

Atlantic Richfield Company

Chuck Carmel

Remediation Management Project Manager

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October 31, 2014

RECEIVED

By Alameda County Environmental Health at 10:39 am, Nov 03, 2014

Re: Third Quarter 2014 Monitoring Report
Atlantic Richfield Company Station #374
6407 Telegraph Avenue, Oakland, California
ACEH Case #RO0000078

"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,



Chuck Carmel
Remediation Management Project Manager

Attachment

October 31, 2014

Project No. 06-88-602

Atlantic Richfield Company
P.O. Box 1257
San Ramon, CA 94583
Submitted via ENFOS

Attn.: Mr. Chuck Carmel

Re: Third Quarter 2014 Monitoring Report, Atlantic Richfield Company Station #374,
6407 Telegraph Avenue, Oakland, Alameda County, California
ACEH Case #RO0000078

Dear Mr. Carmel

Attached is the *Third Quarter 2014 Monitoring Report* for Atlantic Richfield Company (a BP affiliated company) for Station #374 located at 6407 Telegraph Avenue, Oakland, California (Site). Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (707) 455-7290.

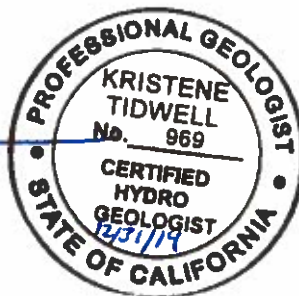
Sincerely,
BROADBENT & ASSOCIATES, INC.



Jessica Collado
Staff Scientist



Kristene Tidwell, P.G., C.H.G.
Associate Hydrogeologist



Enclosures

cc: Ms. Karol Detterman, Alameda County Environmental Health (Submitted via ACEH ftp site)
Electronic copy uploaded to GeoTracker

**THIRD QUARTER 2014
MONITORING REPORT
ATLANTIC RICHFIELD COMPANY STATION #374
OAKLAND, CALIFORNIA**

Broadbent & Associates, Inc. (Broadbent) is pleased to present this *Third Quarter 2014 Monitoring Report* on behalf of Atlantic Richfield Company (ARC, a BP affiliated company) for Station #374 located at 6407 Telegraph Avenue, Oakland, Alameda County, California (the Site). Monitoring activities at the Site were performed in accordance with an agency directive issued by the Alameda County Environmental Health (ACEH). Details of work performed, discussion of results, and recommendations are provided below.

Facility Name / Address:	Station #374 / 6407 Telegraph Avenue, Oakland, California
Client Project Manager / Title:	Mr. Chuck Carmel / Operations Project Manager
Broadbent Contact:	Ms. Kristene Tidwell, P.G., C.HG.
Broadbent Project No.:	06-88-602
Primary Regulatory Agency / ID No.:	ACEH / Case #RO0000078
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 (Third Quarter 2014):

1. Submitted *Second Quarter 2014 Status Report* on July 30, 2014.
2. Broadbent conducted Third Quarter 2014 groundwater monitoring and sampling event on August 15, 2014.

WORK SCHEDULED FOR NEXT QUARTER (Fourth Quarter 2014):

1. Submit *Third Quarter 2014 Monitoring Report* (contained herein).
2. Secure access agreement with adjacent property owner with assistance from ACEH.
3. Perform field activities described in the conditionally approved *Second Addendum to Soil Vapor Investigation Work Plan* (submitted June 27, 2014) within 30 days of secured off-Site access.
4. Submit a *Site Conceptual Model and Soil and Groundwater Investigation Report* within 60 days of securing offsite access.

QUARTERLY MONITORING PLAN SUMMARY:

Groundwater level gauging:	MW-1 through MW-9	(Semi-Annually, 1Q & 3Q)
Groundwater sample collection:	MW-1, MW-2, MW-4, MW-7, MW-8, and MW-9	(Semi-Annually, 1Q & 3Q)
	MW-3, MW-5, and MW-6	(Annually, 3Q)

QUARTERLY RESULTS SUMMARY:

LNAPL

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

Groundwater Elevation and Gradient:

Depth to groundwater:	2.84 (MW-6) to 8.65 (MW-8)	(ft below TOC)
Gradient direction:	South-Southwest	(compass direction)
Gradient magnitude:	0.03	(ft/ft)
Average change in elevation:	-0.65	(ft since last measurement)

Laboratory Analytical Data

Summary:

Analytical results are as follows:

- GRO was detected in two wells at a maximum concentration of 6,300 µg/L in well MW-4
 - Benzene was detected in one well at a concentration of 900 µg/L in well MW-4
 - MTBE was detected in seven wells at a maximum concentration of 120 µg/L in well MW-1
 - TAME was detected in three wells at a concentration of 0.73 µg/L in well MW-2
 - Ethylbenzene was detected in one well at a concentration of 38 µg/L in well MW-4
 - Total xylenes were detected in one well at a concentration of 92 µg/L in well MW-4
 - Toluene was detected in one well at a concentration of 45 µg/L in well MW-4
-

ACTIVITIES CONDUCTED & RESULTS:

Third Quarter 2014 groundwater monitoring was conducted on August 15, 2014 in accordance with the monitoring plan summary presented above. No irregularities were noted during water level gauging. Collected depth to water measurements ranged from 2.84 ft in monitoring well MW-6 to 8.65 ft in monitoring well MW-8. Resulting groundwater surface elevations ranged from 148.84 ft bgs in well MW-5 to 156.57 ft bgs in well MW-6. Groundwater elevations are summarized in Table 1. Water level elevations yielded a potentiometric groundwater gradient to the south-southwest at approximately 0.03 ft/ft. Historical groundwater gradient direction and magnitude data are summarized in Table 3. Field methods used during groundwater monitoring are provided in Appendix A. Field data sheets are included in Appendix B.

Groundwater samples collected from monitoring wells MW-1 through MW-9 were submitted to Test America Laboratories, Inc. (Test America) of Irvine, California for analysis of GRO, by EPA Method 8015B; BTEX, MTBE, ETBE, TAME, DIPE, TBA, EDB, 1,2-DCA, and ethanol by EPA Method 8260B. No significant irregularities were encountered during analysis of the samples. Laboratory analytical report and chain of custody record are provided in Appendix C.

Results of this sampling event are included in the laboratory analytical data summary presented above. These results indicate that the highest overall petroleum concentrations are present in well MW-4. The analytes detected this quarter are within historical concentration ranges. Further discussion of these results are presented below.

DISCUSSION:

Review of historical groundwater gradient data indicates that the gradient measured during Third Quarter 2014 monitoring is consistent with predominant measurements observed historically at the Site. During Third Quarter 2014, groundwater elevations decreased an average of 0.65 feet across the Site relative to measurements collected during First Quarter 2014.

Review of historical groundwater results indicate that well MW-4 contains the highest residual concentrations of petroleum compounds due to its location near the former Underground Storage Tank (UST). Petroleum hydrocarbon concentrations from the Third Quarter 2014 monitoring event were within historical ranges. Historical analytical data indicates decreasing trends for all Site wells.

Groundwater levels in several Site wells are currently above the top of their respective screen intervals. Ideally, groundwater samples would not be collected from wells where screens are flooded. In general, wells with flooded screens are older wells, where water levels over time may have risen. Additionally, these wells only periodically have flooded screens. For example, well MW-4 is one of the oldest Site wells, and has elevated residual petroleum concentrations.

The screen in this well is periodically flooded, with the concentrations noted during events when the screen is not flooded are comparable to those where the screen is flooded. Additionally, data from wells with lower hydrocarbon concentrations is comparable to site wells without flooded screens. For these reasons, the data reported herein appears valid despite the occurrence of flooded screens at the Site.

RECOMMENDATIONS:

Additional soil vapor and groundwater investigation activities will be carried out shortly as access to the adjacent property has just recently been secured. An updated conceptual site model (CSM) and investigation report will be submitted following these activities.

LIMITATIONS:

The findings presented in this report are based upon observations of field personnel, points investigated, results of laboratory tests performed by Test America and our understanding of ACEH guidelines. 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 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 Contour and Analytical Summary Map

- 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 Gradient - Direction and Magnitude

- Appendix A: Field Methods
- Appendix B: Field Data Sheets and Non-Hazardous Waste Data Form
- Appendix C: Laboratory Report and Chain-of-Custody Documentation
- Appendix D: GeoTracker Upload Confirmation Receipts

LIST OF COMMONLY USED ACRONYMS/ABBREVIATIONS:

ACEH	Alameda County Environmental Health	gal:	Gallons
ARC:	Atlantic Richfield Company	GRO:	Gasoline Range Organics (C6-12)
BAI:	Broadbent & Associates, Inc.	LNAPL:	Light Non-Aqueous Phase Liquid
BTEX:	Benzene, Toluene, Ethylbenzene, Total Xylenes	MTBE:	Methyl Tertiary Butyl Ether
1,2-DCA:	1,2-Dichloroethane	TAME:	Tert-Amyl Methyl Ether
DIPE:	Di-Isopropyl Ether	TBA:	Tert-Butyl Alcohol
EDB:	1,2-Dibromomethane	TOC:	Top Of Casing
ft/ft:	Feet Per Foot	µg/L:	Micrograms Per Liter
UST:	Underground Storage Tank	ft bgs:	Feet Below Ground Surface

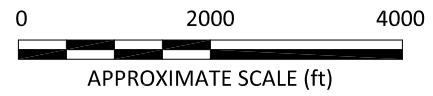
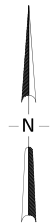
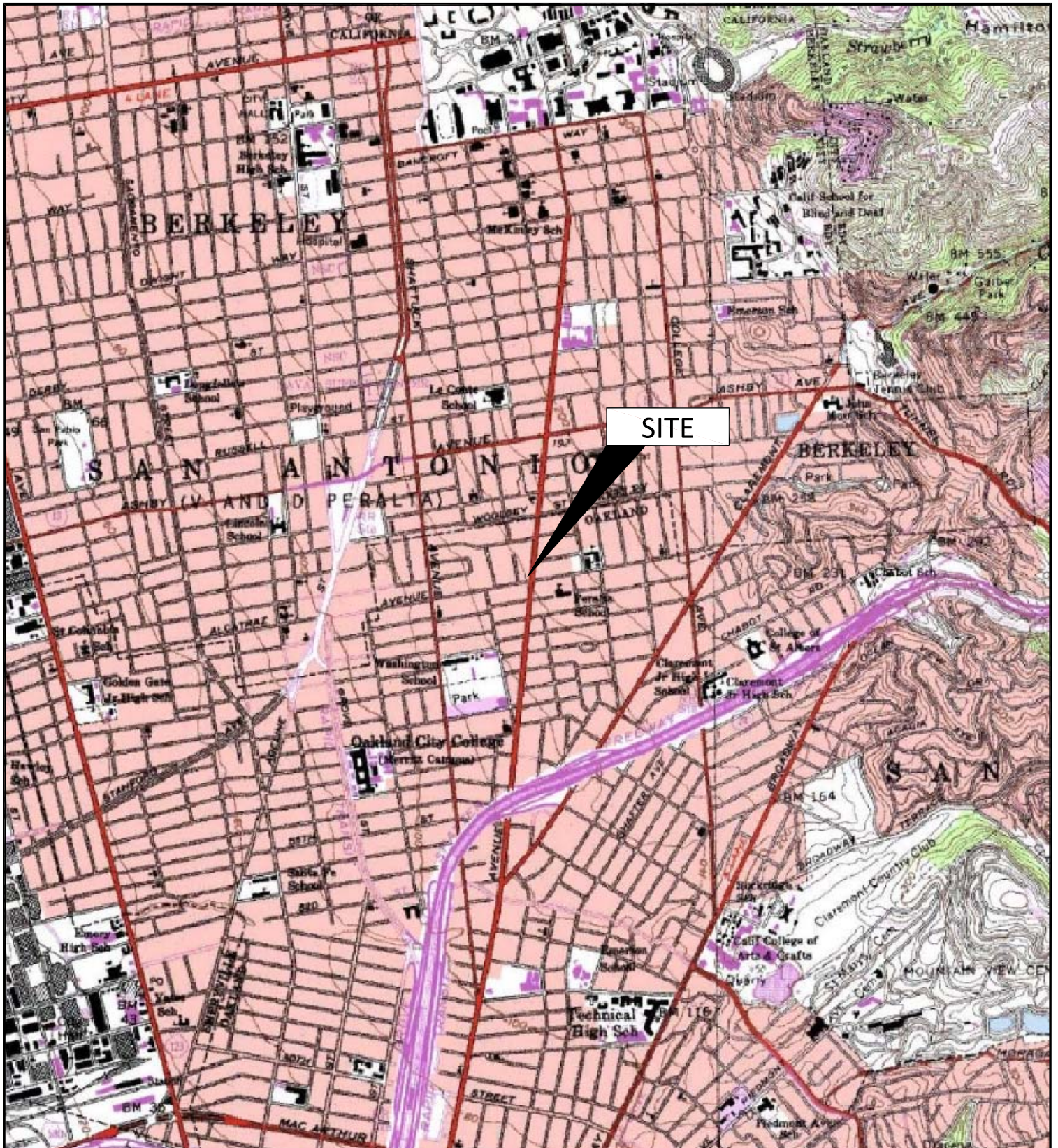


IMAGE SOURCE: USGS

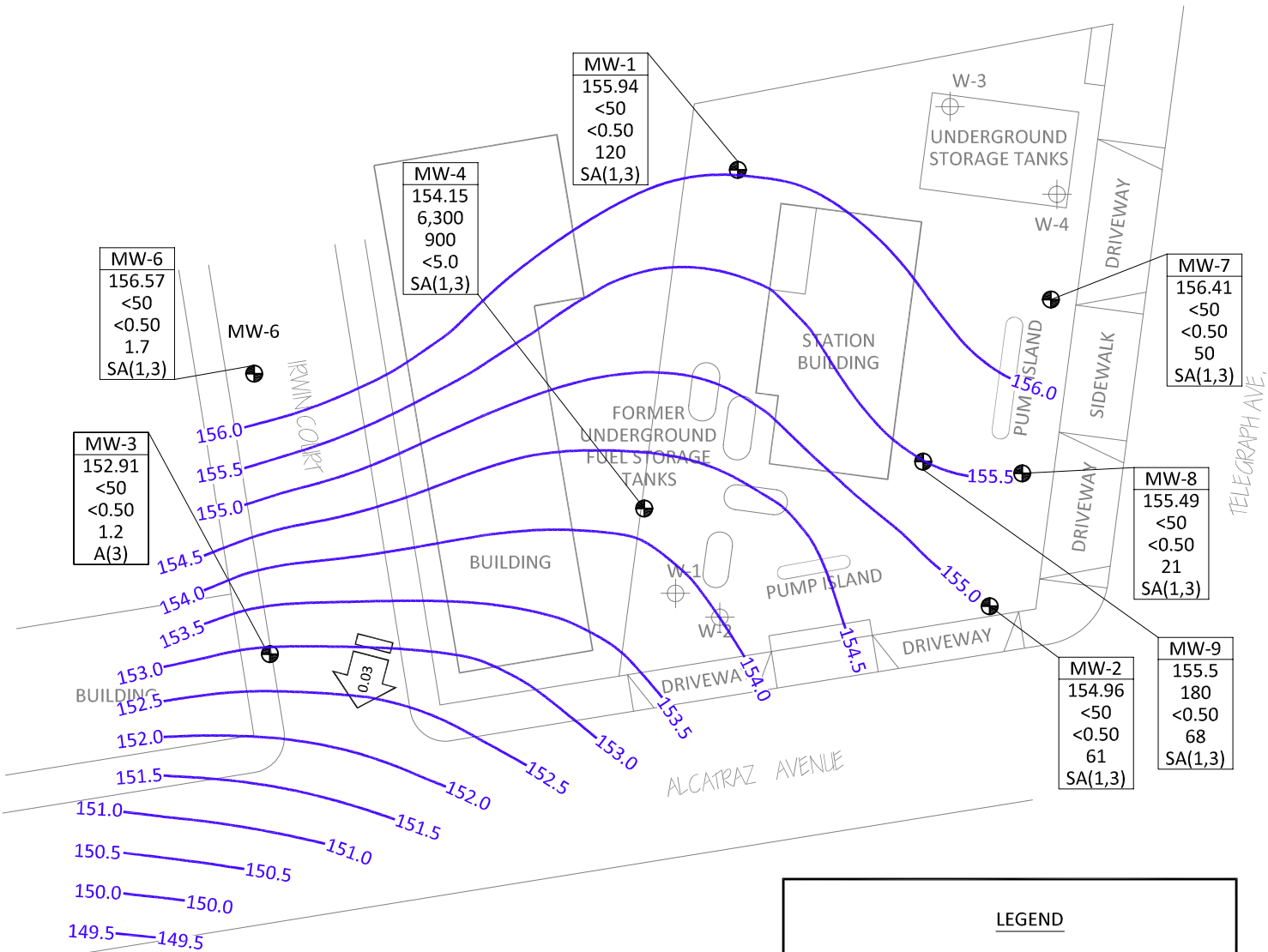
BROADBENT
 875 Cotting Lane, Suite G
 Vacaville, California 95688
 Project No.: 06-88-602 Date: 3/8/2013

Station #374
 6407 Telegraph Ave.
 Oakland, California

Site Location Map

Drawing

1



MW-6
156.57
<50
<0.50
1.7
SA(1,3)

MW-4
154.15
6,300
900
<5.0
SA(1,3)

MW-1
155.94
<50
<0.50
120
SA(1,3)

MW-7
156.41
<50
<0.50
50
SA(1,3)

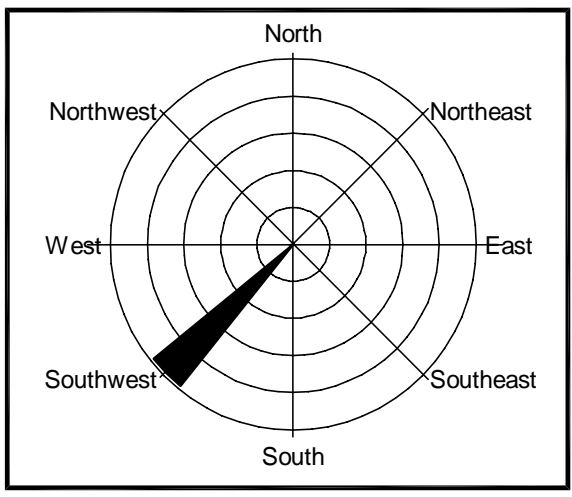
MW-3
152.91
<50
<0.50
1.2
A(3)

MW-8
155.49
<50
<0.50
21
SA(1,3)

MW-2
154.96
<50
<0.50
61
SA(1,3)

MW-9
155.5
180
<0.50
68
SA(1,3)

MW-5
148.84
<50
<0.50
<0.50
A(3)



LEGEND

- Monitor Well Location
- Tank Pit Monitor Well Location
- Groundwater Elevation Contour (Feet Above Site Datum)
- Groundwater Gradient (ft/ft)
- A(3) Sampled Annually - Third Quarter
- SA(1,3) Sampled Semi-Annually - First and Third Quarter

WELL	Well Designation
ELEV	Groundwater Elevation (ft)
GRO	GRO, Benzene, and MTBE
BZ	Concentrations (µg/L)
MTBE	
A/SA/Q	Sampling Frequency

NS Not Sampled



NOTE: SITE MAP ADAPTED FROM IT CORPORATION FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses

ARCO Service Station #0374, 6407 Telegraph Ave., Oakland, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
ESL - DW							100	1.0	40	30	20	5.0			
ESL - NDW							210	46	130	43	100	1,800			
MW-1															
6/20/2000	--	158.91	7.00	27.00	6.86	152.05	--	--	--	--	--	--	--	--	
9/28/2000	--		7.00	27.00	7.50	151.41	--	--	--	--	--	--	--	--	
12/17/2000	--		7.00	27.00	7.49	151.42	--	--	--	--	--	--	--	--	
3/23/2001	--		7.00	27.00	5.90	153.01	<50	<0.5	<0.5	<0.5	<0.5	2,710	--	--	
6/21/2001	--		7.00	27.00	7.45	151.46	--	--	--	--	--	--	--	--	
9/23/2001	--		7.00	27.00	8.46	150.45	--	--	--	--	--	--	--	--	
12/31/2001	--		7.00	27.00	5.50	153.41	--	--	--	--	--	--	--	--	
3/21/2002	--		7.00	27.00	4.71	154.20	<5,000	<50	<50	<50	<50	2,000	--	--	
4/17/2002	--		7.00	27.00	5.54	153.37	--	--	--	--	--	--	--	--	
8/12/2002	--		7.00	27.00	7.77	151.14	--	--	--	--	--	--	--	--	
12/6/2002	--		7.00	27.00	7.65	151.26	--	--	--	--	--	--	--	--	
1/29/2003	--		7.00	27.00	5.88	153.03	--	--	--	--	--	--	--	--	b
5/23/2003	--		7.00	27.00	5.62	153.29	<10,000	<100	<100	<100	<100	1,600	1.3	7.1	
9/4/2003	--		7.00	27.00	7.85	151.06	--	--	--	--	--	--	--	--	
11/20/2003	P		7.00	27.00	8.17	150.74	1,600	<10	<10	<10	<10	1,500	1.7	6.7	
2/2/2004	P	164.57	7.00	27.00	6.71	157.86	--	--	--	--	--	--	1.0	--	f
5/14/2004	P		7.00	27.00	7.08	157.49	<2,500	<25	<25	<25	<25	1,200	1.4	6.6	
9/2/2004	P		7.00	27.00	8.12	156.45	580	<5.0	<5.0	<5.0	<5.0	660	3.8	6.7	
11/4/2004	P		7.00	27.00	7.38	157.19	1,700	<10	<10	<10	<10	580	6.0	6.5	
2/8/2005	P		7.00	27.00	6.60	157.97	<1,000	<10	<10	<10	<10	610	0.71	6.5	
5/9/2005	P		7.00	27.00	6.84	157.73	540	<5.0	<5.0	<5.0	5.5	620	3.12	6.6	e
8/11/2005	P		7.00	27.00	7.36	157.21	540	<2.5	<2.5	<2.5	4.0	390	0.8	6.6	
11/18/2005	P		7.00	27.00	8.02	156.55	350	<2.5	<2.5	<2.5	<2.5	340	2.6	6.7	e
2/16/2006	P		7.00	27.00	6.44	158.13	350	<2.5	<2.5	<2.5	<2.5	340	1.6	6.7	e
5/30/2006	P		7.00	27.00	6.87	157.70	270	<2.5	<2.5	<2.5	<2.5	420	4.73	6.4	
8/24/2006	P		7.00	27.00	7.75	156.82	95	<5.0	<5.0	<5.0	<5.0	180	0.65	6.9	
11/1/2006	P		7.00	27.00	8.28	156.29	120	<5.0	<5.0	<5.0	<5.0	220	1.65	7.07	
2/7/2007	NP		7.00	27.00	7.40	157.17	120	<5.0	<5.0	<5.0	<5.0	190	1.88	7.45	e

Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses

ARCO Service Station #0374, 6407 Telegraph Ave., Oakland, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
ESL - DW							100	1.0	40	30	20	5.0			
ESL - NDW							210	46	130	43	100	1,800			
MW-1 Cont.															
5/8/2007	P	164.57	7.00	27.00	6.50	158.07	<500	<5.0	<5.0	<5.0	<5.0	420	1.21	6.94	
8/8/2007	NP		7.00	27.00	8.17	156.40	82	<0.50	<0.50	<0.50	<0.50	110	1.16	7.00	e
11/14/2007	NP		7.00	27.00	8.01	156.56	170	<2.5	<2.5	<2.5	<2.5	210	1.92	6.49	
2/22/2008	P		7.00	27.00	6.00	158.57	<50	<0.50	<0.50	<0.50	<0.50	250	2.57	6.65	
5/24/2008	NP		7.00	27.00	7.58	156.99	<50	<5.0	<5.0	<5.0	<5.0	380	2.28	6.81	
8/21/2008	NP		7.00	27.00	8.60	155.97	<50	<2.5	<2.5	<2.5	<2.5	170	2.16	6.98	
11/19/2008	NP		7.00	27.00	8.88	155.69	<50	<0.50	<0.50	<0.50	<0.50	30	2.12	7.27	
2/23/2009	P		7.00	27.00	6.40	158.17	78	<2.5	<2.5	<2.5	<2.5	240	2.19	6.03	
5/14/2009	P		7.00	27.00	6.67	157.90	53	<0.50	<0.50	<0.50	<0.50	200	1.75	6.69	
8/20/2009	NP		7.00	27.00	8.25	156.32	150	<2.0	<2.0	<2.0	<2.0	170	2.14	6.25	i (GRO)
2/19/2010	P		7.00	27.00	6.07	158.50	<50	<0.50	<0.50	<0.50	<0.50	170	0.92	6.66	
8/10/2010	NP		7.00	27.00	7.58	156.99	<50	<2.5	<2.5	<2.5	<2.5	230	3.86	7.1	
12/16/2010	P	164.45	7.00	27.00	6.64	157.81	<50	<2.0	<2.0	<2.0	<2.0	140	1.20	6.86	j
2/14/2011	NP		7.00	27.00	7.10	157.35	<50	<2.5	<2.5	<2.5	<2.5	170	1.18	6.7	
5/20/2011	--		7.00	27.00	6.38	158.07	--	--	--	--	--	--	--	--	
8/15/2011	NP		7.00	27.00	7.24	157.21	<50	<2.5	<2.5	<2.5	<2.5	130	2.54	6.9	
2/2/2012	P		7.00	27.00	7.32	157.13	<50	<1.0	<1.0	<1.0	<1.0	66	1.01	7.1	
8/9/2012	P		7.00	27.00	6.69	157.76	<50	<0.50	<0.50	<0.50	<1.0	170	1.65	6.99	
2/14/2013	P		7.00	27.00	5.97	158.48	<50	<0.50	<0.50	<0.50	<1.0	140	1.74	7.20	
8/22/2013	P		7.00	27.00	7.87	156.58	<50	<0.50	<0.50	<0.50	<1.0	91	5.69	7.21	
2/11/2014	P		7.00	27.00	7.75	156.70	<50	<0.50	<0.50	<0.50	<1.0	26	2.02	7.04	
8/15/2014	P		7.00	27.00	8.51	155.94	<50	<0.50	<0.50	<0.50	<1.0	120	1.82	6.70	
MW-2															
6/20/2000	--	157.92	7.00	27.00	7.67	150.25	--	--	--	--	--	--	--	--	
9/28/2000	--		7.00	27.00	8.51	149.41	--	--	--	--	--	--	--	--	
12/17/2000	--		7.00	27.00	8.14	149.78	--	--	--	--	--	--	--	--	
3/23/2001	--		7.00	27.00	7.21	150.71	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
6/21/2001	--		7.00	27.00	7.99	149.93	--	--	--	--	--	--	--	--	

Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses

ARCO Service Station #0374, 6407 Telegraph Ave., Oakland, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
ESL - DW							100	1.0	40	30	20	5.0			
ESL - NDW							210	46	130	43	100	1,800			
MW-2 Cont.															
9/23/2001	--	157.92	7.00	27.00	8.52	149.40	--	--	--	--	--	--	--	--	
12/31/2001	--		7.00	27.00	6.01	151.91	--	--	--	--	--	--	--	--	
3/21/2002	--		7.00	27.00	5.95	151.97	<50	<0.5	<0.5	<0.5	<0.5	45	--	--	
4/17/2002	--		7.00	27.00	6.45	151.47	--	--	--	--	--	--	--	--	
8/12/2002	--		7.00	27.00	8.08	149.84	--	--	--	--	--	--	--	--	
12/6/2002	--		7.00	27.00	8.29	149.63	--	--	--	--	--	--	--	--	
1/29/2003	--		7.00	27.00	7.22	150.70	--	--	--	--	--	--	--	--	b
5/23/2003	--		7.00	27.00	6.85	151.07	<50	<0.50	<0.50	<0.50	<0.50	55	1.4	7.2	
9/4/2003	--		7.00	27.00	7.94	149.98	--	--	--	--	--	--	--	--	
11/20/2003	--		7.00	27.00	8.05	149.87	--	--	--	--	--	--	--	--	
2/2/2004	P	163.46	7.00	27.00	7.00	156.46	74	<0.50	<0.50	<0.50	<0.50	37	1.1	8.9	f
5/14/2004	--		7.00	27.00	7.97	155.49	--	--	--	--	--	--	--	--	
9/2/2004	P		7.00	27.00	8.19	155.27	<250	<2.5	<2.5	<2.5	<2.5	67	2.7	6.9	
11/4/2004	--		7.00	27.00	7.54	155.92	--	--	--	--	--	--	--	--	
2/8/2005	P		7.00	27.00	6.72	156.74	<50	<0.50	<0.50	<0.50	<0.50	30	0.86	6.7	
5/9/2005	--		7.00	27.00	7.16	156.30	--	--	--	--	--	--	--	--	
8/11/2005	P		7.00	27.00	7.85	155.61	<50	<0.50	<0.50	<0.50	<0.50	35	1.0	6.6	
11/18/2005	--		7.00	27.00	8.23	155.23	--	--	--	--	--	--	--	--	
2/16/2006	P		7.00	27.00	6.82	156.64	<50	<0.50	<0.50	<0.50	<0.50	39	1.3	7.0	
5/30/2006	--		7.00	27.00	7.23	156.23	--	--	--	--	--	--	--	--	
8/24/2006	P		7.00	27.00	8.00	155.46	60	<0.50	<0.50	<0.50	<0.50	25	0.90	6.8	
11/1/2006	--		7.00	27.00	8.38	155.08	--	--	--	--	--	--	--	--	
2/7/2007	NP		7.00	27.00	7.88	155.58	<50	0.50	<0.50	<0.50	<0.50	7.2	0.94	7.39	
5/8/2007	--		7.00	27.00	7.28	156.18	--	--	--	--	--	--	--	--	
8/8/2007	NP		7.00	27.00	8.38	155.08	88	3.2	<0.50	<0.50	<0.50	7.2	0.94	7.75	
11/14/2007	--		7.00	27.00	8.10	155.36	--	--	--	--	--	--	--	--	
2/22/2008	P		7.00	27.00	6.75	156.71	<50	<0.50	<0.50	<0.50	<0.50	24	2.18	7.02	
5/24/2008	--		7.00	27.00	7.98	155.48	--	--	--	--	--	--	--	--	

Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses

ARCO Service Station #0374, 6407 Telegraph Ave., Oakland, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
ESL - DW							100	1.0	40	30	20	5.0			
ESL - NDW							210	46	130	43	100	1,800			
MW-2 Cont.															
8/21/2008	NP	163.46	7.00	27.00	8.58	154.88	<50	2.6	<0.50	<0.50	<0.50	4.9	2.20	7.11	
11/19/2008	--		7.00	27.00	8.66	154.80	--	--	--	--	--	--	--	--	
2/23/2009	P		7.00	27.00	6.67	156.79	74	1.0	<0.50	<0.50	<0.50	24	2.25	6.16	
5/14/2009	--		7.00	27.00	7.02	156.44	--	--	--	--	--	--	--	--	
8/20/2009	NP		7.00	27.00	8.41	155.05	82	2.4	<0.50	<0.50	<0.50	8.4	2.19	6.37	
2/19/2010	NP		7.00	27.00	7.36	156.10	<50	<0.50	<0.50	<0.50	<0.50	22	0.81	6.90	
8/10/2010	NP		7.00	27.00	7.69	155.77	<50	<0.50	<0.50	<0.50	<0.50	23	2.40	7.67	
12/16/2010	P	163.49	7.00	27.00	7.12	156.37	<50	<0.50	<0.50	<0.50	<0.50	17	0.69	7.06	j
2/14/2011	NP		7.00	27.00	7.35	156.14	<50	<0.50	<0.50	<0.50	<0.50	11	0.87	7.0	
5/20/2011	--		7.00	27.00	7.02	156.47	--	--	--	--	--	--	--	--	
8/15/2011	NP		7.00	27.00	7.62	155.87	<50	<0.50	<0.50	<0.50	<0.50	1.7	1.45	7.1	
2/2/2012	P		7.00	27.00	7.56	155.93	<50	<0.50	<0.50	<0.50	<0.50	1.8	0.85	7.3	
8/9/2012	P		7.00	27.00	6.31	157.18	<50	<0.50	<0.50	<0.50	<1.0	73	1.28	7.15	
2/14/2013	P		7.00	27.00	6.03	157.46	<50	<0.50	<0.50	<0.50	<1.0	46	1.71	7.48	
8/22/2013	P		7.00	27.00	7.79	155.70	<50	<0.50	<0.50	<0.50	<1.0	82	4.16	7.23	
2/11/2014	P		7.00	27.00	7.12	156.37	<50	<0.50	<0.50	<0.50	<1.0	7.5	2.32	6.65	
8/15/2014	P		7.00	27.00	8.53	154.96	<50	<0.50	<0.50	<0.50	<1.0	61	2.90	6.02	
MW-3															
6/20/2000	--	153.64	7.00	27.00	6.42	147.22	<50	<0.5	<0.5	<0.5	<1.0	<10	--	--	
9/28/2000	--		7.00	27.00	7.31	146.33	--	--	--	--	--	--	--	--	
12/17/2000	--		7.00	27.00	6.45	147.19	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
3/23/2001	--		7.00	27.00	6.01	147.63	--	--	--	--	--	--	--	--	
6/21/2001	--		7.00	27.00	6.80	146.84	110	5.5	<0.5	5.4	4.1	2.5	--	--	
9/23/2001	--		7.00	27.00	7.32	146.32	--	--	--	--	--	--	--	--	
12/31/2001	--		7.00	27.00	4.48	149.16	<50	<0.5	<0.5	<0.5	<0.5	4.9	--	--	
3/21/2002	--		7.00	27.00	4.36	149.28	--	--	--	--	--	--	--	--	
4/17/2002	--		7.00	27.00	5.31	148.33	<50	<0.5	<0.5	<0.5	<0.5	8.7	--	--	
8/12/2002	--		7.00	27.00	7.00	146.64	--	--	--	--	--	--	--	--	

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ARCO Service Station #0374, 6407 Telegraph Ave., Oakland, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
ESL - DW							100	1.0	40	30	20	5.0			
ESL - NDW							210	46	130	43	100	1,800			
MW-3 Cont.															
12/6/2002	--	153.64	7.00	27.00	7.32	146.32	<50	<0.5	<0.5	<0.5	<0.5	6.2	1.4	6.7	
1/29/2003	--		7.00	27.00	6.07	147.57	--	--	--	--	--	--	--	--	b
5/23/2003	--		7.00	27.00	6.45	147.19	<50	<0.50	<0.50	<0.50	<0.50	1.6	0.9	7.7	
9/4/2003	--		7.00	27.00	6.93	146.71	--	--	--	--	--	--	--	--	c
11/20/2003	--		7.00	27.00	7.04	146.60	--	--	--	--	--	--	--	--	c
2/2/2004	--	159.21	7.00	27.00	5.92	153.29	--	--	--	--	--	--	--	--	f
5/14/2004	--		7.00	27.00	7.52	151.69	--	--	--	--	--	--	--	--	
9/2/2004	P		7.00	27.00	7.19	152.02	<50	<0.50	<0.50	<0.50	<0.50	6.5	9.3	8.9	
11/4/2004	--		7.00	27.00	6.40	152.81	--	--	--	--	--	--	--	--	
2/8/2005	--		7.00	27.00	6.01	153.20	--	--	--	--	--	--	--	--	
5/9/2005	--		7.00	27.00	6.74	152.47	--	--	--	--	--	--	--	--	
8/11/2005	P		7.00	27.00	6.77	152.44	<50	<0.50	<0.50	<0.50	<0.50	11	1.9	6.5	
11/18/2005	--		7.00	27.00	7.83	151.38	--	--	--	--	--	--	--	--	
2/16/2006	--		7.00	27.00	7.26	151.95	--	--	--	--	--	--	--	--	
5/30/2006	--		7.00	27.00	5.82	153.39	--	--	--	--	--	--	--	--	
8/24/2006	P		7.00	27.00	7.00	152.21	<50	<0.50	<0.50	<0.50	<0.50	7.6	1.15	6.4	
11/1/2006	--		7.00	27.00	7.50	151.71	--	--	--	--	--	--	--	--	
2/7/2007	--		7.00	27.00	6.90	152.31	--	--	--	--	--	--	--	--	
5/8/2007	--		7.00	27.00	5.95	153.26	--	--	--	--	--	--	--	--	
8/8/2007	NP		7.00	27.00	7.47	151.74	<50	<0.50	<0.50	<0.50	<0.50	1.2	1.21	6.93	
11/14/2007	--		7.00	27.00	7.05	152.16	--	--	--	--	--	--	--	--	
2/22/2008	--		7.00	27.00	5.50	153.71	--	--	--	--	--	--	--	--	
5/24/2008	--		7.00	27.00	7.03	152.18	--	--	--	--	--	--	--	--	
8/21/2008	NP		7.00	27.00	7.80	151.41	<50	<0.50	<0.50	<0.50	<0.50	3.1	2.11	6.84	
11/19/2008	--		7.00	27.00	7.69	151.52	--	--	--	--	--	--	--	--	
2/23/2009	--		7.00	27.00	7.28	151.93	--	--	--	--	--	--	--	--	
5/14/2009	--		7.00	27.00	6.17	153.04	--	--	--	--	--	--	--	--	
8/20/2009	NP		7.00	27.00	7.38	151.83	<50	<0.50	<0.50	<0.50	<0.50	2.2	2.05	7.01	

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Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
ESL - DW							100	1.0	40	30	20	5.0			
ESL - NDW							210	46	130	43	100	1,800			
MW-3 Cont.															
2/19/2010	--	159.21	7.00	27.00	5.31	153.90	--	--	--	--	--	--	--	--	
8/10/2010	NP		7.00	27.00	7.12	152.09	<50	<0.50	<0.50	<0.50	<0.50	1.6	1.27	7.33	
12/16/2010	--		7.00	27.00	5.65	153.56	--	--	--	--	--	--	--	--	j
2/14/2011	--		7.00	27.00	6.20	153.01	--	--	--	--	--	--	--	--	
5/20/2011	--		7.00	27.00	5.77	153.44	--	--	--	--	--	--	--	--	
8/15/2011	P		7.00	27.00	6.41	152.80	<50	<0.50	<0.50	<0.50	<0.50	1.2	1.04	7.0	
2/2/2012	--		7.00	27.00	6.34	152.87	--	--	--	--	--	--	--	--	
8/9/2012	P		7.00	27.00	6.62	152.59	<50	<0.50	<0.50	<0.50	<1.0	2.0	1.16	6.71	
2/14/2013	--		7.00	27.00	6.09	153.12	--	--	--	--	--	--	--	--	
8/22/2013	P		7.00	27.00	7.15	152.06	<50	<0.50	<0.50	<0.50	<1.0	1.4	4.35	6.72	
2/11/2014	--		7.00	27.00	5.79	153.42	--	--	--	--	--	--	--	--	
8/15/2014	P		7.00	27.00	6.30	152.91	<50	<0.50	<0.50	<0.50	<1.0	1.2	0.15	6.12	
MW-4															
6/20/2000	--	156.53	7.00	27.00	7.50	149.03	20,000	5,100	440	1,000	1,700	<250	--	--	c
9/28/2000	--		7.00	27.00	8.20	148.33	--	--	--	--	--	--	--	--	
12/17/2000	--		7.00	27.00	8.11	148.42	4,320	1,240	<20	27.2	249	<100	--	--	
3/23/2001	--		7.00	27.00	6.69	149.84	--	--	--	--	--	--	--	--	
6/21/2001	--		7.00	27.00	8.01	148.52	2,800	470	16	19	160	130	--	--	
9/23/2001	--		7.00	27.00	8.91	147.62	--	--	--	--	--	--	--	--	
12/31/2001	--		7.00	27.00	4.42	152.11	4,600	1,500	100	160	210	160	--	--	
3/21/2002	--		7.00	27.00	4.98	151.55	--	--	--	--	--	--	--	--	
4/17/2002	--		7.00	27.00	6.23	150.30	7,100	2,200	110	290	450	<250	--	--	
8/12/2002	--		7.00	27.00	8.24	148.29	--	--	--	--	--	--	--	--	
12/6/2002	--		7.00	27.00	8.42	148.11	1,500	410	6.8	20	29	43	1.1	6.7	a
1/29/2003	--		7.00	27.00	7.20	149.33	--	--	--	--	--	--	--	--	b
5/23/2003	--		7.00	27.00	7.18	149.35	<5,000	1,300	89	210	260	<50	1.4	6.9	
9/4/2003	--		7.00	27.00	8.15	148.38	--	--	--	--	--	--	--	--	c
11/20/2003	--		7.00	27.00	8.73	147.80	--	--	--	--	--	--	--	--	c

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							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
ESL - DW							100	1.0	40	30	20	5.0			
ESL - NDW							210	46	130	43	100	1,800			
MW-4 Cont.															
2/2/2004	P	163.25	7.00	27.00	6.25	157.00	980	280	21	29	38	29	1.4	10.6	c, f, g
5/14/2004	--		7.00	27.00	8.38	154.87	--	--	--	--	--	--	--	--	g
9/2/2004	P		7.00	27.00	8.36	154.89	260	11	<1.0	5.5	14	28	2.4	7.4	g
11/4/2004	--		7.00	27.00	7.71	155.54	--	--	--	--	--	--	--	--	c, g
2/8/2005	P		7.00	27.00	6.27	156.98	7,500	1,700	320	480	920	45	0.65	6.5	g
5/9/2005	--		7.00	27.00	5.90	157.35	--	--	--	--	--	--	--	--	g
8/11/2005	P		7.00	27.00	7.96	155.29	3,100	1,100	41	160	110	32	0.6	6.5	g
11/18/2005	--		7.00	27.00	8.57	154.68	--	--	--	--	--	--	--	--	g
2/16/2006	P		7.00	27.00	6.28	156.97	9,400	1,800	130	600	420	35	0.5	6.8	g
5/30/2006	--	162.47	7.00	27.00	7.02	155.45	--	--	--	--	--	--	--	--	g
8/24/2006	P		7.00	27.00	8.26	154.21	3,600	1,400	21	110	70	39	1.00	6.8	
11/1/2006	--		7.00	27.00	8.67	153.80	--	--	--	--	--	--	--	--	
2/7/2007	NP		7.00	27.00	8.02	154.45	3,100	570	17	170	110	67	0.95	7.07	
5/8/2007	--		7.00	27.00	7.03	155.44	--	--	--	--	--	--	--	--	
8/8/2007	NP		7.00	27.00	8.60	153.87	2,900	630	22	67	57	72	0.93	6.79	
11/14/2007	--		7.00	27.00	8.53	153.94	--	--	--	--	--	--	--	--	
2/22/2008	P		7.00	27.00	6.25	156.22	3,900	880	39	180	92	70	2.31	6.87	
5/24/2008	--		7.00	27.00	--	--	--	--	--	--	--	--	--	--	d
8/21/2008	NP		7.00	27.00	8.96	153.51	3,700	1,100	26	85	130	53	2.26	6.80	
11/19/2008	--		7.00	27.00	9.20	153.27	--	--	--	--	--	--	--	--	
2/23/2009	P		7.00	27.00	6.35	156.12	3,000	220	9.1	23	19	39	2.21	6.51	
5/14/2009	--		7.00	27.00	7.00	155.47	--	--	--	--	--	--	--	--	
8/20/2009	NP		7.00	27.00	8.05	154.42	5,700	1,100	35	110	100	23	2.17	6.81	
2/19/2010	P		7.00	27.00	5.71	156.76	12,000	1,200	120	230	390	<5.0	0.81	6.70	i
8/10/2010	NP		7.00	27.00	7.59	154.88	9,700	1,500	120	400	400	<20	3.81	6.8	
12/16/2010	P	162.48	7.00	27.00	6.83	155.65	15,000	1,800	82	270	210	<25	0.49	6.81	j
2/14/2011	NP		7.00	27.00	7.33	155.15	260	<0.50	<0.50	2.7	11	13	0.80	7.10	
5/20/2011	--		7.00	27.00	6.89	155.59	--	--	--	--	--	--	--	--	

