Atlantic Richfield Company

Chuck Carmel
Environmental Business Manager

PO Box 1257
San Ramon, CA 94583
Phone: (925) 275-3803
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January 26, 2011

Re: Fourth Quarter 2010 Semi-Annual Groundwater Monitoring Report
Atlantic Richfield Company Station #6113
785 East Stanley Boulevard, Livermore, California
ACEH Case #RO0000393

"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
Environmental Business Manager

Attachment

Fourth Quarter 2010 Semi-Annual Groundwater Monitoring Report
Atlantic Richfield Company Station No. 6113
785 East Stanley Boulevard, Livermore, California
ACEH Case No. RO0000393

Prepared for:

Mr. Chuck Carmel
Environmental Business Manager
Atlantic Richfield Company
P.O. Box 1257
San Ramon, California 94583

Prepared by:

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

1324 Mangrove Ave., Suite 212
Chico, California 95926
(530) 566-1400
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January 26, 2011

Project No. 06-82-637

Broadbent & Associates, Inc.
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BROADBENT & ASSOCIATES, INC
ENVIRONMENTAL, WATER RESOURCES & ENGINEERING

January 26, 2011

Project No. 06-82-637

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

Attn.: Mr. Chuck Carmel

Re: Fourth Quarter 2010 Semi-Annual Groundwater Monitoring Report, Atlantic Richfield Company Station No.6113, 785 East Stanley Boulevard, Livermore, California; ACEH Case No.RO0000393

Dear Mr. Carmel:

Broadbent & Associates, Inc. (BAI) is pleased to submit this *Fourth Quarter 2010 Semi-Annual Groundwater Monitoring Report* for Atlantic Richfield Company Station No.6113 (herein referred to as Station No.6113) located at 785 East Stanley Boulevard, Livermore, California (Site). This report presents a summary of results from semi-annual groundwater monitoring and sampling conducted during the Fourth Quarter of 2010.

Should you have questions or require additional information, please do not hesitate to contact us at (530) 566-1400.

Sincerely,
BROADBENT & ASSOCIATES, INC.

Jason Duda
Project Scientist

Matthew G. Herrick, P.G., C.HG.
Senior Hydrogeologist

Enclosures

cc: Mr. Paresh Khatri, ACEH (Submitted via ACEH ftp site)
Mr. Paul M. Smith/Ms. Danielle Stefani, Livermore-Pleasanton Fire Department (submitted via GeoTracker)
Electronic copy uploaded to GeoTracker

STATION #6113 SEMI-ANNUAL GROUNDWATER MONITORING REPORT

Facility: #6113 Address:	785 East Stanley Boulevard, Livermore, California
Environmental Business Manager:	Mr. Chuck Carmel
Consulting Co./Contact Persons:	Broadbent & Associates, Inc.(BAI)/Jason Duda & Matt Herrick (530) 566-1400
Consultant Project No.:	06-82-637
Primary Agency/Regulatory ID No.:	Alameda County Environmental Health (ACEH) ACEH Case # RO0000393
Facility Permits/Permitting Agency:	NA

WORK PERFORMED THIS QUARTER (Fourth Quarter 2010)

1. Prepared and submitted *Third Quarter 2010 Status Report* (BAI, 10/27/2010)
2. Conducted groundwater monitoring/sampling for Fourth Quarter 2010. Work performed by BAI on November 4, 2010.
3. Prepared and submitted *Feasibility Study Report* (BAI, 11/12/2010)

WORK PROPOSED FOR NEXT QUARTER (First Quarter 2011)

1. Prepare and submit this *Fourth Quarter 2010 Semi-Annual Groundwater Monitoring Report*.
2. Prepare and submit *Dual Phase Extraction (DPE) Pilot Test Work Plan* by March 7, 2011 as requested in ACEH's approval letter dated January 6, 2011.

QUARTERLY RESULTS SUMMARY:

Current phase of project:	**Groundwater monitoring/sampling**
Frequency of ground-water monitoring:	**Semi-Annually (2Q and 4Q): Wells MW-2, MW-4, MW-7, MW-9, MW-11, MW-12, RMW-13, VW-1, VW-2, VW-4**
Frequency of ground-water sampling:	**Semi-Annually (2Q and 4Q): Wells MW-4, MW-7, MW-11, MW-12, RMW-13, VW-1** **Annually (4Q): Well MW-9**
Is free product (FP) present on-site:	**No**
FP recovered this quarter:	**None**
Bulk Soil Removed to Date:	**288 cubic yards TPH impacted soil**
Current remediation techniques:	**Air Diffusion (discontinued in September 2008 as a result of station raze and rebuild activities)**
Depth to ground water (below TOC):	**18.62 (MW-9) to 21.53 (MW-12)**
General ground-water flow direction:	**Northeast**
Approximate hydraulic gradient:	**0.01 ft/ft**

DISCUSSION:

Fourth Quarter 2010 groundwater monitoring and sampling was conducted at Station No. 6113 on November 4, 2010 by BAI. Water levels were gauged in the ten wells associated with the Site. No irregularities were noted during water level gauging. Depth to water measurements

ranged from 18.62 ft at well MW-9 to 21.53 ft at well MW-12. Resulting groundwater surface elevations ranged from 440.76 ft above datum in well MW-2 to 435.84 ft in well MW-12. Water level elevations yielded a potentiometric groundwater flow direction and gradient to the northeast at approximately 0.01 ft/ft. Groundwater monitoring field data sheets are provided within Appendix A. Measured depths to groundwater and respective groundwater elevations are summarized in Table 1. Current and historic groundwater flow directions and gradients are provided in Table 3. A Site Location Map is presented as Drawing 1. Potentiometric groundwater elevation contours are presented in Drawing 2.

Consistent with the current groundwater sampling schedule, water samples were collected from wells MW-4, MW-7, MW-9, MW-11, MW-12, RMW-13, and VW-1 on November 4, 2010. No irregularities were reported during sampling. Samples were submitted under chain-of-custody protocol to Calscience Environmental Laboratories, Inc. (Garden Grove, California), for analysis of Gasoline Range Organics (GRO, C6-C12) by EPA Method 8015B and for Benzene, Toluene, Ethybenzene, and Total Xylenes (BTEX), Methyl Tert-Butyl Ether (MTBE), Ethyl Tert-Butyl Ether (ETBE), Tert-Amyl Methyl Ether (TAME), Di-Isopropyl Ether(DIPE), Tert-Butyl Alcohol (TBA), 1,2-Dichloroethane (1,2-DCA), 1,2-Dibromomethane (EDB) and Ethanol by EPA Method 8260B. The laboratory stated that the GRO concentrations detected in the groundwater samples collected from wells MW-4 and VW-1 had "quantitation of unknown hydrocarbon(s) in sample based on gasoline." No other significant irregularities were encountered during laboratory analysis of the samples. Groundwater sampling field data sheets and the laboratory analytical report, including chain-of-custody documentation, are provided in Appendix A.

Gasoline Range Organics (GRO) were detected above laboratory reporting limits in three of the seven wells sampled at concentrations up to 31,000 micrograms per liter (µg/L) in well RMW-13. Benzene, Ethylbenzene, and Total Xylenes were detected above laboratory reporting limits in well RMW-13 at concentrations of 4,000 µg/L, 1,700 µg/L, and 2,500 µg/L, respectively. MTBE was detected above the laboratory reporting limit in four of the seven wells sampled at concentrations up to 390 µg/L in well RMW-13. 1,2 Dichloroethane (1,2-DCA) was detected in RMW-13 at a concentration of 130 µg/L. The remaining fuel additives and oxygenates were not detected above their respective laboratory reporting limits in the seven wells sampled this quarter. Historic laboratory analytical results are summarized in Table 1 and Table 2. The most recent GRO, Benzene, and MTBE concentrations are also presented in Drawing 2. A copy of the laboratory analytical report, including chain-of-custody documentation is provided in Appendix A. Groundwater monitoring data (GEO_WELL) and laboratory analytical results (EDF) were uploaded to the GeoTracker AB2886 database. Upload confirmation receipts are provided in Appendix B.

CONCLUSIONS AND RECOMMENDATIONS:

The Fourth Quarter 2010 water level elevations were within historic minimum and maximum elevation ranges for each well, excluding replacement well RMW-13. The current groundwater flow direction (northeast) and gradient magnitude (0.01 ft/ft) were generally consistent with recent historical data. Detected analyte concentrations were within the historic

minimum and maximum ranges recorded for each well. Well RMW-13 is not included in this analysis as the well has only been sampled twice.

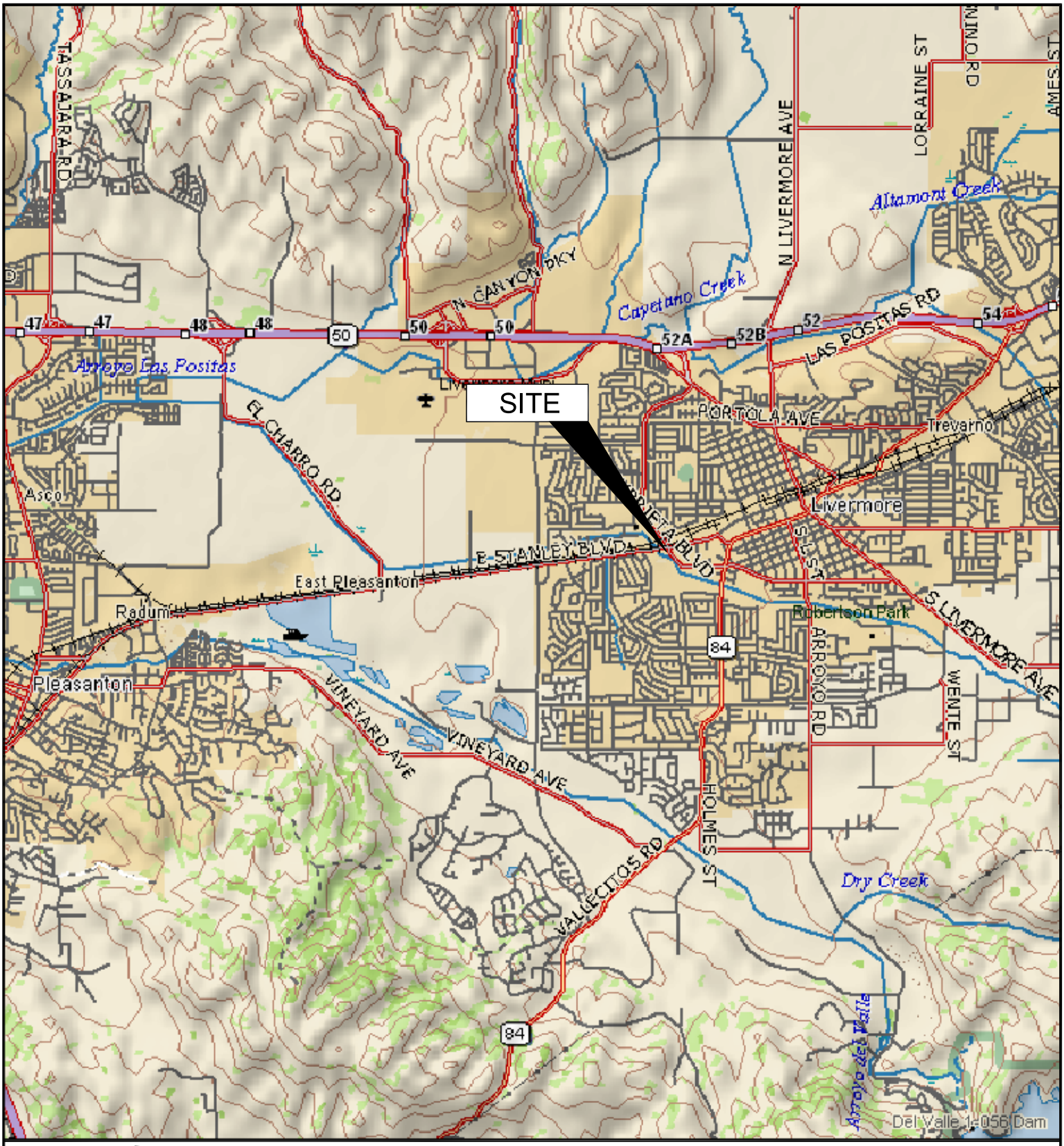
On November 12, 2010, BAI submitted a *Feasibility Study Report* as requested by ACEH in their letter dated August 12, 2010. A letter from ACEH approving the conduct of a DPE pilot test was received on January 6, 2011. A work plan detailing pilot testing activities will be prepared and submitted to ACEH by March 7, 2011. The next semi-annual ground-water monitoring and sampling event is scheduled to occur during the Second Quarter of 2011.

CLOSURE:

The findings presented in this document are based upon: observations of BAI field personnel (see Appendices A and B), the points investigated, and results of laboratory tests performed by Calscience Environmental Laboratories, Inc. (Garden Grove, California). Our services were performed in accordance with the generally accepted standard of practice at the time this document was written. No other warranty, expressed on implied was made. This report has been prepared for the exclusive use of Atlantic Richfield Company. It is possible that variations in soil or ground-water 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, November 4, 2010
Table 1	Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Table 2	Summary of Fuel Additives Analytical Data
Table 3	Historical Groundwater Flow Direction and Gradient
Appendix A	BAI Groundwater Sampling Data (Includes Field Data Sheets, Non-Hazardous Waste Data Form, Laboratory Analytical Reports with Chain-of-Custody Documentation and Field Procedures)
Appendix B	GeoTracker Upload Confirmation Receipts



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0 1 2

APPROXIMATE SCALE (mi)

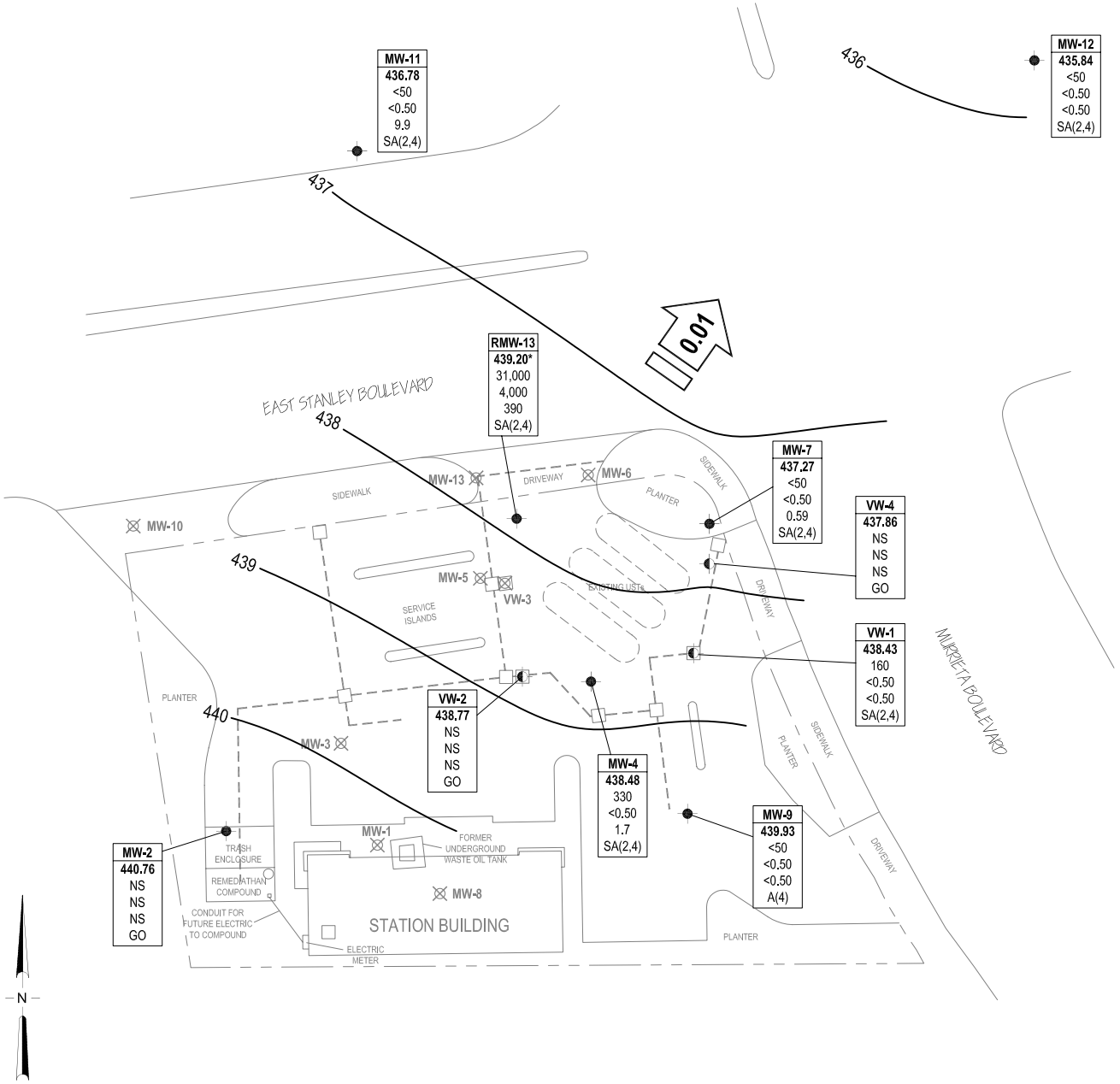
IMAGE SOURCE: DELORME

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California 95926
Project No.: 06-82-637 Date: 7/27/2009

