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Alameda County
Environmental Health

ARCADIS U.S., Inc.
100 Montgomery Street, Suite 300
San Francisco, California 94105
Tel 415.374.2744
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Re: First Quarter 2011 Monitoring Report
Former BP Station #11102
100 MacArthur Boulevard
Oakland, California
ACEH Case #RO0000456

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."

Date:
04/29/2011

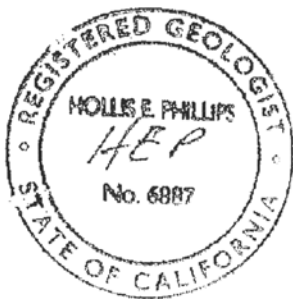
Submitted by:
ARCADIS U.S., Inc.

Contact:
Hollis E. Phillips

Phone:
415.374.2744 ext 13

Hollis E. Phillips, PG
Project Manager

Email:
Hollis.phillips@arcadis-us.com



Our ref:
GP09BPNA.C112

First Quarter 2011 Monitoring Report
Former BP Service Station #11102
100 MacArthur Boulevard, Oakland, California
ACEH Case #RO0000456

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



1324 Mangrove Avenue, Suite 212
Chico, California 95926
(530) 566-1400
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April 29, 2011

Project No. 09-88-643

April 29, 2011

Project No. 09-88-643

ARCADIS-US, INC.
100 Montgomery Street, Ste. 300
San Francisco, CA 94104

Attn.: Ms. Hollis Phillips, PG

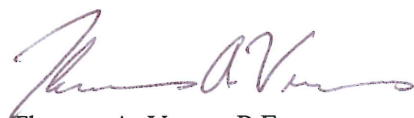
Re: First Quarter 2011 Monitoring Report, Former BP Service Station #11102,
100 MacArthur Boulevard, Alameda County, Oakland, California;
ACEH Case #RO0000456

Dear Ms. Phillips:

Attached is the First Quarter 2011 Monitoring Report for Former BP Service Station #11102 located at 100 MacArthur Boulevard, Oakland, Alameda County, California. Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (530) 566-1400.

Sincerely,
BROADBENT & ASSOCIATES, INC.

Jason Duda
Project Scientist



Thomas A. Venus, P.E.
Senior Engineer



Enclosures

cc: Mr. Paresh Khatri, Alameda County Environmental Health (submitted via ACEH ftp site)
Electronic copy uploaded to GeoTracker

**FIRST QUARTER 2011 MONITORING REPORT
FORMER BP SERVICE STATION #11102, OAKLAND, CALIFORNIA**

Broadbent & Associates, Inc. (BAI) is pleased to present this *First Quarter 2011 Monitoring Report* on behalf of ARCADIS USA, Inc. and Atlantic Richfield Company (a BP affiliated company) for Former BP Service Station #11102 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:	Former BP Service Station #11102 / 100 MacArthur Boulevard, Oakland, California
Client Project Manager / Title:	Ms. Hollis Phillips, PG
BAI Contact:	Mr. Jason Duda, (530) 566-1400
BAI Project No.:	09-88-643
Primary Regulatory Agency / ID No.:	ACEH, Case #RO0000456
Current phase of project:	Monitoring
List of Acronyms / Abbreviations:	See end of report text for list of acronyms/abbreviations used in report.

WORK PERFORMED THIS QUARTER (First Quarter 2011):

1. Submitted *Fourth Quarter 2010 Ground-Water Monitoring Report*.
2. Conducted groundwater monitoring/sampling for First Quarter 2011 on February 3, 2011.

WORK SCHEDULED FOR NEXT QUARTER (Second Quarter 2011):

1. Submit *First Quarter 2011 Monitoring Report* (contained herein).
2. No environmental work is scheduled for Second Quarter 2011.

ADDITIONAL WORK RECOMMENDED FOR NEXT QUARTER (Second Quarter 2011)

1. None.

GROUNDWATER MONITORING PLAN SUMMARY:

Groundwater level gauging:	MW-1 through MW-4	(Quarterly Through 3Q11)
Groundwater sample collection:	MW-1 through MW-3 MW-4	(Semi-Annually: 1Q & 3Q) (Quarterly Through 3Q11)
Biodegradation indicator parameter monitoring:	DO, pH, Conductivity	(Semi-Annually: 1Q & 3Q)

QUARTERLY RESULTS SUMMARY:

LNAPL

LNAPL observed this quarter:	No	
LNAPL recovered this quarter:	None	(gal)
Cumulative LNAPL recovered:	None	(gal)

Groundwater Elevation and Gradient:

Depth to groundwater:	11.88 MW-1 to 12.38 MW-2	(ft below TOC)
Gradient direction:	West-Southwest	(compass direction)
Gradient magnitude:	0.04	(ft/ft)
Average change in elevation:	0.337 (MW-4 not included)	(ft since last measurement)

Laboratory Analytical Data

Summary: Benzene was detected in MW-1. MTBE was detected in MW-1, MW-2, MW-3 and MW-4. TBA was detected in MW-1, MW-2, MW-3 and MW-4. TAME was detected in MW-3 and MW-4. Other petroleum hydrocarbon constituents were below detection levels.

ACTIVITIES CONDUCTED & RESULTS:

First Quarter 2011 groundwater monitoring was conducted on February 3, 2011 by BAI personnel in accordance with the monitoring plan summarized above. No irregularities were noted during water level gauging. Depth to water measurements ranged from 11.88 ft at MW-1 to 12.38 ft at MW-2. Resulting groundwater surface elevations ranged from 65.07 ft at MW-4 to 78.32 ft at MW-1. Groundwater elevations are summarized in Table 1. Water level elevations yielded a potentiometric groundwater flow direction and horizontal gradient to the West-Southwest at approximately 0.04 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 February 3, 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; for Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX), Methyl Tertiary Butyl Ether (MTBE), 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. No significant irregularities were encountered during analysis of the samples. The laboratory analytical report, including chain-of-custody documentation, is provided in Appendix C.

Benzene was detected at the laboratory reporting limit in well MW-1 at a concentration of 0.50 µg/L. MTBE was detected above the laboratory reporting limit in the four wells sampled at concentrations up to 1,500 µg/L in well MW-3. TAME was detected above the laboratory reporting limit in two wells sampled at concentrations up to 12 µg/L in well MW-3. TBA was detected above the laboratory reporting limit in the four wells sampled at concentrations up to 3,200 µg/L in well MW-2. 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 were between historic minimum and maximum elevations for wells MW-1, MW-2, and MW-3 (Well MW-4 was not included in this analysis). Groundwater elevations yielded a potentiometric groundwater flow direction and horizontal gradient to the West-Southwest at approximately 0.04 ft/ft, generally consistent with the historic flow direction and gradient data presented in Table 3.

This event's detected analytical concentrations were within the historic minimum and maximum ranges recorded for each well, with the following exception: TAME reached a historic minimum in MW-2 with a concentration of non-detect. In general, MTBE concentrations have continued to decrease in MW-2. Recent and historic laboratory analytical results are summarized in Table 1 and Table 2.

RECOMMENDATIONS:

Water level and groundwater concentration trends in new well MW-4 should be monitored as more data becomes available. It is also recommended to conduct monitoring and sampling of well MW-4 on a quarterly basis for one year following installation (through Third Quarter 2011). The next monitoring and sampling event is scheduled to be conducted during the Second Quarter of 2011.

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, February 3, 2011
- Table 1: Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Table 2: Summary of Fuel Additives Analytical Data
Table 3: Historical Groundwater Flow Direction and Gradient
Table 4: Bio-Degradation Parameters
- 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
DO:	Dissolved Oxygen	NO ₃ :	Nitrate as Nitrogen
DRO:	Diesel-Range Organics	ppb:	parts per billion
EDB:	1,2-Dibromomethane	SO ₄ :	Sulfate
Eh:	Oxidation Reduction Potential	TAME:	Tert-Amyl Methyl Ether
EPA:	Environmental Protection Agency	TBA:	Tertiary Butyl Ether
ETBE:	Ethyl Tertiary Butyl Ether	TOC:	Top of Casing
Fe ²⁺ :	Ferrous Iron	µg/L:	micrograms per liter