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							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
ESL - DW							100	1.0	40	30	20	5.0			
ESL - NDW							210	46	130	43	100	1,800			
MW-4 Cont.															
8/15/2011	P	162.48	7.00	27.00	7.59	154.89	8,600	2,100	86	250	210	<12	1.02	7.0	I
2/2/2012	P		7.00	27.00	7.71	154.77	4,600	1,000	34	23	33	<12	0.60	7.2	
8/9/2012	P		7.00	27.00	6.57	155.91	3,200	660	44	53	57	<5.0	1.09	7.05	
2/14/2013	P		7.00	27.00	6.26	156.22	7,200	1,400	150	390	700	<10	1.20	7.51	
8/22/2013	P		7.00	27.00	7.59	154.89	6,900	1,600	100	120	330	<10	4.50	6.98	
2/11/2014	P		7.00	27.00	7.13	155.35	140	800	80	84	230	<5.0	1.03	6.65	
8/15/2014	P		7.00	27.00	8.33	154.15	6,300	900	45	38	92	<5.0	0.21	6.14	
MW-5															
6/20/2000	--	151.33	10.00	23.00	7.84	143.49	<50	<0.5	<0.5	<0.5	<1.0	<10	--	--	
9/28/2000	--		10.00	23.00	8.37	142.96	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
12/17/2000	--		10.00	23.00	8.36	142.97	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
3/23/2001	--		10.00	23.00	7.55	143.78	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
6/21/2001	--		10.00	23.00	8.20	143.13	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
9/23/2001	--		10.00	23.00	8.68	142.65	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
12/31/2001	--		10.00	23.00	7.57	143.76	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
3/21/2002	--		10.00	23.00	6.12	145.21	<50	<0.5	<0.5	<0.5	<0.5	3.2	--	--	
4/17/2002	--		10.00	23.00	6.61	144.72	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
8/12/2002	--		10.00	23.00	8.14	143.19	<50	<0.5	<0.5	<0.5	<0.5	<2.5	4.1	7.6	
12/6/2002	--		10.00	23.00	8.65	142.68	<50	<0.5	<0.5	<0.5	<0.5	<2.5	1.1	6.8	
1/29/2003	--		10.00	23.00	7.22	144.11	<50	<0.5	<0.5	<0.5	<0.5	<0.50	1	6.6	b
5/23/2003	--		10.00	23.00	7.31	144.02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	6.6	
9/4/2003	--		10.00	23.00	9.50	141.83	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.2	6.7	
11/20/2003	--		10.00	23.00	8.31	143.02	--	--	--	--	--	--	--	--	
2/2/2004	--		10.00	23.00	6.92	144.41	--	--	--	--	--	--	--	--	c, f, h
5/14/2004	--		10.00	23.00	8.56	142.77	--	--	--	--	--	--	--	--	h
9/2/2004	P		10.00	23.00	8.79	142.54	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.5	6.8	h
11/4/2004	--		10.00	23.00	8.33	143.00	--	--	--	--	--	--	--	--	c, h
2/8/2005	--		10.00	23.00	7.28	144.05	--	--	--	--	--	--	--	--	h

Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses

ARCO Service Station #0374, 6407 Telegraph Ave., Oakland, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
ESL - DW							100	1.0	40	30	20	5.0			
ESL - NDW							210	46	130	43	100	1,800			
MW-5 Cont.															
5/9/2005	--	151.33	10.00	23.00	8.19	143.14	--	--	--	--	--	--	--	--	h
8/11/2005	P		10.00	23.00	8.39	142.94	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.2	6.6	h
11/18/2005	--		10.00	23.00	11.25	140.08	--	--	--	--	--	--	--	--	h
2/16/2006	--		10.00	23.00	9.22	142.11	--	--	--	--	--	--	--	--	h
5/30/2006	--		10.00	23.00	7.52	143.81	--	--	--	--	--	--	--	--	h
8/24/2006	P		10.00	23.00	7.95	143.38	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.60	6.6	
11/1/2006	--		10.00	23.00	8.32	143.01	--	--	--	--	--	--	--	--	
2/7/2007	--		10.00	23.00	8.25	143.08	--	--	--	--	--	--	--	--	
5/8/2007	--		10.00	23.00	7.60	143.73	--	--	--	--	--	--	--	--	
8/8/2007	P		10.00	23.00	8.12	143.21	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.26	7.31	
11/14/2007	--		10.00	23.00	9.10	142.23	--	--	--	--	--	--	--	--	
2/22/2008	--		10.00	23.00	7.48	143.85	--	--	--	--	--	--	--	--	
5/24/2008	--		10.00	23.00	8.12	143.21	--	--	--	--	--	--	--	--	
8/21/2008	P		10.00	23.00	8.65	142.68	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.14	6.54	
11/19/2008	--		10.00	23.00	11.86	139.47	--	--	--	--	--	--	--	--	
2/23/2009	--		10.00	23.00	10.20	141.13	--	--	--	--	--	--	--	--	
5/14/2009	--		10.00	23.00	9.63	141.70	--	--	--	--	--	--	--	--	
8/20/2009	P		10.00	23.00	8.52	142.81	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.01	6.47	
2/19/2010	--		10.00	23.00	--	--	--	--	--	--	--	--	--	--	d
8/10/2010	P		10.00	23.00	8.05	143.28	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.15	7.1	
12/16/2010	--	156.90	10.00	23.00	8.10	148.80	--	--	--	--	--	--	--	--	j
2/14/2011	--		10.00	23.00	--	--	--	--	--	--	--	--	--	--	d
5/20/2011	--		10.00	23.00	--	--	--	--	--	--	--	--	--	--	d
8/15/2011	P		10.00	23.00	7.91	148.99	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.46	7.4	
2/2/2012	--		10.00	23.00	8.08	148.82	--	--	--	--	--	--	--	--	
8/9/2012	P		10.00	23.00	8.02	148.88	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.25	6.99	
2/14/2013	--		10.00	23.00	7.54	149.36	--	--	--	--	--	--	--	--	
8/22/2013	P		10.00	23.00	8.34	148.56	<50	<0.50	<0.50	<0.50	<1.0	<0.50	4.33	6.95	

Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses

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							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
ESL - DW							100	1.0	40	30	20	5.0			
ESL - NDW							210	46	130	43	100	1,800			
MW-5 Cont.															
2/11/2014	--	156.90	10.00	23.00	7.61	149.29	--	--	--	--	--	--	--	--	
8/15/2014	P		10.00	23.00	8.06	148.84	<50	<0.50	<0.50	<0.50	<1.0	<0.50	2.33	5.92	
MW-6															
6/20/2000	--	153.84	5.00	15.00	4.79	149.05	--	--	--	--	--	--	--	--	
9/28/2000	--		5.00	15.00	5.39	148.45	--	--	--	--	--	--	--	--	
12/17/2000	--		5.00	15.00	4.71	149.13	--	--	--	--	--	--	--	--	
3/23/2001	--		5.00	15.00	4.69	149.15	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	
6/21/2001	--		5.00	15.00	5.22	148.62	--	--	--	--	--	--	--	--	
9/23/2001	--		5.00	15.00	5.40	148.44	--	--	--	--	--	--	--	--	
12/31/2001	--		5.00	15.00	3.95	149.89	--	--	--	--	--	--	--	--	
3/21/2002	--		5.00	15.00	2.94	150.90	<50	<0.5	<0.5	<0.5	<0.5	5.2	--	--	
4/17/2002	--		5.00	15.00	5.11	148.73	--	--	--	--	--	--	--	--	
8/12/2002	--		5.00	15.00	5.23	148.61	--	--	--	--	--	--	--	--	
12/6/2002	--		5.00	15.00	5.29	148.55	--	--	--	--	--	--	--	--	
1/29/2003	--		5.00	15.00	4.79	149.05	--	--	--	--	--	--	--	--	b
5/23/2003	--		5.00	15.00	4.31	149.53	<50	<0.50	<0.50	<0.50	<0.50	9.4	1	6.7	
9/4/2003	--		5.00	15.00	--	--	--	--	--	--	--	--	--	--	d
11/20/2003	--		5.00	15.00	6.31	147.53	--	--	--	--	--	--	--	--	
2/2/2004	--	159.41	5.00	15.00	4.78	154.63	--	--	--	--	--	--	--	--	f
5/14/2004	--		5.00	15.00	6.29	153.12	--	--	--	--	--	--	--	--	
9/2/2004	--		5.00	15.00	5.79	153.62	--	--	--	--	--	--	--	--	d
11/4/2004	--		5.00	15.00	--	--	--	--	--	--	--	--	--	--	d
2/8/2005	--		5.00	15.00	5.13	154.28	--	--	--	--	--	--	--	--	
5/9/2005	--		5.00	15.00	4.52	154.89	--	--	--	--	--	--	--	--	
8/11/2005	P		5.00	15.00	5.02	154.39	<50	<0.50	<0.50	<0.50	<0.50	7.9	2.1	6.6	
11/18/2005	--		5.00	15.00	6.31	153.10	--	--	--	--	--	--	--	--	
2/16/2006	--		5.00	15.00	4.24	155.17	--	--	--	--	--	--	--	--	
5/30/2006	--		5.00	15.00	4.45	154.96	--	--	--	--	--	--	--	--	

Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses

ARCO Service Station #0374, 6407 Telegraph Ave., Oakland, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
ESL - DW							100	1.0	40	30	20	5.0			
ESL - NDW							210	46	130	43	100	1,800			
MW-6 Cont.															
8/24/2006	P	159.41	5.00	15.00	5.18	154.23	<50	<0.50	<0.50	<0.50	<0.50	12	3.4	6.8	
11/1/2006	--		5.00	15.00	6.05	153.36	--	--	--	--	--	--	--	--	
2/7/2007	--		5.00	15.00	5.00	154.41	--	--	--	--	--	--	--	--	
5/8/2007	--		5.00	15.00	4.30	155.11	--	--	--	--	--	--	--	--	
8/8/2007	NP		5.00	15.00	5.51	153.90	<50	<0.50	<0.50	<0.50	<0.50	0.57	2.94	6.87	
11/14/2007	--		5.00	15.00	5.38	154.03	--	--	--	--	--	--	--	--	
2/22/2008	--		5.00	15.00	4.70	154.71	--	--	--	--	--	--	--	--	
5/24/2008	--		5.00	15.00	5.25	154.16	--	--	--	--	--	--	--	--	
8/21/2008	NP		5.00	15.00	6.14	153.27	<50	<0.50	<0.50	<0.50	<0.50	1.9	1.99	7.13	
11/19/2008	--		5.00	15.00	5.94	153.47	--	--	--	--	--	--	--	--	
2/23/2009	--		5.00	15.00	5.00	154.41	--	--	--	--	--	--	--	--	
5/14/2009	--		5.00	15.00	4.60	154.81	--	--	--	--	--	--	--	--	
8/20/2009	NP		5.00	15.00	5.65	153.76	<50	<0.50	<0.50	<0.50	<0.50	2.0	1.98	6.81	
2/19/2010	--		5.00	15.00	7.28	152.13	--	--	--	--	--	--	--	--	
8/10/2010	NP		5.00	15.00	5.02	154.39	<50	<0.50	<0.50	<0.50	<0.50	4.3	1.99	6.93	
12/16/2010	--		5.00	15.00	4.50	154.91	--	--	--	--	--	--	--	--	j
2/14/2011	--		5.00	15.00	4.80	154.61	--	--	--	--	--	--	--	--	
5/20/2011	--		5.00	15.00	4.29	155.12	--	--	--	--	--	--	--	--	
8/15/2011	P		5.00	15.00	4.52	154.89	<50	<0.50	<0.50	<0.50	<0.50	2.2	1.55	7.1	
2/2/2012	--		5.00	15.00	--	--	--	--	--	--	--	--	--	--	d
8/9/2012	P		5.00	15.00	4.65	154.76	<50	<0.50	<0.50	<0.50	<1.0	3.6	1.14	6.89	
2/14/2013	--		5.00	15.00	--	--	--	--	--	--	--	--	--	--	d
8/22/2013	--		5.00	15.00	--	--	--	--	--	--	--	--	--	--	d
2/11/2014	--		5.00	15.00	4.67	154.74	--	--	--	--	--	--	--	--	
8/15/2014	P		5.00	15.00	2.84	156.57	<50	<0.50	<0.50	<0.50	<1.0	1.7	1.08	6.01	
MW-7															
12/16/2010	P	164.80	5.00	20.00	6.52	158.28	700	<0.50	<0.50	15	32	62	--	7.08	j
2/14/2011	NP		5.00	20.00	6.77	158.03	7,100	1,700	98	260	210	<20	1.02	6.8	

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							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
ESL - DW							100	1.0	40	30	20	5.0			
ESL - NDW							210	46	130	43	100	1,800			
MW-7 Cont.															
5/20/2011	NP	164.80	5.00	20.00	5.84	158.96	570	<0.50	<0.50	37	25	4.6	1.66	6.7	I (GRO)
8/15/2011	P		5.00	20.00	6.96	157.84	420	<1.0	<1.0	49	6.7	14	0.58	6.9	
2/2/2012	P		5.00	20.00	7.15	157.65	<50	<0.50	<0.50	<0.50	<0.50	6.2	0.45	7.5	
8/9/2012	P		5.00	20.00	5.05	159.75	85	<0.50	<0.50	5.8	1.1	7.0	1.04	7.25	
2/14/2013	P		5.00	20.00	4.38	160.42	310	1.2	<0.50	1.6	6.3	5.1	1.31	7.64	
8/22/2013	P		5.00	20.00	7.39	157.41	78	<0.50	<0.50	3.9	<1.0	3.1	4.01	7.00	
2/11/2014	P		5.00	20.00	7.37	157.43	<50	<0.50	<0.50	<0.50	<1.0	12	1.90	6.94	
8/15/2014	P		5.00	20.00	8.39	156.41	<50	<0.50	<0.50	<0.50	<1.0	50	0.14	6.34	
MW-8															
12/16/2010	P	164.14	5.00	20.00	6.85	157.29	520	43	<0.50	4.1	21	150	0.46	7.12	j
2/14/2011	NP		5.00	20.00	7.30	156.84	<50	<2.0	<2.0	<2.0	<2.0	110	1.07	6.7	
5/20/2011	NP		5.00	20.00	6.88	157.26	<50	<2.0	<2.0	<2.0	<2.0	88	1.35	6.5	
8/15/2011	P		5.00	20.00	6.00	158.14	<50	5.2	<1.0	9.7	<1.0	57	0.51	6.7	
2/2/2012	P		5.00	20.00	7.57	156.57	<50	<0.50	<0.50	<0.50	<0.50	3.9	0.68	7.1	
8/9/2012	P		5.00	20.00	6.08	158.06	110	67	<0.50	<0.50	<1.0	150	1.16	6.98	
2/14/2013	P		5.00	20.00	5.70	158.44	720	350	<2.0	<2.0	<4.0	240	1.23	7.40	
8/22/2013	P		5.00	20.00	7.95	156.19	<50	1.5	<0.50	<0.50	<1.0	180	3.96	6.88	
2/11/2014	P		5.00	20.00	7.56	156.58	<50	<0.50	<0.50	<0.50	<1.0	78	1.93	6.72	
8/15/2014	P		5.00	20.00	8.65	155.49	<50	<0.50	<0.50	<0.50	<1.0	21	1.92	5.88	
MW-9															
12/16/2010	P	163.77	5.00	20.00	6.63	157.14	330	18	<0.50	11	38	390	0.57	6.97	j
2/14/2011	NP		5.00	20.00	6.85	156.92	<50	<4.0	<4.0	<4.0	<4.0	270	0.98	6.9	
5/20/2011	NP		5.00	20.00	6.39	157.38	66	<4.0	<4.0	<4.0	<4.0	280	1.64	6.7	I (GRO)
8/15/2011	NP		5.00	20.00	7.09	156.68	<50	<2.0	<2.0	<2.0	<2.0	120	0.88	7.1	
2/2/2012	P		5.00	20.00	7.18	156.59	<50	<0.50	<0.50	<0.50	<0.50	34	0.65	7.2	
8/9/2012	P		5.00	20.00	5.68	158.09	82	1.9	<0.50	<0.50	<1.0	19	1.61	7.13	
2/14/2013	P		5.00	20.00	5.27	158.50	250	5.2	<0.50	<0.50	1.4	25	1.23	7.51	

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Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
ESL - DW							100	1.0	40	30	20	5.0			
ESL - NDW							210	46	130	43	100	1,800			
MW-9 Cont.															
8/22/2013	P	163.77	5.00	20.00	7.46	156.31	290	0.71	<0.50	<0.50	1.4	31	4.71	7.07	
2/11/2014	P		5.00	20.00	7.07	156.70	250	<0.50	<0.50	<0.50	<1.0	39	1.12	7.07	
8/15/2014	P		5.00	20.00	8.27	155.50	180	<0.50	<0.50	<0.50	<1.0	68	0.10	6.03	

Symbols & Abbreviations:

-- = Not analyzed/applicable/measured/available
< = Not detected at or above laboratory reporting limit
DO = Dissolved oxygen
DTW = Depth to water in ft below TOC
ft bgs = Feet below ground surface
GRO = Gasoline range organics
GWE = Groundwater elevation measured in ft
mg/L = Milligrams per liter
MTBE = Methyl tert-butyl ether
NP = Well was not purged prior to sampling
P = Well was purged prior to sampling
TOC = Top of casing measured in ft
TPH-g = Total petroleum hydrocarbons as gasoline
µg/L = Micrograms per liter
BTEX = Benzene, toluene, ethylbenzene and xylenes

ESL - DW = Environmental Screening Levels (ESLs), shallow soils (<3 meters bgs), groundwater is a current or potential source of drinking water, for residential land use. Ref. California Regional Water Quality Control Board, San Francisco Bay Region (CRWQCB-SFBR), Screening for Environmental Concerns at Sites with Contaminated Soil & Groundwater, Interim Final-November 2007 (Revised May 2008).

ESL - NDW = Environmental Screening Levels (ESLs), shallow soils (<3 meters bgs), groundwater is NOT a current or potential source of drinking water, for residential land use. Ref. California Regional Water Quality Control Board, San Francisco Bay Region (CRWQCB-SFBR), Screening for Environmental Concerns at Sites with Contaminated Soil & Groundwater, Interim Final-November 2007 (Revised May 2008).

