With respect to:

Groundwater Monitoring Report-Second Half 2013
Dated November 15, 2013
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.

RECEIVED
By Alameda County Environmental Health at 3:19 pm, Nov 25, 2013

Tommy Chiu
Mr. Tommy Chiu

11/13/13
Date

CONESTOGA-ROVERS & ASSOCIATES

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

TRANSMITTAL

DATE: November 15, 2013 **REFERENCE NO.:** 581000

PROJECT NAME: 800 Franklin Street, Oakland

TO: Mr. Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California
94502-6577

Please find enclosed:
- ☐ Draft
- ☐ Originals
- ☐ Prints
- ☒ Final
- ☐ Other

Sent via:
- ☐ Mail
- ☐ Overnight Courier
- ☐ Same Day Courier
- ☒ Other Geotracker and ACEH ftp uploads

QUANTITY	DESCRIPTION
1	GROUNDWATER MONITORING REPORT – SECOND HALF 2013

- ☐ As Requested
- ☐ For Your Use
- ☒ For Review and Comment
- ☐
- ☐

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**

GROUNDWATER MONITORING REPORT – SECOND HALF 2013

CHIU PROPERTY
800 FRANKLIN STREET
OAKLAND, CALIFORNIA

AGENCY CASE NO. RO0000196

Prepared by:
Conestoga-Rovers & Associates

5900 Hollis Street, Suite A
Emeryville, California
U.S.A. 94608

Office: (510) 420-0700
Fax: (510) 420-9170

web: http://www.CRAworld.com

NOVEMBER 15, 2013
REF. NO. 581000 (16)

Table of Contents

List of Figures
(Following Text)

List of Tables
(Following Text)

List of Appendices

Section 1.0 Introduction

On behalf of Mr. Tommy Chiu, Conestoga-Rovers & Associates, Inc. (CRA) is submitting this *Groundwater Monitoring Report – Second Half 2013*. This report presents a summary of groundwater monitoring and sampling event activities conducted during the Second Half 2013, analytical results of samples collected during this event, as well as activities anticipated to occur during the upcoming First Half of 2014 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

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

Section 2.0 Site Activities and Results

2.1 Current Sampling Event Activities

On September 19, 2013, Confluence Environmental, Inc. (Confluence) conducted groundwater monitoring and sampling activities at the subject Site. Confluence measured water levels in wells MW-1, MW-2, MW-3A, and MW-5 through MW-7, and collected groundwater samples from monitoring wells MW-2, MW-3A, MW-6, and MW-7 (**Figure 2**). MW-4 was not accessible during this event, therefore, no depth to water measurements were collected from this well. Well construction details are provided in **Table 1**. CRA's *Standard Field Procedures for Groundwater Monitoring and Sampling* is presented as **Appendix A**. The laboratory analytical reports 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-water 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. Depth to groundwater and groundwater elevation data are presented in **Table 2**.

2.1.2 Groundwater Sampling

Confluence collected samples from wells MW-2, MW-3A, MW-6, and MW-7 during the Second Half 2013 event. Field activities associated with groundwater sampling included low-flow well purging, measuring groundwater parameters, and sample collection.

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 water was measured prior to, during, and at the termination of low-flow purging, and also immediately prior to sample collection. Temperature, pH, 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, included as **Appendix C**.

Groundwater samples were collected from each well using the 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 McCampbell, 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 tubing for the peristaltic pump was discarded after use at each well.

2.1.4 Sample Analysis

Groundwater samples collected during the Second Half event were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and TPH as diesel (TPHd) by modified Environmental Protection Agency (EPA) Method SW8015Bm, and benzene, toluene, ethylbenzene and total xylenes (BTEX) and methyl tertiary-butyl ether (MTBE) by EPA Method SW8021B. Based on the lack of historical detections of chloroform and 1,2-dichloroethane (1,2-DCA), these analyses have been eliminated from the monitoring program.

2.2 Second Half 2013 Monitoring/Sampling Event Results

Groundwater Flow Direction	Northwest
Hydraulic Gradient	0.005
Measured Groundwater Depth from Top of Casing in Monitoring Wells	22.68 to 23.65 feet
Were Measureable Separate Phase Hydrocarbons Observed	No

2.2.1 Groundwater Flow Direction and Gradient

Depth-to-water measurements collected on September 19, 2013 ranged from 22.68 to 23.65 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 flow direction was calculated toward the northwest at a gradient of 0.005. 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

Hydrocarbon concentrations were detected in wells MW-2, MW-3A, and MW-6 during the Second Half 2013.

- TPHg was detected in wells MW-2, MW-3A, and MW-6 at concentrations ranging from 8,500 micrograms per liter (μg/L) in MW-6 to 31,000 μg/L in MW-3A.
- Benzene concentrations were detected in wells MW-2, MW-3A, and MW-6 at concentrations ranging from 1,900 μg/L in MW-2 to 3,200 μg/L in both MW-3A and MW-6.
- Toluene, ethylbenzene and xylenes were detected in wells MW-2, MW-3A, and MW-6 at varying concentrations and are presented on **Table 2**.
- Diesel-range hydrocarbons (TPHd) were detected in samples from wells MW-2, MW-3A, and MW-6 at concentrations of 2,300, 3,100 and 1,100 μg/L, respectively. The analytical notes specify that gasoline range compounds are significant.
- No MTBE was detected above laboratory reporting limits in any of the wells.

Elevated hydrocarbon concentrations in groundwater continue to exist in the vicinity of the former USTs. Concentrations detected in MW-6 also increased by several orders of magnitude this event, however, no hydrocarbon concentrations were detected in downgradient well MW-7 for the fifth consecutive event, indicating that the plume is stable and confined to the monitoring well network. The

analytical results are provided in **Table 2**. The laboratory analytical report and sample chain-of-custody (COC) documents are presented as **Appendix B**

2.2.3 GeoTracker Submittal

CRA uploaded relevant data from the Second Half 2013 monitoring event to the GeoTracker database.