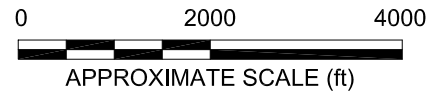
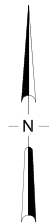
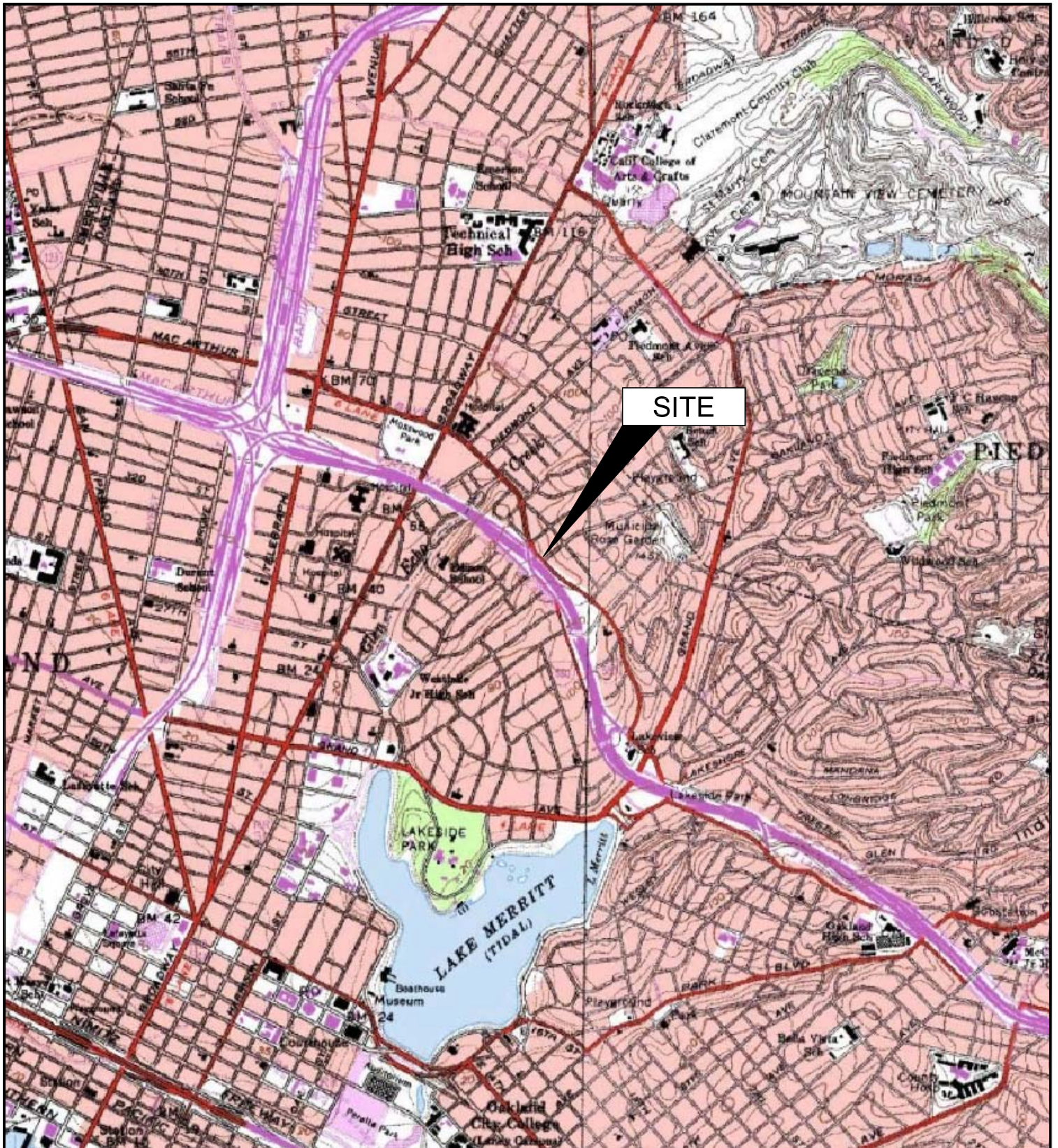
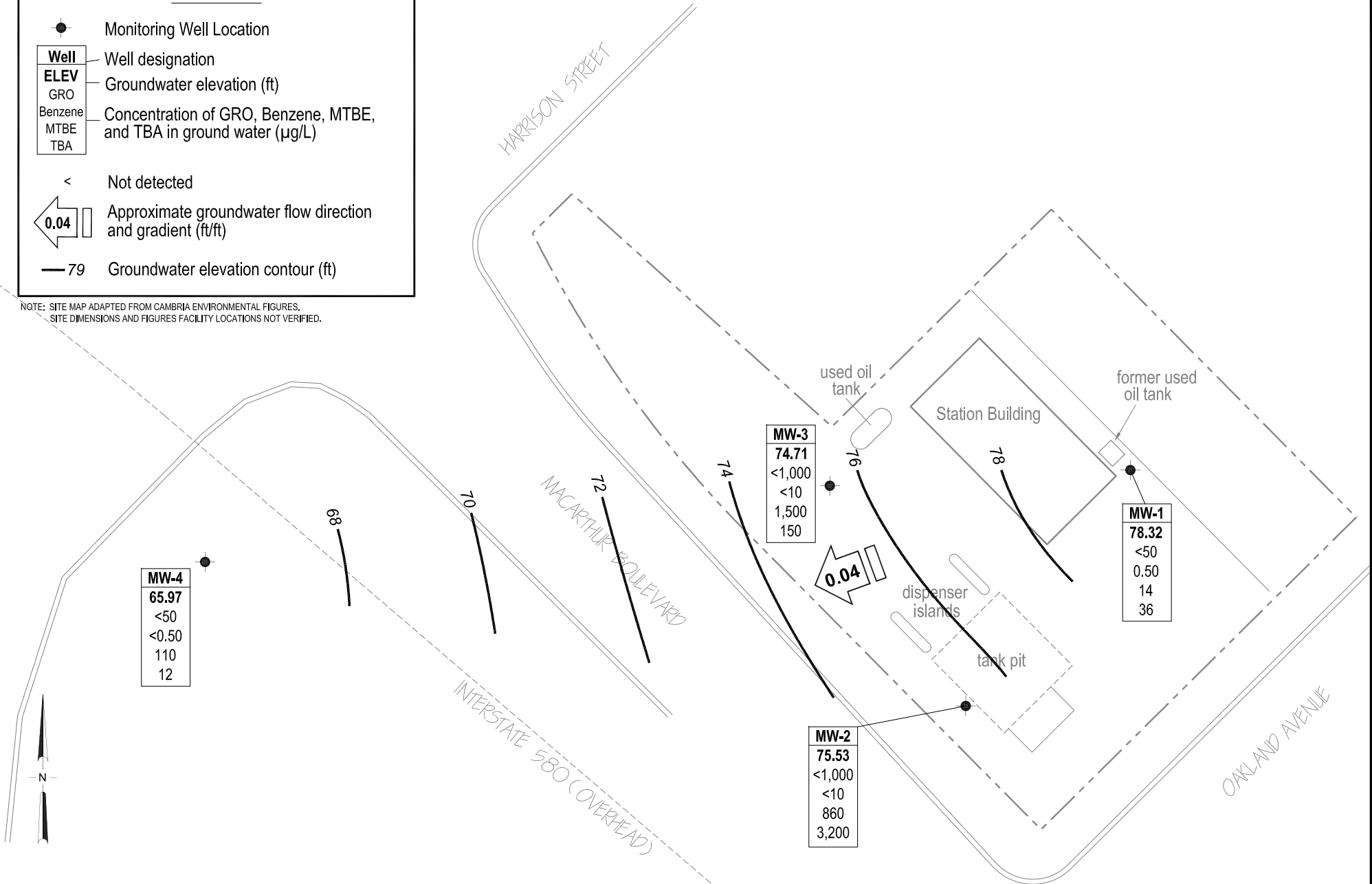


IMAGE SOURCE: USGS

LEGEND

- Monitoring Well Location
- | | |
|-------------|---|
| Well | Well designation |
| ELEV | Groundwater elevation (ft) |
| GRO | Concentration of GRO, Benzene, MTBE, and TBA in ground water (µg/L) |
| Benzene | |
| MTBE | |
| TBA | |
- < Not detected
- Approximate groundwater flow direction and gradient (ft/ft)
- 79 Groundwater elevation contour (ft)

NOTE: SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES.
SITE DIMENSIONS AND FIGURES FACILITY LOCATIONS NOT VERIFIED.

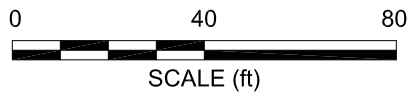


MW-4
65.97
<50
<0.50
110
12

MW-3
74.71
<1,000
<10
1,500
150

MW-1
78.32
<50
0.50
14
36

MW-2
75.53
<1,000
<10
860
3,200



BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California
Project No.: 09-88-643 Date: 4/27/2011

Former Station #11102
100 MacArthur Boulevard Oakland,
California

Groundwater Elevation Contours and
Analytical Summary Map
February 3, 2011

Drawing

1

**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station #11102, 100 MacArthur Blvd., Oakland, CA**

Well and Sample Date	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			
MW-1																	
11/4/1989	--	90.20	13.21	0.00	76.99	<500	<50	3.4	0.6	<0.3	<0.3	--	<5000	--	--	--	
11/11/1989	--		13.32	0.00	76.88	--	--	--	--	--	--	--	--	--	--	--	
4/3/1990	--		12.46	0.00	77.74	820	--	64	1.9	23	34	--	--	--	--	--	
7/30/1990	--		12.92	0.00	77.28	190	<50	11	<5.0	<5.0	<5.0	--	<5000	--	--	--	
11/20/1990	--		14.08	0.00	76.12	50	79	2.4	<0.3	<0.3	<0.3	--	<5000	--	--	--	
3/1/1991	--		13.61	0.00	76.59	<100	<1000	0.9	<0.3	<0.3	0.3	--	14,000	--	--	--	
8/19/1991	--		15.74	0.00	74.46	370	<50	35	0.73	6.4	5.6	--	<5000	--	--	--	
11/13/1991	--		14.08	0.00	76.12	60	<50	0.68	<0.3	<0.3	<0.3	--	<5000	--	--	--	
2/24/1992	--		12.52	0.00	77.68	140	100	3.9	0.66	1.2	3.8	--	<5000	--	--	--	
5/19/1992	--		11.80	0.00	78.40	4,200	910	440	21	250	37	--	<5000	--	--	--	
6/17/1992	--		12.01	0.00	78.19	4,000	560	350	14	150	17	--	<5000	--	--	--	
7/22/1992	--		12.42	0.00	77.78	4,000	--	<5.0	19	210	61	--	--	--	--	--	
8/14/1992	--		12.75	0.00	77.45	2,400	1,700	330	20	150	47	--	<5000	--	--	--	
11/11/1992	--		13.69	0.00	76.51	260	92	30	3.4	7.6	6.8	--	<5000	--	--	--	
6/7/1993	--		10.93	0.00	79.27	3,400	440	98	11	21	7.6	--	--	--	--	--	
6/7/1993	--		10.93	0.00	79.27	3,700	--	120	12	26	9.5	--	--	--	--	--	c
12/2/1993	--		12.72	0.00	77.48	1,100	120	8.3	3.6	0.6	1.5	--	<5000	--	--	--	
6/22/1994	--		11.81	0.00	78.39	2,100	--	30	3.2	2	15	2,000	--	--	--	--	c, d
6/22/1994	--		11.81	0.00	78.39	2,100	<50	32	3.8	2.2	17	4,000	<5000	--	3.2	--	d
1/10/1995	--		10.97	0.00	79.23	<500	--	120	<5	5	<10	--	--	--	--	--	c
1/10/1995	--		10.97	0.00	79.23	<500	420	120	<5	<5	<10	--	--	--	3.9	--	
6/21/1995	--		9.38	0.00	80.82	3,600	--	<13	<5.0	<5.0	<10	--	--	--	--	--	c, e
6/21/1995	--		9.38	0.00	80.82	4,700	1,300	16	<5.0	<5.0	<10	--	2,900	0.6	6.7	--	
12/27/1995	--		11.55	0.00	78.65	430	2,100	<2.5	<2.5	<2.5	<5.0	1,200	640	--	6.3	--	
6/13/1996	--		9.28	0.00	80.92	3,200	920	51	<12	<12	<12	4,000	2,000	--	6.3	--	
12/4/1996	--		11.91	0.00	78.29	1,400	280	6.2	<5	<5	<5	2,600	2,000	6	6.7	--	f
6/10/1997	--		8.97	0.00	81.23	7,900	1,700	12	<10	<10	<10	15,000	<5	--	6	--	
6/10/1997	--		8.97	0.00	81.23	7,700	--	14	<25	<25	<25	13,000	--	--	--	--	c
12/12/1997	--		11.37	0.00	78.83	440	760	8.8	<1.0	2.6	9.4	6,700	1,200	--	5.5	--	
6/18/1998	--		8.02	0.00	82.18	7,500	2,900	<2.5	<5.0	<5.0	<5.0	5,600	<5	--	4.9	--	

Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	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			
MW-1 Cont.																	
3/9/1999	--	90.20	9.80	0.00	80.40	32,000	--	100	16	72	110	49,000	--	--	--	--	
9/28/1999	--		10.78	0.00	79.42	1,000	--	<5.0	<5.0	<5.0	<5.0	730	--	<1.0	--	--	
10/14/1999	--		10.84	0.00	79.36	--	660	--	--	--	--	--	--	--	--	--	
3/27/2000	--		9.83	0.00	80.37	4,300	--	160	19	37	43	28,000	--	--	--	--	
9/28/2000	--		11.33	0.00	78.87	2,700	--	10	2.6	1.1	2.7	28,000	--	--	--	--	
3/8/2001	--		10.96	0.00	79.24	8,200	--	23.5	6.09	5.23	8.97	11,600	--	--	--	--	
9/21/2001	--		12.07	0.00	78.13	6,000	--	37.9	<0.5	<0.5	<1.5	7,370	--	--	--	--	
2/28/2002	--		10.48	0.00	79.72	6,400	--	60.8	<5.0	6.43	<10	7,750	--	--	--	--	
9/6/2002	--		11.20	0.00	79.00	1,400	--	<5.0	<5.0	<5.0	<5.0	6,000	--	--	--	--	
2/19/2003	--		11.29	0.00	78.91	<10000	--	<100	110	<100	<100	4,500	--	--	--	--	h
7/14/2003	--		11.18	0.00	79.02	710	--	11	<10	<10	<10	940	--	--	--	--	
01/14/2004	--		11.74	0.00	78.46	<500	--	<5.0	<5.0	<5.0	<5.0	220			--	6.6	
04/23/2004	P		11.95	0.00	78.25	470	--	3.4	<2.5	<2.5	<2.5	150			--	6.7	l
07/01/2004	P		11.52	0.00	78.68	360	--	<2.5	<2.5	<2.5	<2.5	96			--	6.0	
10/28/2004	P		12.56	0.00	77.64	390	--	0.94	<0.50	<0.50	<0.50	43			--	6.2	
01/10/2005	P		11.85	0.00	78.35	490	--	17	<2.5	5.8	5.4	85			--	7.6	
04/13/2005	P		10.00	0.00	80.20	1,000	--	27	<2.5	<2.5	25	48			--	6.6	
07/11/2005	P		9.27	0.00	80.93	180	--	<0.50	<0.50	<0.50	<0.50	36			--	7.7	
10/17/2005	P		10.96	0.00	79.24	140	--	<0.50	<0.50	<0.50	<0.50	20			--	8.0	
01/17/2006	P		10.81	0.00	79.39	120	--	0.64	<0.50	<0.50	0.56	38			--	6.5	
04/21/2006	P		9.28	0.00	80.92	410	--	1.4	1.0	<0.50	<0.50	17			--	6.5	m
7/17/2006	--		9.25	0.00	80.95	<50	--	<0.50	<0.50	<0.50	<0.50	5.5	--	--	--	7.7	
7/26/2006	--		8.57	0.00	81.63	<50	--	<0.50	<0.50	<0.50	<0.50	4.4	--	--	--	6.6	
10/31/2006	P		9.80	0.00	80.40	<50	--	<0.50	<0.50	<0.50	<0.50	2.8	--	--	2.81	6.99	
1/8/2007	P		10.36	0.00	79.84	<50	--	2.2	<0.50	<0.50	<0.50	6.2	--	--	2.51	6.97	
4/10/2007	P		10.65	0.00	79.55	160	--	1.4	<0.50	<0.50	<0.50	9.0	--	--	1.75	7.00	
7/10/2007	P		10.52	0.00	79.68	120	160	<0.50	<0.50	<0.50	<0.50	4.9	--	--	2.01	6.60	p
10/24/2007	P		11.23	0.00	78.97	100	--	<0.50	<0.50	<0.50	<0.50	4.9	--	--	1.89	6.57	
1/22/2008	P		11.22	0.00	78.98	240	--	<0.50	<0.50	0.83	1.7	7.2	--	--	3.18	6.49	
4/15/2008	P		10.26	0.00	79.94	240	--	<0.50	<0.50	<0.50	0.73	5.5	--	--	3.32	6.45	

Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	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			
MW-1 Cont.																	
7/8/2008	P	90.20	11.10	0.00	79.10	78	--	<0.50	<0.50	<0.50	<0.50	5.8	--	--	1.65	6.78	
11/19/2008	P		12.51	0.00	77.69	150	--	<0.50	<0.50	<0.50	<0.50	3.4	--	--	1.59	6.84	
2/10/2009	P		12.71	0.00	77.49	<50	--	<0.50	<0.50	<0.50	<0.50	5.3	--	--	1.63	7.00	
5/7/2009	P		10.90	0.00	79.30	<50	--	1.6	<0.50	<0.50	<0.50	13	--	--	1.41	6.82	
9/3/2009	P		11.91	0.00	78.29	120	--	<0.50	<0.50	<0.50	0.89	3.8	--	--	1.45	6.82	
10/29/2009	P		12.54	0.00	77.66	<50	--	<0.50	<0.50	<0.50	<1.0	22	--	--	1.53	6.73	
2/26/2010	P		10.61	0.00	79.59	<50	--	<0.50	<0.50	<0.50	<1.0	8.1	--	--	0.75	6.55	
8/16/2010	P		10.12	0.00	80.08	<50	--	<0.50	<0.50	<0.50	<1.0	8.1	--	--	1.27	6.57	
11/12/2010	--		10.53	0.00	79.67	--	--	--	--	--	--	--	--	--	--	--	
2/3/2011	P		11.88	0.00	78.32	<50	--	0.50	<0.50	<0.50	<1.0	14	--	--	1.00	6.51	
MW-2																	
11/4/1989	--	87.91	15.84	0.00	72.07	<500	--	6.5	<0.3	<0.3	<0.3	--	--	--	--	--	
11/11/1989	--		14.75	0.00	73.16	--	--	--	--	--	--	--	--	--	--	--	
4/3/1990	--		15.25	0.00	72.66	<500	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
7/30/1990	--		15.59	0.00	72.32	61	--	6.5	<0.5	<0.5	<0.5	--	--	--	--	--	
11/20/1990	--		17.81	0.00	70.10	<50	--	0.3	<0.3	<0.3	<0.3	--	--	--	--	--	
3/1/1991	--		17.11	0.00	70.80	<100	--	0.4	<0.3	<0.3	<0.3	--	--	--	--	--	
8/19/1991	--		17.97	0.00	69.94	<30	--	<0.3	<0.3	<0.3	<0.3	--	--	--	--	--	
11/13/1991	--		16.76	0.00	71.15	38	--	0.32	<0.3	<0.3	<0.3	--	--	--	--	--	
2/24/1992	--		15.07	0.00	72.84	<50	--	<0.5	<0.5	<0.5	0.58	--	--	--	--	--	
5/19/1992	--		14.70	0.00	73.21	<50	--	0.55	<0.5	<0.5	<0.5	--	--	--	--	--	
7/22/1992	--		15.60	0.00	72.31	90	--	1.3	0.6	0.9	1.9	--	--	--	--	--	
8/14/1992	--		15.88	0.00	72.03	--	--	--	--	--	--	--	--	--	--	--	
11/11/1992	--		16.19	0.00	71.72	65	--	3.2	<0.5	<0.5	1	--	--	--	--	--	c
11/11/1992	--		16.19	0.00	71.72	52	--	2.8	<0.5	<0.5	0.9	--	--	--	--	--	
6/7/1993	--		14.42	0.00	73.49	1,200	--	14	2.8	1.9	1.71	--	--	--	--	--	
12/2/1993	--		14.94	0.00	72.97	2,100	--	32	3.8	2.2	17	3,700	--	--	--	--	c, d
12/2/1993	--		14.94	0.00	72.97	790	--	3.4	0.5	10	<0.5	3,700	--	--	--	--	d
6/22/1994	--		14.25	0.00	73.66	110	--	<0.5	<0.5	<0.5	<0.5	120	--	--	3.9	--	d
1/10/1995	--		13.64	0.00	74.27	<50	--	<0.5	<0.5	0.6	1	--	--	--	4.3	--	

Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	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			
MW-2 Cont.																	
6/21/1995	--	87.91	11.66	0.00	76.25	4,700	--	<10	<10	<10	<20	--	--	--	7.8	--	
12/27/1995	--		13.11	0.00	74.80	6,300	--	<25	<25	<25	<50	19,000	--	--	--	--	c
12/27/1995	--		13.11	0.00	74.80	6,100	--	<25	<25	<25	<50	20,000	--	--	6.7	--	
6/13/1996	--		10.86	0.00	77.05	8,700	--	<5	<5	<5	<5	13,000	--	--	--	--	c
6/13/1996	--		10.86	0.00	77.05	8,300	--	<2.5	<2.5	<2.5	<2.5	13,000	--	--	6.5	--	
12/4/1996	--		13.03	0.00	74.88	5,900	--	<2.5	<5	<5	<5	11,000	--	--	6.3	--	
12/4/1996	--		13.03	0.00	74.88	5,900	--	<2.5	<5	<5	<5	11,000	--	--	--	--	c
6/10/1997	--		10.04	0.00	77.87	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	5.8	--	
12/12/1997	--		12.44	0.00	75.47	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	5.7	--	
6/18/1998	--		8.89	0.00	79.02	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	c
6/18/1998	--		8.89	0.00	79.02	50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	5.3	--	
3/9/1999	--		10.20	0.00	77.71	15,000	--	<5.0	<5.0	<5.0	<5.0	23,000	--	--	--	--	
9/28/1999	--		11.81	0.00	76.10	36,000	--	<5.0	12	7	26	35,000	--	<5.0	--	--	
10/14/1999	--		10.27	0.00	77.64	--	100	--	--	--	--	--	--	--	--	--	
3/27/2000	--		9.98	0.00	77.93	1,300	--	<0.5	<0.5	0.51	<0.5	5,800	--	--	--	--	
9/28/2000	--		11.40	0.00	76.51	1,600	--	1.8	1.7	0.54	2.2	15,000	--	--	--	--	
3/8/2001	--		11.16	0.00	76.75	20,000	--	<0.5	<0.5	<0.5	<0.5	29,100	--	--	--	--	
9/21/2001	--		11.65	0.00	76.26	5,000	--	<0.5	<0.5	<0.5	<1.5	6,110	--	--	--	--	
2/28/2002	--		9.86	0.00	78.05	3,200	--	35.1	<0.5	<0.5	<1.0	4,620	--	--	--	--	
9/6/2002	--		12.32	0.00	75.59	1,900	--	<10	<10	<10	<10	15,000	--	--	--	--	
2/19/2003	--		11.63	0.00	76.28	45,000	--	<250	<250	<250	<250	32,000	--	--	--	--	h
7/14/2003	--		12.07	0.00	75.84	9,300	--	<500	<500	<500	<500	24,000	--	--	--	--	
01/14/2004	P		11.45	0.00	76.46	<50,000	--	<500	<500	<500	<500	21,000			--	6.9	
04/23/2004	P		11.45	0.00	76.46	5,100	--	<250	<250	<250	<250	22,000			--	6.8	l
07/01/2004	P		12.32	0.00	75.59	<5,000	--	<50	<50	<50	<50	5,200			--	5.6	
10/28/2004	P		13.02	0.00	74.89	8,500	--	<50	<50	<50	<50	6,800			--	6.2	
01/10/2005	P		14.38	0.00	73.53	<25,000	--	<250	<250	<250	<250	7,100			--	7.6	
04/13/2005	P		14.03	0.00	73.88	<5,000	--	<50	<50	<50	<50	5,300			--	6.6	
07/11/2005	P		11.25	0.00	76.66	<5,000	--	<50	<50	<50	<50	5,300			--	7.5	
10/17/2005	P		12.48	0.00	75.43	<5,000	--	<50	<50	<50	<50	2,500			--	8.2	

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Former BP Station #11102, 100 MacArthur Blvd., Oakland, CA**