NE = ESL not established

Footnotes:

a = Chromatogram pattern: Gasoline C6-C10 for GRO/TPH-g
b = Beginning this quarter, groundwater samples were analyzed by EPA method 8260B for TPH-g, BTEX, and fuel oxygenates
c = Wells gauged with ORC sock in well
d = Well inaccessible
e = The hydrocarbon result for GRO was partly due to individual peaks in the quantitative range
f = Well resurveyed on 1/27/2004 to NAVD88
g = Upon review of survey data (1/27/2004), TOC elevation for MW-4 is actually 162.47 ft.
h = Upon review of survey data (1/27/2004), MW-5 was not surveyed from the TOC. MW-5 was surveyed from the pavement due to inaccessibility to the TOC. Therefore, survey data for MW-5 from the TOC is unavailable. Historic data prior to 5/30/2006 (change in consultant) not modified
i = Quantitation of unknown hydrocarbon(s) in sample based on gasoline
j = Surveyed 12/9/2010
k = Grab groundwater sample
l = Quantitated against gasoline

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 DO and pH were obtained through field measurements

The DTW's and TOC's for wells MW-5 and MW-6 were taken from Delta Environmental sampling sheets because the well logs were not available

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 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
ARCO Service Station #0374, 6407 Telegraph Ave., Oakland, CA

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
ESL - DW	NE	12	5.0	NE	NE	NE	0.5	0.05	
ESL - NDW	NE	18,000	1,800	NE	NE	NE	200	150	
MW-1									
3/23/2001	--	--	2,710	--	--	--	--	--	
3/21/2002	--	--	2,000	--	--	--	--	--	
5/23/2003	<20,000	<4,000	1,600	<100	<100	<100	--	--	
11/20/2003	<2,000	<400	1,500	<10	<10	<10	--	--	a
5/14/2004	<5,000	<1,000	1,200	<25	<25	<25	<25	<25	
9/2/2004	<1,000	<200	660	<5.0	<5.0	<5.0	<5.0	<5.0	
11/4/2004	<2,000	<400	580	<10	<10	<10	<10	<10	
2/8/2005	<2,000	<400	610	<10	<10	<10	<10	<10	
5/9/2005	<1,000	<200	620	<5.0	<5.0	<5.0	<5.0	<5.0	a
8/11/2005	<500	250	390	<2.5	<2.5	2.6	<2.5	<2.5	a
11/18/2005	<500	<100	340	<2.5	<2.5	<2.5	<2.5	<2.5	a
2/16/2006	<1,500	<100	340	<2.5	<2.5	<2.5	<2.5	<2.5	
5/30/2006	<1,500	<100	420	<2.5	<2.5	<2.5	<2.5	<2.5	a
8/24/2006	<3,000	<200	180	<5.0	<5.0	<5.0	<5.0	<5.0	
11/1/2006	<3,000	<200	220	<5.0	<5.0	<5.0	<5.0	<5.0	a
2/7/2007	<3,000	<200	190	<5.0	<5.0	<5.0	<5.0	<5.0	
5/8/2007	<3,000	<200	420	<5.0	<5.0	<5.0	<5.0	<5.0	
8/8/2007	<300	<20	110	<0.50	<0.50	<0.50	<0.50	<0.50	
11/14/2007	<1,500	<100	210	<2.5	<2.5	<2.5	<2.5	<2.5	
2/22/2008	<300	<10	250	<0.50	<0.50	1.5	<0.50	<0.50	
5/24/2008	<3,000	<100	380	<5.0	<5.0	<5.0	<5.0	<5.0	
8/21/2008	<1,500	<50	170	<2.5	<2.5	<2.5	<2.5	<2.5	
11/19/2008	<300	<10	30	<0.50	<0.50	<0.50	<0.50	<0.50	
2/23/2009	<1,500	<50	240	<2.5	<2.5	<2.5	<2.5	<2.5	
5/14/2009	<300	<10	200	<0.50	<0.50	1.3	<0.50	<0.50	
8/20/2009	<1,200	<40	170	<2.0	<2.0	<2.0	<2.0	<2.0	
2/19/2010	<300	<10	170	<0.50	<0.50	1.2	<0.50	<0.50	
8/10/2010	<1,500	<50	230	<2.5	<2.5	<2.5	<2.5	<2.5	
12/16/2010	<1,200	<40	140	<2.0	<2.0	<2.0	<2.0	<2.0	

Table 2. Summary of Fuel Additives Analytical Data
ARCO Service Station #0374, 6407 Telegraph Ave., Oakland, CA

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
ESL - DW	NE	12	5.0	NE	NE	NE	0.5	0.05	
ESL - NDW	NE	18,000	1,800	NE	NE	NE	200	150	
MW-1 Cont.									
2/14/2011	<1,500	<50	170	<2.5	<2.5	<2.5	<2.5	<2.5	
8/15/2011	<1,500	<50	130	<2.5	<2.5	<2.5	<2.5	<2.5	
2/2/2012	<600	<20	66	<1.0	<1.0	<1.0	<1.0	<1.0	
8/9/2012	<150	<10	170	<0.50	<0.50	0.78	<0.50	<0.50	
2/14/2013	<150	<10	140	<0.50	<0.50	0.58	<0.50	<0.50	
8/22/2013	<150	<10	91	<0.50	<0.50	<0.50	<0.50	<0.50	
2/11/2014	<150	<10	26	<0.50	<0.50	<0.50	<0.50	<0.50	
8/15/2014	<150	<10	120	<0.50	<0.50	0.61	<0.50	<0.50	
MW-2									
3/23/2001	--	--	<2.5	--	--	--	--	--	
3/21/2002	--	--	45	--	--	--	--	--	
5/23/2003	<100	<20	55	<0.50	<0.50	0.53	--	--	
2/2/2004	<100	<20	37	<0.50	<0.50	<0.50	<0.50	<0.50	
9/2/2004	<500	<100	67	<2.5	<2.5	<2.5	<2.5	<2.5	
2/8/2005	<100	<20	30	<0.50	<0.50	<0.50	<0.50	<0.50	
8/11/2005	<100	<20	35	<0.50	<0.50	<0.50	<0.50	<0.50	a
2/16/2006	<300	<20	39	<0.50	<0.50	<0.50	<0.50	<0.50	
8/24/2006	<300	<20	25	<0.50	<0.50	<0.50	<0.50	<0.50	
2/7/2007	<300	<20	7.2	<0.50	<0.50	<0.50	<0.50	<0.50	
8/8/2007	<300	<20	7.2	<0.50	<0.50	<0.50	<0.50	<0.50	
2/22/2008	<300	<10	24	<0.50	<0.50	<0.50	<0.50	<0.50	
8/21/2008	<300	<10	4.9	<0.50	<0.50	<0.50	<0.50	<0.50	
2/23/2009	<300	<10	24	<0.50	<0.50	<0.50	<0.50	<0.50	
8/20/2009	<300	<10	8.4	<0.50	<0.50	<0.50	<0.50	<0.50	
2/19/2010	<300	<10	22	<0.50	<0.50	<0.50	<0.50	<0.50	
8/10/2010	<300	<10	23	<0.50	<0.50	<0.50	<0.50	<0.50	
12/16/2010	<300	<10	17	<0.50	<0.50	<0.50	<0.50	<0.50	
2/14/2011	<300	<10	11	<0.50	<0.50	<0.50	<0.50	<0.50	
8/15/2011	<300	<10	1.7	<0.50	<0.50	<0.50	<0.50	<0.50	

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ARCO Service Station #0374, 6407 Telegraph Ave., Oakland, CA

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
ESL - DW	NE	12	5.0	NE	NE	NE	0.5	0.05	
ESL - NDW	NE	18,000	1,800	NE	NE	NE	200	150	
MW-2 Cont.									
2/2/2012	<300	<10	1.8	<0.50	<0.50	<0.50	<0.50	<0.50	
8/9/2012	<150	<10	73	<0.50	<0.50	0.61	<0.50	<0.50	
2/14/2013	<150	<10	46	<0.50	<0.50	<0.50	<0.50	<0.50	
8/22/2013	<150	<10	82	<0.50	<0.50	1.1	<0.50	<0.50	
2/11/2014	<150	<10	7.5	<0.50	<0.50	<0.50	<0.50	<0.50	
8/15/2014	<150	<10	61	<0.50	<0.50	0.73	<0.50	<0.50	
MW-3									
6/20/2000	--	--	<10	--	--	--	--	--	
12/17/2000	--	--	<2.5	--	--	--	--	--	
6/21/2001	--	--	2.5	--	--	--	--	--	
12/31/2001	--	--	4.9	--	--	--	--	--	
4/17/2002	--	--	8.7	--	--	--	--	--	
12/6/2002	--	--	6.2	--	--	--	--	--	
5/23/2003	<100	<20	1.6	<0.50	<0.50	<0.50	--	--	
9/2/2004	<100	<20	6.5	<0.50	<0.50	<0.50	<0.50	<0.50	
8/11/2005	<100	<20	11	<0.50	<0.50	<0.50	<0.50	<0.50	a
8/24/2006	<300	<20	7.6	<0.50	<0.50	<0.50	<0.50	<0.50	
8/8/2007	<300	<20	1.2	<0.50	<0.50	<0.50	<0.50	<0.50	
8/21/2008	<300	<10	3.1	<0.50	<0.50	<0.50	<0.50	<0.50	
8/20/2009	<300	<10	2.2	<0.50	<0.50	<0.50	<0.50	<0.50	
8/10/2010	<300	<10	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	
8/15/2011	<300	<10	1.2	<0.50	<0.50	<0.50	<0.50	<0.50	
8/9/2012	<150	<10	2.0	<0.50	<0.50	<0.50	<0.50	<0.50	
8/22/2013	<150	<10	1.4	<0.50	<0.50	<0.50	<0.50	<0.50	
8/15/2014	<150	<10	1.2	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-4									
6/20/2000	--	--	<250	--	--	--	--	--	
12/17/2000	--	--	<100	--	--	--	--	--	

Table 2. Summary of Fuel Additives Analytical Data
ARCO Service Station #0374, 6407 Telegraph Ave., Oakland, CA

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
ESL - DW	NE	12	5.0	NE	NE	NE	0.5	0.05	
ESL - NDW	NE	18,000	1,800	NE	NE	NE	200	150	
MW-4 Cont.									
6/21/2001	--	--	130	--	--	--	--	--	
12/31/2001	--	--	160	--	--	--	--	--	
4/17/2002	--	--	<250	--	--	--	--	--	
12/6/2002	--	--	43	--	--	--	--	--	
5/23/2003	<10,000	<2,000	<50	<50	<50	<50	--	--	
2/2/2004	<500	<100	29	<2.5	<2.5	2.6	<2.5	<2.5	
9/2/2004	<200	<40	28	<1.0	<1.0	<1.0	<1.0	<1.0	
2/8/2005	<5,000	<1,000	45	<25	<25	<25	<25	<25	
8/11/2005	<2,000	<400	32	<10	<10	<10	<10	<10	
2/16/2006	<6,000	<400	35	<10	<10	<10	<10	<10	
8/24/2006	<1,500	<100	39	<2.5	<2.5	<2.5	<2.5	<2.5	
2/7/2007	<6,000	<400	67	<10	<10	<10	<10	<10	
8/8/2007	<6,000	<400	72	<10	<10	<10	<10	<10	
2/22/2008	<6,000	<200	70	<10	<10	<10	<10	<10	
8/21/2008	<12,000	<400	53	<20	<20	<20	<20	<20	
2/23/2009	<3,000	<100	39	<5.0	<5.0	<5.0	<5.0	<5.0	
8/20/2009	<12,000	<400	23	<20	<20	<20	<20	<20	
2/19/2010	<3,000	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
8/10/2010	<12,000	<400	<20	<20	<20	<20	<20	<20	
12/16/2010	<15,000	<500	<25	<25	<25	<25	<25	<25	
2/14/2011	<300	<10	13	<0.50	<0.50	<0.50	<0.50	<0.50	
8/15/2011	<7,500	<250	<12	<12	<12	<12	<12	<12	
2/2/2012	<7,500	<250	<12	<12	<12	<12	<12	<12	
8/9/2012	<1,500	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
2/14/2013	<3,000	<200	<10	<10	<10	<10	<10	<10	
8/22/2013	<3,000	<200	<10	<10	<10	<10	<10	<10	
2/11/2014	<1,500	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
8/15/2014	<1,500	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
MW-5									

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ARCO Service Station #0374, 6407 Telegraph Ave., Oakland, CA

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
ESL - DW	NE	12	5.0	NE	NE	NE	0.5	0.05	
ESL - NDW	NE	18,000	1,800	NE	NE	NE	200	150	
MW-5 Cont.									
6/20/2000	--	--	<10	--	--	--	--	--	
9/28/2000	--	--	<2.5	--	--	--	--	--	
12/17/2000	--	--	<2.5	--	--	--	--	--	
3/23/2001	--	--	<2.5	--	--	--	--	--	
6/21/2001	--	--	<2.5	--	--	--	--	--	
9/23/2001	--	--	<2.5	--	--	--	--	--	
12/31/2001	--	--	<2.5	--	--	--	--	--	
3/21/2002	--	--	3.2	--	--	--	--	--	
4/17/2002	--	--	<2.5	--	--	--	--	--	
8/12/2002	--	--	<2.5	--	--	--	--	--	
12/6/2002	--	--	<2.5	--	--	--	--	--	
1/29/2003	<40	<20	<0.50	<0.50	<0.50	<0.50	--	--	
5/23/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	
9/4/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
9/2/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/11/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/24/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/8/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/21/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/20/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/10/2010	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/15/2011	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/9/2012	<150	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/22/2013	<150	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/15/2014	<150	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-6									
3/23/2001	--	--	<2.5	--	--	--	--	--	
3/21/2002	--	--	5.2	--	--	--	--	--	
5/23/2003	<100	<20	9.4	<0.50	<0.50	<0.50	--	--	

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ARCO Service Station #0374, 6407 Telegraph Ave., Oakland, CA

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
ESL - DW	NE	12	5.0	NE	NE	NE	0.5	0.05	
ESL - NDW	NE	18,000	1,800	NE	NE	NE	200	150	
MW-6 Cont.									
8/11/2005	<100	<20	7.9	<0.50	<0.50	<0.50	<0.50	<0.50	a
8/24/2006	<300	<20	12	<0.50	<0.50	<0.50	<0.50	<0.50	
8/8/2007	<300	<20	0.57	<0.50	<0.50	<0.50	<0.50	<0.50	
8/21/2008	<300	<10	1.9	<0.50	<0.50	<0.50	<0.50	<0.50	
8/20/2009	<300	<10	2.0	<0.50	<0.50	<0.50	<0.50	<0.50	
8/10/2010	<300	<10	4.3	<0.50	<0.50	<0.50	<0.50	<0.50	
8/15/2011	<300	<10	2.2	<0.50	<0.50	<0.50	<0.50	<0.50	
8/9/2012	<150	<10	3.6	<0.50	<0.50	<0.50	<0.50	<0.50	
8/15/2014	<150	<10	1.7	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-7									
12/16/2010	<300	<10	62	<0.50	<0.50	<0.50	<0.50	<0.50	
2/14/2011	<1,2000	<400	<20	<20	<20	<20	<20	<20	
5/20/2011	<300	<10	4.6	<0.50	<0.50	<0.50	<0.50	<0.50	
8/15/2011	<600	<20	14	<1.0	<1.0	<1.0	<1.0	<1.0	
2/2/2012	<300	<10	6.2	<0.50	<0.50	<0.50	<0.50	<0.50	
8/9/2012	<150	<10	7.0	<0.50	<0.50	<0.50	<0.50	<0.50	
2/14/2013	<150	<10	5.1	<0.50	<0.50	<0.50	<0.50	<0.50	
8/22/2013	<150	<10	3.1	<0.50	<0.50	<0.50	<0.50	<0.50	
2/11/2014	<150	<10	12	<0.50	<0.50	<0.50	<0.50	<0.50	
8/15/2014	<150	<10	50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-8									
12/16/2010	<300	<10	150	<0.50	<0.50	1.7	<0.50	<0.50	
2/14/2011	<1,200	<40	110	<2.0	<2.0	<2.0	<2.0	<2.0	
5/20/2011	<1,200	<40	88	<2.0	<2.0	<2.0	<2.0	<2.0	
8/15/2011	<600	<20	57	<1.0	<1.0	<1.0	<1.0	<1.0	
2/2/2012	<300	<10	3.9	<0.50	<0.50	<0.50	<0.50	<0.50	
8/9/2012	<150	31	150	<0.50	<0.50	2.0	<0.50	<0.50	
2/14/2013	<600	150	240	<2.0	<2.0	5.2	<2.0	<2.0	

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ARCO Service Station #0374, 6407 Telegraph Ave., Oakland, CA

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
ESL - DW	NE	12	5.0	NE	NE	NE	0.5	0.05	
ESL - NDW	NE	18,000	1,800	NE	NE	NE	200	150	
MW-8 Cont.									
8/22/2013	<150	39	180	<0.50	<0.50	2.8	<0.50	<0.50	
2/11/2014	<150	<10	78	<0.50	<0.50	0.83	<0.50	<0.50	
8/15/2014	<150	<10	21	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-9									
12/16/2010	<300	40	390	<0.50	<0.50	4.1	<0.50	<0.50	
2/14/2011	<2,400	<80	270	<4.0	<4.0	<4.0	<4.0	<4.0	
5/20/2011	<2,400	<80	280	<4.0	<4.0	<4.0	<4.0	<4.0	
8/15/2011	<1,200	<40	120	<2.0	<2.0	<2.0	<2.0	<2.0	
2/2/2012	<300	<10	34	<0.50	<0.50	<0.50	<0.50	<0.50	
8/9/2012	<150	<10	19	<0.50	<0.50	<0.50	<0.50	<0.50	
2/14/2013	<150	<10	25	<0.50	<0.50	<0.50	<0.50	<0.50	
8/22/2013	<150	<10	31	<0.50	<0.50	0.55	<0.50	<0.50	
2/11/2014	<150	<10	39	<0.50	<0.50	<0.50	<0.50	<0.50	
8/15/2014	<150	<10	68	<0.50	<0.50	0.67	<0.50	<0.50	

Symbols & Abbreviations:

-- = Not analyzed/applicable/measured/available

< = Not detected at or above the laboratory reporting limit

1,2-DCA = 1,2-Dichloroethane

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

ESL - DW = Environmental Screening Levels (ESLs), shallow soils (<3 meters bgs), groundwater is a current or potential source of drinking water, for residential land use. Ref. California Regional Water Quality Control Board, San Francisco Bay Region (CRWQCB-SFBR), Screening for Environmental Concerns at Sites with Contaminated Soil & Groundwater, Interim Final-November 2007 (Revised May 2008).

ESL - NDW = Environmental Screening Levels (ESLs), shallow soils (<3 meters bgs), groundwater is NOT a current or potential source of drinking water, for residential land use. Ref. California Regional Water Quality Control Board, San Francisco Bay Region (CRWQCB-SFBR), Screening for Environmental Concerns at Sites with Contaminated Soil & Groundwater, Interim Final-November 2007 (Revised May 2008).

NE = ESL not established

Footnotes:

a = The continuing calibration verification for ethanol was outside of client contractual limits, however, it was within method acceptance limits. The data should still be useful for its intended purpose

Notes:

All volatile organic 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. Summary of Groundwater Gradient - Direction and Magnitude

ARCO Service Station #0374, 6407 Telegraph Ave., Oakland, CA

Date Measured	Approximate Gradient Direction	Approximate Gradient Magnitude (ft/ft)
1/31/1996	Southwest	0.04
4/10/1996	Southwest	0.04
7/16/1996	Southwest	0.03
10/14/1996	Southwest	0.03
3/27/1997	Southwest	0.04
5/27/1997	Southwest	0.03
8/12/1997	Southwest	0.04
11/17/1997	Southwest	0.03
3/16/1998	Southwest	0.03
5/12/1998	Southwest	0.04
7/27/1998	Southwest	0.04
10/15/1998	Southwest	0.02
2/18/1999	Southwest	0.05
5/24/1999	Southwest	0.03
8/27/1999	Southwest	0.03
10/26/1999	Southwest	0.03
2/3/2000	Southwest	0.047
6/20/2000	Southwest	0.035
9/28/2000	Southwest	0.034
12/17/2000	Southwest	0.032
3/23/2001	Southwest	0.034
6/21/2001	Southwest	0.032
9/23/2001	Southwest	0.029
12/31/2001	Southwest	0.043
3/21/2002	Southwest	0.038
4/17/2002	Southwest	0.031
8/12/2002	Southwest	0.032
12/6/2002	Southwest	0.020
1/29/2003	Southwest	0.027
5/23/2003	Southwest	0.039
9/4/2003	Southwest	0.033
11/20/2003	Southwest	0.029
2/2/2004	Southwest	0.043 (a)
5/14/2004	Southwest	0.037 (a)
9/2/2004	Southwest	0.027 (a)
11/4/2004	Southwest	0.034 (a)
2/8/2005	Southwest	0.061 (a)
5/9/2005	Southwest	0.08 (a)
8/11/2005	Southwest	0.06 (a)
11/18/2005	Southwest	0.07 (a)
2/16/2006	Southwest	0.09 (a)
5/30/2006	Southwest	0.06 (a)
8/24/2006	Southwest	0.03
11/1/2006	Southwest	0.02
2/7/2007	Southwest	0.03

Table 3. Summary of Groundwater Gradient - Direction and Magnitude

ARCO Service Station #0374, 6407 Telegraph Ave., Oakland, CA

Date Measured	Approximate Gradient Direction	Approximate Gradient Magnitude (ft/ft)
5/8/2007	Southwest	0.03
8/8/2007	Southwest	0.03
11/14/2007	Southwest	0.03
2/22/2008	Southwest	0.03
5/24/2008	Southwest	0.03
8/21/2008	Southwest	0.03
11/19/2008	Southwest	0.03
2/23/2009	Southwest	0.04
5/14/2009	Southwest	0.03
8/20/2009	Southwest	0.03
2/19/2010	West-Southwest	0.05
8/10/2010	Southwest	0.03
12/16/2010	Southwest	0.03
2/14/2011	Southwest	0.03
5/20/2011	Southwest	0.03
8/15/2011	Southwest	0.03
2/2/2012	Southwest	0.03
8/9/2012	Southwest	0.03
2/14/2013	Southwest	0.04
8/22/2013	Southwest	0.03
2/11/2014	Southwest	0.03
8/15/2014	South-Southwest	0.03

Footnotes:

a = Gradients potentially suspect due to error in MW-4 and MW-5 TOC measuring point elevations discovered third quarter 2006

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

QUALITY ASSURANCE/QUALITY CONTROL FIELD METHODS

Field methods discussed herein were implemented to provide for accuracy and reliability of field activities, data collection, sample collection, and handling. Discussion of these methods is provided below.

1.0 Equipment Calibration

Equipment calibration was performed per equipment manufacturer specifications before use.

2.0 Depth to Groundwater and Light Non-Aqueous Phase Liquid Measurement

Depth to groundwater was measured in wells identified for gauging in the scope of work using a decontaminated water level indicator. The depth to water measurement was taken from a cut notch or permanent mark at the top of the well casing to which the well head elevation was originally surveyed.