2.3 Proposed Activites For the First Half 2014

The subject site will be monitored again during the First Half 2014. CRA will measure water levels in wells MW-1 through MW-7 and collect groundwater samples from MW-2, MW-3A, MW-6 and MW-7. These four groundwater samples will be analyzed for TPHd with silica gel cleanup, TPHg by modified EPA Method SW8015Bm, and MTBE and BTEX by modified EPA Method SW8021B. The First Half 2014 monitoring and sampling activities, and analytical results will be reported in the upcoming *Groundwater Monitoring Report – First Half 2014.*

All of Which is Respectfully Submitted,

CONESTOGA-ROVERS & ASSOCIATES

Bryan A. Fong

Robert Foss, P.G.

Figures

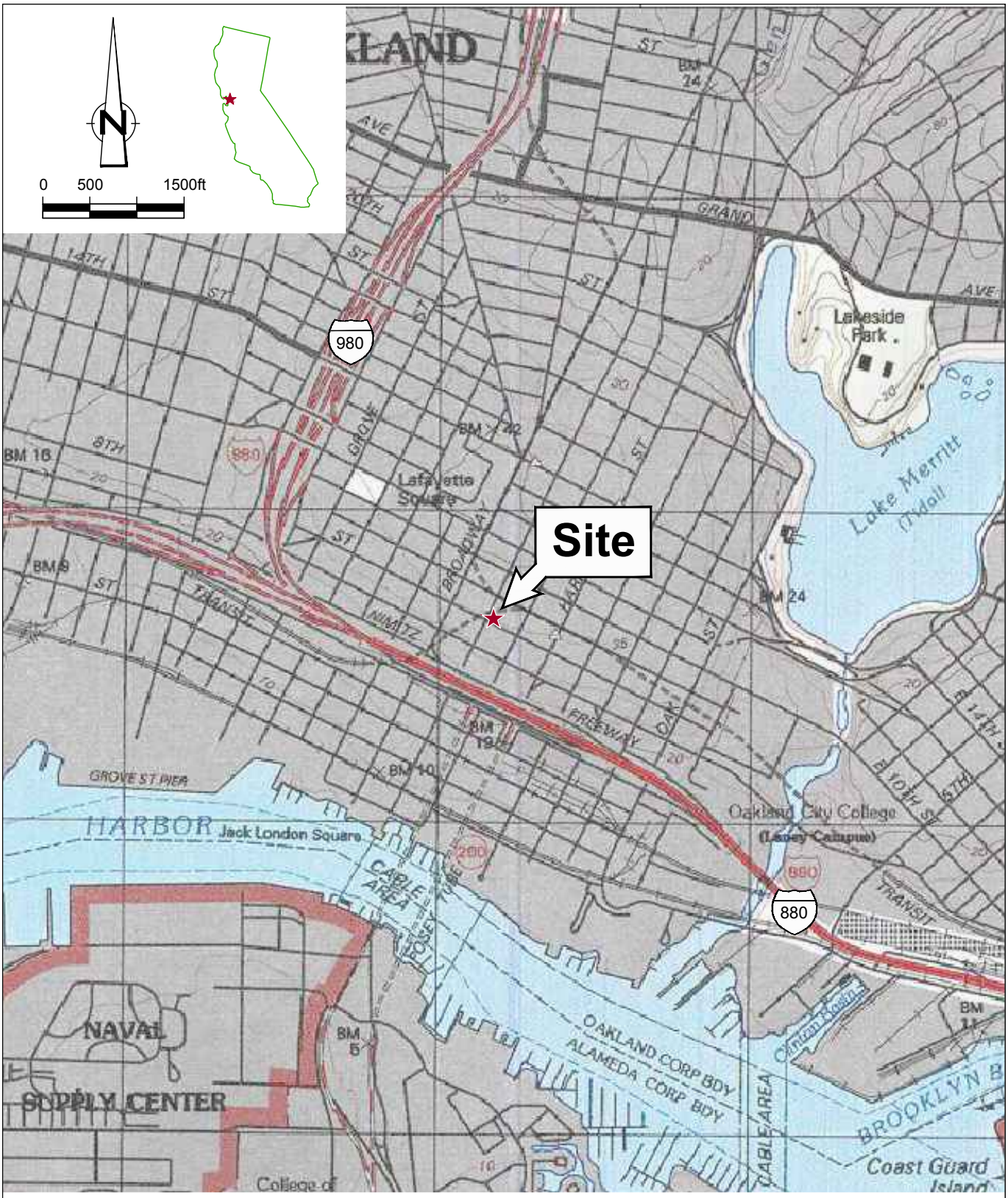

Figure 1

VICINITY MAP
CHIU PROPERTY
800 FRANKLIN STREET
Oakland, California

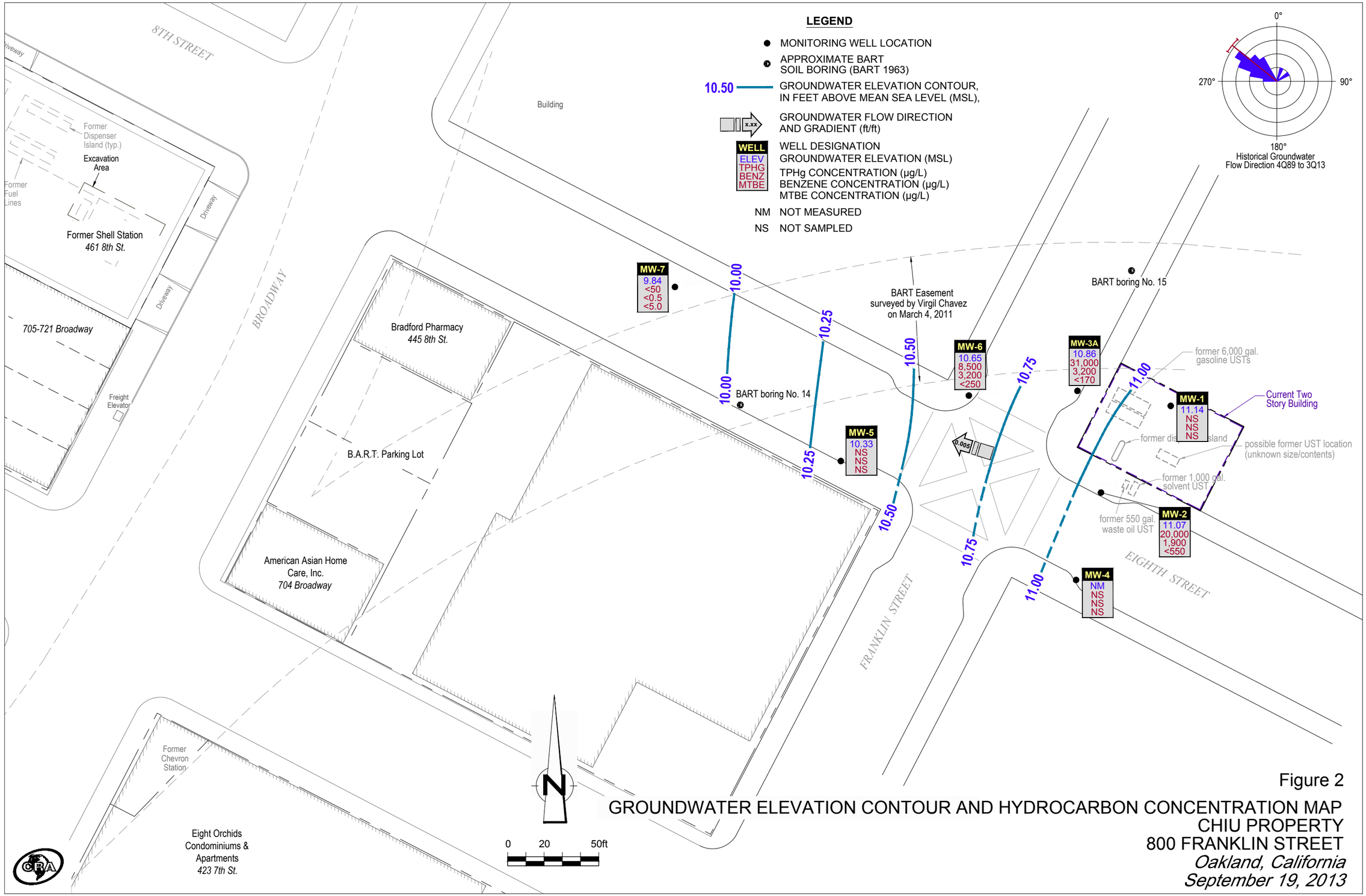

Figure 2

GROUNDWATER ELEVATION CONTOUR AND HYDROCARBON CONCENTRATION MAP
CHIU PROPERTY
800 FRANKLIN STREET
Oakland, California
September 19, 2013

581000-2013(016)GN-EM002 11/12/13

Tables

TABLE 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
MW-7	5/23/2012	35.0	8.0	2	18.0 - 35.0	0.010	16.0 - 35.0	14.0 - 16.0	0 - 14.0	33.49

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

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*	*Xylenes*	*MTBE*	*Chloroform*	*1,2-DCA*
				←					*µg/L*				→
MW-1	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	--	--
	9/28/2004É	--	--	--	--	--	--	--	--	--	--	--	--
