Atlantic Richfield Company
(a BP affiliated company)

P.O. Box 1257
San Ramon, CA 94583
Phone: (925) 275-3801
Fax: (925) 275-3815

30 July 2009

Re: Second Quarter 2009 Ground-Water Monitoring Report
Former Atlantic Richfield Company Station #6002
6235 Seminary Avenue
Oakland, California
ACEH Case #RO0000163

"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:

Paul Supple
Environmental Business Manger

Second Quarter 2009 Ground-Water Monitoring Report
Former Atlantic Richfield Company Station #6002
6235 Seminary Avenue
Oakland, California

Prepared for

Mr. Paul Supple
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
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(530) 566-1400
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30 July 2009

Project No. 06-88-634

Broadbent & Associates, Inc.
1324 Mangrove Ave., Suite 212
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BROADBENT & ASSOCIATES, INC
ENVIRONMENTAL, WATER RESOURCES & ENGINEERING

30 July 2009

Project No. 06-88-634

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

Attn.: Mr. Paul Supple

Re: Second Quarter 2009 Ground-Water Monitoring Report, Former Atlantic Richfield Company (a BP affiliated company) Station #6002, 6235 Seminary Avenue, Oakland, Alameda County, California; ACEH Case #RO0000163

Dear Mr. Supple:

Attached is the *Second Quarter 2009 Ground-Water Monitoring Report* for Former Atlantic Richfield Company Station #6002 located at 6235 Seminary Avenue, Oakland, California (Site). This report presents a summary of results from ground-water monitoring and sampling conducted at the Site during the Second Quarter of 2009.

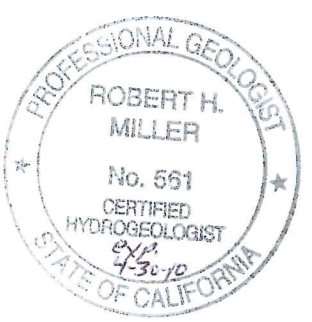
Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (530) 566-1400.

Sincerely,

BROADBENT & ASSOCIATES, INC.

Thomas A. Venus, P.E.
Senior Engineer

Robert H. Miller, P.G., C.HG.
Principal Hydrogeologist



Enclosures

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

STATION # 6002 QUARTERLY GROUND-WATER MONITORING REPORT

Facility: #6002 Address:	6235 Seminary Avenue, Oakland
Environmental Business Manager:	Mr. Paul Supple
Consulting Co./Contact Persons:	Broadbent & Associates, Inc.(BAI)/Rob Miller & Tom Venus (530) 566-1400
Consultant Project No.:	06-88-634
Primary Agency/Regulatory ID No.:	Alameda County Environmental Health (ACEH) ACEH Case #RO0000163
Facility Permits/Permitting Agency:	NA

WORK PERFORMED THIS QUARTER (Second Quarter 2009):

1. Prepared and submitted the *First Quarter 2009 Ground-Water Monitoring Report* (BAI, 4/30/2009).
2. Conducted ground-water monitoring/sampling for Second Quarter 2009. Work performed by Stratus Environmental, Inc. (Stratus) on 14 May 2009.

WORK PROPOSED FOR NEXT QUARTER (Third Quarter 2009):

1. Prepared and submitted Second Quarter 2009 Ground-Water Monitoring Report (contained herein).
2. Prepare and submit Initial Site Conceptual Model with Soil & Ground-Water Investigation Work Plan, as requested by ACEH in their letter dated 22 May 2009.
3. Conduct ground-water monitoring/sampling for Third Quarter 2009.

QUARTERLY RESULTS SUMMARY:

Current phase of project:	**Ground-Water Monitoring/Sampling**
Frequency of ground-water monitoring:*	**Quarterly: Wells MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, VW-1, VW-3, VW-4**
Frequency of ground-water sampling:*	**Quarterly: Wells MW-5, VW-1, VW-4** **Annually (3Q): Wells MW-3, MW-4, MW-6, MW-7, MW-8**
Is free product (FP) present on-site:	**No**
Bulk Soil removed to Date:	**Approximately 370 cubic yards of TPH-impacted soil**
Current remediation techniques:	**NA**
Depth to ground water (below TOC):	**7.35 ft (VW-1) to 12.08 ft (MW-5)**
General ground-water flow direction:	**West-Southwest**
Approximate hydraulic gradient:	**0.06 ft/ft**

* Current schedule through Second Quarter 2009. Proposed modifications discussed below.

DISCUSSION:

Second quarter 2009 ground-water monitoring and sampling was conducted at Former Atlantic Richfield Company Service Station #6002 on 14 May 2009 by Stratus personnel. Water levels were gauged in eight of the nine wells associated with Station #6002. Well MW-8 was inaccessible and therefore the water level was not gauged. No other significant irregularities were noted during water level gauging. Depth to water measurements ranged from 7.35 ft at well VW-1 to 12.08 ft. at well MW-5. Resulting ground-water surface elevations ranged from 250.44 ft in up-gradient well MW-6 to 229.84 ft in down-gradient well MW-7. Water level elevations were between historic minimum and maximum values for each well gauged this quarter, as summarized in Table 1. Water level elevations yielded a potentiometric ground-water flow direction and gradient to the west-southwest at approximately 0.06 ft/ft, generally consistent with the historical data (see Table 3). Ground-water monitoring field data sheets are

provided within Appendix A. Measured depths to 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-5, VW-1, and VW-4. No irregularities were noted 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; 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 noted during analysis of the samples by the laboratory. Ground-water sampling field data sheets and the laboratory analytical report, including chain-of-custody documentation, are provided in Appendix A.

Gasoline Range Organics were detected above the laboratory reporting limit in one of the three wells sampled this quarter at a concentration of 4,200 micrograms per liter (µg/L) in well MW-5. Benzene was detected above the laboratory reporting limit in well VW-4 at a concentration of 0.54 µg/L. Toluene, Ethylbenzene and Total Xylenes were detected above the laboratory reporting limits in well MW-5 at concentrations of 1.0 µg/L, 3.6 µg/L, and 1.8 µg/L, respectively. TBA was detected above the laboratory reporting limit in two of the three wells sampled at concentrations of 31 µg/L and 100 µg/L in wells MW-5 and VW-4, respectively. MTBE was detected above the laboratory reporting limit in each of the three wells sampled at concentrations up to 10 µg/L in VW-4. The remaining fuel additives and oxygenates were not detected above their laboratory reporting limits in the three wells sampled this quarter.

Detected analyte concentrations were within the historic minimum and maximum ranges recorded for each well. 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 pages are provided in Appendix B.

CONCLUSIONS AND RECOMMENDATIONS:

In their letter to Atlantic Richfield Company dated 22 May 2009, ACEH concluded that based on the ground-water flow direction calculated at the Site, it appears that there are no monitoring points directly down-gradient of the dispenser islands. Monitoring well MW-4, located in the northwest corner of the Site, has not detected petroleum hydrocarbon contaminant concentrations above the laboratory reporting limits in some time, while the highest concentrations of petroleum hydrocarbons have been detected in monitoring well MW-5, located on the southwest corner of the Site, which is over ninety feet south of MW-4. Therefore, directly downgradient of the dispenser islands there is an area of over ninety feet which remains uncharacterized. As there are apartment complexes and single-family homes directly west of the Site, BAI is preparing a work plan to evaluate this data gap.

Also in the 22 May 2009 letter, ACEH recommended reduction of quarterly ground-water monitoring/sampling at the Site to first quarter and third quarter semi-annual ground-water monitoring/sampling. BAI concurs and recommends that semi-annual monitoring of ground-water elevation levels be conducted in the existing and future monitoring wells associated with the Site, currently MW-3 through MW-8, VW-1 VW-3, and VW-4. In addition, BAI recommends that semi-annual sampling for petroleum hydrocarbon contaminants in ground water be collected from existing

wells MW-3 through MW-8, VW-1 VW-3, and VW-4 in the third calendar quarter of each year, while sampling wells just MW-5, VW-1, and VW-4 in the first calendar quarter of each year, consistent with the existing list. Therefore, Third Quarter 2009 monitoring/sampling will be performed according to the existing schedule. Furthermore, if an additional well(s) is installed downgradient of the dispensers along the western Site boundary, this well(s) would be recommended to be added to the monitoring and sampling schedule for both first and third calendar quarters.

