Atlantic Richfield Company

Chuck Carmel
Environmental Business Manager

PO Box 1257
San Ramon, CA 94583
Phone: (925) 275-3803
Fax: (925) 275-3815
E-Mail: charles.carmel@bp.com

22 January 2010

Re: Fourth Quarter 2009 Semi-Annual Ground-Water Monitoring Report
Atlantic Richfield Company Station #2162
15135 Hesperian Boulevard, San Leandro, California
ACEH Case #RO0000190

"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 2009 Semi-Annual
Ground-Water Monitoring Report
Atlantic Richfield Company Station #2162
15135 Hesperian Blvd., San Leandro, California
ACEH Case #RO0000190

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 Avenue, Suite 212
Chico, California 95926
(530) 566-1400
www.broadbentinc.com

22 January 2010

Project No. 06-88-620

Broadbent & Associates, Inc.
1324 Mangrove Ave., Suite 212
Chico, CA 95926
Voice (530) 566-1400
Fax (530) 566-1401

BROADBENT & ASSOCIATES, INC
ENVIRONMENTAL. WATER RESOURCES & ENGINEERING

22 January 2010

Project No. 06-88-620

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

Attn.: Mr. Chuck Carmel

Re: Fourth Quarter 2009 Semi-Annual Ground-Water Monitoring Report, Atlantic Richfield Company Station #2162, 15135 Hesperian Boulevard, San Leandro, California; ACEH Case #RO0000190

Dear Mr. Carmel:

Provided herein is the *Fourth Quarter 2009 Semi-Annual Ground-Water Monitoring Report* for Atlantic Richfield Company (a BP affiliated company) Station #2162 located at 15135 Hesperian Boulevard, San Leandro, Alameda County, California (Site). This report presents results of ground-water monitoring conducted at the Site during the Fourth Quarter of 2009.

Should you have questions regarding the work performed or results obtained, please do not hesitate to contact me at (530) 566-1400.

Sincerely,

BROADBENT & ASSOCIATES, INC.

Thomas A. Venus, P.E.
Senior Engineer

Enclosures

cc: Mr. Paresh Khatri, Alameda County Environmental Health (Submitted via ACEH ftp site)
Mr. Karl Busche, City of San Leandro Environmental Services Division (Submitted via GeoTracker)
Electronic copy uploaded to GeoTracker

STATION #2162 SEMI-ANNUAL GROUND-WATER MONITORING REPORT

Facility: #2162 Address:	15135 Hesperian Boulevard, San Leandro, California
Environmental Business Manager:	Mr. Chuck Carmel
Consulting Co./Contact Persons:	Broadbent & Associates, Inc.(BAI)/Mr. Tom Venus, PE (530) 566-1400
Consultant Project No.:	06-88-620
Primary Agency/Regulatory ID No.:	Alameda County Environmental Health (ACEH) ACEH Case #RO0000190
Facility Permits/Permitting Agency:	NA

WORK PERFORMED THIS QUARTER (Fourth Quarter 2009):

1. Prepared and submitted *Third Quarter 2009 Status Report* (BAI, 10/16/2009).
2. Conducted ground-water monitoring/sampling for Fourth Quarter 2009. Work performed on 6 November 2009 by BAI.

WORK PROPOSED FOR NEXT QUARTER (First Quarter 2010):

1. Prepared and submitted this *Fourth Quarter 2009 Semi-Annual Ground-Water Monitoring Report* (contained herein).
2. No environmental field work is scheduled to occur at the Site during First Quarter 2010.

QUARTERLY RESULTS SUMMARY:

Current phase of project:	**Ground-water monitoring/sampling**
Frequency of ground-water monitoring:	**Semi-Annually (2Q and 4Q): MW-1 through MW-6**
Frequency of ground-water sampling:	**Annually (2Q): MW-1 and MW-2** **Semi-Annually (2Q and 4Q): MW-3, MW-4, MW-5, MW-6**
Is free product (FP) present on-site:	**No**
Current remediation techniques:	**NA**
Depth to ground water (below TOC):	**8.32 ft (MW-2) to 9.74 ft (MW-4)**
General ground-water flow direction:	**South-Southwest**
Approximate hydraulic gradient:	**0.003 ft/ft**

DISCUSSION:

Fourth Quarter 2009 semi-annual ground-water monitoring and sampling was conducted at Station #2162 on 6 November 2009 by BAI field personnel. Water levels were gauged in each of the six wells at the Site. No irregularities were noted during water level gauging. Depth-to-water measurements ranged from 8.32 ft at MW-2 to 9.74 ft at MW-4. Resulting ground-water surface elevations ranged from 24.63 ft above datum in well MW-2 to 24.23 ft in well MW-4. Water level elevations yielded a potentiometric ground-water flow direction and gradient to the south-southwest at approximately 0.003 ft/ft (see Table 3). Ground-water monitoring field data sheets are provided within Appendix A. Measured depths to ground water and respective ground-water elevations are summarized in Table 1. A Site Location Map is provided as Drawing 1. Potentiometric ground-water elevation contours are presented in Drawing 2.

Consistent with the current ground-water sampling schedule, water samples were collected from wells MW-3 through MW-6 on 6 November 2009. 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; for Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) by EPA Method 8260B; and Tert-Amyl Methyl Ether (TAME), Tert-Butyl Alcohol (TBA), Di-Isopropyl Ether(DIPE), 1,2-Dibromomethane (EDB), 1,2-Dichloroethane (1,2-DCA), Ethanol, Ethyl Tert-Butyl Ether (ETBE), and Methyl Tert-Butyl Ether (MTBE) by EPA Method 8260B. No significant irregularities were encountered during laboratory analysis of the samples. Ground-water 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 the laboratory reporting limit in one of the four wells sampled at a concentration of 880 micrograms per liter (µg/L) in well MW-6. Benzene was detected above the laboratory reporting limit in one of the four wells sampled at a concentration of 1.7 µg/L in well MW-6. Ethylbenzene was detected above the laboratory reporting limit in one of the four wells sampled at a concentration of 0.77 µg/L in well MW-6. TBA was detected above the laboratory reporting limit in one of the four wells sampled at a concentration of 24 µg/L in well MW-6. MTBE was detected above the laboratory reporting limit in one of the four wells sampled at a concentration of 37 µg/L in well MW-6. The remaining analytes were not detected above their laboratory reporting limits in the four 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. Ground-water 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:

Ground-water level elevations were between historic minimum and maximum ranges for wells MW-1 through MW-4, as summarized in Table 1. Water level elevations in newer wells MW-5 and MW-6 were lower this second time of gauging than during their first gauging event in June 2009. The resulting potentiometric ground-water flow direction to the south-southwest at 0.003 ft/ft is generally consistent with the historic flow directions recorded at the Site.