Once depth to water was measured, an oil/water interface meter or a new disposable bailer was utilized to evaluate the presence and, if present, to measure the “apparent” thickness of light non-aqueous phase liquid (LNAPL) in the well. If LNAPL was present in the well, groundwater purging and sampling were not performed, unless sampling procedures in the scope of work specified collection of samples in the presence of LNAPL. Otherwise, time allowing, LNAPL was bailed from the well using either a new disposable bailer, or the disposal bailer previously used for initial LNAPL assessment. Bailing of LNAPL continued until the thickness of LNAPL (or volume) stabilized in each bailer pulled from the well, or LNAPL was no longer present. After LNAPL thickness either stabilized or was eliminated, periodic depth to water and depth to LNAPL measurements were collected as product came back into the well to evaluate product recovery rate and to aid in further assessment of LNAPL in the subsurface. LNAPL thickness measurements were recorded as “apparent.” If a bailer was used for LNAPL thickness measurement, the field sampler noted the bailer entry diameter and chamber diameter to enable correction of thickness measurements. Recovered LNAPL was stored on-site in a labeled steel drum(s) or other appropriate container(s) prior to disposal.

3.0 Well Purging and Groundwater Sample Collection

Well purging and groundwater sampling were performed in wells specified in the scope of work after measuring depth to groundwater and evaluating the presence of LNAPL. Purging and sampling were performed using one of the methods detailed below. The method used was noted in the field records. Purge water was stored on-site in labeled steel drum(s) or other appropriate container(s) prior to disposal or on-site treatment (in cases where treatment using an on-site system is authorized).

3.1 Purging a Predetermined Well Volume

Purging a predetermined well volume is performed per ASTM International (ASTM) D4448-01. This purging method has the objective of removing a predetermined volume of stagnant water from the well prior to sampling. The volume of stagnant water is defined as either the volume of water contained within the well casing, or the volume within the well casing and sand/gravel in the annulus if natural flow through these is deemed insufficient to keep them flushed out.

This purging method involves removal of a minimum of three stagnant water volumes from the well using a decontaminated pump with new disposable plastic discharge or suction tubing, dedicated well tubing, or using a new disposable or decontaminated reusable bailer. If a new disposable bailer was used for assessment of LNAPL, that bailer may be used for purging. The withdrawal rate used is one that minimizes drawdown while satisfying time constraints.

To evaluate when purging is complete, one or more groundwater stabilization parameters are monitored and recorded during purging activities until stabilization is achieved. Most commonly, stabilization parameters include temperature, conductivity, and pH, but field procedures detailed in the scope of work may also include monitoring of dissolved oxygen concentrations, oxidation reduction potential, and/or turbidity¹. Parameters are considered stable when two (2) consecutive readings recorded three (3) minutes apart fall within ranges provided below in Table 1. In the event that the parameters have not stabilized and five (5) well casing volumes have been removed, purging activities will cease and be considered complete. Once the well is purged, a groundwater sample(s) is collected from the well using a new disposable bailer. If a new disposable bailer was used for purging, that bailer may be used to collect the sample(s). A sample is not collected if the well is inadvertently purged dry.

Table 1. Criteria for Defining Stabilization of Water-Quality Indicator Parameters

Parameter	Stabilization Criterion
Temperature	± 0.2°C (± 0.36°F)
pH	± 0.1 standard units
Conductivity	± 3%
Dissolved oxygen	± 10%
Oxidation reduction potential	± 10 mV
Turbidity ¹	± 10% or 1.0 NTU (whichever is greater)

3.2 Low-Flow Purging and Sampling

“Low-Flow”, “Minimal Drawdown”, or “Low-Stress” purging is performed per ASTM D6771-02. It is a method of groundwater removal from within a well’s screened interval that is intended to

¹ As stated in ASTM D6771-02, turbidity is not a chemical parameter and not indicative of when formation-quality water is being purged; however, turbidity may be helpful in evaluating stress on the formation during purging. Turbidity measurements are taken at the same time that stabilization parameter measurements are made, or, at a minimum, once when purging is initiated and again just prior to sample collection, after stabilization parameters have stabilized. To avoid artifacts in sample analysis, turbidity should be as low as possible when samples are collected. If turbidity values are persistently high, the withdrawal rate is lowered until turbidity decreases. If high turbidity persists even after lowering the withdrawal rate, the purging is stopped for a period of time until turbidity settles, and the purging process is then restarted. If this fails to solve the problem, the purging/sampling process for the well is ceased, and well maintenance or redevelopment is considered.

minimize drawdown and mixing of the water column in the well casing. This is accomplished by pumping the well using a decontaminated pump with new disposable plastic discharge or suction tubing or dedicated well tubing at a low flow rate while evaluating the groundwater elevation during pumping.

The low flow pumping rate is well specific and is generally established at a volume that is less than or equal to the natural recovery rate of the well. A pump with adjustable flow rate control is positioned with the intake at or near the mid-point of the submerged well screen. The pumping rate used during low-flow purging is low enough to minimize mobilization of particulate matter and drawdown (stress) of the water column. Low-flow purging rates will vary based on the individual well characteristics; however, the purge rate should not exceed 1.0 Liter per minute (L/min) or 0.25 gallon per minute (gal/min). Low-flow purging should begin at a rate of approximately 0.1 L/min (0.03 gal/min)², or the lowest rate possible, and be adjusted based on an evaluation of drawdown. Water level measurements should be recorded at approximate one (1) to two (2) minute intervals until the low-flow rate has been established, and drawdown is minimized. As a general rule, drawdown should not exceed 25% of the distance between the top of the water column and the pump in-take.

To evaluate when purging is complete, one or more groundwater stabilization parameters are monitored and recorded during purging activities until stabilization is achieved. Most commonly, stabilization parameters include temperature, conductivity, and pH, but field procedures detailed in the scope of work may also include monitoring of dissolved oxygen concentrations, oxidation reduction potential, and/or turbidity¹. The frequency between measurements will be at an interval of one (1) to three (3) minutes; however, if a flow cell is used, the frequency will be determined based on the time required to evacuate one cell volume. Stabilization is defined as three (3) consecutive readings recorded several minutes apart falling within ranges provided in Table 1. Samples will be collected by filling appropriate containers from the pump discharge tubing at a rate not to exceed the established pumping rate.

3.3 Minimal Purge, Discrete Depth, and Passive Sampling

Per ASTM D4448-01, sampling techniques that do not rely on purging, or require only minimal purging, may be used if a particular zone within a screened interval is to be sampled or if a well is not capable of yielding sufficient groundwater for purging. To properly use these sampling techniques, a water sample is collected within the screened interval with little or no mixing of the water column within the casing. These techniques include minimal purge sampling which uses a dedicated sampling pump capable of pumping rates of less than 0.1 L/min (0.03 gal/min)², discrete depth sampling using a bailer that allows groundwater entry at a controlled depth (e.g. differential pressure bailer), or passive (diffusion) sampling. These techniques are based on certain studies referenced in ASTM D4448-01 that indicate that under certain conditions, natural groundwater flow is laminar and horizontal with little or no mixing within the well screen.

² According to ASTM D4448-01, studies have indicated that at flow rates of 0.1 L/min, low-density polyethylene (LDPE) and plasticized polypropylene tubing materials are prone to sorption. Therefore, TFE-fluorocarbon or other appropriate tubing material is used, particularly when tubing lengths of 50 feet or longer are used.

4.0 Decontamination

Reusable groundwater sampling equipment were cleaned using a solution of Alconox or other acceptable detergent, rinsed with tap water, and finally rinsed with distilled water prior to use in each well. Decontamination water was stored on-site in labeled steel drum(s) or other appropriate container(s) prior to disposal.

5.0 Sample Containers, Labeling, and Storage

Samples were collected in laboratory prepared containers with appropriate preservative (if preservative was required). Samples were properly labeled (site name, sample I.D., sampler initials, date, and time of collection) and stored chilled (refrigerator or ice chest with ice) until delivery to a certified laboratory, under chain of custody procedures.

6.0 Chain of Custody Record and Procedure

The field sampler was personally responsible for care and custody of the samples collected until they were properly transferred to another party. To document custody and transfer of samples, a Chain of Custody Record was prepared. The Chain of Custody Record provided identification of the samples corresponding to sample labels and specified analyses to be performed by the laboratory. The original Chain of Custody Record accompanied the shipment, and a copy of the record was stored in the project file. When the samples were transferred, the individuals relinquishing and receiving them signed, dated, and noted the time of transfer on the record.

7.0 Field Records

Daily Report and data forms were completed by staff personnel to provide daily record of significant events, observations, and measurements. Field records were signed, dated, and stored in the project file.

APPENDIX B

FIELD DATA SHEETS
AND
NON-HAZARDOUS WASTE DATA FORM



DAILY REPORT

Page 1 of 11

Project: BP374 Project No.: 06-88-602

Field Representative(s): AM + NV Day: Friday Date: 8/15/14

Time Onsite: From: 0700 To: ; From: To: ; From: To:

- Signed HASP Safety Glasses Hard Hat Steel Toe Boots Safety Vest
UST Emergency System Shut-off Switches Located Proper Gloves
Proper Level of Barricading Other PPE (describe)

Weather: Overcast & cool

Equipment In Use: Peristaltic pump, LEL meter, flow meter, water level meter

Visitors:

Table with 2 columns: TIME and WORK DESCRIPTION. Contains handwritten entries for activities from 0700 to 1130.

Signature: [Handwritten Signature]



Project: BP 374 Project No.: 06-88-602 Date: 8/15/14
 Field Representative: AM/NV Elevation: _____
 Formation recharge rate is historically: High Low (circle one)
 W. L. Indicator ID #: _____ Oil/Water Interface ID #: _____ (List #s of all equip used.)

WELL ID RECORD					WELL GAUGING RECORD					LAB ANALYSES			
Well ID	Well Sampling Order	As-Built Well Diameter (inches)	As-Built Well Screen Interval (ft)	Previous Depth to Water (ft)	Time (24:00)	Depth to LNAPL (ft)	Apparent LNAPL Thickness (ft)*	Depth to Water (ft)	Well Total Depth (ft)				
MW-1					0737	-	-	8.51	26.67				
MW-2					0800	-	-	8.53	26.29				
MW-3					1040	-	-	6.30	26.73				
MW-4					1105	-	-	8.33	26.95				
MW-5					0944	-	-	8.06	23.04				
MW-6					1015	-	-	2.84	14.56				
MW-7					0922	-	-	8.39	19.90				
MW-8					0854	-	-	8.65	19.50				
MW-9					0821	-	-	8.27	19.56				

* Device used to measure LNAPL thickness: Bailer Oil/Water Interface Meter (circle one)
 If bailer used, note bailer dimensions (inches): Entry Diameter _____ Chamber Diameter _____

Signature: *Nile V. ...*



GROUNDWATER SAMPLING DATA SHEET

Page 3 of 11

Project: 06-88-602 BP374

Project No.: 06-88-602

Date: 8/15/14

Field Representative: AM/NV

Well ID: MW1

Start Time: 0737

End Time: 0757

Total Time (minutes): 20

PURGE EQUIPMENT Disp. Bailer 120V Pump Flow Cell
 Disp. Tubing 12V Pump Peristaltic Pump Other ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments:
 Good Improvement Needed (circle one)

PURGING/SAMPLING METHOD Predetermined Well Volume Low-Flow Other: (circle one)

PREDETERMINED WELL VOLUME					LOW-FLOW	
Casing Diameter Unit Volume (gal/ft) (circle one)					Previous Low-Flow Purge Rate	(lpm)
1" (0.04) 1.25" (0.08) 2" (0.17) 3" (0.38) Other: _____ (____)					Total Well Depth (a):	<u>26.67</u> (ft)
4" (0.66) 6" (1.50) 8" (2.60) 12" (5.84) _____ (____)					Initial Depth to Water (b):	<u>8.51</u> (ft)
Total Well Depth (a): _____ (ft)					Pump In-take Depth = b + (a-b)/2:	<u>17.59</u> (ft)
Initial Depth to Water (b): _____ (ft)					Maximum Allowable Drawdown = (a-b)/8:	<u>2.27</u> (ft)
Water Column Height (WCH) = (a - b): _____ (ft)					Low-Flow Purge Rate:	<u>0.25</u> (lpm)
Water Column Volume (WCV) = WCH x Unit Volume: _____ (gal)					Comments:	
Three Casing Volumes = WCV x 3: _____ (gal)					*Low flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown.	
Five Casing Volumes = WCV x 5: _____ (gal)						
Pump Depth (if pump used): _____ (ft)						

GROUNDWATER STABILIZATION PARAMETER RECORD								NOTES
Time (24:00)	Cumulative Vol. gal or L	Temperature °C	pH	Conductivity μS or mS	DO mg/L	ORP mV	Turbidity NTU	Odor, color, sheen or other
0742	0	18.97	8.75	0.081	1.27	117	319	
0744	0.5	19.37	8.92	0.825	0.27	189	43.5	
0746	1.0	19.49	7.99	0.826	0.63	201	16.9	
0748	1.5	19.55	7.47	0.822	1.35	197	13.3	
0750	2.0	19.58	6.99	0.821	1.84	191	0.0	
0752	2.5	19.60	6.70	0.821	1.82	187	0.0	

Previous Stabilized Parameters

PURGE COMPLETION RECORD Low Flow & Parameters Stable 3 Casing Volumes & Parameters Stable 5 Casing Volumes
 Other:

SAMPLE COLLECTION RECORD		GEOCHEMICAL PARAMETERS	
Depth to Water at Sampling: <u>8.80</u> (ft)		Parameter	Time
Sample Collected Via: <input type="checkbox"/> Disp. Bailer <input type="checkbox"/> Dedicated Pump Tubing		DO (mg/L)	
<input checked="" type="checkbox"/> Disp. Pump Tubing Other:		Ferrous Iron (mg/L)	
Sample ID: <u>MW1</u> Sample Collection Time: <u>0755</u> (24:00)		Redox Potential (mV)	
Containers (#): <u>6</u> VOA (<input checked="" type="checkbox"/> preserved or <input type="checkbox"/> unpreserved) <input type="checkbox"/> Liter Amber		Alkalinity (mg/L)	
Other: _____ Other: _____		Other: _____	
Other: _____ Other: _____		Other: _____	

Signature: [Handwritten Signature]



GROUNDWATER SAMPLING DATA SHEET

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Project: BP 374 Project No.: 06-88-602 Date: 8/15/14
 Field Representative: AM/UV
 Well ID: MW2 Start Time: 0800 End Time: 0822 Total Time (minutes): 22

PURGE EQUIPMENT Disp. Bailer 120V Pump Flow Cell
 Disp. Tubing 12V Pump Peristaltic Pump Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments:
 Good Improvement Needed (circle one)

PURGING/SAMPLING METHOD Predetermined Well Volume Low-Flow Other: (circle one)

PREDETERMINED WELL VOLUME					LOW-FLOW			
Casing Diameter Unit Volume (gal/ft) (circle one)					Previous Low-Flow Purge Rate: _____ (lpm)			
1" (0.04)	1.25" (0.08)	2" (0.17)	3" (0.38)	Other: _____	Total Well Depth (a):	<u>26.27</u> (ft)		
4" (0.66)	6" (1.50)	8" (2.60)	12" (5.81)	_____ (____)	Initial Depth to Water (b):	<u>8.53</u> (ft)		
Total Well Depth (a): _____ (ft)					Pump In-take Depth = b + (a-b)/2: <u>17.41</u> (ft)			
Initial Depth to Water (b): _____ (ft)					Maximum Allowable Drawdown = (a-b)/8: <u>2.22</u> (ft)			
Water Column Height (WCH) = (a - b): _____ (ft)					Low-Flow Purge Rate: <u>0.25</u> (lpm)			
Water Column Volume (WCV) = WCH x Unit Volume: _____ (gal)					Comments:			
Three Casing Volumes = WCV x 3: _____ (gal)					*Low flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown.			
Five Casing Volumes = WCV x 5: _____ (gal)								
Purge Depth (if pump used): _____ (ft)								

GROUNDWATER STABILIZATION PARAMETER RECORD

Time (24:00)	Cumulative Vol. gal or L	Temperature °C	pH	Conductivity µS or (µm)	DO mg/L	ORP mV	Turbidity NTU	NOTES Odor, color, sheen or other
0806	0	19.94	6.61	0.667	3.66	174	46.7	
08	0.5	20.02	6.41	0.658	3.05	176	40.2	
10	1.0	21.12	6.20	0.652	2.90	173	34.9	
12	1.5	21.34	6.11	0.649	2.85	171	32.7	
14	2.0	21.55	6.02	0.647	2.90	169	30.8	

PURGE COMPLETION RECORD Low Flow & Parameters Stable 3 Casing Volumes & Parameters Stable 5 Casing Volumes
 Other

SAMPLE COLLECTION RECORD		GEOCHEMICAL PARAMETERS	
Depth to Water at Sampling: <u>8.69</u> (ft)	Parameter	Time	Measurement
Sample Collected Via: <input type="checkbox"/> Disp. Bailer <input type="checkbox"/> Dedicated Pump Tubing	DO (mg/L)		
<input checked="" type="checkbox"/> Disp. Pump Tubing Other:	Ferrous Iron (mg/L)		
Sample ID: <u>MW-2</u> Sample Collection Time: <u>0820</u> (24:00)	Redox Potential (mV)		
Containers (#): <u>6</u> VOA (<input checked="" type="checkbox"/> preserved or <input type="checkbox"/> unpreserved) <input type="checkbox"/> Liter Amber	Alkalinity (mg/L)		
Other: _____ Other: _____	Other:		
Other: _____ Other: _____	Other:		

Signature: Nick Vudobal



GROUNDWATER SAMPLING DATA SHEET

Project: BP374 Project No.: 06-88-602 Date: 8/15/14
 Field Representative: AM/NV
 Well ID: MW3 Start Time: 1040 End Time: 1102 Total Time (minutes): 22

PURGE EQUIPMENT Disp. Bailer 120V Pump Flow Cell
 Disp. Tubing 12V Pump Peristaltic Pump Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments:
 Good Improvement Needed (circle one)

PURGING/SAMPLING METHOD Predetermined Well Volume Low-Flow Other: (circle one)

PREDETERMINED WELL VOLUME

Casing Diameter | Unit Volume (gal/ft) (circle one)
 1" |(0.04) 1.25" |(0.08) 2" |(0.17) 3" |(0.38) Other:
 4" |(0.66) 6" |(1.50) 8" |(2.60) 12" |(5.81) _____ |(____)

Total Well Depth (a): _____ (ft)
 Initial Depth to Water (b): _____ (ft)
 Water Column Height (WCH) = (a - b): _____ (ft)
 Water Column Volume (WCV) = WCH x Unit Volume: _____ (gal)
 Three Casing Volumes = WCV x 3: _____ (gal)
 Five Casing Volumes = WCV x 5: _____ (gal)
 Pump Depth (if pump used): _____ (ft)

LOW-FLOW

Previous Low-Flow Purge Rate: _____ (lpm)
 Total Well Depth (a): 26.73 (ft)
 Initial Depth to Water (b): 6.30 (ft)
 Pump In-take Depth = b + (a-b)/2: 16.52 (ft)
 Maximum Allowable Drawdown = (a-b)/8: 2.5 (ft)
 Low-Flow Purge Rate: 0.25 (lpm)
 Comments:

**Low flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown.*

Handwritten notes:
 26
 26
 26

GROUNDWATER STABILIZATION PARAMETER RECORD

Time (24:00)	Cumulative Vol. gal or L	Temperature °C	pH	Conductivity µS or nS	DO mg/L	ORP mV	Turbidity NTU	NOTES Odor, color, sheen or other
1047	0	23.48	6.00	0.611	0.81	3	0.0	
49	0.5	23.01	5.88	0.615	0.15	-11	3.7	
51	1.0	22.71	5.94	0.618	0.13	-16	4.4	
53	1.5	22.54	6.03	0.619	0.14	-18	3.8	
55	2.0	22.38	6.12	0.621	0.15	-19	4.7	

Previous Stabilized Parameters _____

PURGE COMPLETION RECORD Low Flow & Parameters Stable 3 Casing Volumes & Parameters Stable 5 Casing Volumes
 Other: _____

SAMPLE COLLECTION RECORD		GEOCHEMICAL PARAMETERS	
Parameter	Time	Measurement	
Depth to Water at Sampling: <u>6.32</u> (ft)			
Sample Collected Via: <input type="checkbox"/> Disp. Bailer <input type="checkbox"/> Dedicated Pump Tubing			
<input checked="" type="checkbox"/> Disp. Pump Tubing Other:			
Sample ID: <u>MW3</u> Sample Collection Time: <u>1100</u> (24:00)			
Containers (#): <u>6</u> VOA (<input checked="" type="checkbox"/> preserved or <input type="checkbox"/> unpreserved) <input type="checkbox"/> Liter Amber			
Other: _____ Other: _____			
Other: _____ Other: _____			
DO (mg/L)			
Ferrous Iron (mg/L)			
Redox Potential (mV)			
Alkalinity (mg/L)			
Other:			
Other:			

Signature: [Handwritten Signature]



GROUNDWATER SAMPLING DATA SHEET

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Project: BP374 Project No.: 06-88-602 Date: 8/15/17
 Field Representative: AM/W
 Well ID: MW4 Start Time: 1103 End Time: 1127 Total Time (minutes): 24

PURGE EQUIPMENT Disp. Bailer 120V Pump Flow Cell
 Disp. Tubing 12V Pump Peristaltic Pump Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc) Comments:
 Good Improvement Needed (circle one)

PURGING/SAMPLING METHOD Predetermined Well Volume Low-Flow Other: (circle one)

PREDETERMINED WELL VOLUME					LOW-FLOW	
Casing Diameter Unit Volume (gal/ft) (circle one)					Previous Low-Flow Purge Rate:	(lpm)
1" (0.04) 1.25" (0.08) 2" (0.17) 3" (0.38) Other:					Total Well Depth (a):	<u>26.95</u> (ft)
4" (0.66) 6" (1.50) 8" (2.60) 12" (5.81) "					Initial Depth to Water (b):	<u>8.33</u> (ft)
Total Well Depth (a):					Pump In-take Depth = b + (a-b)/2:	<u>17.64</u> (ft)
Initial Depth to Water (b):					Maximum Allowable Drawdown = (a-b)/8:	<u>2.33</u> (ft)
Water Column Height (WCH) = (a - b):					Low-Flow Purge Rate:	<u>0.25</u> (Lpm)*
Water Column Volume (WCV) = WCH x Unit Volume:					Comments:	
Three Casing Volumes = WCV x 3:						
Five Casing Volumes = WCV x 5:						
Pump Depth (if pump used):						

*Low flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown.

