

Re: Third Quarter 2011 Monitoring Report  
Former BP Station #11109  
4280 Foothill Blvd.  
Oakland, California  
ACEH Case #RO0000426

**RECEIVED**

**2:12 pm, Nov 01, 2011**

Alameda County  
Environmental Health

ARCADIS U.S., Inc.  
100 Montgomery Street, Suite 300  
San Francisco, California 94104  
Tel 415.374.2744  
Fax 415.374.2745  
www.arcadis-us.com

ENVIRONMENTAL

"I declare that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct."

Submitted by:

ARCADIS U.S., Inc.



Hollis E. Phillips, PG  
Project Manager

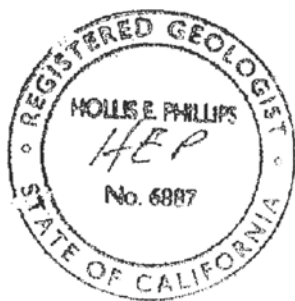
Date:  
10/31/2011

Contact:  
Hollis E. Phillips

Phone:  
415.374.2744 ext 13

Email:  
Hollis.phillips@arcadis-  
us.com

Our ref:  
GP09BPNA.C106.  
N0000



**Third Quarter 2011 Monitoring Report**  
Former BP Station #11109  
4280 Foothill Boulevard, Oakland, California  
ACEH Case #RO0000426

Prepared for  
Ms. Hollis Phillips, PG  
Senior Geologist  
ARCADIS-US, Inc.  
100 Montgomery Street, Ste. 300  
San Francisco, California 94104

On behalf of  
Atlantic Richfield Company  
PO Box 1257  
San Ramon, California 94583

Prepared by



875 Cotting Lane, Suite G  
Vacaville, California 95688  
(707) 455-7290  
*www.broadbentinc.com*

October 31, 2011

Project No. 09-88-646

October 31, 2011

Project No. 06-88-646

ARCADIS-US, Inc.  
100 Montgomery Street, Suite 300  
San Francisco, California 94104  
Submitted via ENFOS


Attn.: Ms. Hollis Phillips, PG


Re: Third Quarter 2011 Monitoring Report, Former BP Service Station #11109, 4280 Foothill Boulevard, Oakland, Alameda County, California; ACEH Case #RO0000426

Dear Ms. Phillips:

Attached is the Third Quarter 2011 Monitoring Report for Former BP Service Station #11109, 4280 Foothill Boulevard, Oakland, Alameda County, California. Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (707) 455-7290.

Sincerely,  
BROADBENT & ASSOCIATES, INC.

  
Samuel Barkley  
Senior Staff Geologist

  
Thomas Sparrowe, PG  
Senior Geologist



enclosures

cc: Mr. Paresh Khatri, Alameda County Environmental Health (Submitted via ACEH ftp Site)  
Ms. Shelby Lathrop, ConocoPhillips, 76 Broadway, Sacramento, California 95818  
Electronic copy uploaded to GeoTracker

**THIRD QUARTER 2011  
MONITORING REPORT  
STATION #11109, OAKLAND, CALIFORNIA**

Broadbent & Associates, Inc. (BAI) is pleased to present this *Third Quarter 2011 Monitoring Report* on behalf of ARCADIS-US, Inc. for station #11109 located in Oakland, Alameda County, California. Monitoring activities at the site were performed in accordance with the reporting requirements issued by the Alameda County Environmental Health Services Agency (ACEH). Details of work performed, discussion of results, and recommendations are provided below.

Facility Name / Address:	<u>#11109 / 4280 Foothill Boulevard, Oakland</u>
Client Project Manager / Title:	<u>Ms. Hollis Phillips, PG / Senior Geologist</u>
BAI Contact:	<u>Sam Barkley &amp; Tom Sparrowe (707) 455-7290</u>
BAI Project No.:	<u>09-88-646</u>
Primary Regulatory Agency / ID No.:	<u>ACEH/ Case #RO0000426</u>
Current phase of project:	<u>Monitoring</u>
List of Acronyms / Abbreviations:	<u>See end of report text for list of acronyms/abbreviations used in report.</u>

**WORK PERFORMED THIS QUARTER (Third Quarter 2011):**

1. Conducted groundwater monitoring/sampling for Third Quarter 2011 on September 28, 2011.

**WORK SCHEDULED FOR NEXT QUARTER (Fourth Quarter 2011):**

1. Submit *Third Quarter 2011 Monitoring Report* (contained herein).

**ADDITIONAL WORK RECOMMENDED FOR NEXT QUARTER (Fourth Quarter 2011)**

1. None

**GROUNDWATER MONITORING PLAN SUMMARY:**

Groundwater level gauging:	<u>MW-2 through MW-12</u>	(Semi-Annually 1Q & 3Q)
Groundwater sample collection:	<u>MW-2 through MW-7, MW-10, MW-11, and MW-12</u>	(Semi-Annually 1Q & 3Q)
Biodegradation indicator parameter monitoring:	<u>None</u>	

**QUARTERLY RESULTS SUMMARY:**

**LNAPL**

LNAPL observed this quarter:	<u>Yes - MW-5, MW-10 &amp; MW-12</u>	(yes/no)
LNAPL recovered this quarter:	<u>None</u>	(gal)
Cumulative LNAPL recovered:	<u>163.34 (FP/Water Mixture)</u>	(gal)

**Groundwater Elevation and Gradient:**

Depth to groundwater:	<u>9.88 (MW-11) to 15.81 (MW-6)</u>	(ft below TOC)
Gradient direction:	<u>Northwest</u>	(compass direction)
Gradient magnitude:	<u>0.02</u>	(ft/ft)
Average change in elevation:	<u>-1.92</u>	(ft since last measurement)

**Laboratory Analytical Data**

Summary: GRO was detected in MW-4, MW-7 and MW-11. Benzene was detected in MW-7 and MW-11. Ethylbenzene was detected in MW-7 and MW-11. Toluene was detected in MW-7 and MW-11. Total Xylenes was detected in MW-7 and MW-11. MTBE was detected in MW-3, MW-4, MW-6, MW-7 and MW-11. TBA was detected in MW-7 and MW-11. Other petroleum hydrocarbon constituents were below laboratory reporting limits.

## ACTIVITIES CONDUCTED & RESULTS:

Third Quarter 2011 groundwater monitoring was conducted on September 28, 2011 by BAI personnel in accordance with the monitoring plan summary above. Light Non-Aqueous Phase Liquid (LNAPL, or free product) was observed in wells MW-5 (0.06 ft), MW-10 (0.29 ft) and MW-12 (0.20 ft). MW-8 was inaccessible due to a car parked over the well. No other irregularities were noted during water level gauging. Depth to water measurements ranged from 9.88 ft at MW-11 to 15.81 ft at MW-6. Resulting groundwater surface elevations ranged from 24.32 ft at MW-8 to 30.16 ft at MW-11. Groundwater elevations are summarized in Table 1. Water level elevations yielded a potentiometric groundwater gradient to the northwest at approximately 0.02 ft/ft. Field methods used during groundwater monitoring are provided in Appendix A. Field data sheets are included in Appendix B. A Site Location Map is presented as Drawing 1. Potentiometric groundwater elevation contours are presented in Drawing 2.

Groundwater samples were collected on September 28, 2011, consistent with the current monitoring schedule. No irregularities were reported during sampling. Samples were submitted under chain-of-custody protocol to TestAmerica Laboratories, Inc. (Pleasanton, California) for analysis of Gasoline-Range Organics (GRO, C6-C12) by EPA Method 8015M (MW-4, MW-7, MW-11); for Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX), Ethyl Tertiary Butyl Ether (ETBE), Tert-Amyl Methyl Ether (TAME), Di-Isopropyl Ether (DIPE), 1,2-Dibromomethane (EDB), 1,2-Dichloroethane (1,2-DCA), Tert-Butyl Alcohol (TBA) and Ethanol by EPA Method 8260 (MW-7, MW-11); and Methyl Tertiary Butyl Ether (MTBE) by EPA Method 8260 (MW-3, MW-4, MW-6). No significant irregularities were encountered during analysis of the samples. The laboratory analytical report, including chain-of-custody documentation, is provided in Appendix C.

Hydrocarbons in the GRO range were detected above the laboratory reporting limit in three wells sampled at concentrations up to 5,900 µg/L in well MW-11. Benzene was detected above the laboratory reporting limit in two wells sampled at concentrations up to 380 µg/L in well MW-7. Toluene was detected above the laboratory reporting limit in two wells sampled at concentrations up to 92 µg/L in well MW-11. Ethylbenzene was detected above the laboratory reporting limit in two wells sampled at concentrations up to 260 µg/L in well MW-11. Total Xylenes was detected above the laboratory reporting limit in two wells sampled at concentrations up to 370 µg/L in well MW-11. MTBE was detected above the laboratory reporting limit in five wells sampled at concentrations up to 62 µg/L in well MW-4. TBA was detected above the laboratory reporting limit in two wells sampled at concentrations up to 26 µg/L in well MW-11. The remaining analytes were not detected above their laboratory reporting limits in the wells sampled this last monitoring event. Groundwater monitoring laboratory analytical results are summarized in Table 1 and Table 2. The most recent GRO, Benzene, and MTBE concentrations are also presented in Drawing 2. Groundwater monitoring data (GEO\_WELL) and laboratory analytical results (EDF) were uploaded to the GeoTracker AB2886 database. Upload confirmation receipts are provided in Appendix D.

## DISCUSSION:

Groundwater levels on September 28, 2011 were between historic minimum and maximum elevations for each well gauged except for a historic minimum in well MW-10. Groundwater elevations yielded a potentiometric groundwater gradient to the northwest at approximately 0.02 ft/ft, generally consistent with the historic flow direction and gradient data since 2009, as presented in Table 3.

Hydrocarbon concentrations during this event were within the historic minimum and maximum ranges recorded for each well, with the following exceptions: Benzene, Toluene, Ethylbenzene, Total Xylenes and MTBE reached historic minimums in well MW-11. Recent and historic laboratory analytical results are summarized in Table 1 and Table 2.

ARCADIS is in the process of obtaining a permit from the Bay Area Air Quality Management District (BAAQMD) to conduct mobile dual phase extraction (DPE) at the site. Do to the site being located within

1,000 feet of a school the permit application process will take up to three months. ARCADIS anticipates starting the work in January 2012.

## RECOMMENDATIONS:

There are no scheduled environmental work for Fourth Quarter of 2011. The next semi-annual monitoring and sampling event is scheduled to be conducted during the First Quarter of 2012.

## LIMITATIONS:

The findings presented in this report are based upon observations of field personnel, points investigated, results of laboratory tests performed by TestAmerica Laboratories, Inc. (Pleasanton, California), and our understanding of ACEH requirements. Our services were performed in accordance with the generally accepted standard of practice at the time this report was written. No other warranty, expressed or implied was made. This report has been prepared for the exclusive use of ARCADIS-US, Inc. and Atlantic Richfield Company (a BP affiliated company). It is possible that variations in soil or groundwater conditions could exist beyond points explored in this investigation. Also, changes in site conditions could occur in the future due to variations in rainfall, temperature, regional water usage, or other factors.

## ATTACHMENTS:

- Drawing 1: Site Location Map
- Drawing 2: Groundwater Elevation Contours and Analytical Summary Map September 28, 2011
  
- Table 1: Summary of Groundwater Monitoring Data: Water Elevations and Laboratory Analyses
- Table 2: Summary of Fuel Additives Analytical Data
- Table 3: Historical Groundwater Gradient - Direction and Magnitude
- Table 4: Summary of Free Product Removal
  
- Appendix A: Field Methods
- Appendix B: Field Data Sheets
- Appendix C: Laboratory Report and Chain-of-Custody Documentation
- Appendix D: GeoTracker Upload Confirmation Receipts

## LIST OF COMMONLY USED ACCRONYMS/ABBREVIATIONS:

ACEH:	Alameda County Environmental Health	ft/ft:	feet per foot
BAI:	Broadbent & Associates, Inc.	gal:	Gallons
BTEX:	Benzene, Toluene, Ethylbenzene, Total Xylenes	GRO:	Gasoline-Range Organics
1,2-DCA:	1,2-Dichloroethane	LNAPL:	Light Non-Aqueous Phase Liquid
DIPE:	Di-Isopropyl Ether	MTBE:	Methyl Tertiary Butyl Ether
EDB:	1,2-Dibromomethane	TAME:	Tert-Amyl Methyl Ether
ETBE:	Ethyl Tertiary Butyl Ether	TBA:	Tertiary Butyl Ether
TOC:	Top of Casing	µg/L:	Micrograms per liter

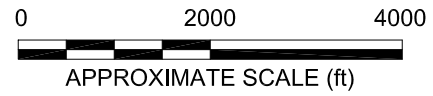
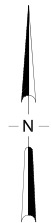
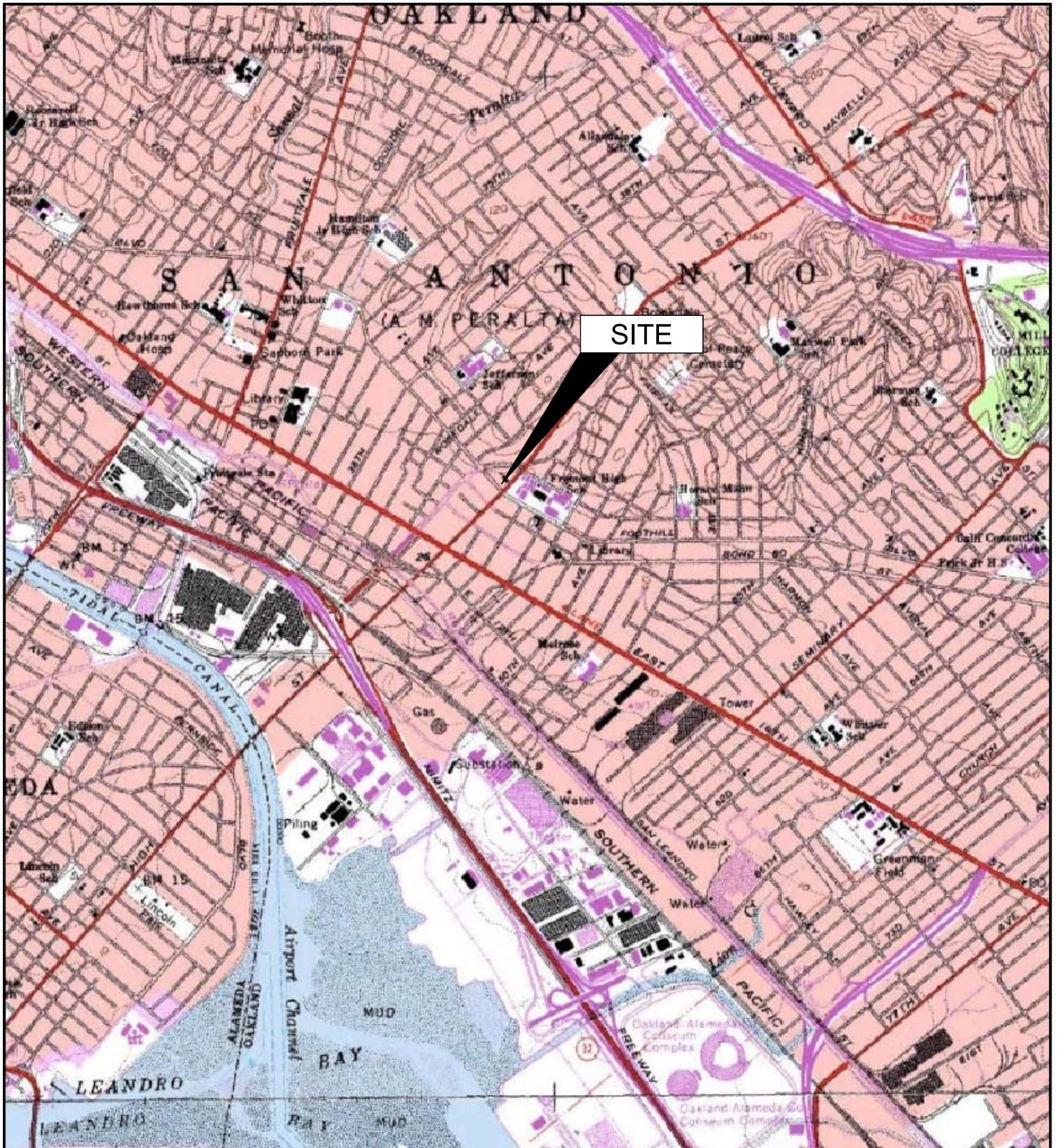
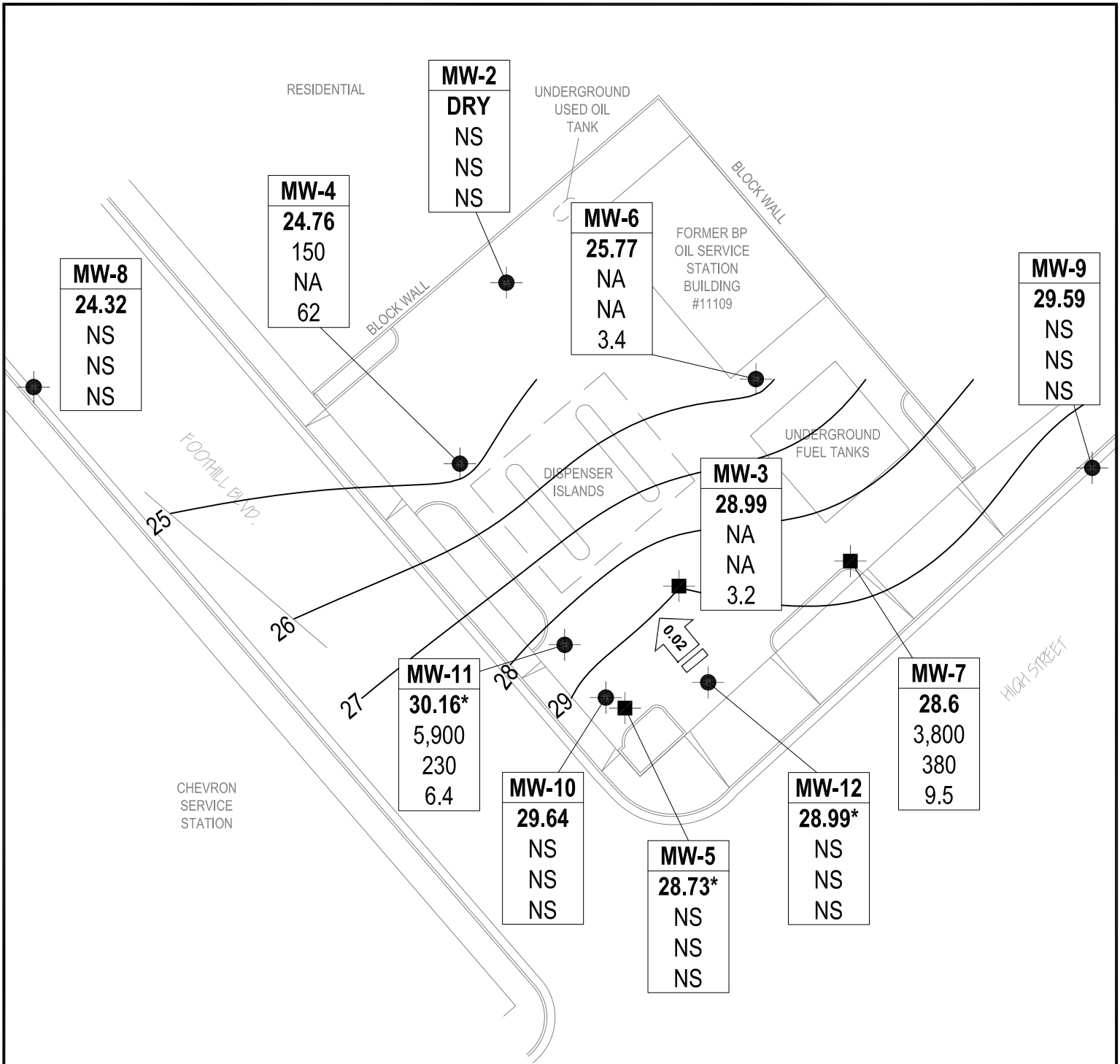
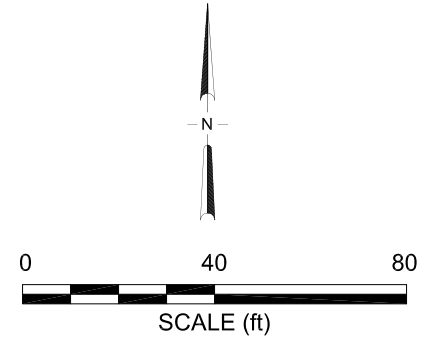


IMAGE SOURCE: USGS



	Monitor Well	NA	Not Analyzed
	Recovery Well	NM	Not Monitored
— 29.0	Groundwater Elevation Contour (ft)	NS	Not Sampled
<b>WELL</b>	Well Designation	SPH	Separate Phase Hydrocarbons
<b>ELEV</b>	Groundwater Elevation (ft)	*	Elevation Not Used for Contouring
<b>GRO</b>	GRO Concentration (µg/L)	<	Not Detected at or Above Laboratory Reporting Limits
<b>BENZ</b>	Benzene Concentration (µg/L)		Groundwater Elevation Flow Direction and Gradient (ft/ft)
<b>MTBE</b>	MTBE Concentration (µg/L)		