Station #6113
785 East Stanley Boulevard
Livermore, California

Site Location Map

Drawing
1



LEGEND

- Monitoring well
- Vapor extraction well
- Abandoned well
- 437 — Ground-water elevation contour (ft/MSL)
- Well Designation
- ELEV — Ground-water Elevation
- GRO, Benzene, MTBE — GRO, Benzene and MTBE concentration (µg/L)
- A/SA — Sampling frequency
- A(4) — Sampled annually, 4th quarter
- SA(2,4) — Semi-annual sampling, 2nd and 4th quarters
- GO — Gauge only
- NS — Not Sampled
- NM — Not Measured
- * — Not Used in Contouring
- 0.01 — Approximate ground-water flow direction and gradient (ft/ft)
- Vault box
- Piping trench

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

0 50 100
SCALE (ft)

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave, Suite 212, Chico, California 95926
Project No.: 06-82-637 Date: 12/8/2010

Station #6113
785 East Stanley Boulevard
Livermore, California

Ground-Water Elevation Contour and Analytical Summary Map
November 4, 2010

Drawing
2

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

ARCO Service Station #6113, 785 East Stanley Blvd., Livermore, CA

Well and Sample Date	P/NP	Comments	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
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-1															
3/23/1995	--	e	457.04	29.0	**44.0**	14.12	442.92	--	--	--	--	--	--	--	--
5/31/1995	--	e	457.04	29.0	**44.0**	14.45	442.59	--	--	--	--	--	--	--	--
8/31/1995	--	e	457.04	29.0	**44.0**	17.12	439.92	--	--	--	--	--	--	--	--
11/28/1995	--		457.04	29.0	**44.0**	16.34	440.70	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
2/22/1996	--	e	457.04	29.0	**44.0**	13.23	443.81	--	--	--	--	--	--	--	--
5/23/1996	--	e	457.04	29.0	**44.0**	14.02	443.02	--	--	--	--	--	--	--	--
8/8/1996	--	e	457.04	29.0	**44.0**	16.13	440.91	--	--	--	--	--	--	--	--
11/7/1996	--		457.04	29.0	**44.0**	17.28	439.76	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
3/27/1997	--	e	457.04	29.0	**44.0**	14.91	442.13	--	--	--	--	--	--	--	--
5/19/1997	--	e	457.04	29.0	**44.0**	16.47	440.57	--	--	--	--	--	--	--	--
5/18/1998	--	e	457.04	29.0	**44.0**	14.69	442.35	--	--	--	--	--	--	--	--
11/2/1998	--		457.04	29.0	**44.0**	25.94	431.10	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
6/4/1999	--	e	457.04	29.0	**44.0**	17.38	439.66	--	--	--	--	--	--	--	--
11/11/1999	P		457.04	29.0	**44.0**	18.63	438.41	<50	<0.5	<0.5	<0.5	<1	<3	1.03	--
6/20/2000	--	e	457.04	29.0	**44.0**	17.09	439.95	--	--	--	--	--	--	3.1	--
8/29/2000	--	e	457.04	29.0	**44.0**	18.20	438.84	--	--	--	--	--	--	2.66	--
11/29/2000	P		457.04	29.0	**44.0**	20.30	436.74	<50.0	<0.500	<0.500	<0.500	1.36	<2.50	0.71	--
5/2/2001	--	e	457.04	29.0	**44.0**	22.39	434.65	--	--	--	--	--	--	--	--
8/15/2001	--	e	457.04	29.0	**44.0**	24.97	432.07	--	--	--	--	--	--	--	--
10/5/2001	P		457.04	29.0	**44.0**	25.09	431.95	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.78	--
1/21/2002	--	e	457.04	29.0	**44.0**	24.58	432.46	--	--	--	--	--	--	--	--
4/26/2002	--	e	457.04	29.0	**44.0**	24.19	432.85	--	--	--	--	--	--	--	--
10/7/2002	--		457.04	29.0	**44.0**	20.13	436.91	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.8	--
05/01/2003	--	r	457.04	29.0	**44.0**	17.98	439.06	--	--	--	--	--	--	--	--
10/27/2005	--		459.41	29.0	44.0	18.45	440.96	--	--	--	--	--	--	--	--
04/12/2006	--		459.41	29.0	44.0	15.18	444.23	--	--	--	--	--	--	--	--
10/31/2006	--		459.41	29.0	44.0	19.18	440.23	--	--	--	--	--	--	--	--
4/19/2007	--		459.41	29.0	44.0	23.20	436.21	--	--	--	--	--	--	--	--
10/16/2007	--		459.41	29.0	44.0	38.28	421.13	--	--	--	--	--	--	--	--
4/24/2008	--		459.41	29.0	44.0	25.97	433.44	--	--	--	--	--	--	--	--
6/18/2008	--	k	--	29.0	44.0	--	--	--	--	--	--	--	--	--	--

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

ARCO Service Station #6113, 785 East Stanley Blvd., Livermore, CA

Well and Sample Date	P/NP	Comments	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
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-1															
MW-2 Cont.															
3/23/1995	--		457.74	28.0	38.0	14.15	443.59	--	--	--	--	--	--	--	--
5/31/1995	--	e	457.74	28.0	38.0	14.67	443.07	--	--	--	--	--	--	--	--
8/31/1995	--	e	457.74	28.0	38.0	17.24	440.50	--	--	--	--	--	--	--	--
11/28/1995	--		457.74	28.0	38.0	16.40	441.34	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
2/22/1996	--	e	457.74	28.0	38.0	13.55	444.19	--	--	--	--	--	--	--	--
5/23/1996	--	e	457.74	28.0	38.0	14.29	443.45	--	--	--	--	--	--	--	--
8/8/1996	--	e	457.74	28.0	38.0	16.19	441.55	--	--	--	--	--	--	--	--
11/7/1996	--		457.74	28.0	38.0	17.50	440.24	65	0.6	7.4	2.1	12	5	--	--
3/27/1997	--	e	457.74	28.0	38.0	15.32	442.42	--	--	--	--	--	--	--	--
5/19/1997	--	e	457.74	28.0	38.0	16.62	441.12	--	--	--	--	--	--	--	--
5/18/1998	--	e	457.74	28.0	38.0	15.12	442.62	--	--	--	--	--	--	--	--
11/2/1998	--		457.74	28.0	38.0	26.66	431.08	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
6/4/1999	--	e	457.74	28.0	38.0	17.74	440.00	--	--	--	--	--	--	--	--
11/11/1999	P		457.74	28.0	38.0	18.75	438.99	<50	<0.5	<0.5	<0.5	<1	<3	0.82	--
6/20/2000	--	e	457.74	28.0	38.0	17.21	440.53	--	--	--	--	--	--	2.6	--
8/29/2000	--	e	457.74	28.0	38.0	18.25	439.49	--	--	--	--	--	--	2.65	--
11/29/2000	P		457.74	28.0	38.0	20.69	437.05	<50.0	<0.500	0.581	0.827	4.38	<2.50	0.88	--
5/2/2001	--	e	457.74	28.0	38.0	22.69	435.05	--	--	--	--	--	--	--	--
8/15/2001	--	e	457.74	28.0	38.0	25.15	432.59	--	--	--	--	--	--	--	--
10/5/2001	P		457.74	28.0	38.0	25.22	432.52	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.8	--
1/21/2002	--	e	457.74	28.0	38.0	24.70	433.04	--	--	--	--	--	--	--	--
4/26/2002	--	e	457.74	28.0	38.0	24.53	433.21	--	--	--	--	--	--	--	--
10/7/2002	--		457.74	28.0	38.0	19.45	438.29	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.5	--
05/01/2003	--	r	457.74	28.0	38.0	18.18	439.56	--	--	--	--	--	--	--	--
10/27/2005	--	t	460.07	28.0	38.0	--	--	--	--	--	--	--	--	--	--
04/12/2006	--		460.07	28.0	38.0	15.30	444.77	--	--	--	--	--	--	--	--
10/31/2006	--		460.07	28.0	38.0	19.48	440.59	--	--	--	--	--	--	--	--
4/19/2007	--		460.07	28.0	38.0	23.85	436.22	--	--	--	--	--	--	--	--
10/16/2007	--		460.07	28.0	38.0	36.78	423.29	--	--	--	--	--	--	--	--

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

ARCO Service Station #6113, 785 East Stanley Blvd., Livermore, CA

Well and Sample Date	P/NP	Comments	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
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-2 Cont.															
4/24/2008	--		460.07	28.0	38.0	26.38	433.69	--	--	--	--	--	--	--	--
10/15/2008	--		460.07	28.0	38.0	37.21	422.86	--	--	--	--	--	--	--	--
4/28/2009	--		460.07	28.0	38.0	33.30	426.77	--	--	--	--	--	--	--	--
11/9/2009	--		460.07	28.0	38.0	21.87	438.20	--	--	--	--	--	--	--	--
4/12/2010	--		460.07	28.0	38.0	18.53	441.54	--	--	--	--	--	--	--	--
11/4/2010	--		**460.07**	**28.0**	**38.0**	**19.31**	**440.76**	--	--	--	--	--	--	--	--
MW-3 Cont.															
3/23/1995	--	e	456.97	28.5	38.5	14.13	442.84	--	--	--	--	--	--	--	--
5/31/1995	--	e	456.97	28.5	38.5	14.46	442.51	--	--	--	--	--	--	--	--
8/31/1995	--	e	456.97	28.5	38.5	17.06	439.91	--	--	--	--	--	--	--	--
11/28/1995	--		456.97	28.5	38.5	16.27	440.70	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
2/22/1996	--	e	456.97	28.5	38.5	13.14	443.83	--	--	--	--	--	--	--	--
5/23/1996	--	e	456.97	28.5	38.5	13.95	443.02	--	--	--	--	--	--	--	--
8/8/1996	--	e	456.97	28.5	38.5	16.03	440.94	--	--	--	--	--	--	--	--
11/7/1996	--		456.97	28.5	38.5	17.26	439.71	<50	<0.5	0.9	<0.5	1.5	<3	--	--
3/27/1997	--	e	456.97	28.5	38.5	14.85	442.12	--	--	--	--	--	--	--	--
5/19/1997	--	e	456.97	28.5	38.5	16.40	440.57	--	--	--	--	--	--	--	--
5/18/1998	--	e	456.97	28.5	38.5	14.66	442.31	--	--	--	--	--	--	--	--
11/2/1998	--		456.97	28.5	38.5	25.85	431.12	<1,000	<10	<10	<10	<10	1,700	--	--
6/4/1999	--	e	456.97	28.5	38.5	17.35	439.62	--	--	--	--	--	--	--	--
11/11/1999	P		456.97	28.5	38.5	18.58	438.39	<50	<0.5	<0.5	<0.5	<1	<3	0.79	--
6/20/2000	--	e	456.97	28.5	38.5	17.03	439.94	--	--	--	--	--	--	2.8	--
8/29/2000	--	e	456.97	28.5	38.5	18.25	438.72	--	--	--	--	--	--	3.39	--
11/29/2000	--		456.97	28.5	38.5	20.27	436.70	<50.0	<0.500	<0.500	1.08	3.34	<2.50	0.67	--
5/2/2001	--	e	456.97	28.5	38.5	22.33	434.64	--	--	--	--	--	--	--	--
8/15/2001	--	e	456.97	28.5	38.5	25.03	431.94	--	--	--	--	--	--	--	--
10/5/2001	P		456.97	28.5	38.5	25.17	431.80	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.79	--
1/21/2002	--	e	456.97	28.5	38.5	24.79	432.18	--	--	--	--	--	--	--	--
4/26/2002	--	e	456.97	28.5	38.5	24.27	432.70	--	--	--	--	--	--	--	--
10/7/2002	--		456.97	28.5	38.5	20.20	436.77	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.2	--

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

ARCO Service Station #6113, 785 East Stanley Blvd., Livermore, CA

Well and Sample Date	P/NP	Comments	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
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-3 Cont.															
05/01/2003	--	c, e	456.97	28.5	38.5	18.27	438.70	--	--	--	--	--	--	--	--
10/03/2003	P	d	456.97	28.5	38.5	20.07	436.90	<50	<0.50	<0.50	<0.50	<0.50	<0.50	5.2	7.3
04/06/2004	--	e	459.32	28.5	38.5	17.24	442.08	--	--	--	--	--	--	--	--
10/28/2004	P		459.32	28.5	38.5	19.38	439.94	<50	<0.50	<0.50	<0.50	<0.50	<0.50	8.1	7.3
04/13/2005	--		459.32	28.5	38.5	16.02	443.30	--	--	--	--	--	--	--	--
10/27/2005	--	t	459.32	28.5	38.5	--	--	--	--	--	--	--	--	--	--
04/12/2006	--		459.32	28.5	38.5	15.12	444.20	--	--	--	--	--	--	--	--
10/31/2006	P		459.32	28.5	38.5	19.14	440.18	400	5.5	<0.50	5.5	9.6	22	--	7.64
4/19/2007	--		459.32	28.5	38.5	23.07	436.25	--	--	--	--	--	--	--	--
10/16/2007	--	f	459.32	28.5	38.5	--	--	--	--	--	--	--	--	--	--
4/24/2008	--		459.32	28.5	38.5	25.65	433.67	--	--	--	--	--	--	--	--
9/10/2008	--	k	459.32	28.5	38.5	--	--	--	--	--	--	--	--	--	--
MW-4 Cont.															
3/23/1995	--		456.55	21.0	27.0	15.39	441.16	210	2.1	0.6	0.8	2.1	--	--	--
5/31/1995	--		456.55	21.0	27.0	15.32	441.23	190	1.6	<0.5	0.7	0.9	--	--	--
8/31/1995	--		456.55	21.0	27.0	17.86	438.69	160	1.2	0.7	<0.5	<2	<3	--	--
11/28/1995	--		456.55	21.0	27.0	17.18	439.37	150	0.7	<0.5	0.7	1.4	<3	--	--
2/22/1996	--		456.55	21.0	27.0	14.80	441.75	100	<0.5	<0.5	<0.6	0.8	<3	--	--
5/23/1996	--		456.55	21.0	27.0	14.43	442.12	86	<0.5	<0.5	<0.5	<0.7	<3	--	--
8/8/1996	--		456.55	21.0	27.0	16.80	439.75	98	<0.5	<0.5	<0.5	1.3	<3	--	--
11/7/1996	--		456.55	21.0	27.0	17.90	438.65	140	<0.5	<0.5	<0.9	1.3	<3	--	--
3/27/1997	--		456.55	21.0	27.0	15.22	441.33	<50	1.1	<0.5	<0.5	1.6	<3	--	--
5/19/1997	--		456.55	21.0	27.0	16.98	439.57	62	<0.5	<0.5	<0.5	0.6	<3	--	--
5/18/1998	--		456.55	21.0	27.0	14.99	441.56	<50	<0.5	<0.5	<0.5	<0.5	64	--	--
11/2/1998	--		456.55	21.0	27.0	25.29	431.26	74	<0.5	<0.5	<0.5	<0.5	96	--	--
6/4/1999	P		456.55	21.0	27.0	17.95	438.60	100	<0.5	<0.5	<0.5	<0.5	38	--	--
11/11/1999	P		456.55	21.0	27.0	19.25	437.30	88	<0.5	<0.5	<0.5	<1	10	0.77	--
6/20/2000	--	q	456.55	21.0	27.0	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	62.3	--	--
6/20/2000	P		456.55	21.0	27.0	17.79	438.76	<50.0	<0.500	<0.500	<0.500	<0.500	82.4	1.3	--
8/29/2000	P		456.55	21.0	27.0	18.90	437.65	56	<0.500	<0.500	<0.500	<0.500	47.9	0.97	--

