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With respect to:

Groundwater Monitoring Report – SECOND 2011 SEMI-ANNUAL
Dated 10 20/11
Fuel Leak Case No. RO0000266

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.

Estate of A. Bacharach/Barbara Jean Borsuk

Date



SECOND 2011 SEMI-ANNUAL GROUNDWATER MONITORING REPORT

ALLRIGHT PARKING 1432 HARRISON STREET OAKLAND, CALIFORNIA

FUEL LEAK CASE NO. RO0000266

Prepared by: Conestoga-Rovers & Associates

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1.0 INTRODUCTION

On behalf of the Estate of A. Bacharach/Barbara Jean Borsuk, Conestoga-Rovers & Associates (CRA) has prepared this *Second 2011 Semi-Annual Groundwater Monitoring Report* for the site located at 1432 Harrison Street in Oakland, California (Figure 1). Presented in this report are groundwater monitoring activities and analytical results, along with activities anticipated during the fourth quarter of 2011 and for the first 2012 semi-annual groundwater monitoring and sampling event. Work is performed under the regulatory oversight of Alameda County Environmental Health (ACEH).

Figure 2 presents groundwater elevation contours calculated from depth to water measurements and reported hydrocarbon concentrations from the September 23, 2011 field activities. Table 1 provides well construction details. Table 2 presents recent and historical depth to water measurements, analytical data and light non-aqueous phase liquid (LNAPL, previously referred to as SPH) observations and measurements. Appendix A contains field data sheets of this sampling event. Appendix B contains CRA's *Standard Field Procedures for Groundwater Monitoring and Sampling*. Appendix C contains the laboratory analytical report of sample results and Appendix D contains graphs of benzene concentrations and depth to water vs. time.

1.1 SITE INFORMATION

Site Address 1432 Harrison Street, Oakland

Site Use Parking Facility

Client and Contact The Estate of A. Bacharach/

Barbara Jean Borsuk

Contact: Mr. Mark Borsuk, Esq.

Consultant and Contact Person CRA, Robert Foss, P.G.

Lead Agency and Contact Person ACEH, Jerry Wickham, P.G.

2.0 SITE ACTIVITIES AND RESULTS

2.1 <u>CURRENT MONITORING/SAMPLING EVENT ACTIVITIES</u>

2.1.1 FIELD ACTIVITIES

CRA coordinated with Muskan Environmental Sampling (MES) to conduct monitoring and sampling activities on September 23, 2011. MES measured depth to water and inspected each well for the presence of LNAPL. LNAPL was observed in the well casing of MW-2 at a measured thickness of 0.19 feet. Groundwater samples were collected from wells MW-1, MW-4, MW-5 and MW-7. Well MW-1 was redeveloped on September 24, 2010, removing a large volume of silt from the well casing. Prior to redevelopment, the well had contained so much silt that no measurable thickness of groundwater could be measured in the casing from September 2009 through September 2010. Since redevelopment, groundwater has been measured and sampled in February However, since redevelopment of MW-1, calculated and September of 2011. groundwater elevations in MW-1 have been anomalously low relative to nearby wells. Consequently, this well was not used in groundwater elevation contouring during the first 2011 groundwater monitoring event and the calculated groundwater elevation from the September 2011 measurement is, again, not used to contour groundwater elevations across the site. Groundwater monitoring field data sheets are included in Appendix A. Field activities were conducted in accordance with CRA's Standard Field Procedures for *Groundwater Monitoring and Sampling* included as Appendix B.

Micropurge sampling protocols were implemented during the third quarter of 2010. These procedures are documented, as referenced above, in Appendix B. Prior to sampling, groundwater levels were measured and each well was purged by placing the intake tube of a clean peristaltic pump approximately 1 foot below the initial water level. Depth of groundwater was again measured prior to low-flow purging, during purging, at termination of purging, and immediately prior to sample collection. Temperature, pH, specific conductance, oxygen reduction potential (ORP) and dissolved oxygen (DO) were measured initially and at regular volume intervals. Well purging continued until consecutive pH, specific conductance and temperature measurements were relatively stable. Field measurements, purge volumes and sample collection data were recorded on field sampling data forms presented in Appendix A.

Groundwater samples were collected from each well using a clean peristaltic pump. The samples were collected in 40-milliliter (mL) glass volatile organic analysis (VOA) vials and 1-liter amber glass containers supplied by McCampbell Analytical Laboratory, Inc. (McCampbell) of Pittsburg, California. Sample containers were labeled, sealed in a

plastic bag, placed on ice in a chilled cooler and delivered to McCampbell, a State-certified laboratory. Field water quality measurements, purge volumes, and sample collection data were recorded on field sampling data sheets. The chain-of-custody (COC) used for this monitoring event is provided in Appendix C.

To minimize the potential for cross-contamination, the groundwater monitoring equipment was decontaminated prior to being deployed in the first monitoring well and between successive wells. 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.

2.1.2 SAMPLE ANALYSIS

Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene and xylenes (BTEX) and methyl tertiary-butyl ether (MTBE) by modified EPA Method 8015/8021. MTBE was to be confirmed by EPA Method 8260 confirmation if detected by Method 8015/8021. All analyses were performed by McCampbell. The laboratory analytical report is included as Appendix C. Hydrocarbon concentrations are summarized on Figure 2 and presented in Table 2. The analytical data has been uploaded to the GeoTracker database.

2.2 CURRENT MONITORING/SAMPLING CONDITIONS

Groundwater Flow Direction North-Northeast

Hydraulic Gradient 0.003

Range of Depth to Water

Measurements Below Top of Casing 18.87 to 20.24 feet

Presence of Measureable Light

Non-Aqueous Phase Liquid (LNAPL)? Yes, Offsite well MW-2

2.2.1 GROUNDWATER FLOW DIRECTION

Based on depth-to-water measurements collected September 23, 2011, the calculated flow direction of groundwater beneath the site is toward the north-northeast at an

approximate gradient of 0.003. This flow direction and gradient are generally consistent with conditions observed during previous monitoring events. Groundwater elevation data is summarized on Figure 2 and presented in Table 2.

2.2.2 HYDROCARBON DISTRIBUTION IN GROUNDWATER

Hydrocarbon concentrations were detected in wells MW-1, MW-4 and MW-7, and are assumed to be at saturation levels in well MW-2 based on the presence of LNAPL. TPHg and benzene were detected in wells MW-1, MW-4 and MW-7 at a maximum TPHg concentration of 23,000 micrograms per liter (μg/L) in well MW-7 and at a maximum benzene concentration of 2,600 µg/L in well MW-1. Toluene, ethylbenzene and xylenes were detected in wells MW-1 and MW-7 at varying concentrations. MTBE was not reported above laboratory detection limits in any of the wells. However, the minimum reporting limit of MTBE was significantly elevated to 250 µg/L in well MW-1 and to 500 µg/L in MW-7 due to high concentrations of other constituents. TPHg and BTEX compounds were consistent with historical concentrations in wells MW-1 and appear to fluctuate relative to groundwater elevation, exhibiting higher concentrations as the water table rises. MW-4 continues to exhibit an overall decreasing trend that began in 2004-2005, coinciding with the completion of Air Sparge/Soil Vapor Extraction remediation activities. This is visually apparent on the MW-4 benzene vs. time graph in Appendix D. Reported hydrocarbon concentrations in well MW-5 continued their unexpected and dramatic reduction to below reporting limits for all analyzed constituents in September 2011, indicating that the February 2011 sample results were not anomalous. Table 2 documents dissolved hydrocarbon concentrations in the wells and, as stated above, Appendix D contains benzene concentration vs. time trend graphs for wells MW-1 through MW-6.

2.3 PROPOSED ACTIVITIES FOR THE REMAINDER OF 2011 AND THE FIRST HALF OF 2012

2.3.1 SUB-SLAB SOIL VAPOR PROBE INSTALLATION AND SAMPLING

CRA has completed the soil boring and well installation activities of the approved additional site characterization scope of work. The installation of four soil vapor probes within the basement of 1445 Harrison Street has yet to be completed due to ongoing negotiations regarding access with the property owners of 1445 Harrison Street. Once the probes have been installed, sampled and analytical results are received and evaluated, CRA will complete and submit the additional offsite characterization report.

2.3.2 MONITORING ACTIVITIES

The first half 2012 semi-annual groundwater monitoring and sampling event will be scheduled for March 2012. All seven wells will be gauged during field activities for this event. Samples will be collected from wells MW-1, MW-2, MW-4, MW-5 and MW-7. Sampling of wells MW-3 and MW-6 will be permanently eliminated due to consistently non-detected analytical results, unless instructed otherwise by the ACEH case manager. MES will gauge depth to water and check each well for the presence of LNAPL. Groundwater samples will be collected from the five wells listed above for analysis by EPA Method 8015/8021. If LNAPL is present in well MW-2, it will be bailed from the well and stored onsite in a double-walled container for removal and recycling. Groundwater monitoring and sampling results will be uploaded to the State's GeoTracker database. CRA will summarize groundwater monitoring activities and results in a document titled First Half 2012 Semi-Annual Groundwater Monitoring Report.