Detected analyte concentrations were within the historic minimum and maximum ranges recorded for wells MW-3 and MW-4, with the exception of MTBE, which reached a historic minimum concentration in well MW-4 (<0.50 µg/L). GRO, Benzene, Ethylbenzene, MTBE, and TAME concentrations decreased during this second monitoring event, with TAME not detected during this Fourth Quarter monitoring event. The TBA detection in well MW-6 was new as the first monitoring event in June 2009 did not detect TBA above the laboratory reporting limit.

Wells MW-5 and MW-6 were installed during the Second Quarter 2009 and were sampled for the first time on 12 June 2009. Second time sampling during the Fourth Quarter 2009 of well MW-5, located between the main gasoline UST pit and the waste oil tank, contained a no individual fuel constituents or additives above the low laboratory reporting limits. Second time sampling of well MW-6 along the center portion of the southern property boundary continued to contain slightly elevated concentrations of petroleum hydrocarbon contaminants, however concentrations have decreased since the initial sampling. It is presently unknown whether the concentrations reported in new wells MW-5 and MW-6 are representative of the low or high range of petroleum contaminantion in their respective areas, since only

two rounds of ground-water sampling have occurred. At this time, it is recommended that continued monitoring/sampling of the wells be continued to determine the range of contaminants present, especially at well location MW-6 along the southern Site boundary.

CLOSURE:

The findings presented in this report are based upon: observations of BAI field personnel (see Appendix A), 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 report was written. No other warranty, expressed or implied was made. This report has been prepared for the exclusive use of Atlantic Richfield Company (a BP affiliated company). It is possible that variations in soil or 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, Station #2162, 15135 Hesperian Boulevard, San Leandro, California

Drawing 2. Ground-Water Elevation Contour and Analytical Summary Map, 6 November 2009, Station #2162, 15135 Hesperian Boulevard, San Leandro, California

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses, Station #2162, 15135 Hesperian Boulevard, San Leandro, California

Table 2. Summary of Fuel Additives Analytical Data, Station #2162, 15135 Hesperian Boulevard, San Leandro, California

Table 3. Historical Ground-Water Flow Direction and Gradient, Station #2162, 15135 Hesperian Boulevard, San Leandro, California

Appendix A. BAI Ground-Water Sampling Data Package (Includes Field Data Sheets, Laboratory Analytical Report with Chain-of-Custody Documentation, and Field Procedures)