	12/21/2004	22.93	11.05	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--
	3/11/2005É	--	--	--	--	--	--	--	--	--	--	--	--
	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
	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	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)	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
	8/22/2011	22.23	11.75	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
	3/5/2012	22.61	11.37	ND<50	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--
	9/27/2012	22.31	11.67	ND<50	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--
	3/25/2013	22.20	11.78	--	--	--	--	--	--	--	--	--	--
	9/19/2013	**22.84**	**11.14**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-2	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

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	Xylenes	MTBE	Chloroform	1,2-DCA
				←					µg/L				→
MW-2 *(cont.)*	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	--	--	--
	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
	8/22/2011	22.04	11.71	7,900 (a)	1,300 (d)	--	(320)	(270)	(170)	(1,400)	(ND<12)	ND<0.5	ND<12
	3/5/2012	22.32	11.43	18,000(a)	1,400 (d)	--	1,200	930	560	2,100	ND<500	--	--
	9/27/2012	22.16	11.59	6,300 (a)	690 (d)	--	410	290	130	830	ND<70	--	--
	3/25/2013	22.01	11.74	9,200 (a)	900 (d)	--	820	440	280	1,200	ND<250	--	--
	9/19/2013	**22.68**	**11.07**	**20,000 (a)**	**2,300 (d)**	**--**	**1,900**	**2,200**	**630**	**3,100**	**ND<550**	**--**	**--**
MW-3	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	--	--	--