**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**Former BP Station #11109, 4280 Foothill Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC Elevation (feet)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L									DO (mg/L)	pH	Footnote
						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-1</b>																	
1/31/1990	--	38.19	15.41	0.00	22.78	--	--	--	--	--	--	--	--	--	--	--	
2/5/1990	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	c
<b>MW-2</b>																	
2/5/1990	--	41.22	21.90	0.00	19.32	1,300	--	14	<0.1	9	13	--	--	--	--	--	
2/14/1991	--		21.16	0.00	20.06	<50	<10000	<0.3	<0.3	<0.3	<0.3	--	<5000	51	--	--	d
5/13/1991	--		21.32	0.00	19.90	<50	<50	<0.3	<0.3	<0.3	<0.3	--	6,000	0.5	--	--	e
7/24/1991	--		22.92	0.00	18.30	--	--	--	--	--	--	--	--	--	--	--	
10/3/1991	--		24.90	0.00	16.32	<50	<50	<0.3	0.8	<0.3	<0.3	--	<5000	0.7	--	--	e
10/15/1991	--		24.10	0.00	17.12	--	--	--	--	--	--	--	--	--	--	--	
12/4/1991	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	f
12/16/1991	--		23.95	0.00	17.27	--	--	--	--	--	--	--	--	--	--	--	
1/6/1992	--		23.30	0.00	17.92	<50	<50	<0.3	<0.3	<0.3	<0.3	--	<5000	--	--	--	
1/22/1992	--		23.14	0.00	18.08	--	--	--	--	--	--	--	--	--	--	--	
1/28/1992	--		22.99	0.00	18.23	--	--	--	--	--	--	--	--	--	--	--	
2/5/1992	--		22.63	0.00	18.59	--	--	--	--	--	--	--	--	--	--	--	
2/12/1992	--		22.04	0.00	19.18	--	--	--	--	--	--	--	--	--	--	--	
2/17/1992	--		20.84	0.00	20.38	--	--	--	--	--	--	--	--	--	--	--	
4/3/1992	--		18.29	0.00	22.93	--	--	--	--	--	--	--	--	--	--	--	
4/8/1992	--		18.86	0.00	22.36	<50	63	<0.5	<0.5	<0.5	<0.5	--	<5000	--	--	--	
4/14/1992	--		19.45	0.00	21.77	--	--	--	--	--	--	--	--	--	--	--	
4/29/1992	--		20.35	0.00	20.87	--	--	--	--	--	--	--	--	--	--	--	
5/7/1992	--		20.84	0.00	20.38	--	--	--	--	--	--	--	--	--	--	--	
7/3/1992	--		22.34	0.00	18.88	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
10/8/1992	--		23.73	0.00	17.49	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
12/31/1992	--		21.12	0.00	20.10	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
4/21/1993	--		17.68	0.00	23.54	<50	<50	<0.5	<0.5	<0.5	<0.5	--	<5000	--	--	--	g, n
7/7/1993	--		20.30	0.00	20.92	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	1.0	--	--	e, n
9/21/1993	--		21.93	0.00	19.29	<50	--	0.9	0.7	0.7	2.6	21.54	--	--	--	--	n
12/17/1993	--		21.48	0.00	19.74	--	--	--	--	--	--	--	--	--	--	--	
12/23/1993	--		--	--	--	<50	--	<0.5	<0.5	<0.5	0.7	--	--	--	--	--	n

**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**Former BP Station #11109, 4280 Foothill Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC Elevation (feet)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L									DO (mg/L)	pH	Footnote
						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-2 Cont.</b>																	
4/7/1994	--	41.22	20.25	0.00	20.97	<50	--	<0.5	<0.5	<0.5	<0.5	12.2	--	--	5.9	--	n
7/6/1994	--		20.59	0.00	20.63	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	3.1	--	n
10/7/1994	--		22.04	0.00	19.18	<50	--	<0.5	<0.5	<0.5	<0.5	15.2	--	--	2.8	--	n
1/27/1995	--		26.12	0.00	15.10	<50	440	<0.5	<0.5	<0.5	<1	--	<5000	--	4.8	--	
3/30/1995	--		12.34	0.00	28.88	<50	--	<0.50	<0.50	<0.50	<1.0	--	--	--	7.2	--	
6/20/1995	--		16.42	0.00	24.80	<50	--	<0.50	<0.50	<0.50	<1.0	--	--	--	6.0	--	
10/3/1995	--		20.06	0.00	21.16	<50	--	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	5.7	--	
12/6/1995	--		21.31	0.00	19.91	<50	--	<0.50	<0.50	<0.50	<1.0	46	--	--	5.4	--	
3/21/1996	--		12.28	0.00	28.94	<50	--	<0.5	<1.0	<1.0	<1.0	<1.0	--	--	7.4	--	
6/21/1996	--		13.28	0.00	27.94	<50	--	<0.5	<1	<1	<1	<10	--	--	7.3	--	
9/6/1996	--		13.94	0.00	27.28	--	--	--	--	--	--	--	--	--	--	--	
9/9/1996	--		--	--	--	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	7.4	--	
12/19/1996	--		12.19	0.00	29.03	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	7.9	--	
3/17/1997	--		11.59	0.00	29.63	--	--	--	--	--	--	--	--	--	--	--	
8/12/1997	--		13.21	0.00	28.01	--	--	--	--	--	--	--	--	--	--	--	
12/10/1997	--		12.34	0.00	28.88	--	--	--	--	--	--	--	--	--	--	--	
3/12/1998	--		11.04	0.00	30.18	--	--	--	--	--	--	--	--	--	--	--	
6/23/1998	--		11.77	0.00	29.45	--	--	--	--	--	--	--	--	--	--	--	
3/31/1999	--		12.38	0.00	28.84	--	--	--	--	--	--	--	--	--	--	--	
8/25/1999	--		17.72	0.00	23.50	--	--	--	--	--	--	--	--	--	--	--	
3/9/2000	--		11.94	0.00	29.28	--	--	--	--	--	--	--	--	--	--	--	
3/8/2001	--		10.31	0.00	30.91	--	--	--	--	--	--	--	--	--	--	--	
3/8/2002	--		14.35	0.00	26.87	--	--	--	--	--	--	--	--	--	--	--	
3/18/2002	--		13.11	0.00	28.11	--	--	--	--	--	--	--	--	--	--	--	
3/11/2003	--		13.24	0.00	27.98	--	--	--	--	--	--	--	--	--	--	--	
12/09/2003	P		18.58	0.00	22.64	350	--	<0.50	<0.50	0.56	2.8	24			--	6.2	q
03/09/2004	P		12.52	0.00	28.70	74	--	<0.50	<0.50	0.83	4.7	27			--	6.5	
09/17/2004	P		18.05	0.00	23.17	59	--	<0.50	<0.50	<0.50	<0.50	21			--	6.3	
03/07/2005	--		2.32	0.00	38.90	--	--	--	--	--	--	--			--	--	p
09/06/2005	--		--	--	--	--	--	--	--	--	--	--			--	--	r

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**Former BP Station #11109, 4280 Foothill Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC Elevation (feet)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L									DO (mg/L)	pH	Footnote
						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-2 Cont.</b>																	
03/06/2006	--	41.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	p
9/5/2006	--		10.46	0.00	30.76	79	--	<0.50	5.1	<0.50	0.73	<0.50	--	--	--	6.4	p
3/5/2007	--		12.25	0.00	28.97	--	--	--	--	--	--	--	--	--	--	--	p
9/7/2007	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	r
3/6/2008	--		12.33	0.00	28.89	--	--	--	--	--	--	--	--	--	--	--	w
9/3/2008	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	r
3/4/2009	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	r
9/30/2009	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	r, x
10/28/2009	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	r
3/23/2010	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	r
6/10/2010	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	r
9/16/2010	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	r
2/23/2011	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	r
<b>9/28/2011</b>	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	<b>r</b>
<b>MW-3</b>																	
2/5/1990	--	40.74	17.45	0.00	23.29	1,400	--	15	<2.5	11	8	--	--	--	--	--	
2/14/1991	--		18.52	0.00	22.22	320	--	8	<0.3	8	1	--	--	--	--	--	
5/13/1991	--		19.32	0.00	21.42	640	--	13	<0.3	18	1	--	--	--	--	--	
7/24/1991	--		20.69	0.00	20.05	--	--	--	--	--	--	--	--	--	--	--	
10/3/1991	--		19.47	0.00	21.27	940	--	21	<0.3	23	2.1	--	--	--	--	--	
10/15/1991	--		20.46	0.00	20.28	--	--	--	--	--	--	--	--	--	--	--	
12/4/1991	--		18.29	0.00	22.45	--	--	--	--	--	--	--	--	--	--	--	
12/16/1991	--		18.34	0.00	22.40	--	--	--	--	--	--	--	--	--	--	--	
1/6/1992	--		18.50	0.00	22.24	580	--	6.1	1	6.1	7.1	--	--	--	--	--	
1/22/1992	--		17.86	0.00	22.88	--	--	--	--	--	--	--	--	--	--	--	
1/28/1992	--		15.84	0.00	24.90	--	--	--	--	--	--	--	--	--	--	--	
2/5/1992	--		17.53	0.00	23.21	--	--	--	--	--	--	--	--	--	--	--	
2/12/1992	--		17.15	0.00	23.59	--	--	--	--	--	--	--	--	--	--	--	
2/17/1992	--		16.18	0.00	24.56	--	--	--	--	--	--	--	--	--	--	--	
4/3/1992	--		14.80	0.00	25.94	--	--	--	--	--	--	--	--	--	--	--	

**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**Former BP Station #11109, 4280 Foothill Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC Elevation (feet)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L									DO (mg/L)	pH	Footnote
						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-3 Cont.</b>																	
4/8/1992	--	40.74	17.06	0.00	23.68	1,100	--	30	4.6	32	11	--	--	--	--	--	
4/14/1992	--		15.22	0.00	25.52	--	--	--	--	--	--	--	--	--	--	--	
4/29/1992	--		15.90	0.00	24.84	--	--	--	--	--	--	--	--	--	--	--	
5/7/1992	--		16.35	0.00	24.39	--	--	--	--	--	--	--	--	--	--	--	
7/3/1992	--		17.74	0.00	23.00	1,200	--	38	<2.5	24	<2.5	--	--	--	--	--	
10/8/1992	--		19.06	0.00	21.68	1,400	--	31	<0.5	25	13	--	--	--	--	--	
12/31/1992	--		16.61	0.00	24.13	960	--	11	3.6	10	3.8	--	--	--	--	--	h
12/31/1992	--		16.61	0.00	24.13	820	--	12	4.1	13	5.9	--	--	--	--	--	
4/21/1993	--		14.24	0.00	26.50	390	--	5	<0.5	3.7	1.5	--	--	--	--	--	h, n
4/21/1993	--		14.24	0.00	26.50	420	--	5.6	<0.5	3.9	1.4	--	--	--	--	--	n
7/7/1993	--	40.13	15.19	0.00	24.94	54	--	0.6	0.6	<0.5	<0.5	12.68	--	--	--	--	i, n
9/21/1993	--		16.58	0.00	23.55	540	--	7.9	0.9	4.7	2.4	--	--	--	--	--	n
12/17/1993	--		15.82	0.00	24.31	--	--	--	--	--	--	--	--	--	--	--	
12/23/1993	--		--	--	--	480	--	9.2	<0.5	5.4	5.3	--	--	--	--	--	h
12/23/1993	--		--	--	--	500	--	9.8	1.5	3.3	2.1	--	--	--	--	--	n
4/7/1994	--		28.50	0.00	11.63	460	--	20	7.7	9	11	--	--	--	--	--	h
4/7/1994	--		28.50	0.00	11.63	460	--	20	7.4	8.9	11	18.2	--	--	--	--	n
7/6/1994	--		--	--	--	300	--	10	0.6	1.7	6.4	5.54	--	--	4.8	--	n
10/7/1994	--		27.65	0.00	12.48	620	--	28	<0.5	2.2	12	31.4	31	--	4.4	--	n
1/27/1995	--		27.65	0.00	12.48	--	--	--	--	--	--	--	--	--	--	--	j
3/30/1995	--		26.05	0.00	14.08	300	--	10	6	3.4	18	--	--	--	7.6	--	
6/20/1995	--		19.49	0.00	20.64	170	--	7.2	3.4	0.85	15	--	--	--	--	--	
10/3/1995	--		24.93	0.00	15.20	170	--	2.1	<0.50	0.81	8	6.7	--	--	--	--	
12/6/1995	--		25.14	0.00	14.99	1,400	--	6.1	3	1.7	190	53	--	--	--	--	h
12/6/1995	--		25.14	0.00	14.99	1,700	--	6.7	3.1	2.8	210	64	--	--	--	--	
3/21/1996	--		9.48	0.00	30.65	<50	--	0.5	<1	<1	1	<10	--	--	7.3	--	
6/21/1996	--		11.60	0.00	28.53	<50	--	13	<1	<1	<1	12	--	--	7.6	--	
9/6/1996	--		12.23	0.00	27.90	--	--	--	--	--	--	--	--	--	--	--	
9/9/1996	--		--	--	--	<250	--	6.5	<5.0	<5.0	<5.0	<50	--	--	7.6	--	
12/19/1996	--		10.46	0.00	29.67	<50	--	4.1	<1.0	<1.0	<1.0	<10	--	--	8.4	--	

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Well ID and Date Monitored	P/NP	TOC Elevation (feet)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L									DO (mg/L)	pH	Footnote
						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-3 Cont.</b>																	
3/17/1997	--	40.13	9.86	0.00	30.27	50	--	<5	<1.0	<1.0	<1.0	<10	--	--	7.4	--	
8/12/1997	--		12.11	0.00	28.02	<50	--	0.79	<1.0	<1.0	<1.0	10	--	--	6.1	--	
12/10/1997	--		10.90	0.00	29.23	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	3.2	--	
3/12/1998	--		10.20	0.00	29.93	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	h
3/12/1998	--		10.20	0.00	29.93	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	6.3	--	
6/23/1998	--		10.17	0.00	29.96	50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	3.4	--	
3/31/1999	--		11.45	0.00	28.68	60	--	<1.0	<1.0	<1.0	<1.0	6.2	--	--	--	--	
8/25/1999	--		12.52	0.00	27.61	<50	--	<1.0	<1.0	<1.0	<1.0	7.7	--	--	--	--	
3/9/2000	--		12.39	0.00	27.74	<50	--	<0.5	0.54	<0.5	1.7	6.3	--	--	--	--	
3/8/2001	--		10.41	0.00	29.72	<50	--	<0.5	<0.5	<0.5	0.59	7.7	--	--	--	--	
3/8/2002	--		9.83	0.00	30.30	62	--	<0.5	<0.5	<0.5	<1.0	11.6	--	--	--	--	
3/18/2002	--		9.20	0.00	30.93	--	--	--	--	--	--	--	--	--	--	--	
3/11/2003	--		10.54	0.00	29.59	<50	--	<0.50	<0.50	<0.50	<0.50	6.7	--	--	--	--	
12/09/2003	P		12.88	0.00	27.25	<50	--	<0.50	<0.50	<0.50	<0.50	6.4			--	6.3	
03/09/2004	P		9.49	0.00	30.64	<50	--	<0.50	<0.50	<0.50	0.63	6.9			--	6.1	
09/17/2004	--		12.76	0.00	27.37	--	--	--	--	--	--	--			--	--	
03/07/2005	P		7.30	0.00	32.83	<50	--	<0.50	<0.50	<0.50	0.52	5.1			--	7.0	
09/06/2005	--	42.92	10.81	0.00	32.11	--	--	--	--	--	--	--			--	--	
03/06/2006	P		8.85	0.00	34.07	<50	--	<0.50	<0.50	<0.50	<0.50	6.9			--	6.8	u
9/5/2006	--		9.86	0.00	33.06	--	--	--	--	--	--	--			--	--	
3/5/2007	P		8.33	0.00	34.59	<50	--	<0.50	<0.50	<0.50	<0.50	5.4	--	--	2.31	6.95	
9/7/2007	--		11.10	0.00	31.82	--	--	--	--	--	--	--			--	--	
3/6/2008	P		8.92	0.00	34.00	<50	--	<0.50	<0.50	<0.50	<0.50	4.2	--	--	2.5	6.86	
9/3/2008	--		12.19	0.00	30.73	--	--	--	--	--	--	--			--	--	
3/4/2009	P		8.28	0.00	34.64	<50	--	<0.50	<0.50	<0.50	<0.50	4.9	--	--	1.19	6.71	
9/30/2009	P	40.13	11.60	0.00	28.53	<50	--	<0.50	<0.50	<0.50	<0.50	6.8	--	--	--	7.12	x
10/28/2009	--		10.40	0.00	29.73	--	--	--	--	--	--	--			--	--	
3/23/2010	P		8.27	0.00	31.86	<50	--	<0.50	<0.50	<0.50	<1.0	3.2	--	--	2.47	6.61	
6/10/2010	--		9.40	0.00	30.73	--	--	--	--	--	--	--			--	--	
9/16/2010	P		11.14	0.00	28.99	<50	--	<0.50	<0.50	<0.50	<1.0	5.9	--	--	0.91	6.60	

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						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-3 Cont.</b>																	
2/23/2011	P	40.13	8.71	0.00	31.42	--	--	--	--	--	--	0.58	--	--	2.76	6.83	
<b>9/28/2011</b>	<b>P</b>		<b>11.14</b>	<b>0.00</b>	<b>28.99</b>	--	--	--	--	--	--	<b>3.2</b>	--	--	<b>1.52</b>	<b>7.23</b>	
<b>MW-4</b>																	
2/5/1990	--	40.11	20.75	0.00	19.36	620	--	<0.5	9	<0.5	10	--	--	--	--	--	
2/14/1991	--		21.73	0.00	18.38	180	--	<0.3	<0.3	0.4	2	--	--	--	--	--	
5/13/1991	--		18.55	0.00	21.56	72	--	0.7	<0.3	<0.3	<0.3	--	--	--	--	--	
7/24/1991	--		21.31	0.00	18.80	--	--	--	--	--	--	--	--	--	--	--	
10/3/1991	--		22.57	0.00	17.54	57	--	<0.3	<0.3	<0.3	<0.3	--	--	--	--	--	
10/15/1991	--		22.88	0.00	17.23	--	--	--	--	--	--	--	--	--	--	--	
12/4/1991	--		22.54	0.00	17.57	--	--	--	--	--	--	--	--	--	--	--	
12/16/1991	--		22.59	0.00	17.52	--	--	--	--	--	--	--	--	--	--	--	
1/6/1992	--		22.00	0.00	18.11	480	--	0.8	3.2	1.9	7.7	--	--	--	--	--	
1/22/1992	--		21.58	0.00	18.53	--	--	--	--	--	--	--	--	--	--	--	
1/28/1992	--		21.42	0.00	18.69	--	--	--	--	--	--	--	--	--	--	--	
2/5/1992	--		21.10	0.00	19.01	--	--	--	--	--	--	--	--	--	--	--	
2/12/1992	--		20.74	0.00	19.37	--	--	--	--	--	--	--	--	--	--	--	
2/17/1992	--		19.78	0.00	20.33	--	--	--	--	--	--	--	--	--	--	--	
4/3/1992	--		16.80	0.00	23.31	--	--	--	--	--	--	--	--	--	--	--	
4/8/1992	--		17.13	0.00	22.98	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
4/14/1992	--		17.74	0.00	22.37	--	--	--	--	--	--	--	--	--	--	--	
4/29/1992	--		18.56	0.00	21.55	--	--	--	--	--	--	--	--	--	--	--	
5/7/1992	--		19.10	0.00	21.01	--	--	--	--	--	--	--	--	--	--	--	
7/3/1992	--		20.71	0.00	19.40	<50	--	0.6	<0.5	<0.5	<0.5	--	--	--	--	--	
10/8/1992	--		22.43	0.00	17.68	270	--	<0.5	2.1	2.5	3.2	--	--	--	--	--	
12/31/1992	--		19.58	0.00	20.53	150	--	<0.5	<0.5	<0.5	1.3	--	--	--	--	--	
4/21/1993	--		17.79	0.00	22.32	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	n
7/7/1993	--		18.44	0.00	21.67	160	--	1.2	5.4	3.8	19	5.51	--	--	--	--	n
9/21/1993	--		20.14	0.00	19.97	71	--	<0.5	1.9	<0.5	2.1	--	--	--	--	--	n
12/17/1993	--		19.80	0.00	20.31	--	--	--	--	--	--	--	--	--	--	--	
12/23/1993	--		--	--	--	<50	--	3.1	1.6	0.8	3.8	5.7	--	--	--	--	n

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						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-4 Cont.</b>																	
4/7/1994	--	40.11	19.12	0.00	20.99	<50	--	<0.5	<0.5	<0.5	<0.5	11.7	--	--	6.6	--	n
7/6/1994	--		19.90	0.00	20.21	62	--	<0.5	<0.5	<0.5	<0.5	--	--	--	4.1	--	n
10/7/1994	--		20.07	0.00	20.04	<50	--	<0.5	<0.5	<0.5	<0.5	7.38	--	--	3.6	--	n
1/27/1995	--		13.72	0.00	26.39	<50	--	<0.5	<0.5	<0.5	<1	--	--	--	2.7	--	
3/30/1995	--		11.46	0.00	28.65	<50	--	<0.50	<0.50	<0.50	<1.0	--	--	--	8.3	--	
6/20/1995	--		14.78	0.00	25.33	<50	--	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	
10/3/1995	--		19.62	0.00	20.49	<50	--	<0.50	<0.50	<0.50	<1.0	5	--	--	5.8	--	
12/6/1995	--		19.91	0.00	20.20	<50	--	<0.50	<0.50	<0.50	<1.0	47	--	--	5.7	--	
3/21/1996	--		11.12	0.00	28.99	<50	--	<0.5	<1	<1	<1	<10	--	--	7.8	--	
6/21/1996	--		12.21	0.00	27.90	<50	--	<0.5	<1	<1	<1	<10	--	--	7.9	--	
9/6/1996	--		12.89	0.00	27.22	--	--	--	--	--	--	--	--	--	--	--	
9/9/1996	--		--	--	--	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	7.2	--	
12/19/1996	--		11.01	0.00	29.10	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	8.4	--	
3/17/1997	--		10.42	0.00	29.69	--	--	--	--	--	--	--	--	--	--	--	
8/12/1997	--		12.77	0.00	27.34	--	--	--	--	--	--	--	--	--	--	--	
12/10/1997	--		11.22	0.00	28.89	--	--	--	--	--	--	--	--	--	--	--	
3/12/1998	--		10.81	0.00	29.30	--	--	--	--	--	--	--	--	--	--	--	
6/23/1998	--		10.61	0.00	29.50	--	--	--	--	--	--	--	--	--	--	--	
3/31/1999	--		11.46	0.00	28.65	--	--	--	--	--	--	--	--	--	--	--	
8/25/1999	--		16.16	0.00	23.95	--	--	--	--	--	--	--	--	--	--	--	
3/9/2000	--		12.23	0.00	27.88	--	--	--	--	--	--	--	--	--	--	--	
3/8/2001	--		11.04	0.00	29.07	--	--	--	--	--	--	--	--	--	--	--	
3/8/2002	--		12.73	0.00	27.38	--	--	--	--	--	--	--	--	--	--	--	
3/18/2002	--		11.62	0.00	28.49	--	--	--	--	--	--	--	--	--	--	--	
3/11/2003	--		13.44	0.00	26.67	--	--	--	--	--	--	--	--	--	--	--	
12/09/2003	P		15.03	0.00	25.08	<250	--	<2.5	<2.5	<2.5	<2.5	130			--	6.1	
03/09/2004	P		11.04	0.00	29.07	<50	--	<0.50	<0.50	<0.50	<0.50	35			--	5.5	
09/17/2004	P		16.75	0.00	23.36	<250	--	<2.5	<2.5	<2.5	<2.5	140			--	6.5	
03/07/2005	P		11.02	0.00	29.09	67	--	<0.50	<0.50	<0.50	<0.50	42			--	6.6	
09/06/2005	P	42.88	14.64	0.00	28.24	81	--	<0.50	<0.50	<0.50	<1.5	180			--	6.7	s, t