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ARCO Service Station #6113, 785 East Stanley Blvd., Livermore, CA

Well and Sample Date	P/NP	Comments	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
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-4 Cont.															
11/29/2000	P	s	456.55	21.0	**27.0**	20.50	436.05	<50.0	<0.500	<0.500	<0.500	<0.500	9.88/10.4	0.59	--
5/2/2001	P	q, s	456.55	21.0	**27.0**	22.65	433.90	<50.0	<0.500	<0.500	<0.500	<0.500	61.1/70.9	0.74	--
5/2/2001	--	s	456.55	21.0	**27.0**	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	59.4/68.4	--	--
8/15/2001	--	f	456.55	21.0	**27.0**	--	--	--	--	--	--	--	--	--	--
10/5/2001	--	f	456.55	21.0	**27.0**	--	--	--	--	--	--	--	--	--	--
1/21/2002	--	f	456.55	21.0	**27.0**	--	--	--	--	--	--	--	--	--	--
4/26/2002	P		456.55	21.0	**27.0**	20.15	436.40	110	<0.50	<0.50	<0.50	<0.50	150	0.21	--
10/7/2002	P	a	456.55	21.0	**27.0**	20.76	435.79	96	<0.50	<0.50	0.54	<0.50	260	1.0	--
05/01/2003	P	c	456.55	21.0	**27.0**	19.67	436.88	120	1.3	<0.50	<0.50	<0.50	86	1.7	--
10/03/2003	P	d	456.55	21.0	27.0	20.23	436.32	<50	<0.50	<0.50	<0.50	<0.50	22	13.5	6.8
04/06/2004	P		458.88	21.0	27.0	18.13	440.75	96	<0.50	<0.50	<0.50	<0.50	17	1.6	6.8
10/28/2004	P		458.88	21.0	27.0	20.02	438.86	<50	<0.50	<0.50	<0.50	<0.50	4.5	1.2	6.7
04/13/2005	P		458.88	21.0	27.0	16.68	442.20	<50	<0.50	<0.50	<0.50	<0.50	2.8	0.8	6.7
10/27/2005	P		458.88	21.0	27.0	19.05	439.83	400	14	<0.50	11	1.8	22	1.0	6.9
04/12/2006	P		458.88	21.0	27.0	15.47	443.41	100	<0.50	<0.50	<0.50	<0.50	1.9	1.6	7.2
10/31/2006	P		458.88	21.0	27.0	19.67	439.21	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	7.63
4/19/2007	NP		458.88	21.0	27.0	22.72	436.16	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.92	7.36
10/16/2007	--	f	458.88	21.0	27.0	--	--	--	--	--	--	--	--	--	--
4/24/2008	--	f	458.88	21.0	27.0	--	--	--	--	--	--	--	--	--	--
10/15/2008	--	f	458.88	21.0	27.0	--	--	--	--	--	--	--	--	--	--
4/28/2009	--	f	458.88	21.0	27.0	--	--	--	--	--	--	--	--	--	--
11/9/2009	NP	x (GRO)	458.88	21.0	27.0	22.73	436.15	270	4.6	<0.50	<0.50	<0.50	3.1	--	--
4/12/2010	P		458.88	21.0	27.0	19.25	439.63	1,200	2.0	<0.50	<0.50	<0.50	2.7	0.81	6.87
11/4/2010	**P**	**x (GRO)**	**458.88**	**21.0**	**27.0**	**20.40**	**438.48**	**330**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**1.7**	**0.44**	**6.5**
MW-5 Cont.															
3/23/1995	--		455.84	43.0	**63.0**	13.97	441.87	68	4.2	3.4	2.3	12	--	--	--
5/31/1995	--	g	455.84	43.0	**63.0**	--	--	--	--	--	--	--	--	--	--
8/31/1995	--	g	455.84	43.0	**63.0**	--	--	--	--	--	--	--	--	--	--
11/28/1995	--		455.84	43.0	**63.0**	16.46	439.38	960	41	24	38	210	<5	--	--
2/22/1996	--	f	455.84	43.0	**63.0**	13.34	442.50	--	--	--	--	--	--	--	--

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ARCO Service Station #6113, 785 East Stanley Blvd., Livermore, CA

Well and Sample Date	P/NP	Comments	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
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-5 Cont.															
5/23/1996	--		455.84	43.0	63.0	14.36	441.48	7,100	440	180	270	1,700	<50	--	--
8/8/1996	--	f	455.84	43.0	63.0	16.38	439.46	--	--	--	--	--	--	--	--
11/7/1996	--		455.84	43.0	63.0	17.26	438.58	5,600	230	86	210	1,100	<80	--	--
3/27/1997	--	f	455.84	43.0	63.0	15.95	439.89	--	--	--	--	--	--	--	--
5/19/1997	--		455.84	43.0	63.0	16.64	439.20	7,600	480	140	400	1,200	<40	--	--
5/18/1998	--		455.84	43.0	63.0	14.75	441.09	990	46	13	45	180	4	--	--
11/2/1998	--		455.84	43.0	63.0	27.83	428.01	14,000	690	140	550	2,200	100	--	--
6/4/1999	P		455.84	43.0	63.0	17.47	438.37	8,300	690	370	90	440	1,400	--	--
11/11/1999	P		455.84	43.0	63.0	18.80	437.04	18,000	900	190	1,100	3,200	72	0.86	--
6/20/2000	P		455.84	43.0	63.0	17.14	438.70	10,200	618	122	832	2,020	<50.0	1.6	--
8/29/2000	P		455.84	43.0	63.0	18.60	437.24	12,300	436	166	711	2,120	517	0.79	--
11/29/2000	P	s	455.84	43.0	63.0	20.57	435.27	26,000	491	149	1,090	3,810	671/<20.0	0.51	--
5/2/2001	--	k	--	43.0	63.0	--	--	--	--	--	--	--	--	--	--
MW-6 Cont.															
3/23/1995	--		454.93	48.0	68.0	13.38	441.55	<50	1.5	<0.5	<0.5	0.9	--	--	--
5/31/1995	--		454.93	48.0	68.0	13.96	440.97	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
8/31/1995	--		454.93	48.0	68.0	16.71	438.22	150	9	1.8	4	12	<3	--	--
11/28/1995	--		454.93	48.0	68.0	15.65	439.28	<50	0.6	<0.5	<0.5	0.8	<3	--	--
2/22/1996	--		454.93	48.0	68.0	12.53	442.40	<50	1.9	<0.5	0.8	2.1	<3	--	--
5/23/1996	--		454.93	48.0	68.0	13.24	441.69	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
8/8/1996	--		454.93	48.0	68.0	16.65	438.28	<50	0.5	<0.5	<0.5	0.5	<3	--	--
11/7/1996	--		454.93	48.0	68.0	16.65	438.28	110	5.3	1.3	3.1	6.6	<3	--	--
3/27/1997	--		454.93	48.0	68.0	14.25	440.68	<50	2.3	<0.5	0.9	3.5	4	--	--
5/19/1997	--		454.93	48.0	68.0	15.87	439.06	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
5/18/1998	--		454.93	48.0	68.0	14.00	440.93	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
11/2/1998	--		454.93	48.0	68.0	24.95	429.98	<50	1.2	<0.5	<0.5	<0.5	3	--	--
6/4/1999	P		454.93	48.0	68.0	16.68	438.25	310	41	3.8	11	19	33	--	--
11/11/1999	P		454.93	48.0	68.0	16.12	438.81	<50	0.5	<0.5	<0.5	<1	<3	0.92	--
6/20/2000	P		454.93	48.0	68.0	16.63	438.30	<50.0	<0.500	<0.500	<0.500	<0.500	17.3	1.9	--
8/29/2000	P		454.93	48.0	68.0	17.91	437.02	<50.0	<0.500	0.551	<0.500	<0.500	<2.50	1.67	--

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ARCO Service Station #6113, 785 East Stanley Blvd., Livermore, CA

Well and Sample Date	P/NP	Comments	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
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-6 Cont.															
8/29/2000	--	q	454.93	48.0	**68.0**	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
11/29/2000	P		454.93	48.0	**68.0**	20.30	434.63	<50.0	<0.500	<0.500	<0.500	1.03	<2.50	0.79	--
5/2/2001	P	s	454.93	48.0	**68.0**	22.20	432.73	3,230	1,300	33.6	89.4	136	1,810/2,310	0.95	--
8/15/2001	P	s	454.93	48.0	**68.0**	27.95	426.98	<50	<0.50	<0.50	<0.50	<0.50	21/25	0.63	--
10/5/2001	P		454.93	48.0	**68.0**	28.05	426.88	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.85	--
1/21/2002	P		454.93	48.0	**68.0**	26.81	428.12	<50	<0.50	<0.50	<0.50	<0.50	<5.0	0.91	--
4/26/2002	P		454.93	48.0	**68.0**	26.27	428.66	<50	<0.50	<0.50	<0.50	<0.50	17	0.75	--
10/7/2002	P	a	454.93	48.0	**68.0**	20.05	434.88	60	13	1.7	1.7	3.5	8	2.8	--
05/01/2003	P	c	454.93	48.0	**68.0**	17.62	437.31	<50	5.4	<0.50	0.63	1.3	12	1.6	--
10/03/2003	P	d	454.93	48.0	68.0	19.62	435.31	80	2.6	<2.5	<2.5	<2.5	120	5.1	6.9
04/06/2004	P		457.24	48.0	68.0	16.88	440.36	<2,500	<25	<25	<25	<25	1,700	4.1	7.0
10/28/2004	P		457.24	48.0	68.0	19.20	438.04	3,200	<25	<25	<25	<25	3,100	6.8	6.9
04/13/2005	P		457.24	48.0	68.0	15.15	442.09	<5,000	<50	<50	<50	<50	3,900	3.9	7.0
10/27/2005	P		457.24	48.0	68.0	18.12	439.12	<5,000	<50	<50	<50	<50	2,900	3.15	7.0
04/12/2006	P		457.24	48.0	68.0	15.32	441.92	<5,000	<50	<50	<50	<50	3,400	4.3	7.6
10/31/2006	P	u, v	457.24	48.0	68.0	18.85	438.39	2,700	<25	<25	<25	<25	3,400	--	10.36
4/19/2007	P	v	457.24	48.0	68.0	22.25	434.99	970	<25	<25	<25	<25	2,200	5.54	10.52
10/16/2007	P	v, w (MTBE)	457.24	48.0	68.0	37.17	420.07	2,700	240	<25	50	55	2,600	4.56	10.26
4/24/2008	P		457.24	48.0	68.0	24.55	432.69	15,000	5,300	200	620	470	4,200	2.15	6.90
9/10/2008	--	k	457.24	48.0	68.0	--	--	--	--	--	--	--	--	--	--
MW-7 Cont.															
3/23/1995	--		454.92	48.0	**68.0**	13.29	441.63	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
5/31/1995	--		454.92	48.0	**68.0**	13.72	441.20	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
8/31/1995	--		454.92	48.0	**68.0**	16.53	438.39	<50	<0.5	<0.5	<0.5	1.2	<3	--	--
11/28/1995	--		454.92	48.0	**68.0**	15.50	439.42	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
2/22/1996	--		454.92	48.0	**68.0**	12.30	442.62	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
5/23/1996	--		454.92	48.0	**68.0**	13.02	441.90	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
8/8/1996	--	m	454.92	48.0	**68.0**	--	--	--	--	--	--	--	--	--	--
11/7/1996	--		454.92	48.0	**68.0**	16.50	438.42	<50	<0.5	<0.5	<0.5	0.8	<3	--	--
3/27/1997	--		454.92	48.0	**68.0**	14.22	440.70	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--

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Well and Sample Date	P/NP	Comments	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
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-7 Cont.															
5/19/1997	--		454.92	48.0	**68.0**	15.74	439.18	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
5/18/1998	--		454.92	48.0	**68.0**	13.82	441.10	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
11/2/1998	--		454.92	48.0	**68.0**	24.80	430.12	<50	<0.5	<0.5	<0.5	<0.5	4	--	--
6/4/1999	P		454.92	48.0	**68.0**	16.55	438.37	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
11/11/1999	P		454.92	48.0	**68.0**	18.02	436.90	<50	<0.5	<0.5	<0.5	<1	<3	1.03	--
6/20/2000	P		454.92	48.0	**68.0**	16.50	438.42	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	1.3	--
8/29/2000	P		454.92	48.0	**68.0**	17.80	437.12	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	1.67	--
11/29/2000	P		454.92	48.0	**68.0**	19.61	435.31	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	0.51	--
5/2/2001	P	s	454.92	48.0	**68.0**	22.05	432.87	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50/2.66	0.9	--
8/15/2001	P		454.92	48.0	**68.0**	27.55	427.37	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.84	--
10/5/2001	P		454.92	48.0	**68.0**	27.59	427.33	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.62	--
1/21/2002	P	s	454.92	48.0	**68.0**	26.50	428.42	<50	<0.50	<0.50	<0.50	<0.50	15/21	0.65	--
4/26/2002	P		454.92	48.0	**68.0**	26.22	428.70	<50	<0.50	<0.50	<0.50	<0.50	18	0.61	--
10/7/2002	--		454.92	48.0	**68.0**	20.04	434.88	<50	1.2	<0.50	<0.50	0.77	41	4.8	--
05/01/2003	P	c	454.92	48.0	**68.0**	17.47	437.45	<50	<0.50	<0.50	<0.50	0.5	43	2.7	--
10/03/2003	P	d	454.92	48.0	68.0	19.55	435.37	<50	<1.0	<1.0	<1.0	<1.0	49	5.7	7.1
04/06/2004	P		457.17	48.0	68.0	16.60	440.57	<50	<0.50	<0.50	<0.50	0.75	0.76	0.7	7.0
10/28/2004	P		457.17	48.0	68.0	19.17	438.00	<50	<0.50	<0.50	<0.50	<0.50	14	6.7	6.9
04/13/2005	P		457.17	48.0	68.0	14.84	442.33	<50	<0.50	<0.50	<0.50	<0.50	1.7	2.3	6.9
10/27/2005	P		457.17	48.0	68.0	17.38	439.79	<50	<0.50	<0.50	<0.50	<0.50	2.3	2.16	7.0
04/12/2006	P		457.17	48.0	68.0	14.84	442.33	<50	<0.50	<0.50	<0.50	<0.50	1.1	3.0	7.2
10/31/2006	P		457.17	48.0	68.0	18.74	438.43	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	7.55
4/19/2007	P		457.17	48.0	68.0	22.11	435.06	<50	<0.50	<0.50	<0.50	<0.50	<0.50	4.37	7.60
10/16/2007	P		457.17	48.0	68.0	37.23	419.94	140	68	6.8	<0.50	5.0	24	4.87	8.02
4/24/2008	P		457.17	48.0	68.0	24.47	432.70	<50	<0.50	0.99	<0.50	<0.50	22	1.96	7.24
10/15/2008	P		457.17	48.0	68.0	43.40	413.77	<50	<0.50	<0.50	<0.50	<0.50	8.2	2.31	7.14
4/28/2009	P		457.17	48.0	68.0	32.13	425.04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.78	6.93
11/9/2009	P		457.17	48.0	68.0	22.15	435.02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.3	6.8
4/12/2010	P		457.17	48.0	68.0	18.49	438.68	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	7.55
11/4/2010	**P**		**457.17**	**48.0**	**68.0**	**19.90**	**437.27**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**0.59**	**4.15**	**8.4**

