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## TRANSMITTAL

**DATE:** May 9, 2011

**REFERENCE NO.:** 581000

**PROJECT NAME:** 800 Franklin Street, Oakland

**TO:** Mr. Jerry Wickham  
Alameda County Department of Environmental Health  
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Alameda, California  
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1	Groundwater Monitoring Report - First Half 2011

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### COMMENTS:

Should you have any questions regarding the contents of the document, please contact Bryan Fong at (510) 420-3369.

Thank you.

Copy to: Ms. Anny Chiu

Completed by: Bryan A. Fong  
[Please Print]

Signed: Bryan A. Fong

Filing: Correspondence File

With respect to:

*Down-Groundwater Monitoring Report-First Half 2011*

Dated May 9, 2011

Fuel Leak Case No. RO0000196

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

Tommy Chiu  
Mr. Tommy Chiu

4-25-11  
Date



## **GROUNDWATER MONITORING REPORT - FIRST HALF 2011**

**CHIU PROPERTY  
800 FRANKLIN STREET  
OAKLAND, CALIFORNIA**

**AGENCY CASE NO.      RO0000196**

**Prepared by:  
Conestoga-Rovers  
& Associates**

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**MAY 9, 2011**

**REF. NO. 581000 (9)**

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## **1.0 INTRODUCTION**

On behalf of Mr. Tommy Chiu, Conestoga-Rovers & Associates (CRA) is submitting this *Groundwater Monitoring Report – First Half 2011*. This report presents a summary of First Half 2011 groundwater monitoring and sampling event activities, analytical results and activities anticipated to occur during the Second Half of 2011 at the subject site, located at 800 Franklin Street, Oakland, California (Figure 1). This groundwater monitoring event was conducted in accordance with guidelines issued by Alameda County Department of Environmental Health (ACEH).

### **1.1 SITE INFORMATION**

<b>Site Address</b>	800 Franklin Street, Oakland
<b>Site Use</b>	Commercial Building
<b>Client and Contact</b>	Tommy Chiu
<b>Consultant and Contact Person</b>	CRA, Bryan A. Fong
<b>Lead Agency and Contact</b>	Alameda County Environmental Health, Jerry Wickham, P.G.
<b>Agency Case No.</b>	RO0000196

## **2.0 SITE ACTIVITIES AND RESULTS**

### **2.1 CURRENT SAMPLING EVENT ACTIVITIES**

On March 4, 2011, Muskan Environmental Sampling (MES) conducted groundwater monitoring and sampling activities at the subject site. MES measured groundwater levels and collected groundwater samples from monitoring wells MW-1, MW-2, MW-3A, MW-4, MW-5 and MW-6 (Figure 2). Well construction details are provided in Table 1. CRA's standard field procedures are presented as Appendix A. The laboratory analytical report and sample chain-of-custody (COC) documents are presented as Appendix B, and copies of the field data sheets are included as Appendix C.

### **2.1.1      WATER LEVEL MEASUREMENTS**

Depth to groundwater measurements were recorded to the nearest 0.01-foot from the surveyed reference elevation on the top of the well casing (TOC). Measurements were collected using a conductance-actuated well sounder. Groundwater elevation and depth data are presented in Table 2.

### **2.1.2      GROUNDWATER SAMPLING**

MES collected groundwater samples from wells MW-1, MW-2, MW-3A, MW-4, MW-5 and MW-6. Field activities associated with groundwater sampling included low flow well purging, measuring groundwater parameters and sample collection. Field equipment was decontaminated before use and between each well.

Each well was purged prior to sampling by placing a clean intake tube of a peristaltic pump approximately 1 foot below the initial water level. Depth to groundwater was measured prior to, during, and at the termination of low-flow purging, and also immediately prior to sample collection. Temperature, pH, specific conductivity, oxygen reduction potential (ORP) and dissolved oxygen (DO) were measured initially and at regular volume intervals. Well purging continued until consecutive pH, specific conductivity and temperature measurements were relatively stable. Field measurements, purge volumes and sample collection data were recorded on field sampling data sheets, presented in Appendix C.

Groundwater samples were collected from each well using a peristaltic pump. The samples were decanted into 40-milliliter (mL) glass volatile organic analysis (VOA) vials and 1-liter amber glass containers supplied by McCampbell Analytical, Inc. (McCampbell) of Pittsburg, California. Sample containers were labeled, sealed in a plastic bag, placed on ice in a chilled cooler and transported under COC to a State-certified laboratory for analysis. The COC used for this monitoring event is included in Appendix B.

### **2.1.3      EQUIPMENT DECONTAMINATION**

To minimize the potential of cross-contamination, the groundwater monitoring equipment was decontaminated prior to being deployed in the first well, and again between each successive well. The probe of the well sounder used for water level measurements was rinsed thoroughly with distilled water prior to its first use and

between subsequent water level measurements. The tubing for the peristaltic pump was discarded after use at each well.

#### **2.1.4      SAMPLE ANALYSIS**

Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by modified Environmental Protection Agency (EPA) Method SW8015Bm. Samples were also analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX), and methyl tertiary-butyl ether (MTBE) by EPA Method SW8260B. In addition, groundwater samples were analyzed for TPH as diesel (TPHd) by EPA Method SW8015B with silica gel cleanup, and chloroform and 1,2-dichloroethane (1,2-DCA) by EPA Method SW8260B. The results for all compounds in the Basic Target List by EPA Method SW8260B are included in the laboratory analytical report. The analyses were performed by McCampbell and the laboratory analytical report is included in Appendix B. Groundwater analytical results are summarized on Figure 2 and presented in Table 2.

#### **2.2      CURRENT SAMPLING EVENT RESULTS**

<b>Groundwater Flow Direction</b>	Northwest
<b>Hydraulic Gradient</b>	0.007
<b>Groundwater Depth</b>	
<b>from Top of Casing in Monitoring Wells</b>	21.78 to 22.78 feet
<b>Were Measureable Separate Phase Hydrocarbons Observed</b>	No

#### **2.2.1      GROUNDWATER FLOW DIRECTION AND GRADIENT**

Depth-to-water measurements collected on March 4, 2011 ranged from 21.78 to 22.78 feet below TOC. Groundwater elevations were calculated by subtracting the depth-to-water measurements from the surveyed TOC elevations. Groundwater elevations were plotted on a site plan and contoured. Based on depth-to-water data collected during the site visit, groundwater appears to flow towards the northwest at a gradient of 0.007. Depth-to-water and groundwater elevation data for the site are summarized in Table 2 and presented on Figure 2.

## **2.2.2 GROUNDWATER ANALYTICAL RESULTS**

Concentrations of analytes were detected in five of the six site wells during the First Half 2011, as follows:

- TPHg was detected in the samples collected from wells MW-2, MW-3A and MW-6 at concentrations ranging from 3,700 micrograms per liter ( $\mu\text{g}/\text{L}$ ) in MW-6 to 35,000  $\mu\text{g}/\text{L}$  in MW-3A. Benzene concentrations were also detected in wells MW-2, MW-3A and MW-6 at concentrations ranging from 610 in MW-2 to 5,000  $\mu\text{g}/\text{L}$  in MW-3A. Toluene, ethylbenzene and xylenes were detected in wells MW-2, MW-3A, and MW-6. Toluene was detected in MW-2, MW-3A, and MW-6 at 430, 6,400 and 170  $\mu\text{g}/\text{L}$ , respectively; ethylbenzene at 290, 1,900, and 70  $\mu\text{g}/\text{L}$ , respectively; and total xylenes at 1,400, 8,800, and 200  $\mu\text{g}/\text{L}$ , respectively. Laboratory analysis noted that the chromatographic pattern seen in these three wells suggests unmodified or weakly modified gasoline is significant in the samples.
- No MTBE was detected above laboratory reporting limits in any of the wells.
- Diesel-range hydrocarbons (TPHd) were detected in samples from wells MW-2, MW-3A and MW-6 at concentrations of 2,200, 3,300, and 410  $\mu\text{g}/\text{L}$ , respectively. Laboratory analysis noted that the TPH chromatogram suggested gasoline range compounds were significant in these samples.
- Chloroform was detected in wells MW-4 and MW-5 at concentrations of 1.0 and 3.4  $\mu\text{g}/\text{L}$ , respectively. The established drinking water ESL for chloroform is 70  $\mu\text{g}/\text{L}$ .
- 1,2-DCA was not detected above laboratory reporting limits in any of the wells.

## **2.2.3 WASTE DISPOSAL**

On March 4, 2011 approximately 5 gallons of drummed purged groundwater from the First Half 2011 monitoring event was transported for disposal by American Integrated Services, Inc., to Crosby & Overton, Inc in Long Beach, CA. A copy of the waste manifest is included in Appendix D.

#### **2.2.4      GEOTRACKER SUBMITTAL**

CRA uploaded relevant data to the GeoTracker database on behalf of Mr. Tommy Chiu. CRA has uploaded First Half 2011 groundwater depth data, analytical results and this report to the State's GeoTracker database.

#### **2.3      PROPOSED ACTIVITIES FOR THE SECOND 2011 SEMI-ANNUAL EVENT**

As approved by ACEH, the subject site will be monitored semi-annually during the first and third quarters. CRA will measure water levels and collect groundwater samples from wells MW-1 through MW-6. Groundwater samples will be analyzed for TPHd with silica gel cleanup and TPHg by modified EPA Method SW8015Bm; and for BTEX, MTBE, chloroform and 1,2-DCA by EPA Method SW8260B (Basic Target List). CRA will prepare a groundwater monitoring report summarizing the monitoring activities and results.

CRA submitted a *Work Plan Addendum*, dated April 25, 2011, to ACEH summarizing the implementation of the first phase of activities, as presented in the previously-approved *Down-Gradient Site Characterization Work Plan*. Also included in the addendum was the recommendation for implementation of the second phase activities. Following ACEH's approval, CRA anticipates implementing the second phase activities of the *Down-Gradient Site Characterization Work Plan* during the second/third quarter 2011.

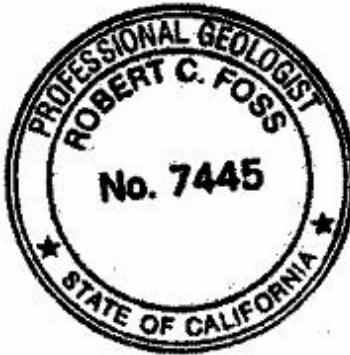
All of Which is Respectfully Submitted,  
CONESTOGA-ROVERS & ASSOCIATES



Bryan A. Fong



Robert Foss, P.G.