Appendix B. GeoTracker Upload Confirmation Receipts

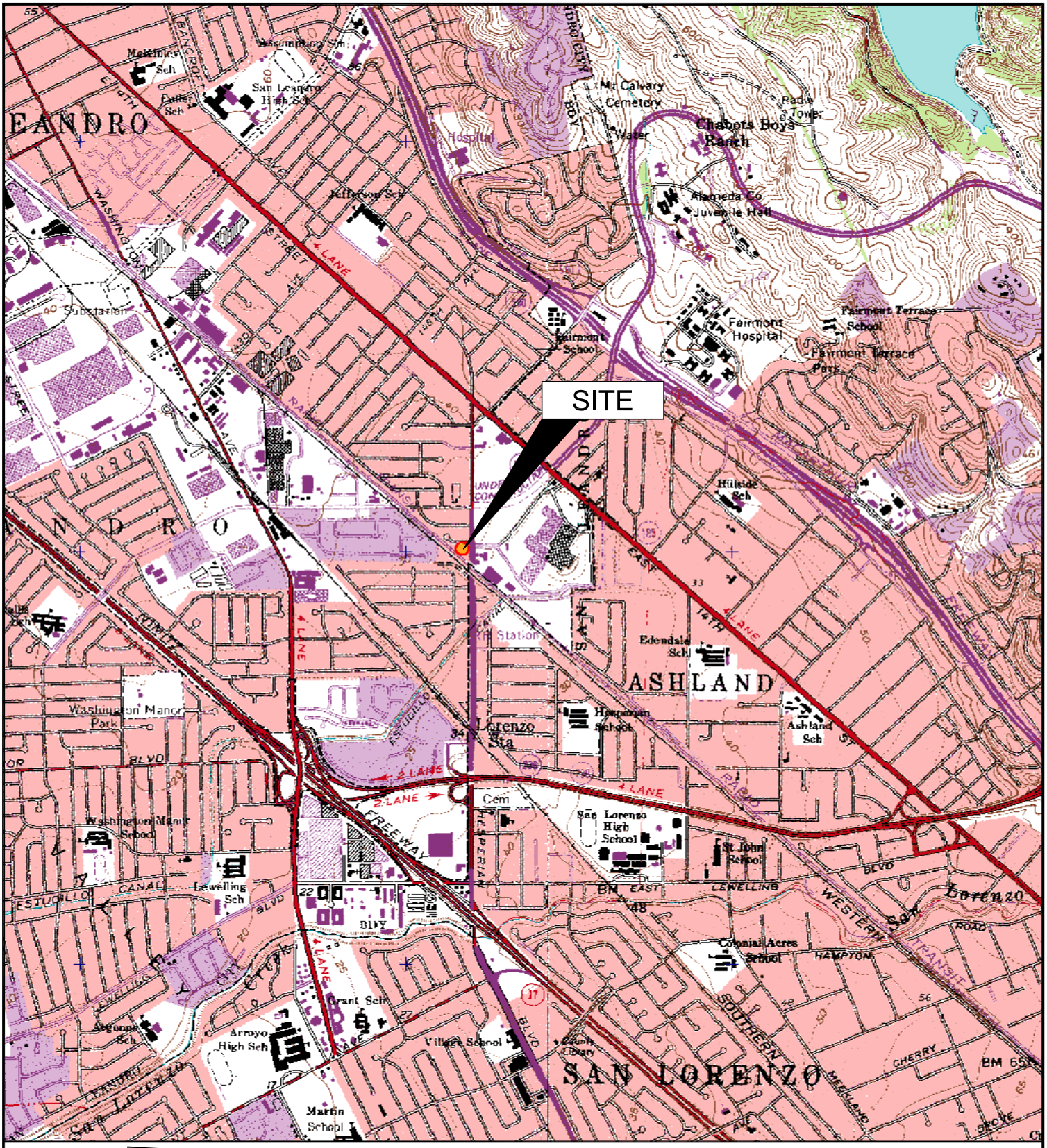


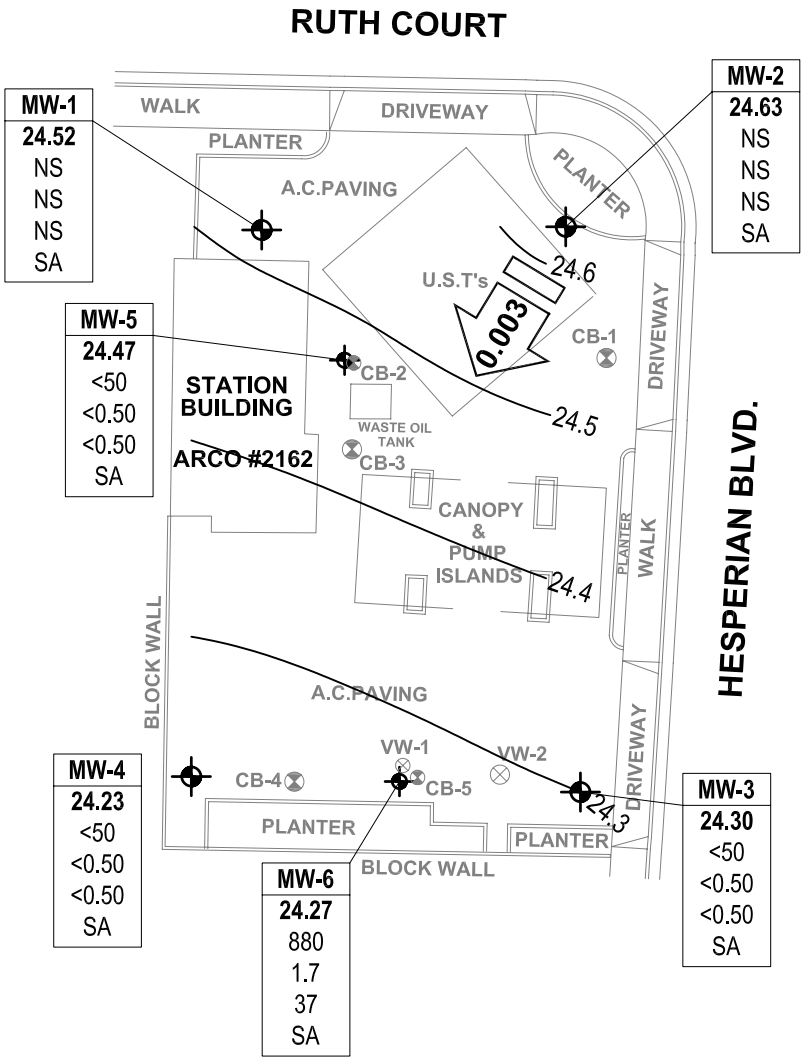
IMAGE SOURCE: USGS

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, CA 95926
Project No.: 06-88-620 Date: 07/27/09

Station #2162
15135 Hesperian Boulevard
San Leandro, California

Site Location Map

Drawing
1



LEGEND

- GROUND-WATER MONITORING WELL
- VAPOR EXTRACTION WELL
- SOIL BORING
- 24.5 GROUND-WATER ELEVATION CONTOUR (FEET ABOVE DATUM)
- 0.003 APPROXIMATE GROUND-WATER FLOW DIRECTION AND GRADIENT (FT/FT)

NOTE: SITE MAP ADAPTED FROM WOOD RODGERS SURVYING.

Well	WELL DESIGNATION
ELEV	GROUND-WATER ELEVATION (FEET)
GRO Benzene MTBE	GRO, BENZENE & MTBE CONCENTRATIONS (µg/L)
A/Q/SA	SAMPLING FREQUENCY
<	NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMITS
*	DATA NOT USED FOR CONTOURING
SA	SAMPLED SEMI-ANNUALLY

N

0 40 80

SCALE (ft)

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California

Project No.: 06-88-620 Date: 1/6/09

Station #2162
15135 Hesperian Boulevard
San Leandro, California

Ground-Water Elevation Contours and Analytical Summary Map
6 November 2009

Drawing 2

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

Station #2162, 15135 Hesperian Blvd., San Leandro, 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															
6/20/2000	--		31.19	8.0	**16.0**	8.33	22.86	<50	<0.5	0.8	<0.5	<1.0	<10	--	--
9/29/2000	--		31.19	8.0	**16.0**	9.07	22.12	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
12/17/2000	--		31.19	8.0	**16.0**	8.69	22.50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/23/2001	--		31.19	8.0	**16.0**	8.19	23.00	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
6/20/2001	--		31.19	8.0	**16.0**	8.97	22.22	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
9/22/2001	--		31.19	8.0	**16.0**	9.56	21.63	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
12/28/2001	--		31.19	8.0	**16.0**	8.40	22.79	<50	<0.5	<0.5	<0.5	0.63	<2.5	--	--
3/14/2002	--		31.19	8.0	**16.0**	8.05	23.14	<50	<0.5	<0.5	<0.5	<0.5	170	--	--
4/18/2002	--		31.19	8.0	**16.0**	8.27	22.92	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
7/19/2002	NP		31.19	8.0	**16.0**	8.88	22.31	<50	<0.5	<0.5	<0.5	<0.5	11	1.0	8.2
10/09/02	NP	a	31.19	8.0	**16.0**	--	--	--	--	--	--	--	--	--	--
03/28/03	NP	a, c	31.19	8.0	**16.0**	--	--	--	--	--	--	--	--	--	--
4/7/2003	NP		31.19	8.0	**16.0**	8.28	22.91	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.6	6.9
7/9/2003	NP		31.19	8.0	**16.0**	8.62	22.57	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	7.2
10/08/2003	--	d, e	31.13	8.0	16.0	9.19	21.94	--	--	--	--	--	--	--	--
01/13/2004	--		31.13	8.0	16.0	8.35	22.78	--	--	--	--	--	--	--	--
04/05/2004	--		33.70	8.0	16.0	7.29	26.41	--	--	--	--	--	--	--	--
07/12/2004	NP		33.70	8.0	16.0	9.00	24.70	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.8	7.0
10/19/2004	--		33.70	8.0	16.0	9.47	24.23	--	--	--	--	--	--	--	--
01/11/2005	--		33.70	8.0	16.0	7.64	26.06	--	--	--	--	--	--	--	--
04/14/2005	--		33.70	8.0	16.0	7.35	26.35	--	--	--	--	--	--	--	--
08/01/2005	--		33.70	8.0	16.0	8.21	25.49	--	--	--	--	--	--	--	--
7/31/2006	--		33.70	8.0	16.0	8.10	25.60	--	--	--	--	--	--	--	--
6/12/2009	P		33.70	8.0	16.0	8.93	24.77	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.59	7.40
11/6/2009	--		**33.70**	**8.0**	**16.0**	**9.18**	**24.52**	--	--	--	--	--	--	--	--
MW-2															
6/20/2000	--		30.38	8.0	**16.0**	7.38	23.00	--	--	--	--	--	--	--	--
9/29/2000	--		30.38	8.0	**16.0**	8.08	22.30	266	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
12/17/2000	--		30.38	8.0	**16.0**	7.80	22.58	175	<0.5	<0.5	0.659	<0.5	<2.5	--	--
3/23/2001	--		30.38	8.0	**16.0**	7.23	23.15	351	<0.5	<0.5	0.912	<0.5	<2.5	--	--