Well and Sample Date	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			
MW-2 Cont.																	
01/17/2006	P	87.91	10.70	0.00	77.21	<5,000	--	<50	<50	<50	<50	2,200			--	7.0	
04/21/2006	--		--	--	--	--	--	--	--	--	--	--			--	--	n
7/26/2006	--		10.47	0.00	77.44	2,700	--	<50	<50	<50	<50	2,900	--	--	--	6.69	k
10/31/2006	P		12.02	0.00	75.89	2,300	--	<25	<25	<25	<25	2,300	--	--	2.02	6.71	
1/8/2007	P		11.68	0.00	76.23	1500	--	<12	<12	<12	<12	1700	--	--	1.37	6.54	
4/10/2007	P		11.45	0.00	76.46	1,300	--	<50	<50	<50	<50	1,500	--	--	1.60	6.89	k
7/10/2007	P		11.97	0.00	75.94	2,300	120	<25	<25	<25	<25	2,600	--	--	1.82	6.69	k, p
10/24/2007	P		12.91	0.00	75.00	2,800	--	<25	<25	<25	<25	2,800	--	--	1.55	6.77	k
1/22/2008	P		12.00	0.00	75.91	<2,500	--	<25	<25	<25	<25	1,400	--	--	2.08	6.55	
4/15/2008	P		11.77	0.00	76.14	73	--	<2.5	<2.5	<2.5	<2.5	2,400	--	--	3.12	6.72	
7/8/2008	P		12.65	0.00	75.26	93	--	<50	<50	<50	<50	2,800	--	--	1.78	7.05	
11/19/2008	P		13.98	0.00	73.93	130	--	<50	<50	<50	<50	1,900	--	--	1.75	6.72	
2/10/2009	P		13.64	0.00	74.27	<50	--	<50	<50	<50	<50	940	--	--	1.71	7.04	
5/7/2009	P		12.00	0.00	75.91	350	--	<20	<20	<20	<20	1,900	--	--	1.62	6.94	
9/3/2009	P		13.68	0.00	74.23	890	--	<40	<40	<40	<40	1,300	--	--	1.56	7.02	q
10/29/2009	P		13.88	0.00	74.03	530	--	<0.50	<0.50	<0.50	<1.0	690	--	--	1.60	6.7	k
2/26/2010	P		11.65	0.00	76.26	1,100	--	<10	<10	<10	<20	1,100	--	--	0.52	6.64	k
8/16/2010	NP		12.82	0.00	75.09	1,000	--	<10	<10	<10	<20	1,100	--	--	0.70	6.60	
11/12/2010	--		12.98	0.00	74.93	--	--	--	--	--	--	--	--	--	--	--	
2/3/2011	NP		12.38	0.00	75.53	<1,000	--	<10	<10	<10	<20	860	--	--	1.23	6.51	
MW-3																	
11/4/1989	--	87.02	15.40	0.00	71.62	<500	--	<0.3	<0.3	<0.3	<0.3	--	--	--	--	--	
11/11/1989	--		14.10	0.00	72.92	--	--	--	--	--	--	--	--	--	--	--	
4/3/1990	--		13.90	0.00	73.12	<100	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
7/30/1990	--		13.77	0.00	73.25	<50	--	<0.5	<0.5	<0.5	<0.5	--	<5000	--	--	--	
11/20/1990	--		14.67	0.00	72.35	<50	--	0.3	0.8	0.4	1.5	--	--	--	--	--	
3/1/1991	--		15.22	0.00	71.80	<100	--	0.4	<0.3	<0.3	<0.3	--	--	--	--	--	
8/19/1991	--		13.15	0.00	73.87	<30	--	<0.3	<0.3	<0.3	<0.3	--	--	--	--	--	
11/13/1991	--		15.66	0.00	71.36	<30	--	<0.3	<0.3	<0.3	<0.3	--	--	--	--	--	
2/24/1992	--		15.01	0.00	72.01	<50	--	0.65	1.4	0.66	4.4	--	--	--	--	--	

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Former BP Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	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			
MW-3 Cont.																	
5/19/1992	--	87.02	15.52	0.00	71.50	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
7/22/1992	--		15.63	0.00	71.39	<50	<50	<0.5	<0.5	<0.5	<0.5	--	<5000	--	--	--	
8/14/1992	--		13.57	0.00	73.45	--	--	--	--	--	--	--	--	--	--	--	
11/11/1992	--		14.13	0.00	72.89	<50	--	<0.5	0.7	<0.5	1.3	--	--	--	--	--	
6/7/1993	--		12.13	0.00	74.89	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
12/2/1993	--		13.29	0.00	73.73	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
6/22/1994	--		12.78	0.00	74.24	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	2.9	--	
1/10/1995	--		12.01	0.00	75.01	<50	--	<0.5	<0.5	<0.5	<1	--	--	--	3.8	--	
6/21/1995	--		11.57	0.00	75.45	<50	--	<0.50	<0.50	<0.50	<1.0	--	--	--	7.4	--	
12/27/1995	--		13.47	0.00	73.55	<50	--	<0.50	<0.50	<0.50	<1.0	5.7	--	--	7.3	--	
6/13/1996	--		11.22	0.00	75.80	60	--	<0.5	<0.5	<0.5	<0.5	<10	--	--	6.8	--	
12/4/1996	--		13.28	0.00	73.74	<50	--	<0.5	<1	<1	<1	<10	--	--	6.7	--	
6/10/1997	--		10.22	0.00	76.80	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	6.1	--	
12/12/1997	--		12.61	0.00	74.41	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	5.6	--	
12/12/1997	--		12.61	0.00	74.41	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	c
6/18/1998	--		12.80	0.00	74.22	--	--	--	--	--	--	--	--	--	--	--	
6/18/1998	--		9.07	0.00	77.95	--	--	--	--	--	--	--	--	--	--	--	
6/18/1998	--		12.80	0.00	74.22	50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	5.3	--	
6/18/1998	--		9.07	0.00	77.95	50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	5.3	--	
9/28/1999	--		13.76	0.00	73.26	--	--	--	--	--	--	--	--	--	--	--	
3/27/2000	--		13.77	0.00	73.25	<50	--	<0.5	<0.5	<0.5	<0.5	1.6	--	--	--	--	
9/28/2000	--		11.28	0.00	75.74	<50	--	<0.5	7.4	<0.5	1.3	2	--	--	--	--	
3/8/2001	--		11.75	0.00	75.27	<50	--	<0.5	<0.5	<0.5	<0.5	60.4	--	--	--	--	
9/21/2001	--		11.33	0.00	75.69	<50	--	<0.5	<0.5	<0.5	<1.5	8.18	--	--	--	--	
2/28/2002	--		10.86	0.00	76.16	<50	--	<0.5	<0.5	<0.5	<1.0	25.5	--	--	--	--	
9/6/2002	--		12.73	0.00	74.29	<50	--	1.2	<0.5	<0.5	1	16	--	--	--	--	
2/19/2003	--		11.72	0.00	75.30	<500	--	<5.0	<5.0	<5.0	<5.0	110	--	--	--	--	h
7/14/2003	--		13.76	0.00	73.26	<50	--	<0.50	<0.50	<0.50	0.67	28	--	--	--	--	
01/14/2004	P		14.83	0.00	72.19	550	--	<5.0	<5.0	<5.0	<5.0	380			--	8.1	
04/23/2004	P		13.17	0.00	73.85	<200	--	<25	<25	<25	<25	560			--	6.8	l

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						GRO/TPHg	DRO/TPHd	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE	TOG	HVOC			
MW-3 Cont.																	
07/01/2004	P	87.02	15.19	0.00	71.83	<50	--	<0.50	<0.50	<0.50	0.50	48			--	6.4	
10/28/2004	P		15.50	0.00	71.52	<500	--	<5.0	<5.0	<5.0	<5.0	290			--	6.3	
01/10/2005	P		15.00	0.00	72.02	<50	--	<0.50	<0.50	<0.50	<0.50	18			--	7.6	
04/13/2005	P		14.34	0.00	72.68	<50	--	<0.50	<0.50	<0.50	<0.50	9.0			--	7.1	
07/11/2005	P		10.82	0.00	76.20	130	--	<1.0	<1.0	<1.0	<1.0	120			--	7.8	k
10/17/2005	P		11.84	0.00	75.18	<250	--	<2.5	<2.5	<2.5	<2.5	260			--	8.5	
01/17/2006	P		11.59	0.00	75.43	800	--	<5.0	<5.0	<5.0	<5.0	980			--	7.2	
04/21/2006	P		10.00	0.00	77.02	<500	--	<5.0	<5.0	<5.0	<5.0	48			--	6.7	
7/17/2006	P		10.80	0.00	76.22	910	--	<5.0	<5.0	<5.0	<5.0	1,400	--	--	--	7.7	k
7/26/2006	P		9.67	0.00	77.35	810	--	<10	<10	<10	<10	1,300	--	--	--	6.56	
10/31/2006	P		10.85	0.00	76.17	1,600	--	<10	<10	<10	<10	2,300	--	--	2.50	6.84	
1/8/2007	P		12.73	0.00	74.29	520	--	<5.0	<5.0	<5.0	<5.0	760	--	--	3.61	7.12	
4/10/2007	P		11.93	0.00	75.09	630	--	<5.0	<5.0	<5.0	<5.0	750	--	--	2.31	7.15	k
7/10/2007	P		11.30	0.00	75.72	1,800	66	<5.0	<5.0	<5.0	<5.0	2,400	--	--	1.56	6.72	k, p
10/24/2007	P		13.77	0.00	73.25	2,000	--	<25	<25	<25	<25	3,500	--	--	1.62	6.41	k
1/22/2008	P		12.92	0.00	74.10	1,600	--	<12	<12	<12	<12	2,800	--	--	2.17	6.32	k
4/15/2008	P		15.25	0.00	71.77	<50	--	<2.5	<2.5	<2.5	<2.5	960	--	--	3.44	6.71	
7/8/2008	P		12.27	0.00	74.75	<50	--	<50	<50	<50	<50	2,200	--	--	1.52	7.01	
11/19/2008	P		15.27	0.00	71.75	<50	--	<50	<50	<50	<50	2,700	--	--	1.60	6.83	
2/10/2009	P		13.61	0.00	73.41	<50	--	<50	<50	<50	<50	1,800	--	--	1.66	6.98	
5/7/2009	P		11.75	0.00	75.27	140	--	<10	<10	<10	<10	780	--	--	1.28	6.86	
9/3/2009	P		13.47	0.00	73.55	1,100	--	<10	<10	<10	<10	2,400	--	--	1.33	6.87	q
10/29/2009	P		13.04	0.00	73.98	1,000	--	<10	<10	<10	<20	1,500	--	--	0.97	7.09	k
2/26/2010	P		12.44	0.00	74.58	1,500	--	<10	<10	<10	<20	1,500	--	--	0.74	6.69	k
8/16/2010	P		11.43	0.00	75.59	1,900	--	<0.50	<0.50	<0.50	<1.0	2,400	--	--	0.52	6.59	
11/12/2010	--		12.05	0.00	74.97	--	--	--	--	--	--	--	--	--	--	--	
2/3/2011	NP		12.31	0.00	74.71	<1,000	--	<10	<10	<10	<20	1,500	--	--	1.92	6.68	
MW-4																	
11/12/2010	--	NS	--	--	--	<50	--	<0.50	<0.50	<0.50	<1.0	95	--	--	--	--	
2/3/2011	P	78.06	12.09	0.00	65.97	<50	--	<0.50	<0.50	<0.50	<1.0	110	--	--	3.45	6.51	

**Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station #11102, 100 MacArthur Blvd., Oakland, CA**

Well and Sample Date	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			
QC-2																	
11/11/1992	--	NS	--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	ns
6/7/1993	--		--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	ns
12/2/1993	--		--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	ns
6/22/1994	--		--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	ns
1/10/1995	--		--	--	--	<50	--	<0.5	<0.5	<0.5	<1	--	--	--	--	--	ns
6/21/1995	--		--	--	--	<50	--	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	ns
12/27/1995	--		--	--	--	<50	--	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	--	--	ns
6/13/1996	--		--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	<10	--	--	--	--	ns

Symbols & Abbreviations:

--/-- = Not analyzed/applicable/measured/available
< = Not detected at or above specified laboratory reporting limit
DO = Dissolved oxygen
DRO = Diesel range organics
DTW = Depth to water in ft bgs
ft bgs = feet below ground surface
GRO = Gasoline range organics, range C4-C12
GWE = Groundwater elevation measured in ft
HVOC = Halogenated volatile organic compounds
mg/L = Milligrams per liter
MTBE = Methyl tert-butyl ether
NP = Well not purged prior to sampling
P = Well purged prior to sampling
TOC = Top of casing measured in ft
TOG = Total oil and grease
TPH-d = Total petroleum hydrocarbons as diesel
TPH-g = Total petroleum hydrocarbons as gasoline
µg/L = Micrograms per liter
ANA = Anametrix, Inc.
PACE = Pace, Inc.
ATI = Analytical Technologies, Inc.
SAL = Superior Analytical Laboratory
SPL = Southern Petroleum Laboratories
SEQ/SEQM = Sequoia Analytical/Sequoia Analytical - Morgan Hill (Laboratories)
CEL = CalScience Environmental Laboratories, Inc.