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## FIGURES

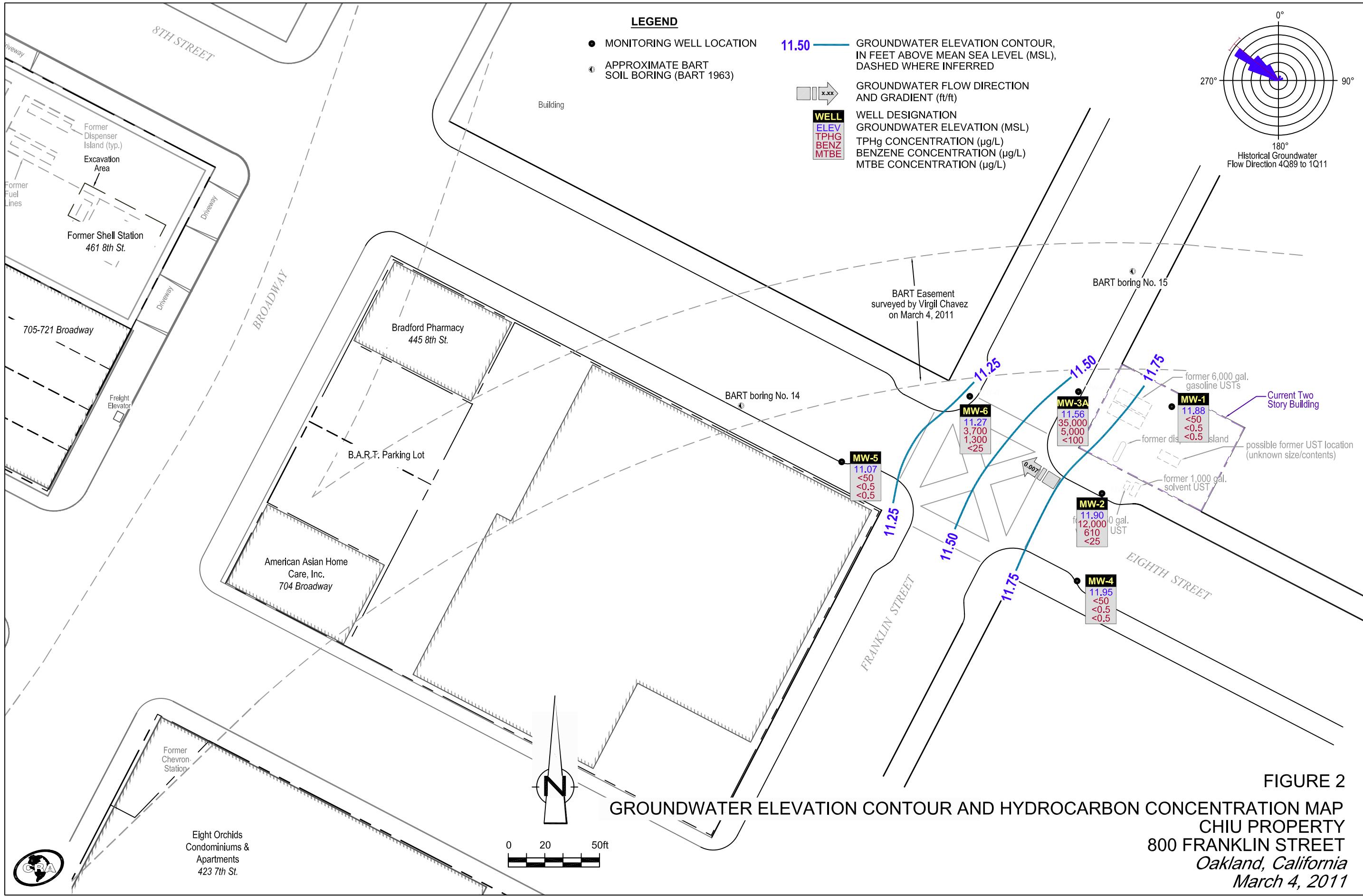


**Chiu Property**  
800 Franklin Street  
Oakland, California



**CONESTOGA-ROVERS**  
& ASSOCIATES

**Vicinity Map**



## TABLES

TABLE 1

Page 1 of 1

**WELL CONSTRUCTION DETAILS**  
**CHIU PROPERTY**  
**800 FRANKLIN STREET**  
**OAKLAND, CALIFORNIA**

Well ID	Date Installed	Borehole Depth (ft)	Borehole Diameter (in)	Casing Diameter (in)	Screen Interval (ft bgs)	Screen Size (in)	Filter Pack (ft bgs)	Bentonite Seal (ft bgs)	Cement Seal (ft bgs)	TOC Elevation (ft msl)
MW-1	1989	35.0	8.0	2	20.0 - 35.0	0.010	18.0 - 35.0	16.0 - 18.0	0 - 16.0	33.42
MW-2	1989	35.0	8.0	2	20.0 - 35.0	0.010	18.0 - 35.0	16.0 - 18.0	0 - 16.0	33.66
MW-3*	Installed: 1989 Destroyed: 1/29/07	35.0	8.0	2	20.0 - 35.0	0.010	18.0 - 35.0	16.0 - 18.0	0 - 16.0	34.23
MW-3A	2/8/2007	35.0	10.0	4	20.0 - 35.0	0.010	19.0 - 35.0	17.0 - 19.0	0 - 17.0	34.16
MW-4	10/2/1991	35.0	8.0	2	20.0 - 35.0	0.010	18.0 - 35.0	-	0 - 18.0	33.64
MW-5	10/3/1991	35.0	8.0	2	20.0 - 35.0	0.010	18.0 - 35.0	-	0 - 18.0	33.56
MW-6	5/15/1997	35.0	8.0	2	14.5 - 36.25	0.010	14.5 - 36.25	12.5 - 14.5 (?)	0 - 12.5	33.98

**Abbreviations / Notes**

ft = feet

in = inches

ft bgs = feet below grade surface

ft msl = feet above mean sea level

TOC = top of casing

\* = Monitoring well MW-3 properly destroyed on January 29, 2007 by Cambria.

TABLE 2

Page 1 of 6

**GROUNDWATER ANALYTICAL AND ELEVATION DATA: PETROLEUM HYDROCARBONS**  
**CHIU PROPERTY**  
**800 FRANKLIN STREET**  
**OAKLAND, CALIFORNIA**

<b>Well ID</b> <b>TOC Elevation</b> <b>(ft msl)</b>	<b>Date Sampled</b>	<b>Depth to Water</b> <b>(ft below TOC)</b>	<b>Groundwater Elevation</b> <b>(feet msl)</b>	<b>TPHg</b>	<b>TPHd</b>	<b>TPHmo</b>	<b>Benzene</b>	<b>Toluene</b>	<b>Ethylbenzene</b> <b>µg/L</b>	<b>Xylenes</b>	<b>MTBE</b>	<b>Chloroform</b>	<b>1,2-DCA</b>	
<b>MW-1</b>	10/12/1989	22.87	10.55	ND	--	--	ND	ND	ND	ND	--	0.8	8.6	
33.42	10/31/1991	--	--	630	960	1,700	3.2	ND<0.5	ND<0.5	130	--	--	0.0098	
34.89	10/21/1992	23.48	11.41	520	--	--	78	38	ND<0.5	120	--	--	ND	
	2/25/1993	22.51	12.38	1,600	--	--	160	190	34	350	--	--	--	
	4/27/1993	22.36	12.53	380	--	--	5.2	ND<0.5	ND<0.5	74	--	--	--	
	10/7/1993	--	12.10	1,000	--	--	81	150	47	230	--	--	--	
33.98	3/28/1994	--	11.91	460	--	--	14	25	14	39	--	--	--	
	4/29/1994	--	--	--	--	--	--	--	--	--	--	--	--	
	6/10/1994	--	11.66	--	--	--	--	--	--	--	--	--	--	
	7/8/1994	--	11.62	--	--	--	--	--	--	--	--	--	--	
	7/26/1994	--	11.48	--	--	--	--	--	--	--	--	--	--	
	8/25/1994	--	11.47	--	--	--	--	--	--	--	--	--	--	
	10/27/1994	22.51	11.47	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	
	1/6/1995	--	12.08	--	--	--	--	--	--	--	--	--	--	
	2/1/1995	--	12.79	--	--	--	--	--	--	--	--	--	--	
	3/29/1995	--	12.75	--	--	--	--	--	--	--	--	--	--	
	10/31/1995	--	12.48	1,400	--	--	15	38	49	510	19	--	--	
	5/21/1997	--	12.49	150	--	--	2.9	1.5	8.6	26	ND<5.0	--	--	
	8/10/2004	23.35	10.63	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--	
	9/28/2004	--	--	--	--	--	--	--	--	--	--	--	--	
	12/21/2004	22.93	11.05	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--	
	3/11/2005	--	--	--	--	--	--	--	--	--	--	--	--	
	6/16/2005	20.68	13.30	ND<50	--	--	0.64	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--	
	9/1/2005	20.74	13.24	ND<50	--	--	1.2	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--	
	12/16/2005	20.95	13.03	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--	
	3/10/2006	20.34	13.64	ND<50	--	--	0.60	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--	
	9/15/2006	21.51	12.47	ND<50	ND<50	ND<250	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	6.4	ND<0.5	
	3/8/2007	21.81	12.17	ND<50	ND<50	ND<250	ND<0.5	ND<0.5	0.72	ND<0.5	ND<5.0	6.9	ND<0.5	
	9/17/2007	22.08	11.90	ND<50	ND<50	ND<250	ND<0.5	ND<0.5	2.3	ND<0.5	ND<0.5	4.7	ND<0.5	
	3/4/2008	21.72	12.26	ND<50	ND<50	ND<250	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.3	ND<0.5	
	9/3/2008	22.70	11.28	ND<50	ND<50	ND<250	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	0.98	ND<0.5	
	3/4/2009	22.49	11.49	ND<50	ND<50	ND<250	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	0.65	
	9/8/2009	22.80	11.18	ND<50	ND<50	ND<250	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	ND<0.5
	3/19/2010	22.25	11.73	ND<50	ND<50	--	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	ND<0.5	0.58
	9/3/2010	22.51	11.47	ND<50	ND<50	--	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	1.2	ND<0.5
	3/4/2011	22.10	11.88	ND<50	ND<50	--	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	ND<0.5	ND<0.5
<b>MW-2</b>	10/12/1989	23.25	10.40	38,000	--	3,900	1,300	1,200	ND	4,700	--	--	--	
33.66	10/31/1991	--	--	10,000	1,500	--	1,800	1,200	270	960	--	--	0.17	
	11/6/1991	24.02	9.64	--	--	--	--	--	--	--	--	--	--	
	10/21/1992	22.42	11.24	270,000	--	--	9,700	4,500	9,600	56,000	--	--	15.4	
	2/25/1993	21.50	12.16	49,000	--	--	4,300	11,000	1,300	9,100	--	--	--	
	4/27/1993	21.26	12.40	39,000	--	--	1,400	4,000	220	5,200	--	--	--	
	10/7/1993	--	12.04	50,000	--	--	2,700	8,100	940	7,800	--	--	--	
	3/28/1994	--	11.88	20,000	--	--	360	1,300	220	1,800	--	--	--	

TABLE 2

**GROUNDWATER ANALYTICAL AND ELEVATION DATA: PETROLEUM HYDROCARBONS**  
**CHIU PROPERTY**  
**800 FRANKLIN STREET**  
**OAKLAND, CALIFORNIA**