GROUNDWATER STABILIZATION PARAMETER RECORD								
Time (24:00)	Cumulative Vol. gal or L	Temperature °C	pH	Conductivity µS or nS	DO mg/L	ORP mV	Turbidity NTU	NOTES Odor, color, sheen or other
<u>1110</u>	<u>0</u>	<u>21.47</u>	<u>6.13</u>	<u>0.773</u>	<u>0.18</u>	<u>-69</u>	<u>0.0</u>	<u>Hydrocarbon odor present</u>
<u>1112</u>	<u>0.5</u>	<u>20.91</u>	<u>6.02</u>	<u>0.774</u>	<u>0.19</u>	<u>-83</u>	<u>0.0</u>	
<u>1115</u>	<u>1.0</u>	<u>20.76</u>	<u>6.08</u>	<u>0.777</u>	<u>0.20</u>	<u>-94</u>	<u>0.0</u>	
<u>1118</u>	<u>1.5</u>	<u>20.71</u>	<u>6.11</u>	<u>0.775</u>	<u>0.21</u>	<u>-98</u>	<u>0.0</u>	
<u>1120</u>	<u>2.0</u>	<u>20.69</u>	<u>6.14</u>	<u>0.774</u>	<u>0.21</u>	<u>-101</u>	<u>0.0</u>	
Previous Stabilized Parameters								

PURGE COMPLETION RECORD Low Flow & Parameters Stable 3 Casing Volumes & Parameters Stable 5 Casing Volumes
 Other:

SAMPLE COLLECTION RECORD		GEOCHEMICAL PARAMETERS	
Depth to Water at Sampling <u>0.78</u> (ft)	Parameter	Time	Measurement
Sample Collected Via <input type="checkbox"/> Disp. Bailer <input type="checkbox"/> Dedicated Pump Tubing	DO (mg/L)		
<input checked="" type="checkbox"/> Disp. Pump Tubing Other:	Ferrous Iron (mg/L)		
Sample ID: <u>MW4</u> Sample Collection Time: <u>1125</u> (24:00)	Redox Potential (mV)		
Containers (#): <u>6</u> VOA <input checked="" type="checkbox"/> preserved or <input type="checkbox"/> unpreserved) <u> </u> Liter Amber	Alkalinity (mg/L)		
Other: <u> </u> Other: <u> </u>	Other:		
Other: <u> </u> Other: <u> </u>	Other:		

Signature: Nikhil Udofah



GROUNDWATER SAMPLING DATA SHEET

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Project: BP374 Project No.: 06-88-602 Date: 8/15/14
 Field Representative: AM/NU
 Well ID: MW6 MW5 Start Time: 0944 End Time: 1012 Total Time (minutes): 28

PURGE EQUIPMENT Disp. Bailer 120V Pump Flow Cell
 Disp. Tubing 12V Pump Peristaltic Pump Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments:
 Good Improvement Needed (circle one)

PURGING/SAMPLING METHOD Predetermined Well Volume Low-Flow Other: (circle one)

PREDETERMINED WELL VOLUME					LOW-FLOW	
Casing Diameter Unit Volume (gal/ft) (circle one)						Previous Low-Flow Purge Rate: _____ (lpm)
1" (0.04)	1.25" (0.08)	2" (0.17)	3" (0.28)	Other: _____		Total Well Depth (a): <u>23.04</u> (ft)
4" (0.66)	6" (1.50)	8" (2.60)	12" (5.81)	_____ (____)	Initial Depth to Water (b): <u>8.06</u> (ft)	
Total Well Depth (a): _____ (ft)					Pump In-take Depth = b + (a-b)/2: <u>15.55</u> (ft)	
Initial Depth to Water (b): _____ (ft)					Maximum Allowable Drawdown = (a-b)/8: <u>1.87</u> (ft)	
Water Column Height (WCH) = (a - b): _____ (ft)					Low-Flow Purge Rate: <u>0.25</u> (Lpm)*	
Water Column Volume (WCV) = WCH x Unit Volume: _____ (gal)					Comments:	
Three Casing Volumes = WCV x 3: _____ (gal)					*Low-flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown	
Five Casing Volumes = WCV x 5: _____ (gal)						
Pump Depth (if pump used): _____ (ft)						

Time (24:00)	Cumulative Vol. gal or L	Temperature °C	pH	Conductivity uS or (mS)	DO mg/L	ORP mV	Turbidity NTU	NOTES Odor, color, sheen or other
0955	0	23.06	6.00	0.579	0.16	142	0.0	
57	0.5	23.05	6.37	0.577	0.14	142	0.0	
1057	1.0	23.05	6.24	0.576	0.81	142	0.0	
03	1.5	22.87	6.14	0.575	1.45	141	0.0	
05	2.0	22.77	6.07	0.574	1.86	136	0.0	
07	2.5	22.79	5.95	0.574	2.09	135	0.0	
	3.0	22.75	5.92	0.573	2.33	132	0.0	

PURGE COMPLETION RECORD Low Flow & Parameters Stable 3 Casing Volumes & Parameters Stable 5 Casing Volumes
 Other

SAMPLE COLLECTION RECORD		GEOCHEMICAL PARAMETERS	
Depth to Water at Sampling: <u>8.67</u> (ft)	Parameter	Time	Measurement
Sample Collected Via: <input type="checkbox"/> Disp. Bailer <input type="checkbox"/> Dedicated Pump Tubing	DO (mg/L)		
<input checked="" type="checkbox"/> Disp. Pump Tubing Other:	Ferrous Iron (mg/L)		
Sample ID: <u>MW5</u> Sample Collection Time: <u>1010</u> (24:00)	Redox Potential (mV)		
Containers (#): <u>6</u> VOA (<input checked="" type="checkbox"/> preserved or <input type="checkbox"/> unpreserved) <input type="checkbox"/> Liter Amber	Alkalinity (mg/L)		
Other: _____ Other: _____	Other: _____		
Other: _____ Other: _____	Other: _____		

Signature: [Handwritten Signature]



GROUNDWATER SAMPLING DATA SHEET

Project: BP374 Project No.: 06-88-602 Date: 8/15/14
 Field Representative: AM/W
 Well ID: MW6 Start Time: 1015 End Time: 1042 Total Time (minutes): 27

PURGE EQUIPMENT Disp. Bailer 120V Pump Flow Cell
 Disp. Tubing 12V Pump Peristaltic Pump Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments:
 Good Improvement Needed (circle one)

PURGING/SAMPLING METHOD Predetermined Well Volume Low-Flow Other: (circle one)

PREDETERMINED WELL VOLUME					LOW-FLOW				
Casing Diameter Unit Volume (gal/ft) (circle one)					Previous Low-Flow Purge Rate: _____ (lpm)				
1" (0.04)	1.25" (0.08)	2" (0.17)	3" (0.38)	Other: _____	Total Well Depth (a): <u>14.56</u> (ft)				
4" (0.66)	6" (1.50)	8" (2.60)	12" (5.81)	_____	Initial Depth to Water (b): <u>2.87</u> (ft)				
Total Well Depth (a): _____ (ft)					Pump In-take Depth = b + (a-b)/2: <u>8.70</u> (ft)				
Initial Depth to Water (b): _____ (ft)					Maximum Allowable Drawdown = (a-b)/8: <u>1.47</u> (ft)				
Water Column Height (WCH) = (a - b): _____ (ft)					Low-Flow Purge Rate: <u>0.25</u> (lpm)				
Water Column Volume (WCV) = WCH x Unit Volume: _____ (gal)					Comments:				
Three Casing Volumes = WCV x 3: _____ (gal)					*Low-flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown.				
Five Casing Volumes = WCV x 5: _____ (gal)									
Pump Depth (if pump used): _____ (ft)									

GROUNDWATER STABILIZATION PARAMETER RECORD								
Time (24:00)	Cumulative Vol. gal or l	Temperature °C	pH	Conductivity μS or mS	DO mg/L	ORP mV	Turbidity NTU	NOTES Odor, color, sheen or other
1024	0	23.52	6.92	0.451	0.78	135	0.0	
26	0.5	23.68	6.20	0.447	1.05	159	0.0	
28	1.0	23.68	6.04	0.446	1.10	159	0.0	
30	1.5	23.64	6.03	0.446	1.08	158	0.0	
32	2.0	23.60	6.01	0.445	1.08	154	0.0	

PURGE COMPLETION RECORD Low Flow & Parameters Stable 3 Casing Volumes & Parameters Stable 5 Casing Volumes
 Other:

SAMPLE COLLECTION RECORD		GEOCHEMICAL PARAMETERS	
Depth to Water at Sampling: <u>334</u> (ft)	Parameter	Time	Measurement
Sample Collected Via <input type="checkbox"/> Disp. Bailer <input type="checkbox"/> Dedicated Pump Tubing	DO (mg/L)		
<input checked="" type="checkbox"/> Disp. Pump Tubing Other:	Ferrous Iron (mg/L)		
Sample ID: <u>MW6</u> Sample Collection Time: <u>1040</u> (24:00)	Redox Potential (mV)		
Containers (#): <u>6</u> VOA (<input checked="" type="checkbox"/> preserved or <input type="checkbox"/> unpreserved) <input type="checkbox"/> Liter Amber	Alkalinity (mg/L)		
Other: _____ Other: _____	Other:		
Other: _____ Other: _____	Other:		

Signature: Mike V...



GROUNDWATER SAMPLING DATA SHEET

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Project: BP374 Project No.: 06-88-602 Date: 8/15/14
 Field Representative: AM/NU
 Well ID: MW7 Start Time: 0922 End Time: 0942 Total Time (minutes): 20

PURGE EQUIPMENT Disp. Bailer 120V Pump Flow Cell
 Disp. Tubing 12V Pump Peristaltic Pump Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments
 Good Improvement Needed (circle one)

PURGING/SAMPLING METHOD Predetermined Well Volume Low-Flow Other: (circle one)

PREDETERMINED WELL VOLUME				LOW-FLOW	
Casing Diameter Unit Volume (gal/ft) (circle one)					
1" (0.04)	1.25" (0.08)	2" (0.17)	3" (0.38)	Other: _____	
4" (0.66)	6" (1.50)	8" (2.60)	12" (4.81)	_____	
Total Well Depth (a): _____ (ft)	Initial Depth to Water (b): _____ (ft)		Previous Low-Flow Purge Rate: _____ (lpm)		
Water Column Height (WCH) = (a - b): _____ (ft)	Water Column Volume (WCV) = WCH x Unit Volume: _____ (gal)		Total Well Depth (a): <u>19.90</u> (ft)		
Three Casing Volumes = WCV x 3: _____ (gal)	Five Casing Volumes = WCV x 5: _____ (gal)		Initial Depth to Water (b): <u>8.27</u> (ft)		
Pump Depth (if pump used): _____ (ft)			Pump In-take Depth = b + (a-b)/2: <u>14.085</u> (ft)		
			Maximum Allowable Drawdown = (a-b)/8: <u>1.45</u> (ft)		
			Low-Flow Purge Rate: <u>0.25</u> (lpm)		
			Comments: _____		
			*Low flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown.		

GROUNDWATER STABILIZATION PARAMETER RECORD

Time (24:00)	Cumulative Vol gal or L	Temperature °C	pH	Conductivity uS or nS	DO mg/L	ORP mV	Turbidity NTU	NOTES Odor, color, sheen or other
0927	0	23.56	6.18	0.925	0.15	145	11.1	
29	0.5	23.70	6.33	0.925	0.15	134	0.0	
31	1.0	24.02	6.34	0.925	0.14	124	0.0	
33	1.5	23.99	6.33	0.926	0.14	115	0.0	
35	2.0	24.06	6.34	0.925	0.14	108	0.0	

Previous Stabilized Parameters _____

PURGE COMPLETION RECORD Low Flow & Parameters Stable 3 Casing Volumes & Parameters Stable 5 Casing Volumes
 Other: _____

SAMPLE COLLECTION RECORD		GEOCHEMICAL PARAMETERS	
Depth to Water at Sampling: <u>8.39</u> (ft)	Sample Collected Via: <input type="checkbox"/> Disp. Bailer <input type="checkbox"/> Dedicated Pump Tubing	Parameter	Time
<input checked="" type="checkbox"/> Disp. Pump Tubing Other: _____	Sample ID: <u>MW7</u> Sample Collection Time: <u>0940</u> (24:00)	DO (mg/L)	
Containers (#): <u>6</u> VOA (<input checked="" type="checkbox"/> preserved or <input type="checkbox"/> unpreserved) _____ Liter Amber	Other: _____	Ferrous Iron (mg/L)	
Other: _____	Other: _____	Redox Potential (mV)	
Other: _____	Other: _____	Alkalinity (mg/L)	
		Other:	
		Other:	

Signature: [Handwritten Signature]



GROUNDWATER SAMPLING DATA SHEET

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Project: 09374 Project No.: 06-88-602 Date: 8/15/14
 Field Representative: AM + MV
 Well ID: MW8 Start Time: 0854 End Time: 0912 Total Time (minutes): 18

PURGE EQUIPMENT Disp. Bailer 120V Pump Flow Cell
 Disp. Tubing 12V Pump Peristaltic Pump Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments: Difficult to remove cover
 Good Improvement Needed (circle one)

PURGING/SAMPLING METHOD Predetermined Well Volume Low-Flow Other: (circle one)

PREDETERMINED WELL VOLUME					LOW-FLOW				
Casing Diameter Unit Volume (gal/ft) (circle one)					Previous Low-Flow Purge Rate: _____ (lpm)				
1" (0.04)	1.25" (0.08)	2" (0.17)	3" (0.38)	Other: _____	Total Well Depth (a): <u>19.50</u> (ft)				
4" (0.66)	6" (1.50)	8" (2.60)	12" (5.81)	_____	Initial Depth to Water (b): <u>8.65</u> (ft)				
Total Well Depth (a): _____ (ft)					Pump In-take Depth = b + (a-b)/2: <u>14.075</u> (ft)				
Initial Depth to Water (b): _____ (ft)					Maximum Allowable Drawdown = (a-b)/8: <u>1.36</u> (ft)				
Water Column Height (WCH) = (a - b): _____ (ft)					Low-Flow Purge Rate: <u>0.25</u> (lpm)*				
Water Column Volume (WCV) = WCH x Unit Volume: _____ (gal)					Comments:				
Three Casing Volumes = WCV x 3: _____ (gal)					*Low flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown				
Five Casing Volumes = WCV x 5: _____ (gal)									
Pump Depth (if pump used): _____ (ft)									

GROUNDWATER STABILIZATION PARAMETER RECORD								NOTES
Time (24:00)	Cumulative Vol. gal or L	Temperature °C	pH	Conductivity uS or mS	DO mg/L	ORP mV	Turbidity NTU	Odor, color, sheen or other
0859	0	22.59	6.77	0.610	0.18	100	32.1	
0901	0.5	23.28	6.53	0.598	0.17	100	36.7	
03	1.0	23.52	6.34	0.594	0.16	101	22.1	
05	1.5	23.64	6.21	0.592	0.15	101	12.1	
07	2.0	23.74	6.07	0.591	0.90	102	0.2	
09	2.5	23.80	5.93	0.590	1.70	104	0.0	
10	2.75	23.82	5.88	0.589	1.92	104	0.0	

PURGE COMPLETION RECORD Low Flow & Parameters Stable 3 Casing Volumes & Parameters Stable 5 Casing Volumes
 Other:

SAMPLE COLLECTION RECORD		GEOCHEMICAL PARAMETERS	
Depth to Water at Sampling: <u>8.96</u> (ft)	Parameter	Time	Measurement
Sample Collected Via: <input type="checkbox"/> Disp. Bailer <input type="checkbox"/> Dedicated Pump Tubing	DO (mg/L)		
<input checked="" type="checkbox"/> Disp. Pump Tubing Other:	Ferrous Iron (mg/L)		
Sample ID: <u>MW8</u> Sample Collection Time: <u>0910</u> (24:00)	Redox Potential (mV)		
Containers (#): <u>6</u> VOA (<input checked="" type="checkbox"/> preserved or <input type="checkbox"/> unpreserved) <input type="checkbox"/> Liter Amber	Alkalinity (mg/L)		
Other: _____ Other: _____	Other:		
Other: _____ Other: _____	Other:		

Signature: [Handwritten Signature]



GROUNDWATER SAMPLING DATA SHEET

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Project: BP 374 Project No.: 06-88-604 Date: 8/15/14
 Field Representative: AM/NV
 Well ID: MW9 Start Time: 0821 End Time: 0847 Total Time (minutes): 26

PURGE EQUIPMENT Disp. Bailer 120V Pump Flow Cell
 Disp. Tubing 12V Pump Peristaltic Pump Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments:
 Good Improvement Needed (circle one)

PURGING/SAMPLING METHOD Predetermined Well Volume Low-Flow Other: (circle one)

***PREDETERMINED WELL VOLUME**

Casing Diameter | Unit Volume (gal/ft) (circle one)
 1" |(0.04) 1.25" |(0.08) 2" |(0.17) 3" |(0.28) Other:
 4" |(0.66) 6" |(1.50) 8" |(2.60) 12" |(5.81) "

Total Well Depth (a): _____ (ft)
 Initial Depth to Water (b): _____ (ft)
 Water Column Height (WCH) = (a - b): _____ (ft)
 Water Column Volume (WCV) = WCH x Unit Volume: _____ (gal)
 Three Casing Volumes = WCV x 3: _____ (gal)
 Five Casing Volumes = WCV x 5: _____ (gal)
 Pump Depth (if pump used): _____ (ft)

LOW-FLOW

Previous Low-Flow Purge Rate: 19.5 (lpm)
 Total Well Depth (a): 19.5 (ft)
 Initial Depth to Water (b): 8.27 (ft)
 Pump In-take Depth = b + (a-b)/2: 13.88 (ft)
 Maximum Allowable Drawdown = (a-b)/8: 1.40 (ft)
 Low-Flow Purge Rate: 0.25 (Lpm)*
 Comments:

*Low flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown.

GROUNDWATER STABILIZATION PARAMETER RECORD

Time (24:00)	Cumulative Vol. gal or L	Temperature °C	pH	Conductivity μS or (mS)	DO mg/L	ORP mV	Turbidity NTU	NOTES Odor, color, sheen or other
0832	0	21.58	5.98	0.880	8.06	-31	59.1	
34	0.5	21.95	5.73	0.870	3.57	-57	0.3	
36	1.0	22.06	5.74	0.874	1.84	-70	0.0	
38	1.5	22.14	5.86	0.874	0.14	-80	0.0	
40	2.0	22.21	6.02	0.874	0.10	-86	0.0	

Previous Stabilized Parameters

PURGE COMPLETION RECORD Low Flow & Parameters Stable 3 Casing Volumes & Parameters Stable 5 Casing Volumes
 Other:

SAMPLE COLLECTION RECORD

Depth to Water at Sampling: 8.53 (ft)
 Sample Collected Via Disp. Bailer Dedicated Pump Tubing
 Disp. Pump Tubing Other:
 Sample ID: MW9 Sample Collection Time: 0845 (24:00)
 Containers (#): 6 VOA (preserved or unpreserved) Liter Amber
 Other: _____ Other: _____
 Other: _____ Other: _____

GEOCHEMICAL PARAMETERS

Parameter	Time	Measurement
DO (mg/L)		
Ferrous Iron (mg/L)		
Redox Potential (mV)		
Alkalinity (mg/L)		
Other:		
Other:		

Signature: Nile Ndoyale

APPENDIX C

LABORATORY REPORT
AND CHAIN-OF-CUSTODY DOCUMENTATION

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

TestAmerica Job ID: 440-85900-1
Client Project/Site: ARCO 0374, Oakland

For:
Broadbent & Associates, Inc.
4820 Business Center Drive
#110
Fairfield, California 94534

Attn: Kristene Tidwell



*Authorized for release by:
8/30/2014 2:52:49 PM*

Kathleen Robb, Project Manager II
(949)261-1022
kathleen.robbs@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Broadbent & Associates, Inc.
Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-85900-1	MW-1	Water	08/15/14 07:55	08/16/14 09:50
440-85900-2	MW-2	Water	08/15/14 08:20	08/16/14 09:50
440-85900-3	MW-3	Water	08/15/14 11:00	08/16/14 09:50
440-85900-4	MW-4	Water	08/15/14 11:25	08/16/14 09:50
440-85900-5	MW-5	Water	08/15/14 10:10	08/16/14 09:50
440-85900-6	MW-6	Water	08/15/14 10:40	08/16/14 09:50
440-85900-7	MW-7	Water	08/15/14 09:45	08/16/14 09:50
440-85900-8	MW-8	Water	08/15/14 09:10	08/16/14 09:50
440-85900-9	MW-9	Water	08/15/14 08:45	08/16/14 09:50



Case Narrative

Client: Broadbent & Associates, Inc.
Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Job ID: 440-85900-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative 440-85900-1

Comments

No additional comments.