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

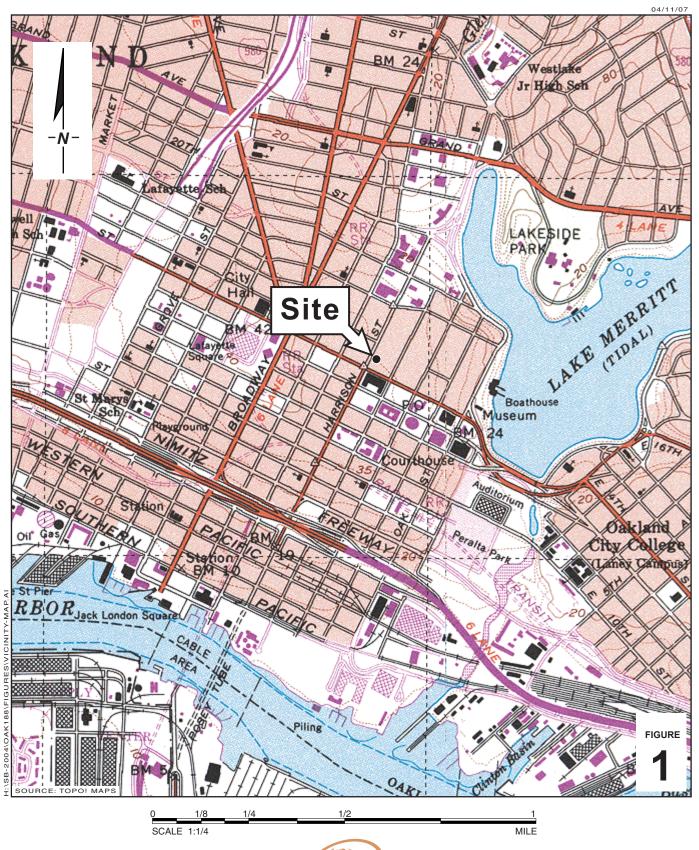
Calvin Hee

Robert Foss, P.G. # 7445



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FIGURES

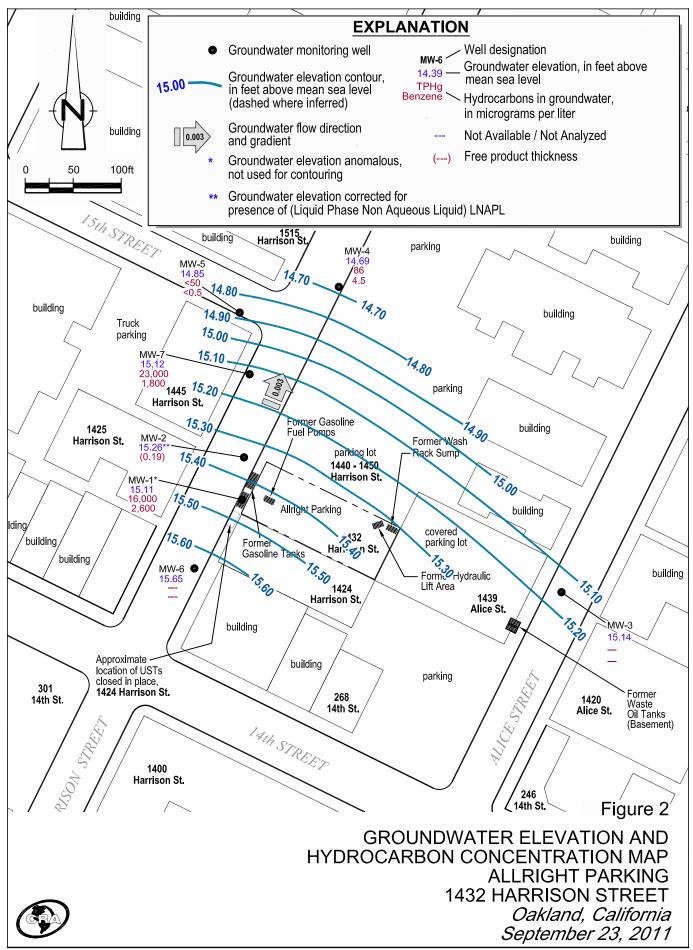


Allright Parking

1432 Harrison Street Oakland, California



Vicinity Map



TABLES

TABLE 1

WELL CONSTRUCTION DETAILS ALLRIGHT PARKING 1432 HARRISON STREET, OAKLAND, CALIFORNIA

Well No.	Installation Date	Total Depth (ft-bgs)	Boring Diameter (inch)	Well Diameter (inch)	Screen Size (inch)	Screened Interval (ft-bgs)	Sand Pack Interval (ft-bgs)	Surface Seal (ft-bgs)	TOC Elevation (ft-msl)
MW-1	1/12/1994	27	12	4	0.020	16-26.5	14.5-27	0-14.5	35.37
MW-2	7/30/1994	26		2	0.010	11-26	9-26	0-9	35.21
MW-3	7/30/1994	25		2	0.010	15-25	13-25	0-13	34.01
MW-4	10/2/1996	25	8	2	0.010	15-25	13-25	0-13	33.75
MW-5	10/2/1996	30	8	2	0.010	14-29	12-30	0-12	34.63
MW-6	10/2/1996	30.5	8	2	0.010	14-29	12-30	0-12	35.89
MW-7	5/31/2011	25	8	2	0.010	15-25	14-25	0-12	34.72
VES-1 (VE) VES-1 (AS)	7/23/1999	30	8	3 1	0.020 0.020	5-20 28-30	4.5-20 27.5-30	0-5 0-27.5	
VES-2 (VE) VES-2 (AS)	7/22/1999	29.5	8	3 1	0.020 0.020	5-20 27.5-29.5	4-20 27-29.5	0-4 0-27	
VES-3 (VE) VES-3 (AS)	7/23/1999	30	8	3 1	0.020 0.020	5-20 28-30	4-20 25-30	0-4 0-25	
VES-4 (VE) VES-4 (AS)	7/23/1999	29	8	3 1	0.020 0.020	5-20 27-29	4-20 26.5-28.5	0-4 0-26.5	
SV-3	8/31/2009	5.5	3	1/4	probe	4.8-5.3	4.5-5.5	0.5-4.5	

TABLE 1

WELL CONSTRUCTION DETAILS ALLRIGHT PARKING 1432 HARRISON STREET, OAKLAND, CALIFORNIA

SV-4	8/31/2009	5.75	3	1/4	probe	4.8-5.3	4.5-5.75	0.5-4.5	
SV-5	8/31/2009	5.5	3	1/4	probe	4.8-5.3	4.5-5.5	0.5-4.5	
SV-6	8/31/2009	5.5	3	1/4	probe	4.8-5.3	4.5-5.5	0.5-4.5	
SV-7	8/31/2009	5.75	3	1/4	probe	4.8-5.3	4.5-5.75	0.5-4.5	
SV-8	8/31/2009	5.5	3	1/4	probe	4.8-5.3	4.5-5.5	0.5-4.5	

Notes:

ft-bgs Feet below ground surface ft-msl Feet above mean sea level

Not surveyedVEVapor extractionASAir spargeSVSoil Vapor Well

TABLE 2

Well ID Sample ID TOC (ft amsl)	Date	Depth to Groundwater (ft below TOC)	LNAPL Thickness (feet)	TOC Groundwater Elevation (ft amsl)	TPHg ←	Benzene	Toluene ——— (µg/.	Ethylbenzene L) —	Xylenes	<i>МТВЕ</i> →>	Notes
Monitoring Well S	Sample Results:	-	-								
MW-1	8/1/1994				170,000	35,000	51,000	2,400	13,000		
34.95	12/21/1994	19.53		15.42	180,000	41,000	64,000	3,100	100,000		
01.00	3/13/1995	18.66		16.29	150,000	31,000	45,000	2,500	17,000		
	6/27/1995	18.20		16.75	71,000	17,000	18,000	1,600	7,700		
	7/7/1995	18.35		16.60	71,000	17,000	18,000	1,600	7,700		
	9/28/1995	18.20		16.75	110,000	27,000	34,000	1,700	14,000		
		19.96		14.99							
	12/20/1995				120,000	33,000	43,000	2,300	15,000		
	3/26/1996	19.27		15.68	140,000	29,000	36,000	1,900	13,000	<200*	d
	6/20/1996	18.64		16.31	110,000	30,000	38,000	2,200	13,000	<200*	
	9/26/1996	19.35		15.60	170,000	28,000	40,000	2,200	15,000	ND**	
	10/28/1996	19.58		15.37							
	12/12/1996	19.68		15.27	110,000	36,000	47,000	2,500	16,000	ND*	
	3/31/1997	18.80		16.15	160,000	24,000	39,000	1,900	13,000	ND*	
	6/27/1997	19.26		15.69	130,000	25,000	36,000	2,000	14,000	ND*	
	9/9/1997	19.70		15.25	99,000	22,000	27,000	1,600	13,000	270*	
	12/18/1997	19.25		15.70	160,000	30,000	44,000	2,200	15,000	ND***	
	3/12/1998	17.52		17.43	190,000	20,000	49,000	2,500	18,000	ND***	
	6/22/1998	18.63		16.32	90,000	19,000	40,000	2,100	16,000		
	9/18/1998	18.60		16.35	190,000	29,000	48,000	2,400	17,000		
	12/23/1998	19.18		15.77	140,000	24,000	44,000	2,000	8,200		
	3/29/1999	18.52		16.43	181,000	22,200	40,100	1,844	12,200		
	6/23/1999	18.60		16.35	80,000	20,000	33,000	1,600	11,000		
	9/24/1999	19.05		15.90	117,000	15,100	20,700	1,550	11,800		
	12/23/1999	19.95		15.00	186,000	25,900	39,000	1,990	12,400		
	3/21/2000	18.48		16.47	210,000	35,000	42,000	2,200	13,000	<3,000	a
	7/3/2000	18.95		16.00	200,000	33,000	46,000	2,200	15,000	<200*	a
	9/7/2000	19.45	Sheen Field	15.50							
	12/5/2000	19.90		15.05	220,000	42,000	57,000	2,700	17,000	<200	a
	3/6/2001	18.20		16.75	180,000	27,000	39,000	2,000	13,000	<1200* /<20***	a,l
	6/8/2001	20.14		14.81	170,000	28,000	40,000	1,900	13,000	<200	a
	8/27/2001	21.19		13.76	130,000	24,000	33,000	1,600	11,000	<350	a
	10/25/2001	21.74		13.21	160,000	22,000	28,000	1,500	10,000	<350	a
	3/1/2002	21.39	0.41	13.84 ^x							
	6/10/2002	22.30		12.65	210,000	30,000	51,000	3,100	22,000	<1,000*	a
34.96	9/3/2002	21.40		13.56	2,500,000	31,000	170,000	29,000	170,000	2,500,000*	a
	12/22/2002	20.50		14.46	89,000	2,600	9,300	530	28,000	<1,700	a,m
	1/23/2003	18.57	Sheen ^{Lab}	16.39	130,000	600	1,600	<100	41,000	<50***	a,b,l
	6/12/2003	19.10	0.07	15.91 ^x							
	7/23/2003	19.42	0.07	15.59 ^x							
35.37#	12/22/2003	17.09	0.01	18.29 ^x							
	3/10/2004	13.82		21.55	22,000	190	250	<10	5,100	<100	a,c
	6/16/2004	14.75		20.62	2,700	23	160	13	520	<25	a
	9/27/2004	18.02	Sheen Field	17.35	27,000	580	2,000	56	6,800	<10***	a,m
	12/22/2004	11.25		24.12	250	3.5	18	<0.5	47	<0.5***	a,m
	3/3/2005	14.42		20.95	320	5.2	13	3.2	46	<5.0	a
34.96##	6/9/2005	17.80		17.16							+
	9/9/2005	18.26		16.70							+
	12/20/2005	18.68		16.28							+
	3/26/2006	16.96		18.00	23,000	270	400	65	4,400	<50	a
	6/23/2006	17.55		17.41	30,000	340	680	170	6,900	<500	a,m
	9/7/2006	18.53		16.43	34,000	540	630	190	7,000	<500	a
	12/29/2006	19.43	Sheen Field	15.53	20,000	550	55	130	4,700	<100*/<0.5***	a,m
	3/21/2007	18.92	Sheen Field	16.04	23,000	910	210	140	5,900	<250*	a
	6/7/2007	19.22	Sheen Field	15.74	24,000	680	61	190	4,300	<100*	a,b
	9/28/2007	20.19		14.77							+
	12/9/2007	20.40		14.56							+
	3/3/2008	19.16	Sheen Lab	15.80	10,000	510	28	<10	1,700	<2.5***	a,b,m,l
	-, -, - 000	27.20		20.00	10,000	010		-10	1,, 50		,,,1

TABLE 2

Well ID Sample ID TOC (ft amsl)	Date	Depth to Groundwater	LNAPL Thickness	TOC Groundwater Elevation	ТРНд	Benzene	Toluene	Ethylbenzene	Xylenes	МТВЕ	Notes
100 (ji umsi)		(ft below TOC)	(feet)	(ft amsl)	←		(μg/	L) —		\rightarrow	
	6/4/2008	20.05		14.91				_		_	_
	9/9/2008	20.40		14.56							
	12/5/2008	20.42		14.54							
MW-1 cont.	3/2/2009	20.39		14.57							
	9/15/2009	Well Dry									
	3/1/2010	Well Dry									
	9/7/2010	Well Dry									
	2/18/2011	20.31		14.65	15,000	1,600	25	<10	1,400	<5.0***	a,l
	9/23/2011	19.85		15.11	16,000	2,600	65	350	1,400	<250	a
MW-2	8/1/1994				130,000	28,000	35,000	3,000	12,000		
35.18	12/21/1994	19.91		15.27	200	140,000	200,000	3,500	22,000		
	3/13/1995	19.15		16.03	500	9,200	23,000	7,000	36,000		
	6/27/1995	18.74		16.44	120,000	23,000	30,000	2,700	13,000		
	7/7/1995	18.80		16.38	120,000	23,000	30,000	2,700	13,000		
	9/28/1995	19.30		15.88	110,000	23,000	29,000	2,500	11,000		
	12/20/1995	20.24		14.94	83,000	980	1,800	2,200	10,000		-
	3/26/1996	19.69		15.49	150,000	23,000	32,000	2,800	12,000	<200*	d
	6/20/1996	19.20 19.80		15.98 15.38	94,000	15,000	23,000	2,400 2,800	12,000	<200* ND**	
	9/26/1996				150,000	20,000	29,000		12,000		
	10/28/1996	20.18		15.00	 FR 000	2.100		1.700		220*	
	12/12/1996	20.17 19.67		15.01 15.51	58,000	3,100 6,000	11,000 7,900	1,700 690	8,100 3,300	220* ND*	
	3/31/1997 6/27/1997	19.68		15.50	38,000 62,000	13,000	16,000	1,300	6,000	ND*	
	9/9/1997	20.20		14.98	81,000		18,000	1,800	8,600	ND***	
	12/18/1997	19.80		15.38	110,000	16,000 18,000	26,000	2,200	9,500	ND***	
	3/12/1998	18.07		17.11	120,000	16,000	26,000	2,200	9,400	ND***	
	6/22/1998	18.29		16.89	38,000	9,800	9,500	1,500	6,000		
	9/18/1998	19.09		16.09	68,000	12,000	16,000	1,400	5,900		
	12/23/1998	19.67		15.51	180,000	16,000	22,000	2,200	8,300		
	3/29/1999	18.97		16.21	16,600	1,380	1,920	373	1,840		
	6/23/1999	18.25		16.93	41,000	10,000	9,400	1,100	5,000		
	9/24/1999	19.60		15.58	40,600	4,880	3,490	1,090	4,560		
	12/23/1999	20.21		14.97	61,900	6,710	9,320	1,150	5,360		
	3/21/2000	18.93		16.25	98,000	14,000	21,000	1,600	6,900	<1600	a
	7/3/2000	19.38		15.80	140,000	18,000	33,000	2,600	11,000	<200*	a
	9/7/2000	19.83		15.35	110,000	17,000	21,000	2,200	9,700	<100***	a,l
	12/5/2000	20.30		14.88	130,000	19,000	28,000	2,500	11,000	<200	a
	3/6/2001	19.57		15.61	32,000	3,400	3,400	580	2,500	<200	a
	6/8/2001	20.59		14.59	72,000	9,400	9,200	1,300	5,800	<200	a
	8/27/2001	21.79		13.39	110,000	17,000	28,000	2,600	11,000	<950	a
	10/25/2001	22.05		13.13	110,000	15,000	18,000	2,000	8,700	<350	a
	3/1/2002	21.80		13.38	3,100	370	180	62	330	<5.0*	a
	6/10/2002	22.83		12.35	7,800	2,000	1,100	76	570	<100*	a
35.21	9/3/2002	22.03		13.18	21,000	2,400	2,900	320	1,400	<500	a
	12/22/2002	22.70		12.51	630	48	56	19	82	<5.0	a
	1/23/2003	20.49		14.72	1,100	27	32	19	150	<25	a
	6/12/2003	21.03		14.18	10,000	2,100	1,600	150	660	<250	a
	7/23/2003	21.40		13.81	28,000	4,800	4,800	380	1,700	<500	a
	12/22/2003	19.33		15.88	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	3/10/2004	19.33	-	15.88	3,100	460	290	38	240	<50	a
	6/16/2004	19.90		15.31	9,100	1,600	1,200	220	830	<400	a
	9/27/2004	22.08		13.13	14,000	2,800	490	340	1,600	<350	a
	12/22/2004	21.74		13.47	1,100	300	28	22	71	<15	a
	3/3/2005	19.60		15.61	340	12	4.4	9.1	28	<10	a
	6/9/2005	18.65		16.56	240	22	2.7	6.4	27	<10	a
	9/9/2005	19.27		15.94	7,800	1,100	170	380	690	<160	a
	12/20/2005	19.70		15.51	150	10	1.9	2.8	10	<5.0	a