Well ID TOC Elevation (ft msl)	Date Sampled	Depth to Water (ft below TOC)	Groundwater Elevation (feet msl)	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene µg/L	Xylenes	MTBE	Chloroform	1,2-DCA	
<b>MW-2 (cont.)</b>														
	4/29/1994	--	11.87	--	--	--	--	--	--	--	--	--	--	
	6/10/1994	--	11.44	--	--	--	--	--	--	--	--	--	--	
	7/8/1994	--	11.42	--	--	--	--	--	--	--	--	--	--	
	7/26/1994	--	11.22	--	--	--	--	--	--	--	--	--	--	
	8/25/1994	--	11.01	--	--	--	--	--	--	--	--	--	--	
	10/27/1994	22.66	11.00	21,000	--	--	1,200	3,700	600	4,300	--	--	--	
	1/6/1995	--	11.66	--	--	--	--	--	--	--	--	--	--	
	2/1/1995	--	12.21	--	--	--	--	--	--	--	--	--	--	
	3/29/1995	--	12.66	--	--	--	--	--	--	--	--	--	--	
	10/31/1995	--	11.51	45,000	--	--	3,100	8,800	1,200	8,400	810	--	--	
	5/21/1997	--	12.65	18,000	--	--	1,400	4,200	680	3,600	370	--	--	
	8/10/2004	21.03	12.63	47,000 (a)	--	--	4,200	4,900	1,400	6,000	ND<500	--	--	
	9/28/2004	22.95	10.71	--	--	--	--	--	--	--	--	--	--	
	12/21/2004	20.91	12.75	13,000 (a)	--	--	500	310	34	1600	ND<100	--	--	
	3/11/2005	11.35	22.31	32,000 (a)	--	--	970	2,400	890	4,200	ND<1,000	--	--	
	6/16/2005	20.50	13.16	43,000 (a,i)	--	--	1,500	3,400	1,200	5,400	ND<1,200	--	--	
	9/1/2005	20.60	13.06	20,000 (a)	--	--	640	1,700	460	2,200	ND<200	--	--	
	12/16/2005	20.83	12.83	32,000 (a,i)	--	--	1,000	3,100	760	3,800	ND<500	--	--	
	3/10/2006	20.05	13.61	20,000 (a)	--	--	460	1,900	440	2,400	ND<400	--	--	
	9/15/2006	21.31	12.35	43,000 (a)	3,100 (d)	ND<250	1,600	4,400	1,100	5,100	ND<500	16	ND<10	
	3/8/2007	21.62	12.04	30,000 (a,h)	4,600 (d,h)	ND<1,200	1,200	3,400	890	4,500	ND<500	ND<50	ND<50 (j,h)	
	9/17/2007	21.92	11.74	31,000 (a)	6,600 (d,b)	340	790	3,000	700	3,100	ND<100	ND<100	ND<100	
	3/4/2008	--	--	--	--	--	--	--	--	--	--	--	--	
	9/3/2008	22.50	11.16	46,000 (a)	5,100 (d)	370	1,700	8,600	1,400	7,500	ND<250	ND<250	ND<250	
	3/4/2009	22.25	11.41	56,000 (a)	13,000 (d)	1,100	1,500	5,300	990	4,500	ND<10	ND<10	ND<10	
	9/8/2009	22.60	11.06	42,000 (a)	11,000 (d)	1,200	1,400 (1,200)	5,200 (4,900)	970 (890)	5500 (4,900)	ND<100 (ND<100)	ND<0.5	ND<100	
33.75	3/19/2010 **	21.96	11.70	30,000 (a,h)	12,000 (d,h)	--	(1,000)	(3,500)	(980)	(4,500)	(ND<50)	ND<5.0	ND<5.0	
	9/3/2010	22.30	11.45	9,500 (a)	1,500 (d)	--	(320)	(290)	(140)	(970)	(ND<12)	ND<12	ND<12	
	3/4/2011	21.85	11.90	12,000 (a)	2,200 (d)	--	(610)	(430)	(290)	(1,400)	(ND<25)	ND<25	ND<25	
<b>MW-3</b>	10/12/1989	24.02	10.21	87,000	--	4,500	3,200	8,800	ND	6,500	--	--	70.0	
34.23	10/31/1991	--	--	310,000	25,000	--	9,300	25,000	5,600	27,000	--	--	0.058	
	11/6/1991	23.52	10.71	--	--	--	--	--	--	--	--	--	--	
	10/21/1992	23.32	10.91	22,000	--	--	10,000	4,300	790	2,100	--	--	ND	
	2/25/1993	22.51	11.72	29,000	--	--	8,400	5,400	1,300	3,300	--	--	--	
	4/27/1993	22.37	11.86	50,000	--	--	8,200	8,700	1,000	5,400	--	--	--	
	10/7/1993	--	14.19	1,700	--	--	3,100	3,700	400	1,700	--	--	--	
	3/28/1994	--	11.52	53,000	--	--	3,900	4,600	710	2,500	--	--	--	
	4/29/1994	--	11.34	--	--	--	--	--	--	--	--	--	--	
	6/10/1994	--	11.13	--	--	--	--	--	--	--	--	--	--	
	7/8/1994	--	11.09	--	--	--	--	--	--	--	--	--	--	
	7/26/1994	--	10.94	--	--	--	--	--	--	--	--	--	--	
	8/25/1994	--	10.80	--	--	--	--	--	--	--	--	--	--	
	10/27/1994	23.56	10.67	8,500	--	--	2,700	2,700	490	2,000	--	--	--	
	1/6/1995	--	11.33	--	--	--	--	--	--	--	--	--	--	

TABLE 2

**GROUNDWATER ANALYTICAL AND ELEVATION DATA: PETROLEUM HYDROCARBONS**  
**CHIU PROPERTY**  
**800 FRANKLIN STREET**  
**OAKLAND, CALIFORNIA**

Well ID TOC Elevation (ft msl)	Date Sampled	Depth to Water (ft below TOC)	Groundwater Elevation (feet msl)	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene µg/L	Xylenes	MTBE	Chloroform	1,2-DCA
<b>MW-3 (cont.)</b>	2/1/1995	--	11.79	--	--	--	--	--	--	--	--	--	--
	3/29/1995	--	12.10	--	--	--	--	--	--	--	--	--	--
	10/31/1995	--	11.23	19,000	--	--	4,400	4,600	720	2,900	410	--	--
	5/21/1997	--	11.68	4,000	--	--	810	840	190	690	ND<100	--	--
	9/28/2004						Well is damaged. Unable to measure depth to water or collect sample.						
	12/21/2004						Well is damaged. Unable to measure depth to water or collect sample.						
	3/11/2005						Well is damaged. Unable to measure depth to water or collect sample.						
	6/16/2005						Well is damaged. Unable to measure depth to water or collect sample.						
	9/1/2005						Well is damaged. Unable to measure depth to water or collect sample.						
	12/16/2005						Well is damaged. Unable to measure depth to water or collect sample.						
	3/10/2006						Well is damaged. Unable to measure depth to water or collect sample.						
	9/15/2006						Well is damaged. Unable to measure depth to water or collect sample.						
	1/29/2007						Well properly destroyed by Cambria.						
<b>MW-3A</b>	1/29/2007						<b>MW-3A replaces MW-3</b>						
<b>34.16</b>	3/8/2007	22.42	11.74	30,000 (a,i)	1,700 (d,i)	ND<250	2,600	4,400	710	4,600	ND<1,000	ND<50	ND<50 (j)
	9/17/2007	22.65	11.51	9,800 (a)	980 (d)	ND<250	1,100	1,800	270	1,100	ND<25	ND<25	ND<25
	3/4/2008	22.31	11.85	21,000 (a,i)	1,700 (d,i)	ND<250	2,600	5,000	810	3,500	ND<50	ND<50	ND<50
	9/3/2008	23.11	11.05	13,000 (a)	880 (d)	ND<250	1,400	2,100	370	1,500	ND<50	ND<50	ND<50
	3/4/2009	22.98	11.18	12,000 (a)	810 (d)	ND<250	1,000	1,700	330	1,200	ND<5.0	7.9	7.2
	9/8/2009	23.25	10.91	8,900 (a)	780 (d)	ND<250	870 (830)	1300 (1,200)	260 (200)	1100 (880)	ND<25 (ND<25)	6.3	ND<25
	3/19/2010	22.79	11.37	16,000 (a)	1,700 (d)	--	(1,900)	(3,200)	(620)	(2,800)	(ND<50)	ND<5.0	10
	9/3/2010	23.02	11.14	35,000 (a)	1,600 (d)	--	(5,300)	(6,500)	(1,100)	(5,100)	(ND<120)	ND<120	ND<120
	3/4/2011	22.60	11.56	35,000 (a)	3,300 (d)	--	(5,000)	(6,400)	(1,900)	(8,800)	(ND<100)	ND<100	ND<100
<b>MW-4</b>	10/31/1991	--	--	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	2.6	ND
<b>33.64</b>	11/6/1991	23.32	10.32	--	--	--	--	--	--	--	--	--	--
	10/21/1992	22.10	11.54	410	--	--	3.1	29	6.8	47	--	--	ND
	2/25/1993	21.13	12.51	170	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--
	4/27/1993	20.74	12.90	100	--	--	ND<0.5	ND<0.5	ND<0.5	0.9	--	--	--
	10/7/1993	--	12.52	240	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--
	3/28/1994	--	12.34	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--
	4/29/1994	--	11.33	--	--	--	--	--	--	--	--	--	--
	6/10/1994	--	11.55	--	--	--	--	--	--	--	--	--	--
	7/8/1994	--	11.54	--	--	--	--	--	--	--	--	--	--
	7/26/1994	--	11.30	--	--	--	--	--	--	--	--	--	--
	8/25/1994	--	11.09	--	--	--	--	--	--	--	--	--	--
	10/27/1994	22.69	10.95	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--
	1/6/1995	--	11.70	--	--	--	--	--	--	--	--	--	--
	2/1/1995	--	12.34	--	--	--	--	--	--	--	--	--	--
	3/29/1995	--	12.76	--	--	--	--	--	--	--	--	--	--
	10/31/1995	--	11.61	80	--	--	ND<0.5	0.6	ND<0.5	1.0	ND<0.5	--	--
	5/21/1997	--	12.08	ND<50	--	--	11	120	27	180	ND<5.0	--	--
	9/28/2004	22.72	10.92	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--
	12/21/2004	20.65	12.99	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--
	3/11/2005	20.20	13.44	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--

TABLE 2

**GROUNDWATER ANALYTICAL AND ELEVATION DATA: PETROLEUM HYDROCARBONS**  
**CHIU PROPERTY**  
**800 FRANKLIN STREET**  
**OAKLAND, CALIFORNIA**