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

ARCO Service Station #6113, 785 East Stanley Blvd., Livermore, CA

Well and Sample Date	P/NP	Comments	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
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-8															
3/23/1995	--	e	456.97	47.0	67.0	11.55	445.42	--	--	--	--	--	--	--	--
5/31/1995	--	e	456.97	47.0	67.0	12.37	444.60	--	--	--	--	--	--	--	--
8/31/1995	--	e	456.97	47.0	67.0	15.68	441.29	--	--	--	--	--	--	--	--
11/28/1995	--		456.97	47.0	67.0	14.15	442.82	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
2/22/1996	--	e	456.97	47.0	67.0	10.97	446.00	--	--	--	--	--	--	--	--
5/23/1996	--	e	456.97	47.0	67.0	11.90	445.07	--	--	--	--	--	--	--	--
8/8/1996	--	e	456.97	47.0	67.0	13.85	443.12	--	--	--	--	--	--	--	--
11/7/1996	--		456.97	47.0	67.0	15.08	441.89	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
3/27/1997	--	e	456.97	47.0	67.0	12.96	444.01	--	--	--	--	--	--	--	--
5/19/1997	--	e	456.97	47.0	67.0	14.35	442.62	--	--	--	--	--	--	--	--
5/18/1998	--	e	456.97	47.0	67.0	12.97	444.00	--	--	--	--	--	--	--	--
11/2/1998	--		456.97	47.0	67.0	26.01	430.96	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
6/4/1999	--	e	456.97	47.0	67.0	15.53	441.44	--	--	--	--	--	--	--	--
11/11/1999	P		456.97	47.0	67.0	16.67	440.30	<50	<0.5	<0.5	<0.5	<1	<3	1.01	--
6/20/2000	--	e	456.97	47.0	67.0	15.29	441.68	--	--	--	--	--	--	2.4	--
8/29/2000	--	e	456.97	47.0	67.0	16.59	440.38	--	--	--	--	--	--	3.37	--
11/29/2000	P		456.97	47.0	67.0	19.80	437.17	<50.0	<0.500	<0.500	<0.500	0.772	<2.50	1.35	--
5/2/2001	--	e	456.97	47.0	67.0	22.12	434.85	--	--	--	--	--	--	--	--
8/15/2001	--	e	456.97	47.0	67.0	27.63	429.34	--	--	--	--	--	--	--	--
10/5/2001	P		456.97	47.0	67.0	27.65	429.32	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.07	--
1/21/2002	--	e	456.97	47.0	67.0	26.73	430.24	--	--	--	--	--	--	--	--
4/26/2002	--	e	456.97	47.0	67.0	26.39	430.58	--	--	--	--	--	--	--	--
10/7/2002	--		456.97	47.0	67.0	18.43	438.54	<50	<0.50	<0.50	<0.50	0.86	<0.50	4.2	--
05/01/2003	--	r	456.97	47.0	67.0	16.47	440.50	--	--	--	--	--	--	--	--
10/27/2005	--		456.97	47.0	67.0	17.14	439.83	--	--	--	--	--	--	--	--
04/12/2006	--		456.97	47.0	67.0	14.08	442.89	--	--	--	--	--	--	--	--
10/31/2006	--		456.97	47.0	67.0	18.12	438.85	--	--	--	--	--	--	--	--
4/19/2007	--		456.97	47.0	67.0	22.39	434.58	--	--	--	--	--	--	--	--
10/16/2007	--		456.97	47.0	67.0	38.18	418.79	--	--	--	--	--	--	--	--
4/24/2008	--		456.97	47.0	67.0	25.43	431.54	--	--	--	--	--	--	--	--
6/18/2008	--	k	--	47.0	67.0	--	--	--	--	--	--	--	--	--	--

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ARCO Service Station #6113, 785 East Stanley Blvd., Livermore, CA

Well and Sample Date	P/NP	Comments	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
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-8															
MW-9 Cont.															
3/23/1995	--	e	456.18	48.0	68.0	13.18	443.00	--	--	--	--	--	--	--	--
5/31/1995	--	e	456.18	48.0	68.0	12.66	443.52	--	--	--	--	--	--	--	--
8/31/1995	--	e	456.18	48.0	68.0	14.40	441.78	--	--	--	--	--	--	--	--
11/28/1995	--		456.18	48.0	68.0	14.26	441.92	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
2/22/1996	--	e	456.18	48.0	68.0	12.05	444.13	--	--	--	--	--	--	--	--
5/23/1996	--	e	456.18	48.0	68.0	12.07	444.11	--	--	--	--	--	--	--	--
8/8/1996	--	e	456.18	48.0	68.0	14.12	442.06	--	--	--	--	--	--	--	--
11/7/1996	--		456.18	48.0	68.0	15.42	440.76	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
3/27/1997	--	e	456.18	48.0	68.0	13.01	443.17	--	--	--	--	--	--	--	--
5/19/1997	--	e	456.18	48.0	68.0	14.60	441.58	--	--	--	--	--	--	--	--
5/18/1998	--	e	456.18	48.0	68.0	12.60	443.58	--	--	--	--	--	--	--	--
11/2/1998	--	e	456.18	48.0	68.0	25.08	431.10	--	--	--	--	--	--	--	--
6/4/1999	P		456.18	48.0	68.0	15.87	440.31	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
11/11/1999	P		456.18	48.0	68.0	17.02	439.16	<50	<0.5	<0.5	<0.5	<1	<3	0.96	--
6/20/2000	--	e	456.18	48.0	68.0	15.54	440.64	--	--	--	--	--	--	2.1	--
8/29/2000	--	e	456.18	48.0	68.0	16.81	439.37	--	--	--	--	--	--	2.59	--
11/29/2000	P		456.18	48.0	68.0	18.81	437.37	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	0.81	--
5/2/2001	--	e	456.18	48.0	68.0	22.09	434.09	--	--	--	--	--	--	--	--
8/15/2001	--	e	456.18	48.0	68.0	27.59	428.59	--	--	--	--	--	--	--	--
10/5/2001	P		456.18	48.0	68.0	27.63	428.55	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.93	--
10/5/2001	--	q	456.18	48.0	68.0	27.63	428.55	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
1/21/2002	--	e	456.18	48.0	68.0	26.77	429.41	--	--	--	--	--	--	--	--
4/26/2002	--	e	456.18	48.0	68.0	26.41	429.77	--	--	--	--	--	--	--	--
10/7/2002	P		456.18	48.0	68.0	18.85	437.33	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.6	--
05/01/2003	--	c, e	456.18	48.0	68.0	17.84	438.34	--	--	--	--	--	--	--	--
10/03/2003	P	d	456.18	48.0	68.0	18.69	437.49	<50	1.1	0.57	<0.50	<0.50	<0.50	4.9	6.8
04/06/2004	--	e	458.55	48.0	68.0	16.08	442.47	--	--	--	--	--	--	--	--
10/28/2004	P		458.55	48.0	68.0	18.35	440.20	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.8	6.9
04/13/2005	--	e	458.55	48.0	68.0	14.09	444.46	--	--	--	--	--	--	--	--

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Well and Sample Date	P/NP	Comments	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
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-9 Cont.															
10/27/2005	P		458.55	48.0	68.0	17.41	441.14	<50	0.51	<0.50	<0.50	<0.50	1.4	2.56	7.0
04/12/2006	--		458.55	48.0	68.0	14.18	444.37	--	--	--	--	--	--	--	--
10/31/2006	P		458.55	48.0	68.0	17.97	440.58	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	7.46
4/19/2007	--		458.55	48.0	68.0	22.37	436.18	--	--	--	--	--	--	--	--
10/16/2007	P		458.55	48.0	68.0	37.75	420.80	<50	0.83	<0.50	<0.50	<0.50	<0.50	1.27	7.59
4/24/2008	--		458.55	48.0	68.0	24.89	433.66	--	--	--	--	--	--	--	--
10/15/2008	P		458.55	48.0	68.0	44.16	414.39	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.14	7.08
4/28/2009	--		458.55	48.0	68.0	32.61	425.94	--	--	--	--	--	--	--	--
11/9/2009	P		458.55	48.0	68.0	20.69	437.86	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.33	6.82
4/12/2010	--		458.55	48.0	68.0	17.29	441.26	--	--	--	--	--	--	--	--
11/4/2010	**P**		**458.55**	**48.0**	**68.0**	**18.62**	**439.93**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**4.73**	**6.8**
MW-10 Cont.															
3/23/1995	--	e	456.85	32.0	**52.0**	14.86	441.99	--	--	--	--	--	--	--	--
5/31/1995	--	e	456.85	32.0	**52.0**	15.63	441.22	--	--	--	--	--	--	--	--
8/31/1995	--	e	456.85	32.0	**52.0**	14.40	442.45	--	--	--	--	--	--	--	--
11/28/1995	--		456.85	32.0	**52.0**	17.24	439.61	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
2/22/1996	--	e	456.85	32.0	**52.0**	14.30	442.55	--	--	--	--	--	--	--	--
5/23/1996	--	e	456.85	32.0	**52.0**	14.93	441.92	--	--	--	--	--	--	--	--
8/8/1996	--	e	456.85	32.0	**52.0**	17.20	439.65	--	--	--	--	--	--	--	--
11/7/1996	--		456.85	32.0	**52.0**	18.25	438.60	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
3/27/1997	--	e	456.85	32.0	**52.0**	15.77	441.08	--	--	--	--	--	--	--	--
5/19/1997	--	e	456.85	32.0	**52.0**	17.38	439.47	--	--	--	--	--	--	--	--
5/18/1998	--	e	456.85	32.0	**52.0**	15.47	441.38	--	--	--	--	--	--	--	--
11/2/1998	--		456.85	32.0	**52.0**	26.94	429.91	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
6/4/1999	--	e	456.85	32.0	**52.0**	17.19	439.66	--	--	--	--	--	--	--	--
11/11/1999	P		456.85	32.0	**52.0**	19.35	437.50	<50	<0.5	<0.5	<0.5	<1	<3	0.68	--
6/20/2000	--	e	456.85	32.0	**52.0**	17.92	438.93	--	--	--	--	--	--	2.9	--
8/29/2000	--	e	456.85	32.0	**52.0**	19.15	437.70	--	--	--	--	--	--	1.54	--
11/29/2000	P		456.85	32.0	**52.0**	21.30	435.55	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	0.95	--
5/2/2001	--	e	456.85	32.0	**52.0**	29.95	426.90	--	--	--	--	--	--	--	--

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ARCO Service Station #6113, 785 East Stanley Blvd., Livermore, CA

Well and Sample Date	P/NP	Comments	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
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-10 Cont.															
8/15/2001	--	e	456.85	32.0	**52.0**	30.74	426.11	--	--	--	--	--	--	--	--
10/5/2001	P		456.85	32.0	**52.0**	30.95	425.90	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.89	--
1/21/2002	--	e	456.85	32.0	**52.0**	28.97	427.88	--	--	--	--	--	--	--	--
4/26/2002	--	e	456.85	32.0	**52.0**	28.50	428.35	--	--	--	--	--	--	--	--
10/7/2002	--		456.85	32.0	**52.0**	21.15	435.70	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.0	--
05/01/2003	--	c, e	456.85	32.0	**52.0**	18.90	437.95	--	--	--	--	--	--	--	--
10/03/2003	P	d	456.85	32.0	52.0	20.64	436.21	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.4	7.1
04/06/2004	--	e	459.20	32.0	52.0	17.99	441.21	--	--	--	--	--	--	--	--
10/28/2004	P		459.20	32.0	52.0	20.27	438.93	<50	<0.50	<0.50	<0.50	<0.50	<0.50	5.9	7.1
04/13/2005	--	e	459.20	32.0	52.0	16.25	442.95	--	--	--	--	--	--	--	--
10/27/2005	P		459.20	32.0	52.0	19.03	440.17	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.38	7.2
04/12/2006	--		459.20	32.0	52.0	14.95	444.25	--	--	--	--	--	--	--	--
10/31/2006	P		459.20	32.0	52.0	20.20	439.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	7.30
4/19/2007	--		459.20	32.0	52.0	24.00	435.20	--	--	--	--	--	--	--	--
10/16/2007	NP		459.20	32.0	52.0	38.99	420.21	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.20	7.36
4/24/2008	--		459.20	32.0	52.0	26.62	432.58	--	--	--	--	--	--	--	--
9/10/2008	--	k	459.20	32.0	52.0	--	--	--	--	--	--	--	--	--	--
MW-11 Cont.															
3/23/1995	--		455.07	38.0	**45.0**	17.34	437.73	--	--	--	--	--	--	--	--
5/31/1995	--		455.07	38.0	**45.0**	16.68	438.39	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
8/31/1995	--	h	455.07	38.0	**45.0**	20.20	434.87	--	--	--	--	--	--	--	--
11/28/1995	--		455.07	38.0	**45.0**	17.80	437.27	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
2/22/1996	--	h	455.07	38.0	**45.0**	15.97	439.10	--	--	--	--	--	--	--	--
5/23/1996	--		455.07	38.0	**45.0**	15.50	439.57	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
8/8/1996	--	h	455.07	38.0	**45.0**	17.77	437.30	--	--	--	--	--	--	--	--
11/7/1996	--		455.07	38.0	**45.0**	17.45	437.62	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
3/27/1997	--	h	455.07	38.0	**45.0**	15.77	439.30	--	--	--	--	--	--	--	--
5/19/1997	--		455.07	38.0	**45.0**	16.80	438.27	<50	1.1	4.5	<0.5	2.2	<3	--	--
5/18/1998	--		455.07	38.0	**45.0**	15.38	439.69	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
11/2/1998	--		455.07	38.0	**45.0**	24.15	430.92	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--