TABLE 2

Well ID Sample ID	Date	Depth to Groundwater	LNAPL Thickness	TOC Groundwater Elevation	ТРНд	Benzene	Toluene	Ethylbenzene	Xylenes	МТВЕ	Notes
TOC (ft amsl)		(ft below TOC)	(feet)	(ft amsl)	←		(μg/L)				
	3/26/2006	18.51		16.70	2,200	93	19	66	130	<50	a
	6/23/2006	18.47		16.74	8,800	1,600	110	500	480	<500	a,m
	9/7/2006	18.97		16.24	29,000	4,800	280	940	1,000	<500	a
	12/29/2006	19.76		15.45	4,500	720	54	250	480	75*1/<0.5***	a
	3/21/2007	19.59		15.62	34,000	9,100	500	890	2,500	<1,100*	a
	6/7/2007	19.74	Sheen Lab	15.47	46,000	7,100	410	870	2,400	<800*	a,b
MW-2 cont.	9/28/2007	20.23		14.98	44,000	9,400	630	1,400	3,600	<0.5***	a
	12/9/2007	20.68		14.53	37,000	8,400	550	1,400	4,500	<17***	a,l
	3/3/2008	20.11		15.10	40,000	7,700	490	1,400	4,400	<17***	a,l
	6/4/2008	20.40		14.81	56,000	7,400	600	1,500	4,100	<25***	a,j
	9/9/2008	20.85		14.36	65,000	7,800	510	1,700	4,700	<25***	a,l
	12/5/2008	←				accessible -					
	3/2/2009	←				accessible -					
	9/15/2009	21.22		13.99	48,000	6,400	600	1,900	2,800	<2.5***	a,l
	3/1/2010	21.00	0.22	14.39	•	_	SPH Observed Du				
	9/7/2010	20.71	0.29	14.73	-		SPH Observed Du			→	
	2/18/2011	20.68	0.38	14.83			SPH Observed Du			→	-
	9/23/2011	20.10	0.19	15.26	•		SPH Observed Du	ring Purging		→	-
MW-3	8/1/1994				<50	<0.5	<0.5	<0.5	<2.0		
33.97	12/21/1994	18.82		15.15	<50	<0.5	<0.5	<0.5	<0.5		
33.07	3/13/1995	17.86		16.11	<50	<0.5	<0.5	<0.5	<0.5		e
	7/7/1995	18.25		15.72							f,g
	9/28/1995	18.00		15.97							h
	12/20/1995	18.74		15.23							
	3/26/1996	18.25		15.72							
	6/20/1996	18.35		15.62							
	9/26/1996	19.12		14.85							
	10/28/1996	19.11		14.86							
	12/12/1996	18.61		15.36							
	3/31/1997	18.35		15.62							
	6/27/1997	18.81		15.16							
	9/9/1997	19.18		14.79							
	12/18/1997	18.64		15.33							
	3/12/1998	17.56		16.41			-				
	6/22/1998	18.64		15.33							
	9/18/1998	18.33		15.64							
	12/23/1998	18.60		15.37							-
	3/29/1999	17.85		16.12							
	6/23/1999	18.67		15.30							
	9/24/1999 12/23/1999	18.64 19.32		15.33 14.65							
	3/21/2000	17.89		16.08							
	7/3/2000	18.40		15.57			-				
	9/7/2000	18.75		15.22							
34.01	12/5/2000	19.03		14.94	<50	< 0.5	<0.5	<0.5	<0.5	<5.0	
	3/6/2001	18.12		15.85	<50	< 0.5	<0.5	<0.5	<0.5	<5.0	
	6/8/2001	20.02		13.95	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	8/27/2001	21.09		12.88	<50	<0.5	<0.5	<0.5	< 0.5	<5.0	
	10/25/2001	21.29		12.68	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	3/1/2002	21.14		12.83	<50	< 0.5	<0.5	<0.5	< 0.5	<5.0*	
	6/10/2002	21.99		11.98	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	
	9/3/2002	21.17		12.84							
	12/22/2002	21.94		12.07							
	1/23/2003	20.08		13.93	<50	< 0.5	<0.5	<0.5	<0.5	<5.0	
	6/12/2003	20.95		13.06							
	7/23/2003	21.28		12.73							
	12/22/2003	19.05		14.96			-				

TABLE 2

Well ID Sample ID TOC (ft amsl)	Date	Depth to Groundwater (ft below TOC)	LNAPL Thickness	TOC Groundwater Elevation	ТРНд	Benzene	Toluene	Ethylbenzene	Xylenes	МТВЕ	Notes
100 (1 111101)		(Ji below TOC)	(feet)	(ft amsl)	←		(μg/	L) —		\longrightarrow	
	3/10/2004	18.22		15.79	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	6/16/2004	18.82		15.19							
	9/27/2004	21.03		12.98							
	12/22/2004	20.69		13.32							
	3/3/2005	17.94		16.07	<50	< 0.5	< 0.5	<0.5	< 0.5	<5.0	
	6/9/2005	18.00		16.01							
	9/9/2005	18.43		15.58							
	12/20/2005	18.18		15.83							
	3/26/2006	17.42		16.59	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
MW-3 cont.	6/23/2006	17.77		16.24							
	9/7/2006	18.20		15.81							
	12/29/2006	18.49		15.52							
	3/21/2007	18.44		15.57	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	
	6/7/2007	18.68		15.33	-						
	9/28/2007	19.19 19.31		14.82 14.70							
	12/9/2007 3/3/2008	18.68		15.33	 <50	<0.5	<0.5	<0.5	<0.5	<0.5***	
	6/4/2008	19.11		14.90							
	9/9/2008	19.65		14.36							
	12/5/2008	19.96		14.05							
	3/2/2009	19.19		14.82	<50	<0.5	<0.5	<0.5	< 0.5	<0.5***	
	9/15/2009	19.90		14.11							
	3/1/2010	19.20		14.81	<50	<0.5	< 0.5	< 0.5	< 0.5	<0.5***	
	9/7/2010	19.43		14.58							
	2/18/2011	18.79		15.22	<50	<0.5	<0.5	<0.5	< 0.5	<0.5***	
	9/23/2011	18.87		15.14		-				-	
MW-4	10/28/1996	19.32		14.43	10,000	3,900	420	400	360	<200*	n
33.75	12/12/1996	19.42		14.33	11,000	4,200	410	420	260	32*	
	3/31/1997	18.67		15.08	ND	ND	ND	ND	ND	ND*	
	6/27/1997	19.08		14.67	160	49	1.2	ND	5.9	ND*	
	9/9/1997	19.33		14.42	7,400	5,000	410	230 ND	470	33*	
	12/18/1997	19.17		14.58	710	170	8.0	ND	39	ND***	
	3/12/1998	17.68		16.07	1,300	410 ND	21 ND	ND	57 ND	ND***	
	6/22/1998 9/18/1998	17.63 18.58		16.12 15.17	ND ND	ND 42	ND 1.6	ND ND	ND		
	12/23/1998	19.01		14.74	1,900	1,000	76	50	4.8 120		
	3/29/1999	18.35		15.40	ND	ND	ND	ND	ND		
	6/23/1999	17.58		16.17	ND	ND	ND	ND	ND		
	9/24/1999	19.05		14.70	9,150	3,270	131	34	537		
	12/23/1999	19.41		14.34	12,200	5,360	275	424	592		
	3/21/2000	18.42		15.33	45,000	16,000	1,100	1,400	1,900	1400* /<35***	a,1
	7/3/2000	18.82		14.93	33,000	10,000	720	840	1,800	<200*	a
	9/7/2000	19.21		14.54	26,000	8,800	800	740	1,500	<50***	a,c,1
	12/5/2000	19.60		14.15	41,000	11,000	840	930	1,900	<200	a
	3/6/2001	18.24		15.51	1,100	400	5.7	<0.5	20	<5.0	a
	6/8/2001	20.91		12.84	92	19	<0.5	<0.5	1	<5.0	a
	8/27/2001	21.63		12.12	49,000	17,000	1700	1,700	3,200	<260	a
	10/25/2001	21.70		12.05	57,000	16,000	1,500	1,600	2,600	<300	a
	3/1/2002	21.53		12.22	400	140	2.3	<0.5	12	<5.0*	a
	6/10/2002	22.23		11.52	<50	2.5	<0.5	<0.5	<0.5	<5.0*	
	9/3/2002	21.85		11.90	31,000	9,700	300	650	1,100	<1,000	a
	12/22/2002	22.39		11.36	35,000	13,000	310	1,100	1,800	<1,500	a
	1/23/2003	20.61		13.14	51,000	18,000	430	1,500	2,200	<5.0***	a,1
	6/12/2003	21.20		12.55	80	7.600	< 0.5	<0.5	1.0	<10	a
	7/23/2003	21.51		12.24	20,000	7,600	100	65 380	660	<250	a
	12/22/2003 3/10/2004	19.60 18.81		14.15 14.94	26,000 14,000	9,500 4,800	200 150	380 320	1,100 530	<150 <400	a
	3/ 10/ 2004	10.01		14.74	14,000	4,000	150	320	550	\400	a