Well ID TOC Elevation (ft msl)	Date Sampled	Depth to Water (ft below TOC)	Groundwater Elevation (feet msl)	TPHg ←	TPHd ↔	TPHmo →	Benzene	Toluene	Ethylbenzene µg/L	Xylenes	MTBE	Chloroform	1,2-DCA →	
<b>MW-4 (cont.)</b>	6/16/2005	20.38	13.26	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--	
	9/1/2005	20.48	13.16	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--	
	12/16/2005	20.78	12.86	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--	
	3/10/2006	19.81	13.83	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--	
	9/15/2006	21.16	12.48	ND<50	ND<50	ND<250	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	28	ND<0.5	
	3/8/2007	21.52	12.12	ND<50	ND<50	ND<250	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	23	ND<0.5	
	9/17/2007	21.84	11.80	ND<50	ND<50	ND<250	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	18	ND<0.5	
	3/4/2008	21.41	12.23	ND<50	ND<50	ND<250	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	13	ND<0.5	
	9/3/2008	22.50	11.14	ND<50	ND<50	ND<250	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	12	ND<0.5	
	3/4/2009	22.15	11.49	ND<50	ND<50	ND<250	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	14	ND<0.5	
	9/8/2009	22.56	11.08	ND<50	ND<50	ND<250	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	ND<0.5
33.73	3/19/2010 *	21.88	11.76	ND<50	ND<50	--	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	10	ND<0.5	
	9/3/2010	22.21	11.52	ND<50	ND<50	--	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	ND<0.5	ND<0.5	
	3/4/2011	21.78	11.95	ND<50	ND<50	--	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	1.0	ND<0.5	
<b>MW-5</b>	10/31/1991	--	--	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	1.1	--	
33.51	11/6/1991	24.00	9.51	ND	--	--	ND	ND	ND	ND	--	--	--	
	10/21/1992	23.24	10.27	840	--	--	17	120	39	180	--	--	--	
33.56	2/25/1993	22.40	11.16	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	
	4/27/1993	22.15	11.41	260	--	--	53	19	1.2	2.4	--	--	--	
	10/7/1993	--	11.06	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	
	3/28/1994	--	10.95	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	
	4/29/1994	--	10.91	--	--	--	--	--	--	--	--	--	--	
	6/10/1994	--	10.68	--	--	--	--	--	--	--	--	--	--	
	7/8/1994	--	10.60	--	--	--	--	--	--	--	--	--	--	
	7/26/1994	--	10.45	--	--	--	--	--	--	--	--	--	--	
	8/25/1994	--	10.28	--	--	--	--	--	--	--	--	--	--	
	10/27/1994	23.50	10.06	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	--	
	1/6/1995	--	10.78	--	--	--	--	--	--	--	--	--	--	
	2/1/1995	--	11.25	--	--	--	--	--	--	--	--	--	--	
	3/29/1995	--	11.63	--	--	--	--	--	--	--	--	--	--	
	10/31/1995	--	10.64	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	--	
	5/21/1997	--	11.04	260	--	--	2.4	33	7.7	56	ND<5.0	--	--	
	9/28/2004	23.70	9.86	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--	
	12/21/2004	21.40	12.16	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--	
	3/11/2005	21.40	12.16	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--	
	6/16/2005	21.63	11.93	ND<50 (i)	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--	
	9/1/2005	21.65	11.91	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--	
	12/16/2005	21.94	11.62	ND<50 (i)	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--	
	3/10/2006	21.11	12.45	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--	
	9/15/2006	22.20	11.36	ND<50	ND<50	ND<250	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	10	ND<0.5	
	3/8/2007	22.44	11.12	ND<50	ND<50	ND<250	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	18	ND<0.5	
	9/17/2007	22.73	10.83	ND<50	ND<50	ND<250	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	14	ND<0.5	
	3/4/2008	22.32	11.24	ND<50	ND<50	ND<250	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	19	ND<0.5	
	9/3/2008	23.13	10.43	ND<50	ND<50	ND<250	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	17	ND<0.5	

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**CHIU PROPERTY**  
**800 FRANKLIN STREET**  
**OAKLAND, CALIFORNIA**

Well ID TOC Elevation (ft msl)	Date Sampled	Depth to Water (ft below TOC)	Groundwater Elevation (feet msl)	TPHg ←	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene µg/L	Xylenes	MTBE	Chloroform	1,2-DCA →
<b>MW-5 (cont.)</b>  33.67	3/4/2009	22.95	10.61	ND<50	ND<50	ND<250	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	14	ND<0.5
	9/8/2009	23.21	10.35	ND<50	ND<50	ND<250	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	ND<0.5
	3/19/2010 *	22.72	10.84	ND<50	ND<50	--	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	14	ND<0.5
	9/3/2010	23.03	10.64	ND<50	ND<50	--	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	7.2	ND<0.5
<b>MW-6</b>  33.98	3/4/2011	22.60	11.07	ND<50	ND<50	--	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	3.4	ND<0.5
	5/21/1997	--	11.26	760	--	--	2.5	1.7	ND<0.50	25	10	--	--
	9/28/2004	24.00	9.98	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--
	12/21/2004	21.61	12.37	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--
	3/11/2005	21.60	12.38	340 (a)	--	--	1.9	2.6	0.68	0.61	ND<5.0	--	--
	6/16/2005	21.81	12.17	1,300 (a)	--	--	58	8.3	6.1	4.0	ND<25	--	--
	9/1/2005	21.82	12.16	1,900 (a)	--	--	150	19	18	76	ND<12	--	--
	12/16/2005	22.03	11.95	3,600 (a,i)	--	--	560	63	33	230	ND<50	--	--
	3/10/2006	21.46	12.52	2,200 (a)	--	--	240	10	20	87	ND<50	--	--
	9/15/2006	22.46	11.52	1,800 (a)	480 (d)	ND<250	10	6.7	9.9	42	ND<17	3.2	ND<0.5
	3/8/2007	22.64	11.34	4,300 (a)	890 (d)	ND<250	260	36	29	140	ND<60	ND<10	ND<10 (j)
	9/17/2007	22.88	11.10	7,000 (a)	970 (d)	ND<250	760	28	46	270	ND<10	ND<10	ND<10
	3/4/2008	22.51	11.47	400 (a)	74 (d)	ND<250	46	ND<1.0	1.0	6.0	ND<1.0	ND<1.0	ND<1.0
	9/3/2008	23.24	10.74	280 (a)	69 (d, b)	ND<250	2.9	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
34.05	3/4/2009	23.14	10.84	670 (a)	150 (d)	ND<250	68	13	ND<2.5	12	ND<2.5	ND<2.5	ND<2.5
	9/8/2009	23.38	10.60	8,000 (a)	1,400 (d)	ND<250	870 (770)	16 (ND<12)	34 (17)	1500 (1,200)	ND<12 (ND<12)	ND<0.5	ND<12
	3/19/2010 *	22.93	11.05	8,900 (a)	1,200 (d)	--	(2,900)	(ND<100)	(ND<100)	(ND<100)	(ND<5.0)	ND<5.0	15
	9/3/2010	23.19	10.86	4,600 (a)	710 (d)	--	(1,500)	(33)	(35)	(79)	(ND<25)	ND<25	ND<25
<b>Grab Groundwater</b>	3/4/2011	22.78	11.27	3,700 (a)	410 (d)	--	(1,300)	(170)	(70)	(200)	(ND<25)	ND<25	ND<25
	B-7	3/11/2011	--	--	ND<50 (i)	--	--	ND<0.5	ND<0.5	ND<0.5	--	--	--
	B-8	3/11/2011	--	--	ND<50 (i)	--	--	ND<0.5	ND<0.5	ND<0.5	--	--	--
	B-9	3/12/2011	--	--	ND<50 (i)	--	--	ND<0.5	3.0	ND<0.5	--	--	--

**Abbreviations and Notes:**

TOC Elevation = Top of well casing elevation measured in feet above mean sea level

msl = Above mean sea level

µg/L = Micrograms per liter

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

TPHd = Total petroleum hydrocarbons as diesel by EPA Method SW8015C with silica gel cleanup.

TPHmo = Total petroleum hydrocarbons as motor oil by EPA Method SW8015C with silica gel cleanup.

Benzene, toluene, ethylbenzene, and xylenes by EPA Method SW8021B (SW8260B).

MTBE = Methyl tertiary-butyl ether by EPA Method SW8021B by (8260B)

Chloroform by EPA Method SW8260B.

1,2-DCA = 1,2-Dichloroethane by EPA Method SW8260B.

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

Field = Observed in the field.

Lab = Observed in analytical laboratory.

TABLE 2

**GROUNDWATER ANALYTICAL AND ELEVATION DATA: PETROLEUM HYDROCARBONS**  
**CHIU PROPERTY**  
**800 FRANKLIN STREET**  
**OAKLAND, CALIFORNIA**

<i>Well ID</i>	<i>TOC Elevation</i> (ft msl)	<i>Date Sampled</i>	<i>Depth to Water</i> (ft below TOC)	<i>Groundwater Elevation</i> (feet msl)	<i>TPHg</i>	<i>TPHd</i>	<i>TPHmo</i>	<i>Benzene</i>	<i>Toluene</i>	<i>Ethylbenzene</i> µg/L	<i>Xylenes</i>	<i>MTBE</i>	<i>Chloroform</i>	<i>1,2-DCA</i>
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- (a) = unmodified or weakly modified gasoline is significant
- (b) = diesel range compounds are significant; no recognizable pattern
- (d) = gasoline range compounds are significant
- (h) = lighter than water immiscible sheen/product is present
- (i) = liquid sample that contains ~1 vol. % sediment
- (j) = sample diluted due to high organic content/matrix interference
- ND<5.0 = Not detected above detection limit.
- = Not available, not analyzed, or not applicable
- \* = Surveyed September 7, 2006; updated to table May 24, 2010
- \*\* = Surveyed March 8, 2007; updated to table May 24, 2010
- É = Unable to access well due to denial by current tenant

## APPENDIX A

### STANDARD FIELD PROCEDURES FOR GROUNDWATER MONITORING AND SAMPLING

# Conestoga-Rovers & Associates

## STANDARD FIELD PROCEDURES FOR GROUNDWATER MONITORING AND SAMPLING

This document presents standard field methods for groundwater monitoring, purging and sampling, and well development. These procedures are designed to comply with Federal, State and local regulatory guidelines. Conestoga-Rovers and Associate's field procedures are summarized below.

### **Groundwater Elevation Monitoring**

Prior to performing monitoring activities, the historical monitoring and analytical data of each monitoring well shall be reviewed to determine if any of the wells are likely to contain non-aqueous phase liquid (NAPL) and to determine the order in which the wells will be monitored (i.e. cleanest to dirtiest). Groundwater monitoring should not be performed when the potential exists for surface water to enter the well (i.e. flooding during a rainstorm).

Prior to monitoring, each well shall be opened and the well cap removed to allow water levels to stabilize and equilibrate. The condition of the well box and well cap shall be observed and recommended repairs noted. Any surface water that may have entered and flooded the well box should be evacuated prior to removing the well cap. In wells with no history of NAPL, the static water level and total well depth shall be measured to the nearest 0.01 foot with an electronic water level meter. Wells with the highest contaminant concentrations shall be measured last. In wells with a history of NAPL, the NAPL level/thickness and static water level shall be measured to the nearest 0.01 foot using an electronic interface probe. The water level meter and/or interface probe shall be thoroughly cleaned and decontaminated at the beginning of the monitoring event and between each well. Monitoring equipment shall be washed using soapy water consisting of Liqui-nox™ or Alconox™ followed by one rinse of clean tap water and then two rinses of distilled water.