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

ARCO Service Station #6113, 785 East Stanley Blvd., Livermore, CA

Well and Sample Date	P/NP	Comments	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
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-11 Cont.															
6/4/1999	P		455.07	38.0	**45.0**	18.39	436.68	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
11/11/1999	P		455.07	38.0	**45.0**	18.62	436.45	<50	<0.5	<0.5	<0.5	<1	<3	1.01	--
6/20/2000	P		455.07	38.0	**45.0**	17.82	437.25	<50.0	0.631	<0.500	<0.500	<0.500	<2.50	4.1	--
8/29/2000	--	h	455.07	38.0	**45.0**	19.50	435.57	--	--	--	--	--	--	--	--
11/29/2000	P		455.07	38.0	**45.0**	20.60	434.47	<50.0	<0.500	<0.500	<0.500	1.63	<2.50	0.97	--
5/2/2001	P		455.07	38.0	**45.0**	22.42	432.65	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	1.04	--
8/15/2001	--	h	455.07	38.0	**45.0**	27.41	427.66	--	--	--	--	--	--	--	--
10/5/2001	P		455.07	38.0	**45.0**	27.59	427.48	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.05	--
1/21/2002	--	h	455.07	38.0	**45.0**	26.75	428.32	--	--	--	--	--	--	--	--
4/26/2002	P		455.07	38.0	**45.0**	26.50	428.57	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.47	--
10/7/2002	--		455.07	38.0	**45.0**	20.79	434.28	<50	<0.50	<0.50	<0.50	<0.50	1.0	1.4	--
05/01/2003	P	c	455.07	38.0	**45.0**	20.55	434.52	<50	<0.50	<0.50	<0.50	<0.50	1.5	3.2	--
10/03/2003	P	d	455.07	38.0	45.0	20.58	434.49	<50	<0.50	<0.50	<0.50	<0.50	3.1	3.0	7.1
04/06/2004	P		457.40	38.0	45.0	17.52	439.88	<50	<0.50	<0.50	<0.50	<0.50	14	5.1	6.7
10/28/2004	P		457.40	38.0	45.0	20.32	437.08	<50	<0.50	<0.50	<0.50	<0.50	29	1.3	7.2
04/13/2005	P		457.40	38.0	45.0	16.20	441.20	<50	<0.50	<0.50	<0.50	<0.50	3.7	2.8	7.0
10/27/2005	P		457.40	38.0	45.0	21.98	435.42	<50	<0.50	<0.50	<0.50	<0.50	21	1.04	7.2
04/12/2006	--	Well inaccessible m	457.40	38.0	45.0	--	--	--	--	--	--	--	--	--	--
10/31/2006	--		457.40	38.0	45.0	--	--	--	--	--	--	--	--	--	--
4/19/2007	P		457.40	38.0	45.0	22.38	435.02	<50	<0.50	<0.50	<0.50	<0.50	12	7.11	7.57
10/16/2007	P		457.40	38.0	45.0	37.11	420.29	<50	<0.50	<0.50	<0.50	<0.50	6.6	0.60	7.57
4/24/2008	P		457.40	38.0	45.0	26.10	431.30	<50	<0.50	<0.50	<0.50	<0.50	17	1.83	7.26
10/15/2008	--		457.40	38.0	45.0	43.34	414.06	--	--	--	--	--	--	--	--
4/28/2009	P		457.40	38.0	45.0	32.85	424.55	<50	<0.50	<0.50	<0.50	<0.50	5.3	5.89	7.23
11/9/2009	P		457.40	38.0	45.0	22.99	434.41	<50	<0.50	<0.50	<0.50	<0.50	12	0.72	7.0
4/12/2010	P		457.40	38.0	45.0	21.14	436.26	<50	<0.50	<0.50	<0.50	<0.50	10	2.03	7.25
11/4/2010	**P**		**457.40**	**38.0**	**45.0**	**20.62**	**436.78**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**9.9**	**1.64**	**6.9**
MW-12 Cont.															
3/23/1995	--	h	455.04	18.0	**34.5**	15.54	439.50	--	--	--	--	--	--	--	--
5/31/1995	--		455.04	18.0	**34.5**	15.66	439.38	<50	<0.5	<0.5	<0.5	<0.5	--	--	--

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Well and Sample Date	P/NP	Comments	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
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-12 Cont.															
8/31/1995	--	h	455.04	18.0	34.5	18.23	436.81	--	--	--	--	--	--	--	--
11/28/1995	--		455.04	18.0	34.5	17.53	437.51	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
2/22/1996	--	h	455.04	18.0	34.5	14.45	440.59	--	--	--	--	--	--	--	--
5/23/1996	--		455.04	18.0	34.5	14.88	440.16	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
8/8/1996	--	h	455.04	18.0	34.5	17.30	437.74	--	--	--	--	--	--	--	--
11/7/1996	--		455.04	18.0	34.5	18.30	436.74	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
3/27/1997	--	h	455.04	18.0	34.5	15.69	439.35	--	--	--	--	--	--	--	--
5/19/1997	--		455.04	18.0	34.5	17.41	437.63	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
5/18/1998	--		455.04	18.0	34.5	15.21	439.83	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
11/2/1998	--	m	455.04	18.0	34.5	--	--	--	--	--	--	--	--	--	--
6/4/1999	--	m	455.04	18.0	34.5	--	--	--	--	--	--	--	--	--	--
11/11/1999	--	m	455.04	18.0	34.5	--	--	--	--	--	--	--	--	--	--
6/20/2000	--	m	455.04	18.0	34.5	--	--	--	--	--	--	--	--	--	--
8/29/2000	--	m	455.04	18.0	34.5	--	--	--	--	--	--	--	--	--	--
11/29/2000	--	m	455.04	18.0	34.5	--	--	--	--	--	--	--	--	--	--
5/2/2001	--	m	455.04	18.0	34.5	--	--	--	--	--	--	--	--	--	--
8/15/2001	--	m	455.04	18.0	34.5	--	--	--	--	--	--	--	--	--	--
10/5/2001	--	m	455.04	18.0	34.5	--	--	--	--	--	--	--	--	--	--
1/21/2002	--	m	455.04	18.0	34.5	--	--	--	--	--	--	--	--	--	--
4/26/2002	--	m	455.04	18.0	34.5	--	--	--	--	--	--	--	--	--	--
10/7/2002	--	m	455.04	18.0	34.5	--	--	--	--	--	--	--	--	--	--
05/01/2003	--	c, m	455.04	18.0	34.5	--	--	--	--	--	--	--	--	--	--
10/03/2003	--	m	455.04	18.0	34.5	--	--	--	--	--	--	--	--	--	--
04/06/2004	P		457.37	18.0	34.5	18.14	439.23	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.4	6.4
10/28/2004	P		457.37	18.0	34.5	20.66	436.71	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.7	6.8
04/13/2005	P		457.37	18.0	34.5	16.25	441.12	<50	<0.50	<0.50	<0.50	0.55	<0.50	1.9	7.5
10/27/2005	P		457.37	18.0	34.5	19.77	437.60	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.81	7.0
04/12/2006	P		457.37	18.0	34.5	16.08	441.29	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.6	7.2
10/31/2006	--		457.37	18.0	34.5	--	--	--	--	--	--	--	--	--	--
4/19/2007	NP		457.37	18.0	34.5	22.34	435.03	<50	<0.50	<0.50	<0.50	<0.50	<0.50	4.66	7.28
10/16/2007	--	f	457.37	18.0	34.5	--	--	--	--	--	--	--	--	--	--

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Well and Sample Date	P/NP	Comments	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
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-12 Cont.															
4/24/2008	--	m	457.37	18.0	34.5	--	--	--	--	--	--	--	--	--	--
10/15/2008	--	f	457.37	18.0	34.5	--	--	--	--	--	--	--	--	--	--
4/28/2009	NP		457.37	18.0	34.5	32.21	425.16	<50	<0.50	<0.50	<0.50	<0.50	1.4	7.68	6.63
11/9/2009	NP		457.37	18.0	34.5	23.74	433.63	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--
4/12/2010	NP		457.37	18.0	34.5	19.93	437.44	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	7.18
11/4/2010	**NP**		**457.37**	**18.0**	**34.5**	**21.53**	**435.84**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**0.96**	**7.0**
MW-13 Cont.															
1/21/2002	P		--	--	--	24.61	--	15,000	160	68	1,700	3,200	4,900/5,200	0.71	--
4/26/2002	P		--	--	--	24.20	--	17,000	98	<100	1,700	3,400	1,600	0.6	--
10/7/2002	--	b	--	--	--	20.12	--	14,000	510	<50	2,200	2,300	2,800	0.8	--
05/01/2003	P	c	--	--	--	17.82	--	21,000	230	<50	1,900	2,300	1,600	1.9	--
10/03/2003	P	d	--	--	--	19.91	--	19,000	570	55	1,900	2,300	2,400	0.8	6.9
04/06/2004	P		457.91	--	--	17.14	440.77	15,000	470	35	1,600	1,300	1,800	2.0	6.7
10/28/2004	P		457.91	--	--	18.83	439.08	18,000	350	<25	1,900	1,800	1,800	0.8	6.7
04/13/2005	P		457.91	--	--	15.23	442.68	9,700	110	<25	860	280	920	0.9	6.9
10/27/2005	P		457.91	--	--	18.45	439.46	11,000	120	12	1,500	450	580	0.75	6.8
04/12/2006	P		457.91	--	--	15.06	442.85	4,700	65	<10	450	69	470	1.2	6.8
10/31/2006	P		457.91	--	--	19.06	438.85	15,000	150	<25	1,700	400	710	--	6.87
4/19/2007	NP		457.91	--	--	22.21	435.70	14,000	60	<25	1,800	640	330	1.44	7.09
10/16/2007	--	f	457.91	--	--	--	--	--	--	--	--	--	--	--	--
4/24/2008	NP		457.91	--	--	24.68	433.23	1,400	4.5	1.1	9.4	15	49	2.78	7.25
9/10/2008	--	k	457.91	--	--	--	--	--	--	--	--	--	--	--	--
RMW-13 Cont.															
4/12/2010	NP	y	458.03	15	35	18.50	439.53	63,000	7,800	200	1,600	6,400	1,500	2.47	7.21
11/4/2010	**NP**		**458.03**	**15**	**35**	**18.83**	**439.20**	**31,000**	**4,000**	**<120**	**1,700**	**2,500**	**390**	**1.01**	**7.40**
VW-1 Cont.															
8/29/2000	P		--	24	45	17.40	--	2,360	27.6	11.6	26.3	33.2	110	4.47	--
11/29/2000	P		--	24.0	45	18.75	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	0.46	--
5/2/2001	--		--	24.0	45	21.59	--	--	--	--	--	--	--	--	--

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								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
VW-1 Cont.															
8/15/2001	--	q	--	24.0	45	--	--	1,200	6.2	4.1	1.8	1.1	20/17	--	--
8/15/2001	P	s	--	24.0	45	24.62	--	1,200	6.3	4.3	1.7	1.3	20/17	--	--
10/5/2001	P	s	--	24.0	45	24.75	--	1,500	140	55	28	82	610/660	0.71	--
1/21/2002	--	q, s	--	24.0	45	--	--	8,000	770	320	96	1,100	2,500/3,200	--	--
1/21/2002	P	s	--	24.0	45	24.59	--	6,700	810	350	270	1,100	2,600/3,400	0.69	--
4/26/2002	--	q	--	24.0	45	--	--	350	24	1.6	5.9	1.6	45	--	--
4/26/2002	P		--	24.0	45	24.27	--	370	26	2.1	6.6	1.7	48	0.5	--
10/7/2002	P	b	--	24.0	45	19.20	--	410	25	2.2	8	4.3	88	1.7	--
05/01/2003	P	c	--	24.0	45	16.60	--	240	6.4	<0.50	3.3	1.3	36	1.7	--
10/03/2003	P	d	--	24.0	45	18.82	--	180	1.5	<0.50	0.69	<0.50	12	1.1	7.3
04/06/2004	P		457.08	24.0	45	15.78	441.30	300	2.2	<0.50	3.0	1.3	13	2.4	7.2
10/28/2004	P		457.08	24.0	45	18.33	438.75	210	<0.50	<0.50	0.67	<0.50	<0.50	1.2	7.1
04/13/2005	P		457.08	24.0	45	14.02	443.06	740	1.8	<0.50	3.6	1.1	9.6	2.4	7.1
10/27/2005	P		457.08	24.0	45	17.65	439.43	1,500	78	73	36	81	13	1.64	7.3
04/12/2006	P		457.08	24.0	45	13.89	443.19	230	1.4	<0.50	2.2	0.76	1.6	1.4	7.3
10/31/2006	P		457.08	24.0	45	17.87	439.21	80	<0.50	<0.50	2.3	0.82	<0.50	--	7.76
4/19/2007	P		457.08	24.0	45	21.09	435.99	250	1.6	<0.50	4.7	1.3	3.0	1.15	7.66
10/16/2007	NP		457.08	24.0	45	37.10	419.98	12,000	2,300	1,900	860	2,800	150	2.65	7.61
4/24/2008	NP		457.08	24.0	45	24.40	432.68	<50	<0.50	<0.50	<0.50	<0.50	4.5	4.95	7.47
10/15/2008	--		457.08	24.0	45	43.07	414.01	--	--	--	--	--	--	--	--
4/28/2009	NP		457.08	24.0	45	31.06	426.02	3,500	140	2.8	25	4.0	19	6.38	7.02
11/9/2009	P	x (GRO)	457.08	24.0	45	21.12	435.96	230	1.8	<0.50	<0.50	<0.50	1.1	2.28	6.95
4/12/2010	P		457.08	24.0	45	17.27	439.81	410	0.80	<0.50	<0.50	<0.50	<0.50	3.38	7.21
11/4/2010	**P**	**x (GRO)**	**457.08**	**24.0**	**45**	**18.65**	**438.43**	**160**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**1.15**	**6.9**
VW-2 Cont.															
8/29/2000	--	g	--	28	49.5	--	--	--	--	--	--	--	--	--	--
11/29/2000	--	g	--	28	49.5	--	--	--	--	--	--	--	--	--	--
5/2/2001	--		--	28	49.5	--	--	--	--	--	--	--	--	--	--
10/5/2001	--	g	--	28	49.5	--	--	--	--	--	--	--	--	--	--
1/21/2002	--	g	--	28	49.5	--	--	--	--	--	--	--	--	--	--

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								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
VW-2 Cont.															
4/26/2002	--	m	--	28	**49.5**	--	--	--	--	--	--	--	--	--	--
10/7/2002	--	g	--	28	**49.5**	--	--	--	--	--	--	--	--	--	--
05/01/2003	--	c, g	--	28	**49.5**	--	--	--	--	--	--	--	--	--	--
10/03/2003	--	Well inaccessible g	--	28	49.5	--	--	--	--	--	--	--	--	--	--
04/06/2004	--		458.64	28	49.5	16.96	441.68	--	--	--	--	--	--	--	--
10/28/2004	--		458.64	28	49.5	19.35	439.29	--	--	--	--	--	--	--	--
04/13/2005	--		458.64	28	49.5	15.51	443.13	--	--	--	--	--	--	--	--
10/27/2005	--		458.64	28	49.5	18.50	440.14	--	--	--	--	--	--	--	--
04/12/2006	--		458.64	28	49.5	14.92	443.72	--	--	--	--	--	--	--	--
10/31/2006	--		458.64	28	49.5	19.01	439.63	--	--	--	--	--	--	--	--
4/19/2007	--		458.64	28	49.5	22.52	436.12	--	--	--	--	--	--	--	--
10/16/2007	--		458.64	28	49.5	38.58	420.06	--	--	--	--	--	--	--	--
4/24/2008	--		458.64	28	49.5	24.91	433.73	--	--	--	--	--	--	--	--
10/15/2008	--		458.64	28	49.5	43.31	415.33	--	--	--	--	--	--	--	--
4/28/2009	--		458.64	28	49.5	32.56	426.08	--	--	--	--	--	--	--	--
11/9/2009	--		458.64	28	49.5	22.38	436.26	--	--	--	--	--	--	--	--
4/12/2010	--		458.64	28	49.5	18.50	440.14	--	--	--	--	--	--	--	--
11/4/2010	--		**458.64**	**28**	**49.5**	**19.87**	**438.77**	--	--	--	--	--	--	--	--
VW-3 Cont.															
8/29/2000	P		--	15.5	**24**	17.93	--	25,400	3,540	10,600	1,280	43,000	44,700	--	--
11/29/2000	P	s	--	15.5	**24**	19.75	--	54,200	9,450	1,870	2,350	9,400	12,300/15,100	0.47	--
5/2/2001	--	k	--	15.5	**24**	--	--	--	--	--	--	--	--	--	--
VW-4 Cont.															
8/29/2000	--	g	--	17	**30**	--	--	--	--	--	--	--	--	--	--
11/29/2000	P	s	--	17	**30**	19.45	--	37,500	4,510	206	2,100	9,030	6,770/7,880	0.42	--
11/29/2000	--	q, s	--	17	**30**	--	--	36,100	3,700	206	1,850	7,890	6,430/8,460	--	--
5/2/2001	--		--	17	**30**	21.66	--	--	--	--	--	--	--	--	--
8/15/2001	--		--	17	**30**	--	--	--	--	--	--	--	--	--	--
10/5/2001	--	f	--	17	**30**	--	--	--	--	--	--	--	--	--	--