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

Station #2162, 15135 Hesperian Blvd., San Leandro, 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.															
6/20/2001	--		30.38	8.0	**16.0**	7.98	22.40	360	<0.5	<0.5	0.74	<0.5	<2.5	--	--
9/22/2001	--		30.38	8.0	**16.0**	8.55	21.83	190	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
12/28/2001	--		30.38	8.0	**16.0**	7.53	22.85	130	<0.5	0.93	<0.5	0.51	<2.5	--	--
3/14/2002	--		30.38	8.0	**16.0**	7.17	23.21	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
4/18/2002	--		30.38	8.0	**16.0**	7.31	23.07	74	<0.5	<0.5	<0.5	<0.5	--	--	--
7/19/2002	P		30.38	8.0	**16.0**	7.93	22.45	<50	<0.5	<0.5	<0.5	<0.5	<2.5	1.1	7.6
10/9/2002	P		30.38	8.0	**16.0**	8.55	21.83	<50	<0.5	<0.5	<0.5	<0.5	<2.5	0.7	7.3
03/28/03	P	c	30.38	8.0	**16.0**	7.30	23.08	<50	<0.50	0.83	<0.50	<0.50	<0.50	1.48	7.7
4/7/2003	P		30.38	8.0	**16.0**	7.36	23.02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.4	7.0
7/9/2003	P		30.38	8.0	**16.0**	7.71	22.67	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.5	7.6
10/08/2003	--		30.38	8.0	16.0	8.25	22.13	--	--	--	--	--	--	--	--
01/13/2004	--		30.38	8.0	16.0	7.55	22.83	--	--	--	--	--	--	--	--
04/05/2004	--		32.97	8.0	16.0	7.29	25.68	--	--	--	--	--	--	--	--
07/12/2004	NP		32.97	8.0	16.0	8.09	24.88	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.4	7.2
10/19/2004	--		32.97	8.0	16.0	8.29	24.68	--	--	--	--	--	--	--	--
01/11/2005	--		32.97	8.0	16.0	6.81	26.16	--	--	--	--	--	--	--	--
04/14/2005	--		32.97	8.0	16.0	6.69	26.28	--	--	--	--	--	--	--	--
08/01/2005	--		32.97	8.0	16.0	7.40	25.57	--	--	--	--	--	--	--	--
7/31/2006	--		32.97	8.0	16.0	7.22	25.75	--	--	--	--	--	--	--	--
6/12/2009	P		32.95	8.0	16.0	8.18	24.77	51	<0.50	<0.50	<0.50	<0.50	<0.50	0.60	7.55
11/6/2009	--		**32.95**	**8.0**	**16.0**	**8.32**	**24.63**	--	--	--	--	--	--	--	--
MW-3															
6/20/2000	--		30.30	8.0	**15.0**	7.75	22.55	--	--	--	--	--	--	--	--
9/29/2000	--		30.30	8.0	**15.0**	8.46	21.84	<50	<0.5	<0.5	<0.5	<0.5	128	--	--
12/17/2000	--		30.30	8.0	**15.0**	8.01	22.29	<50	<0.5	<0.5	<0.5	<0.5	46.7	--	--
3/23/2001	--		30.30	8.0	**15.0**	7.70	22.60	<50	<0.5	<0.5	<0.5	<0.5	26.8	--	--
6/20/2001	--		30.30	8.0	**15.0**	8.23	22.07	<50	<0.5	<0.5	<0.5	<0.5	30	--	--
9/22/2001	--		30.30	8.0	**15.0**	8.89	21.41	<50	<0.5	<0.5	<0.5	<0.5	12	--	--
12/28/2001	--		30.30	8.0	**15.0**	7.83	22.47	<50	<0.5	<0.5	<0.5	<0.5	6.2	--	--
3/14/2002	--		30.30	8.0	**15.0**	7.48	22.82	<50	<0.5	<0.5	<0.5	<0.5	47	--	--

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

Station #2162, 15135 Hesperian Blvd., San Leandro, 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.															
4/18/2002	--		30.30	8.0	**15.0**	7.62	22.68	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
7/19/2002	P	b (TPH-g)	30.30	8.0	**15.0**	8.23	22.07	100	<1.0	<1.0	<1.0	<1.0	330	0.9	7.6
10/9/2002	P		30.30	8.0	**15.0**	8.83	21.47	<50	<0.5	<0.5	<0.5	<0.5	61	0.5	7.4
03/28/03	P	c	30.30	8.0	**15.0**	7.85	22.45	52	<0.50	1.2	<0.50	<0.50	45	1.42	7.6
4/7/2003	P		30.30	8.0	**15.0**	7.71	22.59	56	<0.50	<0.50	<0.50	<0.50	56	1.1	6.8
7/9/2003	P		30.30	8.0	**15.0**	8.00	22.30	<500	<5.0	<5.0	<5.0	<5.0	87	1.6	7.4
10/08/2003	P		30.30	8.0	15.0	8.59	21.71	<50	<0.50	<0.50	<0.50	<0.50	25	0.9	--
01/15/2004	P		30.30	8.0	15.0	7.90	22.40	<50	<0.50	<0.50	<0.50	<0.50	9.8	2.9	7.3
04/05/2004	P		32.89	8.0	15.0	7.61	25.28	<50	<0.50	<0.50	<0.50	<0.50	15	1.5	7.0
07/12/2004	P		32.89	8.0	15.0	8.45	24.44	<50	<0.50	<0.50	<0.50	<0.50	7.3	1.6	6.9
10/19/2004	P		32.89	8.0	15.0	8.95	23.94	<50	<0.50	<0.50	<0.50	<0.50	5.0	0.96	7.1
01/11/2005	P		32.89	8.0	15.0	7.27	25.62	<50	<0.50	<0.50	<0.50	<0.50	2.3	--	7.2
04/14/2005	P		32.89	8.0	15.0	7.10	25.79	<50	<0.50	<0.50	<0.50	1.5	5.6	2.0	7.2
08/01/2005	P		32.89	8.0	15.0	7.71	25.18	<50	<0.50	<0.50	<0.50	<0.50	5.2	1.18	7.0
7/31/2006	P		32.89	8.0	**15.0**	7.64	25.25	<50	<0.50	<0.50	<0.50	<0.50	4.3	--	6.8
6/12/2009	P		32.88	8.0	**15.0**	8.36	24.52	<50	0.75	<0.50	<0.50	<0.50	0.53	0.61	7.45
11/6/2009	**P**		**32.89**	**8.0**	**15.0**	**8.58**	**24.31**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**0.51**	**7.17**
MW-4															
6/20/2000	--		30.39	10.0	**18.0**	8.87	21.52	--	--	--	--	--	--	--	--
9/29/2000	--		30.39	10.0	**18.0**	9.61	20.78	<50	1.02	<0.5	<0.5	<0.5	12.2	--	--
12/17/2000	--		30.39	10.0	**18.0**	9.17	21.22	<50	<0.5	<0.5	<0.5	<0.5	5.81	--	--
3/23/2001	--		30.39	10.0	**18.0**	8.70	21.69	<50	<0.5	<0.5	<0.5	<0.5	3.04	--	--
6/20/2001	--		30.39	10.0	**18.0**	9.51	20.88	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
9/22/2001	--		30.39	10.0	**18.0**	10.06	20.33	<50	<0.5	<0.5	<0.5	<0.5	5.2	--	--
12/28/2001	--		30.39	10.0	**18.0**	8.86	21.53	<50	<0.5	<0.5	<0.5	<0.5	4.3	--	--
3/14/2002	--		30.39	10.0	**18.0**	8.52	21.87	<50	<0.5	<0.5	<0.5	<0.5	5.1	--	--
4/18/2002	--		30.39	10.0	**18.0**	8.76	21.63	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
7/19/2002	NP		30.39	10.0	**18.0**	9.39	21.00	<50	<0.5	<0.5	<0.5	<0.5	30	1.8	7.8
10/9/2002	NP		30.39	10.0	**18.0**	10.08	20.31	<50	<0.5	<0.5	<0.5	<0.5	28	1.0	8.0
03/28/03	NP	c	30.39	10.0	**18.0**	8.88	21.51	<50	<0.50	1.3	<0.50	<0.50	4.4	0.98	7.2