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						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-4 Cont.</b>																	
03/06/2006	P	42.88	12.42	0.00	30.46	<100	--	<1.0	<1.0	<1.0	<1.0	110	--	--	--	6.4	
9/5/2006	--		13.81	0.00	29.07	130	--	<1.0	<1.0	<1.0	<1.0	190	--	--	--	6.5	
3/5/2007	P		10.63	0.00	32.25	<50	--	<0.50	<0.50	<0.50	<0.50	13	--	--	3.34	7.11	
9/7/2007	P		14.77	0.00	28.11	90	--	<0.50	<0.50	<0.50	<0.50	130	--	--	1.14	6.68	s, v (MTBE)
3/6/2008	P		11.30	0.00	31.58	<50	--	<0.50	<0.50	<0.50	<0.50	170	--	--	1.76	6.62	
9/3/2008	P		16.11	0.00	26.77	<50	--	<5.0	<5.0	<5.0	<5.0	150	--	--	1.97	6.33	
3/4/2009	P		10.78	0.00	32.10	140	--	<5.0	<5.0	<5.0	<5.0	110	--	--	1.31	6.47	
9/30/2009	P	40.10	16.48	0.00	23.62	240	--	<2.0	<2.0	<2.0	<2.0	140	--	--	0.08	6.88	x, y (GRO)
10/28/2009	--		15.07	0.00	25.03	--	--	--	--	--	--	--	--	--	--	--	
3/23/2010	P		10.82	0.00	29.28	<50	--	<0.50	<0.50	<0.50	<1.0	84	--	--	0.63	6.39	
6/10/2010	--		12.67	0.00	27.43	--	--	--	--	--	--	--	--	--	--	--	
9/16/2010	P		15.72	0.00	24.38	120	--	<0.50	<0.50	<0.50	<1.0	72	--	--	1.01	6.11	
2/23/2011	P		11.43	0.00	28.67	<50	--	--	--	--	--	55	--	--	0.69	6.10	
<b>9/28/2011</b>	<b>P</b>		<b>15.34</b>	<b>0.00</b>	<b>24.76</b>	<b>150</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>62</b>	<b>--</b>	<b>--</b>	<b>0.78</b>	<b>7.38</b>	
<b>MW-5</b>																	
10/3/1991	--	39.55	18.08	0.00	21.47	79,000	--	13,000	7,400	1,400	6,200	--	--	--	--	--	
10/15/1991	--		18.55	0.00	21.00	--	--	--	--	--	--	--	--	--	--	--	
12/4/1991	--		18.44	0.13	20.98	--	--	--	--	--	--	--	--	--	--	--	a
12/16/1991	--		18.66	0.01	20.88	--	--	--	--	--	--	--	--	--	--	--	a
1/6/1992	--		19.12	0.11	20.32	--	--	--	--	--	--	--	--	--	--	--	a
1/22/1992	--		14.59	0.00	24.96	--	--	--	--	--	--	--	--	--	--	--	
1/28/1992	--		15.25	0.00	24.30	--	--	--	--	--	--	--	--	--	--	--	
2/5/1992	--		15.58	0.00	23.97	--	--	--	--	--	--	--	--	--	--	--	q
2/12/1992	--		15.54	0.01	24.00	--	--	--	--	--	--	--	--	--	--	--	a
2/17/1992	--		13.98	0.00	25.57	--	--	--	--	--	--	--	--	--	--	--	q
4/3/1992	--		13.63	0.04	25.88	--	--	--	--	--	--	--	--	--	--	--	a
4/8/1992	--		13.17	0.01	26.37	--	--	--	--	--	--	--	--	--	--	--	a
4/14/1992	--		13.45	0.01	26.09	--	--	--	--	--	--	--	--	--	--	--	a
4/29/1992	--		13.75	0.07	25.73	--	--	--	--	--	--	--	--	--	--	--	a
5/7/1992	--		16.15	0.04	23.36	--	--	--	--	--	--	--	--	--	--	--	a



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Well ID and Date Monitored	P/NP	TOC Elevation (feet)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L									DO (mg/L)	pH	Footnote
						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-5 Cont.</b>																	
7/3/1992	--	39.55	17.67	0.08	21.80	--	--	--	--	--	--	--	--	--	--	--	a
9/1/1992	--		17.83	0.50	21.22	--	--	--	--	--	--	--	--	--	--	--	a
10/8/1992	--		17.86	0.92	20.77	--	--	--	--	--	--	--	--	--	--	--	a
12/31/1992	--		15.20	0.00	24.35	--	--	--	--	--	--	--	--	--	--	--	q
4/21/1993	--		12.64	0.02	26.89	--	--	--	--	--	--	--	--	--	--	--	a
7/7/1993	--	39.14	12.68	0.82	25.64	--	--	--	--	--	--	--	--	--	--	--	a, i
9/21/1993	--		14.35	0.00	24.79	--	--	--	--	--	--	--	--	--	--	--	q
12/17/1993	--		12.61	0.41	26.12	--	--	--	--	--	--	--	--	--	--	--	a
4/7/1994	--		30.00	0.00	9.14	66,000	--	3,000	1,700	250	6,800	2,002	--	--	--	--	n
7/6/1994	--		--	--	--	29,000	--	1,900	330	63	2,700	1,141	--	--	--	--	n
10/7/1994	--		28.70	0.00	10.44	45,000	--	2,900	540	260	2,600	--	--	--	--	--	h
10/7/1994	--		28.70	0.00	10.44	250,000	--	2,600	660	830	5,200	37.7	--	--	4.2	--	n
1/27/1995	--		28.70	0.00	10.44	--	--	--	--	--	--	--	--	--	--	--	
3/30/1995	--		28.95	0.00	10.19	50,000	--	7,900	2,600	520	6,400	--	--	--	5.5	--	
3/30/1995	--		28.95	0.00	10.19	43,000	--	7,900	2,500	440	6,200	--	--	--	--	--	h
6/20/1995	--		22.54	0.00	16.60	26,000	--	3,500	290	<25	3,300	--	--	--	--	--	h
6/20/1995	--		22.54	0.00	16.60	34,000	--	5,100	1,900	300	3,700	--	--	--	--	--	
10/3/1995	--		18.84	0.00	20.30	12,000	--	46	39	10	1,600	320	--	--	--	--	h
10/3/1995	--		18.84	0.00	20.30	12,000	--	68	42	11	1,600	330	--	--	--	--	
12/6/1995	--		19.07	0.00	20.07	16,000	--	1,200	93	51	700	600	--	--	--	--	
3/21/1996	--		7.43	0.00	31.71	1,500	--	89	28	6	250	<10	--	--	7.2	--	
3/21/1996	--		7.43	0.00	31.71	1,900	--	92	30	7	270	<10	--	--	--	--	h
6/21/1996	--		9.87	0.00	29.27	3,500	--	740	150	19	400	<100	--	--	7.1	--	
6/21/1996	--		9.87	0.00	29.27	2,700	--	680	140	20	400	<50	--	--	--	--	h
9/6/1996	--		10.52	0.00	28.62	--	--	--	--	--	--	--	--	--	--	--	
9/9/1996	--		--	--	--	90,000	--	2,900	1,600	670	6,900	<2500	--	--	--	--	h
9/9/1996	--		--	--	--	82,000	--	3,100	1,700	850	9,100	<2500	--	--	7.5	--	
12/19/1996	--		8.62	0.00	30.52	26,000	--	490	430	63	1,140	<500	--	--	--	--	h
12/19/1996	--		8.62	0.00	30.52	41,000	--	790	820	120	2,040	<500	--	--	7.7	--	
3/17/1997	--		8.22	0.00	30.92	5,500	--	1.9	2.4	<1.0	<1.0	29	--	--	6.4	--	

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Well ID and Date Monitored	P/NP	TOC Elevation (feet)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L									DO (mg/L)	pH	Footnote
						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-5 Cont.</b>																	
3/17/1997	--	39.14	8.22	0.00	30.92	6,600	--	2.5	2.7	<1.0	<1.0	28	--	--	--	--	h
8/12/1997	--		12.18	0.22	26.74	33,000	--	6,400	2,400	680	4,400	<1000	--	--	6.8	--	a
8/12/1997	--		12.18	0.22	26.74	36,000	--	6,100	2,500	720	4,500	<500	--	--	--	--	h
12/10/1997	--		10.78	0.06	28.30	37,000	--	2,900	2,500	440	4,800	--	--	--	--	--	h
12/10/1997	--		10.78	0.06	28.30	31,000	--	3,000	2,500	560	5,100	500	--	--	1.8	--	a
3/12/1998	--		10.11	0.22	28.81	100,000	--	1,600	870	250	2,600	<250	--	--	6.1	--	a
6/23/1998	--		10.20	0.02	28.92	27,000	--	2,600	840	400	2,950	<500	--	--	--	--	h
6/23/1998	--		10.20	0.02	28.92	27,000	--	2,500	840	370	2,900	<250	--	--	2.1	--	a
3/31/1999	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	f
8/25/1999	--		14.69	0.38	24.07	180,000	--	2,700	400	830	2,800	26	--	--	--	--	a
3/9/2000	--		14.83	0.60	23.71	53,000	--	12,000	2,600	1,900	9,100	<5.0	--	--	--	--	a
3/8/2001	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	f
3/8/2002	--		11.45	1.50	26.19	33,000	--	8,240	1,080	1,010	2,900	34.3	--	--	--	--	a
3/18/2002	--		8.03	0.00	31.11	--	--	--	--	--	--	--	--	--	--	--	
3/11/2003	--		9.60	0.45	29.09	--	--	--	--	--	--	--	--	--	--	--	a
12/09/2003	--		11.44	0.03	27.72	--	--	--	--	--	--	--	--	--	--	--	a
03/09/2004	P		7.91	0.00	31.23	31,000	--	3,900	1,100	780	3,600	<50	--	--	--	6.6	
09/17/2004	--		12.13	0.15	27.13	--	--	--	--	--	--	--	--	--	--	--	a
03/07/2005	--		8.62	0.02	27.13	--	--	--	--	--	--	--	--	--	--	--	a
09/06/2005	--	41.98	11.16	0.18	30.96	--	--	--	--	--	--	--	--	--	--	--	a
03/06/2006	P		8.60	Sheen	33.38	32,000	--	7,500	810	1,200	2,300	<50	--	--	--	6.4	a, q
9/5/2006	--		6.16	0.03	35.82	--	--	--	--	--	--	--	--	--	--	--	a
3/5/2007	P		8.34	Sheen	33.64	90,000	--	10,000	4,200	1,900	7,900	<50	--	--	1.30	6.91	q
9/7/2007	--		15.15	0.15	26.94	--	--	--	--	--	--	--	--	--	--	--	a
1/14/2008	--		10.30	0.49	32.05	--	--	--	--	--	--	--	--	--	--	--	a
2/27/2008	--		13.22	0.12	28.85	--	--	--	--	--	--	--	--	--	--	--	a
3/6/2008	--		12.90	0.14	29.19	--	--	--	--	--	--	--	--	--	--	--	a
9/3/2008	--		12.90	0.99	29.82	--	--	--	--	--	--	--	--	--	--	--	a
3/4/2009	--		8.45	0.16	33.65	--	--	--	--	--	--	--	--	--	--	--	a
4/8/2009	--		9.05	0.67	33.43	--	--	--	--	--	--	--	--	--	--	--	x

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Well ID and Date Monitored	P/NP	TOC Elevation (feet)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L									DO (mg/L)	pH	Footnote
						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-5 Cont.</b>																	
5/11/2009	--	39.14	9.10	0.32	30.28	--	--	--	--	--	--	--	--	--	--	--	--
6/16/2009	--		9.15	0.02	30.01	--	--	--	--	--	--	--	--	--	--	--	--
7/22/2009	--		9.33	0.12	29.90	--	--	--	--	--	--	--	--	--	--	--	--
8/6/2009	--		10.05	0.01	29.10	--	--	--	--	--	--	--	--	--	--	--	--
9/30/2009	--		10.55	0.06	28.64	--	--	--	--	--	--	--	--	--	--	--	--
10/28/2009	--		10.48	0.00	28.66	--	--	--	--	--	--	--	--	--	--	--	--
3/23/2010	P		7.10	0.00	32.04	71,000	--	1,400	380	620	1,800	<5.0	--	--	--	6.50	
6/10/2010	--		8.26	0.06	30.93	--	--	--	--	--	--	--	--	--	--	--	--
9/16/2010	--		9.14	0.04	30.03	--	--	--	--	--	--	--	--	--	--	--	--
2/23/2011	--		8.33	0.01	30.82	--	--	--	--	--	--	--	--	--	--	--	--
<b>9/28/2011</b>	<b>--</b>		<b>10.46</b>	<b>0.06</b>	<b>28.73</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>MW-6</b>																	
10/3/1991	--	41.59	20.73	0.00	20.86	<50	--	0.7	0.8	<0.3	1.3	--	--	--	--	--	--
10/15/1991	--		21.20	0.00	20.39	--	--	--	--	--	--	--	--	--	--	--	--
12/4/1991	--		21.26	0.00	20.33	--	--	--	--	--	--	--	--	--	--	--	--
12/16/1991	--		21.12	0.00	20.47	--	--	--	--	--	--	--	--	--	--	--	--
1/6/1992	--		20.29	0.00	21.30	<50	--	<0.5	<0.5	<0.5	1.6	--	--	--	--	--	--
1/22/1992	--		20.12	0.00	21.47	--	--	--	--	--	--	--	--	--	--	--	--
1/28/1992	--		20.20	0.00	21.39	--	--	--	--	--	--	--	--	--	--	--	--
2/5/1992	--		20.09	0.00	21.50	--	--	--	--	--	--	--	--	--	--	--	--
2/12/1992	--		19.15	0.00	22.44	--	--	--	--	--	--	--	--	--	--	--	--
2/17/1992	--		18.02	0.00	23.57	--	--	--	--	--	--	--	--	--	--	--	--
4/3/1992	--		16.62	0.00	24.97	--	--	--	--	--	--	--	--	--	--	--	--
4/8/1992	--		17.06	0.00	24.53	<50	--	0.6	<0.5	0.8	<0.5	--	--	--	--	--	--
4/14/1992	--		17.23	0.00	24.36	--	--	--	--	--	--	--	--	--	--	--	--
4/29/1992	--		18.12	0.00	23.47	--	--	--	--	--	--	--	--	--	--	--	--
5/7/1992	--		18.52	0.00	23.07	--	--	--	--	--	--	--	--	--	--	--	--
7/3/1992	--		19.71	0.00	21.88	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--
10/8/1992	--		21.22	0.00	20.37	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	h
10/8/1992	--		21.22	0.00	20.37	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--

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Well ID and Date Monitored	P/NP	TOC Elevation (feet)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L									DO (mg/L)	pH	Footnote
						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-6 Cont.</b>																	
12/31/1992	--	41.59	21.33	0.00	20.26	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
4/21/1993	--		16.45	0.00	25.14	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	n
7/7/1993	--		18.68	0.00	22.91	<50	--	<0.5	<0.5	<0.5	<0.5	28.96	29	--	--	--	j, n
9/21/1993	--		19.64	0.00	21.95	<50	--	<0.5	<0.5	<0.5	1.6	--	--	--	--	--	n
12/17/1993	--		21.08	0.00	20.51	--	--	--	--	--	--	--	--	--	--	--	
12/23/1993	--		--	--	--	<50	--	<0.5	0.5	<0.5	0.6	13.95	--	--	--	--	n
4/7/1994	--		21.27	0.00	20.32	<50	--	<0.5	<0.5	<0.5	<0.5	35.1	--	--	6.1	--	n
7/6/1994	--		19.81	0.00	21.78	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	h
7/6/1994	--		19.81	0.00	21.78	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	4.0	--	n
10/7/1994	--		21.25	0.00	20.34	<50	--	<0.5	<0.5	<0.5	<0.5	24.3	24	--	3.5	--	j, n
1/27/1995	--		12.39	0.00	29.20	<50	--	<0.5	<0.5	<0.5	<1	--	--	--	4.2	--	
3/30/1995	--		11.34	0.00	30.25	<50	--	<0.50	<0.50	<0.50	<1.0	--	--	--	6.1	--	
6/20/1995	--		15.12	0.00	26.47	<50	--	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	
10/3/1995	--		20.68	0.00	20.91	<50	--	<0.50	<0.50	<0.50	<1.0	66	--	--	6.4	--	
12/6/1995	--		23.77	0.00	17.82	<50	--	<0.50	<0.50	<0.50	<1.0	45	--	--	5.7	--	
3/21/1996	--		11.55	0.00	30.04	<50	--	<0.5	<1	<1	<1	41	--	--	9.1	--	
6/21/1996	--		12.60	0.00	28.99	<50	--	<0.5	<1	<1	<1	<10	--	--	8.6	--	
9/6/1996	--		13.25	0.00	28.34	--	--	--	--	--	--	--	--	--	--	--	
9/9/1996	--		--	--	--	<50	--	<0.5	<1.0	<1.0	<1.0	22/22	--	--	7.9	--	k
12/19/1996	--		11.45	0.00	30.14	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	7.7	--	
3/17/1997	--		10.80	0.00	30.79	--	--	--	--	--	--	--	--	--	--	--	
8/12/1997	--		13.11	0.00	28.48	--	--	--	--	--	--	--	--	--	--	--	
12/10/1997	--		13.84	0.00	27.75	--	--	--	--	--	--	--	--	--	--	--	
3/12/1998	--		11.17	0.00	30.42	--	--	--	--	--	--	--	--	--	--	--	
6/23/1998	--		13.27	0.00	28.32	--	--	--	--	--	--	--	--	--	--	--	
3/31/1999	--		12.91	0.00	28.68	--	--	--	--	--	--	--	--	--	--	--	
8/25/1999	--		15.93	0.00	25.66	--	--	--	--	--	--	--	--	--	--	--	
3/9/2000	--		11.49	0.00	30.10	--	--	--	--	--	--	--	--	--	--	--	
3/8/2001	--		10.81	0.00	30.78	--	--	--	--	--	--	--	--	--	--	--	
3/8/2002	--		14.28	0.00	27.31	--	--	--	--	--	--	--	--	--	--	--	

**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**Former BP Station #11109, 4280 Foothill Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC Elevation (feet)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L									DO (mg/L)	pH	Footnote
						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-6 Cont.</b>																	
3/18/2002	--	41.59	13.10	0.00	28.49	--	--	--	--	--	--	--	--	--	--	--	
3/11/2003	--		13.63	0.00	27.96	--	--	--	--	--	--	--	--	--	--	--	
12/09/2003	P		14.26	0.00	27.33	<50	--	<0.50	<0.50	<0.50	<0.50	12			--	6.4	
03/09/2004	NP		11.87	0.00	29.72	<50	--	<0.50	<0.50	<0.50	<0.50	10			--	7.1	
09/17/2004	--		16.45	0.00	25.14	--	--	--	--	--	--	--			--	--	
03/07/2005	P		13.65	0.00	27.94	<50	--	<0.50	<0.50	<0.50	<0.50	5.8			--	6.7	
09/06/2005	--	44.37	14.23	0.00	30.14	--	--	--	--	--	--	--			--	--	
03/06/2006	P		12.89	0.00	31.48	<50	--	<0.50	<0.50	<0.50	<0.50	8.1			--	6.8	u
9/5/2006	--		14.10	0.00	30.27	--	--	--	--	--	--	--			--	--	
3/5/2007	P		11.43	0.00	32.94	<50	--	<0.50	<0.50	<0.50	<0.50	5.6	--	--	2.57	7.70	
9/7/2007	--		16.00	0.00	28.37	--	--	--	--	--	--	--			--	--	
3/6/2008	P		11.84	0.00	32.53	<50	--	<0.50	<0.50	<0.50	<0.50	1.9	--	--	2.34	6.81	
9/3/2008	--		16.24	0.00	28.13	--	--	--	--	--	--	--			--	--	
3/4/2009	P		11.68	0.00	32.69	<50	--	<0.50	<0.50	<0.50	<0.50	2.8	--	--	4.66	6.82	
9/30/2009	P	41.58	16.83	0.00	24.75	<50	--	<0.50	<0.50	<0.50	<0.50	4.4	--	--	0.10	7.00	x
10/28/2009	--		15.63	0.00	25.95	--	--	--	--	--	--	--			--	--	
3/23/2010	P		11.48	0.00	30.10	<50	--	<0.50	<0.50	<0.50	<1.0	1.0	--	--	--	6.57	
6/10/2010	--		12.54	0.00	29.04	--	--	--	--	--	--	--			--	--	
9/16/2010	P		15.95	0.00	25.63	<50	--	<0.50	<0.50	<0.50	<1.0	0.80	--	--	--	6.38	
2/23/2011	P		12.34	0.00	29.24	--	--	--	--	--	--	<0.50	--	--	1.60	6.42	
<b>9/28/2011</b>	<b>P</b>		<b>15.81</b>	<b>0.00</b>	<b>25.77</b>	--	--	--	--	--	--	<b>3.4</b>	--	--	<b>1.41</b>	<b>8.07</b>	
<b>MW-7</b>																	
10/3/1991	--	40.64	14.93	0.00	25.71	360	--	62	13	3.4	20	--	--	--	--	--	
10/15/1991	--		15.16	0.00	25.48	--	--	--	--	--	--	--	--	--	--	--	
12/4/1991	--		15.41	0.00	25.23	--	--	--	--	--	--	--	--	--	--	--	
12/16/1991	--		15.21	0.00	25.43	--	--	--	--	--	--	--	--	--	--	--	
1/6/1992	--		14.56	0.00	26.08	1,100	--	170	<0.5	24	23	--	--	--	--	--	
1/22/1992	--		14.63	0.00	26.01	--	--	--	--	--	--	--	--	--	--	--	
1/28/1992	--		14.73	0.00	25.91	--	--	--	--	--	--	--	--	--	--	--	
2/5/1992	--		14.58	0.00	26.06	--	--	--	--	--	--	--	--	--	--	--	