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	Xylenes	MTBE	Chloroform	1,2-DCA
				←					µg/L				→
MW-3 ***(cont.)***	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	--	--	--	--	--	--	--	--	--	--
	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.*						
MW-3A	1/29/2007						***MW-3A replaces MW-3***						
34.16	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
	8/22/2011	22.71	11.45	42,000 (a)	2,700 (d)	--	(5,700)	(6,300)	(1,800)	(7,800)	(ND<120)	ND<0.5	ND<120
	3/5/2012	22.99	11.17	49,000(a)	1500 (d)	--	4,400	2,800	1,900	8,200	ND<800	--	--
	9/27/2012	22.85	11.31	51,000 (a)	3,200 (d)	--	5,100	4,000	2,000	8,300	ND<800	--	--
	3/25/2013	22.72	11.44	43,000 (a)	2,900 (d)	--	4,200	2,700	1,700	6,300	ND<250	--	--
	9/19/2013	**23.30**	**10.86**	**31,000 (a)**	**3,100 (d)**	**--**	**3,200**	**2,100**	**1,500**	**6,200**	**ND<170**	**--**	**--**
MW-4	10/31/1991	--	--	ND<50	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	2.6	ND
33.64	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	--	--	--

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	Xylenes	MTBE	Chloroform	1,2-DCA
				←					µg/L				→
MW-4 ***(cont.)***	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	--	--
	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)	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
	8/22/2011	21.92	11.81	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
	3/5/2012	22.34	11.39	ND<50	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--
	9/27/2012	21.98	11.75	ND<50	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--
	3/25/2013	21.95	11.78	--	--	--	--	--	--	--	--	--	--
	9/19/2013	←						**Inaccessible**					→
MW-5	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	--	--	--	--	--	--	--	--	--	--

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	Xylenes	MTBE	Chloroform	1,2-DCA
				←					µg/L				→
MW-5 ***(cont.)***	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	1.5	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<0.5	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<0.5	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<0.5	17	ND<0.5
	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
33.67	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
	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
	8/22/2011	22.63	11.04	ND<50	ND<50	--	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	(ND<0.5)	1.9	ND<0.5
	3/5/2012	22.94	10.73	ND<50	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--
	9/27/2012	22.75	10.92	ND<50	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--
	3/25/2013	22.73	10.94	--	--	--	--	--	--	--	--	--	--
	9/19/2013	**23.34**	**10.33**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-6	5/21/1997	--	11.26	760	--	--	2.5	1.7	ND<0.50	25	10	--	--
33.98	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
	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
34.05	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

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*	*Xylenes*	*MTBE*	*Chloroform*	*1,2-DCA*
				←					*µg/L*				→
MW-6 (cont.)	3/4/2011	22.78	11.27	3,700 (a)	410 (d)	--	(1,300)	(170)	(70)	(200)	(ND<25)	ND<25	ND<25
	8/22/2011	22.85	11.20	490 (a)	120 (b,d)	--	(190)	(ND<5.0)	(ND<5.0)	(ND<5.0)	(ND<5.0)	0.86	ND<5.0
	3/5/2012	23.16	10.89	190 (a)	65 (b,d)	--	38	2.7	1.4	7.3	ND<15	--	--
	9/27/2012	22.91	11.14	79 (a)	ND<50	--	11	ND<0.5	ND<0.5	0.90	ND<5.0	--	--
	3/25/2013	22.87	11.18	59 (a)	ND<50	--	12	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--
	9/19/2013	**23.40**	**10.65**	**8,500 (a)**	**1,100 (d)**	**--**	**3,200**	**48**	**52**	**92**	**ND<250**	**--**	**--**
MW-7	6/25/2012	22.98	10.51	ND<50	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--
33.49	9/27/2012	23.22	10.27	ND<50	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--
	12/4/2012	23.46	10.03	ND<50	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--
	3/25/2013	23.19	10.30	ND<50	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	--	--
	9/19/2013	**23.65**	**9.84**	**ND<50**	**ND<50**	**--**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**ND<5.0**	**--**	**--**
Grab Groundwater													
B-7	3/11/2011	--	--	ND<50 (i)	--	--	ND<0.5	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	ND<0.5	--	--	--
B-9	3/12/2011	--	--	ND<50 (i)	--	--	ND<0.5	3.0	ND<0.5	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.
(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.

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"

Analytical Report

WorkOrder: 1309622

Report Created for: Conestoga-Rovers & Associates
5900 Hollis St, Suite A
Emeryville, CA 94608

Project Contact: Bryan Fong
Project P.O.:
Project Name: #EI-130919; 800 Franklin St, Oakland

Project Received: 09/20/2013

Analytical Report reviewed & approved for release on 09/26/2013 by:

Question about your data?

Click here to email McCampbell

Angela Rydelius,
Laboratory Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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

Glossary of Terms & Qualifier Definitions

Client: Conestoga-Rovers & Associates
Project: #EI-130919; 800 Franklin St, Oakland
WorkOrder: 1309622

Glossary Abbreviation	Description
95% Interval	95% Confident Interval
DF	Dilution Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
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.
RL	Reporting Limit
RPD	Relative Percent Deviation
SPK Val	Spike Value
SPKRef Val	Spike Reference Value

Analytical Qualifier	
d1	weakly modified or unmodified gasoline is significant
e4	gasoline range compounds are significant.

McCampbell Analytical, Inc.
"When Quality Counts"

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

Analytical Report

Client:	Conestoga-Rovers & Associates	**WorkOrder:**	1309622
Project:	#EI-130919; 800 Franklin St, Oakland	**Extraction Method**	SW5030B
Date Received:	9/20/13 20:57	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	9/23/13-9/25/13	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-2	**1309622-001A**	**Water**	**09/19/2013 07:35**	**GC3**	**82038**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**20,000**	500	10	09/23/2013 22:58
MTBE	ND	550	10	09/23/2013 22:58
Benzene	**1900**	5.0	10	09/23/2013 22:58
Toluene	**2200**	5.0	10	09/23/2013 22:58
Ethylbenzene	**630**	5.0	10	09/23/2013 22:58
Xylenes	**3100**	5.0	10	09/23/2013 22:58

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT	112	70-130		09/23/2013 22:58