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

Station #2162, 15135 Hesperian Blvd., San Leandro, 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.															
4/7/2003	NP		30.39	10.0	**18.0**	8.78	21.61	<50	<0.50	<0.50	<0.50	<0.50	14	1.1	7.0
7/9/2003	NP		30.39	10.0	**18.0**	9.14	21.25	<50	<0.50	<0.50	<0.50	<0.50	1.8	1.6	7.4
10/08/2003	NP		30.39	10.0	18.0	9.77	20.62	<50	<0.50	<0.50	<0.50	<0.50	3.1	2.6	6.4
01/15/2004	P		30.39	10.0	18.0	8.68	21.71	<50	1.4	0.84	<0.50	1.5	6.6	2.9	7.1
04/05/2004	NP		33.97	10.0	18.0	8.77	25.20	<50	<0.50	<0.50	<0.50	<0.50	1.3	1.2	7.0
07/12/2004	NP		33.97	10.0	18.0	9.46	24.51	<50	<0.50	<0.50	<0.50	<0.50	1.0	2.5	6.6
10/19/2004	NP		33.97	10.0	18.0	9.91	24.06	<50	<0.50	<0.50	<0.50	<0.50	4.4	1.21	7.9
01/11/2005	P		33.97	10.0	18.0	7.80	26.17	59	2.0	<0.50	<0.50	<0.50	11	0.9	7.1
04/14/2005	NP		33.97	10.0	18.0	8.07	25.90	<50	<0.50	<0.50	<0.50	<0.50	0.64	2.8	7.4
08/01/2005	NP		33.97	10.0	18.0	8.58	25.39	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.48	5.7
7/31/2006	P		33.97	10.0	**18.0**	8.75	25.22	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	6.7
6/12/2009	P		33.97	10.0	**18.0**	9.51	24.46	<50	0.68	<0.50	<0.50	<0.50	<0.50	0.70	7.51
11/6/2009	**P**		**33.97**	**10.0**	**18.0**	**9.74**	**24.23**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**1.15**	**7.15**
MW-5															
6/12/2009	NP		33.96	8.0	**16.0**	9.25	24.71	85	<0.50	<0.50	<0.50	<0.50	<0.50	0.59	7.50
11/6/2009	**P**		**33.96**	**8.0**	**16.0**	**9.49**	**24.47**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**0.56**	**7.1**
MW-6															
6/12/2009	NP		33.48	8.0	**16.0**	9.02	24.46	1,800	4.9	<0.50	2.8	<0.50	59	0.68	7.39
11/6/2009	**P**		**33.48**	**8.0**	**16.0**	**9.21**	**24.27**	**880**	**1.7**	**<0.50**	**0.77**	**<0.50**	**37**	**0.43**	**6.9**

SYMBOLS AND ABBREVIATIONS:
--- = Not analyzed/applicable/measured/available
< = Not detected at or above laboratory reporting limit
DO = Dissolved oxygen
DTW = Depth to water in feet below ground surface
ft bgs = feet below ground surface
GRO = Gasoline Range Organics, range C4-C12
GWE = Groundwater elevation measured in feet
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 feet above mean sea level
TPH-g = Total petroleum hydrocarbons as gasoline
ug/L = Micrograms per liter

FOOTNOTES:
a = Well not accessable - car parked over.
b = Hydrocarbon pattern is present in the requested fuel quantitation range but does not represent the pattern of the requested fuel
c =TPH-g, BTEX and MTBE analyzed by EPA method 8260 beginning on 1st Quarter 2003 sampling event (3/28/03)
d = Guaged with stinger in well
e = Well casing lowered 0.06 feet during well repairs on 9/17/2003

NOTES:
Beginning in the fourth quarter 2003, the laboratory modified the reported analyte list. TPHg was changed to GRO. The resulting data may be impacted by the potential of non-TPHg 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 originally surveyed to NAVD'88 datum by URS Corporation on February 23, 2004.
Wells were resurveyed to NAVD'88 datum by Wood Rodgers Surveying on May 11, 2009.

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

Station #2162, 15135 Hesperian Blvd., San Leandro, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-1									
4/7/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
7/9/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
07/12/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
6/12/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-2									
3/28/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
4/7/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
7/9/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
07/12/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
6/12/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-3									
3/28/2003	<100	<20	45	<0.50	<0.50	0.73	<0.50	<0.50	
4/7/2003	<100	<20	56	<0.50	<0.50	0.72	<0.50	<0.50	
7/9/2003	<1,000	<200	87	<5.0	<5.0	<5.0	<5.0	<5.0	
10/08/2003	<100	<20	25	<0.50	<0.50	<0.50	<0.50	<0.50	
01/15/2004	<100	<20	9.8	<0.50	<0.50	<0.50	<0.50	<0.50	a (TBA and EDB)
04/05/2004	<100	<20	15	<0.50	<0.50	<0.50	<0.50	<0.50	
07/12/2004	<100	<20	7.3	<0.50	<0.50	<0.50	<0.50	<0.50	
10/19/2004	<100	<20	5.0	<0.50	<0.50	<0.50	<0.50	<0.50	
01/11/2005	<100	<20	2.3	<0.50	<0.50	<0.50	<0.50	<0.50	b
04/14/2005	<100	<20	5.6	<0.50	<0.50	<0.50	<0.50	<0.50	
08/01/2005	<100	<20	5.2	<0.50	<0.50	<0.50	<0.50	<0.50	b
7/31/2006	<300	<20	4.3	<0.50	<0.50	<0.50	<0.50	<0.50	c
6/12/2009	<300	<10	0.53	<0.50	<0.50	<0.50	<0.50	<0.50	
11/6/2009	**<300**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-4									
3/28/2003	<100	<20	4.4	<0.50	<0.50	<0.50	<0.50	<0.50	
4/7/2003	<100	<20	14	<0.50	<0.50	<0.50	<0.50	<0.50	
7/9/2003	<100	<20	1.8	<0.50	<0.50	<0.50	<0.50	<0.50	
10/08/2003	<100	<20	3.1	<0.50	<0.50	<0.50	<0.50	<0.50	