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

ARCO Service Station #6113, 785 East Stanley Blvd., Livermore, CA

Well and Sample Date	P/NP	Comments	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
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
VW-4 Cont.															
1/21/2002	--	f	--	17	**30**	--	--	--	--	--	--	--	--	--	--
4/26/2002	--	f	--	17	**30**	--	--	--	--	--	--	--	--	--	--
10/7/2002	--		--	17	**30**	19.25	--	--	--	--	--	--	--	--	--
05/01/2003	--	c	--	17	**30**	17.29	--	--	--	--	--	--	--	--	--
10/03/2003	P	d, n	--	17	30	19.10	--	48,000	3,300	1,700	3,600	21,000	1,600	10.5	6.7
04/06/2004	--		456.99	17	30	18.05	438.94	--	--	--	--	--	--	--	--
10/28/2004	--		456.99	17	30	18.71	438.28	--	--	--	--	--	--	--	--
04/13/2005	--		456.99	17	30	14.62	442.37	--	--	--	--	--	--	--	--
10/27/2005	--		456.99	17	30	18.00	438.99	--	--	--	--	--	--	--	--
04/12/2006	--		456.99	17	30	14.42	442.57	--	--	--	--	--	--	--	--
10/31/2006	--		456.99	17	30	18.30	438.69	--	--	--	--	--	--	--	--
4/19/2007	--		456.99	17	30	20.91	436.08	--	--	--	--	--	--	--	--
10/16/2007	--	f	456.99	17	30	--	--	--	--	--	--	--	--	--	--
4/24/2008	--		456.99	17	30	23.40	433.59	--	--	--	--	--	--	--	--
10/15/2008	--	f	456.99	17	30	--	--	--	--	--	--	--	--	--	--
4/28/2009	--	f	456.99	17	30	--	--	--	--	--	--	--	--	--	--
11/9/2009	--		456.99	17	30	21.65	435.34	--	--	--	--	--	--	--	--
4/12/2010	--		456.99	17	30	17.80	439.19	--	--	--	--	--	--	--	--
11/4/2010	--		**456.99**	**17**	**30**	**19.13**	**437.86**	--	--	--	--	--	--	--	--

ABBREVIATIONS & SYMBOLS:
-- = Not analyzed/applicable/measured/available
< = Not detected at or above specified laboratory reporting limit
DO = Dissolved oxygen
DTW = Depth to water in ft bgs
GRO = Gasoline range organics
GWE = Groundwater elevation measured in ft
mg/L = Milligrams per liter
MTBE = Methyl tert-butyl ether
NP = Well not purged prior to sampling
P = Well purged prior to sampling
TOC = Top of casing measured in ft
TPH-g = Total petroleum hydrocarbons as gasoline
µg/L = Micrograms per liter

FOOTNOTES:
a = Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
b = Chromatogram Pattern: C6-C10.
c = TPH-g, benzene, toluene, ethylbenzene, and total xylenes (BTEX), and MTBE analyzed using EPA Method 8260B beginning second quarter 2003 (05/01/03).
d = This sample was analyzed 3 days after the EPA recommended holding time. The results may still be useful for their intended purpose.
e = Well sampled annually in the fourth quarter.
f = Well dry.
g = Well inaccessible.
h = Well sampled semi-annually in second and fourth quarters.
k = Well abandoned.
m = Unable to locate well.
n = Sheen in well.
q = Duplicate sample.
r = Well removed from sampling schedule.
s = Original sample analyzed by 8021B and confirmation by 8260.
t = Bolts securing well box cover stripped at head. Unable to sample well.
u = Hydrocarbon result partly due to individ. peak(s) in quant. range.
v = pH measurement is believed to be erroneous.
w = Sample > 4x spike concentration.
x = Quantitation of unknown hydrocarbon(s) in sample based on gasoline.
y = Replacement well for abandoned wells MW-6 and MW-13 installed on 3/11/2010, and surveyed on 4/23/2010.

NOTES:
Beginning in the second quarter 2003 (05/01/03) TPH-g and BTEX were analyzed using EPA Method 8260B, and MTBE was analyzed by EPA Method 8260B beginning in fourth quarter 2002. Prior to 05/01/03, TPH-g was analyzed by EPA Method 8015; BTEX by EPA Method 8021B (EPA method 8020 before 11/11/99); and MTBE by EPA Method 8021B. (EPA method 8020 before 11/11/99). Any MTBE detection by 8021B was confirmed by EPA Method 8260 beginning third quarter 2000 (08-29-00 results).

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.

Wells were resurveyed to NAVD '88 datum by URS Corporation on March 8, 2004.

Values for DO and pH were obtained through field measurements.

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

Note: 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 #6113, 785 East Stanley Blvd., Livermore, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-1									
10/7/2002	<40	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-2									
10/7/2002	<40	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-3									
10/7/2002	<40	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
10/03/2003	<100	<20	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	a
10/28/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
10/31/2006	<300	<20	22	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-4									
10/7/2002	<400	<200	260	<5.0	<5.0	<5.0	<5.0	<5.0	
5/1/2003	<100	25	86	<0.50	<0.50	<0.50	<0.50	<0.50	
10/03/2003	<100	<20	22	<1.0	<1.0	<1.0	<0.50	<0.50	a
04/06/2004	<100	<20	17	<0.50	<0.50	<0.50	<0.50	<0.50	
10/28/2004	<100	<20	4.5	<0.50	<0.50	<0.50	<0.50	<0.50	
04/13/2005	<100	<20	2.8	<0.50	<0.50	<0.50	<0.50	<0.50	
10/27/2005	<100	<20	22	<0.50	<0.50	<0.50	<0.50	<0.50	
04/12/2006	<300	<20	1.9	<0.50	<0.50	<0.50	<0.50	<0.50	b
10/31/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
4/19/2007	<300	<20	<0.50	<0.50	<0.50	0.66	<0.50	<0.50	
11/9/2009	<300	12	3.1	<0.50	<0.50	<0.50	<0.50	<0.50	
4/12/2010	<300	<10	2.7	<0.50	<0.50	<0.50	<0.50	<0.50	
11/4/2010	**<300**	**<10**	**1.7**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-6									
10/7/2002	<40	<20	8	<0.50	<0.50	<0.50	<0.50	<0.50	
5/1/2003	<100	<20	12	<0.50	<0.50	<0.50	<0.50	<0.50	
10/03/2003	<500	<100	120	<5.0	<5.0	<5.0	<2.5	<2.5	a
04/06/2004	<5,000	<1,000	1,700	<25	<25	<25	<25	<25	
10/28/2004	<5,000	<1,000	3,100	<25	<25	<25	<25	<25	
04/13/2005	<10,000	<2,000	3,900	<50	<50	<50	<50	<50	

Table 2. Summary of Fuel Additives Analytical Data

ARCO Service Station #6113, 785 East Stanley Blvd., Livermore, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-6 Cont.									
10/27/2005	<10,000	<2,000	2,900	<50	<50	<50	<50	<50	b
04/12/2006	<30,000	<2,000	3,400	<50	<50	<50	<50	<50	b
10/31/2006	<15,000	<1,000	3,400	<25	<25	<25	<25	<25	b
4/19/2007	<15,000	<1,000	2,200	<25	<25	<25	<25	<25	
10/16/2007	<15,000	<1,000	2,600	<25	<25	<25	<25	<25	c (MTBE)
4/24/2008	<6,000	1,500	4,200	<10	<10	<10	<10	<10	
MW-7									
10/7/2002	<40	<20	41	<0.50	<0.50	<0.50	<0.50	<0.50	
5/1/2003	<100	<20	43	<0.50	<0.50	<0.50	<0.50	<0.50	
10/03/2003	<200	<40	49	<2.0	<2.0	<2.0	<1.0	<1.0	a
04/06/2004	<100	<20	0.76	<0.50	<0.50	<0.50	<0.50	<0.50	
10/28/2004	<100	<20	14	<0.50	<0.50	<0.50	<0.50	<0.50	
04/13/2005	<100	<20	1.7	<0.50	<0.50	<0.50	<0.50	<0.50	
10/27/2005	<100	<20	2.3	<0.50	<0.50	<0.50	<0.50	<0.50	b
04/12/2006	<300	<20	1.1	<0.50	<0.50	<0.50	<0.50	<0.50	b
10/31/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	b
4/19/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
10/16/2007	<300	<20	24	<0.50	<0.50	<0.50	<0.50	<0.50	
4/24/2008	<300	<10	22	<0.50	<0.50	<0.50	<0.50	<0.50	
10/15/2008	<300	<10	8.2	<0.50	<0.50	<0.50	<0.50	<0.50	
4/28/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	d
11/9/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
4/12/2010	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/4/2010	**<300**	**<10**	**0.59**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-8									
10/7/2002	<40	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-9									
10/7/2002	<40	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
10/03/2003	<100	<20	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	a
10/28/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	

Table 2. Summary of Fuel Additives Analytical Data

ARCO Service Station #6113, 785 East Stanley Blvd., Livermore, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-9 Cont.									
10/27/2005	<100	<20	1.4	<0.50	<0.50	<0.50	<0.50	<0.50	b
10/31/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	b
10/16/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
10/15/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/9/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/4/2010	**<300**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-10									
10/7/2002	<40	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
10/03/2003	<100	<20	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	a
10/28/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
10/27/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
10/31/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	b
10/16/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-11									
10/7/2002	<40	<20	1.0	<0.50	<0.50	<0.50	<0.50	<0.50	
5/1/2003	<100	<20	--	<0.50	<0.50	<0.50	<0.50	<0.50	
10/03/2003	<100	<20	3.1	<1.0	<1.0	<1.0	<0.50	<0.50	a
04/06/2004	<100	<20	14	<0.50	<0.50	<0.50	<0.50	<0.50	
10/28/2004	<100	<20	29	<0.50	<0.50	<0.50	<0.50	<0.50	
04/13/2005	<100	<20	3.7	<0.50	<0.50	<0.50	<0.50	<0.50	
10/27/2005	<100	<20	21	<0.50	<0.50	<0.50	<0.50	<0.50	
04/12/2006	--	--	--	--	--	--	--	--	Well inaccessible
4/19/2007	<300	<20	12	<0.50	<0.50	<0.50	<0.50	<0.50	
10/16/2007	<300	<20	6.6	<0.50	<0.50	<0.50	<0.50	<0.50	
4/24/2008	<300	<10	17	<0.50	<0.50	<0.50	<0.50	<0.50	
4/28/2009	<300	<10	5.3	<0.50	<0.50	<0.50	<0.50	<0.50	d
11/9/2009	<300	<10	12	<0.50	<0.50	<0.50	<0.50	<0.50	
4/12/2010	<300	<10	10	<0.50	<0.50	<0.50	<0.50	<0.50	
11/4/2010	**<300**	**<10**	**9.9**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-12									

Table 2. Summary of Fuel Additives Analytical Data

ARCO Service Station #6113, 785 East Stanley Blvd., Livermore, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-12 Cont.									
04/06/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
10/28/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
04/13/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
10/27/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
04/12/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	b
4/19/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
4/28/2009	<300	<10	1.4	<0.50	<0.50	<0.50	<0.50	<0.50	d
11/9/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
4/12/2010	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/4/2010	**<300**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-13									
10/7/2002	<4,000	<2,000	2,800	<50	<50	<50	<50	<50	
5/1/2003	<10,000	<2,000	--	<50	<50	<50	<50	<50	
10/03/2003	<10,000	<2,000	2,400	<100	<100	<100	<50	<50	a
04/06/2004	<5,000	<1,000	1,800	<25	<25	<25	<25	<25	
10/28/2004	<5,000	<1,000	1,800	<25	<25	<25	<25	<25	
04/13/2005	<5,000	<1,000	920	<25	<25	<25	<25	<25	
10/27/2005	<2,000	<400	580	<10	<10	<10	<10	<10	
04/12/2006	<6,000	<400	470	<10	<10	<10	<10	<10	b
10/31/2006	<15,000	<1,000	710	<25	<25	<25	<25	<25	b
4/19/2007	<15,000	<1,000	330	<25	<25	<25	<25	<25	
4/24/2008	<300	14	49	<0.50	<0.50	<0.50	<0.50	<0.50	
RMW-13									
4/12/2010	<75,000	<2,500	1,500	<120	<120	<120	<120	<120	
11/4/2010	**<75,000**	**<2,500**	**390**	**<120**	**<120**	**<120**	**130**	**<120**	
VW-1									
10/7/2002	<80	<40	--	<1.0	<1.0	<1.0	<1.0	<1.0	
5/1/2003	<100	<20	--	<0.50	<0.50	<0.50	<0.50	<0.50	
10/03/2003	<100	<20	12	<1.0	<1.0	<1.0	<0.50	<0.50	a
04/06/2004	<100	<20	13	<0.50	<0.50	<0.50	<0.50	<0.50	

Table 2. Summary of Fuel Additives Analytical Data

ARCO Service Station #6113, 785 East Stanley Blvd., Livermore, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
VW-1 Cont.									
10/28/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
04/13/2005	<100	<20	9.6	<0.50	<0.50	<0.50	<0.50	<0.50	
10/27/2005	<100	<20	13	<0.50	<0.50	<0.50	<0.50	<0.50	
04/12/2006	<300	<20	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	b
10/31/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	b
4/19/2007	<300	<20	3.0	<0.50	<0.50	<0.50	<0.50	<0.50	
10/16/2007	<15,000	<1,000	150	<25	<25	<25	<25	<25	b
4/24/2008	<300	<10	4.5	<0.50	<0.50	<0.50	<0.50	<0.50	
4/28/2009	<300	<10	19	<0.50	<0.50	<0.50	<0.50	<0.50	d
11/9/2009	<300	<10	1.1	<0.50	<0.50	<0.50	<0.50	<0.50	
4/12/2010	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/4/2010	**<300**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
VW-2									
10/03/2003	--	--	--	--	--	--	--	--	Well inaccessible
VW-4									
10/03/2003	<100,000	<20,000	1,600	<1,000	<1,000	<1,000	<500	<500	a

ABBREVIATIONS & SYMBOLS:
-- = Not analyzed/applicable/measured/available
< = Not detected at or above specified laboratory reporting limit
1,2-DCA = 1,2-Dichloroethane
DIPE = Di-isopropyl ether
EDB = 1,2-Dibromoethane
ETBE = Ethyl tert-butyl ether
MTBE = Methyl tert-butyl ether
TAME = tert-Amyl methyl ether
TBA = tert-Butyl alcohol
µg/L = Micrograms per Liter

FOOTNOTES:
a = This sample was analyzed 3 days after the EPA recommended holding time. The results may still be useful for their intended purpose.
b = Calibration verification for ethanol was within method limits but outside contract limits.
c = Sample >4x spike concentration.
d = Calibrtn. verif. recov. Below method CL for TAME.

NOTES:
All volatile organic compounds analyzed using EPA Method 8260B.