TABLE 2

Well ID Sample ID TOC (ft amsl)	Date	Depth to Groundwater (ft below TOC)	LNAPL Thickness	TOC Groundwater Elevation	ТРНд	Benzene	Toluene	Ethylbenzene	Xylenes	МТВЕ	Notes
Toe (it amos)		(st below TOC)	(feet)	(ft amsl)	<u>←</u>		(μg/L)			\longrightarrow	
	6/16/2004	19.32		14.43	2,800	1,100	24	17	100	<50	a
	9/27/2004	21.45		12.30	45,000	16,000	260	1,700	2,000	<25***	a
	12/22/2004	21.15		12.60	29,000	10,000	160	890	1,200	<5.0***	a,j
	3/3/2005	18.60		15.15	18,000	6,400	98	500	610	<600	a
	6/9/2005	18.11		15.64	20,000	6,100	110	460	580	<500	a
	9/9/2005	18.65		15.10	17,000	6,400	100	470	730	<250	a
	12/20/2005	19.01		14.74	26,000	8,500	160	640	800	<120	a
	3/26/2006	17.84		15.91	1,900	700	22	49	85	<50	a
	6/23/2006	17.96		15.79	12,000	3,400	130	370	510	260	a
	9/7/2006	18.29		15.46	8,600	1,800	100	170	220	<210	a,i
	12/29/2006	18.93		14.82	4,200	1,100	120	150	280	<150*/<0.5***	a
3.57.4	3/21/2007	18.76		14.99	550	30	2.0	4.5	5.1	<30*	a
MW-4 cont.	6/7/2007	18.92 19.41		14.83 14.34	85 140	4.4 7.0	<0.5 <0.5	0.77 1.2	0.82 <0.5	<5.0* <0.5***	a
	9/28/2007 12/9/2007	19.41		13.89	120	4.5	<0.5	0.62	<0.5	<0.5	a
	3/3/2008	19.22		14.53	63	0.78	<0.5	<0.5	<0.5	<0.5***	a i
	6/4/2008	19.58		14.17	86	2.2	<0.5	<0.5	0.58	<0.5***	a
	9/9/2008	20.01		13.74	460	9.4	0.95	3.1	19	<0.5***	a
	12/5/2008	20.29		13.46	290	4.3	1.4	3.0	14	<0.5***	a
	3/2/2009	19.86		13.89	520	6.0	2.2	6.5	9.2	<0.5***	a
	9/15/2009	20.23		13.52	370	2.2	1.1	2.8	3.3	<0.5***	a
	3/1/2010	19.70		14.05	220	1.8	<0.5	1.2	1.5	<0.5***	a
	9/7/2010	19.55		14.20	320	11	0.83	2.4	2	<0.5***	a
	2/18/2011	19.34		14.41	200	4.7	0.52	2.2	2.0	<0.5***	a
	9/23/2011	19.06		14.69	86	4.5	<0.5	<0.5	<0.5	<5.0	a
MW-5	10/28/1996	19.88		14.75	90	4.0	0.6	<0.50	< 0.50	16*	
34.63	12/12/1996	20.09		14.54	230	5.6	0.9	ND	0.9	3.6*	n
	3/31/1997	19.24		15.39	90	3.1	ND	ND	ND	ND*	
	6/27/1997	19.16		15.47	ND	ND	ND	ND	ND	ND*	
	9/9/1997	19.93		14.70	ND	ND	ND	ND	ND	ND* ND***	
	12/18/1997 3/12/1998	19.77 19.77		14.86 14.86	ND 79	ND 2.3	ND ND	ND 0.8	ND ND	ND*	
	6/22/1998	18.08		16.55	ND	ND	ND	ND	ND		
	9/18/1998	19.12		15.51	ND	ND	ND	ND	ND		
	12/23/1998	19.60		15.03	ND	0.8	0.9	ND	ND		
	3/29/1999	18.88		15.75	ND	ND	ND	ND	ND		
	6/23/1999	18.05		16.58	ND	ND	ND	ND	ND		
	9/24/1999	19.61		15.02	ND	ND	ND	ND	ND		
	12/23/1999	20.01		14.62	ND	ND	ND	ND	ND		
	3/21/2000	19.05		15.58	140	< 0.5	<0.5	<0.5	< 0.5	<5.0	
	7/3/2000	19.40		15.23	85	8.1	3.1	1.6	7.8	<5.0*	k
	9/7/2000	19.62		15.01	<50	< 0.5	<0.5	< 0.5	< 0.5	<5.0*	a
	12/5/2000	20.25		14.38	<50	<0.5	<0.5	<0.5	< 0.5	<5.0	
	3/6/2001	19.07		15.56	91	5.5	<0.5	<0.5	< 0.5	<5.0	
	6/8/2001	20.77		13.86	290	22.0	0.8	<0.5	< 0.5	<5.0	
	8/27/2001	21.33		13.30	660	24.0	2.2	1.3	4.0	<25	a
	10/25/2001	21.62		13.01	55	3.5	<0.5	<0.5	<0.5	<5.0	a
	3/1/2002	21.49		13.14	200	1.9	0.69	<0.5	<0.5	<5.0*	a
	6/10/2002	22.15		12.48	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	a
	9/3/2002	21.50		13.13	60	1.9	<0.5	< 0.5	0.77	<5.0	
	1/22/2002	22.19 20.27		12.44	82 <50	0.57	<0.5	0.68	<0.5	<5.0	a
	1/23/2003 6/12/2003	20.27		14.36 13.53	<50 <50	2.1 0.88	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<5.0 <5.0	a
	7/23/2003	21.10		13.16	<50 <50	4.0	<0.5	<0.5	<0.5	<5.0 <5.0	
	12/22/2003	19.57		15.06	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	3/10/2004	19.61		15.02	990	200	2.9	4.0	20	<70	
	6/16/2004	20.15		14.48	250	42	<0.5	0.88	<0.5	<35	a
	-,,	_5.10					3.0	2.20	0.0	55	

TABLE 2

Well ID Sample ID TOC (ft amsl)	Date	Depth to Groundwater (ft below TOC)	LNAPL Thickness (feet)	TOC Groundwater Elevation (ft amsl)	ТРНд	Benzene	Toluene ——— (μg/	Ethylbenzene	Xylenes	МТВЕ	Notes
100 (1 11/101)		() i below TOC)	(Jeet)	(ji umsi)	<u>←</u>		(μg/	L) —		<u>→</u>	
	9/27/2004	22.14		12.49	1,600	140	4.8	45	18	<110	a
	12/22/2004	21.81		12.82	<50	5.3	<0.5	<0.5	0.66	<5.0	
	3/3/2005	19.35		15.28	2,000	330	4.4	63	39	<150	a
	6/9/2005	18.73		15.90	250	42	1.4	14	3.2	<5.0	a
	9/9/2005	19.30		15.33	2,000	390	5.0	71	38	<400	a
	12/20/2005	19.65		14.98	4,300	760	18	170	150	<35	a
	3/26/2006	18.58		16.05	1,600	460	3.3	35	32	<50	a
	6/23/2006	18.57		16.06	1,900	500	3.9	81	56	<17	a
	9/7/2006	18.98		15.65	8,800	1,900	12	350	220	<260	a,i
	12/29/2006	19.70		14.93	15,000	3,400	69	610	700	<450*/<0.5***	a
	3/21/2007	19.57		15.06	9,900	2,300	24	360	410	<240*	a
	6/7/2007	19.70		14.93	14,000	3,800	40	790	720	<550* <25***	a - 1
	9/28/2007 12/9/2007	20.16 20.56	_	14.47 14.07	26,000 25,000	7,200 7,000	84 59	1,100 1,100	1,600 2,000	<17	a,l a,l
	3/3/2008	19.97		14.66	30,000	6,200	31	900	1,400	<10***	a,1
MW-5 cont.	6/4/2008	20.32		14.31	7,500	1,600	4.6	25	91	<10***	a,j
WW 5 cont.	9/9/2008	20.75		13.88	54,000	8,900	76	1,300	1,700	<25***	a,1
	12/5/2008	21.08		13.55	33,000	9,200	43	1,500	1,800	<5.0***	a,1
	3/2/2009	20.74		13.89	34,000	9,700	41	1,100	1,300	<5.0***	a,l
	9/15/2009	21.02		13.61	40,000	10,000	280	1,400	2,600	<2.5***	a,l
	3/1/2010	20.55		14.08	57,000	16,000	240	1,800	5,000	<10***	a,l
	9/7/2010	20.25		14.38	35,000	12,000	160	970	2,900	<25***	a,l
	2/18/2011	20.13		14.50	100	20	<0.5	0.74	10	<0.5***	a
	9/23/2011	19.78		14.85	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-
MW-6	10/28/1996	20.02		15.87	<50	<0.50	<0.50	<0.50	<0.50	<2.0*	
35.89	12/12/1996	20.18		15.71	ND	ND	ND	ND	ND	ND*	n
	3/31/1997	19.81		16.08							
	6/27/1997	19.76		16.13							
	9/9/1997	20.06		15.83	ND	ND	ND	ND	ND	ND*	
	12/18/1997	19.90		15.99	ND	ND	ND	ND	ND		
	3/12/1998	18.00		17.89	ND	ND	ND	ND	ND	ND*	
	6/22/1998	18.43		17.46	ND	ND	ND	ND	ND		
	9/18/1998	19.10		16.79	ND	ND	ND	ND	ND		
	12/23/1998	19.61		16.28	ND	ND	ND	ND	ND		
	3/29/1999	18.92		16.97	ND	ND	ND	ND	ND		
	6/23/1999	18.41		17.48	ND	ND	ND	ND	ND		
	9/24/1999	19.61		16.28	ND	ND	ND	ND	ND		
	12/23/1999	20.30		15.59	ND	ND	ND	ND	ND		
	3/21/2000	18.97		16.92	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	7/3/2000	19.46		16.43	59	5.1	2.3	1.1	5.3	<5.0*	
	9/7/2000	19.95		15.94	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	a
	12/5/2000 3/6/2001	20.50 19.54		15.39 16.35	<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<5.0 <5.0	
	6/8/2001	20.92		14.97	<50 <50	<0.5	<0.5	<0.5	<0.5	<5.0 <5.1	
	8/27/2001	21.37		14.52	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	10/25/2001	21.59		14.30	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	3/1/2002	21.33		14.56	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	
	6/10/2002	21.97		13.92	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	
	9/3/2002	21.55		14.34							
	12/22/2002	22.25		13.64	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	1/23/2003	20.47		15.42	<50	<0.5	<0.5	<0.5	< 0.5	<5.0	
	6/12/2003	21.09		14.80							
	7/23/2003	21.42		14.47							
	12/22/2003	19.49		16.40							
	3/10/2004	20.20		15.69	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	6/16/2004	20.73		15.16							
	9/27/2004	22.88		13.01							