**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**Former BP Station #11109, 4280 Foothill Blvd., Oakland, CA**

Well ID and Date Monitored	P/NP	TOC Elevation (feet)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L									DO (mg/L)	pH	Footnote
						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-7 Cont.</b>																	
2/12/1992	--	40.64	13.94	0.00	26.70	--	--	--	--	--	--	--	--	--	--	--	
2/17/1992	--		13.10	0.00	27.54	--	--	--	--	--	--	--	--	--	--	--	
4/3/1992	--		12.66	0.00	27.98	--	--	--	--	--	--	--	--	--	--	--	
4/8/1992	--		12.77	0.00	27.87	750	--	150	<0.5	23	9.9	--	--	--	--	--	
4/14/1992	--		13.02	0.00	27.62	--	--	--	--	--	--	--	--	--	--	--	
4/29/1992	--		13.59	0.00	27.05	--	--	--	--	--	--	--	--	--	--	--	
5/7/1992	--		13.95	0.00	26.69	--	--	--	--	--	--	--	--	--	--	--	
7/3/1992	--		14.73	0.00	25.91	660	--	210	<2.5	33	8	--	--	--	--	--	
10/8/1992	--		15.75	0.00	24.89	320	--	49	1.4	13	6.2	--	--	--	--	--	
12/31/1992	--		13.57	0.00	27.07	900	--	100	<2.5	28	4.3	--	--	--	--	--	
4/21/1993	--		14.56	0.00	26.08	510	--	83	1.2	10	5.8	--	--	--	--	--	n
7/7/1993	--	40.32	13.40	0.00	26.92	1,100	--	170	1.9	29	2.84	9.84	--	--	--	--	h, n
7/7/1993	--		13.40	0.00	26.92	1,100	--	160	2	27	4	10.84	--	--	--	--	i, n
9/21/1993	--		14.40	0.00	25.92	640	--	140	1.7	23	2.4	--	--	--	--	--	h, n
9/21/1993	--		14.40	0.00	25.92	690	--	150	3.1	26	5.7	--	--	--	--	--	n
12/17/1993	--		13.65	0.00	26.67	--	--	--	--	--	--	--	--	--	--	--	
12/23/1993	--		--	--	--	250	--	64	1.2	9	1.8	7.81	--	--	--	--	n
4/7/1994	--		30.62	0.00	9.70	140	--	32	1.4	<0.5	<0.5	6.32	--	--	--	--	n
7/6/1994	--		16.88	0.00	23.44	410	--	94	1.3	10	3.5	<5.0	--	--	4.4	--	n
10/7/1994	--		25.59	0.00	14.73	<50	--	9.2	<0.5	<0.5	<0.5	<5.0	--	--	4.9	--	n
1/27/1995	--		9.82	0.00	30.50	930	--	620	4	77	21	--	--	--	--	--	h
1/27/1995	--		9.82	0.00	30.50	810	--	570	3	60	17	--	--	--	0.0	--	
3/30/1995	--		9.15	0.00	31.17	180	--	65	0.53	2	<1.0	--	--	--	7.8	--	
6/20/1995	--		11.38	0.00	28.94	2,800	--	980	<5.0	<5.0	43	--	--	--	--	--	
10/3/1995	--		29.95	0.00	10.37	<50	--	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	--	--	
12/6/1995	--		29.85	0.00	10.47	<50	--	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	--	--	
3/21/1996	--		9.76	0.00	30.56	1,000	--	390	2	40	13	<10	--	--	7.4	--	
6/21/1996	--		11.01	0.00	29.31	<250	--	40	<5	<5	<5	<50	--	--	7.4	--	
9/6/1996	--		11.68	0.00	28.64	--	--	--	--	--	--	--	--	--	--	--	
9/9/1996	--		--	--	--	<250	--	13	<5.0	<5.0	<5.0	<50	--	--	7.2	--	

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Well ID and Date Monitored	P/NP	TOC Elevation (feet)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L									DO (mg/L)	pH	Footnote
						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-7 Cont.</b>																	
12/19/1996	--	40.32	10.78	0.00	29.54	70	--	1.2	<1.0	1	<1.0	<10	--	--	8.3	--	
3/17/1997	--		9.96	0.00	30.36	--	--	--	--	--	--	--	--	--	--	--	
8/12/1997	--		11.44	0.00	28.88	--	--	--	--	--	--	--	--	--	--	--	
12/10/1997	--		10.42	0.00	29.90	--	--	--	--	--	--	--	--	--	--	--	
3/12/1998	--		9.51	0.00	30.81	--	--	--	--	--	--	--	--	--	--	--	
6/23/1998	--		9.98	0.00	30.34	--	--	--	--	--	--	--	--	--	--	--	
3/31/1999	--		10.38	0.00	29.94	--	--	--	--	--	--	--	--	--	--	--	
8/25/1999	--		12.38	0.00	27.94	--	--	--	--	--	--	--	--	--	--	--	
3/9/2000	--		8.48	0.00	31.84	--	--	--	--	--	--	--	--	--	--	--	
3/8/2001	--		8.37	0.00	31.95	--	--	--	--	--	--	--	--	--	--	--	
3/8/2002	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	f
3/18/2002	--		9.94	0.00	30.38	--	--	--	--	--	--	--	--	--	--	--	
3/11/2003	--		11.26	0.00	29.06	--	--	--	--	--	--	--	--	--	--	--	
12/09/2003	P		12.76	0.00	27.56	270	--	26	<0.50	<0.50	<0.50	8.7			--	6.1	
03/09/2004	P		10.91	0.00	29.41	320	--	49	0.73	1.8	0.59	6.9			--	6.2	
09/17/2004	P		13.20	0.00	27.12	330	--	17	<0.50	<0.50	<0.50	7.0			--	6.6	
03/07/2005	P		8.18	0.00	32.14	340	--	41	0.79	0.79	0.73	7.2			--	6.9	
09/06/2005	P	43.10	11.80	0.00	31.30	1,100	--	130	1.2	1.8	<1.5	16			--	6.7	
03/06/2006	P		8.39	0.00	34.71	440	--	31	0.78	0.74	0.81	8.3			--	7.1	
9/5/2006	--		11.45	0.00	31.65	2,000	--	260	3.1	5.9	<2.5	12	--	--	--	6.6	
3/5/2007	P		9.31	0.00	33.79	2,200	--	110	2.2	4.0	1.8	7.6	--	--	1.06	7.26	
9/7/2007	P		12.18	0.00	30.92	220	--	8.4	<0.50	<0.50	<0.50	1.2	--	--	0.98	6.89	
3/6/2008	P		10.05	0.00	33.05	1,800	--	54	1.2	1.1	<1.0	<1.0	--	--	--	7.02	
9/3/2008	P		13.17	0.00	29.93	540	--	13	0.69	<0.50	<0.50	5.5	--	--	4.77	6.88	
3/4/2009	P		8.25	0.00	34.85	720	--	15	0.59	0.53	<0.50	3.4	--	--	1.29	6.93	
9/30/2009	P	40.40	12.70	0.00	27.70	1,200	--	44	1.0	0.74	0.79	3.3	--	--	0.11	6.94	x
10/28/2009	--		11.17	0.00	29.23	--	--	--	--	--	--	--	--	--	--	--	
3/23/2010	P		9.28	0.00	31.12	480	--	11	<0.50	<0.50	<1.0	<0.50	--	--	0.38	6.57	
6/10/2010	--		10.24	0.00	30.16	--	--	--	--	--	--	--	--	--	--	--	
9/16/2010	P		12.16	0.00	28.24	4,700	--	130	<5.0	7.4	<10	<5.0	--	--	0.98	6.36	

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						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-7 Cont.</b>																	
2/23/2011	P	40.40	9.62	0.00	30.78	2,200	--	26	1.1	1.4	1.6	4.0	--	--	0.72	6.56	
<b>9/28/2011</b>	<b>P</b>		<b>11.80</b>	<b>0.00</b>	<b>28.60</b>	<b>3,800</b>	<b>--</b>	<b>380</b>	<b>4.8</b>	<b>28</b>	<b>4.3</b>	<b>9.5</b>	<b>--</b>	<b>--</b>	<b>0.98</b>	<b>7.08</b>	
<b>MW-8</b>																	
10/3/1991	--	38.18	22.37	0.00	15.81	<50	--	<0.3	0.6	<0.3	0.9	--	--	--	--	--	
10/15/1991	--		22.70	0.00	15.48	--	--	--	--	--	--	--	--	--	--	--	
12/4/1991	--		22.44	0.00	15.74	--	--	--	--	--	--	--	--	--	--	--	
12/16/1991	--		22.47	0.00	15.71	--	--	--	--	--	--	--	--	--	--	--	
1/6/1992	--		21.94	0.00	16.24	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
1/22/1992	--		21.44	0.00	16.74	--	--	--	--	--	--	--	--	--	--	--	
1/28/1992	--		21.20	0.00	16.98	--	--	--	--	--	--	--	--	--	--	--	
2/5/1992	--		20.88	0.00	17.30	--	--	--	--	--	--	--	--	--	--	--	
2/12/1992	--		20.54	0.00	17.64	--	--	--	--	--	--	--	--	--	--	--	
2/17/1992	--		19.99	0.00	18.19	--	--	--	--	--	--	--	--	--	--	--	
4/3/1992	--		16.75	0.00	21.43	--	--	--	--	--	--	--	--	--	--	--	
4/8/1992	--		16.57	0.00	21.61	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
4/14/1992	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	f
4/29/1992	--		18.61	0.00	19.57	--	--	--	--	--	--	--	--	--	--	--	
5/7/1992	--		18.41	0.00	19.77	--	--	--	--	--	--	--	--	--	--	--	
7/3/1992	--		20.35	0.00	17.83	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
10/8/1992	--		21.74	0.00	16.44	--	--	--	--	--	--	--	--	--	--	--	f
12/31/1992	--		19.09	0.00	19.09	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
4/21/1993	--		18.92	0.00	19.26	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	n
7/7/1993	--		17.76	0.00	20.42	<50	--	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	--	n
9/21/1993	--		19.71	0.00	18.47	<50	--	2.9	2.2	2.2	7.1	--	--	--	--	--	n
12/17/1993	--		21.33	0.00	16.85	--	--	--	--	--	--	--	--	--	--	--	
12/23/1993	--		--	--	--	<50	--	<0.5	<0.5	<0.5	0.6	<5.0	--	--	--	--	n
4/7/1994	--		21.51	0.00	16.67	<50	--	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	6.6	--	n
7/6/1994	--		17.41	0.00	20.77	<50	--	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	4.4	--	n
10/7/1994	--		19.20	0.00	18.98	<50	--	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	3.7	--	n
1/27/1995	--		12.25	0.00	25.93	<50	--	<0.5	<0.5	<0.5	<1	--	--	--	2.9	--	



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						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-8 Cont.</b>																	
3/30/1995	--	38.18	10.35	0.00	27.83	<50	--	<0.50	<0.50	<0.50	<1.0	--	--	--	8.3	--	
6/20/1995	--		13.37	0.00	24.81	<50	--	<0.50	<0.50	<0.50	<1.0	--	--	--	6.9	--	
10/3/1995	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	f
12/6/1995	--		18.42	0.00	19.76	<50	--	<0.50	<0.50	<0.50	<1.0	47	--	--	5.3	--	
3/21/1996	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	f
6/21/1996	--		13.03	0.00	25.15	<50	--	<0.5	<1	<1	<1	<10	--	--	7.0	--	
9/6/1996	--		13.70	0.00	24.48	--	--	--	--	--	--	--	--	--	--	--	
9/9/1996	--		--	--	--	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	7.0	--	
12/19/1996	--		11.93	0.00	26.25	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	7.6	--	
3/17/1997	--		11.29	0.00	26.89	--	--	--	--	--	--	--	--	--	--	--	
8/12/1997	--		13.73	0.00	24.45	--	--	--	--	--	--	--	--	--	--	--	
12/10/1997	--		11.88	0.00	26.30	--	--	--	--	--	--	--	--	--	--	--	
3/12/1998	--		11.89	0.00	26.29	--	--	--	--	--	--	--	--	--	--	--	
6/23/1998	--		11.33	0.00	26.85	--	--	--	--	--	--	--	--	--	--	--	
3/31/1999	--		12.68	0.00	25.50	--	--	--	--	--	--	--	--	--	--	--	
8/25/1999	--		14.93	0.00	23.25	--	--	--	--	--	--	--	--	--	--	--	
3/9/2000	--		9.14	0.00	29.04	--	--	--	--	--	--	--	--	--	--	--	
3/8/2001	--		8.41	0.00	29.77	--	--	--	--	--	--	--	--	--	--	--	
3/8/2002	--		11.18	0.00	27.00	--	--	--	--	--	--	--	--	--	--	--	
3/18/2002	--		10.72	0.00	27.46	--	--	--	--	--	--	--	--	--	--	--	
3/11/2003	--		10.46	0.00	27.72	--	--	--	--	--	--	--	--	--	--	--	
03/09/2004	P		9.79	0.00	28.39	<50	--	<0.50	<0.50	<0.50	<0.50	0.50			--	7.2	
09/17/2004	--		15.35	0.00	22.83	--	--	--	--	--	--	--			--	--	
03/07/2005	P		7.94	0.00	30.24	<50	--	<0.50	<0.50	<0.50	<0.50	<0.50			--	6.7	
09/06/2005	--	40.95	13.06	0.00	27.89	--	--	--	--	--	--	--			--	--	
03/06/2006	P		9.26	0.00	31.69	<50	--	<0.50	<0.50	<0.50	<0.50	0.59			--	7.2	u
9/5/2006	--		12.61	0.00	28.34	--	--	--	--	--	--	--			--	--	
3/5/2007	P		9.12	0.00	31.83	<50	--	<0.50	<0.50	<0.50	0.53	<0.50	--	--	6.79	7.17	
9/7/2007	--		13.56	0.00	27.39	--	--	--	--	--	--	--			--	--	
3/6/2008	P		9.80	0.00	31.15	<50	--	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	4.14	6.86	

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Well ID and Date Monitored	P/NP	TOC Elevation (feet)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L									DO (mg/L)	pH	Footnote
						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-8 Cont.</b>																	
9/3/2008	--	40.95	14.20	0.00	26.75	--	--	--	--	--	--	--	--	--	--	--	
3/4/2009	P		9.51	0.00	31.44	<50	--	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	2.62	6.96	
9/30/2009	--	38.19	14.92	0.00	23.27	--	--	--	--	--	--	--	--	--	--	--	x
10/28/2009	--		13.56	0.00	24.63	--	--	--	--	--	--	--	--	--	--	--	
3/23/2010	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	f
6/10/2010	--		11.06	0.00	27.13	--	--	--	--	--	--	--	--	--	--	--	
9/16/2010	P		14.41	0.00	23.78	<50	--	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	1.14	6.68	
2/23/2011	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	f, car parked on well
<b>9/28/2011</b>	<b>--</b>		<b>13.87</b>	<b>0.00</b>	<b>24.32</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	
<b>MW-9</b>																	
10/3/1991	--	41.25	14.12	0.00	27.13	<50	--	<0.3	0.4	<0.3	<0.3	--	--	--	--	--	
10/15/1991	--		14.27	0.00	26.98	--	--	--	--	--	--	--	--	--	--	--	
12/4/1991	--		13.84	0.00	27.41	--	--	--	--	--	--	--	--	--	--	--	
12/16/1991	--		14.18	0.00	27.07	--	--	--	--	--	--	--	--	--	--	--	
1/6/1992	--		13.42	0.00	27.83	<50	--	<0.5	<0.5	<0.5	0.9	--	--	--	--	--	
1/22/1992	--		13.75	0.00	27.50	--	--	--	--	--	--	--	--	--	--	--	
1/28/1992	--		14.76	0.00	26.49	--	--	--	--	--	--	--	--	--	--	--	
2/5/1992	--		13.38	0.00	27.87	--	--	--	--	--	--	--	--	--	--	--	
2/12/1992	--		11.86	0.00	29.39	--	--	--	--	--	--	--	--	--	--	--	
2/17/1992	--		10.78	0.00	30.47	--	--	--	--	--	--	--	--	--	--	--	
4/3/1992	--		11.63	0.00	29.62	--	--	--	--	--	--	--	--	--	--	--	
4/8/1992	--		12.25	0.00	29.00	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
4/14/1992	--		12.32	0.00	28.93	--	--	--	--	--	--	--	--	--	--	--	
4/29/1992	--		13.07	0.00	28.18	--	--	--	--	--	--	--	--	--	--	--	
5/7/1992	--		14.43	0.00	26.82	--	--	--	--	--	--	--	--	--	--	--	
7/3/1992	--		13.85	0.00	27.40	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
10/8/1992	--		14.89	0.00	26.36	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
12/31/1992	--		11.90	0.00	29.35	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
4/21/1993	--		13.68	0.00	27.57	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	n
7/7/1993	--		13.12	0.00	28.13	<50	--	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	--	n

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Well ID and Date Monitored	P/NP	TOC Elevation (feet)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L									DO (mg/L)	pH	Footnote
						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-9 Cont.</b>																	
9/21/1993	--	41.25	14.00	0.00	27.25	<50	--	<0.5	<0.5	<0.5	0.9	--	--	--	--	--	n
12/17/1993	--		12.98	0.00	28.27	--	--	--	--	--	--	--	--	--	--	--	
12/23/1993	--		--	--	--	<50	--	<0.5	<0.5	<0.5	0.9	<5.0	--	--	--	--	n
4/7/1994	--		13.24	0.00	28.01	<50	--	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	4.7	--	n
7/6/1994	--		13.77	0.00	27.48	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	3.9	--	n
10/7/1994	--		14.60	0.00	26.65	<50	--	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	3.0	--	n
1/27/1995	--		8.47	0.00	32.78	<50	--	<0.5	<0.5	<0.5	<1	--	--	--	2.5	--	
3/30/1995	--		8.19	0.00	33.06	<50	--	<0.50	<0.50	<0.50	<1.0	--	--	--	8.4	--	
6/20/1995	--		11.25	0.00	30.00	<50	--	<0.50	<0.50	<0.50	<1.0	--	--	--	8.1	--	
10/3/1995	--		14.68	0.00	26.57	<50	--	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	6.0	--	
12/6/1995	--		16.07	0.00	25.18	<50	--	<0.50	<0.50	<0.50	<1.0	46	--	--	5.4	--	
3/21/1996	--		9.60	0.00	31.65	<50	--	<0.5	<1	<1	<1	<10	--	--	8.0	--	
6/21/1996	--		10.86	0.00	30.39	<50	--	<0.5	<1	<1	<1	<10	--	--	7.8	--	
9/6/1996	--		11.52	0.00	29.73	--	--	--	--	--	--	--	--	--	--	--	
9/9/1996	--		--	--	--	<50	--	<0.5	<1.0	<1.0	<1.0	20/21	--	--	7.3	--	k
12/19/1996	--		10.43	0.00	30.82	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	7.3	--	
3/17/1997	--		9.87	0.00	31.38	--	--	--	--	--	--	--	--	--	--	--	
8/12/1997	--		11.44	0.00	29.81	--	--	--	--	--	--	--	--	--	--	--	
12/10/1997	--		10.44	0.00	30.81	--	--	--	--	--	--	--	--	--	--	--	
3/12/1998	--		9.50	0.00	31.75	--	--	--	--	--	--	--	--	--	--	--	
6/23/1998	--		10.06	0.00	31.19	--	--	--	--	--	--	--	--	--	--	--	
3/31/1999	--		9.06	0.00	32.19	--	--	--	--	--	--	--	--	--	--	--	
8/25/1999	--		12.00	0.00	29.25	--	--	--	--	--	--	--	--	--	--	--	
3/9/2000	--		10.57	0.00	30.68	--	--	--	--	--	--	--	--	--	--	--	
3/8/2001	--		9.73	0.00	31.52	--	--	--	--	--	--	--	--	--	--	--	
3/8/2002	--		11.89	0.00	29.36	--	--	--	--	--	--	--	--	--	--	--	
3/18/2002	--		9.68	0.00	31.57	--	--	--	--	--	--	--	--	--	--	--	
3/11/2003	--		9.21	0.00	32.04	--	--	--	--	--	--	--	--	--	--	--	
03/09/2004	--		10.99	0.00	30.26	<50	--	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	6.6	
09/17/2004	--		13.35	0.00	27.90	--	--	--	--	--	--	--	--	--	--	--	