### **Groundwater Purging and Sampling**

Prior to groundwater purging and sampling, the historical analytical data of each monitoring well shall be reviewed to determine the order in which the wells should be purged and sampled (i.e. cleanest to dirtiest). No purging or groundwater sampling shall be performed on wells with a measurable thickness of NAPL or floating NAPL globules. If a sheen is observed, the well should be purged and a groundwater sample collected only if no NAPL is present.

Wells shall be purged according to low flow protocol using an aboveground peristaltic pump. Groundwater wells shall be purged at a low flow rate not to exceed 500 milliliters per minute (mL/min) until groundwater parameters of conductivity and/or dissolved oxygen have stabilized to within 10% for three consecutive readings. Temperature, pH, and conductivity shall also be measured and recorded approximately every 3 to 5 minutes. The total volume of groundwater removed shall be recorded along with any other notable physical characteristic such as color and odor. If required, field parameters such as turbidity shall also be measured prior to collection of each groundwater sample.

# Conestoga-Rovers & Associates

Groundwater samples shall be collected after well parameters have stabilized at a low flow rate not to exceed 500 mL/min. Groundwater samples shall be decanted into clean containers supplied by the analytical laboratory. New latex gloves and Teflon lined tubing shall be used for sampling each well.

## Sample Handling

Except for samples that will be tested in the field, or that require special handling or preservation, samples shall be stored in coolers chilled to 4° C for shipment to the analytical laboratory. Samples shall be labeled, placed in protective foam sleeves or bubble wrap as needed, stored on crushed ice at or below 4° C, and submitted under chain-of-custody (COC) to the laboratory. The laboratory shall be notified of the sample shipment schedule and arrival time. Samples shall be shipped to the laboratory within a time frame to allow for extraction and analysis to be performed within the standard sample holding times.

Sample labels shall be filled out using indelible ink and must contain the site name; field identification number; the date, time, and location of sample collection; notation of the type of sample; identification of preservatives used; remarks; and the signature of the sampler. Field identification must be sufficient to allow easy cross-reference with the field datasheet.

All samples submitted to the laboratory shall be accompanied by a COC record to ensure adequate documentation. A copy of the COC shall be retained in the project file. Information on the COC shall consist of the project name and number; project location; sample numbers; sampler/recorder's signature; date and time of collection of each sample; sample type; analyses requested; name of person receiving the sample; and date of receipt of sample.

Laboratory-supplied trip blanks shall accompany the samples and be analyzed to check for cross-contamination, if requested by the project manager.

## Waste Handling and Disposal

Groundwater extracted during sampling shall be stored onsite in sealed U.S. DOT H17 55-gallon drums and shall be labeled with the contents, date of generation, generator identification, and consultant contact. Extracted groundwater may be disposed offsite by a licensed waste handler or may be treated and discharged via an operating onsite groundwater extraction/treatment system.

## APPENDIX B

CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION



## 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: #581000; Chiu	Date Sampled: 03/04/11
		Date Received: 03/04/11
	Client Contact: Bryan Fong	Date Reported: 03/10/11
	Client P.O.:	Date Completed: 03/09/11

**WorkOrder: 1103149**

March 10, 2011

Dear Bryan:

Enclosed within are:

- 1) The results of the **6** analyzed samples from your project: **#581000; Chiu**,
- 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  
McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
Laboratory Manager  
McCampbell Analytical, Inc.



## McCAMPBELL ANALYTICAL, INC.

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

1103149

Report To: Bryan Fong Bill To: Conestoga-Rovers & Associates  
 Company: Conestoga-Rovers & Associates  
 5900 Hollis St., Ste A E-mail: bongforworld.com  
 Emeryville, CA Fax: (510) 420-9170  
 Tele: (510) 420-3369 Project #: 581000  
 Project Name: Chile  
 Project Location: 800 Franklin St, Oakland, CA  
 Sampler Signature: Muskin Environmental Sampling Inc

## 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

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX	METHOD PRESERVED	Analysis Request		Other	Comments					
		Date	Time					Water	Soil	Air	Sludge	Other	ICE	HCl	HNO <sub>3</sub>	Other
MU-1		3-4-11	11:25	4	VQA Amb	X		X	X							
MU-2			12:23	1												
MU-3A			9:38	1												
MU-4			3:21													
MU-5			7:48													
MU-6			8:42 AM	4												

\*\*MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

Relinquished By:	Date: 3/4/11	Time: 1240	Received By: M. Morrissey	ICE/t* <i>92</i> GOOD CONDITION ✓ HEAD SPACE ABSENT ✓ DECHLORINATED IN LAB ✓ APPROPRIATE CONTAINERS ✓ PRESERVED IN LAB ✓	COMMENTS: lower reporting limits (closer to 0.5 ppb) for HDOEs (vinyl chloride, TCE, VOCs per B.F.)
Relinquished By:	Date:	Time:	Received By:	VOAS ✓ O&G ✓ METALS ✓ pH<2 ✓ OTHER ✓	
Relinquished By:	Date:	Time:	Received By:	PRESERVATION	

# McCampbell Analytical, Inc.

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

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WaterTrax  WriteOn  EDF  Excel  Fax  Email  HardCopy  ThirdParty  J-flag

## Report to:

Bryan Fong  
Conestoga-Rovers & Associates  
5900 Hollis St, Suite A  
Emeryville, CA 94608  
(510) 420-3369 FAX (510) 420-9170

Email: bfong@craworld.com  
cc:  
PO:  
ProjectNo: #581000; Chiu

## Bill to:

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

**Requested TAT:** 5 days

**Date Received:** 03/04/2011

**Date Printed:** 03/04/2011

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
1103149-001	MW-1	Water	3/4/2011 11:25	<input type="checkbox"/>	B	A	A									
1103149-002	MW-2	Water	3/4/2011 4:23	<input type="checkbox"/>	B	A										
1103149-003	MW-3A	Water	3/4/2011 9:38	<input type="checkbox"/>	B	A										
1103149-004	MW-4	Water	3/4/2011 3:21	<input type="checkbox"/>	B	A										
1103149-005	MW-5	Water	3/4/2011 7:48	<input type="checkbox"/>	B	A										
1103149-006	MW-6	Water	3/4/2011 8:42	<input type="checkbox"/>	B	A										

## Test Legend:

1	8260B_W	2	G-MBTEX_W	3	PREDF REPORT	4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A contain testgroup.

**Prepared by:** Melissa Valles

## 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.



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

## Sample Receipt Checklist

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

Date and Time Received: **3/4/2011 12:59:53 PM**

Project Name: **#581000; Chiu**

Checklist completed and reviewed by: **Melissa Valles**

WorkOrder N°: **1103149** 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: 9.2°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"/> |   |
| Metal - pH acceptable upon receipt (pH<2)?          | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>          |
| Samples Received on Ice?                            | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |

(Ice Type: WET ICE )

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

-----  
 Client contacted:

Date contacted:

Contacted by:

Comments:



Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #581000; Chiu	Date Sampled: 03/04/11
		Date Received: 03/04/11
	Client Contact: Bryan Fong	Date Extracted: 03/08/11
	Client P.O.:	Date Analyzed: 03/08/11

**Volatile Organics by P&T and GC/MS (Basic Target List)\***

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1103149

Lab ID	1103149-001B						
Client ID	MW-1						
Matrix	Water						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	10	tert-Amyl methyl ether (TAME)	ND	1.0	0.5
Benzene	ND	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MEK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	2.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	Chloroform	ND	1.0	0.5
Chloromethane	ND	1.0	0.5	2-Chlorotoluene	ND	1.0	0.5
4-Chlorotoluene	ND	1.0	0.5	Dibromochloromethane	ND	1.0	0.5
1,2-Dibromo-3-chloropropane	ND	1.0	0.2	1,2-Dibromoethane (EDB)	ND	1.0	0.5
Dibromomethane	ND	1.0	0.5	1,2-Dichlorobenzene	ND	1.0	0.5
1,3-Dichlorobenzene	ND	1.0	0.5	1,4-Dichlorobenzene	ND	1.0	0.5
Dichlorodifluoromethane	ND	1.0	0.5	1,1-Dichloroethane	ND	1.0	0.5
1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5	1,1-Dichloroethene	ND	1.0	0.5
cis-1,2-Dichloroethene	ND	1.0	0.5	trans-1,2-Dichloroethene	ND	1.0	0.5
1,2-Dichloropropane	ND	1.0	0.5	1,3-Dichloropropane	ND	1.0	0.5
2,2-Dichloropropane	ND	1.0	0.5	1,1-Dichloropropene	ND	1.0	0.5
cis-1,3-Dichloropropene	ND	1.0	0.5	trans-1,3-Dichloropropene	ND	1.0	0.5
Diisopropyl ether (DIPE)	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5	Freon 113	ND	1.0	10
Hexachlorobutadiene	ND	1.0	0.5	Hexachloroethane	ND	1.0	0.5
2-Hexanone	ND	1.0	0.5	Isopropylbenzene	ND	1.0	0.5
4-Isopropyl toluene	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimeethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes	ND	1.0	0.5

**Surrogate Recoveries (%)**

%SS1:	98	%SS2:	102
%SS3:	98		

**Comments:**

\* 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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.



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

Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #581000; Chiu	Date Sampled: 03/04/11
		Date Received: 03/04/11
	Client Contact: Bryan Fong	Date Extracted: 03/08/11
	Client P.O.:	Date Analyzed: 03/08/11