Receipt

The samples were received on 8/16/2014 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.7° C.

Except:

The following sample(s) was received at the laboratory without a sample collection time documented on the chain of custody: MW-1 (440-85900-1), MW-2 (440-85900-2), MW-3 (440-85900-3), MW-4 (440-85900-4), MW-5 (440-85900-5), MW-6 (440-85900-6), MW-7 (440-85900-7), MW-8 (440-85900-8), MW-9 (440-85900-9). Project logged in using the times taken from the container labels.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC VOA

Method(s) 8015B: The Gasoline Range Organics (GRO) concentration reported for the following sample(s) is due to the presence of discrete peaks: MW-1 (440-85900-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: Broadbent & Associates, Inc.
Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Client Sample ID: MW-1

Lab Sample ID: 440-85900-1

Date Collected: 08/15/14 07:55

Matrix: Water

Date Received: 08/16/14 09:50

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			08/19/14 17:26	1
1,2-Dichloroethane	ND		0.50	ug/L			08/19/14 17:26	1
Benzene	ND		0.50	ug/L			08/19/14 17:26	1
Ethanol	ND		150	ug/L			08/19/14 17:26	1
Ethylbenzene	ND		0.50	ug/L			08/19/14 17:26	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	ug/L			08/19/14 17:26	1
Isopropyl Ether (DIPE)	ND		0.50	ug/L			08/19/14 17:26	1
m,p-Xylene	ND		1.0	ug/L			08/19/14 17:26	1
Methyl-t-Butyl Ether (MTBE)	120		0.50	ug/L			08/19/14 17:26	1
o-Xylene	ND		0.50	ug/L			08/19/14 17:26	1
Tert-amyl-methyl ether (TAME)	0.61		0.50	ug/L			08/19/14 17:26	1
tert-Butyl alcohol (TBA)	ND		10	ug/L			08/19/14 17:26	1
Toluene	ND		0.50	ug/L			08/19/14 17:26	1
Xylenes, Total	ND		1.0	ug/L			08/19/14 17:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		80 - 120		08/19/14 17:26	1
Dibromofluoromethane (Surr)	99		76 - 132		08/19/14 17:26	1
Toluene-d8 (Surr)	99		80 - 128		08/19/14 17:26	1

Method: 8015B/5030B - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C12)	ND		50	ug/L			08/19/14 15:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		65 - 140		08/19/14 15:38	1

Client Sample Results

Client: Broadbent & Associates, Inc.
 Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Client Sample ID: MW-2

Lab Sample ID: 440-85900-2

Date Collected: 08/15/14 08:20

Matrix: Water

Date Received: 08/16/14 09:50

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			08/19/14 17:54	1
1,2-Dichloroethane	ND		0.50	ug/L			08/19/14 17:54	1
Benzene	ND		0.50	ug/L			08/19/14 17:54	1
Ethanol	ND		150	ug/L			08/19/14 17:54	1
Ethylbenzene	ND		0.50	ug/L			08/19/14 17:54	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	ug/L			08/19/14 17:54	1
Isopropyl Ether (DIPE)	ND		0.50	ug/L			08/19/14 17:54	1
m,p-Xylene	ND		1.0	ug/L			08/19/14 17:54	1
Methyl-t-Butyl Ether (MTBE)	61		0.50	ug/L			08/19/14 17:54	1
o-Xylene	ND		0.50	ug/L			08/19/14 17:54	1
Tert-amyl-methyl ether (TAME)	0.73		0.50	ug/L			08/19/14 17:54	1
tert-Butyl alcohol (TBA)	ND		10	ug/L			08/19/14 17:54	1
Toluene	ND		0.50	ug/L			08/19/14 17:54	1
Xylenes, Total	ND		1.0	ug/L			08/19/14 17:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		80 - 120		08/19/14 17:54	1
Dibromofluoromethane (Surr)	98		76 - 132		08/19/14 17:54	1
Toluene-d8 (Surr)	98		80 - 128		08/19/14 17:54	1

Method: 8015B/5030B - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C12)	ND		50	ug/L			08/19/14 17:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		65 - 140		08/19/14 17:01	1

Client Sample Results

Client: Broadbent & Associates, Inc.
 Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Client Sample ID: MW-3

Lab Sample ID: 440-85900-3

Date Collected: 08/15/14 11:00

Matrix: Water

Date Received: 08/16/14 09:50

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			08/19/14 18:23	1
1,2-Dichloroethane	ND		0.50	ug/L			08/19/14 18:23	1
Benzene	ND		0.50	ug/L			08/19/14 18:23	1
Ethanol	ND		150	ug/L			08/19/14 18:23	1
Ethylbenzene	ND		0.50	ug/L			08/19/14 18:23	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	ug/L			08/19/14 18:23	1
Isopropyl Ether (DIPE)	ND		0.50	ug/L			08/19/14 18:23	1
m,p-Xylene	ND		1.0	ug/L			08/19/14 18:23	1
Methyl-t-Butyl Ether (MTBE)	1.2		0.50	ug/L			08/19/14 18:23	1
o-Xylene	ND		0.50	ug/L			08/19/14 18:23	1
Tert-amyl-methyl ether (TAME)	ND		0.50	ug/L			08/19/14 18:23	1
tert-Butyl alcohol (TBA)	ND		10	ug/L			08/19/14 18:23	1
Toluene	ND		0.50	ug/L			08/19/14 18:23	1
Xylenes, Total	ND		1.0	ug/L			08/19/14 18:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		80 - 120		08/19/14 18:23	1
Dibromofluoromethane (Surr)	98		76 - 132		08/19/14 18:23	1
Toluene-d8 (Surr)	99		80 - 128		08/19/14 18:23	1

Method: 8015B/5030B - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C12)	ND		50	ug/L			08/19/14 17:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		65 - 140		08/19/14 17:29	1

Client Sample Results

Client: Broadbent & Associates, Inc.
Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Client Sample ID: MW-4

Lab Sample ID: 440-85900-4

Date Collected: 08/15/14 11:25

Matrix: Water

Date Received: 08/16/14 09:50

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		5.0	ug/L			08/20/14 05:28	10
1,2-Dichloroethane	ND		5.0	ug/L			08/20/14 05:28	10
Benzene	900		5.0	ug/L			08/20/14 05:28	10
Ethanol	ND		1500	ug/L			08/20/14 05:28	10
Ethylbenzene	38		5.0	ug/L			08/20/14 05:28	10
Ethyl-t-butyl ether (ETBE)	ND		5.0	ug/L			08/20/14 05:28	10
Isopropyl Ether (DIPE)	ND		5.0	ug/L			08/20/14 05:28	10
m,p-Xylene	92		10	ug/L			08/20/14 05:28	10
Methyl-t-Butyl Ether (MTBE)	ND		5.0	ug/L			08/20/14 05:28	10
o-Xylene	ND		5.0	ug/L			08/20/14 05:28	10
Tert-amyl-methyl ether (TAME)	ND		5.0	ug/L			08/20/14 05:28	10
tert-Butyl alcohol (TBA)	ND		100	ug/L			08/20/14 05:28	10
Toluene	45		5.0	ug/L			08/20/14 05:28	10
Xylenes, Total	92		10	ug/L			08/20/14 05:28	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		80 - 120		08/20/14 05:28	10
Dibromofluoromethane (Surr)	104		76 - 132		08/20/14 05:28	10
Toluene-d8 (Surr)	101		80 - 128		08/20/14 05:28	10

Method: 8015B/5030B - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C12)	6300		1000	ug/L			08/19/14 17:57	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		65 - 140		08/19/14 17:57	20

Client Sample Results

Client: Broadbent & Associates, Inc.
 Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Client Sample ID: MW-5
Date Collected: 08/15/14 10:10
Date Received: 08/16/14 09:50

Lab Sample ID: 440-85900-5
Matrix: Water

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			08/20/14 10:24	1
1,2-Dichloroethane	ND		0.50	ug/L			08/20/14 10:24	1
Benzene	ND		0.50	ug/L			08/20/14 10:24	1
Ethanol	ND		150	ug/L			08/20/14 10:24	1
Ethylbenzene	ND		0.50	ug/L			08/20/14 10:24	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	ug/L			08/20/14 10:24	1
Isopropyl Ether (DIPE)	ND		0.50	ug/L			08/20/14 10:24	1
m,p-Xylene	ND		1.0	ug/L			08/20/14 10:24	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	ug/L			08/20/14 10:24	1
o-Xylene	ND		0.50	ug/L			08/20/14 10:24	1
Tert-amyl-methyl ether (TAME)	ND		0.50	ug/L			08/20/14 10:24	1
tert-Butyl alcohol (TBA)	ND		10	ug/L			08/20/14 10:24	1
Toluene	ND		0.50	ug/L			08/20/14 10:24	1
Xylenes, Total	ND		1.0	ug/L			08/20/14 10:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		80 - 120		08/20/14 10:24	1
Dibromofluoromethane (Surr)	99		76 - 132		08/20/14 10:24	1
Toluene-d8 (Surr)	106		80 - 128		08/20/14 10:24	1

Method: 8015B/5030B - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C12)	ND		50	ug/L			08/19/14 18:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		65 - 140		08/19/14 18:25	1

Client Sample Results

Client: Broadbent & Associates, Inc.
Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Client Sample ID: MW-6

Lab Sample ID: 440-85900-6

Date Collected: 08/15/14 10:40

Matrix: Water

Date Received: 08/16/14 09:50

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			08/20/14 11:51	1
1,2-Dichloroethane	ND		0.50	ug/L			08/20/14 11:51	1
Benzene	ND		0.50	ug/L			08/20/14 11:51	1
Ethanol	ND		150	ug/L			08/20/14 11:51	1
Ethylbenzene	ND		0.50	ug/L			08/20/14 11:51	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	ug/L			08/20/14 11:51	1
Isopropyl Ether (DIPE)	ND		0.50	ug/L			08/20/14 11:51	1
m,p-Xylene	ND		1.0	ug/L			08/20/14 11:51	1
Methyl-t-Butyl Ether (MTBE)	1.7		0.50	ug/L			08/20/14 11:51	1
o-Xylene	ND		0.50	ug/L			08/20/14 11:51	1
Tert-amyl-methyl ether (TAME)	ND		0.50	ug/L			08/20/14 11:51	1
tert-Butyl alcohol (TBA)	ND		10	ug/L			08/20/14 11:51	1
Toluene	ND		0.50	ug/L			08/20/14 11:51	1
Xylenes, Total	ND		1.0	ug/L			08/20/14 11:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		80 - 120		08/20/14 11:51	1
Dibromofluoromethane (Surr)	100		76 - 132		08/20/14 11:51	1
Toluene-d8 (Surr)	104		80 - 128		08/20/14 11:51	1

Method: 8015B/5030B - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C12)	ND		50	ug/L			08/19/14 18:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		65 - 140		08/19/14 18:53	1

Client Sample Results

Client: Broadbent & Associates, Inc.
 Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Client Sample ID: MW-7

Lab Sample ID: 440-85900-7

Date Collected: 08/15/14 09:45

Matrix: Water

Date Received: 08/16/14 09:50

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			08/20/14 12:20	1
1,2-Dichloroethane	ND		0.50	ug/L			08/20/14 12:20	1
Benzene	ND		0.50	ug/L			08/20/14 12:20	1
Ethanol	ND		150	ug/L			08/20/14 12:20	1
Ethylbenzene	ND		0.50	ug/L			08/20/14 12:20	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	ug/L			08/20/14 12:20	1
Isopropyl Ether (DIPE)	ND		0.50	ug/L			08/20/14 12:20	1
m,p-Xylene	ND		1.0	ug/L			08/20/14 12:20	1
Methyl-t-Butyl Ether (MTBE)	50		0.50	ug/L			08/20/14 12:20	1
o-Xylene	ND		0.50	ug/L			08/20/14 12:20	1
Tert-amyl-methyl ether (TAME)	ND		0.50	ug/L			08/20/14 12:20	1
tert-Butyl alcohol (TBA)	ND		10	ug/L			08/20/14 12:20	1
Toluene	ND		0.50	ug/L			08/20/14 12:20	1
Xylenes, Total	ND		1.0	ug/L			08/20/14 12:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		80 - 120		08/20/14 12:20	1
Dibromofluoromethane (Surr)	104		76 - 132		08/20/14 12:20	1
Toluene-d8 (Surr)	104		80 - 128		08/20/14 12:20	1

Method: 8015B/5030B - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C12)	ND		50	ug/L			08/19/14 20:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		65 - 140		08/19/14 20:17	1

Client Sample Results

Client: Broadbent & Associates, Inc.
 Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Client Sample ID: MW-8

Lab Sample ID: 440-85900-8

Date Collected: 08/15/14 09:10

Matrix: Water

Date Received: 08/16/14 09:50

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			08/20/14 12:48	1
1,2-Dichloroethane	ND		0.50	ug/L			08/20/14 12:48	1
Benzene	ND		0.50	ug/L			08/20/14 12:48	1
Ethanol	ND		150	ug/L			08/20/14 12:48	1
Ethylbenzene	ND		0.50	ug/L			08/20/14 12:48	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	ug/L			08/20/14 12:48	1
Isopropyl Ether (DIPE)	ND		0.50	ug/L			08/20/14 12:48	1
m,p-Xylene	ND		1.0	ug/L			08/20/14 12:48	1
Methyl-t-Butyl Ether (MTBE)	21		0.50	ug/L			08/20/14 12:48	1
o-Xylene	ND		0.50	ug/L			08/20/14 12:48	1
Tert-amyl-methyl ether (TAME)	ND		0.50	ug/L			08/20/14 12:48	1
tert-Butyl alcohol (TBA)	ND		10	ug/L			08/20/14 12:48	1
Toluene	ND		0.50	ug/L			08/20/14 12:48	1
Xylenes, Total	ND		1.0	ug/L			08/20/14 12:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		80 - 120		08/20/14 12:48	1
Dibromofluoromethane (Surr)	105		76 - 132		08/20/14 12:48	1
Toluene-d8 (Surr)	106		80 - 128		08/20/14 12:48	1

Method: 8015B/5030B - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C12)	ND		50	ug/L			08/19/14 20:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		65 - 140		08/19/14 20:45	1

Client Sample Results

Client: Broadbent & Associates, Inc.
 Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Client Sample ID: MW-9
Date Collected: 08/15/14 08:45
Date Received: 08/16/14 09:50

Lab Sample ID: 440-85900-9
Matrix: Water

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			08/20/14 13:17	1
1,2-Dichloroethane	ND		0.50	ug/L			08/20/14 13:17	1
Benzene	ND		0.50	ug/L			08/20/14 13:17	1
Ethanol	ND		150	ug/L			08/20/14 13:17	1
Ethylbenzene	ND		0.50	ug/L			08/20/14 13:17	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	ug/L			08/20/14 13:17	1
Isopropyl Ether (DIPE)	ND		0.50	ug/L			08/20/14 13:17	1
m,p-Xylene	ND		1.0	ug/L			08/20/14 13:17	1
Methyl-t-Butyl Ether (MTBE)	68		0.50	ug/L			08/20/14 13:17	1
o-Xylene	ND		0.50	ug/L			08/20/14 13:17	1
Tert-amyl-methyl ether (TAME)	0.67		0.50	ug/L			08/20/14 13:17	1
tert-Butyl alcohol (TBA)	ND		10	ug/L			08/20/14 13:17	1
Toluene	ND		0.50	ug/L			08/20/14 13:17	1
Xylenes, Total	ND		1.0	ug/L			08/20/14 13:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		80 - 120		08/20/14 13:17	1
Dibromofluoromethane (Surr)	111		76 - 132		08/20/14 13:17	1
Toluene-d8 (Surr)	106		80 - 128		08/20/14 13:17	1

Method: 8015B/5030B - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C12)	180		50	ug/L			08/19/14 21:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		65 - 140		08/19/14 21:13	1

Method Summary

Client: Broadbent & Associates, Inc.
Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Method	Method Description	Protocol	Laboratory
8260B/5030B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8015B/5030B	Gasoline Range Organics (GC)	SW846	TAL IRV

Protocol References:

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

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022



Lab Chronicle

Client: Broadbent & Associates, Inc.
Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Client Sample ID: MW-1

Date Collected: 08/15/14 07:55

Date Received: 08/16/14 09:50

Lab Sample ID: 440-85900-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	10 mL	10 mL	200512	08/19/14 17:26	RM	TAL IRV
Total/NA	Analysis	8015B/5030B		1	10 mL	10 mL	200594	08/19/14 15:38	IM	TAL IRV

Client Sample ID: MW-2

Date Collected: 08/15/14 08:20

Date Received: 08/16/14 09:50

Lab Sample ID: 440-85900-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	10 mL	10 mL	200512	08/19/14 17:54	RM	TAL IRV
Total/NA	Analysis	8015B/5030B		1	10 mL	10 mL	200594	08/19/14 17:01	IM	TAL IRV

Client Sample ID: MW-3

Date Collected: 08/15/14 11:00

Date Received: 08/16/14 09:50

Lab Sample ID: 440-85900-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	10 mL	10 mL	200512	08/19/14 18:23	RM	TAL IRV
Total/NA	Analysis	8015B/5030B		1	10 mL	10 mL	200594	08/19/14 17:29	IM	TAL IRV

Client Sample ID: MW-4

Date Collected: 08/15/14 11:25

Date Received: 08/16/14 09:50

Lab Sample ID: 440-85900-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		10	10 mL	10 mL	200711	08/20/14 05:28	LB	TAL IRV
Total/NA	Analysis	8015B/5030B		20	10 mL	10 mL	200594	08/19/14 17:57	IM	TAL IRV

Client Sample ID: MW-5

Date Collected: 08/15/14 10:10

Date Received: 08/16/14 09:50

Lab Sample ID: 440-85900-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	10 mL	10 mL	200811	08/20/14 10:24	TN	TAL IRV
Total/NA	Analysis	8015B/5030B		1	10 mL	10 mL	200594	08/19/14 18:25	IM	TAL IRV

Client Sample ID: MW-6

Date Collected: 08/15/14 10:40

Date Received: 08/16/14 09:50

Lab Sample ID: 440-85900-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	10 mL	10 mL	200811	08/20/14 11:51	TN	TAL IRV

TestAmerica Irvine

Lab Chronicle

Client: Broadbent & Associates, Inc.
Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Client Sample ID: MW-6

Date Collected: 08/15/14 10:40
Date Received: 08/16/14 09:50

Lab Sample ID: 440-85900-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015B/5030B		1	10 mL	10 mL	200594	08/19/14 18:53	IM	TAL IRV

Client Sample ID: MW-7

Date Collected: 08/15/14 09:45
Date Received: 08/16/14 09:50

Lab Sample ID: 440-85900-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	10 mL	10 mL	200811	08/20/14 12:20	TN	TAL IRV
Total/NA	Analysis	8015B/5030B		1	10 mL	10 mL	200594	08/19/14 20:17	IM	TAL IRV

Client Sample ID: MW-8

Date Collected: 08/15/14 09:10
Date Received: 08/16/14 09:50

Lab Sample ID: 440-85900-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	10 mL	10 mL	200811	08/20/14 12:48	TN	TAL IRV
Total/NA	Analysis	8015B/5030B		1	10 mL	10 mL	200594	08/19/14 20:45	IM	TAL IRV

Client Sample ID: MW-9

Date Collected: 08/15/14 08:45
Date Received: 08/16/14 09:50

Lab Sample ID: 440-85900-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	10 mL	10 mL	200811	08/20/14 13:17	TN	TAL IRV
Total/NA	Analysis	8015B/5030B		1	10 mL	10 mL	200594	08/19/14 21:13	IM	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: Broadbent & Associates, Inc.
Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-200512/4

Matrix: Water

Analysis Batch: 200512

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			08/19/14 08:00	1
1,2-Dichloroethane	ND		0.50	ug/L			08/19/14 08:00	1
Benzene	ND		0.50	ug/L			08/19/14 08:00	1
Ethanol	ND		150	ug/L			08/19/14 08:00	1
Ethylbenzene	ND		0.50	ug/L			08/19/14 08:00	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	ug/L			08/19/14 08:00	1
Isopropyl Ether (DIPE)	ND		0.50	ug/L			08/19/14 08:00	1
m,p-Xylene	ND		1.0	ug/L			08/19/14 08:00	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	ug/L			08/19/14 08:00	1
o-Xylene	ND		0.50	ug/L			08/19/14 08:00	1
Tert-amyl-methyl ether (TAME)	ND		0.50	ug/L			08/19/14 08:00	1
tert-Butyl alcohol (TBA)	ND		10	ug/L			08/19/14 08:00	1
Toluene	ND		0.50	ug/L			08/19/14 08:00	1
Xylenes, Total	ND		1.0	ug/L			08/19/14 08:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		80 - 120		08/19/14 08:00	1
Dibromofluoromethane (Surr)	89		76 - 132		08/19/14 08:00	1
Toluene-d8 (Surr)	98		80 - 128		08/19/14 08:00	1