Footnotes:

c = Blind duplicate
d = A copy of the documentation for this data is included in Appendix C of Alisto report 10-076-06-002
e = Tetrachloroethene
f = trans-1,2-Dichloroethene
g = Travel blank
h = TPH-g, benzene, toluene, ethylbenzene, and total xylenes (BTEX), and MTBE analyzed by EPA Method 8260B beginning on 1st quarter sampling event (2/19/03)
k = The hydrocarbon result was partly due to individual peaks in the quantification range (GRO)
l = GRO analyzed by EPA Method 8015B
m = Confirmatory analysis for total xylenes was past holding time
n = Well inaccessible
p = Hydrocarbon in req. fuel range, but doesn't resemble req. fuel (DRO)
q = Quantitation of unknown hydrocarbon(s) in sample based on gasoline (GRO)

Notes:

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

Beginning in the second quarter 2004, the carbon range for GRO was changed from C6-C10 to C4-C12

Values for pH and DO were obtained through field measurements

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 #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-1									
6/22/1994	--	--	2,000	--	--	--	--	--	
6/22/1994	--	--	4,000	--	--	--	--	--	
12/27/1995	--	--	1,200	--	--	--	--	--	
6/13/1996	--	--	4,000	--	--	--	--	--	
12/4/1996	--	--	2,600	--	--	--	--	--	
6/10/1997	--	--	15,000	--	--	--	--	--	
6/10/1997	--	--	13,000	--	--	--	--	--	
12/12/1997	--	--	6,700	--	--	--	--	--	
6/18/1998	--	--	5,600	--	--	--	--	--	
3/9/1999	--	--	49,000	--	--	--	--	--	
9/28/1999	--	--	730	--	--	--	--	--	
3/27/2000	--	--	28,000	--	--	--	--	--	
9/28/2000	--	--	28,000	--	--	--	--	--	
3/8/2001	--	--	11,600	--	--	--	--	--	
9/21/2001	--	--	7,370	--	--	--	--	--	
2/28/2002	--	--	7,750	--	--	--	--	--	
9/6/2002	--	--	6,000	--	--	--	--	--	
2/19/2003	--	--	4,500	--	--	--	--	--	
7/14/2003	<2000	2,700	940	<20	<20	<20	--	--	
01/14/2004	<1,000	2,500	220	<5.0	<5.0	<5.0	<5.0	<5.0	
04/23/2004	<500	2,500	150	<2.5	<2.5	<2.5	<2.5	<2.5	
07/01/2004	<500	2,000	96	<2.5	<2.5	<2.5	<2.5	<2.5	
10/28/2004	<5.0	1,500	43	<0.50	<0.50	0.58	<0.50	<0.50	
01/10/2005	<500	1,900	85	<2.5	<2.5	<2.5	<2.5	<2.5	
04/13/2005	<500	1,400	48	<2.5	<2.5	<2.5	<2.5	<2.5	
07/11/2005	<100	550	36	<0.50	<0.50	<0.50	<0.50	<0.50	
10/17/2005	<100	450	20	<0.50	<0.50	<0.50	<0.50	<0.50	a
01/17/2006	<300	260	38	<0.50	<0.50	0.54	<0.50	<0.50	
04/21/2006	<300	320	17	<0.50	<0.50	<0.50	<0.50	<0.50	
7/17/2006	<300	32	5.5	<0.50	<0.50	<0.50	<0.50	<0.50	
7/26/2006	<300	22	4.4	<0.50	<0.50	<0.50	<0.50	<0.50	
10/31/2006	<300	<20	2.8	<0.50	<0.50	<0.50	<0.50	<0.50	a

Table 2. Summary of Fuel Additives Analytical Data
Former BP Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-1 Cont.									
1/8/2007	<300	110	6.2	<0.50	<0.50	<0.50	<0.50	<0.50	
4/10/2007	<300	210	9.0	<0.50	<0.50	<0.50	<0.50	<0.50	
7/10/2007	<300	110	4.9	<0.50	<0.50	<0.50	<0.50	<0.50	
10/24/2007	<300	94	4.9	<0.50	<0.50	<0.50	<0.50	<0.50	
1/22/2008	<300	110	7.2	<0.50	<0.50	<0.50	<0.50	<0.50	
4/15/2008	<300	84	5.5	<0.50	<0.50	<0.50	<0.50	<0.50	
7/8/2008	<300	64	5.8	<0.50	<0.50	<0.50	<0.50	<0.50	
11/19/2008	<300	110	3.4	<0.50	<0.50	<0.50	<0.50	<0.50	
2/10/2009	<300	110	5.3	<0.50	<0.50	<0.50	<0.50	<0.50	
5/7/2009	<300	17	13	<0.50	<0.50	<0.50	<0.50	<0.50	
9/3/2009	<300	260	3.8	<0.50	<0.50	<0.50	<0.50	<0.50	
10/29/2009	<100	210	22	<0.50	<0.50	<0.50	<0.50	<0.50	
2/26/2010	<100	240	8.1	<0.50	<0.50	<0.50	<0.50	<0.50	
8/16/2010	120	35	8.1	<0.50	<0.50	<0.50	<0.50	<0.50	
2/3/2011	<250	36	14	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-2									
12/2/1993	--	--	3,700	--	--	--	--	--	
12/2/1993	--	--	3,700	--	--	--	--	--	
6/22/1994	--	--	120	--	--	--	--	--	
12/27/1995	--	--	20,000	--	--	--	--	--	
12/27/1995	--	--	19,000	--	--	--	--	--	
6/13/1996	--	--	13,000	--	--	--	--	--	
6/13/1996	--	--	13,000	--	--	--	--	--	
12/4/1996	--	--	11,000	--	--	--	--	--	
12/4/1996	--	--	11,000	--	--	--	--	--	
6/10/1997	--	--	<10	--	--	--	--	--	
12/12/1997	--	--	<10	--	--	--	--	--	
6/18/1998	--	--	<10	--	--	--	--	--	
6/18/1998	--	--	<10	--	--	--	--	--	
3/9/1999	--	--	23,000	--	--	--	--	--	
9/28/1999	--	--	35,000	--	--	--	--	--	

Table 2. Summary of Fuel Additives Analytical Data
Former BP Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-2 Cont.									
3/27/2000	--	--	5,800	--	--	--	--	--	
9/28/2000	--	--	15,000	--	--	--	--	--	
3/8/2001	--	--	29,100	--	--	--	--	--	
9/21/2001	--	--	6,110	--	--	--	--	--	
2/28/2002	--	--	4,620	--	--	--	--	--	
9/6/2002	--	--	15,000	--	--	--	--	--	
2/19/2003	--	--	32,000	--	--	--	--	--	
7/14/2003	<100000	<20000	24,000	<1000	<1000	<1000	--	--	
01/14/2004	<100,000	<20,000	21,000	<500	<500	<500	<500	<500	
04/23/2004	<50,000	11,000	22,000	<250	<250	420	<250	<250	
07/01/2004	<10,000	2,900	5,200	<50	<50	110	<50	<50	
10/28/2004	<5.0	6,700	6,800	<50	<50	120	<50	<50	
01/10/2005	<50,000	<10,000	7,100	<250	<250	<250	<250	<250	
04/13/2005	<10,000	5,300	5,300	<50	<50	95	<50	<50	
07/11/2005	<10,000	9,000	5,300	<50	<50	99	<50	<50	
10/17/2005	<10,000	5,200	2,500	<50	<50	<50	<50	<50	a
01/17/2006	<30,000	8,400	2,200	<50	<50	<50	<50	<50	
04/21/2006	--	--	--	--	--	--	--	--	Well inaccessible
7/26/2006	<30,000	4,500	2,900	<50	<50	<50	<50	<50	
10/31/2006	<15,000	9,300	2,300	<25	<25	41	<25	<25	a
1/8/2007	<7,500	7700	1700	<12	<12	38	<12	<12	
4/10/2007	<30,000	6,400	1,500	<50	<50	<50	<50	<50	
7/10/2007	<15,000	8,700	2,600	<25	<25	42	<25	<25	
10/24/2007	<15,000	9,500	2,800	<25	<25	52	<25	<25	
1/22/2008	<15,000	6,000	1,400	<25	<25	<25	<25	<25	
4/15/2008	<1,500	6,800	2,400	<2.5	<2.5	30	2.8	<2.5	
7/8/2008	<30,000	7,600	2,800	<50	<50	<50	<50	<50	
11/19/2008	<30,000	7,100	1,900	<50	<50	<50	<50	<50	
2/10/2009	<30,000	2,700	940	<50	<50	<50	<50	<50	
5/7/2009	<12,000	3,900	1,900	<20	<20	30	<20	<20	
9/3/2009	<24,000	7,500	1,300	<40	<40	<40	<40	<40	
10/29/2009	<100	3,900	690	<0.50	<0.50	12	2.4	<0.50	

Table 2. Summary of Fuel Additives Analytical Data
Former BP Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-2 Cont.									
2/26/2010	<2,000	4,100	1,100	<10	<10	13	<10	<10	
8/16/2010	<2,000	4,800	1,100	<10	<10	14	<10	<10	
2/3/2011	<250	3,200	860	<10	<10	<10	<10	<10	
MW-3									
12/27/1995	--	--	5.7	--	--	--	--	--	
6/13/1996	--	--	<10	--	--	--	--	--	
12/4/1996	--	--	<10	--	--	--	--	--	
6/10/1997	--	--	<10	--	--	--	--	--	
12/12/1997	--	--	<10	--	--	--	--	--	
12/12/1997	--	--	<10	--	--	--	--	--	
6/18/1998	--	--	<10	--	--	--	--	--	
6/18/1998	--	--	<10	--	--	--	--	--	
3/27/2000	--	--	1.6	--	--	--	--	--	
9/28/2000	--	--	2	--	--	--	--	--	
3/8/2001	--	--	60.4	--	--	--	--	--	
9/21/2001	--	--	8.18	--	--	--	--	--	
2/28/2002	--	--	25.5	--	--	--	--	--	
9/6/2002	--	--	16	--	--	--	--	--	
2/19/2003	--	--	110	--	--	--	--	--	
7/14/2003	<100	<20	28	<1.0	<1.0	<1.0	--	--	
01/14/2004	<1,000	<200	380	<5.0	<5.0	<5.0	<5.0	<5.0	
04/23/2004	<5,000	<1,000	560	<25	<25	<25	<25	<25	
07/01/2004	<100	<20	48	<0.50	<0.50	0.52	<0.50	<0.50	
10/28/2004	<5.0	<200	290	<5.0	<5.0	<5.0	<5.0	<5.0	
01/10/2005	<100	<20	18	<0.50	<0.50	<0.50	<0.50	<0.50	
04/13/2005	<100	<20	9.0	<0.50	<0.50	<0.50	<0.50	<0.50	
07/11/2005	<200	<40	120	<1.0	<1.0	1.4	<1.0	<1.0	a
10/17/2005	<500	<100	260	<2.5	<2.5	4.2	<2.5	<2.5	a
01/17/2006	<3,000	200	980	<5.0	<5.0	13	<5.0	<5.0	
04/21/2006	<3,000	<200	48	<5.0	<5.0	<5.0	<5.0	<5.0	
7/17/2006	<3,000	<200	1,400	<5.0	<5.0	15	<5.0	<5.0	