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Well ID and Date Monitored	P/NP	TOC Elevation (feet)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L									DO (mg/L)	pH	Footnote
						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-9 Cont.</b>																	
03/07/2005	P	41.25	8.94	0.00	32.31	<50	--	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	6.9	
09/06/2005	--	44.06	11.99	0.00	32.07	--	--	--	--	--	--	--	--	--	--	--	
03/06/2006	P		8.26	0.00	35.80	<50	--	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	6.9	u
9/5/2006	--		11.63	0.00	32.43	--	--	--	--	--	--	--	--	--	--	--	
3/5/2007	P		9.33	0.00	34.73	<50	--	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	2.22	7.03	
9/7/2007	--		12.28	0.00	31.78	--	--	--	--	--	--	--	--	--	--	--	
3/6/2008	P		10.11	0.00	33.95	<50	--	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	3.72	6.90	
9/3/2008	--		13.49	0.00	30.57	--	--	--	--	--	--	--	--	--	--	--	
3/4/2009	P		8.15	0.00	35.91	<50	--	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	4.03	6.84	
9/30/2009	--	41.25	12.98	0.00	28.27	--	--	--	--	--	--	--	--	--	--	--	x
10/28/2009	--		11.98	0.00	29.27	--	--	--	--	--	--	--	--	--	--	--	
3/23/2010	P		10.59	0.00	30.66	<50	--	<0.50	<0.50	<0.50	<1.0	<0.50	--	--	0.86	6.54	
6/10/2010	--		10.25	0.00	31.00	--	--	--	--	--	--	--	--	--	--	--	
9/16/2010	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	f
2/23/2011	--		9.71	0.00	31.54	--	--	--	--	--	--	--	--	--	--	--	
<b>9/28/2011</b>	<b>--</b>		<b>11.66</b>	<b>0.00</b>	<b>29.59</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	
<b>MW-10</b>																	
6/16/2009	--	39.78	8.60	0.01	31.19	--	--	--	--	--	--	--	--	--	--	--	x
7/22/2009	--		9.68	0.01	30.11	--	--	--	--	--	--	--	--	--	--	--	
8/6/2009	--		9.48	0.00	30.30	--	--	--	--	--	--	--	--	--	--	--	
9/30/2009	--		9.69	0.01	30.10	--	--	--	--	--	--	--	--	--	--	--	
10/28/2009	P		8.53	0.00	31.25	62,000	--	8,300	5,300	3,100	12,000	<50	--	--	1.14	6.9	z
3/23/2010	P		7.70	Sheen	32.08	58,000	--	6,500	4,800	2,300	9,700	<100	--	--	0.71	6.69	
6/10/2010	--		8.93	0.01	30.86	--	--	--	--	--	--	--	--	--	--	--	
9/16/2010	--		9.69	0.01	30.10	--	--	--	--	--	--	--	--	--	--	--	
2/23/2011	P		7.99	0.00	31.79	61,000	--	7,000	5,300	2,800	12,000	<100	--	--	0.79	6.68	cc
<b>9/28/2011</b>	<b>--</b>		<b>10.36</b>	<b>0.29</b>	<b>29.64</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	
<b>MW-11</b>																	
9/30/2009	P	40.04	10.55	0.00	29.49	30,000	--	850	1,400	1,000	3,700	27	--	--	--	7.09	x

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						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>MW-11 Cont.</b>																	
10/28/2009	P	40.04	8.00	0.00	32.04	27,000	--	1,100	2,300	1,500	5,800	<50	--	--	0.82	6.74	
3/23/2010	P		7.25	0.00	32.79	19,000	--	530	830	790	2,200	<25	--	--	0.66	6.64	
6/10/2010	--		9.65	Sheen	30.39	--	--	--	--	--	--	--	--	--	--	--	
9/16/2010	P		9.42	0.00	30.62	5,500	--	400	250	320	410	11	--	--	0.62	6.36	aa
2/23/2011	P		7.60	0.00	32.44	10,000	--	380	260	330	540	7.2	--	--	0.80	6.62	
<b>9/28/2011</b>	<b>P</b>		<b>9.88</b>	<b>0.00</b>	<b>30.16</b>	<b>5,900</b>	<b>--</b>	<b>230</b>	<b>92</b>	<b>260</b>	<b>370</b>	<b>6.4</b>	<b>--</b>	<b>--</b>	<b>0.70</b>	<b>7.02</b>	
<b>MW-12</b>																	
9/30/2009	--	40.32	11.02	0.02	29.32	--	--	--	--	--	--	--	--	--	--	--	x
10/28/2009	P		10.40	0.00	29.92	43,000	--	5,800	800	2,900	6,800	<50	--	--	0.73	6.7	z
3/23/2010	P		11.46	Sheen	28.86	39,000	--	4,800	1,000	3,100	6,400	<25	--	--	1.06	6.60	
6/10/2010	--		11.35	Sheen	28.97	--	--	--	--	--	--	--	--	--	--	--	
9/16/2010	--		11.54	0.02	28.80	--	--	--	--	--	--	--	--	--	--	--	
2/23/2011	--		10.80	0.10	29.60	--	--	--	--	--	--	--	--	--	--	--	bb
<b>9/28/2011</b>	<b>--</b>		<b>11.48</b>	<b>0.20</b>	<b>28.99</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	
<b>QC-2</b>																	
10/8/1992	--	41.25	--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	1
12/31/1992	--		--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	1
4/21/1993	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	l, n
7/7/1993	--		--	--	--	<50	--	<0.5	<0.5	<0.5	0.6	--	--	--	--	--	l, n
9/21/1993	--		--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	l, n
12/23/1993	--		--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	1
4/7/1994	--		--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	1
7/6/1994	--		--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	1
10/7/1994	--		--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	1
1/27/1995	--		--	--	--	<50	--	<0.5	0.5	<0.5	<1	--	--	--	--	--	1
3/30/1995	--		--	--	--	<50	--	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	1
6/20/1995	--		--	--	--	<50	--	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	1
10/3/1995	--		--	--	--	<50	--	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	--	--	1
12/6/1995	--		--	--	--	<50	--	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	--	--	1

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						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
<b>QC-2 Cont.</b>																	
3/21/1996	--	41.25	--	--	--	<50	--	<0.5	<1	<1	<1	<10	--	--	--	--	1
6/21/1996	--		--	--	--	<50	--	<0.5	<1	<1	<1	<10	--	--	--	--	1

Symbols & Abbreviations:

--/-- = Not analyzed/applicable/measured/available  
< = Not detected at or above specified laboratory reporting limit  
DO = Dissolved oxygen  
DTW = Depth to water in ft bgs  
ft bgs = Feet below ground surface  
GRO = Gasoline range organics, range C4-C12  
GWE = Groundwater elevation in ft  
mg/L = Milligrams per liter  
MTBE = Methyl tert-butyl ether  
ND = Not detected  
NP = Well not purged prior to sampling  
P = Well purged prior to sampling  
TOC = Top of casing elevation in ft  
TPH-g = Total petroleum hydrocarbons as gasoline  
µg/L = Micrograms per liter  
ANA = Anamatrix, Inc.  
PACE = Pace, Inc.  
ATI = Analytical Technologies, Inc.  
CEI = Ceimic Corporation  
SPL = Southern Petroleum Laboratories  
SEQ/SEQM= Sequoia Analytical/Sequoia Analytical - Morgan Hill (Laboratories)  
SUP = Superior Analytical Laboratory

Footnotes:

a = Free product in well  
c = Well destroyed during tank removal in November 1990  
d = Methylene chloride  
e = 1,2-Dichloroethane  
f = Well inaccessible  
g = Sample collected from MW-2 for TPH-d analysis received in laboratory 7 days after collection; sample exceeded EPA recommended holding time for TPH-d on a water matrix  
h = Blind duplicate  
i = TOC lowered  
j = A copy of the documentation for this data is included in Appendix C of Alisto report 10-014-07-001  
k = EPA Methods 8020/8260 used  
l = Travel blank  
n = A copy of the documentation for this data is included in the Blaine Tech Services, Inc. report 020308-DW-2. The data for samples taken on April 21, 1993, have been destroyed. No chromatograms could be located for the samples taken on: July 7, 1993, for well MW-2 and TB; September 21, 1993, for all wells MW-3, MW-4, MW-6, MW-7, MW-8, MW-9, the DUP and TB; December 23, 1993, for wells MW-2 and MW-3; and July 6, 1994, for wells MW-2, MW-4, MW-6, and MW-9  
p = Well not sampled due to damage during site construction  
q = Sheen in well  
r = Well dry  
s = The hydrocarbon result for GRO was partly due to individual peaks in the quantification range  
t = MS and/or MSD were below the acceptance limits for MTBE. Matrix interference was suspected  
u = Possible high bias for benzene due to CCV falling outside acceptance criteria  
v = The sample concentration is greater than four times the spike concentration  
w = Insufficient water to sample  
x = Well surveyed 4/13/2009  
y = Quantitation of unknown hydrocarbon(s) in sample based on gasoline  
z = Free product not observed during initial gauging activities, but was observed following or during purge  
aa = Strong Hydrocarbon Odor  
bb = Not bailed, on site drum is full  
cc = Sheen during purge

Notes:

GWE adjusted assuming a specific gravity of 0.75 for free product

Beginning in the fourth quarter 2003, the laboratory modified the reported analyte list. TPH-g has been changed to GRO. The resulting data may be impacted by the potential inclusion of non-TPHg analytes within the requested fuel range resulting in a higher concentration being reported

GRO analysis was completed by EPA method 8260B (C4-C12) for samples collected from the time period April 2006 through February 4, 2008. The analysis for GRO was changed to EPA method 8015B (C6-C12) for samples collected from the time period February 5, 2008 through September 30, 2009. GRO analysis was changed to EPA method 8260B (C6-C12) for the time period October 1, 2009 through the present

The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information



**Table 2. Summary of Fuel Additives Analytical Data  
Former BP Station #11109, 4280 Foothill Blvd., Oakland, CA**

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>MW-2</b>									
9/21/1993	--	--	21.54	--	--	--	--	--	
4/7/1994	--	--	12.2	--	--	--	--	--	
10/7/1994	--	--	15.2	--	--	--	--	--	
10/3/1995	--	--	<5.0	--	--	--	--	--	
12/6/1995	--	--	46	--	--	--	--	--	
3/21/1996	--	--	<1.0	--	--	--	--	--	
6/21/1996	--	--	<10	--	--	--	--	--	
9/9/1996	--	--	<10	--	--	--	--	--	
12/19/1996	--	--	<10	--	--	--	--	--	
12/09/2003	<100	<20	24	<0.50	<0.50	<0.50	--	--	
03/09/2004	<100	<20	27	<0.50	<0.50	<0.50	<0.50	<0.50	
09/17/2004	<100	<20	21	<0.50	<0.50	<0.50	<0.50	<0.50	
9/5/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>MW-3</b>									
7/7/1993	--	--	12.68	--	--	--	--	--	
4/7/1994	--	--	18.2	--	--	--	--	--	
7/6/1994	--	--	5.54	--	--	--	--	--	
10/7/1994	--	--	31.4	--	--	--	--	--	
10/3/1995	--	--	6.7	--	--	--	--	--	
12/6/1995	--	--	53	--	--	--	--	--	
12/6/1995	--	--	64	--	--	--	--	--	
3/21/1996	--	--	<10	--	--	--	--	--	
6/21/1996	--	--	12	--	--	--	--	--	
9/9/1996	--	--	<50	--	--	--	--	--	
12/19/1996	--	--	<10	--	--	--	--	--	
3/17/1997	--	--	<10	--	--	--	--	--	
8/12/1997	--	--	10	--	--	--	--	--	
12/10/1997	--	--	<10	--	--	--	--	--	
3/12/1998	--	--	<10	--	--	--	--	--	
3/12/1998	--	--	<10	--	--	--	--	--	
6/23/1998	--	--	<10	--	--	--	--	--	

**Table 2. Summary of Fuel Additives Analytical Data**  
**Former BP Station #11109, 4280 Foothill Blvd., Oakland, CA**

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>MW-3 Cont.</b>									
3/31/1999	--	--	6.2	--	--	--	--	--	
8/25/1999	--	--	7.7	--	--	--	--	--	
3/9/2000	--	--	6.3	--	--	--	--	--	
3/8/2001	--	--	7.7	--	--	--	--	--	
3/8/2002	--	--	11.6	--	--	--	--	--	
3/11/2003	--	--	6.7	--	--	--	--	--	
12/09/2003	<100	<20	6.4	<0.50	<0.50	<0.50	--	--	
03/09/2004	<100	<20	6.9	<0.50	<0.50	<0.50	<0.50	<0.50	
03/07/2005	<100	<20	5.1	<0.50	<0.50	<0.50	<0.50	<0.50	
03/06/2006	<300	<20	6.9	<0.50	<0.50	<0.50	<0.50	<0.50	
3/5/2007	<300	<20	5.4	<0.50	<0.50	<0.50	<0.50	<0.50	
3/6/2008	<300	<10	4.2	<0.50	<0.50	<0.50	<0.50	<0.50	
3/4/2009	<300	<10	4.9	<0.50	<0.50	<0.50	<0.50	<0.50	
9/30/2009	<300	<10	6.8	<0.50	<0.50	<0.50	<0.50	<0.50	
3/23/2010	<100	<4.0	3.2	<0.50	<0.50	<0.50	<0.50	<0.50	
9/16/2010	<100	<4.0	5.9	<0.50	<0.50	<0.50	<0.50	<0.50	
2/23/2011	--	--	0.58	--	--	--	--	--	
<b>9/28/2011</b>	--	--	<b>3.2</b>	--	--	--	--	--	
<b>MW-4</b>									
7/7/1993	--	--	5.51	--	--	--	--	--	
12/23/1993	--	--	5.7	--	--	--	--	--	
4/7/1994	--	--	11.7	--	--	--	--	--	
10/7/1994	--	--	7.38	--	--	--	--	--	
10/3/1995	--	--	5	--	--	--	--	--	
12/6/1995	--	--	47	--	--	--	--	--	
3/21/1996	--	--	<10	--	--	--	--	--	
6/21/1996	--	--	<10	--	--	--	--	--	
9/9/1996	--	--	<10	--	--	--	--	--	
12/19/1996	--	--	<10	--	--	--	--	--	
12/09/2003	<500	<100	130	<2.5	<2.5	2.7	--	--	
03/09/2004	<100	<20	35	<0.50	<0.50	<0.50	<0.50	<0.50	

**Table 2. Summary of Fuel Additives Analytical Data  
Former BP Station #11109, 4280 Foothill Blvd., Oakland, CA**

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>MW-4 Cont.</b>									
09/17/2004	<500	<100	140	<2.5	<2.5	2.6	<2.5	<2.5	
03/07/2005	<100	<20	42	<0.50	<0.50	0.56	<0.50	<0.50	
09/06/2005	<150	<10	180	<0.50	<0.50	2.8	<0.50	<0.50	a
03/06/2006	<600	<40	110	<1.0	<1.0	1.4	<1.0	<1.0	
9/5/2006	<600	<40	190	<1.0	<1.0	1.7	<1.0	<1.0	
3/5/2007	<300	<20	13	<0.50	<0.50	<0.50	<0.50	<0.50	
9/7/2007	<300	<20	130	<0.50	<0.50	1.7	<0.50	<0.50	b (MTBE)
3/6/2008	<300	14	170	<0.50	<0.50	2.1	<0.50	<0.50	
9/3/2008	<3,000	<100	150	<5.0	<5.0	<5.0	<5.0	<5.0	
3/4/2009	<3,000	<100	110	<5.0	<5.0	<5.0	<5.0	<5.0	
9/30/2009	<1,200	<40	140	<2.0	<2.0	<2.0	<2.0	<2.0	
3/23/2010	<100	18	84	<0.50	<0.50	0.88	<0.50	<0.50	
9/16/2010	<100	8.0	72	<0.50	<0.50	0.82	<0.50	<0.50	
2/23/2011	--	--	55	--	--	--	--	--	
<b>9/28/2011</b>	--	--	<b>62</b>	--	--	--	--	--	
<b>MW-5</b>									
4/7/1994	--	--	2,002	--	--	--	--	--	
7/6/1994	--	--	1,141	--	--	--	--	--	
10/7/1994	--	--	37.7	--	--	--	--	--	
10/3/1995	--	--	320	--	--	--	--	--	
10/3/1995	--	--	330	--	--	--	--	--	
12/6/1995	--	--	600	--	--	--	--	--	
3/21/1996	--	--	<10	--	--	--	--	--	
3/21/1996	--	--	<10	--	--	--	--	--	
6/21/1996	--	--	<100	--	--	--	--	--	
6/21/1996	--	--	<50	--	--	--	--	--	
9/9/1996	--	--	<2500	--	--	--	--	--	
9/9/1996	--	--	<2500	--	--	--	--	--	
12/19/1996	--	--	<500	--	--	--	--	--	
12/19/1996	--	--	<500	--	--	--	--	--	
3/17/1997	--	--	29	--	--	--	--	--	

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**Former BP Station #11109, 4280 Foothill Blvd., Oakland, CA**

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>MW-5 Cont.</b>									
3/17/1997	--	--	28	--	--	--	--	--	
8/12/1997	--	--	<500	--	--	--	--	--	
8/12/1997	--	--	<1000	--	--	--	--	--	
12/10/1997	--	--	500	--	--	--	--	--	
3/12/1998	--	--	<250	--	--	--	--	--	
6/23/1998	--	--	<500	--	--	--	--	--	
6/23/1998	--	--	<250	--	--	--	--	--	
8/25/1999	--	--	26	--	--	--	--	--	
3/9/2000	--	--	<5.0	--	--	--	--	--	
3/8/2002	--	--	34.3	--	--	--	--	--	
03/09/2004	<10,000	<2,000	<50	<50	<50	<50	96	<50	
03/06/2006	<30,000	<2,000	<50	60	<50	<50	<50	<50	
3/5/2007	<30,000	<2,000	<50	57	<50	<50	<50	<50	
3/23/2010	<1,000	<40	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
<b>MW-6</b>									
7/7/1993	--	--	28.96	--	--	--	--	--	
12/23/1993	--	--	13.95	--	--	--	--	--	
4/7/1994	--	--	35.1	--	--	--	--	--	
10/7/1994	--	--	24.3	--	--	--	--	--	
10/3/1995	--	--	66	--	--	--	--	--	
12/6/1995	--	--	45	--	--	--	--	--	
3/21/1996	--	--	41	--	--	--	--	--	
6/21/1996	--	--	<10	--	--	--	--	--	
9/9/1996	--	--	22/22	--	--	--	--	--	
12/19/1996	--	--	<10	--	--	--	--	--	
12/09/2003	<100	<20	12	<0.50	<0.50	<0.50	--	--	
03/09/2004	<100	<20	10	<0.50	<0.50	<0.50	0.58	<0.50	
03/07/2005	<100	<20	5.8	<0.50	<0.50	<0.50	<0.50	<0.50	
03/06/2006	<300	<20	8.1	<0.50	<0.50	<0.50	<0.50	<0.50	
3/5/2007	<300	<20	5.6	<0.50	<0.50	<0.50	<0.50	<0.50	
3/6/2008	<300	<10	1.9	<0.50	<0.50	<0.50	<0.50	<0.50	

**Table 2. Summary of Fuel Additives Analytical Data**  
**Former BP Station #11109, 4280 Foothill Blvd., Oakland, CA**

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>MW-6 Cont.</b>									
3/4/2009	<300	<10	2.8	<0.50	<0.50	<0.50	<0.50	<0.50	
9/30/2009	<300	<10	4.4	<0.50	<0.50	<0.50	<0.50	<0.50	
3/23/2010	<100	<4.0	1.0	<0.50	<0.50	<0.50	<0.50	<0.50	
9/16/2010	<100	<4.0	0.80	<0.50	<0.50	<0.50	<0.50	<0.50	
2/23/2011	--	--	<0.50	--	--	--	--	--	
<b>9/28/2011</b>	--	--	<b>3.4</b>	--	--	--	--	--	
<b>MW-7</b>									
7/7/1993	--	--	9.84	--	--	--	--	--	
7/7/1993	--	--	10.84	--	--	--	--	--	
12/23/1993	--	--	7.81	--	--	--	--	--	
4/7/1994	--	--	6.32	--	--	--	--	--	
7/6/1994	--	--	<5.0	--	--	--	--	--	
10/7/1994	--	--	<5.0	--	--	--	--	--	
10/3/1995	--	--	<5.0	--	--	--	--	--	
12/6/1995	--	--	<5.0	--	--	--	--	--	
3/21/1996	--	--	<10	--	--	--	--	--	
6/21/1996	--	--	<50	--	--	--	--	--	
9/9/1996	--	--	<50	--	--	--	--	--	
12/19/1996	--	--	<10	--	--	--	--	--	
12/09/2003	<100	<20	8.7	<0.50	<0.50	<0.50	--	--	
03/09/2004	<100	<20	6.9	<0.50	<0.50	<0.50	1.2	<0.50	
09/17/2004	<100	<20	7.0	<0.50	<0.50	<0.50	<0.50	<0.50	
03/07/2005	<100	<20	7.2	<0.50	<0.50	<0.50	<0.50	<0.50	
09/06/2005	<150	30	16	0.60	<0.50	<0.50	<0.50	<0.50	
03/06/2006	<300	<20	8.3	<0.50	<0.50	<0.50	<0.50	<0.50	
9/5/2006	<1,500	<100	12	<2.5	<2.5	<2.5	<2.5	<2.5	
3/5/2007	<600	<40	7.6	<1.0	<1.0	<1.0	<1.0	<1.0	
9/7/2007	<300	<20	1.2	<0.50	<0.50	<0.50	<0.50	<0.50	
3/6/2008	<600	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
9/3/2008	<300	17	5.5	<0.50	<0.50	<0.50	<0.50	<0.50	
3/4/2009	<300	12	3.4	<0.50	<0.50	<0.50	<0.50	<0.50	

**Table 2. Summary of Fuel Additives Analytical Data  
Former BP Station #11109, 4280 Foothill Blvd., Oakland, CA**

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>MW-7 Cont.</b>									
9/30/2009	<300	<10	3.3	<0.50	<0.50	<0.50	<0.50	<0.50	
3/23/2010	<100	12	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
9/16/2010	<1,000	<40	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
2/23/2011	<250	<4.0	4.0	<0.50	<0.50	<0.50	<5.0	<5.0	
<b>9/28/2011</b>	<b>&lt;250</b>	<b>13</b>	<b>9.5</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	
<b>MW-8</b>									
7/7/1993	--	--	<5.0	--	--	--	--	--	
12/23/1993	--	--	<5.0	--	--	--	--	--	
4/7/1994	--	--	<5.0	--	--	--	--	--	
7/6/1994	--	--	<5.0	--	--	--	--	--	
10/7/1994	--	--	<5.0	--	--	--	--	--	
12/6/1995	--	--	47	--	--	--	--	--	
6/21/1996	--	--	<10	--	--	--	--	--	
9/9/1996	--	--	<10	--	--	--	--	--	
12/19/1996	--	--	<10	--	--	--	--	--	
03/09/2004	<100	<20	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
03/07/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
03/06/2006	<300	<20	0.59	<0.50	<0.50	<0.50	<0.50	<0.50	
3/5/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
3/6/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
3/4/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
9/16/2010	<100	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>MW-9</b>									
7/7/1993	--	--	<5.0	--	--	--	--	--	
12/23/1993	--	--	<5.0	--	--	--	--	--	
4/7/1994	--	--	<5.0	--	--	--	--	--	
10/7/1994	--	--	<5.0	--	--	--	--	--	
10/3/1995	--	--	<5.0	--	--	--	--	--	
12/6/1995	--	--	46	--	--	--	--	--	
3/21/1996	--	--	<10	--	--	--	--	--	