CLOSURE:

The findings presented in this report are based upon: observations of Stratus 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. 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, Former ARCO Service Station #6002, 6235 Seminary Avenue, Oakland, California

Drawing 2. Ground-Water Elevation Contours and Analytical Summary Map, 14 May 2009, Former ARCO Service Station #6002, 6235 Seminary Avenue, Oakland, California

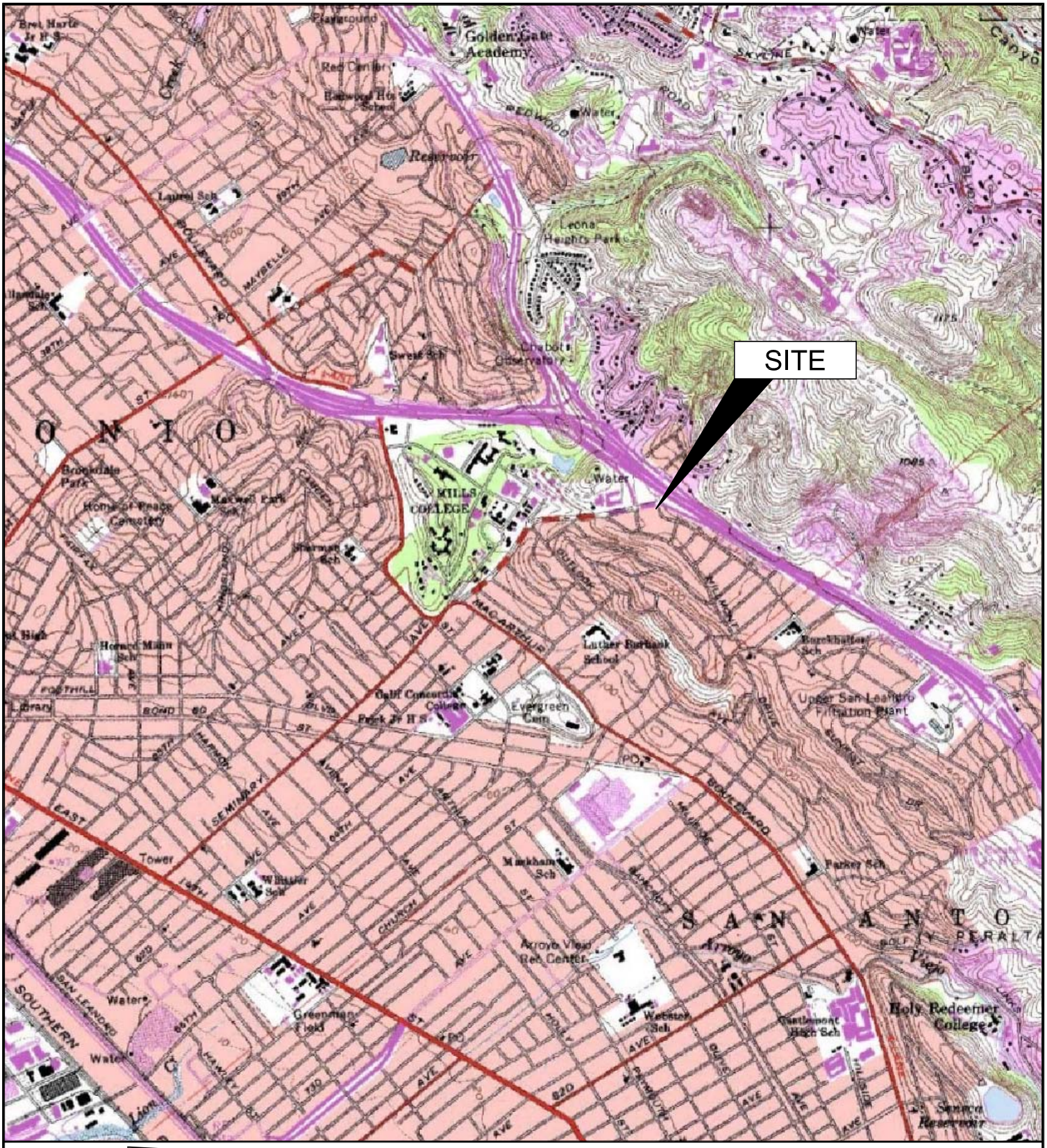
Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses, Station #6002, 6235 Seminary Ave., Oakland, California

Table 2. Summary of Fuel Additives Analytical Data, Station #6002, 6235 Seminary Ave., Oakland, California

Table 3. Historical Ground-Water Flow Direction and Gradient, Station #6002, 6235 Seminary Avenue, Oakland, California

Appendix A. Stratus 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



0 2000 4000

APPROXIMATE SCALE (ft)

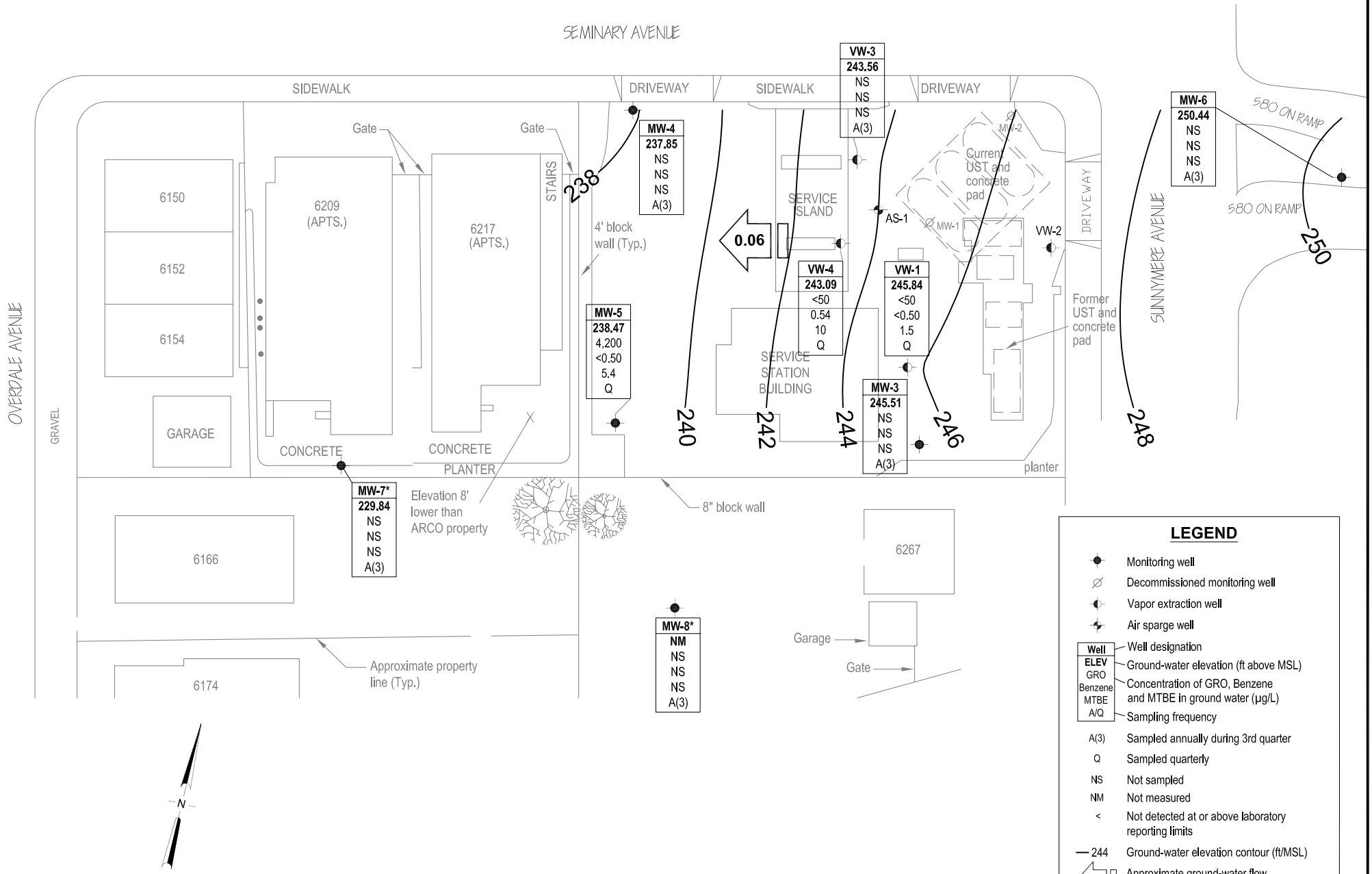
IMAGE SOURCE: USGS

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, CA 95926
Project No.: 06-88-634 Date: 07/22/09