Lab Sample ID: LCS 440-200512/5

Matrix: Water

Analysis Batch: 200512

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	25.0	29.5		ug/L		118	70 - 130
1,2-Dichloroethane	25.0	25.6		ug/L		102	57 - 138
Benzene	25.0	26.1		ug/L		104	68 - 130
Ethanol	250	255		ug/L		102	50 - 149
Ethylbenzene	25.0	26.1		ug/L		105	70 - 130
Ethyl-t-butyl ether (ETBE)	25.0	26.2		ug/L		105	60 - 136
Isopropyl Ether (DIPE)	25.0	26.8		ug/L		107	58 - 139
m,p-Xylene	50.0	54.6		ug/L		109	70 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	28.3		ug/L		113	63 - 131
o-Xylene	25.0	27.9		ug/L		112	70 - 130
Tert-amyl-methyl ether (TAME)	25.0	27.4		ug/L		110	57 - 139
tert-Butyl alcohol (TBA)	125	130		ug/L		104	70 - 130
Toluene	25.0	26.5		ug/L		106	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	93		76 - 132
Toluene-d8 (Surr)	98		80 - 128

TestAmerica Irvine

QC Sample Results

Client: Broadbent & Associates, Inc.
Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-85722-E-1 MS

Matrix: Water

Analysis Batch: 200512

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
1,2-Dibromoethane (EDB)	ND		25.0	27.0		ug/L		108	70 - 131	
1,2-Dichloroethane	ND		25.0	24.8		ug/L		99	56 - 146	
Benzene	8.3		25.0	31.1		ug/L		91	66 - 130	
Ethanol	ND		250	225		ug/L		90	54 - 150	
Ethylbenzene	ND		25.0	23.2		ug/L		93	70 - 130	
Ethyl-t-butyl ether (ETBE)	ND		25.0	24.8		ug/L		99	70 - 130	
Isopropyl Ether (DIPE)	ND		25.0	24.8		ug/L		99	64 - 138	
m,p-Xylene	ND		50.0	48.0		ug/L		96	70 - 133	
Methyl-t-Butyl Ether (MTBE)	ND		25.0	26.5		ug/L		106	70 - 130	
o-Xylene	ND		25.0	24.8		ug/L		99	70 - 133	
Tert-amyl-methyl ether (TAME)	ND		25.0	26.0		ug/L		104	68 - 133	
tert-Butyl alcohol (TBA)	ND		125	118		ug/L		94	70 - 130	
Toluene	ND		25.0	24.4		ug/L		98	70 - 130	

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	96		76 - 132
Toluene-d8 (Surr)	99		80 - 128

Lab Sample ID: 440-85722-E-1 MSD

Matrix: Water

Analysis Batch: 200512

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	RPD
	Result	Qualifier		Result	Qualifier						RPD	Limit
1,2-Dibromoethane (EDB)	ND		25.0	26.8		ug/L		107	70 - 131	1	25	
1,2-Dichloroethane	ND		25.0	24.6		ug/L		99	56 - 146	1	20	
Benzene	8.3		25.0	30.8		ug/L		90	66 - 130	1	20	
Ethanol	ND		250	208		ug/L		83	54 - 150	8	30	
Ethylbenzene	ND		25.0	23.0		ug/L		92	70 - 130	1	20	
Ethyl-t-butyl ether (ETBE)	ND		25.0	25.4		ug/L		101	70 - 130	2	25	
Isopropyl Ether (DIPE)	ND		25.0	25.3		ug/L		101	64 - 138	2	25	
m,p-Xylene	ND		50.0	47.8		ug/L		96	70 - 133	0	25	
Methyl-t-Butyl Ether (MTBE)	ND		25.0	26.6		ug/L		106	70 - 130	0	25	
o-Xylene	ND		25.0	24.7		ug/L		99	70 - 133	1	20	
Tert-amyl-methyl ether (TAME)	ND		25.0	26.4		ug/L		105	68 - 133	1	30	
tert-Butyl alcohol (TBA)	ND		125	121		ug/L		97	70 - 130	3	25	
Toluene	ND		25.0	24.3		ug/L		97	70 - 130	1	20	

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	93		76 - 132
Toluene-d8 (Surr)	99		80 - 128

TestAmerica Irvine

QC Sample Results

Client: Broadbent & Associates, Inc.
Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-200711/4

Matrix: Water

Analysis Batch: 200711

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			08/19/14 19:56	1
1,2-Dichloroethane	ND		0.50	ug/L			08/19/14 19:56	1
Benzene	ND		0.50	ug/L			08/19/14 19:56	1
Ethanol	ND		150	ug/L			08/19/14 19:56	1
Ethylbenzene	ND		0.50	ug/L			08/19/14 19:56	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	ug/L			08/19/14 19:56	1
Isopropyl Ether (DIPE)	ND		0.50	ug/L			08/19/14 19:56	1
m,p-Xylene	ND		1.0	ug/L			08/19/14 19:56	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	ug/L			08/19/14 19:56	1
o-Xylene	ND		0.50	ug/L			08/19/14 19:56	1
Tert-amyl-methyl ether (TAME)	ND		0.50	ug/L			08/19/14 19:56	1
tert-Butyl alcohol (TBA)	ND		10	ug/L			08/19/14 19:56	1
Toluene	ND		0.50	ug/L			08/19/14 19:56	1
Xylenes, Total	ND		1.0	ug/L			08/19/14 19:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		80 - 120		08/19/14 19:56	1
Dibromofluoromethane (Surr)	96		76 - 132		08/19/14 19:56	1
Toluene-d8 (Surr)	99		80 - 128		08/19/14 19:56	1

Lab Sample ID: LCS 440-200711/26

Matrix: Water

Analysis Batch: 200711

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	25.0	27.8		ug/L		111	70 - 130
1,2-Dichloroethane	25.0	26.0		ug/L		104	57 - 138
Benzene	25.0	27.3		ug/L		109	68 - 130
Ethanol	250	247		ug/L		99	50 - 149
Ethylbenzene	25.0	28.1		ug/L		112	70 - 130
Ethyl-t-butyl ether (ETBE)	25.0	25.1		ug/L		100	60 - 136
Isopropyl Ether (DIPE)	25.0	26.8		ug/L		107	58 - 139
m,p-Xylene	50.0	54.9		ug/L		110	70 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	27.0		ug/L		108	63 - 131
o-Xylene	25.0	27.2		ug/L		109	70 - 130
Tert-amyl-methyl ether (TAME)	25.0	25.2		ug/L		101	57 - 139
tert-Butyl alcohol (TBA)	125	125		ug/L		100	70 - 130
Toluene	25.0	27.3		ug/L		109	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	98		76 - 132
Toluene-d8 (Surr)	99		80 - 128

TestAmerica Irvine

QC Sample Results

Client: Broadbent & Associates, Inc.
Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-85763-B-1 MS

Matrix: Water

Analysis Batch: 200711

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
1,2-Dibromoethane (EDB)	ND		25.0	26.9		ug/L		108	70 - 131	
1,2-Dichloroethane	0.65		25.0	25.8		ug/L		100	56 - 146	
Benzene	0.57		25.0	27.4		ug/L		107	66 - 130	
Ethanol	ND		250	258		ug/L		103	54 - 150	
Ethylbenzene	14		25.0	40.9		ug/L		108	70 - 130	
Ethyl-t-butyl ether (ETBE)	ND		25.0	24.2		ug/L		97	70 - 130	
Isopropyl Ether (DIPE)	0.50		25.0	25.4		ug/L		100	64 - 138	
m,p-Xylene	7.0		50.0	62.1		ug/L		110	70 - 133	
Methyl-t-Butyl Ether (MTBE)	ND		25.0	24.5		ug/L		98	70 - 130	
o-Xylene	6.3		25.0	33.4		ug/L		108	70 - 133	
Tert-amyl-methyl ether (TAME)	ND		25.0	24.5		ug/L		98	68 - 133	
tert-Butyl alcohol (TBA)	10		125	145		ug/L		108	70 - 130	
Toluene	ND		25.0	27.0		ug/L		108	70 - 130	

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	96		76 - 132
Toluene-d8 (Surr)	97		80 - 128

Lab Sample ID: 440-85763-B-1 MSD

Matrix: Water

Analysis Batch: 200711

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
1,2-Dibromoethane (EDB)	ND		25.0	27.9		ug/L		112	70 - 131	3	25	
1,2-Dichloroethane	0.65		25.0	26.1		ug/L		102	56 - 146	1	20	
Benzene	0.57		25.0	27.6		ug/L		108	66 - 130	1	20	
Ethanol	ND		250	251		ug/L		100	54 - 150	3	30	
Ethylbenzene	14		25.0	40.8		ug/L		108	70 - 130	0	20	
Ethyl-t-butyl ether (ETBE)	ND		25.0	24.6		ug/L		98	70 - 130	1	25	
Isopropyl Ether (DIPE)	0.50		25.0	26.1		ug/L		103	64 - 138	3	25	
m,p-Xylene	7.0		50.0	62.1		ug/L		110	70 - 133	0	25	
Methyl-t-Butyl Ether (MTBE)	ND		25.0	25.2		ug/L		101	70 - 130	3	25	
o-Xylene	6.3		25.0	33.3		ug/L		108	70 - 133	0	20	
Tert-amyl-methyl ether (TAME)	ND		25.0	24.2		ug/L		97	68 - 133	1	30	
tert-Butyl alcohol (TBA)	10		125	146		ug/L		108	70 - 130	0	25	
Toluene	ND		25.0	27.2		ug/L		109	70 - 130	1	20	

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	93		76 - 132
Toluene-d8 (Surr)	97		80 - 128

TestAmerica Irvine

QC Sample Results

Client: Broadbent & Associates, Inc.
Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-200811/4

Matrix: Water

Analysis Batch: 200811

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			08/20/14 08:30	1
1,2-Dichloroethane	ND		0.50	ug/L			08/20/14 08:30	1
Benzene	ND		0.50	ug/L			08/20/14 08:30	1
Ethanol	ND		150	ug/L			08/20/14 08:30	1
Ethylbenzene	ND		0.50	ug/L			08/20/14 08:30	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	ug/L			08/20/14 08:30	1
Isopropyl Ether (DIPE)	ND		0.50	ug/L			08/20/14 08:30	1
m,p-Xylene	ND		1.0	ug/L			08/20/14 08:30	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	ug/L			08/20/14 08:30	1
o-Xylene	ND		0.50	ug/L			08/20/14 08:30	1
Tert-amyl-methyl ether (TAME)	ND		0.50	ug/L			08/20/14 08:30	1
tert-Butyl alcohol (TBA)	ND		10	ug/L			08/20/14 08:30	1
Toluene	ND		0.50	ug/L			08/20/14 08:30	1
Xylenes, Total	ND		1.0	ug/L			08/20/14 08:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		80 - 120		08/20/14 08:30	1
Dibromofluoromethane (Surr)	102		76 - 132		08/20/14 08:30	1
Toluene-d8 (Surr)	105		80 - 128		08/20/14 08:30	1

Lab Sample ID: LCS 440-200811/5

Matrix: Water

Analysis Batch: 200811

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	25.0	26.1		ug/L		104	70 - 130
1,2-Dichloroethane	25.0	25.7		ug/L		103	57 - 138
Benzene	25.0	23.6		ug/L		94	68 - 130
Ethanol	250	235		ug/L		94	50 - 149
Ethylbenzene	25.0	24.9		ug/L		100	70 - 130
Ethyl-t-butyl ether (ETBE)	25.0	22.7		ug/L		91	60 - 136
Isopropyl Ether (DIPE)	25.0	22.8		ug/L		91	58 - 139
m,p-Xylene	50.0	49.2		ug/L		98	70 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	23.9		ug/L		96	63 - 131
o-Xylene	25.0	25.8		ug/L		103	70 - 130
Tert-amyl-methyl ether (TAME)	25.0	22.3		ug/L		89	57 - 139
tert-Butyl alcohol (TBA)	125	119		ug/L		96	70 - 130
Toluene	25.0	24.7		ug/L		99	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		80 - 120
Dibromofluoromethane (Surr)	105		76 - 132
Toluene-d8 (Surr)	106		80 - 128

TestAmerica Irvine

QC Sample Results

Client: Broadbent & Associates, Inc.
Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-85900-5 MS

Matrix: Water

Analysis Batch: 200811

Client Sample ID: MW-5

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	ND		25.0	28.0		ug/L		112	70 - 131
1,2-Dichloroethane	ND		25.0	28.5		ug/L		114	56 - 146
Benzene	ND		25.0	25.8		ug/L		103	66 - 130
Ethanol	ND		250	282		ug/L		113	54 - 150
Ethylbenzene	ND		25.0	27.1		ug/L		109	70 - 130
Ethyl-t-butyl ether (ETBE)	ND		25.0	24.5		ug/L		98	70 - 130
Isopropyl Ether (DIPE)	ND		25.0	24.4		ug/L		98	64 - 138
m,p-Xylene	ND		50.0	53.8		ug/L		108	70 - 133
Methyl-t-Butyl Ether (MTBE)	ND		25.0	24.9		ug/L		99	70 - 130
o-Xylene	ND		25.0	27.9		ug/L		112	70 - 133
Tert-amyl-methyl ether (TAME)	ND		25.0	24.0		ug/L		96	68 - 133
tert-Butyl alcohol (TBA)	ND		125	135		ug/L		108	70 - 130
Toluene	ND		25.0	27.2		ug/L		109	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		80 - 120
Dibromofluoromethane (Surr)	106		76 - 132
Toluene-d8 (Surr)	105		80 - 128

Lab Sample ID: 440-85900-5 MSD

Matrix: Water

Analysis Batch: 200811

Client Sample ID: MW-5

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	ND		25.0	26.1		ug/L		105	70 - 131	7	25
1,2-Dichloroethane	ND		25.0	28.0		ug/L		112	56 - 146	2	20
Benzene	ND		25.0	25.5		ug/L		102	66 - 130	1	20
Ethanol	ND		250	261		ug/L		104	54 - 150	8	30
Ethylbenzene	ND		25.0	25.7		ug/L		103	70 - 130	5	20
Ethyl-t-butyl ether (ETBE)	ND		25.0	24.3		ug/L		97	70 - 130	1	25
Isopropyl Ether (DIPE)	ND		25.0	24.3		ug/L		97	64 - 138	0	25
m,p-Xylene	ND		50.0	50.4		ug/L		101	70 - 133	6	25
Methyl-t-Butyl Ether (MTBE)	ND		25.0	25.1		ug/L		100	70 - 130	1	25
o-Xylene	ND		25.0	26.2		ug/L		105	70 - 133	6	20
Tert-amyl-methyl ether (TAME)	ND		25.0	24.1		ug/L		96	68 - 133	0	30
tert-Butyl alcohol (TBA)	ND		125	130		ug/L		104	70 - 130	3	25
Toluene	ND		25.0	26.8		ug/L		107	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	106		76 - 132
Toluene-d8 (Surr)	106		80 - 128

TestAmerica Irvine

QC Sample Results

Client: Broadbent & Associates, Inc.
Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Method: 8015B/5030B - Gasoline Range Organics (GC)

Lab Sample ID: MB 440-200594/11

Matrix: Water

Analysis Batch: 200594

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C12)	ND		50	ug/L			08/19/14 14:14	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		65 - 140				08/19/14 14:14	1

Lab Sample ID: LCS 440-200594/9

Matrix: Water

Analysis Batch: 200594

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	800	700		ug/L		88	80 - 120
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	102		65 - 140				

Lab Sample ID: 440-85900-1 MS

Matrix: Water

Analysis Batch: 200594

Client Sample ID: MW-1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	78		800	678		ug/L		75	65 - 140
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	93		65 - 140						

Lab Sample ID: 440-85900-1 MSD

Matrix: Water

Analysis Batch: 200594

Client Sample ID: MW-1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)	78		800	677		ug/L		75	65 - 140	0	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	93		65 - 140								

TestAmerica Irvine

QC Association Summary

Client: Broadbent & Associates, Inc.
 Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

GC/MS VOA

Analysis Batch: 200512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-85722-E-1 MS	Matrix Spike	Total/NA	Water	8260B/5030B	
440-85722-E-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B/5030B	
440-85900-1	MW-1	Total/NA	Water	8260B/5030B	
440-85900-2	MW-2	Total/NA	Water	8260B/5030B	
440-85900-3	MW-3	Total/NA	Water	8260B/5030B	
LCS 440-200512/5	Lab Control Sample	Total/NA	Water	8260B/5030B	
MB 440-200512/4	Method Blank	Total/NA	Water	8260B/5030B	

Analysis Batch: 200711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-85763-B-1 MS	Matrix Spike	Total/NA	Water	8260B/5030B	
440-85763-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B/5030B	
440-85900-4	MW-4	Total/NA	Water	8260B/5030B	
LCS 440-200711/26	Lab Control Sample	Total/NA	Water	8260B/5030B	
MB 440-200711/4	Method Blank	Total/NA	Water	8260B/5030B	

Analysis Batch: 200811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-85900-5	MW-5	Total/NA	Water	8260B/5030B	
440-85900-5 MS	MW-5	Total/NA	Water	8260B/5030B	
440-85900-5 MSD	MW-5	Total/NA	Water	8260B/5030B	
440-85900-6	MW-6	Total/NA	Water	8260B/5030B	
440-85900-7	MW-7	Total/NA	Water	8260B/5030B	
440-85900-8	MW-8	Total/NA	Water	8260B/5030B	
440-85900-9	MW-9	Total/NA	Water	8260B/5030B	
LCS 440-200811/5	Lab Control Sample	Total/NA	Water	8260B/5030B	
MB 440-200811/4	Method Blank	Total/NA	Water	8260B/5030B	

GC VOA

Analysis Batch: 200594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-85900-1	MW-1	Total/NA	Water	8015B/5030B	
440-85900-1 MS	MW-1	Total/NA	Water	8015B/5030B	
440-85900-1 MSD	MW-1	Total/NA	Water	8015B/5030B	
440-85900-2	MW-2	Total/NA	Water	8015B/5030B	
440-85900-3	MW-3	Total/NA	Water	8015B/5030B	
440-85900-4	MW-4	Total/NA	Water	8015B/5030B	
440-85900-5	MW-5	Total/NA	Water	8015B/5030B	
440-85900-6	MW-6	Total/NA	Water	8015B/5030B	
440-85900-7	MW-7	Total/NA	Water	8015B/5030B	
440-85900-8	MW-8	Total/NA	Water	8015B/5030B	
440-85900-9	MW-9	Total/NA	Water	8015B/5030B	
LCS 440-200594/9	Lab Control Sample	Total/NA	Water	8015B/5030B	
MB 440-200594/11	Method Blank	Total/NA	Water	8015B/5030B	

Definitions/Glossary

Client: Broadbent & Associates, Inc.
Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: Broadbent & Associates, Inc.
Project/Site: ARCO 0374, Oakland

TestAmerica Job ID: 440-85900-1

Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-15
Arizona	State Program	9	AZ0671	10-13-14 *
California	LA Cty Sanitation Districts	9	10256	01-31-15
California	State Program	9	2706	06-30-16
Guam	State Program	9	Cert. No. 12.002r	01-23-15
Hawaii	State Program	9	N/A	01-29-15 *
Nevada	State Program	9	CA015312007A	07-31-15
New Mexico	State Program	6	N/A	01-29-15
Northern Mariana Islands	State Program	9	MP0002	01-29-15
Oregon	NELAP	10	4005	01-29-15
USDA	Federal		P330-09-00080	06-06-15
USEPA UCMR	Federal	1	CA01531	01-31-15

* Certification renewal pending - certification considered valid.

TestAmerica Irvine

Login Sample Receipt Checklist

Client: Broadbent & Associates, Inc.

Job Number: 440-85900-1

Login Number: 85900

List Number: 1

Creator: Soderblom, Tim

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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 containers received 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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



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>Report Title:</u>	Third Quarter 2014 Monitoring Report
<u>Facility Global ID:</u>	T0600100106
<u>Facility Name:</u>	ARCO #0374
<u>File Name:</u>	GEO_WELL.zip
<u>Organization Name:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	69.170.11.178
<u>Submittal Date/Time:</u>	10/30/2014 1:57:57 PM
<u>Confirmation Number:</u>	3638980925

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public (VACAVILL...)



Teri (192.168.3.2...)



440-85900-...
Aug 14 155...

GeoTracker ESI



→ https://geotracker.waterboards.ca.gov/esi/upload_geoedd.asp?cmd=uploadstatus&checktype=EDF&upload_id=11520963&check

TOOLS

- Upload EDD
- Check EDD
- VL Search Tool
- Edit Field Points
- Other Tools
- Logout

NEW SUBMITTALS

- by Facility
- All Submittals (4722)
- Pending Submittals (9)
- Denied Submittals (74)
- Received Submittals (1591)

FACILITY MANAGEMENT

- Associated Facilities (45)
- Pending Facilities (0)
- Denied Facilities (50)
- Request Additional facilities

DOWNLOAD

- Associated Global IDs

UPLOADING A EDF FILE

SUCCESS

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

<u>Submittal Type:</u>	EDF
<u>Report Title:</u>	Third Quarter 2014 Monitoring Report
<u>Report Type:</u>	Monitoring Report - Semi-Annually
<u>Facility Global ID:</u>	T0600100106
<u>Facility Name:</u>	ARCO #0374
<u>File Name:</u>	440-85900-1_30 Aug 14 1550_EDF.zip
<u>Organization Name:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	69.170.11.178
<u>Submittal Date/Time:</u>	10/28/2014 10:46:17 AM
<u>Confirmation Number:</u>	5516969799

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