Table 2. Summary of Fuel Additives Analytical Data
Former BP Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-3 Cont.									
7/26/2006	<6,000	<400	1,300	<10	<10	18	<10	<10	
10/31/2006	<6,000	<400	2,300	<10	<10	39	<10	<10	a
1/8/2007	<3000	<200	760	<5.0	<5.0	9.7	<5.0	<5.0	
4/10/2007	<3,000	<200	750	<5.0	<5.0	<5.0	<5.0	<5.0	
7/10/2007	<3,000	<200	2,400	<5.0	<5.0	39	<5.0	--	
10/24/2007	<15,000	<1,000	3,500	<25	<25	58	<25	<25	
1/22/2008	<7,500	<500	2,800	<12	<12	34	<12	<12	
4/15/2008	<1,500	<50	960	<2.5	<2.5	9.2	<2.5	<2.5	
7/8/2008	<30,000	<1,000	2,200	<50	<50	<50	<50	<50	
11/19/2008	<30,000	<1,000	2,700	<50	<50	<50	<50	<50	
2/10/2009	<30,000	<1,000	1,800	<50	<50	<50	<50	<50	
5/7/2009	<6,000	<200	780	<10	<10	11	<10	<10	
9/3/2009	<6,000	<200	2,400	<10	<10	39	<10	<10	
10/29/2009	<2,000	110	1,500	<10	<10	17	<10	<10	
2/26/2010	<2,000	<80	1,500	<10	<10	16	<10	<10	
8/16/2010	<100	20	2,400	<0.50	0.77	32	2.3	<0.50	
2/3/2011	<50,000	150	1,500	<10	<10	12	<10	<10	
MW-4									
11/12/2010	<250	6.9	95	<0.50	<0.50	0.75	<0.50	<0.50	
2/3/2011	<250	12	110	<0.50	<0.50	0.67	<0.50	<0.50	
QC-2									
12/27/1995	--	--	<5.0	--	--	--	--	--	
6/13/1996	--	--	<10	--	--	--	--	--	

Symbols & Abbreviations:

-- = Not analyzed/applicable/measured/available

< = Not detected at or above specified laboratory reporting limit

1,2-DCA = 1,2-Dichloroethane

DIPE = Di-isopropyl ether

EDB = 1,2-Dibromoethane

ETBE = Ethyl tert-butyl ether

MTBE = Methyl tert-butyl ether

TAME = tert-Amyl methyl ether

TBA = tert-Butyl alcohol

µg/L = Micrograms per Liter

Footnotes:

a = The calibration verification for ethanol was within the method limits but outside the contract limits

Notes:

All volatile organic compounds were 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 Flow Direction and Gradient
Former BP Station #11102, 100 MacArthur Blvd., Oakland, CA**

Date Measured	Approximate Gradient Direction	Approximate Gradient Magnitude (ft/ft)
4/21/2006	--	--
7/17/2006	Southwest	0.05
10/31/2006	Southwest	0.04
1/8/2007	West	0.06
4/10/2007	West	0.05
7/10/2007	Southwest	0.04
10/24/2007	West-Southwest	0.06
1/22/2008	West	0.05
4/15/2008	West-Southwest	0.09
7/8/2008	West-Southwest	0.05
11/19/2008	West	0.06
2/10/2009	West	0.04
5/7/2009	West	0.05
9/3/2009	West	0.05
10/29/2009	West	0.04
2/26/2010	West	0.05
8/16/2010	West-Southwest	0.05
2/3/2011	West-Southwest	0.04

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. Bio-Degradation Parameters
Former BP Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)			Ferrous Iron (mg/L)	ORP (mV)	DO (mg/L)	Conductivity (µS/cm)	Hydrogen Sulfide (mg/L)	Methane (µg/L)	pH	Comments
	Total Alkalinity	Nitrate NO3	Sulfate SO4								
MW-1											
7/10/2007	--	1,500	21,000	0.11	71.1	2.01	--	<1.0	--	6.60	
10/24/2007	--	--	--	--	--	1.89	639	--	--	6.57	
1/22/2008	--	760	11,000	0.42	108	3.18	811	<1.0	--	6.49	
4/15/2008	--	240	9,900	0.26	--	3.32	758	<0.100	--	6.45	
7/8/2008	--	860	19,000	0.23	--	1.65	628	--	--	6.78	
11/19/2008	--	540	16,000	0.5	--	1.59	853	--	--	6.84	
2/10/2009	--	830	35,000	0.0	63	1.63	899	<100	--	7.00	
5/7/2009	--	9,300	40,000	0.5	59	1.41	851	<100	--	6.82	
9/3/2009	--	<440	15,000	0.0	62	1.45	676	<100	--	6.82	
10/29/2009	--	<1,000	19,000	<0.10	20	1.53	142.8	2.9	--	6.73	a
2/26/2010	--	--	--	--	45	0.75	761.2	--	--	6.55	
8/16/2010	--	--	--	--	116	1.27	598.2	--	--	6.57	
2/3/2011	--	--	--	--	--	1.00	611	--	--	6.51	
MW-2											
7/10/2007	--	<500	26,000	0.16	9.7	1.82	--	<1.0	--	6.69	
10/24/2007	--	--	--	--	--	1.55	863	--	--	6.77	
1/22/2008	--	8,500	26,000	0.15	167	2.08	672	<1.0	--	6.55	
4/15/2008	--	<100	28,000	<0.100	--	3.12	799	<0.100	--	6.72	
7/8/2008	--	<440	25,000	0.15	--	1.78	753	--	--	7.05	
11/19/2008	--	3,300	20,000	0.0	--	1.75	581	--	--	6.72	
2/10/2009	--	22,000	42,000	0.0	87	1.71	591	100	--	7.04	CL (NO3)
5/7/2009	--	<440	33,000	0.03	90	1.62	1,108	<100	--	6.94	
9/3/2009	--	<440	16,000	0.5	93	1.56	525	<100	--	7.02	
10/29/2009	--	<1,000	14,000	0.64	--	1.60	514.4	3.1	--	6.7	a
2/26/2010	--	--	--	--	9	0.52	577.9	--	--	6.64	
8/16/2010	--	--	--	--	--	0.70	492.3	--	--	6.60	
2/3/2011	--	--	--	--	--	1.23	533	--	--	6.51	
MW-3											
7/10/2007	--	8,500	19,000	<0.100	182.9	1.56	--	<1.0	--	6.72	
10/24/2007	--	--	--	--	--	1.62	639	--	--	6.41	

Table 4. Bio-Degradation Parameters
Former BP Station #11102, 100 MacArthur Blvd., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)			Ferrous Iron (mg/L)	ORP (mV)	DO (mg/L)	Conductivity (µS/cm)	Hydrogen Sulfide (mg/L)	Methane (µg/L)	pH	Comments
	Total Alkalinity	Nitrate NO3	Sulfate SO4								
MW-3 Cont.											
1/22/2008	--	5,600	17,000	<0.100	144	2.17	636	<1.0	--	6.32	
4/15/2008	--	1,600	21,000	<0.100	--	3.44	638	<0.100	--	6.71	
7/8/2008	--	6,700	18,000	<0.100	--	1.52	651	--	--	7.01	
11/19/2008	--	6,100	15,000	0.5	--	1.60	651	--	--	6.83	
2/10/2009	--	5,400	22,000	0.0	91	1.66	659	<100	--	6.98	
5/7/2009	--	11,300	19,000	0.0	87	1.28	643	<100	--	6.86	
9/3/2009	--	8,100	15,000	0.0	85	1.33	557	<100	--	6.87	
10/29/2009	--	12,000	17,000	<0.10	-21	0.97	630	2.4	--	7.09	a
2/26/2010	--	--	--	--	17	0.74	665.6	--	--	6.69	
8/16/2010	--	--	--	--	108	0.52	643.9	--	--	6.59	
2/3/2011	--	--	--	--	--	1.92	601	--	--	6.68	
MW-4											
2/3/2011	--	--	--	--	--	3.45	765	--	--	6.51	

ABBREVIATIONS AND SYMBOLS:

< = Not detected at or above specified laboratory reporting limit

ORP = Oxygen reduction potential

DO = Dissolved oxygen

CO₂ = Carbon dioxide

mV = Millivolts

μg/L = Micrograms per liter

mg/L = Milligrams per liter

a = Sample analyzed for total sulfide instead of hydrogen sulfide due to holding time requirements

CL = Initial analysis within holding time but required dilution

APPENDIX A
FIELD METHODS

APPENDIX B

FIELD DATA SHEETS

Groundwater Sampling Data Sheet

Well I.D.: MW-1
 Project Name/Location: 11102 Project #: _____
 Sampler's Name: E. Ferr Date: 2/3/10
 Purging Equipment: Bur
 Sampling Equipment: Bur

Casing Type: PVC
 Casing Diameter: 4 inch
 Total Well Depth: 32.00 feet
 Depth to Water: - 11.88 feet
 Water Column Thickness: = 20.12 feet
 Unit Casing Volume*: x 0.65 gallon / foot
 Casing Water Volume: = 13.07 gallons
 Casing Volume: x 3 each
 Estimated Purge Volume: = 39.23 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	1447	1.00			949	64.0	7.22	
8	1452	X	X	X	647	64.9	6.57	
10	1459	X	X	X	611	64.9	6.51	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 10 gallons
 Depth to Water at Sample Collection: _____ feet
 Sample Collection Time: 1500
 Purged Dry? (Y/N) (N)

Comments:

Groundwater Sampling Data Sheet

Well I.D.: ML-2
 Project Name/Location: 11102 Project #: _____
 Sampler's Name: E. Farver Date: 2/3/11
 Purging Equipment: Bailer
 Sampling Equipment: Bailer

Casing Type: PVC
 Casing Diameter: 4 inch
 Total Well Depth: _____ feet
 Depth to Water: 12.38 feet
 Water Column Thickness: = _____ feet
 Unit Casing Volume*: x _____ 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
0	1510	1.23			533	64.8	8.91	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 0 gallons
 Depth to Water at Sample Collection: _____ feet
 Sample Collection Time: 1510

Purged Dry? (Y/N) (N)

Comments: NP @ 12

Groundwater Sampling Data Sheet

Well I.D.: MW-3
 Project Name/Location: 11102 Project #: _____
 Sampler's Name: E. Ford Date: 2/5/11
 Purging Equipment: Bair
 Sampling Equipment: Bair

Casing Type: PVC
 Casing Diameter: 4 inch
 Total Well Depth: _____ feet
 Depth to Water: 12.31 feet
 Water Column Thickness: = _____ feet
 Unit Casing Volume*: x _____ 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
<u>0</u>	<u>1525</u>	<u>1.92</u>			<u>601</u>	<u>66.7</u>	<u>6.68</u>	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 0 gallons
 Depth to Water at Sample Collection: _____ feet
 Sample Collection Time: 1525 Purged Dry? (Y/N)

Comments: NPO 12



Groundwater Sampling Data Sheet

Well I.D.: MW-4
 Project Name/Location: 1102 Project #: _____
 Sampler's Name: E. Fure Date: 2/3/11
 Purging Equipment: Boyle
 Sampling Equipment: Boyle

Casing Type: PVC
 Casing Diameter: 2 inch
 Total Well Depth: _____ feet
 Depth to Water: 12.09 feet
 Water Column Thickness: = _____ feet
 Unit Casing Volume*: x _____ 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
0	1538	3.45			7.45 ms	59.5	6.80	
2.5	1545	X	X	X	7.63 ms	58.5	6.49	
5	1549	X	X	X	7.65 ms	59.0	6.51	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