Table 2. Summary of Fuel Additives Analytical Data

Station #2162, 15135 Hesperian Blvd., San Leandro, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-4 Cont.									
01/15/2004	<100	<20	6.6	<0.50	<0.50	<0.50	<0.50	<0.50	a (TBA and EDB)
04/05/2004	<100	<20	1.3	<0.50	<0.50	<0.50	<0.50	<0.50	
07/12/2004	<100	<20	1.0	<0.50	<0.50	<0.50	<0.50	<0.50	
10/19/2004	<100	<20	4.4	<0.50	<0.50	<0.50	<0.50	<0.50	
01/11/2005	<100	<20	11	<0.50	<0.50	<0.50	<0.50	<0.50	b
04/14/2005	<100	<20	0.64	<0.50	<0.50	<0.50	<0.50	<0.50	
08/01/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	b
7/31/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	c
6/12/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/6/2009	**<300**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-5									
6/12/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/6/2009	**<300**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-6									
6/12/2009	<300	<10	59	<0.50	<0.50	5.2	<0.50	<0.50	
11/6/2009	**<300**	**24**	**37**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	

SYMBOLS AND ABBREVIATIONS:
< = Not detected at or above specified laboratory reporting limit
--- = Not analyzed/applicable/measured/available
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
ug/L = Micrograms per liter

FOOTNOTES:
a = The result was reported with a possible high bias due to the continuing calibration verification falling outside acceptance criteria.
b = The calbration verification for ethanol was within method limits but outside contract limits.
c = LCS rec. above meth. control limits. Analyte ND. Data not impacted.

NOTES:
All fuel oxygenate 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

Station #2162, 15135 Hesperian Blvd., San Leandro, CA

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
3/23/2001	Southwest	0.011
6/20/2001	Southwest	0.013
9/22/2001	Southwest	0.012
12/28/2001	Southwest	0.010
3/14/2002	Southwest	0.011
4/18/2002	Southwest	0.012
7/19/2002	Southwest	0.012
10/9/2002	Southwest	0.013
3/28/2003	Southwest	0.013
4/7/2003	Southwest	0.011
7/9/2003	Southwest	0.010
10/8/2003	Southwest	0.010
1/15/2004	Southwest	0.008
4/5/2004	South-Southwest	0.004
7/12/2004	South and Southwest	0.003 and 0.005
10/19/2004	Southwest	0.004
1/11/2005	Southwest (a) to Southeast (b)	0.005 to 0.004
4/14/2005	Southeast	0.004
8/1/2005	Southwest	0.002
7/31/2006	South-Southwest	0.003
6/12/2009	South	0.003
11/6/2009	**South-Southwest**	**0.003**

FOOTNOTES:
a = Direction at underground storage tanks
b = Direction at dispensers

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 PACKAGE
(Includes Field Data Sheets, Laboratory Analytical Report with Chain-Of-Custody Documentation, and Field Procedures)

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

Groundwater Sampling Data Sheet

Well I.D.: MW-3
Project Name/Location: BP 2162 Project #: 09.88.620
Sampler's Name: EF TG Date: 11/6/09
Purging Equipment: Bailer
Sampling Equipment: Bailer
Casing Type: PVC

Casing Diameter:		4	inch
Total Well Depth:		15.00	feet
Depth to Water:	-	8.58	feet
Water Column Thickness:	=	6.47	feet
Unit Casing Volume*:	x	0.65	gallon / foot
Casing Water Volume:	=	4.17	gallons
Casing Volume:	x	3	each
Estimated Purge Volume:	=	12.5	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 mg/l	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	1043	0.51	-16	—	825.4	22.9	7.14	
4.5	1048	X	X	X	803.5	23.4	7.18	
7	1052	X	X	X	805.2	23.3	7.17	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 7 gallons
Depth to Water at Sample Collection: feet
Sample Collection Time: 1055 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-162 Project #: 09-88-020
Sampler's Name: EFTG Date: 11/6/09
Purging Equipment: Bailer
Sampling Equipment: Bailer
Casing Type: PVC

Casing Diameter:		4	inch
Total Well Depth:		18.31	feet
Depth to Water:	-	9.74	feet
Water Column Thickness:	=	8.65	feet
Unit Casing Volume*:	x	0.65	gallon / foot
Casing Water Volume:	=	5.38	gallons
Casing Volume:	x	3	each
Estimated Purge Volume:	=	16.10	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 (mg/l)	ORP (mV)	Fe	Conductance (µS)	Temperature (Fahrenheit)	pH	Observations
0	1001	1.15	-40	—	889.2	21.8	7.06	
5	1005	X	X	X	902.7	22.0	7.17	
8	1008	X	X	X	910.4	22.0	7.15	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 8 gallons
Depth to Water at Sample Collection: 9.76 feet
Sample Collection Time: 1018 Purged Dry? (Y / N)

Comments:

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

Groundwater Sampling Data Sheet

Well I.D.: MW-5
Project Name/Location: BP 2162 Project #: 09-68-620
Sampler's Name: T. Geddes E. Farrar Date: 10/6/09
Purging Equipment: Bailer
Sampling Equipment: Bailer
Casing Type: PVC
Casing Diameter: 4" inch
Total Well Depth: 16.00 feet
Depth to Water: - 9.49 feet
Water Column Thickness: = 6.51 feet
Unit Casing Volume*: x .65 gallon / foot
Casing Water Volume: = 4.2 gallons
Casing Volume: x 3 each
Estimated Purge Volume: = 12.6 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)~~ C	pH	Observations
6	1020	.56	-7		881.8	26.1	7.1	
~~4.5~~	1025	X	X	X	887.6	21.5	7.1	
7.5	1030	X	X	X	884.1	26.5	7.1	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 7.5 gallons
Depth to Water at Sample Collection: 9.54 feet
Sample Collection Time: 1035 Purged Dry? (Y (N)

Comments:

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

Groundwater Sampling Data Sheet

Well I.D.: MW-6
Project Name/Location: BP2162 Project #: 89-68-620
Sampler's Name: Date: 11/60
Purging Equipment:
Sampling Equipment:
Casing Type: PVC
Casing Diameter: 4" inch
Total Well Depth: 16.00 feet
Depth to Water: - 9.21 feet
Water Column Thickness: = 6.79 feet
Unit Casing Volume*: x .65 gallon / foot
Casing Water Volume: = 4.41 gallons
Casing Volume: x 3 each
Estimated Purge Volume: = 13.2 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	1105	.43	-11		871.3	22.8	6.9	
5	1110	X	X	X	861.1	23.4	6.8	
8	1115	X	X	X	849.2	23.4	6.9	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 8 gallons
Depth to Water at Sample Collection: 9.29 feet
Sample Collection Time: 1120 Purged Dry? (Y / N)