MW-6	1309622-002A	Water	09/19/2013 08:25	GC3	82038

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**8500**	1000	20	09/25/2013 02:15
MTBE	ND	250	20	09/25/2013 02:15
Benzene	**3200**	10	20	09/25/2013 02:15
Toluene	**48**	10	20	09/25/2013 02:15
Ethylbenzene	**52**	10	20	09/25/2013 02:15
Xylenes	**92**	10	20	09/25/2013 02:15

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT	106	70-130		09/25/2013 02:15

MW-7	1309622-003A	Water	09/19/2013 09:10	GC3	82038

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	09/24/2013 21:50
MTBE	ND	5.0	1	09/24/2013 21:50
Benzene	ND	0.50	1	09/24/2013 21:50
Toluene	ND	0.50	1	09/24/2013 21:50
Ethylbenzene	ND	0.50	1	09/24/2013 21:50
Xylenes	ND	0.50	1	09/24/2013 21:50

Surrogates	REC (%)	Limits	
aaa-TFT	102	70-130	09/24/2013 21:50

(Cont.)

McCampbell Analytical, Inc.
"When Quality Counts"

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

Analytical Report

Client:	Conestoga-Rovers & Associates	**WorkOrder:**	1309622
Project:	#EI-130919; 800 Franklin St, Oakland	**Extraction Method**	SW5030B
Date Received:	9/20/13 20:57	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	9/23/13-9/25/13	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-3A	**1309622-004A**	**Water**	**09/19/2013 10:00**	**GC3**	**82038**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**31,000**	1700	33	09/25/2013 03:15
MTBE	ND	170	33	09/25/2013 03:15
Benzene	**3200**	17	33	09/25/2013 03:15
Toluene	**2100**	17	33	09/25/2013 03:15
Ethylbenzene	**1500**	17	33	09/25/2013 03:15
Xylenes	**6200**	17	33	09/25/2013 03:15

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT	111	70-130		09/25/2013 03:15

McCampbell Analytical, Inc.
"When Quality Counts"

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

Analytical Report

Client:	Conestoga-Rovers & Associates	**WorkOrder:**	1309622
Project:	#EI-130919; 800 Franklin St, Oakland	**Extraction Method**	SW3510C/3630C
Date Received:	9/20/13 20:57	**Analytical Method:**	SW8015B
Date Prepared:	9/20/13	**Unit:**	µg/L

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-2	**1309622-001A**	**Water**	**09/19/2013 07:35**	**GC6B**	**81937**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**2300**	50	1	09/25/2013 04:15

Surrogates	REC (%)	Limits	Analytical Comments: e4	
C9	111	70-130		09/25/2013 04:15

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-6	**1309622-002A**	**Water**	**09/19/2013 08:25**	**GC6B**	**81937**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**1100**	50	1	09/25/2013 05:27

Surrogates	REC (%)	Limits	Analytical Comments: e4	
C9	112	70-130		09/25/2013 05:27

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-7	**1309622-003A**	**Water**	**09/19/2013 09:10**	**GC6B**	**81937**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	09/25/2013 00:38

Surrogates	REC (%)	Limits		
C9	109	70-130		09/25/2013 00:38

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-3A	**1309622-004A**	**Water**	**09/19/2013 10:00**	**GC6B**	**81937**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**3100**	50	1	09/25/2013 03:03

Surrogates	REC (%)	Limits	Analytical Comments: e4	
C9	104	70-130		09/25/2013 03:03

McCampbell Analytical, Inc.
"When Quality Counts"

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

Quality Control Report

Client:	Conestoga-Rovers & Associates	**WorkOrder:**	1309622
Date Prepared:	9/20/13	**BatchID:**	81937
Date Analyzed:	9/20/13	**Extraction Method**	SW3510C/3630C
Instrument:	GC11B	**Analytical Method:**	SW8015B
Matrix:	Water	**Unit:**	µg/L
Project:	#EI-130919; 800 Franklin St, Oakland	**Sample ID:**	MB/LCS-81937

QC SUMMARY REPORT FOR SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	1101	50	1000	-	110	70-130
Surrogate Recovery							
C9	668.2	631.6		625	107	101	70-130

(Cont.)

McCampbell Analytical, Inc.
"When Quality Counts"

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

Quality Control Report

Client:	Conestoga-Rovers & Associates	**WorkOrder:**	1309622
Date Prepared:	9/23/13	**BatchID:**	82038
Date Analyzed:	9/23/13	**Extraction Method**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	#EI-130919; 800 Franklin St, Oakland	**Sample ID:**	MB/LCS-82038 1309631-005AMS/MSD

QC SUMMARY REPORT FOR SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	58.1	40	60	-	96.8	70-130
MTBE	ND	10.1	5.0	10	-	101	70-130
Benzene	ND	10.3	0.50	10	-	103	70-130
Toluene	ND	10.46	0.50	10	-	105	70-130
Ethylbenzene	ND	10.45	0.50	10	-	104	70-130
Xylenes	ND	31.73	0.50	30	-	106	70-130
Surrogate Recovery							
aaa-TFT	9.738	9.582		10	97	96	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	57.18	50.25	60	ND	95.3	83.7	70-130	12.9	20
MTBE	10.47	10.4	10	ND	105	104	70-130	0.666	20
Benzene	10.8	10.44	10	ND	108	104	70-130	3.47	20
Toluene	10.94	10.53	10	ND	108	104	70-130	3.86	20
Ethylbenzene	10.78	10.36	10	ND	108	104	70-130	4.01	20
Xylenes	32.63	31.37	30	ND	109	105	70-130	3.96	20
Surrogate Recovery									
aaa-TFT	10.13	9.74	10		101	97	70-130	3.94	20

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1309622 **ClientCode: CETE**

☐ WaterTrax ☐ WriteOn ☑ EDF ☐ Excel ☐ EQuIS ☑ 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: #EI-130919; 800 Franklin St, Oakland

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

Requested TAT: 5 days

Date Received: **09/20/2013**
Date Printed: **09/20/2013**

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
1309622-001	MW-2	Water	9/19/2013 7:35	☐	A	A	A									
1309622-002	MW-6	Water	9/19/2013 8:25	☐	A		A									
1309622-003	MW-7	Water	9/19/2013 9:10	☐	A		A									
1309622-004	MW-3A	Water	9/19/2013 10:00	☐	A		A									

Test Legend:

1	G-MBTEX_W	2	PREDF REPORT	3	TPH(D)WSG_W	4		5	
6		7		8		9		10	
11		12							

Prepared by: Daniel Loa

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.