Former ARCO Service Station #6002
6235 Seminary Avenue
Oakland, California

Site Location Map

Drawing
1



LEGEND

- Monitoring well
- Decommissioned monitoring well
- Vapor extraction well
- Air sparge well
- Well designation
- Ground-water elevation (ft above MSL)
- Concentration of GRO, Benzene and MTBE in ground water (µg/L)
- Sampling frequency

Well
ELEV
GRO
Benzene
MTBE
A/Q

- A(3) — Sampled annually during 3rd quarter
- Q — Sampled quarterly
- NS — Not sampled
- NM — Not measured
- < — Not detected at or above laboratory reporting limits
- 244 — Ground-water elevation contour (ft/MSL)
- 0.06 — Approximate ground-water flow direction and gradient (ft/ft)
- * — Not used in contouring

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

0 40 80
SCALE (ft)

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California 95926
Project No.: 06-88-634 Date: 6/23/09

Former ARCO Service Station #6002
6235 Seminary Avenue
Oakland, California

Ground-Water Elevation Contours
and Analytical Summary Map
14 May 2009

Drawing
2

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

Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH
									GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE		
AS-1																
6/29/1995	--		--	20.0	22.0	9.20	--	--	<50	1.6	<0.5	0.9	0.9	--	--	--
MW-1																
3/15/1995	--		247.06	4.5	24.5	7.37	--	239.69	13,000	1,200	44	770	1,100	--	--	--
5/30/1995	--		247.06	4.5	24.5	8.48	--	238.58	19,000	1,600	30	890	1,400	--	--	--
9/1/1995	--		247.06	4.5	24.5	9.47	--	237.59	14,000	1,300	28	480	780	24,000	--	--
11/13/1995	--	a, b	247.06	4.5	24.5	8.78	--	238.28	11,000	570	17	260	410	25,000	--	--
2/23/1996	--	d	247.06	4.5	24.5	--	--	--	--	--	--	--	--	--	--	--
MW-2																
3/15/1995	--		249.30	5.0	17.5	8.25	--	241.05	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
5/30/1995	--		249.30	5.0	17.5	9.93	--	239.37	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
9/1/1995	--		249.30	5.0	17.5	10.69	--	238.61	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
11/13/1995	--		249.30	5.0	17.5	10.32	--	238.98	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
2/23/1996	--	d	249.30	5.0	17.5	--	--	--	--	--	--	--	--	--	--	--
MW-3																
3/15/1995	--		248.35	5.0	24.5	6.76	--	241.59	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
5/30/1995	--		248.35	5.0	24.5	7.81	--	240.54	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
9/1/1995	--		248.35	5.0	24.5	8.65	--	239.70	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
11/13/1995	--		248.35	5.0	24.5	8.25	--	240.10	120	45	0.7	<0.5	6.2	--	--	--
2/23/1996	--		248.35	5.0	24.5	6.64	--	241.71	<50	<0.5	<0.5	0.6	1.9	<3	--	--
5/10/1996	--		248.35	5.0	24.5	7.95	--	240.40	--	--	--	--	--	--	--	--
8/9/1996	--		248.35	5.0	24.5	8.06	--	240.29	--	--	--	--	--	--	--	--
11/8/1996	--	e	248.35	5.0	24.5	--	--	--	--	--	--	--	--	--	--	--
3/21/1997	--		248.35	5.0	24.5	8.21	--	240.14	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
5/27/1997	--		248.35	5.0	24.5	8.25	--	240.10	--	--	--	--	--	--	--	--
8/5/1997	--		248.35	5.0	24.5	8.29	--	240.06	--	--	--	--	--	--	--	--
10/29/1997	--		248.35	5.0	24.5	8.58	--	239.77	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
2/25/1998	--		248.35	5.0	24.5	7.69	--	240.66	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
5/12/1998	--		248.35	5.0	24.5	8.20	--	240.15	--	--	--	--	--	--	--	--
7/28/1998	--		248.35	5.0	24.5	8.55	--	239.80	--	--	--	--	--	--	--	--

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

Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Product Thickness (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.																
10/27/1998	--		248.35	5.0	24.5	8.30	--	240.05	--	--	--	--	--	--	--	--
2/8/1999	--		248.35	5.0	24.5	7.90	--	240.45	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
6/1/1999	--		248.35	5.0	24.5	8.40	--	239.95	--	--	--	--	--	--	--	--
8/25/1999	--		248.35	5.0	24.5	8.49	--	239.86	--	--	--	--	--	--	1.67	--
10/29/1999	--		248.35	5.0	24.5	8.52	--	239.83	--	--	--	--	--	--	6.9	--
2/16/2000	NP		248.35	5.0	24.5	8.03	--	240.32	<50	<0.5	0.8	<0.5	<1	<3	8.51	--
6/23/2000	--		248.35	5.0	24.5	7.55	--	240.80	--	--	--	--	--	--	2.1	--
8/17/2000	--		248.35	5.0	24.5	8.65	--	239.70	--	--	--	--	--	--	1.1	--
11/10/2000	--		248.35	5.0	24.5	7.19	--	241.16	--	--	--	--	--	--	--	--
2/12/2001	NP		248.35	5.0	24.5	8.60	--	239.75	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.81	--
4/13/2001	--		248.35	5.0	24.5	6.13	--	242.22	--	--	--	--	--	--	--	--
7/18/2001	--		248.35	5.0	24.5	6.47	--	241.88	--	--	--	--	--	--	--	--
10/1/2001	--		248.35	5.0	24.5	6.99	--	241.36	--	--	--	--	--	--	--	--
1/14/2002	NP		248.35	5.0	24.5	5.47	--	242.88	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
4/3/2002	--		248.35	5.0	24.5	6.95	--	241.40	--	--	--	--	--	--	--	--
8/8/2002	--		248.35	5.0	24.5	8.78	--	239.57	--	--	--	--	--	--	--	--
11/27/2002	--		248.35	5.0	24.5	8.52	--	239.83	--	--	--	--	--	--	--	--
2/10/2003	NP		248.35	5.0	24.5	8.40	--	239.95	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.7	6.4
6/3/2003	--		248.35	5.0	24.5	8.40	--	239.95	--	--	--	--	--	--	--	--
8/14/2003	--		248.35	5.0	24.5	8.60	--	239.75	--	--	--	--	--	--	--	--
11/13/2003	--		248.35	5.0	24.5	8.41	--	239.94	--	--	--	--	--	--	--	--
02/13/2004	--		253.88	5.0	24.5	8.40	--	245.48	--	--	--	--	--	--	--	--
05/05/2004	--		253.88	5.0	24.5	8.28	--	245.60	--	--	--	--	--	--	--	--
08/30/2004	NP		253.88	5.0	24.5	10.32	--	243.56	<50	<0.50	<0.50	<0.50	<0.50	0.72	1.4	6.4
11/08/2004	--		253.88	5.0	24.5	8.12	--	245.76	--	--	--	--	--	--	--	--
02/07/2005	--		253.88	5.0	24.5	8.20	--	245.68	--	--	--	--	--	--	--	--
05/09/2005	--		253.88	5.0	24.5	8.23	--	245.65	--	--	--	--	--	--	--	--
08/11/2005	NP		253.88	5.0	24.5	8.72	--	245.16	<50	<0.50	<0.50	<0.50	<0.50	0.73	1.6	6.1
12/02/2005	--		253.88	5.0	24.5	8.15	--	245.73	--	--	--	--	--	--	--	--
02/15/2006	--		253.88	5.0	24.5	8.23	--	245.65	--	--	--	--	--	--	--	--
5/19/2006	--		253.88	5.0	24.5	8.38	--	245.50	--	--	--	--	--	--	--	--