Comments:

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

FIELD DATA REPORT

DATE: 11/6/09
PERSONNEL: TG. EE
WEATHER: overcast 60's

PROJECT NO.: 09-88-620
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	1125		8.32									
MW-1	1128		9.18									Oil stain over well vault

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name: BP 2162 | Req Due Date (mm/dd/yy): | Rush TAT: Yes ___ No X

BP/ARC Facility No: 2162 | Lab Work Order Number:

Lab Name:	Calscience	BP/ARC Facility Address:	3310 Park Blvd.	Consultant/Contractor:	Broadbent & Associates, Inc.
Lab Address:	7440 Lincoln Way	City, State, ZIP Code:	Oakland, CA	Consultant/Contractor Project No:	06-88-620-5-822
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.:	T0600100084	Consultant/Contractor PM:	Tom Venus
Lab Shipping Accnt:	9225	Enfos Proposal No:	000WD-0011	Phone:	530-566-1400
Lab Bottle Order No:		Accounting Mode:	Provision X OOC-BU ___ OOC-RM ___	Email EDD To:	tvenus@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 / Comments
	MW-3	11/6/09	1055		X							X			X	X	X	X	X	X					
	MW-4	↓	1018		X							X			X	X	X	X	X	X					
	MW-5		1035		X							X			X	X	X	X	X	X					
	MW-6		1120		X							X			X	X	X	X	X	X					
	Trip Blank	↓																							Hold Trip Blank

Standard X

Full Data Package ___

Comments

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

Sampler's Name:	E. Farrar	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	BAI	Eric Farrar / BAI	11/09/09	0702			
Shipment Method:	GSO	Ship Date: 11/9/09					
Shipment Tracking No:	106462453						

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

NO. 857368

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 2162
15135 Hesperian Blvd,
San Leandro, 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	30.5	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: Tracy Geddes — Signature: [signature] — Month: 11 — Day: 16 — Year: 09

TRANSPORTER

13. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Tracy Geddes — Signature: [signature] — Month: 11 — Day: 10 — Year: 09

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 19, 2009

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

Subject: **Calscience Work Order No.: 09-11-0743**
Client Reference: BP 2162

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 11/10/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. 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.	Date Received: 11/10/09
1324 Mangrove Ave, Ste 212	Work Order No: 09-11-0743
Chico, CA 95926-2642	Preparation: EPA 5030B
	Method: EPA 8015B (M)

Project: BP 2162

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**09-11-0743-1-C**	**11/06/09 10:55**	**Aqueous**	**GC 11**	**11/13/09**	**11/14/09 08:13**	**091113B03**

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

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	57	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	**09-11-0743-2-C**	**11/06/09 10:18**	**Aqueous**	**GC 11**	**11/13/09**	**11/14/09 08:47**	**091113B03**

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

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	50	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-5	**09-11-0743-3-C**	**11/06/09 10:35**	**Aqueous**	**GC 11**	**11/13/09**	**11/14/09 09:20**	**091113B03**

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

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	55	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**09-11-0743-4-C**	**11/06/09 11:20**	**Aqueous**	**GC 11**	**11/13/09**	**11/14/09 10:28**	**091113B03**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	880	50	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	82	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: 11/10/09
Work Order No: 09-11-0743
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP 2162

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-689**	**N/A**	**Aqueous**	**GC 11**	**11/13/09**	**11/14/09 00:21**	**091113B03**

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

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	48	38-134	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Broadbent & Associates, Inc.	Date Received:	11/10/09
1324 Mangrove Ave, Ste 212	Work Order No:	09-11-0743
Chico, CA 95926-2642	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L

Project: BP 2162

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**09-11-0743-1-B**	**11/06/09 10:55**	**Aqueous**	**GC/MS BB**	**11/15/09**	**11/15/09 18:20**	**091115L01**

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	98	80-128			Dibromofluoromethane	99	80-127		
Toluene-d8	98	80-120			1,4-Bromofluorobenzene	96	68-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	**09-11-0743-2-B**	**11/06/09 10:18**	**Aqueous**	**GC/MS BB**	**11/15/09**	**11/15/09 18:49**	**091115L01**

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	97	80-128			Dibromofluoromethane	99	80-127		
Toluene-d8	99	80-120			1,4-Bromofluorobenzene	96	68-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-5	**09-11-0743-3-B**	**11/06/09 10:35**	**Aqueous**	**GC/MS BB**	**11/15/09**	**11/15/09 19:18**	**091115L01**

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	101	80-128			Dibromofluoromethane	102	80-127		
Toluene-d8	98	80-120			1,4-Bromofluorobenzene	96	68-120		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Broadbent & Associates, Inc.		Date Received:	11/10/09
1324 Mangrove Ave, Ste 212		Work Order No:	09-11-0743
Chico, CA 95926-2642		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	ug/L
Project: BP 2162			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**09-11-0743-4-B**	**11/06/09 11:20**	**Aqueous**	**GC/MS BB**	**11/15/09**	**11/15/09 19:47**	**091115L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	1.7	0.50	1		Methyl-t-Butyl Ether (MTBE)	37	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	24	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	0.77	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	100	80-127		
Toluene-d8	102	80-120			1,4-Bromofluorobenzene	96	68-120		

Method Blank	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-1,127**	**N/A**	**Aqueous**	**GC/MS BB**	**11/15/09**	**11/15/09 13:01**	**091115L01**

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	99	80-127		
Toluene-d8	99	80-120			1,4-Bromofluorobenzene	92	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: 11/10/09
Work Order No: 09-11-0743
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project BP 2162

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-11-1108-6	**Aqueous**	**GC 11**	**11/13/09**	**11/14/09**	**091113S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	67	72	38-134	8	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: 11/10/09
Work Order No: 09-11-0743
Preparation: EPA 5030B
Method: EPA 8260B

Project BP 2162

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-11-0990-3	**Aqueous**	**GC/MS BB**	**11/15/09**	**11/15/09**	**091115S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	0	0	76-124	1	0-20	LN,AY
Carbon Tetrachloride	107	110	74-134	2	0-20	
Chlorobenzene	100	104	80-120	4	0-20	
1,2-Dibromoethane	94	102	80-120	8	0-20	
1,2-Dichlorobenzene	99	102	80-120	2	0-20	
1,1-Dichloroethene	112	102	73-127	9	0-20	
Ethylbenzene	0	0	78-126	4	0-20	LN,AY
Toluene	103	102	80-120	1	0-20	
Trichloroethene	103	105	77-120	2	0-20	
Vinyl Chloride	80	82	72-126	1	0-20	
Methyl-t-Butyl Ether (MTBE)	0	25	67-121	9	0-49	LN,AY
Tert-Butyl Alcohol (TBA)	69	73	36-162	4	0-30	
Diisopropyl Ether (DIPE)	96	101	60-138	5	0-45	
Ethyl-t-Butyl Ether (ETBE)	84	92	69-123	9	0-30	
Tert-Amyl-Methyl Ether (TAME)	86	95	65-120	11	0-20	
Ethanol	95	76	30-180	22	0-72	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Laboratory Control Sample