1309622

Confluence Environmental, Inc.
3308 El Camino Ave, Suite 300 # 148
Sacramento, CA 95821
916-760-7641 - main
916-473-8617 - fax
www.confluence-env.com

Chain of Custody

Project Name: 800 Franklin St, Oakland

Job Number: E/-130959

TAT: (STANDARD) 5 DAY 2 DAY 24 HOUR OTHER:

Lab: McCampbell	Site Address: 800 Franklin St, Oakland	Confluence PM: Jason Brown
Address: 1534 Willow Pass Rd, Pittsburg, CA 94565	California Global ID No.: T0600100050	Phone / Fax: 916-760-7641 / 916-473-8617
Contact:	Include EDF w/ Report: (Yes) No	Confluence Log Code: CESC
Phone/ Fax: 925-252-9262	Consultant / PM: CRA / Bryan Fong	Report to: Bryan Fong
	Phone / Fax: 510-385-0509	Invoice to: CRA

	Sample ID	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: NaOH	Requested Analysis: TPH-G (8015)	Requested Analysis: BTEX, MTBE* (8021)	Requested Analysis: TPH-D w/ sgc	Notes and Comments
✓	MW-2	735	9/19/13		2			6	2			4		X	X	X	
✓	MW-6	825	"		2			6	2			4		X	X	X	
✓	MW-7	910	"		2			6	2			4		X	X	X	
✓	MW-3A	1000	"		2			6	2			4		X	X	X	

ICE/T 4.7
GOOD CONDITION ____ APPROPRIATE
HEAD SPACE ABSENT ____ CONTAINERS ____
DECHLORINATED IN LAB ____ PRESERVED IN LAB ____
VOAS | O&G | METALS | OTHER
PRESERVATION ____

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Eric Mors						
Sampler's Company: Confluence Environmental		9-20	1400		9-20	1400
Shipment Date:			1635		9/20	1635
Shipment Method:						

Special Instructions: *Confirm MTBE by 8260

McCampbell Analytical, Inc.
"When Quality Counts"

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

Sample Receipt Checklist

Client Name: **Conestoga-Rovers & Associates**
Date and Time Received: **9/20/2013 8:57:14 PM**

Project Name: **#EI-130919; 800 Franklin St, Oakland**
LogIn Reviewed by: Daniel Loa

WorkOrder N°: **1309622** Matrix: Water
Carrier: Tim Tatum (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 4.7°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Comments:

Appendix C

FIELD DATA SHEETS

Confluence Environmental, Inc.
3308 El Camino Ave, Suite 300 #148
Sacramento, CA 95821
916-760-7641 - main
916-473-8617 - fax
www.confluence-env.com

Chain of Custody

Project Name: 800 Franklin St, Oakland

Job Number: E1-130919

TAT: (STANDARD) 5 DAY 2 DAY 24 HOUR OTHER:

Lab: McCampbell	Site Address: 800 Franklin St, Oakland	Confluence PM: Jason Brown
Address: 1534 Willow Pass Rd, Pittsburg, CA 94565	California Global ID No.: T0600100050	Phone / Fax: 916-760-7641 / 916-473-8617
Contact:	Include EDF w/ Report: (Yes) No	Confluence Log Code: **CESC**
Phone/ Fax: 925-252-9262	Consultant / PM: CRA / Bryan Fong	Report to: Bryan Fong
	Phone / Fax: 510-385-0509	Invoice to: CRA

Sample ID	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: NaOH	Requested Analysis: TPH-G (8015)	Requested Analysis: BTEX, MTBE* (8021)	Requested Analysis: TPH-D w/ sgc	Notes and Comments
MW-2	735	9/19/13		X			6	2			4		X	X	X	
MW-6	825	"		X			6	2			4		X	X	X	
MW-7	910	"		X			6	2			4		X	X	X	
MW-3A	1000	"		X			6	2			4		X	X	X	

Sampler's Name: Eric Mors	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Confluence Environmental						
Shipment Date:						
Shipment Method:						

Special Instructions: *Confirm MTBE by 8260

Confluence Environmental, Inc

Equipment Calibration Log

Equipment make/model	Equipment ID/ serial number	Date	Time	Calibration Standards	Equipment Reading	Equipment Calibrated	Temp (°C / °F)	Tech init.	Comments
YSI Pro Plus	Confluent #3	9/19/13	649	PH. 4.0, 7.0, 10.0	4, 7, 10.0	✓	22.0	ER	
			653	D.O. 100%	99.8%	✓	18.0	ER	
			656	Cond 1413	1413	✓	18.0	ER	
			659	ORP 241.8	241.8	✓	17.5	ER	

Notes/comments:

Water Level Measurements

Job Number: EI-130919 Date: 9/19/13 Client: CRA

Site: Chiu Property, Oakland

Well I.D.	Time	Dia	Depth to NAPL	Thickness of NAPL	Depth to water (DTW)	Total Depth (measured)	Total Depth (historical)	Ref Point TOC/TOB		
MW-1	1030	2			22.84	—	33.35	TOC		
MW-2	636	2			22.68	32.90	34.15			
MW-3A	936	4			23.30	34.00	34.25		Parked over	
MW-4	not measured, Lid stuck, parked over.						33.60		Lid stuck upon arrival	
MW-5	1013	2			23.34	34.60	34.60		"	"
MW-6	648	2			23.40	32.75	32.90			
MW-7	646	2			23.65	35.10	35.50		Traffic control.	
	Purged + sampled out of order on some wells due to access, safety.									