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

Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Product Thickness (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.																
8/25/2006	P		253.88	5.0	24.5	8.59	--	245.29	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.15	6.2
11/2/2006	--		253.88	5.0	24.5	8.65	--	245.23	--	--	--	--	--	--	--	--
2/6/2007	--		253.88	5.0	24.5	8.38	--	245.50	--	--	--	--	--	--	--	--
5/9/2007	--		253.88	5.0	24.5	8.42	--	245.46	--	--	--	--	--	--	--	--
8/8/2007	NP		253.88	5.0	24.5	8.67	--	245.21	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.16	6.90
11/14/2007	--		253.88	5.0	24.5	8.48	--	245.40	--	--	--	--	--	--	--	--
2/28/2008	--		253.88	5.0	24.5	8.28	--	245.60	--	--	--	--	--	--	--	--
5/23/2008	--		253.88	5.0	24.5	8.42	--	245.46	--	--	--	--	--	--	--	--
8/21/2008	NP		253.88	5.0	24.5	8.52	--	245.36	<50	<0.50	<0.50	<0.50	<0.50	0.81	1.17	7.17
11/13/2008	--		253.88	5.0	24.5	8.52	--	245.36	--	--	--	--	--	--	--	--
2/23/2009	--		253.88	5.0	24.5	7.92	--	245.96	--	--	--	--	--	--	--	--
5/14/2009	--		**253.88**	**5.0**	**24.5**	**8.37**	--	**245.51**	--	--	--	--	--	--	--	--
MW-4																
3/15/1995	--		242.91	4.5	**24.5**	9.37	--	233.54	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
5/30/1995	--		242.91	4.5	**24.5**	11.47	--	231.44	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
9/1/1995	--		242.91	4.5	**24.5**	12.28	--	230.63	78	<0.5	0.7	<0.5	<0.5	<3	--	--
11/13/1995	--		242.91	4.5	**24.5**	11.75	--	231.16	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
2/23/1996	--		242.91	4.5	**24.5**	8.51	--	234.40	59	1.2	7.4	1.6	9.3	3	--	--
5/10/1996	--		242.91	4.5	**24.5**	11.35	--	231.56	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
8/9/1996	--		242.91	4.5	**24.5**	9.70	--	233.21	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
11/8/1996	--		242.91	4.5	**24.5**	11.79	--	231.12	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
3/21/1997	--		242.91	4.5	**24.5**	10.94	--	231.97	<50	<0.5	<0.5	<0.5	<0.5	81	--	--
5/27/1997	--		242.91	4.5	**24.5**	11.51	--	231.40	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
8/5/1997	--		242.91	4.5	**24.5**	11.90	--	231.01	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
10/29/1997	--		242.91	4.5	**24.5**	12.00	--	230.91	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
2/25/1998	--		242.91	4.5	**24.5**	8.34	--	234.57	<50	<0.5	0.9	<0.5	0.9	4	--	--
5/12/1998	--		242.91	4.5	**24.5**	10.93	--	231.98	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
7/28/1998	--		242.91	4.5	**24.5**	12.08	--	230.83	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
10/27/1998	--		242.91	4.5	**24.5**	11.40	--	231.51	<5,000	<50	<50	160	64	6,400	--	--
2/8/1999	--		242.91	4.5	**24.5**	8.40	--	234.51	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--

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

Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Product Thickness (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.																
6/1/1999	NP		242.91	4.5	24.5	11.93	--	230.98	<50	<0.5	<0.5	<0.5	<0.5	<3	4	6.26
8/25/1999	NP		242.91	4.5	24.5	12.21	--	230.70	<50	<0.5	<0.5	<0.5	<0.5	<3	1.29	6.34
10/29/1999	NP		242.91	4.5	24.5	12.37	--	230.54	<50	<0.5	<0.5	<0.5	<1	<3	1.5	5.60
2/16/2000	NP		242.91	4.5	24.5	7.45	--	235.46	<50	<0.5	<0.5	<0.5	<1	<3	2.38	--
6/23/2000	NP		242.91	4.5	24.5	12.31	--	230.60	<50	<0.50	<0.50	<0.50	<0.50	<2.50	2.8	--
8/17/2000	--	f	242.91	4.5	24.5	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.50	--	--
8/17/2000	NP		242.91	4.5	24.5	11.92	--	230.99	<50	<0.50	<0.50	<0.50	<0.50	<2.50	2.38	--
11/10/2000	NP		242.91	4.5	24.5	10.80	--	232.11	<50	<0.50	<0.50	<0.50	<0.50	<2.50	1.55	--
2/12/2001	NP		242.91	4.5	24.5	11.65	--	231.26	<50	<0.50	<0.50	<0.50	<0.50	<2.50	1.12	--
4/13/2001	--	f	242.91	4.5	24.5	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.50	--	--
4/13/2001	NP		242.91	4.5	24.5	8.17	--	234.74	<50	<0.50	<0.50	<0.50	<0.50	<2.50	--	--
7/18/2001	NP		242.91	4.5	24.5	8.51	--	234.40	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
10/1/2001	NP		242.91	4.5	24.5	8.71	--	234.20	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
1/14/2002	--	f	242.91	4.5	24.5	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
1/14/2002	NP		242.91	4.5	24.5	7.13	--	235.78	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
4/3/2002	NP		242.91	4.5	24.5	10.10	--	232.81	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
8/8/2002	NP		242.91	4.5	24.5	12.64	--	230.27	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.4	8.1
11/27/2002	NP		242.91	4.5	24.5	12.01	--	230.90	<50	<0.50	<0.50	<0.50	<0.50	4.7	2.5	6.5
2/10/2003	NP		242.91	4.5	24.5	11.22	--	231.69	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.8	6.6
6/3/2003	--		242.91	4.5	24.5	11.54	--	231.37	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.9	6
8/14/2003	--		242.91	4.5	24.5	12.41	--	230.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.8	6.3
11/13/2003	--		242.91	4.5	24.5	11.64	--	231.27	--	--	--	--	--	--	--	--
02/13/2004	--		248.62	4.5	24.5	10.28	--	238.34	--	--	--	--	--	--	--	--
05/05/2004	--		248.62	4.5	24.5	12.04	--	236.58	--	--	--	--	--	--	--	--
08/30/2004	NP		248.62	4.5	24.5	12.98	--	235.64	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.6	5.8
11/08/2004	--		248.62	4.5	24.5	11.29	--	237.33	--	--	--	--	--	--	--	--
02/07/2005	--		248.62	4.5	24.5	10.03	--	238.59	--	--	--	--	--	--	--	--
05/09/2005	--		248.62	4.5	24.5	10.65	--	237.97	--	--	--	--	--	--	--	--
08/11/2005	NP		248.62	4.5	24.5	12.68	--	235.94	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.9	6.5
12/02/2005	--		248.62	4.5	24.5	10.35	--	238.27	--	--	--	--	--	--	--	--
02/15/2006	--		248.62	4.5	24.5	8.38	--	240.24	--	--	--	--	--	--	--	--