TABLE 2

Well ID Sample ID	Date	Depth to Groundwater	LNAPL Thickness	TOC Groundwater Elevation	ТРНg	Benzene	Toluene	Ethylbenzene	Xylenes	МТВЕ	Notes
TOC (ft amsl)		(ft below TOC)	(feet)	(ft amsl)	\leftarrow		(μg/L) ———		\rightarrow	
	12/22/2004	22.53		13.36							
	3/3/2005	19.87		16.02	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	6/9/2005	18.95		16.94							
	9/9/2005	19.45		16.44							
	12/20/2005	19.90		15.99							
	3/26/2006	18.85		17.04	<50	<0.5	<0.5	<0.5	< 0.5	<5.0	
	6/23/2006	18.57		17.32							
	9/7/2006	19.13		16.76							
	12/29/2006	19.96		15.93							
	3/21/2007	19.87		16.02	<50	<0.5	<0.5	<0.5	< 0.5	<5.0*	m
	6/7/2007	20.05		15.84							
	9/28/2007	20.51		15.38							
	12/9/2007	20.90		14.99							
	3/3/2008	20.47		15.42	<50	<0.5	<0.5	<0.5	< 0.5	<0.5***	
	6/4/2008	20.70		15.19							
	9/9/2008	21.09		14.80							
	12/5/2008	21.50		14.39							
	3/2/2009	21.30		14.59	<50	<0.5	<0.5	<0.5	<0.5	<0.5***	
MW-6 cont.	9/15/2009	21.55		14.34							
	3/1/2010	21.20		14.69	<50	<0.5	<0.5	<0.5	<0.5	<0.5***	m
	9/7/2010	20.78		15.11							
	2/18/2011	20.74		15.15	<50	<0.5	<0.5	<0.5	<0.5	<0.5***	
	9/23/2011	20.24		15.65			-	-		-	-
MW-7	9/23/2011	19.60		15.12	23,000a	1,800	1,700	930	3,300	<500	
34.72											
Trip Blank	3/21/2000				<50	<0.5	<0.5	<0.5	< 0.5	<5.0	
	9/7/2000				<50	<0.5	<0.5	<0.5	< 0.5	<5.0	
Grab Groundwate	=										
SB-A	7/6/1995	~20			330	16	3.6	1.3	4.9		i,j
SB-B	7/7/1995	~20			450	55	3.1	5.1	5.0		a
SB-C	7/6/1995	~20			44,000	6,600	5,900	980	4,400		a
SB-D	7/6/1995	~20			70,000	7,400	10,000	1,600	7,200		a
SB-E	7/6/1995	~20			25,000	1,000	3,000	610	2,700		a
SB-G	7/7/1995	~20			84,000	9,400	16,000	2,200	9,900		a,b
SB-I	7/7/1995	~20			24,000	6,100	1,400	680	1,600		a
SB-J SB-K	7/7/1995 7/7/1995	~20 ~20			960 72,000	110 9,600	66 9,600	8.7 1,800	71 7,000		a
3D-K	7/7/1993	20			72,000	9,000	9,000	1,000	7,000		a
CB-1-W	7/22/1999				110,000	1,300	16,000	2,700	12,000	<3000*	a,b,c
CB-2-W	7/22/1999				4,700	21	13	170	76	<50*	a,c
	.,,				2,7. 0.0						2,5
GW-1	7/30/1994				<50	<0.5	<0.5	<0.5	<2.0		
GW-2 ^	7/29/1994				<50	<0.5	<0.5	<0.5	<2.0		
GW-3 ^	7/29/1994				<50	<0.5	<0.5	<0.5	<2.0		
B-25-W	5/31/2011			_	55,000	19,000	2,000	1,700	2,700	<1,000	a,c
B-26-W	6/1/2011				54,000	1,900	9,600	1,700	8,900	<1,000	a,b,c
B-27-W	6/1/2011			_	100,000	7,200	21,000	2,300	13,000	<1,500	a,b,c
B-28-W	6/2/2011			-	100,000	17,000	19,000	2,300	10,000	<2,000	a,b,c

$\underline{Abbreviations, Methods, \&\ Notes}$

TOC = Top of casing elevation

ft amsl = feet above mean sea level

LNAPL = light non-aquesous phase liquid (previously referred to as SPH)

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

a = Unmodified or weakly modified gasoline is significant.

b = Lighter than water immiscible sheen is present.

c = Liquid sample that contains greater than \sim 2 vol. % sediment.

d = MTBE result confirmed by secondary column or GC/MS analysis.

TABLE 2

GROUNDWATER ELEVATION AND ANALYTICAL DATA ALLRIGHT PARKING 1432 HARRISON STREET, OAKLAND, CALIFORNIA

				TOC							
Well ID			LNAPL	Groundwater							
Sample ID	Date	Depth to Groundwater	Thickness	Elevation	ТРНд	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
TOC (ft amsl)		(ft below TOC)	(feet)	(ft amsl)	←		(μg/l			\rightarrow	

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

MTBE = Methyl tert-butyl ether

- * = MTBE by EPA Method SW8021B
- ** = MTBE by EPA Method SW8240
- *** = MTBE by EPA Method SW8260
- 1 = Not confirmed with EPA Method 8260B.

 μ g/L = micrograms per liter, equivalent to parts per billion

- -- = Not sampled, not analyzed, not applicable, or no SPH was measured or observed
- <n = Not detected in sample above n mg/L
- ND = Not detected above laboratory detection limit
- x = Groundwater elevation adjusted for SPH by the relation:
 - Groundwater Elevation = TOC Elevation Depth to Groundwater + (0.7 x SPH thickness)
- # = The wellhead elevation was raised by 0.41 feet when well MW-1 was connected to the SVE system on October 31, 2003.
- ## = The wellhead elevation was lowered by 0.41 feet when well MW-1 was disconnected from the SVE system on April 30. 2005.
- + = Well de-watered during purging, no measurable water to sample.

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

Field = Observed in the field

Lab = Observed in analytical laboratory

 $^{\wedge}$ = Samples associated with 1439 Alice St. Property

- e = Sample analyzed for purgeable hydrocarbons by EPA Method SW8010, no purgeable hydrocarbons were detected.
- f = Sample analyzed for VOCs by EPA Method SW8240, no non-BTEX compounds were detected.
- g = Sample analyzed for Total Petroleum Hydrocarbons as motor oil (TPHmo) by Modified EPA Method SW8015, no TPHmo was detected.
- h = Analytic sampling discontinued. Approved by Alameda County Department of Environmental Health.
- i = Lighter gasoline range compounds are significant.
- $j = Gasoline \ range \ compounds \ having \ broad \ chromatographic \ peaks \ are \ significant.$
- k = No recognizable pattern.
- 1 = Sample diluted due to high organic content.
- m = Liquid sample that contains greater than \sim 1 vol. % sediment.
- n = TOC well elevation was increased by 3 ft based on a benchmark discrepancy discovered during a well survey performed on September 11, 2002.

APPENDIX A

FIELD DATA SHEETS



WELL GAUGING SHEET

	Conestoga-Rovers and Associates
C*4.	