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Former BP Station #11109, 4280 Foothill Blvd., Oakland, CA**

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>MW-9 Cont.</b>									
6/21/1996	--	--	<10	--	--	--	--	--	
9/9/1996	--	--	20/21	--	--	--	--	--	
12/19/1996	--	--	<10	--	--	--	--	--	
03/09/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
03/07/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
03/06/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
3/5/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
3/6/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
3/4/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
3/23/2010	<100	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>MW-10</b>									
10/28/2009	<10,000	<400	<50	<50	<50	<50	<50	<50	
3/23/2010	<20,000	<800	<100	<100	<100	<100	<100	<100	
2/23/2011	<50,000	<800	<100	<100	<100	<100	<100	<100	
<b>MW-11</b>									
9/30/2009	<6,000	<200	27	<10	<10	<10	<10	<10	
10/28/2009	<10,000	<400	<50	<50	<50	<50	<50	<50	
3/23/2010	<5,000	<200	<25	<25	<25	<25	<25	<25	
9/16/2010	<500	<20	11	<2.5	<2.5	<2.5	<2.5	<2.5	
2/23/2011	<2,500	<40	7.2	<5.0	<5.0	<5.0	<5.0	<5.0	
<b>9/28/2011</b>	<b>&lt;1,300</b>	<b>26</b>	<b>6.4</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	
<b>MW-12</b>									
10/28/2009	<10,000	<400	<50	<50	<50	<50	<50	<50	
3/23/2010	<5,000	<200	<25	<25	<25	<25	<25	<25	
<b>QC-2</b>									
10/3/1995	--	--	<5.0	--	--	--	--	--	
12/6/1995	--	--	<5.0	--	--	--	--	--	
3/21/1996	--	--	<10	--	--	--	--	--	
6/21/1996	--	--	<10	--	--	--	--	--	

Symbols & Abbreviations:

TBA = tert-Butyl alcohol

MTBE = Methyl tert-butyl ether

DIPE = Diisopropyl ether

ETBE = Ethyl tert-butyl ether

TAME = tert-Amyl methyl ether

1,2-DCA = 1,2-Dichloroethane

EDB = 1,2-Dibromoethane

µg/L = micrograms per liter

< = Not detected at or above specified laboratory reporting limit

-- = Data not available, not analyzed, or not applicable

Footnotes:

a = MS and/or MSD below acceptance limits for MTBE. Matrix interference suspected

b = The sample concentration is greater than four times the spike concentration

Notes:

All fuel oxygenate compounds analyzed using EPA Method 8260B

The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information



**Table 3. Historical Groundwater Gradient - Direction and Magnitude**  
**Former BP Station #11109, 4280 Foothill Blvd., Oakland, CA**

<b>Date Measured</b>	<b>Approximate Gradient Direction</b>	<b>Approximate Gradient Magnitude (ft/ft)</b>
3/6/2006	Southwest	0.05
9/5/2006	Southwest	0.05
2/21/2007	Southwest	0.02
9/7/2007	Southwest	0.03
3/6/2008	Southwest	0.01
9/3/2008	Southwest	0.006
3/4/2009	Southwest	0.02
9/30/2009	Northwest	0.07
10/28/2009	Northwest	0.04
3/23/2010	Northwest	0.03
6/10/2010	Northwest	0.02
9/16/2010	Northwest	0.07
2/23/2011	Northwest	0.04
<b>9/28/2011</b>	<b>Northwest</b>	<b>0.02</b>

Notes:

The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information

**Table 4**  
**Summary of Free Product Removal**  
Former BP Service Station #11109  
4280 Foothill Boulevard, Oakland, California

Well ID	Date of Removal Event	DTW (feet)	Product Thickness (feet)	Product Removed (gallons)	Cumulative Product Removed (gallons)
MW-5	11/5/1992	--	--	0.200	0.200
MW-5	2/25/1993	--	--	0.100	0.300
MW-5	3/18/1993	--	--	0.100	0.400
MW-5	4/13/1993	--	--	0.100	0.500
MW-5	4/23/1993	--	--	13.0*	13.500
MW-5	5/24/1993	--	--	0.100	13.600
MW-5	10/14/1993	--	--	0.300	13.900
MW-5	11/10/1993	--	--	0.400	14.300
MW-5	12/23/1993	--	--	0.400	14.700
MW-5	8/12/1997	12.18	0.22	--	14.700
MW-5	12/10/1997	10.78	0.06	--	14.700
MW-5	3/12/1998	10.11	0.22	0.200	14.900
MW-5	6/23/1998	10.20	0.02	<0.050	14.900
MW-5	9/11/1998	11.61	0.04	0.100	15.000
MW-5	8/25/1999	14.69	0.38	0.070	15.070
MW-5	3/9/2000	14.83	0.60	0.400	15.470
MW-5	7/14/2003	12.72	0.03	0.019	15.489
MW-5	8/25/2003	14.04	0.00	0.000	15.489
MW-5	9/25/2003	14.38	0.08	0.052	15.542
MW-5	10/3/2003	12.15	0.06	0.040	15.582
MW-5	11/12/2003	12.74	0.19	0.120	15.702
MW-5	12/9/2003	11.44	0.03	0.040	15.742
MW-5	2/2/2004	6.47	0.04	0.030	15.772
MW-5	2/9/2004	10.61	0.04	0.030	15.802
MW-5	3/9/2004	7.91	--	--	15.802
MW-5	4/13/2004	9.68	0.28	0.200	16.002
MW-5	5/5/2004	11.93	Sheen	--	16.002
MW-5	6/3/2004	12.60	Sheen	--	16.002
MW-5	7/2/2004	11.11	0.10	0.060	16.062
MW-5	8/31/2004	12.80	0.05	0.132	16.194
MW-5	9/17/2004	12.13	0.15	--	16.194
MW-5	10/25/2004	10.66	0.26	0.170	16.364
MW-5	11/8/2004	9.98	0.02	0.020	16.384
MW-5	12/15/2004	8.76	0.01	0.010	16.394
MW-5	1/13/2005	7.12	--	--	16.394
MW-5	2/1/2005	8.10	0.01	0.007	16.400
MW-5	3/7/2005	8.62	0.02	0.013	16.413
MW-5	4/29/2005	9.39	--	--	16.413
MW-5	5/12/2005	7.51	0.01	0.007	16.420
MW-5	6/23/2005	7.70	--	--	16.420
MW-5	7/2/2005	10.81	--	--	16.420
MW-5	8/24/2005	10.53	--	--	16.420
MW-5	9/6/2005	11.16	0.18	0.119	16.539
MW-5	1/27/2006	9.02	0.02	0.013	16.433
MW-5	2/15/2006	8.38	0.02	0.013	16.446
MW-5	3/6/2006	8.60	Sheen	--	16.446

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**Summary of Free Product Removal**  
Former BP Service Station #11109  
4280 Foothill Boulevard, Oakland, California

Well ID	Date of Removal Event	DTW (feet)	Product Thickness (feet)	Product Removed (gallons)	Cumulative Product Removed (gallons)
MW-5	4/21/2006	8.02	0.27	0.251	16.697
MW-5	5/30/2006	9.13	0.07	0.045	16.742
MW-5	6/27/2006	9.49	0.09	0.058	16.801
MW-5	7/31/2006	10.08	0.08	0.052	16.853
MW-5	8/28/2006	10.75	0.09	0.059	16.911
MW-5	9/5/2006	6.16	0.03	0.020	16.931
MW-5	10/1/2006	--	--	--	16.931
MW-5	11/1/2006	--	--	--	16.931
MW-5	12/1/2006	--	--	--	16.931
MW-5	1/1/2007	--	--	--	16.931
MW-5	2/1/2007	--	--	--	16.931
MW-5	3/5/2007	8.34	Sheen	--	16.931
MW-5	4/1/2007	--	--	--	16.931
MW-5	5/1/2007	--	--	--	16.931
MW-5	6/1/2007	--	--	--	16.931
MW-5	7/1/2007	--	--	--	16.931
MW-5	8/1/2007	--	--	--	16.931
MW-5	9/7/2007	15.15	0.15	--	16.931
MW-5	9/18/2007	15.42	0.02	4.00*	20.931
MW-5	10/17/2007	12.50	0.35	5.5*	26.431
MW-5	11/8/2007	13.20	0.40	5.0*	31.431
MW-5	12/12/2007	12.25	0.52	3.5*	34.931
MW-5	1/14/2008	10.30	0.49	5.0*	39.931
MW-5	2/27/2008	13.22	0.12	4.0*	43.931
MW-5	3/6/2008	12.90	0.14	3.0*	46.931
MW-5	4/1/2008	9.52	0.07	4.0*	50.931
MW-5	5/20/2008	8.68	0.07	7.0*	57.931
MW-5	6/18/2008	10.46	0.18	0.00	57.931
MW-5	7/16/2008	11.25	0.00	0.0375	57.968
MW-5	8/13/2008	--	--	2.125*	60.093
MW-5	9/3/2008	12.90	0.99	3.0*	63.093
MW-5	9/15/2008	12.75	0.15	4.0*	67.093
MW-5	10/15/2008	13.43	0.50	5.0*	72.093
MW-5	11/20/2008	13.55	0.63	2.625*	74.718
MW-5	12/18/2008	12.62	0.37	3.625*	78.343
MW-5	1/14/2009	12.43	0.11	4.0*	82.343
MW-5	2/17/2009	8.80	0.33	4.0*	86.343
MW-5	3/4/2009	8.45	0.16	4.0*	90.343
MW-5	4/8/2009	9.05	0.22	6.0*	96.343
MW-5	5/11/2009	9.10	0.32	8.0*	104.343
MW-5	6/16/2009	9.15	0.02	5.5*	109.843
MW-5	7/22/2009	9.33	0.12	6.0*	115.843
MW-5	8/6/2009	10.05	0.01	5.0*	120.843
MW-5	9/30/2009	10.55	0.06	8.0*	128.843
MW-5	10/28/2009	10.48	0.00	0.00	128.843
MW-5	11/13/2009	8.61	0.01	0.5*	129.343
MW-5	12/11/2009	7.83	0.01	1.0*	130.343

**Table 4**  
**Summary of Free Product Removal**  
Former BP Service Station #11109  
4280 Foothill Boulevard, Oakland, California

Well ID	Date of Removal Event	DTW (feet)	Product Thickness (feet)	Product Removed (gallons)	Cumulative Product Removed (gallons)
MW-5	1/26/2010	6.43	0.02	1.5*	131.843
MW-5	2/24/2010	6.72	0.02	2.0*	133.843
MW-5	3/23/2010	7.10	0.00	0.00	133.843
MW-5	4/19/2010	7.53	Sheen	0.00	133.843
MW-5	5/18/2010	8.96	Sheen	0.00	133.843
MW-5	6/10/2010	8.26	0.06	2.0*	135.843
MW-5	7/27/2010	8.60	0.09	1.5*	137.343
MW-5	8/31/2010	8.99	0.01	0.00	137.343
MW-5	9/16/2010	9.14	0.04	0.00	137.343
MW-5	10/26/2010	9.40	0.05	2.0*	139.343
MW-5	11/15/2010	9.50	0.01	0.5*	139.843
MW-5	12/15/2011	6.52	0.00	0.00	139.843
MW-5	1/31/2011	9.31	0.01	0.5*	140.343
MW-5	2/23/2011	8.33	0.01	0.00	140.343
MW-5	3/18/2011	7.65	Sheen	0.00	140.343
MW-5	9/28/2011	10.46	0.06	0.00	140.343
MW-10	6/16/2009	8.60	0.01	2.5*	2.500
MW-10	7/22/2009	9.68	0.01	3.0*	5.500
MW-10	8/6/2009	9.48	0.00	0.00	5.500
MW-10	9/30/2009	9.69	0.01	3.0*	8.500
MW-10	10/28/2009	8.53	0.00	0.00	8.500
MW-10	11/13/2009	9.11	0.00	0.00	8.500
MW-10	12/11/2009	8.81	0.00	0.00	8.500
MW-10	1/26/2010	7.86	0.01	0.5*	9.000
MW-10	2/24/2010	7.28	0.00	0.00	9.000
MW-10	3/23/2010	7.70	0.00	0.00	9.000
MW-10	4/19/2010	8.10	0.00	0.00	9.000
MW-10	5/18/2010	8.83	0.00	0.00	9.000
MW-10	6/10/2010	8.93	0.01	2.0*	11.000
MW-10	7/27/2010	8.81	0.00	0.00	11.000
MW-10	8/31/2010	9.41	0.00	0.00	11.000
MW-10	9/16/2010	9.69	0.01	0.00	11.000
MW-10	10/26/2010	9.98	0.03	1.0*	12.000
MW-10	11/15/2010	10.15	0.00	0.00	12.000
MW-10	12/15/2010	8.71	0.00	0.00	12.000
MW-10	1/31/2011	9.05	0.00	0.00	12.000
MW-10	2/23/2011	7.99	0.00	0.00	12.000
MW-10	3/18/2011	8.10	0.00	0.00	12.000
MW-10	9/28/2011	10.36	0.29	0.00	12.000
MW-11	10/28/2009	8.00	0.00	0.00	0.000
MW-11	11/13/2009	9.24	0.00	0.00	0.000
MW-11	12/11/2009	9.06	0.00	0.00	0.000
MW-11	1/26/2010	6.98	0.00	0.00	0.000
MW-11	2/24/2010	7.07	0.00	0.00	0.000
MW-11	3/23/2010	7.25	0.00	0.00	0.000
MW-11	4/19/2010	7.95	0.00	0.00	0.000
MW-11	5/18/2010	8.26	0.00	0.00	0.000
MW-11	6/10/2010	9.65	Sheen	2.0*	2.000
MW-11	7/27/2010	8.61	0.00	0.00	2.000
MW-11	8/31/2010	9.35	0.00	0.00	2.000
MW-11	9/16/2010	9.42	0.00	0.00	2.000
MW-11	10/26/2010	9.90	0.00	0.00	2.000

**Table 4**  
**Summary of Free Product Removal**  
Former BP Service Station #11109  
4280 Foothill Boulevard, Oakland, California

Well ID	Date of Removal Event	DTW (feet)	Product Thickness (feet)	Product Removed (gallons)	Cumulative Product Removed (gallons)
MW-11	11/15/2010	10.00	0.00	0.00	2.000
MW-11	12/15/2010	8.51	0.00	0.00	2.000
MW-11	1/31/2011	9.07	0.00	0.00	2.000
MW-11	2/23/2011	7.60	0.00	0.00	2.000
MW-11	3/18/2011	7.01	0.00	0.00	2.000
MW-11	9/28/2011	9.88	0.00	0.00	2.000
MW-12	9/30/2009	11.01	0.02	4.0*	4.000
MW-12	10/28/2009	10.40	0.00	0.00	4.000
MW-12	11/13/2009	10.13	0.00	0.00	4.000
MW-12	12/11/2009	10.22	0.00	0.00	4.000
MW-12	1/26/2010	8.67	0.00	0.00	4.000
MW-12	2/24/2010	10.21	0.00	0.00	4.000
MW-12	3/23/2010	11.16	Sheen	0.00	4.000
MW-12	4/19/2010	11.52	Sheen	0.5*	4.500
MW-12	5/18/2010	11.5	0.00	0.00	4.500
MW-12	6/10/2010	11.35	Sheen	1.0*	5.500
MW-12	7/27/2010	10.65	0.01	0.5*	6.000
MW-12	8/31/2010	10.71	0.10	1.00	7.000
MW-12	9/16/2010	11.54	0.02	0.00	7.000
MW-12	10/26/2010	11.35	0.02	1.0*	8.000
MW-12	11/15/2010	11.48	0.02	0.5*	8.500
MW-12	12/15/2010	12.78	0.00	0.00	8.500
MW-12	1/31/2011	11.45	0.01	0.5*	9.000
MW-12	2/23/2011	10.80	0.10	0.00	9.000
MW-12	3/18/2011	11.40	Sheen	0.00	9.000
MW-12	9/28/2011	11.48	0.20	0.00	9.000
<b>Free Product Removed this Quarter:</b>					<b>0.0</b>
<b>Total Free Product Removed:</b>					<b>163.34</b>

**ABBREVIATIONS & SYMBOLS**

-- = Not available/applicable/measured/calculated

\* = FP/water mixture

**NOTES:**

The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

**APPENDIX A**  
**FIELD METHODS**

## BROADBENT & ASSOCIATES INC. FIELD PROCEDURES

### A.1 QUALITY ASSURANCE/QUALITY CONTROL FIELD PROTOCOLS

Field protocols have been implemented to enhance the accuracy and reliability of data collection, ground-water sample collection, transportation and laboratory analysis. Discussion of these protocols is provided below.

#### A.1.1 Water Level & Free-Product Measurement

Prior to ground-water sample collection from each monitoring well, the presence of separate-phase hydrocarbons (SPH or free product, FP) and depth to ground water shall be measured. Depth to ground water will be measured with a standard water level indicator that has been decontaminated prior to its use in accordance with procedures discussed below. Depth to groundwater will be gauged from a saw cut notch at the top of the well casing on each well head. Where FP is suspected, the initial gauging will be done with an oil-water interface probe. Once depth to water has been measured, the first retrieval of a new disposable bailer will be scrutinized for the presence of SPH/FP.

#### A.1.2 Monitoring Well Purging

Subsequent to measuring depth to ground water and prior to the collection of ground-water samples, purging of standing water within the monitoring well will be performed if called for. Consistent with the American Society for Testing and Materials (ASTM) Standard D6452-99, Section 7.1, the well will be purged of approximately three wetted-casing volumes of water, or until the well is dewatered, or until monitored field parameters indicate stabilization. The well will be purged using a pre-cleaned disposable bailer or submersible pump and disposable plastic tubing dedicated to each individual well. The well will be purged at a low flow rate to minimize the possibility of purging the well dry. So that the sample collected is representative of formation water, several field parameters will be monitored during the purging process. The sample will not be collected until these parameters (i.e. temperature, pH, and conductivity) have stabilized to within 10% of the previously measured value. If a well is purged dry, the sample should not be collected until the well has recovered to a minimum 50% of its initial volume.

#### A.1.3 Ground-Water Sample Collection

Once the wells are satisfactorily purged, water samples will be collected from each well. Water samples for organic analyses will be collected using a pre-cleaned, new, disposable bailer and transferred into the appropriate, new, laboratory-prepared containers such that no head space or air bubbles are present in the sample container (if appropriate to the analysis). The samples will be properly labeled (i.e. sample identification, sampler initials, date/time of collection, site location, requested analyses), placed in an ice chest with bagged ice or ice substitute, and delivered to the contracted analytical laboratory.

#### A.1.4 Surface Water Sample Collection

Unless specified otherwise, surface water samples will be collected from mid-depth in the central area of the associated surface water body. Water samples will be collected into appropriate, new, laboratory-prepared containers by dipping the container into the surface water unless the container has a preservative present. If a sample preservative is present, a new, cleaned non-preserved surrogate container will be used to obtain the sample which will then be directly transferred into a new, laboratory-provided, preserved container. Samples will be properly labeled and transported as described above.

#### A.1.5 Decontamination Protocol

Prior to use in each well, re-usable ground-water sampling equipment (e.g., water level indicator, oil-interface probe, purge pump, etc.) will be decontaminated. Decontamination protocol will include thoroughly cleaning with a solution of Liquinox, rinsing with clean water, and final rinsing with control water (potable water of known quality, distilled, or de-ionized water). Pre-cleaned new disposable bailers and disposable plastic tubing will be dedicated to each individual well.

#### A.1.6 Chain of Custody Procedures

Sample identification documents will be carefully prepared so identification and chain of custody can be maintained and sample disposition can be controlled. The sample identification documents include Chain-of-Custody (COC) records and Daily Field Report forms. Chain of custody procedures are outlined below.

##### Field Custody Procedures

The field sampler is individually responsible for the care and custody of the samples collected until they are properly transferred.

Samples will have unique labels. The information on these labels will correspond to the COC which shows the identification of individual samples and the contents of the shipping container. The original COC will accompany the shipment and a copy will be retained by the field sampler.

##### Transfer of Custody and Shipment

A COC will accompany samples during transfer and shipment. When transferring samples, the individual relinquishing and the individual receiving the samples will each sign, date, and note the time on the COC. This documents the sample custody transfer.

Samples will be packaged properly for shipment and dispatched to the appropriate laboratory for analysis, with a separate COC accompanying each shipment. Shipments will be accompanied by the original COC. Samples will be delivered by BAI personnel to the laboratory, or shipped by responsible courier. When a shipping courier is utilized, the sample shipment number will be identified on the COC.

#### A.1.7 Field Records

In addition to sample identification numbers and COC records, Daily Field Report records will be maintained by field staff to provide daily records of significant events, observations, and measurements during field investigations. These documents will contain observed information such as: the personnel present, site conditions, sampling procedures, measurement procedures, calibration records, equipment used, supplies used, etc. Field measurements will be recorded on the appropriate forms. Entries on the data forms will be signed and dated. The data forms will be kept as permanent file records.