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

Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Product Thickness (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.																
5/19/2006	--		248.62	4.5	24.5	11.24	--	237.38	--	--	--	--	--	--	--	--
8/25/2006	P		248.62	4.5	24.5	12.28	--	236.34	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.51	5.7
11/2/2006	--		248.62	4.5	24.5	12.64	--	235.98	--	--	--	--	--	--	--	--
2/6/2007	--		248.62	4.5	24.5	10.52	--	238.10	--	--	--	--	--	--	--	--
5/9/2007	--		248.62	4.5	24.5	10.97	--	237.65	--	--	--	--	--	--	--	--
8/8/2007	NP		248.62	4.5	24.5	12.95	--	235.67	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.70	7.11
11/14/2007	--		248.62	4.5	24.5	11.38	--	237.24	--	--	--	--	--	--	--	--
2/28/2008	--		248.62	4.5	24.5	9.01	--	239.61	--	--	--	--	--	--	--	--
5/23/2008	--		248.62	4.5	24.5	11.20	--	237.42	--	--	--	--	--	--	--	--
8/21/2008	NP		248.62	4.5	24.5	12.37	--	236.25	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.39	7.24
11/13/2008	--		248.62	4.5	24.5	12.08	--	236.54	--	--	--	--	--	--	--	--
2/23/2009	--		248.62	4.5	24.5	7.95	--	240.67	--	--	--	--	--	--	--	--
5/14/2009	--		**248.62**	**4.5**	**24.5**	**10.77**	--	**237.85**	--	--	--	--	--	--	--	--
MW-5																
3/15/1995	--		244.82	5.0	24.5	11.99	--	232.83	21,000	870	22	1,600	1,900	--	--	--
5/30/1995	--		244.82	5.0	24.5	12.97	--	231.85	17,000	2,100	250	1,000	520	--	--	--
9/1/1995	--		244.82	5.0	24.5	14.03	--	230.79	19,000	1,500	25	1,600	880	8,300	--	--
11/13/1995	--		244.82	5.0	24.5	13.65	--	231.17	21,000	1,300	22	1,400	630	--	--	--
2/23/1996	--		244.82	5.0	24.5	11.93	--	232.89	27,000	1,300	<50	1,600	1,500	730	--	--
5/10/1996	--		244.82	5.0	24.5	13.05	--	231.77	17,000	460	21	760	480	1,000	--	--
8/9/1996	--		244.82	5.0	24.5	13.22	--	231.60	16,000	420	14	870	390	1,500	--	--
11/8/1996	--	e	244.82	5.0	24.5	--	--	--	--	--	--	--	--	--	--	--
3/21/1997	--		244.82	5.0	24.5	13.24	--	231.58	18,000	110	<50	730	1,500	1,800	--	--
5/27/1997	--		244.82	5.0	24.5	13.10	--	231.72	21,000	86	<20	810	610	1,700	--	--
8/5/1997	--		244.82	5.0	24.5	13.14	--	231.68	340	2.2	<0.5	15	8.8	39	--	--
10/29/1997	--		244.82	5.0	24.5	13.03	--	231.79	19,000	130	<20	1,400	620	1,700	--	--
2/25/1998	--		244.82	5.0	24.5	11.33	--	233.49	8,500	19	13	190	100	170	--	--
5/12/1998	--		244.82	5.0	24.5	12.81	--	232.01	10,000	34	<10	390	220	610	--	--
7/28/1998	--		244.82	5.0	24.5	13.12	--	231.70	15,000	68	<10	690	620	1,000	--	--
10/27/1998	--		244.82	5.0	24.5	12.90	--	231.92	15,000	60	<10	770	400	890	--	--

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Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Product Thickness (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.																
2/8/1999	--		244.82	5.0	24.5	11.08	--	233.74	8,200	23	<10	290	120	<60	--	--
6/1/1999	NP		244.82	5.0	24.5	12.95	--	231.87	11,000	33	3.3	340	180	580	1	6.49
8/25/1999	NP		244.82	5.0	24.5	12.99	--	231.83	9,200	26	14	420	270	1,100	0.37	7.78
10/29/1999	NP		244.82	5.0	24.5	13.10	--	231.72	11,000	19	9.8	260	150	590	1.27	6.2
2/16/2000	NP		244.82	5.0	24.5	8.21	--	236.61	12,000	8.1	10	340	160	130	1.42	--
6/23/2000	NP		244.82	5.0	24.5	12.90	--	231.92	9,680	38	<20.0	212	114	930	1.4	--
8/17/2000	NP		244.82	5.0	24.5	13.00	--	231.82	10,500	15	7.98	223	118	430	0.68	--
11/10/2000	NP		244.82	5.0	24.5	12.50	--	232.32	7,030	19.7	<10.0	190	43.6	445	1.27	--
2/12/2001	NP		244.82	5.0	24.5	12.81	--	232.01	8,840	33.9	<10.0	186	56.4	352	0.4	--
4/13/2001	NP		244.82	5.0	24.5	11.31	--	233.51	9,020	54.2	43.3	137	96	297	--	--
7/18/2001	NP		244.82	5.0	24.5	11.59	--	233.23	13,000	19	10	110	49	230	--	--
10/1/2001	NP		244.82	5.0	24.5	11.84	--	232.98	8,500	6.9	<1.0	87	27	220	--	--
1/14/2002	NP		244.82	5.0	24.5	10.75	--	234.07	9,500	<20	<20	140	22	<200	--	--
4/3/2002	NP	f	244.82	5.0	24.5	--	--	--	2,700	24	5.1	92	8.5	130	--	--
4/3/2002	NP		244.82	5.0	24.5	12.50	--	232.32	2,400	21	<5.0	91	8.5	130	--	--
8/8/2002	NP		244.82	5.0	24.5	12.83	--	231.99	2,000	<20	<20	48	<20	520	0.8	6.9
11/27/2002	NP		244.82	5.0	24.5	12.79	--	232.03	2,200	<10	<10	33	<10	150	0.8	6.4
2/10/2003	NP		244.82	5.0	24.5	12.62	--	232.20	2,600	<2.5	<2.5	47	4.2	100	0.7	6.6
6/3/2003	--		244.82	5.0	24.5	12.41	--	232.41	2,400	<5.0	<5.0	26	<5.0	160	1.8	6.3
8/14/2003	--	e	244.82	5.0	24.5	--	--	--	--	--	--	--	--	--	--	--
11/13/2003	NP		244.82	5.0	24.5	12.49	--	232.33	1,900	<5.0	<5.0	13	<5.0	90	0.9	6.4
02/13/2004	NP		250.55	5.0	24.5	12.38	--	238.17	1,400	1.4	1.9	23	3.6	90	1.1	62.8
05/05/2004	NP		250.55	5.0	24.5	12.68	--	237.87	5,800	<2.5	<2.5	13	<2.5	130	1.1	6.3
08/30/2004	P		250.55	5.0	24.5	12.96	--	237.59	4,100	<2.5	<2.5	<2.5	<2.5	85	--	6.4
11/08/2004	NP		250.55	5.0	24.5	12.10	--	238.45	3,300	14	1.9	17	6.1	69	1.05	6.0
02/07/2005	NP		250.55	5.0	24.5	12.02	--	238.53	3,500	<1.0	1.1	16	2.6	15	0.95	6.5
05/09/2005	NP	j	250.55	5.0	24.5	11.94	--	238.61	3,400	<1.0	1.7	12	2.2	19	2.2	6.7
08/11/2005	NP		250.55	5.0	24.5	12.77	--	237.78	5,700	<2.5	<2.5	13	<2.5	51	0.7	6.0
12/02/2005	NP		250.55	5.0	24.5	11.83	--	238.72	3,900	<2.5	<2.5	15	8.3	13	1.41	6.9
02/15/2006	NP		250.55	5.0	24.5	10.77	--	239.78	790	<0.50	<0.50	1.2	<0.50	<0.50	1.2	6.9
5/19/2006	NP		250.55	5.0	24.5	12.29	--	238.26	4,100	0.97	1.3	3.9	1.8	15	0.98	6.5