Site

Address: 1432 Harrison Street, Oakland, CA

Date: 9/2**3**/2011 Signature:

Well ID	Time	Depth to SPH	Depth to Water	SPH Thickness	Depth to Bottom	Comments
ML-1	9:00		19.85		25.60	
Mu-2	9:05	19.91	20.10	0.19		•
WD-3	8:35		18.87	NEW REPORT OF THE PROPERTY OF	2395	
MJ-4	8:45		19.06		24.50	
MW-5	8:50		19.78		27.90	
MW-6	8:40	**	20.24		28.25	
MW-7	8:55	at rech more construction of the second construc	19.60		25.05	
				-		
						п



Date:		9/2 3 /2011				Maria Anni Indonésia Anni Total In			
Client:		Conestoga-R	overs and A	ssociates					
ite Addre	ss:	1432 Harriso	on Street, Oa	kland, CA					
			Contract the Contract to Contract the Contract the Contract to Contract the Contract to Contract the Contract to Contract the Contract to Contract the Contract						Well ID: MW-1
					400000000000000000000000000000000000000			Well I	Diameter: 4"
	12								g Device: Peristaltic Pump
								Sampling	Method: Peristaltic Pump
o envention and the second						Total V	Vell Depth	from top	of casing: 25.60
				W	ater level	at the star	rt of purge	from top	of casing: 19.85
			Арг	roximate o	depth of w	ater intak	e on pump	from top	of casing: 23.0
	Purged	TEMP		COND.		DO	Drawdow n Water	Turbidity	*
IME:	Rate (ml/min)	(Celsius)	pН	(μS/cm)	ORP (mV)	(mg/L)	Level (ft)	(NTU)	Comments
1:00	100	100. 700					19.85		
11:03	100	21.0	6.95	1055	-126	1.12	19.87	38	
1:06	100	20.7	6-94	1040	-124	0.87	19.88	39	
11:09	100	20.9	6.93	1038	-123	0.86		34	
11:12	100	20.7	6.93	1037	-122			39	
11:15	100	20.7	6-91	1037	-120	0.83	19.89	32	
			-						

									total purge volume =)500m
Sample									16.1
D:	Date:		Time	Container	Туре	Preserva	tive	Analytes	Method
	0 (1	1						
MU-1	9/23	5/11	11:16	40 mI	. VOA	HC1		see coc	see coc



Date:		9/2 3 /2011									
Client:		Conestoga-Re	overs and As	ssociates							
Site Addr	ess:	1432 Harrisc	on Street, Oa	kland, CA							
									Well ID:	MU-2	
								Well I	Diameter:	2"	
								Purgin	g Device:	Peristaltic Pum	np
	and the second s							Sampling	g Method:	Peristaltic Pum	np
						Total V	Vell Depth	from top	of casing:		
				W	ater level	at the star	rt of purge	from top	of casing:	2010	2011
			App	roximate	depth of w	ater intak	e on pump	from top	of casing:		
				I	1		l D				
	Purged Rate	TEMP		COND.		DO	Drawdow n Water	Turbidity			
TIME:	(ml/min)	(Celsius)	pН	(µS/cm)	ORP (mV)	(mg/L)	Level (ft)	(NTU)	Comments		
									SPH	19.91	
			Bank	3	/m00	SPL	1		H2O	20.10 nicknes =	
			Danil	<u>u</u> -					SPM +1	nicknes z	0.10
a											
							<u> </u>				
									total	a valumas –	ml
C 1									total purge	e volume =	ml ml
Sample ID:	Date:		Time	Containe	r Type	Preserva	tive	Analytes	Method		
				- Oziotelle							
	/			40 - 1	L VOA	HC1		822.205	500 500		
				40 ml	JVOA	Inci		see coc	see coc		
								/4			
				VALUE CONTROL			Signatur	e: //		/	



Date:		9/2 3 /2011	Martin Anna de la companya de la co	•							
Client:		Conestoga-R	lovers and A	ssociates							
Site Addre	ess:	1432 Harris	on Street, Oa	akland, CA							
									Well ID:	MN-4 2"	
Well Diameter:											
Purging Device: Peristaltic Pump											
Sampling Method: Peristaltic Pump											
Total Well Depth from top of casing: 24.50											
Water level at the start of purge from top of casing: 19.0											
			Арј	oroximate (depth of w	ater intak	e on pump	from top	of casing:	22.0	
			1								
TIME:	Purged Rate (ml/min)	TEMP (Celsius)	pН	COND. (μS/cm)	ORP (mV)	DO (mg/L)	Drawdow n Water Level (ft)	Turbidity (NTU)	Comments	S	
9:15	100	**					19.05	~			
9:18	100	19.6	6.83	461	39	0.48	19.07				
9:21	100	19.7	6.85	470	36	0.42		23			
9:24	100	19.7	6.89	471	36	0.41	19.09	20			
9:27	100	19-6	6.89	474	38	0.40	19.11	24			
7.30	100	74.6	6.01	719	38	0.39	19.11	22			
					-						
Sample									total purge	e volume = / 5 (1) ml	
- 1	Date:		Time	Container	Туре	Preservat	ive	Analytes	Method		
MN-4	9/23	111	9:31	40 mL	T/O A	LICI					
1 12 1	7/20	5/11	4.21	40 IIIL	VUA	HC1		see coc	see coc		
							Signature	l		~	



Date:		9/2 3 /2011									
Client:		Conestoga-R	overs and A	ssociates			Money and a second described to the Conference of grane				
Site Addre	Site Address: 1432 Harrison Street, Oakland, CA										
	MW-5										
Well Diameter: 2"											
Purging Device: Peristaltic Pump											
Sampling Method: Peristaltic Pump											
Total Well Depth from top of casing: 27.40											
Water level at the start of purge from top of casing: 19.76											
Approximate depth of water intake on pump from top of casing: 22.0										22.0	
9:47 9:50 9:53 9:56 9:59 10:02	Purged Rate (ml/min) 100 100 100 100 100	TEMP (Celsius) 19.7 19.9 19.9 19.9	6.89 6.85 6.84 6.82 6.82	COND. (μS/cm) 470 468 465 463 463	ORP (mV) 72 71 70 69	DO (mg/L) O.95 O.81 O.80 O.78	Drawdow n Water Level (ft) [9.76 19.79 19.79 19.79	Turbidity (NTU) 21 14 17 15 18	Comments	S	
Sample ID: MW-5	Date:	3/11	Time	Container 40 mL		Preservat HCl	iive Signature	Analytes see coc		e volume = / 5 00 ml	



Date:		9/2 3 /2011									
Client:)	Conestoga-Re	overs and A	ssociates							
Site Addre	ss:	1432 Harrisc	n Street, Oa	kland, CA							
									Well ID: MW-7		
						on Antono and on the United States Comme		Well I	Diameter: 2"		
Purging Device: Peristaltic Pump											
Sampling Method: Peristaltic Pump											
						Total V	Vell Depth	from top	of casing: 25-05		
Water level at the start of purge from top of casing: 19.60											
Approximate depth of water intake on pump from top of casing:											
	Purged Rate	TEMP		COND.		DO	Drawdow n Water	Turbidity	×		
TIME:	(ml/min)	(Celsius)	pН	(μS/cm)	ORP (mV)	(mg/L)	Level (ft)	(NTU)	Comments		
10:21	100						19.60	_			
10:24	100	20.3	7.02	681	-105	1.15	19.62	27			
10:27	100	20.3	6-97	678	-106	1.04	19.62	24			
10:30	100	20.3	6.96	677	-102	1.03	19.63				
10:33	100	20.2	6.95	674	-102	1.02	19.64	20			
10:36	100	20.2	6.94	674	-102	1.01	19.64	21			
								Mily and the second second second			
			**								
									total purge volume = 1500 ml		
Sample					L		L		total purge volume 4500 mil		
ID:	Date:		Time	Container	Туре	Preservat	tive	Analytes	Method		
MW-7	9/23	11)	10:37	40 mL	VOA	HC1		see coc	see coc		
	1100	111	10:21			L			No.		
							G	l.			
							Signature	: /	0		

APPENDIX B

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-noxTM or AlconoxTM 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 C

CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

Analytical Report

Conestoga-Rovers & Associates	Client Project ID: #540188; Borsuk-Oakland	Date Sampled: 09/23/11
5900 Hollis St, Suite A		Date Received: 09/23/11
3,000 Homs St, Builte H	Client Contact: Bob Foss	Date Reported: 09/30/11
Emeryville, CA 94608	Client P.O.:	Date Completed: 09/30/11

WorkOrder: 1109658

September 30, 2011

Dear Bob:

Enclosed within are:

- 1) The results of the 4 analyzed samples from your project: #540188; Borsuk-Oakland,
- 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.

The analytical results relate only to the items tested.