**APPENDIX B**

**FIELD DATA SHEETS**

DATE: 9-28-11  
PERSONNEL: JR  
WEATHER: Sunny

PROJECT NO.: 09-88-646  
COMMENTS:

Well ID	Time	MEASURING POINT	DTW (FT)	PRODUCT THICKNESS DTP	COMMENTS:							
					Equip:	Geosquir	Tubing	Bailers	DO	wli	Ec/pH	
					pH	Cond. (X100)	Temp. (C/F)	DO (mg/l)	Redox (mV)	Iron (mg/l)	Alk. (mg/l)	WELL HEAD CONDITION: VAULT, BOLTS, CAP, LOCK, ETC
		TRC										
MW-2	0828		DRY									
MW-3	0950		11.14									
MW-4	0832		15.34									
MW-5	0926		10.46	10.40								
MW-6	0800		15.81									
MW-7	1020		11.80									
MW-8	1102		13.87									
MW-9	1055		11.66									
MW-10	0915		10.36	10.07								
MW-11	0852		9.88									
MW-12	0941		11.48	11.20								

**Groundwater Sampling Data Sheet**

Well I.D.: MW-2  
 Project Name/Location: 1109 Project #: 09-88-646  
 Sampler's Name: JR Date: 9-28-11  
 Purging Equipment: Bailer  
 Sampling Equipment: Bailer

Casing Type: PVC  
 Casing Diameter: 2 inch  
 Total Well Depth: 12.81 feet  
 Depth to Water: - DRY feet  
 Water Column Thickness: = - feet  
 Unit Casing Volume\*: x 0.16 gallon / foot  
 Casing Water Volume: = - gallons  
 Casing Volume: x 3 each  
 Estimated Purge Volume: = - gallons

**\*UNIT CASING VOLUMES**  
 2" = 0.16 gal/lin ft.  
 3" = 0.37 gal/lin ft.  
 4" = 0.65 gal/lin ft.  
 6" = 1.47 gal/lin ft.

Free product measurement (if present):

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: \_\_\_\_\_ gallons  
 Depth to Water at Sample Collection: \_\_\_\_\_ feet  
 Sample Collection Time: \_\_\_\_\_ Purged Dry? (Y / N)

Comments: - NS; well was DRY

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**Groundwater Sampling Data Sheet**

Well I.D.: MW-3  
 Project Name/Location: 11109 Project #: ~~09-88-646~~ 09-88-646  
 Sampler's Name: JR Date: 9-28-11  
 Purging Equipment: Bailer  
 Sampling Equipment: Bailer

Casing Type: PVC  
 Casing Diameter: 4 inch  
 Total Well Depth: 31.42 ~~31.42~~ feet  
 Depth to Water: - 11.14 feet  
 Water Column Thickness: = 20.28 feet  
 Unit Casing Volume\*: x 0.65 gallon / foot  
 Casing Water Volume: = 13.18 gallons  
 Casing Volume: x 3 each  
 Estimated Purge Volume: = 39.54 gallons

**\*UNIT CASING VOLUMES**

2" = 0.16 gal/lin ft.  
 3" = 0.37 gal/lin ft.  
 4" = 0.65 gal/lin ft.  
 6" = 1.47 gal/lin ft.

Free product measurement (if present):

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	0956	1.52	47		741.7	23.1	7.64	
2	0959	X	X	X	738.2	23.3	7.36	
4	1003	X	X	X	736.4	23.5	7.24	
6	1006	X	X	X	740.2	22.6	7.23	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 6 gallons

Depth to Water at Sample Collection: \_\_\_\_\_ feet

Sample Collection Time: 1010

Purged Dry? (Y  N)

Comments:

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**Groundwater Sampling Data Sheet**

Well I.D.: MW-4  
 Project Name/Location: 11101 Project #: 09-88-646  
 Sampler's Name: JR Date: 9-26-11  
 Purging Equipment: Bailer  
 Sampling Equipment: Bailer

Casing Type: PVC  
 Casing Diameter: 4 inch  
 Total Well Depth: 26.74 feet  
 Depth to Water: - 15.34 feet  
 Water Column Thickness: = 11.40 feet  
 Unit Casing Volume\*: x 0.65 gallon / foot  
 Casing Water Volume: = 7.41 gallons  
 Casing Volume: x 3 each  
 Estimated Purge Volume: = 22.23 gallons

**\*UNIT CASING VOLUMES**

2" = 0.16 gal/lin ft.  
 3" = 0.37 gal/lin ft.  
 4" = 0.65 gal/lin ft.  
 6" = 1.47 gal/lin ft.

Free product measurement (if present):

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	0836	0.78	114		671.2	21.1	7.84	
1	0838	X	X	X	669.9	20.7	7.55	
2	0840	X	X	X	667.9	20.5	7.40	
3	0842	X	X	X	667.2	20.4	7.38	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 3 gallons  
 Depth to Water at Sample Collection: \_\_\_\_\_ feet  
 Sample Collection Time: 0845

Purged Dry? (Y/N) (N)

Comments:

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**Groundwater Sampling Data Sheet**

Well I.D.: MW-5  
 Project Name/Location: 11109 Project #: 09-88-646  
 Sampler's Name: JR Date: 9-20-11  
 Purging Equipment: Bailer  
 Sampling Equipment: Bailer

Casing Type: PVC

Casing Diameter: 4 inch

**\*UNIT CASING VOLUMES**

Total Well Depth: 32.07 feet

2" = 0.16 gal/lin ft.

Depth to Water: - 10.46 feet

3" = 0.37 gal/lin ft.

Water Column Thickness: = 21.61 feet

4" = 0.65 gal/lin ft.

Unit Casing Volume\*: x 0.65 gallon / foot

6" = 1.47 gal/lin ft.

Casing Water Volume: = 14.05 gallons

Casing Volume: x 3 each

Estimated Purge Volume: = 42.15 gallons

Free product measurement (if present): 0.06'

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: \_\_\_\_\_ gallons

Depth to Water at Sample Collection: \_\_\_\_\_ feet

Sample Collection Time: \_\_\_\_\_

Purged Dry? (Y/N)

Comments: strong HC ODOE / DIESEL ODOE

NS - product in well



**Groundwater Sampling Data Sheet**

Well I.D.: MW-6  
 Project Name/Location: 11109 Project #: 09-88-646  
 Sampler's Name: JR Date: 9-28-11  
 Purging Equipment: Bailer  
 Sampling Equipment: Bailer

Casing Type: PVC  
 Casing Diameter: 4 inch  
 Total Well Depth: 34.49 feet  
 Depth to Water: - 15.81 feet  
 Water Column Thickness: = 18.68 feet  
 Unit Casing Volume\*: x 0.65 gallon / foot  
 Casing Water Volume: = 12.14 gallons  
 Casing Volume: x 3 each  
 Estimated Purge Volume: = 36.42 gallons

**\*UNIT CASING VOLUMES**

2" = 0.16 gal/lin ft.  
 3" = 0.37 gal/lin ft.  
 4" = 0.65 gal/lin ft.  
 6" = 1.47 gal/lin ft.

Free product measurement (if present):

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	0806	1.41	105		628.1	20.6	9.12	
1	0808	X	X	X	624.6	20.8	8.48	
2	0810	X	X	X	624.9	20.6	8.10	
3	0812	X	X	X	626.9	20.3	8.07	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 3 gallons  
 Depth to Water at Sample Collection: \_\_\_\_\_ feet  
 Sample Collection Time: 0815

Purged Dry? (Y/N) (N)

Comments:

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**Groundwater Sampling Data Sheet**

Well I.D.: MW-7  
 Project Name/Location: 11109 Project #: 09-08-646  
 Sampler's Name: JR Date: 9-28-11  
 Purging Equipment: Bailer  
 Sampling Equipment: Bailer

Casing Type: PVC

Casing Diameter: 6 inch  
 Total Well Depth: 33.32 feet  
 Depth to Water: 11.80 feet  
 Water Column Thickness: 21.52 feet  
 Unit Casing Volume\*: 1.47 gallon / foot  
 Casing Water Volume: 31.34 gallons  
 Casing Volume: 3 each  
 Estimated Purge Volume: 94.02 gallons

**\*UNIT CASING VOLUMES**

2" = 0.16 gal/lin ft.  
 3" = 0.37 gal/lin ft.  
 4" = 0.65 gal/lin ft.  
 6" = 1.47 gal/lin ft.

Free product measurement (if present): \_\_\_\_\_

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	1027	0.98	3		705.2	24.3	7.49	
2	1030	X	X	X	704.5	23.3	7.21	
4	1033	X	X	X	704.7	23.0	7.09	
6	1036	X	X	X	704.8	22.1	7.00	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 6 gallons

Depth to Water at Sample Collection: \_\_\_\_\_ feet

Sample Collection Time: 1040

Purged Dry? (Y/N) (N)

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



**Groundwater Sampling Data Sheet**

Well I.D.: MW-10  
 Project Name/Location: 11109 Project #: 09-88-646  
 Sampler's Name: JR Date: 9-28-11  
 Purging Equipment: Bailer  
 Sampling Equipment: Bailer

Casing Type: PVC

Casing Diameter: 4 inch

**\*UNIT CASING VOLUMES**

Total Well Depth: 30.00 feet

2" = 0.16 gal/lin ft.

Depth to Water: 10.36 feet

3" = 0.37 gal/lin ft.

Water Column Thickness: ~~19.64~~ feet

4" = 0.65 gal/lin ft.

Unit Casing Volume\*: x 0.65 gallon / foot

6" = 1.47 gal/lin ft.

Casing Water Volume: = 12.77 gallons

Casing Volume: x 3 each

Estimated Purge Volume: ~~38.31~~ gallons

Free product measurement (if present): 0.29'

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: \_\_\_\_\_ gallons

Depth to Water at Sample Collection: \_\_\_\_\_ feet

Sample Collection Time: \_\_\_\_\_ Purged Dry? (Y / N)

Comments: Very strong HC odor / DIESEL odor

- NS; PRODUCT PRESENT

**Groundwater Sampling Data Sheet**

Well I.D.: MW-11  
 Project Name/Location: 11109 Project #: 09-08-646  
 Sampler's Name: JR Date: 9-28-11  
 Purging Equipment: Bailer  
 Sampling Equipment: Bailer

Casing Type: PVC

Casing Diameter: 4 inch  
 Total Well Depth: 30.00 feet  
 Depth to Water: - 9.88 feet  
 Water Column Thickness: = 20.12 feet  
 Unit Casing Volume\*: x 0.65 gallon / foot  
 Casing Water Volume: = 13.08 gallons  
 Casing Volume: x 3 each  
 Estimated Purge Volume: = 39.24 gallons

**\*UNIT CASING VOLUMES**

2" = 0.16 gal/lin ft.  
 3" = 0.37 gal/lin ft.  
 4" = 0.65 gal/lin ft.  
 6" = 1.47 gal/lin ft.

Free product measurement (if present): \_\_\_\_\_

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	0856	0.70	-3		1095	21.8	7.22	
1	0858	X	X	X	1102	22.2	7.10	
2	0900	X	X	X	1108	22.1	7.03	
3	0902	X	X	X	1110	22.0	7.02	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 3 gallons

Depth to Water at Sample Collection: \_\_\_\_\_ feet

Sample Collection Time: 0905

Purged Dry? (Y/N) (N)

Comments: HC ODOR

- BLACK PARTICULATES IN WATER

**Groundwater Sampling Data Sheet**

Well I.D.: MW-12  
 Project Name/Location: 11109 Project #: 09-88-646  
 Sampler's Name: JR Date: 9-28-11  
 Purging Equipment: Bailer  
 Sampling Equipment: Bailer

Casing Type: PVC

Casing Diameter: 4 inch

**\*UNIT CASING VOLUMES**

Total Well Depth: 30.00 feet

2" = 0.16 gal/lin ft.

Depth to Water: - 11.48 feet

3" = 0.37 gal/lin ft.

Water Column Thickness: = 18.52 feet

4" = 0.65 gal/lin ft.

Unit Casing Volume\*: x 0.65 gallon / foot

6" = 1.47 gal/lin ft.

Casing Water Volume: = 12.04 gallons

Casing Volume: x 3 each

Estimated Purge Volume: = 36.12 gallons

Free product measurement (if present): 0.28

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: \_\_\_\_\_ gallons

Depth to Water at Sample Collection: \_\_\_\_\_ feet

Sample Collection Time: \_\_\_\_\_ Purged Dry? (Y/N)

Comments: Strong He/diesel odor  
- NS; product in well

San Francisco  
1220 Quarry Lane

### Chain of Custody Record



Pleasanton, CA 94566  
phone 925.484.1919 fax 925.600.3002

TestAmerica Laboratories, Inc.

Client Contact Broadbent and Associates, Inc. Address: 1324 Mangrove Ave. Suite 212 City/State/Zip: Chico, CA 95926 (530) 566-1400 Phone (530) 566-1401 FAX Project Name: BP 11109 Site: 4280 Foothill, Oakland P O # GP09BPNA.C106		Project Manager: Jason Duda Tel/Fax: 530-566-1400/530-566-1401		Site Contact: Lab Contact: Dimple Sharma		Date: Carrier:		COC No: _____ of _____ COCs			
		Analysis Turnaround Time Calendar (C) or Work Days (W) TAT if different from Below _____ Standard <input checked="" type="checkbox"/> X <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Filtered Sample GRO by 8260B BTEX and 5 Oxys by 8260B EDB, 1,2-DCA and Ethanol by 8260B MTBE by 8260B				Job No. SDG No.			
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.			Sample Specific Notes:		
MW-2 (9/28/11)		9-28-11		GRAB	AQ	3	X	X	X	(JE)	
MW-3			1010	GRAB	AQ	3					
MW-4			0845	GRAB	AQ	3	X		X		
MW-5				GRAB	AQ	3	X	X	X	(JE)	
MW-6			0815	GRAB	AQ	3				X	
MW-7			1040	GRAB	AQ	3	X	X	X		
MW-10				GRAB	AQ	3	X	X	X	(JE)	
MW-11			0905	GRAB	AQ	3	X	X	X		
MW-12				GRAB	AQ	3	X	X	X	(JE)	
TB-1109-09202011		9-28-11	1045		AQ	1				ON HOLD	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/>						Special Instructions/QC Requirements & Comments:					
Relinquished by: <i>James Row</i>		Company: <i>BAI</i>		Date/Time: <i>9-28-11 12:50</i>		Received by: <i>[Signature]</i>		Company: <i>DASF</i>		Date/Time: <i>9/28/11 12:50</i>	
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:	
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:	


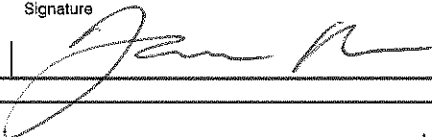
Temp 4.5°C

NO. 683404

09-08-646

# NON-HAZARDOUS WASTE DATA FORM

BESI #

GENERATOR	Generator's Name and Mailing Address BP WEST COAST PRODUCTS, LLC P.O. BOX 80249 RANCHO SANTA MARGARITA, CA 92688		Generator's Site Address (if different than mailing address) FORMER ARCO 11109 4280 FOOTHILL BLVD OAKLAND, CA 94601																		
	Generator's Phone: 949-480-5200		24-HOUR EMERGENCY PHONE: 800-424-9300																		
	Container type removed from site: <input type="checkbox"/> Drums <input checked="" type="checkbox"/> Vacuum Truck <input type="checkbox"/> Roll-off Truck <input type="checkbox"/> Dump Truck <input type="checkbox"/> Other _____		Container type transported to receiving facility: <input type="checkbox"/> Drums <input type="checkbox"/> Vacuum Truck <input type="checkbox"/> Roll-off Truck <input type="checkbox"/> Dump Truck <input type="checkbox"/> Other _____																		
	Quantity <u>18</u>		Quantity _____ Volume _____																		
WASTE DESCRIPTION <u>NON-HAZARDOUS WATER</u>		GENERATING PROCESS <u>WELL PURGING / DECON WATER</u>																			
<table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">COMPONENTS OF WASTE</th> <th style="width:10%;">PPM</th> <th style="width:10%;">%</th> </tr> </thead> <tbody> <tr> <td>1. <u>WATER</u></td> <td></td> <td><u>99-100%</u></td> </tr> <tr> <td>2. <u>TPH</u></td> <td></td> <td><u>&lt;1%</u></td> </tr> </tbody> </table>		COMPONENTS OF WASTE	PPM	%	1. <u>WATER</u>		<u>99-100%</u>	2. <u>TPH</u>		<u>&lt;1%</u>	<table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">COMPONENTS OF WASTE</th> <th style="width:10%;">PPM</th> <th style="width:10%;">%</th> </tr> </thead> <tbody> <tr> <td>3. _____</td> <td></td> <td>_____</td> </tr> <tr> <td>4. _____</td> <td></td> <td>_____</td> </tr> </tbody> </table>		COMPONENTS OF WASTE	PPM	%	3. _____		_____	4. _____		_____
COMPONENTS OF WASTE	PPM	%																			
1. <u>WATER</u>		<u>99-100%</u>																			
2. <u>TPH</u>		<u>&lt;1%</u>																			
COMPONENTS OF WASTE	PPM	%																			
3. _____		_____																			
4. _____		_____																			
Waste Profile _____		PROPERTIES: pH <u>7-10</u> <input type="checkbox"/> SOLID <input checked="" type="checkbox"/> LIQUID <input type="checkbox"/> SLUDGE <input type="checkbox"/> SLURRY <input type="checkbox"/> OTHER _____																			
HANDLING INSTRUCTIONS: <u>WEAR ALL APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT.</u>																					
Generator Printed/Typed Name <u>Emily LEAMER</u>		Signature 	Month <u>8</u> Day <u>1</u> Year <u>10</u>																		
On Behalf of <u>BP West Coast Products, LLC</u>																					
The Generator certifies that the waste as described is 100% non-hazardous																					
TRANSPORTER	Transporter 1 Company Name <u>Broadbent &amp; Associates</u>		Phone# <u>707-455-7280</u>																		
	Transporter 1 Printed/Typed Name <u>James Rames</u>		Signature 	Month <u>9</u> Day <u>29</u> Year <u>11</u>																	
	Transporter Acknowledgment of Receipt of Materials																				
	Transporter 2 Company Name _____		Phone# _____																		
Transporter 2 Printed/Typed Name _____		Signature _____	Month _____ Day _____ Year _____																		
Transporter Acknowledgment of Receipt of Materials																					
RECEIVING FACILITY	Designated Facility Name and Site Address INSTRAT, INC. 1105 AIRPORT RD. RIO VISTA, CA 94571		Phone# <u>530-753-1829</u>																		
	Printed/Typed Name _____		Signature _____	Month _____ Day _____ Year _____																	
	Designated Facility Owner or Operator: Certification of receipt of materials covered by this data form.																				

**APPENDIX C**

**LABORATORY REPORT  
AND CHAIN-OF-CUSTODY DOCUMENTATION**

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

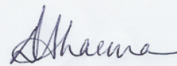
## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica San Francisco  
1220 Quarry Lane  
Pleasanton, CA 94566  
Tel: (925)484-1919

TestAmerica Job ID: 720-37711-1  
Client Project/Site: BP #11109, Oakland

For:  
ARCADIS U.S., Inc.  
100 Montgomery Street  
Suite 300  
San Francisco, California 94104

Attn: Hollis Phillips



Authorized for release by:  
10/05/2011 05:43:46 PM

Dimple Sharma  
Project Manager I  
[dimple.sharma@testamericainc.com](mailto:dimple.sharma@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

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# Definitions/Glossary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Case Narrative

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

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**Job ID: 720-37711-1**

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**Laboratory: TestAmerica San Francisco**

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**Narrative**

**Job Narrative**  
720-37711-1

**Comments**

No additional comments.

**Receipt**

All samples were received in good condition within temperature requirements.

**GC/MS VOA**

No analytical or quality issues were noted.