ACCREDITED IN ACCORDANCE WITH nelac

Broadbent & Associates, Inc.		Date Received:	N/A
1324 Mangrove Ave, Ste 212		Work Order No:	09-11-0743
Chico, CA 95926-2642		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: BP 2162

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	Lab File ID	LCS Batch Number
099-12-695-689	**Aqueous**	**GC 11**	**11/14/09**	**020F2001**	**091113B03**

Parameter	Conc Added	Conc Recovered	LCS %Rec	%Rec CL	Qualifiers
Gasoline Range Organics (C6-C12)	2000	1570	78	78-120	

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: 09-11-0743
Preparation: EPA 5030B
Method: EPA 8260B

Project: BP 2162

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-1,127	**Aqueous**	**GC/MS BB**	**11/15/09**	**11/15/09**	**091115L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	106	106	80-120	73-127	0	0-20	
Carbon Tetrachloride	117	116	74-134	64-144	0	0-20	
Chlorobenzene	104	103	80-120	73-127	0	0-20	
1,2-Dibromoethane	98	101	79-121	72-128	3	0-20	
1,2-Dichlorobenzene	100	100	80-120	73-127	0	0-20	
1,1-Dichloroethene	120	110	78-126	70-134	9	0-28	
Ethylbenzene	103	101	80-120	73-127	2	0-20	
Toluene	101	103	80-120	73-127	1	0-20	
Trichloroethene	104	106	79-127	71-135	2	0-20	
Vinyl Chloride	87	87	72-132	62-142	1	0-20	
Methyl-t-Butyl Ether (MTBE)	86	90	69-123	60-132	4	0-20	
Tert-Butyl Alcohol (TBA)	105	115	63-123	53-133	9	0-20	
Diisopropyl Ether (DIPE)	98	101	59-137	46-150	3	0-37	
Ethyl-t-Butyl Ether (ETBE)	89	93	69-123	60-132	4	0-20	
Tert-Amyl-Methyl Ether (TAME)	87	92	70-120	62-128	5	0-20	
Ethanol	119	110	28-160	6-182	8	0-57	

Total number of LCS compounds : 16
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: 09-11-0743

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.

Work Order Number: 09-11-0743

Qualifier	Definition
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.
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

BP/ARC Project Name: BP 2162 | Req Due Date (mm/dd/yy): 07H3 | Rush TAT: Yes ___ No X

BP/ARC Facility No: 2162 | Lab Work Order Number:

Lab Name:	Calscience	BP/ARC Facility Address:	3310 Park Blvd.	Consultant/Contractor:	Broadbent & Associates, Inc.
Lab Address:	7440 Lincoln Way	City, State, ZIP Code:	Oakland, CA	Consultant/Contractor Project No:	06-88-620-5-822
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.:	T0600100084	Consultant/Contractor PM:	Tom Venus
Lab Shipping Accnt:	9225	Enfos Proposal No:	000WD-0011	Phone:	530-566-1400
Lab Bottle Order No:		Accounting Mode:	Provision X OOC-BU ___ OOC-RM ___	Email EDD To:	tvenus@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-3	11/6/09	1055		X							X			X	X	X	X	X	X					
2	MW-4	"	1018		X							X			X	X	X	X	X	X					
3	MW-5	"	1035		X							X			X	X	X	X	X	X					
4	MW-6	"	1120		X							X			X	X	X	X	X	X					
5	Trip Blank	"																							Hold Trip Blank

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

Standard X

Full Data Package ___

Sampler's Name:	E. Farrar	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation / Date / Time
Sampler's Company:	BAI	Eric Farrar / BAI	11/09/09	0702	
Shipment Method:	GSO	Ship Date: 11/9/09			
Shipment Tracking No:	106462453				11/10/09 1000

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

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-11-0743

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Broadbent

DATE: 11/10/09

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

Temperature 5.5 °C - 0.8 °C (CF) = 4.7 °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 ☐ Metals Only ☐ PCBs Only **Initial:** JP

CUSTODY SEALS INTACT:

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

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

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.			
☐ COC not relinquished. ☐ No date relinquished. ☐ No time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
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** (3) ☐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#:**_____ **Checked by:** JP

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

Preservative: **h:** HCL **n:** HNO3 **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:** JP

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-11-0743

SAMPLE ANOMALY FORM

SAMPLES - CONTAINERS & LABELS:

Comments:

- ☑ **Samples NOT RECEIVED but listed on COC** — (-5) TRIPBLANK NOT RECEIVED
- ☐ **Samples received but NOT LISTED on COC**
- ☐ **Holding time expired** – list sample ID(s) and test
- ☐ **Insufficient quantities for analysis** – list test
- ☐ **Improper container(s)/preservative used** – list test
- ☐ **No preservative noted on COC or label** – list test & notify lab
- ☐ **Sample labels illegible** – note test/container type
- ☐ **Sample labels do not match COC** – Note in comments
  - ☐ **Sample ID**
  - ☐ **Date and/or Time Collected**
  - ☐ **Project Information**
  - ☐ **# of Containers**
  - ☐ **Analysis**
- ☐ **Sample containers compromised** – Note in comments
  - ☐ **Leaking**
  - ☐ **Broken**
  - ☐ **Without Labels**
- ☐ **Air sample containers compromised** – Note in comments
  - ☐ **Flat**
  - ☐ **Very low in volume**
  - ☐ **Leaking (Not transferred - duplicate bag submitted)**
  - ☐ **Leaking (transferred into Calscience Tedlar® Bag*)**
  - ☐ **Leaking (transferred into Client's Tedlar® Bag*)**
- ☐ **Other:** _____

HEADSPACE – Containers with Bubble > 6mm or ¼ inch:

Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Cont. received	Analysis

Comments: _____

*Transferred at Client's request.

Initial / Date: JC 11/10/09

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 RECEIPTS

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_WELL FILE

SUCCESS

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

Submittal Type:	**GEO_WELL**
Submittal Title:	**4Q09 GEO_WELL 2162**
Facility Global ID:	**T0600100084**
Facility Name:	**ARCO #2162**
File Name:	**GEO_WELL.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**1/6/2010 3:57:14 PM**
Confirmation Number:	**1830623805**

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:	**4Q09 GW Monitoring**
Facility Global ID:	**T0600100084**
Facility Name:	**ARCO #2162**
File Name:	**09110743.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**12/9/2009 3:11:57 PM**
Confirmation Number:	**6064492344**

VIEW QC REPORT

VIEW DETECTIONS REPORT