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Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Product Thickness (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.																
8/25/2006	P		250.55	5.0	24.5	12.62	--	237.93	3,700	<2.5	<2.5	4.0	<2.5	17	1.15	6.2
11/2/2006	P		250.55	5.0	24.5	12.90	--	237.65	5,700	<1.0	1.5	4.3	1.7	18	1.86	6.67
2/6/2007	NP		250.55	5.0	24.5	12.37	--	238.18	4,800	<1.0	<1.0	5.2	1.3	13	0.96	6.99
5/9/2007	NP		250.55	5.0	24.5	12.50	--	238.05	4,400	<1.0	<1.0	4.9	1.5	31	1.42	6.89
8/8/2007	NP		250.55	5.0	24.5	12.88	--	237.67	4,100	<1.0	<1.0	4.1	1.3	11	1.16	6.44
11/14/2007	NP		250.55	5.0	24.5	12.30	--	238.25	4,700	<1.0	<1.0	7.3	1.8	11	1.22	6.77
2/28/2008	NP		250.55	5.0	24.5	11.37	--	239.18	4,100	<2.5	<2.5	<2.5	<2.5	<2.5	1.15	6.67
5/23/2008	NP		250.55	5.0	24.5	11.68	--	238.87	4,700	<0.50	0.87	5.6	1.2	17	1.28	6.57
8/21/2008	NP		250.55	5.0	24.5	12.42	--	238.13	4,700	<0.50	0.60	3.6	1.4	8.7	1.24	6.78
11/13/2008	NP		250.55	5.0	24.5	12.32	--	238.23	7,400	<0.50	0.63	6.3	1.4	5.6	1.18	6.67
2/23/2009	NP	l	250.55	5.0	24.5	10.50	--	240.05	4,100	<0.50	<0.50	1.9	1.1	3.2	1.30	6.17
5/14/2009	**NP**		**250.55**	**5.0**	**24.5**	**12.08**	**--**	**238.47**	**4,200**	**<0.50**	**1.0**	**3.6**	**1.8**	**5.4**	**1.14**	**6.65**
MW-6																
6/29/1995	--		--	17.0	31.5	6.63	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
9/1/1995	--		--	17.0	31.5	--	--	--	--	--	--	--	--	--	--	--
11/13/1995	--		--	17.0	31.5	7.70	--	--	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
2/23/1996	--		--	17.0	31.5	9.82	--	--	<50	<0.5	0.8	<0.5	0.6	<3	--	--
5/10/1996	--		--	17.0	31.5	15.25	--	--	--	--	--	--	--	--	--	--
8/9/1996	--		252.20	17.0	31.5	11.11	--	241.09	--	--	--	--	--	--	--	--
11/8/1996	--		252.20	17.0	31.5	9.31	--	242.89	--	--	--	--	--	--	--	--
3/21/1997	--		252.20	17.0	31.5	9.40	--	242.80	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
5/27/1997	--		252.20	17.0	31.5	7.08	--	245.12	--	--	--	--	--	--	--	--
8/5/1997	--		252.20	17.0	31.5	7.12	--	245.08	--	--	--	--	--	--	--	--
10/29/1997	--		252.20	17.0	31.5	7.42	--	244.78	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
2/25/1998	--		252.20	17.0	31.5	10.35	--	241.85	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
5/12/1998	--		252.20	17.0	31.5	15.83	--	236.37	--	--	--	--	--	--	--	--
7/28/1998	--		252.20	17.0	31.5	11.84	--	240.36	--	--	--	--	--	--	--	--
10/27/1998	--		252.20	17.0	31.5	9.73	--	242.47	--	--	--	--	--	--	--	--
2/8/1999	--		252.20	17.0	31.5	8.10	--	244.10	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
6/1/1999	--		252.20	17.0	31.5	17.84	--	234.36	--	--	--	--	--	--	--	--

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

Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Product Thickness (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.																
8/25/1999	--		252.20	17.0	31.5	11.00	--	241.20	--	--	--	--	--	--	0.77	--
10/29/1999	--		252.20	17.0	31.5	9.03	--	243.17	--	--	--	--	--	--	3.42	--
2/16/2000	P		252.20	17.0	31.5	7.71	--	244.49	<50	<0.5	<0.5	<0.5	<1	<3	2.42	--
6/23/2000	--		252.20	17.0	31.5	6.69	--	245.51	--	--	--	--	--	--	2.3	--
8/17/2000	--		252.20	17.0	31.5	6.95	--	245.25	--	--	--	--	--	--	2.51	--
11/10/2000	--		252.20	17.0	31.5	11.79	--	240.41	--	--	--	--	--	--	--	--
2/12/2001	P		252.20	17.0	31.5	7.35	--	244.85	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.66	7.77
2/12/2001	--	f	--	17.0	31.5	--	--	--	--	--	--	--	--	--	--	--
4/13/2001	--		252.20	17.0	31.5	10.52	--	241.68	--	--	--	--	--	--	--	--
7/18/2001	--		252.20	17.0	31.5	11.03	--	241.17	--	--	--	--	--	--	--	--
10/1/2001	--		252.20	17.0	31.5	11.31	--	240.89	--	--	--	--	--	--	--	--
1/14/2002	P		252.20	17.0	31.5	9.87	--	242.33	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
4/3/2002	--		252.20	17.0	31.5	12.19	--	240.01	--	--	--	--	--	--	--	--
8/8/2002	--		252.20	17.0	31.5	7.04	--	245.16	--	--	--	--	--	--	--	--
11/27/2002	--		252.20	17.0	31.5	6.85	--	245.35	--	--	--	--	--	--	--	--
2/10/2003	NP		252.20	17.0	31.5	6.74	--	245.46	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	7.4
6/3/2003	--		252.20	17.0	31.5	14.35	--	237.85	--	--	--	--	--	--	--	--
8/14/2003	--		252.20	17.0	31.5	10.74	--	241.46	--	--	--	--	--	--	--	--
11/13/2003	--		252.20	17.0	31.5	10.68	--	241.52	--	--	--	--	--	--	--	--
02/13/2004	--		257.94	17.0	31.5	7.38	--	250.56	--	--	--	--	--	--	--	--
05/05/2004	--		257.94	17.0	31.5	7.43	--	250.51	--	--	--	--	--	--	--	--
08/30/2004	P		257.94	17.0	31.5	7.39	--	250.55	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.5	7.0
11/08/2004	--		257.94	17.0	31.5	15.57	--	242.37	--	--	--	--	--	--	--	--
02/07/2005	--		257.94	17.0	31.5	15.26	--	242.68	--	--	--	--	--	--	--	--
05/09/2005	--		257.94	17.0	31.5	11.31	--	246.63	--	--	--	--	--	--	--	--
08/11/2005	P		257.94	17.0	31.5	9.80	--	248.14	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.4	7.1
12/02/2005	--		257.94	17.0	31.5	14.55	--	243.39	--	--	--	--	--	--	--	--
02/15/2006	--		257.94	17.0	31.5	10.33	--	247.61	--	--	--	--	--	--	--	--
5/19/2006	--		257.94	17.0	31.5	6.50	--	251.44	--	--	--	--	--	--	--	--
8/25/2006	P		257.94	17.0	31.5	6.75	--	251.19	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.90	6.6
11/2/2006	--		257.94	17.0	31.5	7.15	--	250.79	--	--	--	--	--	--	--	--