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

Table 3. Historical Ground-Water Flow Direction and Gradient

ARCO Service Station #6113, 785 East Stanley Blvd., Livermore, CA

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
3/23/1995	Northwest	0.035
5/31/1995	North-Northwest	0.028
8/31/1995	North-Northwest	0.03
11/28/1995	North-Northwest	0.025
2/22/1996	North-Northwest	0.031
5/23/1996	North-Northwest	0.025
8/8/1996	North	0.019
11/7/1996	North-Northeast	0.019
3/27/1997	North-Northwest	0.021
5/19/1997	North	0.019
5/18/1998	North	0.02
11/2/1998	North	0.02
6/4/1999	North	0.02
11/11/1999	North	0.03
6/20/2000	North-Northeast	0.014
8/29/2000	North-Northeast	0.013
11/29/2000	North-Northwest	0.026
5/2/2001	Northeast	0.026
8/15/2001	Northeast	0.047
10/5/2001	Northeast	0.031
1/21/2002	Northeast	0.033
4/26/2002	Northeast	0.031
10/7/2002	Northeast	0.017
5/1/2003	North-Northeast	0.011
10/3/2003	North-Northeast	0.016
4/6/2004	North-Northeast	0.013
10/28/2004	North-Northeast	0.014
4/13/2005	North-Northwest	0.02
10/27/2005	North-Northwest	0.01 to 0.03
4/12/2006	Northeast	0.01
10/31/2006	Northeast	0.014
4/19/2007	Northeast	0.013
10/16/2007	Northeast	0.031
4/24/2008	North-Northwest	0.013
10/15/2008	Northeast	0.070
4/28/2009	Northeast	0.008
11/9/2009	Northeast	0.02
4/12/2010	North-Northeast	0.03
11/4/2010	**Northeast**	**0.01**

Note: 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

BAI GROUND-WATER SAMPLING DATA
(Includes Field Data Sheets, Non-Hazardous Waste Data Form, Laboratory Analytical Reports with Chain-of-Custody Documentation and Field Procedures)

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

FIELD DATA REPORT

DATE: 11/4/10
PERSONNEL: CB & EF
WEATHER: Sunny/clear

PROJECT NO.: 06-82-637
COMMENTS:

Equip:	Geosquirt	Tubing	Bailers	DO	wli	Ec/pH

Well ID	Time	MEASURING POINT	DTW (FT)	PRODUCT THICKNESS	pH	Cond. (X100)	Temp. (C/F)	DO (mg/l)	Redox (mV)	Iron (mg/l)	Alk. (mg/l)	WELL HEAD CONDITION: VAULT, BOLTS, CAP, LOCK, ETC
mw-2	1200		19.31									good Condition
mw-4	1020		20.40									bolts stripped - 2
mw-7	0977		19.90									good condition
mw-9	1044		18.62									good condition
mw-11	1203		20.62									2 stripped
mw-12	1227		21.53									good condition
emw-13	0959		18.83									good condition
vw-1	1129		18.65									
vw-2	1015		19.87									
vw-4	0954		19.13									

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

Groundwater Sampling Data Sheet

Well I.D.: MW-12
Project Name/Location: BP 6113 Project #: 06-87-639
Sampler's Name: CPSB Date: 11/4/16
Purging Equipment: —
Sampling Equipment: Bailer
Casing Type: PVC

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

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

Free product measurement (if present): —

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	1231	0.96	112	—	567.8	72.1	7.0	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 0 gallons
Depth to Water at Sample Collection: — feet
Sample Collection Time: 1235 Purged Dry? (Y / (N))

Comments:

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

Groundwater Sampling Data Sheet

Well I.D.: MW-22
Project Name/Location: BP/ARCO Project #: 06-82-687
Sampler's Name: SB & BF Date: 11/4/10
Purging Equipment: bailer
Sampling Equipment: bailer
Casing Type: PVC

Casing Diameter:		2	inch
Total Well Depth:		45.00	feet
Depth to Water:	-	24.33	feet 20.67
Water Column Thickness:	=	24.33	feet
Unit Casing Volume*:	x	0.16	gallon / foot
Casing Water Volume:	=	3.89	gallons
Casing Volume:	x	3	each
Estimated Purge Volume:	=	11.67	gallons

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

Free product measurement (if present): —

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	1212	1.64	115	—	653.3	67.9	6.9	
7	1215	X	X	X	648.9	68.1	7.0	
4	1218	X	X	X	647.1	68.0	6.9	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 4.0 gallons
Depth to Water at Sample Collection: — feet
Sample Collection Time: 1220 Purged Dry? (Y / (N))

Comments:

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

Groundwater Sampling Data Sheet

Well I.D.: VW-1
Project Name/Location: BP/ARCO 6113 Project #: 06-82-637
Sampler's Name: SD + ER Date: 1/4/10
Purging Equipment: Bailer
Sampling Equipment: Bailer
Casing Type: PVC

Casing Diameter:		4	inch
Total Well Depth:		44.34	feet
Depth to Water:	-	18.65	feet
Water Column Thickness:	=	25.69	feet
Unit Casing Volume*:	x	0.65	gallon / foot
Casing Water Volume:	=	16.69	gallons
Casing Volume:	x	3	each
Estimated Purge Volume:	=	50.1	gallons

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

Free product measurement (if present): ____

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	1133	1.45	120	—	657.6	69.1	6.9	
10	1142	X	X	X	667.9	66.9	6.8	
15	1146	X	X	X	648.4	66.5	6.9	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 15.0 gallons
Depth to Water at Sample Collection: ~ feet
Sample Collection Time: 1150 Purged Dry? (Y / (N))

Comments:

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

Groundwater Sampling Data Sheet

Well I.D.: MW-9
Project Name/Location: BP/ARCO 6113 Project #: 06-82-637
Sampler's Name: SB + EF Date: 11/4/10
Purging Equipment: bailer
Sampling Equipment: bailer
Casing Type: PVC

Casing Diameter:		4	inch
Total Well Depth:		67.92	feet
Depth to Water:	-	18.62	feet
Water Column Thickness:	=	49.30	feet
Unit Casing Volume*:	x	0.65	gallon / foot
Casing Water Volume:	=	32.04	gallons
Casing Volume:	x	3	each
Estimated Purge Volume:	=	96.13	gallons

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

Free product measurement (if present): _____

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	1050	4.73	73	—	515.4	65.9	6.9	
10	1058	X	X	X	492.9	67.7	6.9	
15	1103	X	X	X	501.8	67.1	6.8	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 15.0 gallons
Depth to Water at Sample Collection: — feet
Sample Collection Time: 1105
Purged Dry? (Y / (N))

Comments:

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

Groundwater Sampling Data Sheet

Well I.D.: MW-4

Project Name/Location: BP/ARCO 6013 Project #: 06-82-6302

Sampler's Name: SB & EP Date: 11/9/10

Purging Equipment: bailer

Sampling Equipment: bailer

Casing Type: PVC

Casing Diameter:		4	inch
Total Well Depth:		26.68	feet
Depth to Water:	-	20.40	feet
Water Column Thickness:	=	6.28	feet
Unit Casing Volume*:	x	0.65	gallon / foot
Casing Water Volume:	=	4.0	gallons
Casing Volume:	x	3	each
Estimated Purge Volume:	=	12.2	gallons

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

Free product measurement (if present): —

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	1044	0.44	11	—	811.0	68.2	6.6	
4	1027	X	X	X	798.5	69.0	6.5	
6	1030	X	X	X	802.6	68.7	6.5	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 6.0 gallons

Depth to Water at Sample Collection: — feet

Sample Collection Time: 1035 Purged Dry? (Y / (N))

Comments:

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

Groundwater Sampling Data Sheet

Well I.D.: RMW-13
Project Name/Location: BP/ARCO 6113 Project #: 06-82-657
Sampler's Name: SB & EP Date: 10/4/10
Purging Equipment: —
Sampling Equipment: bailer
Casing Type: PVC
Casing Diameter: 4 inch
Total Well Depth: 35.00 feet
Depth to Water: - 18.83 feet
Water Column Thickness: = feet
Unit Casing Volume*: x gallon / foot
Casing Water Volume: = gallons
Casing Volume: x 3 each
Estimated Purge Volume: = gallons
Free product measurement (if present):

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

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	1005	1.09	85	—	1130	69.4	7.40	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 0 gallons
Depth to Water at Sample Collection: — feet
Sample Collection Time: 1010 Purged Dry? (Y / (N))

Comments: NP

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

Groundwater Sampling Data Sheet

Well I.D.: MW-7
Project Name/Location: BP/ARCO 6113 Project #: 06-82-637
Sampler's Name: SB + ISP Date: 11/4/10
Purging Equipment: bailer
Sampling Equipment: bailer
Casing Type: PVC

Casing Diameter:	4	inch	
Total Well Depth:	67.45	feet	
Depth to Water:	- 19.90	feet	
Water Column Thickness:	= 47.55	feet	
Unit Casing Volume*:	x 0.65	gallon / foot	
Casing Water Volume:	= 30.9	gallons	
Casing Volume:	x 3	each	
Estimated Purge Volume:	= 92.7	gallons	

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

Free product measurement (if present):

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	0930	4.15	133	—	526.2	64.5	7.8	
10	0942	X	X	X	513.2	66.0	8.2	
15	0946	X	X	X	524.8	66.1	8.4	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 15.0 gallons
Depth to Water at Sample Collection: feet
Sample Collection Time: 0950 Purged Dry? (Y (N)

Comments:

NO. 857327

NON-HAZARDOUS WASTE DATA FORM

1. BESI #

GENERATOR

2. Generator's Name and Mailing Address

BP WEST COAST PRODUCTS, LLC
P.O. BOX 80249
RANCHO SANTA MARGARITA, CA 92688

Generator's Site Address (if different than mailing address)

BP 6113
785 E. Stanley Blvd
Livermore, CA

Generator's Phone: (949) 460-5200

24-HOUR EMERGENCY PHONE: (949) 699-3706

3. Transporter 1 Company Name: Broadbent & Associates, Inc. — Phone #: (530) 566-1400

4. Transporter 2 Company Name: Gomes Excavating — Phone #: (707) 374-2881

5. Designated Facility Name and Site Address

INTRAT, INC.
1105 AIRPORT RD #C
RIO VISTA, CA 94571

Phone #: (530) 753-1829

6. Waste Shipping Name and Description	7. Containers No.	7. Containers Type	8. Total Quantity	9. Unit Wt/Vol	10. Profile No.
A. NON-HAZARDOUS WATER	1	TT	SS	G	
B.					
C.					
D.					

11. Special Handling Instructions and Additional Information

WEAR ALL APPROPRIATE PROTECTIVE CLOTHING

WELL PURGING / DECON WATER

12. GENERATOR'S CERTIFICATION: I certify the materials described above on this data form are non-hazardous.

Generator's/Offeror's Printed/Typed Name: BAE — Signature — Month: 11 — Day: 30 — Year: 16

TRANSPORTER

13. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: BAE — Signature — Month: 11 — Day: 30 — Year: 16

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

FACILITY

14. Designated Facility Owner or Operator: Certification of receipt of materials covered by this data form.

Printed/Typed Name — Signature — Month — Day — Year

GENERATOR (ORIGINAL)

Calscience Environmental Laboratories, Inc.

November 17, 2010

Jason Duda
Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico , CA 95926-2642

Subject: **Calscience Work Order No.: 10-11-0508**
Client Reference: BP 6113

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 11/5/2010 and analyzed in accordance with the attached chain-of-custody.

Calscience Environmental Laboratories certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico , CA 95926-2642

Date Received: 11/05/10
Work Order No: 10-11-0508
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: BP 6113

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	**10-11-0508-1-E**	**11/04/10 10:35**	**Aqueous**	**GC 1**	**11/06/10**	**11/07/10 11:54**	**101106B02**

Comment(s): -LW = Quantitation of unknown hydrocarbon(s) in sample based on gasoline.

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	330	50	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	80	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**10-11-0508-2-E**	**11/04/10 09:50**	**Aqueous**	**GC 1**	**11/06/10**	**11/07/10 12:58**	**101106B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	71	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-9	**10-11-0508-3-E**	**11/04/10 11:05**	**Aqueous**	**GC 1**	**11/06/10**	**11/07/10 13:29**	**101106B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	68	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-11	**10-11-0508-4-E**	**11/04/10 12:20**	**Aqueous**	**GC 1**	**11/06/10**	**11/07/10 14:01**	**101106B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	84	38-134	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico , CA 95926-2642

Date Received: 11/05/10
Work Order No: 10-11-0508
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: BP 6113

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-12	**10-11-0508-5-E**	**11/04/10 12:35**	**Aqueous**	**GC 1**	**11/06/10**	**11/07/10 14:33**	**101106B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	73	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RMW-13	**10-11-0508-6-E**	**11/04/10 10:10**	**Aqueous**	**GC 1**	**11/06/10**	**11/07/10 15:05**	**101106B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	31000	2500	50		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	80	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VW-1	**10-11-0508-7-E**	**11/04/10 11:50**	**Aqueous**	**GC 1**	**11/06/10**	**11/07/10 15:37**	**101106B02**

Comment(s): -LW = Quantitation of unknown hydrocarbon(s) in sample based on gasoline.

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	160	50	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	74	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-935**	**N/A**	**Aqueous**	**GC 1**	**11/06/10**	**11/07/10 02:20**	**101106B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	68	38-134	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Broadbent & Associates, Inc.		Date Received:	11/05/10
1324 Mangrove Ave, Ste 212		Work Order No:	10-11-0508
Chico , CA 95926-2642		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: BP 6113			Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	**10-11-0508-1-A**	**11/04/10 10:35**	**Aqueous**	**GC/MS L**	**11/10/10**	**11/10/10 18:58**	**101110L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	1.7	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	100	80-128			Dibromofluoromethane	101	80-127		
Toluene-d8	103	80-120			1,4-Bromofluorobenzene	99	68-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**10-11-0508-2-A**	**11/04/10 09:50**	**Aqueous**	**GC/MS L**	**11/10/10**	**11/10/10 19:27**	**101110L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	0.59	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	112	80-128			Dibromofluoromethane	103	80-127		
Toluene-d8	103	80-120			1,4-Bromofluorobenzene	89	68-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-9	**10-11-0508-3-A**	**11/04/10 11:05**	**Aqueous**	**GC/MS L**	**11/10/10**	**11/10/10 19:55**	**101110L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	112	80-128			Dibromofluoromethane	105	80-127		
Toluene-d8	102	80-120			1,4-Bromofluorobenzene	89	68-120		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Broadbent & Associates, Inc.		Date Received:	11/05/10
1324 Mangrove Ave, Ste 212		Work Order No:	10-11-0508
Chico , CA 95926-2642		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: BP 6113			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-11	**10-11-0508-4-A**	**11/04/10 12:20**	**Aqueous**	**GC/MS L**	**11/10/10**	**11/10/10 20:24**	**101110L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	9.9	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	111	80-128			Dibromofluoromethane	103	80-127		
Toluene-d8	101	80-120			1,4-Bromofluorobenzene	89	68-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-12	**10-11-0508-5-A**	**11/04/10 12:35**	**Aqueous**	**GC/MS L**	**11/10/10**	**11/11/10 01:11**	**101110L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	103	80-128			Dibromofluoromethane	102	80-127		
Toluene-d8	97	80-120			1,4-Bromofluorobenzene	89	68-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RMW-13	**10-11-0508-6-A**	**11/04/10 10:10**	**Aqueous**	**GC/MS L**	**11/10/10**	**11/11/10 02:08**	**101110L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	4000	120	250		Methyl-t-Butyl Ether (MTBE)	390	120	250	
1,2-Dibromoethane	ND	120	250		Tert-Butyl Alcohol (TBA)	ND	2500	250	
1,2-Dichloroethane	130	120	250		Diisopropyl Ether (DIPE)	ND	120	250	
Ethylbenzene	1700	120	250		Ethyl-t-Butyl Ether (ETBE)	ND	120	250	
Toluene	ND	120	250		Tert-Amyl-Methyl Ether (TAME)	ND	120	250	
Xylenes (total)	2500	120	250		Ethanol	ND	75000	250	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	108	80-128			Dibromofluoromethane	102	80-127		
Toluene-d8	102	80-120			1,4-Bromofluorobenzene	100	68-120		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Broadbent & Associates, Inc.		Date Received:	11/05/10
1324 Mangrove Ave, Ste 212		Work Order No:	10-11-0508
Chico , CA 95926-2642		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	ug/L
Project: BP 6113			Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VW-1	**10-11-0508-7-A**	**11/04/10 11:50**	**Aqueous**	**GC/MS L**	**11/10/10**	**11/11/10 01:39**	**101110L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	99	80-128			Dibromofluoromethane	101	80-127		
Toluene-d8	103	80-120			1,4-Bromofluorobenzene	99	68-120		