1109658



McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD PITTSBURG, CA 94565-1701

Website: www.mccampbell.com Email: main@mccampbell.com

Telephone: (877) 252-9262

Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

VOAS O&G METALS OTHER

pH<2

T	TI	D	M	A	D	α	UN	n	TI	FB.4	TIP.	
	w	ĸ	13	A	K	v		17		HVI	111	

RUSH	24 HR	48 HR

Planter.
1966
LONG
Jan

Page 2 of 7

GeoTracker EDF № PDF 🗸 Excel 🗆 Write On (DW) 🖵

48 HR 72 HR 5 DAY

Check if sample is effluent and "J" flag is required

Report To: B	b Foss	6327		Bill To	o: Co	ne	sto	30-1	Soni	ers	81	25	50	ia	es	55.00		15-21	A	nal	ysis	Rec	lues	t						P	Ther	Comments
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		SAMI	PLING		S.		MA	TRI	X			HOERV		as (6	5)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	MTBE / BTEX ONLY (EPA 602 / 8021)	EPA 505/ 608 / 8081 (CI Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA \$25.2 / 625 / 8270 (SVOCs)	EPA' 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.7 / 200.8 / 6010 / 6020)	438260	stud . Futher prevent by stol	
	LOCATION/			STS	Type Containers	\vdash				111	ESI	- PC V	ED	as G	TPH as Diesel (8015)	0 10	m H	1/8	ON	808	PC	S	5	4/8	8/8	/83	s (20	(20	8.00	T	0	
SAMPLE ID	Field Point			Containers	nts									Hd.	esel	olem	olem	7 60	TEN	808	8082	8 4	815	/ 62	162	SIN	letal	etals	7/2	7	25	
	Name	Date	Time	ntz	ű	er			200		,	3	1	. S. T	s Di	Petri	Petrn	02.2	3 / B	05/ (/80	07.7	15.	24.2	25.2	3270	17.8	SN	200	100	F10790	
				ű	ype	Water	Soil	Air	Other	ICE	HCL	HNO3	Other	BTEX &	ь На	otal	otal	PA 3	TBE	PA 3	PA 6	PA S	PA 5	PA S	PA S	P.Y.	AM.	E	pua	1	uthely	
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MW-1		9/23/11	11:16	3	VOR	X				X	X			X												,				*		
MW-4			9:31																													
MW-4 MW-5			10:03							П		- 10																				
MN-7			10:37		1	1				1	K			表																X	X	
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future health enda	ngerment as	s a result	of brief.	, glov	ed, or	en	air,	sam	ple	han	dlin	ig b	y N	IAI	stal	ff. N	on-c	lisc	losu	re i	ncu	rs a	n in	me	diat	e \$2	250 s	surc	har	ge a	nd the	client is
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PRESERVATION

McCampbell Analytical, Inc.

MW-4

MW-5

MW-7

Water

Water

Water

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

1534 Willow Pass Rd
Pittsburg CA 94565-1701

(925) 25	52-9262				,	Work(Order:	11096	58	Clie	ntCode	e: CETI	Ξ			
		WaterTrax	WriteOn	✓ EDF		Excel		Fax	✓	Email		HardCopy	/T	hirdParty	J-	-flag
Report to:						I	Bill to:					Re	equestec	ITAT:	5	days
Bob Foss Conestoga-I 5900 Hollis Emeryville, ((510) 420-332	CA 94608	cc: PO:	ofoss@crawoi #540188; Bors				Coi 590	counts P nestoga 00 Hollis eryville,	Rovers St, Ste		iates		ate Rec		09/23 09/23	
									Req	uested Te	ests (Se	e legend	below)			
Lab ID	Client ID		Matrix	Collection Date	Hold	1	2	3	4	5	6	7 8	9	10	11	12
1109658-001	MW-1		Water	9/23/2011 11:16		Α	Α									

Α

Α

Α

9/23/2011 9:31

9/23/2011 10:03

9/23/2011 10:37

Test Legend:

1109658-002

1109658-003

1109658-004

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

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.

Sample Receipt Checklist

Client Name:	Conestoga-Rovers &	& Associates			Date a	and Time Received:	9/23/2011 5	5:10:08 PM
Project Name:	#540188; Borsuk-Oa	ıkland			Check	dist completed and re	viewed by:	Melissa Valles
WorkOrder N°:	1109658	Matrix: Water			Carrie	r: <u>Client Drop-In</u>		
		<u>Cha</u>	in of Cι	ustody (Co	OC) Informat	tion		
Chain of custody	present?		Yes	✓	No 🗌			
Chain of custody	signed when relinquis	hed and received?	Yes	✓	No 🗆			
Chain of custody	agrees with sample la	bels?	Yes	✓	No 🗆			
Sample IDs noted	d by Client on COC?		Yes	✓	No 🗌			
Date and Time of	f collection noted by C	lient on COC?	Yes	✓	No 🗌			
Sampler's name	noted on COC?		Yes	✓	No 🗌			
			<u>Sample</u>	Receipt	<u>Information</u>			
Custody seals int	act on shipping contai	ner/cooler?	Yes		No 🗌		NA 🗸	
Shipping containe	er/cooler in good cond	ition?	Yes	✓	No 🗌			
Samples in prope	er containers/bottles?		Yes	✓	No 🗌			
Sample container	rs intact?		Yes	✓	No 🗌			
Sufficient sample	volume for indicated	test?	Yes	✓	No 🗆			
		Sample Pres	ervatio	n and Hol	d Time (HT)	Information		
All samples recei	ved within holding time	e?	Yes	✓	No 🗌			
Container/Temp I	Blank temperature		Coole	er Temp:	9.8°C		NA \square	
Water - VOA vials	s have zero headspac	e / no bubbles?	Yes	✓	No 🗆	No VOA vials submi	tted	
Sample labels ch	ecked for correct pres	ervation?	Yes	✓	No 🗌			
Metal - pH accep	table upon receipt (pH	<2)?	Yes		No 🗌		NA 🗹	
Samples Receive	ed on Ice?		Yes	✓	No 🗌			
		(Ісе Тур	e: WE	TICE)				
* NOTE: If the "N	lo" box is checked, see	e comments below.						
=====	======	=====				======		======
Client contacted:		Date contac	ted:			Contacted	by:	
Comments:								

Conestoga-Rovers & Associates	Client Project ID: #540188; Borsuk-	Date Sampled:	09/23/11
5900 Hollis St, Suite A	Oakland	Date Received:	09/23/11
	Client Contact: Bob Foss	Date Extracted:	09/27/11-09/29/11
Emeryville, CA 94608	Client P.O.:	Date Analyzed:	09/27/11-09/29/11

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

Extraction	on method: SW5030B			Analyti	ical methods:	SW8021B/8015I	3m		Wo	rk Order:	1109658
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	MW-1	W	16,000	ND<250	2600	65	350	1400	50	105	d1
002A	MW-4	W	86	ND	4.5	ND	ND	ND	1	112	d1
003A	MW-5	W	ND	ND	ND	ND	ND	ND	1	103	
004A	MW-7	W	23,000	ND<500	1800	1700	930	3300	20	103	d1
							1	L			1
	orting Limit for DF =1; neans not detected at or	W	50	5.0	0.5	0.5	0.5	0.5		μg/I	
	ove the reporting limit	S	1.0	0.05	0.005	0.005	0.005	0.005		mg/k	Κg

above the reporting limit	3	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg
ND means not detected at or	٧٧	30	5.0	0.5	0.5	0.5	0.5	μg/L

^{*} 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.

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

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

QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 61385 WorkOrder: 1109658

EPA Method: SW8021B/8015Bm Extraction: SW5030B Spiked Sample ID: 1109												
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acc	eptance	Criteria (%)	
, unaryte	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) [£]	ND	60	113	120	6.54	118	120	1.53	70 - 130	20	70 - 130	20
MTBE	ND	10	97.6	92	5.87	104	109	5.10	70 - 130	20	70 - 130	20
Benzene	ND	10	99.6	106	5.88	104	105	0.773	70 - 130	20	70 - 130	20
Toluene	ND	10	97.9	104	5.74	102	103	0.644	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	99	105	5.71	103	104	0.898	70 - 130	20	70 - 130	20
Xylenes	ND	30	103	109	5.80	107	109	1.18	70 - 130	20	70 - 130	20
% SS:	99	10	97	95	2.21	97	93	3.53	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 61385 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1109658-004A	09/23/11 10:37 AM	1 09/27/11	09/27/11 7:08 AM				

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

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

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

QA/QC Officer

QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 61401 WorkOrder: 1109658

EPA Method: SW8021B/8015Bm Extraction: SW5030B					Spiked Sample ID: 1109649-017A							
Analyte	Sample	Spiked	MS	MSD	SD MS-MSD LCS LCSD LCS-LCSD Acceptance Criteri				Criteria (%)			
, and yet	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) [£]	ND	60	90.8	93.5	2.92	92.4	90.3	2.24	70 - 130	20	70 - 130	20
MTBE	ND	10	117	118	0.963	115	115	0	70 - 130	20	70 - 130	20
Benzene	ND	10	104	103	0.995	104	101	2.79	70 - 130	20	70 - 130	20
Toluene	ND	10	91.5	91.9	0.485	93.7	90.5	3.45	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	92.3	93.3	1.06	94.7	91.4	3.59	70 - 130	20	70 - 130	20
Xylenes	ND	30	105	106	0.855	108	104	3.34	70 - 130	20	70 - 130	20
%SS:	98	10	100	99	1.05	101	99	1.12	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 61401 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1109658-001A	09/23/11 11:16 AM	09/27/11	09/27/11 4:18 PM	1109658-002A	09/23/11 9:31 AM	09/29/11	09/29/11 2:19 AM
1109658-003A	09/23/11 10:03 AM	09/27/11	09/27/11 5:19 PM				

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

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

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

£ 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.

QA/QC Officer

APPENDIX D

BENZENE CONCENTRATION AND DEPTH TO WATER vs. TIME-SERIES GRAPHS