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

Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Product Thickness (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.																
2/6/2007	--		257.94	17.0	31.5	6.93	--	251.01	--	--	--	--	--	--	--	--
5/9/2007	--		257.94	17.0	31.5	7.03	--	250.91	--	--	--	--	--	--	--	--
8/8/2007	P		257.94	17.0	31.5	7.01	--	250.93	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.64	7.12
11/14/2007	--		257.94	17.0	31.5	7.25	--	250.69	--	--	--	--	--	--	--	--
2/28/2008	--		257.94	17.0	31.5	6.85	--	251.09	--	--	--	--	--	--	--	--
5/23/2008	--		257.94	17.0	31.5	7.15	--	250.79	--	--	--	--	--	--	--	--
8/21/2008	P		257.94	17.0	31.5	7.17	--	250.77	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.38	7.27
11/13/2008	--		257.94	17.0	31.5	12.30	--	245.64	--	--	--	--	--	--	--	--
2/23/2009	--		257.94	17.0	31.5	7.61	--	250.33	--	--	--	--	--	--	--	--
5/14/2009	--		**257.94**	**17.0**	**31.5**	**7.50**	--	**250.44**	--	--	--	--	--	--	--	--
MW-7																
8/9/1996	--	g	235.95	8.5	13.5	--	--	--	--	--	--	--	--	--	--	--
11/8/1996	--	g	235.95	8.5	13.5	--	--	--	--	--	--	--	--	--	--	--
1/27/1997	--		235.95	8.5	13.5	--	--	--	2,900	29	<5	<5	580	220	--	--
3/21/1997	--		235.95	8.5	13.5	7.13	--	228.82	590	3.5	<0.5	<0.5	1.3	90	--	--
5/27/1997	--		235.95	8.5	13.5	9.02	--	226.93	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
8/5/1997	--		235.95	8.5	13.5	12.33	--	223.62	110	0.5	<0.5	<0.5	0.8	81	--	--
10/29/1997	--	g	235.95	8.5	13.5	--	--	--	--	--	--	--	--	--	--	--
2/25/1998	--		235.95	8.5	13.5	8.04	--	227.91	<50	<0.5	0.6	<0.5	0.7	<3	--	--
5/12/1998	--		235.95	8.5	13.5	8.88	--	227.07	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
7/28/1998	--		235.95	8.5	13.5	10.50	--	225.45	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
10/27/1998	--		235.95	8.5	13.5	8.75	--	227.20	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
2/8/1999	--		235.95	8.5	13.5	9.35	--	226.60	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
6/1/1999	NP		235.95	8.5	13.5	9.85	--	226.10	250	<0.5	0.6	<0.5	1.6	18	1	6.43
8/25/1999	NP		235.95	8.5	13.5	11.31	--	224.64	119	<0.5	5.7	<0.5	<0.5	11	0.41	8.28
10/29/1999	NP		235.95	8.5	13.5	9.08	--	226.87	<50	<0.5	<0.5	<0.5	<1	<3	1.29	5.82
2/25/2000	NP		235.95	8.5	13.5	8.02	--	227.93	<50	<0.5	<0.5	<0.5	<1	38	2.1	--
6/23/2000	NP		235.95	8.5	13.5	10.68	--	225.27	<50	<0.50	<0.50	<0.50	<0.50	14.4	1.6	--
8/17/2000	NP		235.95	8.5	13.5	11.85	--	224.10	70	<0.500	0.678	<0.500	1.07	14.2	1.59	--
11/10/2000	NP		235.95	8.5	13.5	9.62	--	226.33	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.09	--

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

Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Product Thickness (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.																
2/12/2001	NP		235.95	8.5	13.5	12.10	--	223.85	<50	<0.50	<0.50	<0.50	<0.50	<2.5	0.84	--
4/13/2001	P		235.95	8.5	13.5	7.95	--	228.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
7/18/2001	P		235.95	8.5	13.5	8.20	--	227.75	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
10/1/2001	NP		235.95	8.5	13.5	8.59	--	227.36	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
1/14/2002	P		235.95	8.5	13.5	6.93	--	229.02	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
4/3/2002	P		235.95	8.5	13.5	8.31	--	227.64	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
8/8/2002	P	h	235.95	8.5	13.5	12.11	--	223.84	--	--	--	--	--	--	--	--
11/27/2002	NP	h	235.95	8.5	13.5	13.01	--	222.94	--	--	--	--	--	--	--	--
2/10/2003	NP		235.95	8.5	13.5	10.02	--	225.93	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.5	6.7
6/3/2003	NP		235.95	8.5	13.5	6.82	--	229.13	<50	<0.50	<0.50	<0.50	<0.50	<0.50	8.1	6.8
8/14/2003	P		235.95	8.5	13.5	8.16	--	227.79	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.8	6.7
11/13/2003	--		235.95	8.5	13.5	8.07	--	227.88	--	--	--	--	--	--	--	--
02/13/2004	--		241.64	8.5	13.5	7.62	--	234.02	--	--	--	--	--	--	--	--
05/05/2004	--		241.64	8.5	13.5	11.01	--	230.63	--	--	--	--	--	--	--	--
08/30/2004	--	h	241.64	8.5	13.5	13.27	--	228.37	--	--	--	--	--	--	--	--
11/08/2004	--		241.64	8.5	13.5	13.22	--	228.42	--	--	--	--	--	--	--	--
02/07/2005	--		241.64	8.5	13.5	13.07	--	228.57	--	--	--	--	--	--	--	--
05/09/2005	--		241.64	8.5	13.5	7.57	--	234.07	--	--	--	--	--	--	--	--
08/11/2005	NP		241.64	8.5	13.5	11.55	--	230.09	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	6.7
12/02/2005	--		241.64	8.5	13.5	13.12	--	228.52	--	--	--	--	--	--	--	--
02/15/2006	--		241.64	8.5	13.5	7.27	--	234.37	--	--	--	--	--	--	--	--
5/19/2006	--		241.64	8.5	13.5	7.84	--	233.80	--	--	--	--	--	--	--	--
8/25/2006	P		241.64	8.5	13.5	12.19	--	229.45	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.33	6.2
11/2/2006	--		241.64	8.5	13.5	13.15	--	228.49	--	--	--	--	--	--	--	--
2/6/2007	--		241.64	8.5	13.5	11.12	--	230.52	--	--	--	--	--	--	--	--
5/9/2007	--		241.64	8.5	13.5	11.60	--	230.04	--	--	--	--	--	--	--	--
8/8/2007	--	g	241.64	8.5	13.5	--	--	--	--	--	--	--	--	--	--	--
11/14/2007	--	g	241.64	8.5	13.5	--	--	--	--	--	--	--	--	--	--	--
2/28/2008	--		241.64	8.5	13.5	7.70	--	233.94	--	--	--	--	--	--	--	--
5/23/2008	--		241.64	8.5	13.5	5.15	--	236.49	--	--	--	--	--	--	--	--
8/21/2008	--	g	241.64	8.5	13.5	--	--	--	--	--	--	--	--	--	--	--