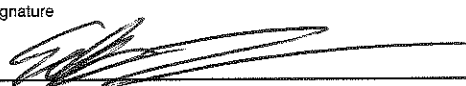

Total Water Volume Purged: 5 gallons
 Depth to Water at Sample Collection: _____ feet
 Sample Collection Time: 1550 Purged Dry? (Y/N) (N)

Comments: _____

NO.683391

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) 11102 100 MACARTHUR BLVD OAKLAND, CA	
	Generator's Phone: 949-460-5200		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>156</u>		Quantity _____ Volume _____	
	WASTE DESCRIPTION <u>NON-HAZARDOUS WATER</u>		GENERATING PROCESS <u>WELL PURGING / DECON WATER</u>	
COMPONENTS OF WASTE		COMPONENTS OF WASTE		
1. <u>WATER</u> PPM _____ % <u>99-100%</u>		3. _____ PPM _____ % _____		
2. <u>TPH</u> PPM _____ % <u><1%</u>		4. _____ PPM _____ % _____		
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 LEAMERZ</u> Signature 		Month Day Year <u>3 1 10</u>		
On Behalf of BP West Coast Products, LLC				
The Generator certifies that the waste as described is 100% non-hazardous				
TRANSPORTER	Transporter 1 Company Name <u>BAT</u>		Phone# <u>707-485-7290</u>	
	Transporter 1 Printed/Typed Name <u>Eric Forin</u> Signature 		Month Day Year <u>2 1 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# 530-753-1829	
	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

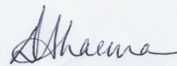
ANALYTICAL REPORT

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

TestAmerica Job ID: 720-33232-1
Client Project/Site: BP #11102, Oakland

For:
ARCADIS U.S., Inc.
155 Montgomery Street
Suite 1500
San Francisco, California 94104

Attn: Project Manager Hollis Phillips



Authorized for release by:
2/16/2011 10:42 AM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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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Qualifier Definition/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11102, Oakland

TestAmerica Job ID: 720-33232-1

Glossary

Glossary	Glossary Description
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis.

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Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: BP #11102, Oakland

TestAmerica Job ID: 720-33232-1

Job ID: 720-33232-1

Laboratory: TestAmerica San Francisco

Narrative

Job Narrative
720-33232-1

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 #11102, Oakland

TestAmerica Job ID: 720-33232-1

Client Sample ID: MW-1 (2/3/11)

Lab Sample ID: 720-33232-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	14		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Benzene	0.50		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
TBA	36		4.0		ug/L	1		8260B/CA_LUFTM	Total/NA

Client Sample ID: MW-2 (2/3/11)

Lab Sample ID: 720-33232-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	860		10		ug/L	20		8260B/CA_LUFTM	Total/NA
TBA	3200		80		ug/L	20		8260B/CA_LUFTM	Total/NA

Client Sample ID: MW-3 (2/3/11)

Lab Sample ID: 720-33232-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	1500		10		ug/L	20		8260B/CA_LUFTM	Total/NA
TBA	150		80		ug/L	20		8260B/CA_LUFTM	Total/NA
TAME	12		10		ug/L	20		8260B/CA_LUFTM	Total/NA

Client Sample ID: MW-4 (2/3/11)

Lab Sample ID: 720-33232-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	110		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
TBA	12		4.0		ug/L	1		8260B/CA_LUFTM	Total/NA
TAME	0.67		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA

Analytical Data

Client: ARCADIS U.S., Inc.
 Project/Site: BP #11102, Oakland

TestAmerica Job ID: 720-33232-1

Client Sample ID: MW-1 (2/3/11)

Lab Sample ID: 720-33232-1

Date Collected: 02/03/11 15:00

Matrix: Water

Date Received: 02/04/11 14:24

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	14		0.50		ug/L			02/05/11 03:45	1
Benzene	0.50		0.50		ug/L			02/05/11 14:17	1
EDB	ND		0.50		ug/L			02/05/11 03:45	1
1,2-DCA	ND		0.50		ug/L			02/05/11 03:45	1
Ethylbenzene	ND		0.50		ug/L			02/05/11 03:45	1
Toluene	ND		0.50		ug/L			02/05/11 03:45	1
Xylenes, Total	ND		1.0		ug/L			02/05/11 03:45	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			02/05/11 03:45	1
TBA	36		4.0		ug/L			02/05/11 03:45	1
Ethanol	ND		250		ug/L			02/05/11 03:45	1
DIPE	ND		0.50		ug/L			02/05/11 03:45	1
TAME	ND		0.50		ug/L			02/05/11 03:45	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/05/11 03:45	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		67 - 130		02/05/11 03:45	1
4-Bromofluorobenzene	101		67 - 130		02/05/11 14:17	1
1,2-Dichloroethane-d4 (Surr)	103		67 - 130		02/05/11 03:45	1
1,2-Dichloroethane-d4 (Surr)	103		67 - 130		02/05/11 14:17	1
Toluene-d8 (Surr)	98		70 - 130		02/05/11 03:45	1
Toluene-d8 (Surr)	102		70 - 130		02/05/11 14:17	1

Analytical Data

Client: ARCADIS U.S., Inc.
 Project/Site: BP #11102, Oakland

TestAmerica Job ID: 720-33232-1

Client Sample ID: MW-2 (2/3/11)

Lab Sample ID: 720-33232-2

Date Collected: 02/03/11 15:10

Matrix: Water

Date Received: 02/04/11 14:24

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	860		10		ug/L			02/05/11 04:15	20
Benzene	ND		10		ug/L			02/05/11 04:15	20
EDB	ND		10		ug/L			02/05/11 04:15	20
1,2-DCA	ND		10		ug/L			02/05/11 04:15	20
Ethylbenzene	ND		10		ug/L			02/05/11 04:15	20
Toluene	ND		10		ug/L			02/05/11 04:15	20
Xylenes, Total	ND		20		ug/L			02/05/11 04:15	20
Gasoline Range Organics (GRO) -C6-C12	ND		1000		ug/L			02/05/11 04:15	20
TBA	3200		80		ug/L			02/05/11 04:15	20
Ethanol	ND		5000		ug/L			02/05/11 04:15	20
DIPE	ND		10		ug/L			02/05/11 04:15	20
TAME	ND		10		ug/L			02/05/11 04:15	20
Ethyl t-butyl ether	ND		10		ug/L			02/05/11 04:15	20

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	90		67 - 130		02/05/11 04:15	20
1,2-Dichloroethane-d4 (Surr)	101		67 - 130		02/05/11 04:15	20
Toluene-d8 (Surr)	96		70 - 130		02/05/11 04:15	20

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Analytical Data

Client: ARCADIS U.S., Inc.
 Project/Site: BP #11102, Oakland

TestAmerica Job ID: 720-33232-1

Client Sample ID: MW-3 (2/3/11)

Lab Sample ID: 720-33232-3

Date Collected: 02/03/11 15:25

Matrix: Water

Date Received: 02/04/11 14:24

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	1500		10		ug/L			02/05/11 04:46	20
Benzene	ND		10		ug/L			02/05/11 04:46	20
EDB	ND		10		ug/L			02/05/11 04:46	20
1,2-DCA	ND		10		ug/L			02/05/11 04:46	20
Ethylbenzene	ND		10		ug/L			02/05/11 04:46	20
Toluene	ND		10		ug/L			02/05/11 04:46	20
Xylenes, Total	ND		20		ug/L			02/05/11 04:46	20
Gasoline Range Organics (GRO) -C6-C12	ND		1000		ug/L			02/05/11 04:46	20
TBA	150		80		ug/L			02/05/11 04:46	20
Ethanol	ND		5000		ug/L			02/05/11 04:46	20
DIPE	ND		10		ug/L			02/05/11 04:46	20
TAME	12		10		ug/L			02/05/11 04:46	20
Ethyl t-butyl ether	ND		10		ug/L			02/05/11 04:46	20

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		67 - 130		02/05/11 04:46	20
1,2-Dichloroethane-d4 (Surr)	102		67 - 130		02/05/11 04:46	20
Toluene-d8 (Surr)	95		70 - 130		02/05/11 04:46	20



Analytical Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11102, Oakland

TestAmerica Job ID: 720-33232-1

Client Sample ID: MW-4 (2/3/11)

Lab Sample ID: 720-33232-4

Date Collected: 02/03/11 15:30

Matrix: Water

Date Received: 02/04/11 14:24

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	110		0.50		ug/L			02/05/11 05:16	1
Benzene	ND		0.50		ug/L			02/05/11 05:16	1
EDB	ND		0.50		ug/L			02/05/11 05:16	1
1,2-DCA	ND		0.50		ug/L			02/05/11 05:16	1
Ethylbenzene	ND		0.50		ug/L			02/05/11 05:16	1
Toluene	ND		0.50		ug/L			02/05/11 05:16	1
Xylenes, Total	ND		1.0		ug/L			02/05/11 05:16	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			02/05/11 05:16	1
TBA	12		4.0		ug/L			02/05/11 05:16	1
Ethanol	ND		250		ug/L			02/05/11 05:16	1
DIPE	ND		0.50		ug/L			02/05/11 05:16	1
TAME	0.67		0.50		ug/L			02/05/11 05:16	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/05/11 05:16	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		67 - 130		02/05/11 05:16	1
1,2-Dichloroethane-d4 (Surr)	106		67 - 130		02/05/11 05:16	1
Toluene-d8 (Surr)	94		70 - 130		02/05/11 05:16	1

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Quality Control Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11102, Oakland

TestAmerica Job ID: 720-33232-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-85879/4

Matrix: Water

Analysis Batch: 85879

Client Sample ID: MB 720-85879/4

Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
MTBE	ND		0.50		ug/L			02/04/11 20:08	1
Benzene	ND		0.50		ug/L			02/04/11 20:08	1
EDB	ND		0.50		ug/L			02/04/11 20:08	1
1,2-DCA	ND		0.50		ug/L			02/04/11 20:08	1
Ethylbenzene	ND		0.50		ug/L			02/04/11 20:08	1
Toluene	ND		0.50		ug/L			02/04/11 20:08	1
m-Xylene & p-Xylene	ND		1.0		ug/L			02/04/11 20:08	1
o-Xylene	ND		0.50		ug/L			02/04/11 20:08	1
Xylenes, Total	ND		1.0		ug/L			02/04/11 20:08	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			02/04/11 20:08	1
TBA	ND		4.0		ug/L			02/04/11 20:08	1
Ethanol	ND		250		ug/L			02/04/11 20:08	1
DIPE	ND		0.50		ug/L			02/04/11 20:08	1
TAME	ND		0.50		ug/L			02/04/11 20:08	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/04/11 20:08	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
4-Bromofluorobenzene	92		67 - 130		02/04/11 20:08	1
1,2-Dichloroethane-d4 (Surr)	99		67 - 130		02/04/11 20:08	1
Toluene-d8 (Surr)	96		70 - 130		02/04/11 20:08	1

Lab Sample ID: LCS 720-85879/5

Matrix: Water

Analysis Batch: 85879

Client Sample ID: LCS 720-85879/5

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Benzene	25.0	25.9		ug/L		104	82 - 127
EDB	25.0	27.4		ug/L		110	70 - 130
1,2-DCA	25.0	25.3		ug/L		101	70 - 126
Ethylbenzene	25.0	25.9		ug/L		104	86 - 135
Toluene	25.0	26.2		ug/L		105	83 - 129
m-Xylene & p-Xylene	50.0	51.9		ug/L		104	70 - 142
o-Xylene	25.0	26.9		ug/L		108	89 - 136
TBA	500	494		ug/L		99	82 - 116
Ethanol	500	598		ug/L		120	31 - 216
DIPE	25.0	27.7		ug/L		111	74 - 155
TAME	25.0	28.7		ug/L		115	79 - 129
Ethyl t-butyl ether	25.0	26.8		ug/L		107	70 - 130