Method Blank	**099-12-703-1,497**	**N/A**	**Aqueous**	**GC/MS L**	**11/10/10**	**11/10/10 11:48**	**101110L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	105	80-128			Dibromofluoromethane	102	80-127		
Toluene-d8	99	80-120			1,4-Bromofluorobenzene	93	68-120		

Method Blank	**099-12-703-1,500**	**N/A**	**Aqueous**	**GC/MS L**	**11/10/10**	**11/10/10 23:17**	**101110L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	102	80-128			Dibromofluoromethane	103	80-127		
Toluene-d8	99	80-120			1,4-Bromofluorobenzene	91	68-120		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico , CA 95926-2642

Date Received: 11/05/10
Work Order No: 10-11-0508
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project BP 6113

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-11-0232-1	**Aqueous**	**GC 1**	**11/06/10**	**11/07/10**	**101106S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	86	82	38-134	5	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico , CA 95926-2642

Date Received: 11/05/10
Work Order No: 10-11-0508
Preparation: EPA 5030C
Method: EPA 8260B

Project BP 6113

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-11-0413-1	**Aqueous**	**GC/MS L**	**11/10/10**	**11/10/10**	**101110S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	98	94	76-124	4	0-20	
Carbon Tetrachloride	94	89	74-134	4	0-20	
Chlorobenzene	94	96	80-120	1	0-20	
1,2-Dibromoethane	99	102	80-120	2	0-20	
1,2-Dichlorobenzene	99	100	80-120	1	0-20	
1,2-Dichloroethane	103	105	80-120	2	0-20	
Ethylbenzene	96	94	78-126	2	0-20	
Toluene	95	95	80-120	0	0-20	
Trichloroethene	92	90	77-120	2	0-20	
Methyl-t-Butyl Ether (MTBE)	95	101	67-121	6	0-49	
Tert-Butyl Alcohol (TBA)	97	102	36-162	5	0-30	
Diisopropyl Ether (DIPE)	91	91	60-138	1	0-45	
Ethyl-t-Butyl Ether (ETBE)	95	96	69-123	1	0-30	
Tert-Amyl-Methyl Ether (TAME)	96	102	65-120	6	0-20	
Ethanol	125	136	30-180	9	0-72	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico , CA 95926-2642

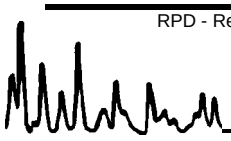
Date Received: 11/05/10
Work Order No: 10-11-0508
Preparation: EPA 5030C
Method: EPA 8260B

Project BP 6113

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-11-0514-7	**Aqueous**	**GC/MS L**	**11/10/10**	**11/11/10**	**101110S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	104	102	76-124	2	0-20	
Carbon Tetrachloride	109	108	74-134	1	0-20	
Chlorobenzene	102	102	80-120	1	0-20	
1,2-Dibromoethane	105	105	80-120	0	0-20	
1,2-Dichlorobenzene	106	102	80-120	4	0-20	
1,2-Dichloroethane	122	116	80-120	5	0-20	LM,AY
Ethylbenzene	100	100	78-126	0	0-20	
Toluene	106	104	80-120	1	0-20	
Trichloroethene	104	102	77-120	2	0-20	
Methyl-t-Butyl Ether (MTBE)	117	111	67-121	4	0-49	
Tert-Butyl Alcohol (TBA)	104	102	36-162	2	0-30	
Diisopropyl Ether (DIPE)	108	105	60-138	3	0-45	
Ethyl-t-Butyl Ether (ETBE)	111	109	69-123	2	0-30	
Tert-Amyl-Methyl Ether (TAME)	108	107	65-120	1	0-20	
Ethanol	73	110	30-180	40	0-72	

RPD - Relative Percent Difference , CL - Control Limit



Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico , CA 95926-2642

Date Received: N/A
Work Order No: 10-11-0508
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: BP 6113

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-935	**Aqueous**	**GC 1**	**11/06/10**	**11/07/10**	**101106B02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	90	91	78-120	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico , CA 95926-2642

Date Received: N/A
Work Order No: 10-11-0508
Preparation: EPA 5030C
Method: EPA 8260B

Project: BP 6113

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-1,497	**Aqueous**	**GC/MS L**	**11/10/10**	**11/10/10**	**101110L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	101	99	80-120	73-127	2	0-20	
Carbon Tetrachloride	97	107	74-134	64-144	10	0-20	
Chlorobenzene	97	99	80-120	73-127	1	0-20	
1,2-Dibromoethane	101	100	79-121	72-128	1	0-20	
1,2-Dichlorobenzene	94	101	80-120	73-127	7	0-20	
1,2-Dichloroethane	103	108	80-120	73-127	5	0-20	
Ethylbenzene	99	101	80-120	73-127	2	0-20	
Toluene	98	104	80-120	73-127	6	0-20	
Trichloroethene	98	103	79-127	71-135	5	0-20	
Methyl-t-Butyl Ether (MTBE)	96	106	69-123	60-132	10	0-20	
Tert-Butyl Alcohol (TBA)	109	94	63-123	53-133	15	0-20	
Diisopropyl Ether (DIPE)	101	99	59-137	46-150	1	0-37	
Ethyl-t-Butyl Ether (ETBE)	97	103	69-123	60-132	6	0-20	
Tert-Amyl-Methyl Ether (TAME)	99	100	70-120	62-128	2	0-20	
Ethanol	96	84	28-160	6-182	13	0-57	

Total number of LCS compounds : 15
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico , CA 95926-2642

Date Received: N/A
Work Order No: 10-11-0508
Preparation: EPA 5030C
Method: EPA 8260B

Project: BP 6113

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-1,500	**Aqueous**	**GC/MS L**	**11/10/10**	**11/10/10**	**101110L02**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	88	89	80-120	73-127	1	0-20	
Carbon Tetrachloride	92	94	74-134	64-144	2	0-20	
Chlorobenzene	93	96	80-120	73-127	3	0-20	
1,2-Dibromoethane	97	99	79-121	72-128	2	0-20	
1,2-Dichlorobenzene	95	97	80-120	73-127	3	0-20	
1,2-Dichloroethane	100	104	80-120	73-127	4	0-20	
Ethylbenzene	92	95	80-120	73-127	4	0-20	
Toluene	93	96	80-120	73-127	4	0-20	
Trichloroethene	91	97	79-127	71-135	7	0-20	
Methyl-t-Butyl Ether (MTBE)	100	100	69-123	60-132	1	0-20	
Tert-Butyl Alcohol (TBA)	92	104	63-123	53-133	12	0-20	
Diisopropyl Ether (DIPE)	92	92	59-137	46-150	0	0-37	
Ethyl-t-Butyl Ether (ETBE)	94	96	69-123	60-132	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	93	94	70-120	62-128	1	0-20	
Ethanol	88	95	28-160	6-182	8	0-57	

Total number of LCS compounds : 15
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 10-11-0508

Qualifier	Definition
AX	Sample too dilute to quantify surrogate.
BA	Relative percent difference out of control.
BA,AY	BA = Relative percent difference out of control. AY = Matrix interference suspected.
BB	Sample > 4x spike concentration.
BF	Reporting limits raised due to high hydrocarbon background.
BH	Reporting limits raised due to high level of non-target analytes.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
BY	Sample received at improper temperature.
BZ	Sample preserved improperly.
CL	Initial analysis within holding time but required dilution.
CQ	Analyte concentration greater than 10 times the blank concentration.
CU	Surrogate concentration diluted to not detectable during analysis.
DF	Reporting limits elevated due to matrix interferences.
DU	Insufficient sample quantity for matrix spike/dup matrix spike.
ET	Sample was extracted past end of recommended max. holding time.
EY	Result exceeds normal dynamic range; reported as a min est.
GR	Internal standard recovery is outside method recovery limit.
IB	CCV recovery abovelimit; analyte not detected.
IH	Calibrtn. verif. recov. below method CL for this analyte.
IJ	Calibrtn. verif. recov. above method CL for this analyte.
J,DX	J=EPA Flag -Estimated value; DX= Value < lowest standard (MQL), but > than MDL.
LA	Confirmatory analysis was past holding time.
LG,AY	LG= Surrogate recovery below the acceptance limit. AY= Matrix interference suspected.
LH,AY	LH= Surrogate recovery above the acceptance limit. AY= Matrix interference suspected.
LM,AY	LM= MS and/or MSD above acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LN,AY	LN= MS and/or MSD below acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.
LW	Quantitation of unknown hydrocarbon(s) in sample based on gasoline.
LX	Quantitation of unknown hydrocarbon(s) in sample based on diesel.
MB	Analyte present in the method blank.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
PC	Sample taken from VOA vial with air bubble > 6mm diameter.
PI	Primary and confirm results varied by > than 40% RPD.
RB	RPD exceeded method control limit; % recoveries within limits.
SG	A silica gel cleanup procedure was performed.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

0908

Page ____ of ____

BP/ARC Project Name: BP 6113 | Req Due Date (mm/dd/yy): ____ | Rush TAT: Yes ____ No X

BP/ARC Facility No: 6113 | Lab Work Order Number: ____

Lab Name:	Calscience	BP/ARC Facility Address:	785 E. Stanley Boulevard	Consultant/Contractor:	Broadbent & Associates, Inc.
Lab Address:	7440 Lincoln Way	City, State, ZIP Code:	Livermore, CA	Consultant/Contractor Project No:	06-82-637-5-822
Lab PM:	Richard Villafania	Lead Regulatory Agency:	ACEH	Address:	1324 Mangrove Ave. Ste. 212, Chico, CA 95926
Lab Phone:	714-895-5494	California Global ID No.:	T0600100111	Consultant/Contractor PM:	Jason Duda
Lab Shipping Accnt:	9225	Enfos Proposal No:	000TS-0007	Phone:	530-566-1400
Lab Bottle Order No:		Accounting Mode:	Provision X OOC-BU ____ OOC-RM ____	Email EDD To:	jduda@broadbentinc.com
Other Info:		Stage: Operate (5)	Activity: Monitoring/MNA (22)	Invoice To:	BP/ARC X Contractor ____

BP/ARC EBM: Chuck Carmel

EBM Phone:

EBM Email:

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix:	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		Requested Analyses: GRO (8015)	BTEX (8260)	5 Oxys (8260)	EDB (8260)	1,2-DCA (8260)	Ethanol (8260)					Report Type & QC Level
1	MW-4	11/4/10	1035		X							X			X	X	X	X	X	X					
2	MW-7		0950		X							X			X	X	X	X	X	X					
3	MW-9		1105		X							X			X	X	X	X	X	X					
4	MW-11		1220		X							X			X	X	X	X	X	X					
5	MW-12		1235		X							X			X	X	X	X	X	X					
6	RMW-13		1010		X							X			X	X	X	X	X	X					
7	VW-1	↓	1150		X							X			X	X	X	X	X	X					
8	TB-6113- 11/4/10	11/4/10			X																				Hold

Comments

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name:	Eric Fenn	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	BA H		11/4/10	1430			
Shipment Method:	CSE	Ship Date: 11/4/10				11/5/10	1040
Shipment Tracking No:	106436684						

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

[redacted]

DATE 11/04/16 SHIPPERS GSO ACCOUNT NO. 9255

COMPANY BAT

ADDRESS 875 Coffing Lane STE/ROOM 6

ADDRESS

CITY Vacaville ZIP CODE 95688

SENDERS NAME Eric Furr PHONE NUMBER 775 247-7906

COMPANY CAL SCIENCE

NAME PHONE NUMBER 714) 895-5494

ADDRESS 7440 LINCOLN WAY

ADDRESS STE/ROOM

CITY GARDEN GROVE ZIP CODE 92841

YOUR INTERNAL BILLING REFERENCE WILL APPEAR ON YOUR INVOICE

SPECIAL INSTRUCTIONS

GSO GOLDEN STATE OVERNIGHT

1-800-322-5555

WWW.GSO.COM

SHIPPING AIR BILL

GSO COPY

4 PACKAGE INFORMATION

☐ LETTER (MAX 8 OZ)

☒ PACKAGE (WT) 15

☐ DECLARED VALUE $

☐ COD AMOUNT $ (CASH NOT ACCEPTED)

5 DELIVERY SERVICE ☒ PRIORITY OVERNIGHT BY 10:30 AM ☐ EARLY PRIORITY BY 8:00 AM ☐ SATURDAY DELIVERY

*DELIVERY TIMES MAY BE LATER IN SOME AREAS • CONSULT YOUR SERVICE GUIDE OR CALL GOLDEN STATE OVERNIGHT.

6 RELEASE SIGNATURE

SIGN TO AUTHORIZE DELIVERY WITHOUT OBTAINING SIGNATURE

7 CREDIT CARD ☐ M/C ☐ VISA ☐ AM EX CREDIT CARD NUMBER

8 PICK UP INFORMATION TIME DRIVER # ROUTE #

106836684

9 GSO TRACKING NUMBER

106836684

9601 San Leandro St. Oakland, CA

ENVIRONMENTAL SAMPLING SUPPLY

0508

ORC

GSO GOLDEN STATE OVERNIGHT

1-800-322-5555

www.gso.com

PDS

D

GARDEN GROVE

92841 14 lb 3/JV3

86098556 1011042001

D92843A

CSL-06

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 10-11-0508

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Broadbent

DATE: 11/05/10

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 3.1 °C + 0.5 °C (CF) = 3.6 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☐ Air ☐ Filter Initial: JL

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A Initial: JL

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Initial: DSI

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☐	☑	☐
☑ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
pH / Residual Chlorine / Dissolved Sulfide received within 24 hours	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☑	☐	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Water: ☐VOA ☑VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na**

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® **Other:** ☐_____ **Trip Blank Lot#:** 100921A **Labeled/Checked by:** DSI

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** WSC

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:** $Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **znna:** $ZnAc_2$+NaOH **f:** Field-filtered **Scanned by:** WSL

BROADBENT & ASSOCIATES INC. FIELD PROCEDURES

A.1 QUALITY ASSURANCE/QUALITY CONTROL FIELD PROTOCOLS

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

A.1.1 Water Level & Free-Product Measurement

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

A.1.2 Monitoring Well Purging

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

A.1.3 Ground-Water Sample Collection

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

A.1.4 Surface Water Sample Collection

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

A.1.5 Decontamination Protocol

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

A.1.6 Chain of Custody Procedures

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

Field Custody Procedures

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

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

Transfer of Custody and Shipment

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

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

A.1.7 Field Records

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

APPENDIX B

GEOTRACKER UPLOAD CONFIRMATION REPORTS

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!

Submittal Type:	**GEO_WELL**
Submittal Title:	**4Q10 GEO_WELL 6113**
Facility Global ID:	**T0600100111**
Facility Name:	**ARCO #06113**
File Name:	**GEO_WELL.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**12/8/2010 11:20:17 AM**
Confirmation Number:	**5369477272**

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A EDF FILE

SUCCESS

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

Submittal Type:	**EDF - Monitoring Report - Semi-Annually**
Submittal Title:	**4Q10 GW Monitoring**
Facility Global ID:	**T0600100111**
Facility Name:	**ARCO #06113**
File Name:	**10110508.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**12/8/2010 11:20:51 AM**
Confirmation Number:	**1095803678**

VIEW QC REPORT

VIEW DETECTIONS REPORT