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1103149

Lab ID	1103149-002B						
Client ID	MW-2						
Matrix	Water						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<500	50	10	tert-Amyl methyl ether (TAME)	ND<25	50	0.5
Benzene	610	50	0.5	Bromobenzene	ND<25	50	0.5
Bromochloromethane	ND<25	50	0.5	Bromodichloromethane	ND<25	50	0.5
Bromoform	ND<25	50	0.5	Bromomethane	ND<25	50	0.5
2-Butanone (MEK)	ND<100	50	2.0	t-Butyl alcohol (TBA)	ND<100	50	2.0
n-Butyl benzene	26	50	0.5	sec-Butyl benzene	ND<25	50	0.5
tert-Butyl benzene	ND<25	50	0.5	Carbon Disulfide	ND<25	50	0.5
Carbon Tetrachloride	ND<25	50	0.5	Chlorobenzene	ND<25	50	0.5
Chloroethane	ND<25	50	0.5	Chloroform	ND<25	50	0.5
Chloromethane	ND<25	50	0.5	2-Chlorotoluene	ND<25	50	0.5
4-Chlorotoluene	ND<25	50	0.5	Dibromochloromethane	ND<25	50	0.5
1,2-Dibromo-3-chloropropane	ND<10	50	0.2	1,2-Dibromoethane (EDB)	ND<25	50	0.5
Dibromomethane	ND<25	50	0.5	1,2-Dichlorobenzene	ND<25	50	0.5
1,3-Dichlorobenzene	ND<25	50	0.5	1,4-Dichlorobenzene	ND<25	50	0.5
Dichlorodifluoromethane	ND<25	50	0.5	1,1-Dichloroethane	ND<25	50	0.5
1,2-Dichloroethane (1,2-DCA)	ND<25	50	0.5	1,1-Dichloroethene	ND<25	50	0.5
cis-1,2-Dichloroethene	ND<25	50	0.5	trans-1,2-Dichloroethene	ND<25	50	0.5
1,2-Dichloropropane	ND<25	50	0.5	1,3-Dichloropropane	ND<25	50	0.5
2,2-Dichloropropane	ND<25	50	0.5	1,1-Dichloropropene	ND<25	50	0.5
cis-1,3-Dichloropropene	ND<25	50	0.5	trans-1,3-Dichloropropene	ND<25	50	0.5
Diisopropyl ether (DIPE)	ND<25	50	0.5	Ethylbenzene	290	50	0.5
Ethyl tert-butyl ether (ETBE)	ND<25	50	0.5	Freon 113	ND<500	50	10
Hexachlorobutadiene	ND<25	50	0.5	Hexachloroethane	ND<25	50	0.5
2-Hexanone	ND<25	50	0.5	Isopropylbenzene	61	50	0.5
4-Isopropyl toluene	ND<25	50	0.5	Methyl-t-butyl ether (MTBE)	ND<25	50	0.5
Methylene chloride	ND<25	50	0.5	4-Methyl-2-pentanone (MIBK)	ND<25	50	0.5
Naphthalene	110	50	0.5	n-Propyl benzene	89	50	0.5
Styrene	ND<25	50	0.5	1,1,1,2-Tetrachloroethane	ND<25	50	0.5
1,1,2,2-Tetrachloroethane	ND<25	50	0.5	Tetrachloroethene	ND<25	50	0.5
Toluene	430	50	0.5	1,2,3-Trichlorobenzene	ND<25	50	0.5
1,2,4-Trichlorobenzene	ND<25	50	0.5	1,1,1-Trichloroethane	ND<25	50	0.5
1,1,2-Trichloroethane	ND<25	50	0.5	Trichloroethene	ND<25	50	0.5
Trichlorofluoromethane	ND<25	50	0.5	1,2,3-Trichloropropane	ND<25	50	0.5
1,2,4-Trimeethylbenzene	650	50	0.5	1,3,5-Trimethylbenzene	160	50	0.5
Vinyl Chloride	ND<25	50	0.5	Xylenes	1400	50	0.5

### Surrogate Recoveries (%)

%SS1:	100	%SS2:	103
%SS3:	98		

### Comments:

\* 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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.



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Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #581000; Chiu	Date Sampled: 03/04/11
		Date Received: 03/04/11
	Client Contact: Bryan Fong	Date Extracted: 03/08/11
	Client P.O.:	Date Analyzed: 03/08/11

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1103149

Lab ID	1103149-003B						
Client ID	MW-3A						
Matrix	Water						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<2000	200	10	tert-Amyl methyl ether (TAME)	ND<100	200	0.5
Benzene	5000	200	0.5	Bromobenzene	ND<100	200	0.5
Bromochloromethane	ND<100	200	0.5	Bromodichloromethane	ND<100	200	0.5
Bromoform	ND<100	200	0.5	Bromomethane	ND<100	200	0.5
2-Butanone (MEK)	ND<400	200	2.0	t-Butyl alcohol (TBA)	ND<400	200	2.0
n-Butyl benzene	ND<100	200	0.5	sec-Butyl benzene	ND<100	200	0.5
tert-Butyl benzene	ND<100	200	0.5	Carbon Disulfide	ND<100	200	0.5
Carbon Tetrachloride	ND<100	200	0.5	Chlorobenzene	ND<100	200	0.5
Chloroethane	ND<100	200	0.5	Chloroform	ND<100	200	0.5
Chloromethane	ND<100	200	0.5	2-Chlorotoluene	ND<100	200	0.5
4-Chlorotoluene	ND<100	200	0.5	Dibromochloromethane	ND<100	200	0.5
1,2-Dibromo-3-chloropropane	ND<40	200	0.2	1,2-Dibromoethane (EDB)	ND<100	200	0.5
Dibromomethane	ND<100	200	0.5	1,2-Dichlorobenzene	ND<100	200	0.5
1,3-Dichlorobenzene	ND<100	200	0.5	1,4-Dichlorobenzene	ND<100	200	0.5
Dichlorodifluoromethane	ND<100	200	0.5	1,1-Dichloroethane	ND<100	200	0.5
1,2-Dichloroethane (1,2-DCA)	ND<100	200	0.5	1,1-Dichloroethene	ND<100	200	0.5
cis-1,2-Dichloroethene	ND<100	200	0.5	trans-1,2-Dichloroethene	ND<100	200	0.5
1,2-Dichloropropane	ND<100	200	0.5	1,3-Dichloropropane	ND<100	200	0.5
2,2-Dichloropropane	ND<100	200	0.5	1,1-Dichloropropene	ND<100	200	0.5
cis-1,3-Dichloropropene	ND<100	200	0.5	trans-1,3-Dichloropropene	ND<100	200	0.5
Diisopropyl ether (DIPE)	ND<100	200	0.5	Ethylbenzene	1900	200	0.5
Ethyl tert-butyl ether (ETBE)	ND<100	200	0.5	Freon 113	ND<2000	200	10
Hexachlorobutadiene	ND<100	200	0.5	Hexachloroethane	ND<100	200	0.5
2-Hexanone	ND<100	200	0.5	Isopropylbenzene	ND<100	200	0.5
4-Isopropyl toluene	ND<100	200	0.5	Methyl-t-butyl ether (MTBE)	ND<100	200	0.5
Methylene chloride	ND<100	200	0.5	4-Methyl-2-pentanone (MIBK)	ND<100	200	0.5
Naphthalene	240	200	0.5	n-Propyl benzene	130	200	0.5
Styrene	ND<100	200	0.5	1,1,1,2-Tetrachloroethane	ND<100	200	0.5
1,1,2,2-Tetrachloroethane	ND<100	200	0.5	Tetrachloroethene	ND<100	200	0.5
Toluene	6400	200	0.5	1,2,3-Trichlorobenzene	ND<100	200	0.5
1,2,4-Trichlorobenzene	ND<100	200	0.5	1,1,1-Trichloroethane	ND<100	200	0.5
1,1,2-Trichloroethane	ND<100	200	0.5	Trichloroethene	ND<100	200	0.5
Trichlorofluoromethane	ND<100	200	0.5	1,2,3-Trichloropropane	ND<100	200	0.5
1,2,4-Trimethylbenzene	940	200	0.5	1,3,5-Trimethylbenzene	300	200	0.5
Vinyl Chloride	ND<100	200	0.5	Xylenes	8800	200	0.5

### Surrogate Recoveries (%)

%SS1:	103	%SS2:	101
%SS3:	95		

### Comments:

\* 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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.



Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #581000; Chiu	Date Sampled: 03/04/11
		Date Received: 03/04/11
	Client Contact: Bryan Fong	Date Extracted: 03/08/11
	Client P.O.:	Date Analyzed: 03/08/11

**Volatile Organics by P&T and GC/MS (Basic Target List)\***

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1103149

Lab ID	1103149-004B						
Client ID	MW-4						
Matrix	Water						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	10	tert-Amyl methyl ether (TAME)	ND	1.0	0.5
Benzene	ND	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MEK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	2.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	Chloroform	1.0	1.0	0.5
Chloromethane	ND	1.0	0.5	2-Chlorotoluene	ND	1.0	0.5
4-Chlorotoluene	ND	1.0	0.5	Dibromochloromethane	ND	1.0	0.5
1,2-Dibromo-3-chloropropane	ND	1.0	0.2	1,2-Dibromoethane (EDB)	ND	1.0	0.5
Dibromomethane	ND	1.0	0.5	1,2-Dichlorobenzene	ND	1.0	0.5
1,3-Dichlorobenzene	ND	1.0	0.5	1,4-Dichlorobenzene	ND	1.0	0.5
Dichlorodifluoromethane	ND	1.0	0.5	1,1-Dichloroethane	ND	1.0	0.5
1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5	1,1-Dichloroethene	ND	1.0	0.5
cis-1,2-Dichloroethene	ND	1.0	0.5	trans-1,2-Dichloroethene	ND	1.0	0.5
1,2-Dichloropropane	ND	1.0	0.5	1,3-Dichloropropane	ND	1.0	0.5
2,2-Dichloropropane	ND	1.0	0.5	1,1-Dichloropropene	ND	1.0	0.5
cis-1,3-Dichloropropene	ND	1.0	0.5	trans-1,3-Dichloropropene	ND	1.0	0.5
Diisopropyl ether (DIPE)	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5	Freon 113	ND	1.0	10
Hexachlorobutadiene	ND	1.0	0.5	Hexachloroethane	ND	1.0	0.5
2-Hexanone	ND	1.0	0.5	Isopropylbenzene	ND	1.0	0.5
4-Isopropyl toluene	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimeethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes	ND	1.0	0.5

**Surrogate Recoveries (%)**

%SS1:	96	%SS2:	103
%SS3:	98		

**Comments:**

\* 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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.



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Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #581000; Chiu	Date Sampled: 03/04/11
		Date Received: 03/04/11
	Client Contact: Bryan Fong	Date Extracted: 03/08/11
	Client P.O.:	Date Analyzed: 03/08/11

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1103149

Lab ID	1103149-005B						
Client ID	MW-5						
Matrix	Water						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	10	tert-Amyl methyl ether (TAME)	ND	1.0	0.5
Benzene	ND	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MEK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	2.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	Chloroform	3.4	1.0	0.5
Chloromethane	ND	1.0	0.5	2-Chlorotoluene	ND	1.0	0.5
4-Chlorotoluene	ND	1.0	0.5	Dibromochloromethane	ND	1.0	0.5
1,2-Dibromo-3-chloropropane	ND	1.0	0.2	1,2-Dibromoethane (EDB)	ND	1.0	0.5
Dibromomethane	ND	1.0	0.5	1,2-Dichlorobenzene	ND	1.0	0.5
1,3-Dichlorobenzene	ND	1.0	0.5	1,4-Dichlorobenzene	ND	1.0	0.5
Dichlorodifluoromethane	ND	1.0	0.5	1,1-Dichloroethane	ND	1.0	0.5
1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5	1,1-Dichloroethene	ND	1.0	0.5
cis-1,2-Dichloroethene	ND	1.0	0.5	trans-1,2-Dichloroethene	ND	1.0	0.5
1,2-Dichloropropane	ND	1.0	0.5	1,3-Dichloropropane	ND	1.0	0.5
2,2-Dichloropropane	ND	1.0	0.5	1,1-Dichloropropene	ND	1.0	0.5
cis-1,3-Dichloropropene	ND	1.0	0.5	trans-1,3-Dichloropropene	ND	1.0	0.5
Diisopropyl ether (DIPE)	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5	Freon 113	ND	1.0	10
Hexachlorobutadiene	ND	1.0	0.5	Hexachloroethane	ND	1.0	0.5
2-Hexanone	ND	1.0	0.5	Isopropylbenzene	ND	1.0	0.5
4-Isopropyl toluene	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimeethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes	ND	1.0	0.5

### Surrogate Recoveries (%)

%SS1:	96	%SS2:	104
%SS3:	97		

### Comments:

\* 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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.