Well Maintenance Inspection Form

Client: CRA Site: Chiu Property, Oakland Date: 9/19/13

Job #: EI-130919 Technician: Eric Meza Page 1 of 1

Inspection Point	Well Inspected - No Corrective Action Required	Entry Indicates Deficiency: Cap non-functional	Lock non-functional	Lock missing	Bolts missing (# missing / # total tabs)	Tabs stripped (# stripped / # total tabs.)	Tabs broken (# broken / # of total tabs)	Annular seal incomplete	Apron damaged	Rim / Lid broken	Trip Hazard	Below Grade	Other (explain in notes)	Well Not Inspected (explain in notes)	Notes (Note any repairs made while on site)
MW-1			X												in vault floor.
MW-2	X														
MW-3A			X												
MW-4						1									center bolt stripped, unable to access, open lid
MW-5		X	X		1	1									uno
MW-6	X														
MW-7				X											

Notes:

Repair codes: **rt**=retap/ bolts added or replaced **as**=annular seal repair.

Confluence Environmental, Inc

3308 El Camino Ave, Suite 300 #148, Sacramento CA, 95821, 916-760-7641

Purging And Sampling Data Sheet

Job#: E1-130919	**Sampler:** E Morse		**Client:** CRA
Well ID: MW-2	**Date:** 9/19/13	**Site:** Chiu Property, Oakland	
Well diam: 1/4" 1" (2") 3" 4" 6" Other:		**DTW:** 22.68	**Total Depth:** 32.90
Purge equip: ES - diam: Bladder (Peri) Waterra Positive Air Displacement Ext. System			
disp bailer teflon bailer other:	**Tubing:** OD: New Dedicated NA		
Purge method: 3-5 Case Volume (Micro/Low-Flow) Extraction Other:			
Pump depth/ intake: 27.5'	**Multipliers:** 1"= 0.04 2"= 0.16 3"= 0.37 4"= 0.65 5"=1.02 6"= 1.47 Radius² X 0.163		
(TD - DTW X Multiplier = 1 Volume	80% Recovery (TD - DTW X 0.20 + DTW)		

1 Volume = _____ X _____ = _____ (Total Purge) 80%=_____

Time	Temp (°C/ °F)	pH	Cond (mS (µS)	Turbidity (NTU)	Purge Rate (gal or mL/ min)	Volume Removed (gal L)	DO (mg/l)	ORP (mv)	DTW	Notes
716	20.8	6.7	1223	10	150	—	3.95	-41	—	Filled cell
719	20.7	6.7	1187	7		0.45	3.9	-69	22.75	air bubbles in line ↑
722	20.7	6.7	1170	7		0.9	4.05	-79	22.78	odor strong
725	20.7	6.7	1162	7		1.35	4.95	-91	22.78	
728	20.7	6.7	1158	7		1.8	5.15	-88	22.78	
731	20.6	6.7	1151	7		2.25	5.20	-85	22.78	

Did well dewater? YES (NO)	Total volume removed: 2.25 (gal L)	
Sample method: Disp Bailer (Ded. Tubing) New Tubing Ext. Port Other:		
Sample date: 9/19/13	Sample time: 735	DTW at sample: 22.78
Sample ID: MW-2	Lab: McCampbell	Number of bottles: 6
Analysis: TPH-G, BTEX, MTBE, TPH-D		
Equipment blank ID @	Field blank ID @	
Duplicate ID:	Pre-purge DO:	Post purge DO:
$Fe2^+$:	Pre-purge ORP:	Post purge ORP:
NAPL depth:	Volume of NAPL:	Volume removed: ml

Purging And Sampling Data Sheet

Job#: E1-130919	**Sampler:** E Morse	**Client:** CRA
Well ID: MW-3A	**Date:** 9/19/13	**Site:** Chiu Property, Oakland
Well diam: 1/4" 1" 2" 3" (4") 6" Other:		**DTW:** 23.30 **Total Depth:** 34.00
Purge equip: ES - diam: Bladder (Peri) Waterra Positive Air Displacement Ext. System		
disp bailer teflon bailer other:	**Tubing:** OD: New (Dedicated) NA	
Purge method: 3-5 Case Volume (Micro/Low-Flow) Extraction Other:		
Pump depth/ intake:	**Multipliers:** 1"= 0.04 2"= 0.16 3"= 0.37 4"= 0.65 5"=1.02 6"= 1.47 Radius² X 0.163	
(TD - DTW X Multiplier = 1 Volume	80% Recovery (TD - DTW X 0.20 + DTW)	

1 Volume = _____ X _____ = _____ (Total Purge) 80%=_____

Time	Temp (°C / °F)	pH	Cond (mS / µS)	Turbidity (NTU)	Purge Rate (gal or mL/ min)	Volume Removed (gal / L)	DO (mg/l)	ORP (mv)	DTW	Notes
942	20.5	6.5	835	17	200	—	1.5	-54	—	Filled well
945	19.9	6.55	838	3	|	0.6	2.45	-93	23.37	odor, strong
948	19.7	6.57	857	3	|	1.2	3.85	-108	23.37	
951	19.8	6.57	854	2	|	1.8	4.1	-111	23.37	
954	19.8	6.57	852	2	|	2.4	4.3	-113	23.37	
957	19.8	6.57	861	2	—	3.0	4.1	-114	23.37	