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

Quality Control Data

Client: ARCADIS U.S., Inc.
 Project/Site: BP #11102, Oakland

TestAmerica Job ID: 720-33232-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-85879/8

Matrix: Water

Analysis Batch: 85879

Client Sample ID: LCS 720-85879/8

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits	
Gasoline Range Organics (GRO) -C6-C12	500	418		ug/L		84	58 - 106	
Surrogate		LCS % Recovery	LCS Qualifier				Limits	
4-Bromofluorobenzene		100					67 - 130	
1,2-Dichloroethane-d4 (Surr)		99					67 - 130	
Toluene-d8 (Surr)		102					70 - 130	

Lab Sample ID: LCSD 720-85879/6

Matrix: Water

Analysis Batch: 85879

Client Sample ID: LCSD 720-85879/6

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits		RPD Limit	
									RPD	Limit
MTBE	25.0	26.7		ug/L		107	62 - 130		1	20
Benzene	25.0	26.3		ug/L		105	82 - 127		1	20
EDB	25.0	27.7		ug/L		111	70 - 130		1	20
1,2-DCA	25.0	25.6		ug/L		102	70 - 126		1	20
Ethylbenzene	25.0	26.2		ug/L		105	86 - 135		1	20
Toluene	25.0	26.4		ug/L		106	83 - 129		1	20
m-Xylene & p-Xylene	50.0	52.9		ug/L		106	70 - 142		2	20
o-Xylene	25.0	27.4		ug/L		110	89 - 136		2	20
TBA	500	496		ug/L		99	82 - 116		0	20
Ethanol	500	613		ug/L		123	31 - 216		2	30
DIPE	25.0	28.0		ug/L		112	74 - 155		1	20
TAME	25.0	28.7		ug/L		115	79 - 129		0	20
Ethyl t-butyl ether	25.0	26.8		ug/L		107	70 - 130		0	20
Surrogate		LCSD % Recovery	LCSD Qualifier				Limits			
4-Bromofluorobenzene		101					67 - 130			
1,2-Dichloroethane-d4 (Surr)		100					67 - 130			
Toluene-d8 (Surr)		99					70 - 130			

Lab Sample ID: LCSD 720-85879/9

Matrix: Water

Analysis Batch: 85879

Client Sample ID: LCSD 720-85879/9

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits		RPD Limit	
									RPD	Limit
Gasoline Range Organics (GRO) -C6-C12	500	414		ug/L		83	58 - 106		1	20
Surrogate		LCSD % Recovery	LCSD Qualifier				Limits			
4-Bromofluorobenzene		101					67 - 130			
1,2-Dichloroethane-d4 (Surr)		100					67 - 130			
Toluene-d8 (Surr)		101					70 - 130			

Quality Control Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11102, Oakland

TestAmerica Job ID: 720-33232-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-85906/4

Matrix: Water

Analysis Batch: 85906

Client Sample ID: MB 720-85906/4

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.50		ug/L			02/05/11 11:08	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		67 - 130					02/05/11 11:08	1
1,2-Dichloroethane-d4 (Surr)	99		67 - 130					02/05/11 11:08	1
Toluene-d8 (Surr)	101		70 - 130					02/05/11 11:08	1

Lab Sample ID: LCS 720-85906/5

Matrix: Water

Analysis Batch: 85906

Client Sample ID: LCS 720-85906/5

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits	
Benzene	25.0	25.1		ug/L		101	82 - 127	
Surrogate	% Recovery	Qualifier	Limits					
4-Bromofluorobenzene	102		67 - 130					
1,2-Dichloroethane-d4 (Surr)	95		67 - 130					
Toluene-d8 (Surr)	103		70 - 130					

Lab Sample ID: LCSD 720-85906/6

Matrix: Water

Analysis Batch: 85906

Client Sample ID: LCSD 720-85906/6

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits		RPD
									Limit
Benzene	25.0	25.4		ug/L		102	82 - 127	1	20
Surrogate	% Recovery	Qualifier	Limits						
4-Bromofluorobenzene	103		67 - 130						
1,2-Dichloroethane-d4 (Surr)	99		67 - 130						
Toluene-d8 (Surr)	103		70 - 130						

QC Association Summary

Client: ARCADIS U.S., Inc.
 Project/Site: BP #11102, Oakland

TestAmerica Job ID: 720-33232-1

GC/MS VOA

Analysis Batch: 85879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-33232-1	MW-1 (2/3/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-33232-2	MW-2 (2/3/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-33232-3	MW-3 (2/3/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-33232-4	MW-4 (2/3/11)	Total/NA	Water	8260B/CA_LUF TMS	
MB 720-85879/4	MB 720-85879/4	Total/NA	Water	8260B/CA_LUF TMS	
LCS 720-85879/5	LCS 720-85879/5	Total/NA	Water	8260B/CA_LUF TMS	
LCSD 720-85879/6	LCSD 720-85879/6	Total/NA	Water	8260B/CA_LUF TMS	
LCS 720-85879/8	LCS 720-85879/8	Total/NA	Water	8260B/CA_LUF TMS	
LCSD 720-85879/9	LCSD 720-85879/9	Total/NA	Water	8260B/CA_LUF TMS	

Analysis Batch: 85906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-33232-1	MW-1 (2/3/11)	Total/NA	Water	8260B/CA_LUF TMS	
MB 720-85906/4	MB 720-85906/4	Total/NA	Water	8260B/CA_LUF TMS	
LCS 720-85906/5	LCS 720-85906/5	Total/NA	Water	8260B/CA_LUF TMS	
LCSD 720-85906/6	LCSD 720-85906/6	Total/NA	Water	8260B/CA_LUF TMS	

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Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: BP #11102, Oakland

TestAmerica Job ID: 720-33232-1

Client Sample ID: MW-1 (2/3/11)

Date Collected: 02/03/11 15:00

Date Received: 02/04/11 14:24

Lab Sample ID: 720-33232-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1	85879	02/05/11 03:45	JZ	TestAmerica San Francisco
Total/NA	Analysis	8260B/CA_LUF TMS		1	85906	02/05/11 14:17	LL	TestAmerica San Francisco

Client Sample ID: MW-2 (2/3/11)

Date Collected: 02/03/11 15:10

Date Received: 02/04/11 14:24

Lab Sample ID: 720-33232-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		20	85879	02/05/11 04:15	JZ	TestAmerica San Francisco

Client Sample ID: MW-3 (2/3/11)

Date Collected: 02/03/11 15:25

Date Received: 02/04/11 14:24

Lab Sample ID: 720-33232-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		20	85879	02/05/11 04:46	JZ	TestAmerica San Francisco

Client Sample ID: MW-4 (2/3/11)

Date Collected: 02/03/11 15:30

Date Received: 02/04/11 14:24

Lab Sample ID: 720-33232-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1	85879	02/05/11 05:16	JZ	TestAmerica San Francisco

Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11102, Oakland

TestAmerica Job ID: 720-33232-1

Laboratory	Authority	Program	EPA Region	Certification ID	* Expiration Date
TestAmerica San Francisco	California	State Program	9	2496	01/31/12

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.

* Any expired certifications in this list are currently pending renewal and are considered valid.

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Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11102, Oakland

TestAmerica Job ID: 720-33232-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFT MS	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 #11102, Oakland

TestAmerica Job ID: 720-33232-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-33232-1	MW-1 (2/3/11)	Water	02/03/11 15:00	02/04/11 14:24
720-33232-2	MW-2 (2/3/11)	Water	02/03/11 15:10	02/04/11 14:24
720-33232-3	MW-3 (2/3/11)	Water	02/03/11 15:25	02/04/11 14:24
720-33232-4	MW-4 (2/3/11)	Water	02/03/11 15:30	02/04/11 14:24

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San Francisco
1220 Quarry Lane

Pleasanton, CA 94566
phone 925.484.1919 fax 925.600.3002

720-33232 Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
127573
TestAmerica Laboratories, Inc.

02/16/2011

Client Contact		Project Manager: Jason Duda				Site Contact:				Date:		COC No:				
Broadbent & Associates		Tel/Fax: (530) 566-1400/ (530) 566-1401				Lab Contact: Dimple Sharma				Carrier:		1 of 1 COCs				
1324 Mangrove Ave Suite 212		Analysis Turnaround Time				Filtered Sample GRO, BTEX, & 5 Oxy by 8260B 1,2 DCA and EDB by 8260B Ethanol by 8260B Acetone, Chloroform, Naphthalene, Trichloroethene by 8260B GRO by 8260B Diesel & Motor Oil by 8015B Sulfide by 4500.SZF Arsenic, Chromium & Lead by 6010B BTEX, 1,2-DCA, Acetone, Chloroform, MTBE, Naphthalene, TBA, & Trichloroethene by 8260B Acute Aquatic 96-hour LC50 Fathead Minnow				Job No.						
Chico, CA 95926		Calendar (C) or Work Days (W)								SDG No.						
(530) 566-1400		TAT if different from Below Standard								Sample Specific Notes:						
(530) 566-1401		<input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day														
Project Name: BP 11102																
Site: 100 MacArthur Blvd, Oakland, CA																
P O # GP09BPNA.C111																
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.										
MW-1 (2/3/11)		2/3/11	1500	G60	AQ	3U	X	X								
MW-2 (2/3/11)		↓	1510	↓	↓	↓	↓	↓								
MW-3 (2/3/11)		↓	1525	↓	↓	↓	↓	↓								
MW-4 (2/3/11)		↓	1550	↓	↓	↓	↓	↓								
TB-11102-2/3/11		2/3/11			AA	2V										Hold TB
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"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months										
Special Instructions/QC Requirements & Comments:																
Relinquished by:		Company: BAI		Date/Time: 2/4/11 1424		Received by:		TASF		Date/Time: 2/4/11 1424		G.O.C.				
Relinquished by:		Company:		Date/Time:		Received by:				Date/Time:						
Relinquished by:		Company:		Date/Time:		Received by:				Date/Time:						

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Login Sample Receipt Check List

Client: ARCADIS U.S., Inc.

Job Number: 720-33232-1

Login Number: 33232
Creator: Apostol, Anita
List Number: 1

List Source: TestAmerica San Francisco

Question	T / F / NA	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	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	



APPENDIX D

GEOTRACKER UPLOAD CONFIRMATION RECEIPTS

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!

<u>Submittal Type:</u>	GEO_WELL
<u>Submittal Title:</u>	1Q11 GEO_WELL 11102
<u>Facility Global ID:</u>	T0600100908
<u>Facility Name:</u>	BP #11102
<u>File Name:</u>	GEO_WELL.zip
<u>Organization Name:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	2/22/2011 2:53:38 PM
<u>Confirmation Number:</u>	1195840418

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!

<u>Submittal Type:</u>	EDF - Monitoring Report - Quarterly
<u>Submittal Title:</u>	1Q11 GW Monitoring
<u>Facility Global ID:</u>	T0600100908
<u>Facility Name:</u>	BP #11102
<u>File Name:</u>	720-33232-1.zip
<u>Organization Name:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	2/22/2011 2:54:12 PM
<u>Confirmation Number:</u>	1277341485

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[VIEW DETECTIONS REPORT](#)