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Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #581000; Chiu	Date Sampled: 03/04/11
		Date Received: 03/04/11
	Client Contact: Bryan Fong	Date Extracted: 03/08/11
	Client P.O.:	Date Analyzed: 03/08/11

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1103149

Lab ID	1103149-006B						
Client ID	MW-6						
Matrix	Water						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<500	50	10	tert-Amyl methyl ether (TAME)	ND<25	50	0.5
Benzene	1300	50	0.5	Bromobenzene	ND<25	50	0.5
Bromochloromethane	ND<25	50	0.5	Bromodichloromethane	ND<25	50	0.5
Bromoform	ND<25	50	0.5	Bromomethane	ND<25	50	0.5
2-Butanone (MEK)	ND<100	50	2.0	t-Butyl alcohol (TBA)	ND<100	50	2.0
n-Butyl benzene	ND<25	50	0.5	sec-Butyl benzene	ND<25	50	0.5
tert-Butyl benzene	ND<25	50	0.5	Carbon Disulfide	ND<25	50	0.5
Carbon Tetrachloride	ND<25	50	0.5	Chlorobenzene	ND<25	50	0.5
Chloroethane	ND<25	50	0.5	Chloroform	ND<25	50	0.5
Chloromethane	ND<25	50	0.5	2-Chlorotoluene	ND<25	50	0.5
4-Chlorotoluene	ND<25	50	0.5	Dibromochloromethane	ND<25	50	0.5
1,2-Dibromo-3-chloropropane	ND<10	50	0.2	1,2-Dibromoethane (EDB)	ND<25	50	0.5
Dibromomethane	ND<25	50	0.5	1,2-Dichlorobenzene	ND<25	50	0.5
1,3-Dichlorobenzene	ND<25	50	0.5	1,4-Dichlorobenzene	ND<25	50	0.5
Dichlorodifluoromethane	ND<25	50	0.5	1,1-Dichloroethane	ND<25	50	0.5
1,2-Dichloroethane (1,2-DCA)	ND<25	50	0.5	1,1-Dichloroethene	ND<25	50	0.5
cis-1,2-Dichloroethene	ND<25	50	0.5	trans-1,2-Dichloroethene	ND<25	50	0.5
1,2-Dichloropropane	ND<25	50	0.5	1,3-Dichloropropane	ND<25	50	0.5
2,2-Dichloropropane	ND<25	50	0.5	1,1-Dichloropropene	ND<25	50	0.5
cis-1,3-Dichloropropene	ND<25	50	0.5	trans-1,3-Dichloropropene	ND<25	50	0.5
Diisopropyl ether (DIPE)	ND<25	50	0.5	Ethylbenzene	70	50	0.5
Ethyl tert-butyl ether (ETBE)	ND<25	50	0.5	Freon 113	ND<500	50	10
Hexachlorobutadiene	ND<25	50	0.5	Hexachloroethane	ND<25	50	0.5
2-Hexanone	ND<25	50	0.5	Isopropylbenzene	26	50	0.5
4-Isopropyl toluene	ND<25	50	0.5	Methyl-t-butyl ether (MTBE)	ND<25	50	0.5
Methylene chloride	ND<25	50	0.5	4-Methyl-2-pentanone (MIBK)	ND<25	50	0.5
Naphthalene	100	50	0.5	n-Propyl benzene	51	50	0.5
Styrene	ND<25	50	0.5	1,1,1,2-Tetrachloroethane	ND<25	50	0.5
1,1,2,2-Tetrachloroethane	ND<25	50	0.5	Tetrachloroethene	ND<25	50	0.5
Toluene	170	50	0.5	1,2,3-Trichlorobenzene	ND<25	50	0.5
1,2,4-Trichlorobenzene	ND<25	50	0.5	1,1,1-Trichloroethane	ND<25	50	0.5
1,1,2-Trichloroethane	ND<25	50	0.5	Trichloroethene	ND<25	50	0.5
Trichlorofluoromethane	ND<25	50	0.5	1,2,3-Trichloropropane	ND<25	50	0.5
1,2,4-Trimethylbenzene	ND<25	50	0.5	1,3,5-Trimethylbenzene	ND<25	50	0.5
Vinyl Chloride	ND<25	50	0.5	Xylenes	200	50	0.5

### Surrogate Recoveries (%)

%SS1:	98	%SS2:	102
%SS3:	100		

### Comments:

\* 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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.



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Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #581000; Chiu	Date Sampled: 03/04/11
		Date Received: 03/04/11
	Client Contact: Bryan Fong	Date Extracted: 03/07/11-03/08/11
	Client P.O.:	Date Analyzed 03/07/11-03/08/11

## Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline\*

Extraction method SW5030B

Analytical methods SW8015Bm

Work Order: 1103149

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS	Comments
001A	MW-1	W	ND	1	98	
002A	MW-2	W	12,000	10	96	d1
003A	MW-3A	W	35,000	50	109	d1
004A	MW-4	W	ND	1	100	
005A	MW-5	W	ND	1	101	
006A	MW-6	W	3700	10	107	d1

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

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

# cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference. %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

d1) weakly modified or unmodified gasoline is significant



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Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #581000; Chiu	Date Sampled: 03/04/11
		Date Received: 03/04/11
	Client Contact: Bryan Fong	Date Extracted: 03/04/11
	Client P.O.:	Date Analyzed 03/06/11

## Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up\*

Extraction method SW3510C/3630C

Analytical methods: SW8015B

Work Order: 1103149

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS	Comments
1103149-001A	MW-1	W	ND	1	100	
1103149-002A	MW-2	W	2200	1	103	e4
1103149-003A	MW-3A	W	3300	1	102	e4
1103149-004A	MW-4	W	ND	1	100	
1103149-005A	MW-5	W	ND	1	101	
1103149-006A	MW-6	W	410	1	102	e4

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

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

%SS = Percent Recovery of Surrogate Standard. DF = Dilution Factor

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

e4) gasoline range compounds are significant.



## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 56718

WorkOrder 1103149

EPA Method SW8260B		Extraction SW5030B								Spiked Sample ID: 1103149-005B			
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	
tert-Amyl methyl ether (TAME)	ND	10	87.1	86.3	0.931	81.7	80.4	1.57	70 - 130	30	70 - 130	30	
Benzene	ND	10	104	103	0.712	106	106	0	70 - 130	30	70 - 130	30	
t-Butyl alcohol (TBA)	ND	50	98	99.4	1.32	86.7	85.2	1.79	70 - 130	30	70 - 130	30	
Chlorobenzene	ND	10	99.1	97.5	1.72	106	105	1.32	70 - 130	30	70 - 130	30	
1,2-Dibromoethane (EDB)	ND	10	101	98.4	2.66	96.1	93.7	2.57	70 - 130	30	70 - 130	30	
1,2-Dichloroethane (1,2-DCA)	ND	10	107	105	2.23	97.1	95.2	1.92	70 - 130	30	70 - 130	30	
1,1-Dichloroethene	ND	10	103	102	0.590	112	111	1.25	70 - 130	30	70 - 130	30	
Diisopropyl ether (DIPE)	ND	10	109	108	1.01	96.1	94.7	1.51	70 - 130	30	70 - 130	30	
Ethyl tert-butyl ether (ETBE)	ND	10	104	101	2.05	95.3	94.6	0.801	70 - 130	30	70 - 130	30	
Methyl-t-butyl ether (MTBE)	ND	10	107	106	0.825	104	102	1.92	70 - 130	30	70 - 130	30	
Toluene	ND	10	101	99.8	1.27	103	101	1.58	70 - 130	30	70 - 130	30	
Trichloroethylene	ND	10	95.8	93.8	2.10	101	100	0.453	70 - 130	30	70 - 130	30	
%SS1:	96	25	81	81	0	80	80	0	70 - 130	30	70 - 130	30	
%SS2:		104	25	94	95	1.17	84	84	0	70 - 130	30	70 - 130	30
%SS3:		97	2.5	92	94	1.70	83	82	0.869	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 56718 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1103149-001B	03/04/11 11:25 AM	03/08/11	03/08/11 3:07 AM	1103149-002B	03/04/11 4:23 AM	03/08/11	03/08/11 3:47 AM
1103149-003B	03/04/11 9:38 AM	03/08/11	03/08/11 4:26 AM	1103149-003B	03/04/11 9:38 AM	03/08/11	03/08/11 4:57 PM
1103149-004B	03/04/11 3:21 AM	03/08/11	03/08/11 5:04 AM	1103149-005B	03/04/11 7:48 AM	03/08/11	03/08/11 5:44 AM
1103149-006B	03/04/11 8:42 AM	03/08/11	03/08/11 6:22 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.

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.

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



## QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 56692

WorkOrder 1103149

EPA Method SW8021B/8015Bm		Extraction SW5030B								Spiked Sample ID: 1103139-021A			
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	108	111	3.17	92.3	94.3	2.19	70 - 130	20	70 - 130	20	
MTBE	ND	10	115	114	1.13	114	120	4.54	70 - 130	20	70 - 130	20	
Benzene	ND	10	104	105	1.20	106	109	2.36	70 - 130	20	70 - 130	20	
Toluene	ND	10	103	105	2.47	106	106	0	70 - 130	20	70 - 130	20	
Ethylbenzene	ND	10	104	105	1.46	105	105	0	70 - 130	20	70 - 130	20	
Xylenes	ND	30	106	108	1.20	108	108	0	70 - 130	20	70 - 130	20	
%SS:	101	10	98	98	0	98	95	2.88	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 56692 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1103149-001A	03/04/11 11:25 AM	03/07/11	03/07/11 10:21 PM	1103149-002A	03/04/11 4:23 AM	03/08/11	03/08/11 5:47 PM
1103149-003A	03/04/11 9:38 AM	03/07/11	03/07/11 10:53 PM	1103149-004A	03/04/11 3:21 AM	03/07/11	03/07/11 11:25 PM
1103149-005A	03/04/11 7:48 AM	03/07/11	03/07/11 11:58 PM	1103149-006A	03/04/11 8:42 AM	03/08/11	03/08/11 12:30 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.

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.



# 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

## QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 56714

WorkOrder 1103149

EPA Method SW8015B		Extraction SW3510C/3630C								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-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	94.3	91.1	3.50	N/A	N/A	70 - 130	30	
%SS:	N/A	625	N/A	N/A	N/A	101	102	1.41	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 56714 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1103149-001A	03/04/11 11:25 AM	03/04/11	03/06/11 3:23 PM	1103149-002A	03/04/11 4:23 AM	03/04/11	03/06/11 1:07 PM
1103149-003A	03/04/11 9:38 AM	03/04/11	03/06/11 2:15 PM	1103149-004A	03/04/11 3:21 AM	03/04/11	03/06/11 2:55 AM
1103149-005A	03/04/11 7:48 AM	03/04/11	03/06/11 1:47 AM	1103149-006A	03/04/11 8:42 AM	03/04/11	03/06/11 7:27 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.