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# Detection Summary

Client: ARCADIS U.S., Inc.  
 Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

## Client Sample ID: MW-3

Lab Sample ID: 720-37711-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	3.2		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA

## Client Sample ID: MW-4

Lab Sample ID: 720-37711-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	62		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Gasoline Range Organics (GRO) -C6-C12	150		50		ug/L	1		8260B/CA_LUFTM	Total/NA

## Client Sample ID: MW-6

Lab Sample ID: 720-37711-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	3.4		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA

## Client Sample ID: MW-7

Lab Sample ID: 720-37711-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	9.5		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Benzene	380		2.5		ug/L	5		8260B/CA_LUFTM	Total/NA
Ethylbenzene	28		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Toluene	4.8		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Xylenes, Total	4.3		1.0		ug/L	1		8260B/CA_LUFTM	Total/NA
Gasoline Range Organics (GRO) -C6-C12	3800		50		ug/L	1		8260B/CA_LUFTM	Total/NA
TBA	13		4.0		ug/L	1		8260B/CA_LUFTM	Total/NA

## Client Sample ID: MW-11

Lab Sample ID: 720-37711-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	6.4		2.5		ug/L	5		8260B/CA_LUFTM	Total/NA
Benzene	230		2.5		ug/L	5		8260B/CA_LUFTM	Total/NA
Ethylbenzene	260		2.5		ug/L	5		8260B/CA_LUFTM	Total/NA
Toluene	92		2.5		ug/L	5		8260B/CA_LUFTM	Total/NA
Xylenes, Total	370		5.0		ug/L	5		8260B/CA_LUFTM	Total/NA
Gasoline Range Organics (GRO) -C6-C12	5900		250		ug/L	5		8260B/CA_LUFTM	Total/NA
TBA	26		20		ug/L	5		8260B/CA_LUFTM	Total/NA

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

**Client Sample ID: MW-3**  
**Date Collected: 09/28/11 10:10**  
**Date Received: 09/28/11 12:50**

**Lab Sample ID: 720-37711-1**  
**Matrix: Water**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	3.2		0.50		ug/L			09/30/11 17:17	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	105		67 - 130					09/30/11 17:17	1
1,2-Dichloroethane-d4 (Surr)	110		67 - 130					09/30/11 17:17	1
Toluene-d8 (Surr)	101		70 - 130					09/30/11 17:17	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

**Client Sample ID: MW-4**  
**Date Collected: 09/28/11 08:45**  
**Date Received: 09/28/11 12:50**

**Lab Sample ID: 720-37711-2**  
**Matrix: Water**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	62		0.50		ug/L			10/03/11 15:04	1
Gasoline Range Organics (GRO) -C6-C12	150		50		ug/L			10/03/11 15:04	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	110		67 - 130					10/03/11 15:04	1
1,2-Dichloroethane-d4 (Surr)	112		67 - 130					10/03/11 15:04	1
Toluene-d8 (Surr)	103		70 - 130					10/03/11 15:04	1



# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

**Client Sample ID: MW-6**  
**Date Collected: 09/28/11 08:15**  
**Date Received: 09/28/11 12:50**

**Lab Sample ID: 720-37711-3**  
**Matrix: Water**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	3.4		0.50		ug/L			09/30/11 17:46	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	105		67 - 130					09/30/11 17:46	1
1,2-Dichloroethane-d4 (Surr)	110		67 - 130					09/30/11 17:46	1
Toluene-d8 (Surr)	102		70 - 130					09/30/11 17:46	1



# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

**Client Sample ID: MW-7**  
**Date Collected: 09/28/11 10:40**  
**Date Received: 09/28/11 12:50**

**Lab Sample ID: 720-37711-4**  
**Matrix: Water**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>MTBE</b>	<b>9.5</b>		0.50		ug/L			09/29/11 19:44	1
<b>Benzene</b>	<b>380</b>		2.5		ug/L			09/30/11 17:07	5
EDB	ND		0.50		ug/L			09/29/11 19:44	1
1,2-DCA	ND		0.50		ug/L			09/29/11 19:44	1
<b>Ethylbenzene</b>	<b>28</b>		0.50		ug/L			09/29/11 19:44	1
<b>Toluene</b>	<b>4.8</b>		0.50		ug/L			09/29/11 19:44	1
<b>Xylenes, Total</b>	<b>4.3</b>		1.0		ug/L			09/29/11 19:44	1
<b>Gasoline Range Organics (GRO)</b>	<b>3800</b>		50		ug/L			09/29/11 19:44	1
<b>-C6-C12</b>									
<b>TBA</b>	<b>13</b>		4.0		ug/L			09/29/11 19:44	1
Ethanol	ND		250		ug/L			09/29/11 19:44	1
DIPE	ND		0.50		ug/L			09/29/11 19:44	1
TAME	ND		0.50		ug/L			09/29/11 19:44	1
Ethyl t-butyl ether	ND		0.50		ug/L			09/29/11 19:44	1
<b>Surrogate</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	114		67 - 130					09/29/11 19:44	1
4-Bromofluorobenzene	110		67 - 130					09/30/11 17:07	5
1,2-Dichloroethane-d4 (Surr)	119		67 - 130					09/29/11 19:44	1
1,2-Dichloroethane-d4 (Surr)	118		67 - 130					09/30/11 17:07	5
Toluene-d8 (Surr)	99		70 - 130					09/29/11 19:44	1
Toluene-d8 (Surr)	101		70 - 130					09/30/11 17:07	5

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

**Client Sample ID: MW-11**

**Lab Sample ID: 720-37711-5**

Date Collected: 09/28/11 09:05

Matrix: Water

Date Received: 09/28/11 12:50

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>MTBE</b>	<b>6.4</b>		2.5		ug/L			09/29/11 20:14	5
<b>Benzene</b>	<b>230</b>		2.5		ug/L			09/29/11 20:14	5
EDB	ND		2.5		ug/L			09/29/11 20:14	5
1,2-DCA	ND		2.5		ug/L			09/29/11 20:14	5
<b>Ethylbenzene</b>	<b>260</b>		2.5		ug/L			09/29/11 20:14	5
<b>Toluene</b>	<b>92</b>		2.5		ug/L			09/29/11 20:14	5
<b>Xylenes, Total</b>	<b>370</b>		5.0		ug/L			09/29/11 20:14	5
<b>Gasoline Range Organics (GRO)</b>	<b>5900</b>		250		ug/L			09/29/11 20:14	5
<b>-C6-C12</b>									
<b>TBA</b>	<b>26</b>		20		ug/L			09/29/11 20:14	5
Ethanol	ND		1300		ug/L			09/29/11 20:14	5
DIPE	ND		2.5		ug/L			09/29/11 20:14	5
TAME	ND		2.5		ug/L			09/29/11 20:14	5
Ethyl t-butyl ether	ND		2.5		ug/L			09/29/11 20:14	5
<b>Surrogate</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	105		67 - 130					09/29/11 20:14	5
1,2-Dichloroethane-d4 (Surr)	113		67 - 130					09/29/11 20:14	5
Toluene-d8 (Surr)	100		70 - 130					09/29/11 20:14	5



# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS

**Lab Sample ID: MB 720-100070/5**

**Matrix: Water**

**Analysis Batch: 100070**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			10/03/11 10:57	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			10/03/11 10:57	1

Surrogate	MB % Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	104		67 - 130		10/03/11 10:57	1
1,2-Dichloroethane-d4 (Surr)	105		67 - 130		10/03/11 10:57	1
Toluene-d8 (Surr)	101		70 - 130		10/03/11 10:57	1

**Lab Sample ID: LCS 720-100070/6**

**Matrix: Water**

**Analysis Batch: 100070**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Methyl tert-butyl ether	25.0	27.0		ug/L		108	62 - 130

Surrogate	LCS % Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	106		67 - 130
1,2-Dichloroethane-d4 (Surr)	103		67 - 130
Toluene-d8 (Surr)	103		70 - 130

**Lab Sample ID: LCS 720-100070/8**

**Matrix: Water**

**Analysis Batch: 100070**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Gasoline Range Organics (GRO) -C6-C12	500	388		ug/L		78	58 - 106

Surrogate	LCS % Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	105		67 - 130
1,2-Dichloroethane-d4 (Surr)	106		67 - 130
Toluene-d8 (Surr)	102		70 - 130

**Lab Sample ID: LCSD 720-100070/7**

**Matrix: Water**

**Analysis Batch: 100070**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	25.0	26.6		ug/L		106	62 - 130	1	20

Surrogate	LCSD % Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	104		67 - 130
1,2-Dichloroethane-d4 (Surr)	103		67 - 130
Toluene-d8 (Surr)	103		70 - 130

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCSD 720-100070/9**

**Matrix: Water**

**Analysis Batch: 100070**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C12	500	383		ug/L		77	58 - 106	1	20

Surrogate	LCSD % Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	106		67 - 130
1,2-Dichloroethane-d4 (Surr)	107		67 - 130
Toluene-d8 (Surr)	102		70 - 130

**Lab Sample ID: MB 720-99891/4**

**Matrix: Water**

**Analysis Batch: 99891**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		0.50		ug/L			09/29/11 10:51	1
Benzene	ND		0.50		ug/L			09/29/11 10:51	1
EDB	ND		0.50		ug/L			09/29/11 10:51	1
1,2-DCA	ND		0.50		ug/L			09/29/11 10:51	1
Ethylbenzene	ND		0.50		ug/L			09/29/11 10:51	1
Toluene	ND		0.50		ug/L			09/29/11 10:51	1
Xylenes, Total	ND		1.0		ug/L			09/29/11 10:51	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			09/29/11 10:51	1
TBA	ND		4.0		ug/L			09/29/11 10:51	1
Ethanol	ND		250		ug/L			09/29/11 10:51	1
DIPE	ND		0.50		ug/L			09/29/11 10:51	1
TAME	ND		0.50		ug/L			09/29/11 10:51	1
Ethyl t-butyl ether	ND		0.50		ug/L			09/29/11 10:51	1

Surrogate	MB % Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	99		67 - 130		09/29/11 10:51	1
1,2-Dichloroethane-d4 (Surr)	117		67 - 130		09/29/11 10:51	1
Toluene-d8 (Surr)	96		70 - 130		09/29/11 10:51	1

**Lab Sample ID: LCS 720-99891/5**

**Matrix: Water**

**Analysis Batch: 99891**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
MTBE	25.0	26.0		ug/L		104	62 - 130
Benzene	25.0	24.0		ug/L		96	82 - 127
EDB	25.0	25.3		ug/L		101	70 - 130
1,2-DCA	25.0	27.5		ug/L		110	70 - 126
Ethylbenzene	25.0	24.7		ug/L		99	86 - 135
Toluene	25.0	23.8		ug/L		95	83 - 129
m-Xylene & p-Xylene	50.0	49.3		ug/L		99	70 - 142
o-Xylene	25.0	24.9		ug/L		100	89 - 136
TBA	500	521		ug/L		104	82 - 116
Ethanol	500	494		ug/L		99	31 - 216
DIPE	25.0	25.5		ug/L		102	74 - 155

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-99891/5**

**Matrix: Water**

**Analysis Batch: 99891**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
TAME	25.0	26.5		ug/L		106	79 - 129
Ethyl t-butyl ether	25.0	26.5		ug/L		106	70 - 130

Surrogate	LCS % Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	101		67 - 130
1,2-Dichloroethane-d4 (Surr)	111		67 - 130
Toluene-d8 (Surr)	99		70 - 130

**Lab Sample ID: LCS 720-99891/7**

**Matrix: Water**

**Analysis Batch: 99891**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Gasoline Range Organics (GRO) -C6-C12	500	370		ug/L		74	58 - 106

Surrogate	LCS % Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	100		67 - 130
1,2-Dichloroethane-d4 (Surr)	111		67 - 130
Toluene-d8 (Surr)	98		70 - 130

**Lab Sample ID: LCSD 720-99891/6**

**Matrix: Water**

**Analysis Batch: 99891**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
MTBE	25.0	25.8		ug/L		103	62 - 130	1	20
Benzene	25.0	24.1		ug/L		96	82 - 127	0	20
EDB	25.0	24.8		ug/L		99	70 - 130	2	20
1,2-DCA	25.0	27.5		ug/L		110	70 - 126	0	20
Ethylbenzene	25.0	24.7		ug/L		99	86 - 135	0	20
Toluene	25.0	23.8		ug/L		95	83 - 129	0	20
m-Xylene & p-Xylene	50.0	49.2		ug/L		98	70 - 142	0	20
o-Xylene	25.0	24.7		ug/L		99	89 - 136	1	20
TBA	500	513		ug/L		103	82 - 116	2	20
Ethanol	500	498		ug/L		100	31 - 216	1	30
DIPE	25.0	25.4		ug/L		102	74 - 155	0	20
TAME	25.0	26.5		ug/L		106	79 - 129	0	20
Ethyl t-butyl ether	25.0	26.5		ug/L		106	70 - 130	0	20

Surrogate	LCSD % Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	100		67 - 130
1,2-Dichloroethane-d4 (Surr)	110		67 - 130
Toluene-d8 (Surr)	98		70 - 130

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCSD 720-99891/8**

**Matrix: Water**

**Analysis Batch: 99891**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C12	500	371		ug/L		74	58 - 106	0	20

Surrogate	LCSD % Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	101		67 - 130
1,2-Dichloroethane-d4 (Surr)	114		67 - 130
Toluene-d8 (Surr)	98		70 - 130

**Lab Sample ID: MB 720-99949/4**

**Matrix: Water**

**Analysis Batch: 99949**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			09/30/11 09:47	1

Surrogate	MB % Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	105		67 - 130		09/30/11 09:47	1
1,2-Dichloroethane-d4 (Surr)	110		67 - 130		09/30/11 09:47	1
Toluene-d8 (Surr)	101		70 - 130		09/30/11 09:47	1

**Lab Sample ID: LCS 720-99949/5**

**Matrix: Water**

**Analysis Batch: 99949**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Methyl tert-butyl ether	25.0	27.2		ug/L		109	62 - 130

Surrogate	LCS % Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	105		67 - 130
1,2-Dichloroethane-d4 (Surr)	106		67 - 130
Toluene-d8 (Surr)	103		70 - 130

**Lab Sample ID: LCSD 720-99949/6**

**Matrix: Water**

**Analysis Batch: 99949**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	25.0	27.7		ug/L		111	62 - 130	2	20

Surrogate	LCSD % Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	104		67 - 130
1,2-Dichloroethane-d4 (Surr)	106		67 - 130
Toluene-d8 (Surr)	103		70 - 130

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: MB 720-99952/4**

**Matrix: Water**

**Analysis Batch: 99952**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		0.50		ug/L			09/30/11 09:50	1
Benzene	ND		0.50		ug/L			09/30/11 09:50	1
EDB	ND		0.50		ug/L			09/30/11 09:50	1
1,2-DCA	ND		0.50		ug/L			09/30/11 09:50	1
Ethylbenzene	ND		0.50		ug/L			09/30/11 09:50	1
Toluene	ND		0.50		ug/L			09/30/11 09:50	1
Xylenes, Total	ND		1.0		ug/L			09/30/11 09:50	1
Gasoline Range Organics (GRO)	ND		50		ug/L			09/30/11 09:50	1
-C6-C12									
TBA	ND		4.0		ug/L			09/30/11 09:50	1
Ethanol	ND		250		ug/L			09/30/11 09:50	1
DIPE	ND		0.50		ug/L			09/30/11 09:50	1
TAME	ND		0.50		ug/L			09/30/11 09:50	1
Ethyl t-butyl ether	ND		0.50		ug/L			09/30/11 09:50	1

Surrogate	MB % Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		67 - 130		09/30/11 09:50	1
1,2-Dichloroethane-d4 (Surr)	112		67 - 130		09/30/11 09:50	1
Toluene-d8 (Surr)	96		70 - 130		09/30/11 09:50	1

**Lab Sample ID: LCS 720-99952/5**

**Matrix: Water**

**Analysis Batch: 99952**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
MTBE	25.0	26.5		ug/L		106	62 - 130
Benzene	25.0	24.5		ug/L		98	82 - 127
EDB	25.0	25.4		ug/L		102	70 - 130
1,2-DCA	25.0	27.4		ug/L		110	70 - 126
Ethylbenzene	25.0	24.9		ug/L		100	86 - 135
Toluene	25.0	24.1		ug/L		96	83 - 129
m-Xylene & p-Xylene	50.0	49.4		ug/L		99	70 - 142
o-Xylene	25.0	25.1		ug/L		100	89 - 136
TBA	500	508		ug/L		102	82 - 116
Ethanol	500	485		ug/L		97	31 - 216
DIPE	25.0	25.3		ug/L		101	74 - 155
TAME	25.0	27.3		ug/L		109	79 - 129
Ethyl t-butyl ether	25.0	27.3		ug/L		109	70 - 130

Surrogate	LCS % Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	100		67 - 130
1,2-Dichloroethane-d4 (Surr)	108		67 - 130
Toluene-d8 (Surr)	99		70 - 130

# QC Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCSD 720-99952/6**

**Matrix: Water**

**Analysis Batch: 99952**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD	Limit
							Limits	RPD		
MTBE	25.0	25.6		ug/L		102	62 - 130	3	20	
Benzene	25.0	23.9		ug/L		96	82 - 127	2	20	
EDB	25.0	24.7		ug/L		99	70 - 130	3	20	
1,2-DCA	25.0	26.3		ug/L		105	70 - 126	4	20	
Ethylbenzene	25.0	24.3		ug/L		97	86 - 135	2	20	
Toluene	25.0	23.7		ug/L		95	83 - 129	2	20	
m-Xylene & p-Xylene	50.0	48.3		ug/L		97	70 - 142	2	20	
o-Xylene	25.0	24.4		ug/L		98	89 - 136	3	20	
TBA	500	500		ug/L		100	82 - 116	2	20	
Ethanol	500	469		ug/L		94	31 - 216	3	30	
DIPE	25.0	24.6		ug/L		98	74 - 155	3	20	
TAME	25.0	26.5		ug/L		106	79 - 129	3	20	
Ethyl t-butyl ether	25.0	26.3		ug/L		105	70 - 130	4	20	

Surrogate	LCSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	98		67 - 130
1,2-Dichloroethane-d4 (Surr)	107		67 - 130
Toluene-d8 (Surr)	99		70 - 130

# QC Association Summary

Client: ARCADIS U.S., Inc.  
 Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

## GC/MS VOA

### Analysis Batch: 99891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37711-4	MW-7	Total/NA	Water	8260B/CA_LUFT MS	
720-37711-5	MW-11	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-99891/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-99891/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-99891/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-99891/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-99891/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

### Analysis Batch: 99949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37711-1	MW-3	Total/NA	Water	8260B/CA_LUFT MS	
720-37711-3	MW-6	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-99949/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-99949/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-99949/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

### Analysis Batch: 99952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37711-4	MW-7	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-99952/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-99952/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-99952/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

### Analysis Batch: 100070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37711-2	MW-4	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-100070/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-100070/8	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-100070/7	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-100070/9	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-100070/5	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

## Client Sample ID: MW-3

Date Collected: 09/28/11 10:10

Date Received: 09/28/11 12:50

## Lab Sample ID: 720-37711-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	99949	09/30/11 17:17	AC	TAL SF

## Client Sample ID: MW-4

Date Collected: 09/28/11 08:45

Date Received: 09/28/11 12:50

## Lab Sample ID: 720-37711-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	100070	10/03/11 15:04	LL	TAL SF

## Client Sample ID: MW-6

Date Collected: 09/28/11 08:15

Date Received: 09/28/11 12:50

## Lab Sample ID: 720-37711-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	99949	09/30/11 17:46	AC	TAL SF

## Client Sample ID: MW-7

Date Collected: 09/28/11 10:40

Date Received: 09/28/11 12:50

## Lab Sample ID: 720-37711-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	99891	09/29/11 19:44	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		5	99952	09/30/11 17:07	AC	TAL SF

## Client Sample ID: MW-11

Date Collected: 09/28/11 09:05

Date Received: 09/28/11 12:50

## Lab Sample ID: 720-37711-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		5	99891	09/29/11 20:14	JZ	TAL SF

### Laboratory References:

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919



# Certification Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

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Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica San Francisco	California	State Program	9	2496

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Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

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# Method Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTMS	8260B / CA LUFT MS	SW846	TAL SF

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919



# Sample Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11109, Oakland

TestAmerica Job ID: 720-37711-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-37711-1	MW-3	Water	09/28/11 10:10	09/28/11 12:50
720-37711-2	MW-4	Water	09/28/11 08:45	09/28/11 12:50
720-37711-3	MW-6	Water	09/28/11 08:15	09/28/11 12:50
720-37711-4	MW-7	Water	09/28/11 10:40	09/28/11 12:50
720-37711-5	MW-11	Water	09/28/11 09:05	09/28/11 12:50

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San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

phone 925.484.1919 fax 925.600.3002

720-37711  
Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

133938  
TestAmerica Laboratories, Inc.

10/05/2011

Client Contact Broadbent and Associates, Inc. Address: 1324 Mangrove Ave. Suite 212 City/State/Zip: Chico, CA 95926 (530) 566-1400 Phone (530) 566-1401 FAX Project Name: BP 11109 Site: 4280 Foothill, Oakland P O # GP09BPNA.C106		Project Manager: Jason Duda Tel/Fax: 530-566-1400/530-566-1401 Analysis Turnaround Time Calendar (C) or Work Days (W) TAT if different from Below Standard <input checked="" type="checkbox"/> <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Site Contact: Lab Contact: Dimple Sharma Date: Carrier:		COC No: of COCs Job No. SDG No. Sample Specific Notes:					
Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	GRO by 8260B	BTEX and 5 Oxy's by 8260B	EDB, 1,2-DCA and Ethanol by 8260B	MTBE by 8260B	
MW-2 (9/28/11)	9-28-11		GRAB	AQ	3		X	X	X	(-1P)	
MW-3		1010	GRAB	AQ	3				X		
MW-4		0845	GRAB	AQ	3		X		X		
MW-5			GRAB	AQ	3		X	X	X	(1P)	
MW-6		0815	GRAB	AQ	3				X		
MW-7		1040	GRAB	AQ	3		X	X	X		
MW-10			GRAB	AQ	3		X	X	X	(1P)	
MW-11		0905	GRAB	AQ	3		X	X	X		
MW-12			GRAB	AQ	3		X	X	X	(1P)	
TB-1109-09202011	9-28-11	1045		AQ	1						
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/>						Special Instructions/QC Requirements & Comments:					
Relinquished by: James Ran		Company: BAI		Date/Time: 9-28-11 12:50		Received by: [Signature]		Company: TRSF		Date/Time: 9/28/11 12:50	
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:	
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:	

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Temp 4.5°C

## Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 720-37711-1

**Login Number: 37711**

**List Source: TestAmerica San Francisco**

**List Number: 1**

**Creator: Apostol, Anita**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

**APPENDIX D**

**GEOTRACKER UPLOAD CONFIRMATION RECEIPTS**

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STATE WATER RESOURCES CONTROL BOARD  
**GEOTRACKER ESI**

UPLOADING A EDF FILE

**SUCCESS**

Processing is complete. No errors were found!  
Your file has been successfully submitted!

<b><u>Submittal Type:</u></b>	EDF - Monitoring Report - Semi-Annually
<b><u>Submittal Title:</u></b>	3Q11 GW Monitoring
<b><u>Facility Global ID:</u></b>	T0600100217
<b><u>Facility Name:</u></b>	BP #11109
<b><u>File Name:</u></b>	720-37711-1.zip
<b><u>Organization Name:</u></b>	Broadbent & Associates, Inc.
<b><u>Username:</u></b>	BROADBENT-C
<b><u>IP Address:</u></b>	67.118.40.90
<b><u>Submittal Date/Time:</u></b>	10/14/2011 10:16:32 AM
<b><u>Confirmation Number:</u></b>	4350083351

[VIEW QC REPORT](#)

[VIEW DETECTIONS REPORT](#)

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STATE WATER RESOURCES CONTROL BOARD  
**GEOTRACKER ESI**

UPLOADING A GEO\_WELL FILE

**SUCCESS**

Processing is complete. No errors were found!  
Your file has been successfully submitted!

<b><u>Submittal Type:</u></b>	<b>GEO_WELL</b>
<b><u>Submittal Title:</u></b>	<b>3Q11 GEO_WELL 11109</b>
<b><u>Facility Global ID:</u></b>	<b>T0600100217</b>
<b><u>Facility Name:</u></b>	<b>BP #11109</b>
<b><u>File Name:</u></b>	<b>GEO_WELL.zip</b>
<b><u>Organization Name:</u></b>	<b>Broadbent &amp; Associates, Inc.</b>
<b><u>Username:</u></b>	<b>BROADBENT-C</b>
<b><u>IP Address:</u></b>	<b>67.118.40.90</b>
<b><u>Submittal Date/Time:</u></b>	<b>10/14/2011 10:19:10 AM</b>
<b><u>Confirmation Number:</u></b>	<b>1048634350</b>