Did well dewater? YES (NO)		Total volume removed: 3.0 (gal / L)	
Sample method: Disp Bailer (Ded. Tubing) New Tubing Ext. Port Other:			
Sample date: 9/19/13	Sample time: 1000	DTW at sample: 23.37	
Sample ID: MW-3A	Lab: McCampbell	Number of bottles: 6	
Analysis: TPH-G, BTEX, MTBE, TPH-D			
Equipment blank ID @		Field blank ID @	
Duplicate ID:		Pre-purge DO:	Post purge DO:
$Fe2^+$:		Pre-purge ORP:	Post purge ORP:
NAPL depth:	Volume of NAPL:	Volume removed:	ml

Purging And Sampling Data Sheet

Job#: E1-130919	**Sampler:** E Morse	**Client:** CRA
Well ID: MW-6	**Date:** 9/19/13	**Site:** Chiu Property, Oakland
Well diam: 1/4" 1" (2") 3" 4" 6" Other:		**DTW:** 23.40 **Total Depth:** 32.75
Purge equip: ES - diam: Bladder (Peri) Waterra Positive Air Displacement Ext. System		
disp bailer teflon bailer other:	**Tubing:** OD: New Dedicated NA	
Purge method: 3-5 Case Volume (Micro/Low-Flow) Extraction Other:		
Pump depth/ intake:	**Multipliers:** 1"= 0.04 2"= 0.16 3"= 0.37 4"= 0.65 5"=1.02 6"= 1.47 Radius² X 0.163	
(TD - DTW X Multiplier = 1 Volume	80% Recovery (TD - DTW X 0.20 + DTW)	

1 Volume = _____ X _____ = _____ (Total Purge) 80%=_____

Time	Temp (°C/ °F)	pH	Cond (mS / µS)	Turbidity (NTU)	Purge Rate (gal or mL/ min)	Volume Removed (gal L)	DO (mg/l)	ORP (mv)	DTW	Notes
755	20.4	6.35	1795	15	200	—	0.52	-34	—	Filled cell
758	20.2	6.34	1792	14		0.6	0.37	0	23.58	
801	20.3	6.34	1770	14		1.2	0.92	15	23.59	
804	20.4	6.33	1742	13		1.8	1.77	28	23.61	
807	20.4	6.35	1712	14		2.4	2.25	27	23.61	
810	20.3	6.45	1631	14		3.0	2.8	-8	23.61	
813	20.4	6.56	1441	14		3.6	3.13	-48	23.61	
816	20.4	6.6	1356	5		4.2	3.35	-64	23.61	
819	20.3	6.6	1283	5		4.8	3.55	-71	23.61	
822	20.3	6.6	1262	4	↓	5.4	3.59	-72	23.61	

Did well dewater? YES (NO)	Total volume removed:	(gal L)
Sample method: Disp Bailer (Ded. Tubing) New Tubing Ext. Port Other:		
Sample date: 9/19/13	Sample time: 825	DTW at sample: 23.61
Sample ID: MW-6	Lab: McCampbell	Number of bottles: 6
Analysis: TPH-G, BTEX, MTBE, TPH-D		

Equipment blank ID @	Field blank ID @	
Duplicate ID:	Pre-purge DO:	Post purge DO:
$Fe2^+$:	Pre-purge ORP:	Post purge ORP:
NAPL depth:	Volume of NAPL:	Volume removed: ml

Purging And Sampling Data Sheet

Job#: E1-130919	**Sampler:** E Morse	**Client:** CRA
Well ID: MW-7	**Date:** 9/19/13	**Site:** Chiu Property, Oakland
Well diam: 1/4" 1" (2") 3" 4" 6" Other:		**DTW:** 23.65 **Total Depth:** 35.10
Purge equip: ES - diam: Bladder (Peri) Waterra Positive Air Displacement Ext. System		
disp bailer teflon bailer other:	**Tubing:** OD: New Dedicated NA	
Purge method: 3-5 Case Volume (Micro/Low-Flow) Extraction Other:		
Pump depth/ intake:	**Multipliers:** 1"= 0.04 2"= 0.16 3"= 0.37 4"= 0.65 5"=1.02 6"= 1.47 Radius^2 X 0.163	
(TD - DTW X Multiplier = 1 Volume	80% Recovery (TD - DTW X 0.20 + DTW)	

1 Volume = _____ X _____ = _____ (Total Purge) 80%=_____

Time	Temp (°C / °F)	pH	Cond (mS / (uS))	Turbidity (NTU)	Purge Rate (gal or mL/ min)	Volume Removed (gal / L)	DO (mg/l)	ORP (mv)	DTW	Notes
852	20.8	6.8	525	15	200	0.6	0.37	47	23.71	
855	20.8	6.75	506	15		1.2	0.58	55	23.73	
858	20.7	6.75	504	11		1.8	0.93	61	23.73	
901	20.8	6.75	502	10		2.4	1.25	64	23.73	
904	20.8	6.74	500	7		3.0	1.31	66	23.73	
907	20.9	6.75	499	6		3.6	1.35	66	23.73	

Did well dewater? YES (NO)	Total volume removed: 3.6 (gal / L)	
Sample method: Disp Bailer (Ded. Tubing) New Tubing Ext. Port Other:		
Sample date: 9/19/13	Sample time: 910	DTW at sample: 23.73
Sample ID: MW-7	Lab: McCampbell	Number of bottles: 7
Analysis: TPH-G, BTEX, MTBE, TPH-D		
Equipment blank ID @	Field blank ID @	
Duplicate ID:	Pre-purge DO:	Post purge DO:
$Fe2^+$:	Pre-purge ORP:	Post purge ORP:
NAPL depth:	Volume of NAPL:	Volume removed: ml