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

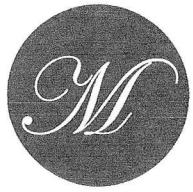
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification 1644

 QA/QC Officer

## APPENDIX C

### FIELD DATA SHEETS



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## **WELL GAUGING SHEET**

**Client:** Conestoga-Rovers and Associates

PG 1 of 1

## Site

**Address:** 800 Franklin Street, Oakland, CA

Date: 3/4/2011

**Signature:**



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## MICRO PURGE WELL SAMPLING FORM

Date: 3/4/2011

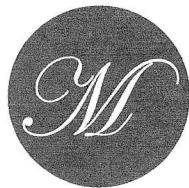
Client: Conestoga-Rovers and Associates

Site Address: 800 Franklin Street, Oakland, CA

Well ID:	MW-1
Well Diameter:	2"
Purging Device:	Peristaltic Pump
Sampling Method:	Peristaltic Pump
Total Well Depth from top of casing:	33.32
Water level at the start of purge from top of casing:	22.10
Approximate depth of water intake on pump from top of casing:	27.0

TIME:	Purged Rate (ml/min)	TEMP (Celsius)	pH	COND. (µS/cm)	ORP (mV)	DO (mg/L)	Drawdown Water Level (ft)	Turbidity (NTU)	Comments
11:06	100	--	--	--	--	--	22.10	—	
11:09	100	16.9	7.18	1410	13	1.18	22.13	45.9	
11:12	100	16.6	7.14	1407	9	1.02	22.15	45.4	
11:15	100	16.3	7.14	1401	8	1.02	22.15	58.1	
11:18	100	16.3	7.06	1401	8	0.98	22.16	52.6	
11:21	100	16.2	7.05	1399	6	0.98	22.16	51.3	
11:24	100	16.2	7.05	1399	5	0.98	22.17	53.2	
									total purge volume = 1800 ml
Sample ID:	Date:	Time	Container Type	Preservative	Analytes	Method			
MW-1	3/4/11	11:25	40 ml VOA, 1 L Amber Glass	HCl	see COC	8015, 8021, 8260			

Signature:



## MICRO PURGE WELL SAMPLING FORM

Date:	3/4/2011								
Client:	Conestoga-Rovers and Associates								
Site Address:	800 Franklin Street, Oakland, CA								
		Well ID:	<b>MN-2</b>						
		Well Diameter:	<b>2"</b>						
		Purging Device:	Peristaltic Pump						
		Sampling Method:	Peristaltic Pump						
		Total Well Depth from top of casing:	<b>34.15</b>						
		Water level at the start of purge from top of casing:	<b>21.87</b>						
		Approximate depth of water intake on pump from top of casing:	<b>27.0</b>						
TIME:	Purged Rate (ml/min)	TEMP (Celsius)	pH	COND. ( $\mu\text{S}/\text{cm}$ )	ORP (mV)	DO (mg/L)	Drawdown Water Level (ft)	Turbidity (NTU)	Comments
4:07	100	--	--	--	-1	1.17	21.87	26.7	
4:10	100	18.6	7.21	1419	3	1.02	21.88	26.7	
4:13	100	18.4	7.20	1420	5	0.90	21.88	26.4	
4:16	100	18.2	7.21	1421	5	0.90	21.89	26.4	
4:19	100	18.2	7.20	1424	6	0.90	21.89	26.1	
4:22	100	18.2	7.20	1424	6	0.89	21.89	26.1	
									total purge volume = 1500 ml
Sample ID:	Date:	Time	Container Type	Preservative		Analytes	Method		
MN-2	3/4/11	4:23	40 ml VOA, 1 L Amber Glass	HCl	see COC		8015, 8021, 8260		

Signature:



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## MICRO PURGE WELL SAMPLING FORM

Date: 3/4/2011

Client: Conestoga-Rovers and Associates

Site Address: 800 Franklin Street, Oakland, CA

Well ID: MW-3A

Well Diameter: 4"

Purging Device: Peristaltic Pump

Sampling Method: Peristaltic Pump

Total Well Depth from top of casing: 34.24

Water level at the start of purge from top of casing: 22.60

Approximate depth of water intake on pump from top of casing: 27.0

TIME:	Purged Rate (ml/min)	TEMP (Celsius)	pH	COND. (µS/cm)	ORP (mV)	DO (mg/L)	Drawdown Water Level (ft)	Turbidity (NTU)	Comments	
9:22	100	--	--	--	--	--	22.60	—		
9:25	100	16.1	7.02	1020	-123	1.76	22.62	22.6		
9:28	100	16.9	7.00	1016	-130	0.65	22.64	22.9		
9:31	100	16.9	6.94	1013	-132	0.34	22.64	22.7		
9:34	100	16.9	6.92	1012	-130	0.32	22.64	22.6		
9:37	100	16.9	6.92	1010	-130	0.32	22.64	22.6		
									total purge volume = 1500 ml	
Sample ID:	Date:	Time	Container Type	Preservative	Analytes	Method				
MW-3A	3/4/11	9:38	40 ml VOA, 1 L Amber Glass	HCl	see COC	8015, 8021, 8260				

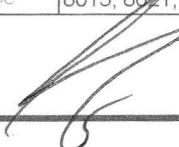
Signature:

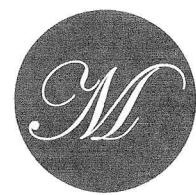




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SAMPLING

## MICRO PURGE WELL SAMPLING FORM

Date:	3/4/2011								
Client:	Conestoga-Rovers and Associates								
Site Address:	800 Franklin Street, Oakland, CA								
								Well ID:	MW-5
								Well Diameter:	2"
								Purging Device:	Peristaltic Pump
								Sampling Method:	Peristaltic Pump
								Total Well Depth from top of casing:	34.61
								Water level at the start of purge from top of casing:	22.60
								Approximate depth of water intake on pump from top of casing:	27.0
TIME:	Purged Rate (ml/min)	TEMP (Celsius)	pH	COND. (µS/cm)	ORP (mV)	DO (mg/L)	Drawdown Water Level (ft)	Turbidity (NTU)	Comments
7:32	100	--	--	--	--	--	22.60	29.3	
7:35	100	16.0	7.62	489	-34	6.74	22.60	29.3	
7:38	100	16.0	7.54	481	-30	2.75	22.60	29.6	
7:41	100	15.8	7.44	476	-2	2.08	22.61	29.1	
7:44	100	15.7	7.43	474	-1	2.08	22.61	29.5	
7:47	100	15.7	7.43	474	-1	2.03	22.61	29.2	
									total purge volume = 1500 ml
Sample ID:	Date:	Time	Container Type		Preservative		Analytes	Method	
MW-5	3/4/11	7:48	40 ml VOA, 1 L Amber Glass		HCl		see COC	8015, 8021, 8260	
Signature: 									



## MICRO PURGE WELL SAMPLING FORM

Date:	3/4/2011								
Client:	Conestoga-Rovers and Associates								
Site Address:	800 Franklin Street, Oakland, CA								
	Well ID: MN-6								
	Well Diameter: 2"								
	Purging Device: Peristaltic Pump								
	Sampling Method: Peristaltic Pump								
	Total Well Depth from top of casing: 32.88								
	Water level at the start of purge from top of casing: 22.78								
	Approximate depth of water intake on pump from top of casing: 27.0								
TIME:	Purged Rate (ml/min)	TEMP (Celsius)	pH	COND. (µS/cm)	ORP (mV)	DO (mg/L)	Drawdown Water Level (ft)	Turbidity (NTU)	Comments
8:26	100	--	--	--	--	--	22.78	—	
8:29	100	16.4	6.95	1713	-21	1.30	22.79	25.7	
8:32	100	16.6	6.88	1710	-26	1.21	22.80	25.1	
8:35	100	16.9	6.85	1704	-3	0.41	22.81	25.9	
8:38	100	16.9	6.85	1704	0	0.40	22.81	25.7	
8:41	100	16.9	6.84	1702	0	0.40	22.81	22.3	
									total purge volume = 1500 ml
Sample ID:	Date:	Time	Container Type		Preservative		Analytes	Method	
MN-6	3/4/11	8:42	40 ml VOA, 1 L Amber Glass		HCl		see COC	8015, 8021, 8260	
Signature: 									

APPENDIX D

WASTE MANIFESTS

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number <b>NOT REQUIRED</b>	2. Page 1 of 1	3. Emergency Response Phone <b>888-423-6060</b>	4. Waste Tracking Number <b>215082</b>	
	Generator's Site Address (if different than mailing address) <b>Chiu</b> <b>800 Franklin St.</b> <b>Oakland, CA 94607</b>				
5. Generator's Name and Mailing Address <b>Chiu</b> <b>5900 Hollis Street, Suite A</b> <b>Emeryville, CA 94608</b>	Generator's Site Address (if different than mailing address) <b>Chiu</b> <b>800 Franklin St.</b> <b>Oakland, CA 94607</b>				
Generator's Phone					
6. Transporter 1 Company Name <b>American Integrated Services, Inc.</b>	U.S. EPA ID Number <b>CAR000148338</b>				
7. Transporter 2 Company Name	U.S. EPA ID Number				
8. Designated Facility Name and Site Address <b>Crosby &amp; Overton, Inc.</b> <b>1630 W. 16th Street</b>	U.S. EPA ID Number <b>CADD2B400019</b>				
Facility's Phone: <b>Long Beach, CA 90813 562-432-5445</b>					
9a. 9b. U.S. DOT Description (including Proper Shipping Name)	10. Containers		11. Total Quantity <b>5</b>	12. Unit Wt./Vol. <b>G</b>	
	No.	Type			
	1. <b>Non-Hazardous Waste Liquid</b>	<b>1</b>			<b>DM</b>
	2.				
	3.				
4.					
13. Special Handling Instructions and Additional Information <b>Wear protective equipment while handling. Weights or volumes are approximate. 24 hour emergency number (888) 423-6060 (AIS Dispatcher).</b>	<b>Profile #: 27578</b> <b>Project #: 71006-2-25</b>				
14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.					
Generator's/Offeree's Printed/Typed Name <b>Bryan A. Fong Agent for Chiu</b>	Signature 		Month <b>13</b>	Day <b>4</b>	Year <b>11</b>
15. International Shipments <input type="checkbox"/> Import to U.S.	<input type="checkbox"/> Export from U.S.	Port of entry/exit: Date leaving U.S.:			
Transporter Signature (for exports only): 					
16. Transporter Acknowledgement of Receipt of Materials					
Transporter 1 Printed/Typed Name <b>Isaac Salcedo</b>	Signature 		Month <b>13</b>	Day <b>4</b>	Year <b>11</b>
Transporter 2 Printed/Typed Name	Signature		Month	Day	Year
17. Discrepancy					
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
Manifest Reference Number:					
17b. Alternate Facility (or Generator)	U.S. EPA ID Number				
Facility's Phone:					
17c. Signature of Alternate Facility (or Generator)	Month Day Year				
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a					
Printed/Typed Name	Signature		Month	Day	Year