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

Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Product Thickness (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.																
11/13/2008	--		241.64	8.5	13.5	12.98	--	228.66	--	--	--	--	--	--	--	--
2/23/2009	--		241.64	8.5	13.5	7.03	--	234.61	--	--	--	--	--	--	--	--
5/14/2009	--		**241.64**	**8.5**	**13.5**	**11.80**	--	**229.84**	--	--	--	--	--	--	--	--
MW-8																
8/9/1996	--		240.37	5.5	**14.0**	9.41	--	230.96	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
11/8/1996	--		240.37	5.5	**14.0**	9.19	--	231.18	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
3/21/1997	--		240.37	5.5	**14.0**	8.55	--	231.82	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
5/27/1997	--		240.37	5.5	**14.0**	11.06	--	229.31	91	0.6	<0.5	<0.5	0.6	66	--	--
8/5/1997	--		240.37	5.5	**14.0**	9.32	--	231.05	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
10/29/1997	--		240.37	5.5	**14.0**	9.35	--	231.02	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
2/25/1998	--		240.37	5.5	**14.0**	7.08	--	233.29	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
5/12/1998	--		240.37	5.5	**14.0**	8.61	--	231.76	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
7/28/1998	--		240.37	5.5	**14.0**	9.63	--	230.74	<50	<0.5	<0.5	<0.5	<0.5	4	--	--
10/27/1998	--		240.37	5.5	**14.0**	9.30	--	231.07	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
2/8/1999	--		240.37	5.5	**14.0**	5.56	--	234.81	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
6/1/1999	--	e	240.37	5.5	**14.0**	--	--	--	--	--	--	--	--	--	--	--
8/25/1999	--	e	240.37	5.5	**14.0**	--	--	--	--	--	--	--	--	--	--	--
10/29/1999	--	e	240.37	5.5	**14.0**	--	--	--	--	--	--	--	--	--	--	--
2/16/2000	--	e	240.37	5.5	**14.0**	--	--	--	--	--	--	--	--	--	--	--
6/23/2000	NP		240.37	5.5	**14.0**	9.45	--	230.92	<50	<0.50	<0.50	<0.500	<0.50	<2.5	1.9	--
8/17/2000	NP		240.37	5.5	**14.0**	6.40	--	233.97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.56	--
11/10/2000	--	f	240.37	5.5	**14.0**	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
11/10/2000	NP		240.37	5.5	**14.0**	6.25	--	234.12	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.93	--
2/12/2001	NP		240.37	5.5	**14.0**	8.11	--	232.26	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.65	--
4/13/2001	P		240.37	5.5	**14.0**	5.19	--	235.18	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
7/18/2001	NP		240.37	5.5	**14.0**	5.55	--	234.82	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
10/1/2001	NP		240.37	5.5	**14.0**	6.41	--	233.96	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
1/14/2002	P		240.37	5.5	**14.0**	5.07	--	235.30	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--
4/3/2002	P		240.37	5.5	**14.0**	8.60	--	231.77	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
8/8/2002	P		240.37	5.5	**14.0**	9.58	--	230.79	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.7	7

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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 bgs)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH
									GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE		
MW-8 Cont.																
11/27/2002	P		240.37	5.5	**14.0**	9.15	--	231.22	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.1	6.7
2/10/2003	P		240.37	5.5	**14.0**	8.55	--	231.82	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.3	6.6
6/3/2003	--		240.37	5.5	**14.0**	8.72	--	231.65	<50	<0.50	<0.50	<0.50	<0.50	<0.50	9.1	6.3
8/14/2003	--		240.37	5.5	**14.0**	9.52	--	230.85	<50	<0.50	<0.50	<0.50	<0.50	<0.50	5.5	6.4
11/13/2003	--		240.37	5.5	14.0	9.45	--	230.92	--	--	--	--	--	--	--	--
02/13/2004	--		246.09	5.5	14.0	8.38	--	237.71	--	--	--	--	--	--	--	--
05/05/2004	--		246.09	5.5	14.0	9.30	--	236.79	--	--	--	--	--	--	--	--
08/30/2004	P		246.09	5.5	14.0	9.69	--	236.40	<50	<0.50	<0.50	<0.50	0.75	<0.50	5.1	6.5
11/08/2004	--		246.09	5.5	14.0	8.34	--	237.75	--	--	--	--	--	--	--	--
02/07/2005	--		246.09	5.5	14.0	8.23	--	237.86	--	--	--	--	--	--	--	--
05/09/2005	--		246.09	5.5	14.0	7.07	--	239.02	--	--	--	--	--	--	--	--
08/11/2005	--	e	246.09	5.5	14.0	--	--	--	--	--	--	--	--	--	--	--
12/02/2005	--		246.09	5.5	14.0	8.15	--	237.94	--	--	--	--	--	--	--	--
02/15/2006	--	e	246.09	5.5	14.0	--	--	--	--	--	--	--	--	--	--	--
5/19/2006	--		246.09	5.5	14.0	8.48	--	237.61	--	--	--	--	--	--	--	--
8/25/2006	P		246.09	5.5	14.0	9.45	--	236.64	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.27	6.0
11/2/2006	--		--	5.5	14.0	--	--	--	--	--	--	--	--	--	--	--
2/6/2007	--		246.09	5.5	14.0	--	--	--	--	--	--	--	--	--	--	--
5/9/2007	--	e	246.09	5.5	14.0	--	--	--	--	--	--	--	--	--	--	--
8/8/2007	--	e	246.09	5.5	14.0	--	--	--	--	--	--	--	--	--	--	--
11/14/2007	--		246.09	5.5	14.0	8.78	--	237.31	--	--	--	--	--	--	--	--
2/28/2008	--		246.09	5.5	14.0	7.77	--	238.32	--	--	--	--	--	--	--	--
5/23/2008	--		246.09	5.5	14.0	8.30	--	237.79	--	--	--	--	--	--	--	--
8/21/2008	--	e	246.09	5.5	14.0	--	--	--	--	--	--	--	--	--	--	--
11/13/2008	--	e	246.09	5.5	14.0	--	--	--	--	--	--	--	--	--	--	--
2/23/2009	--	e	246.09	5.5	14.0	--	--	--	--	--	--	--	--	--	--	--
5/14/2009	--	**e**	**246.09**	**5.5**	**14.0**	--	--	--	--	--	--	--	--	--	--	--
VW-1																
2/23/1996	--		--	6.0	**14.0**	5.29	--	--	21,000	490	57	520	1,500	240	--	--
5/10/1996	--		--	6.0	**14.0**	6.80	--	--	3,700	61	<5	100	50	200	--	--

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

Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH
									GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE		
VW-1 Cont.																
8/9/1996	--		--	6.0	14.0	7.03	--	--	970	2.7	<2.5	2.7	3.7	180	--	--
11/8/1996	--	e	--	6.0	14.0	--	--	--	--	--	--	--	--	--	--	--
3/21/1997	--		--	6.0	14.0	7.51	--	--	640	<4	<1	1	3	194	--	--
5/27/1997	--		--	6.0	14.0	7.51	--	--	--	--	--	--	--	--	--	--
8/5/1997	--		--	6.0	14.0	7.51	--	--	630	<1	<1	3	2	120	--	--
10/29/1997	--		--	6.0	14.0	7.53	--	--	600	<0.5	<0.5	<0.5	1.6	84	--	--
2/25/1998	--		--	6.0	14.0	6.77	--	--	230	<4	<0.7	1.2	0.5	27	--	--
5/12/1998	--		--	6.0	14.0	7.43	--	--	340	<0.5	0.5	2.3	0.8	29	--	--
7/28/1998	--		--	6.0	14.0	7.00	--	--	240	<0.5	<0.5	<0.5	1.1	54	--	--
10/27/1998	--		--	6.0	14.0	7.52	--	--	230	<0.5	<0.5	<0.5	<0.5	65	--	--
2/8/1999	--	c	--	6.0	14.0	7.05	--	--	<50	<0.5	<0.5	<0.5	<0.5	<3/36	--	--
6/1/1999	NP		--	6.0	14.0	7.55	--	--	180	<0.5	<0.5	<0.5	<0.5	23	1	6.36
8/25/1999	NP		--	6.0	14.0	7.66	--	--	130	<0.5	5.6	<0.5	<0.5	40	0.39	7.5
10/29/1999	NP		--	6.0	14.0	7.59	--	--	200	1	<0.5	0.6	1.6	36	0.89	5.65
2/16/2000	NP		--	6.0	14.0	7.03	--	--	210	<0.5	0.9	2.2	1.9	11	1.41	--
6/23/2000	NP		--	6.0	14.0	7.71	--	--	175	1.04	<0.500	<0.500	<0.500	14.4	1.9	--
8/17/2000	NP		--	6.0	14.0	7.75	--	--	180	<0.500	<0.500	0.622	0.76	23.7	0.63	--
11/10/2000	NP		--	6.0	14.0	6.83	--	--	157	0.955	<0.500	0.973	<0.500	32.5	1.03	--
2/12/2001	NP		--	6.0	14.0	7.85	--	--	273	0.627	<0.500	<0.500	0.507	9.19	0.47	--
4/13/2001	P		--	6.0	14.0	5.11	--	--	213	<0.500	<0.500	<0.500	<0.500	6.38	--	--
7/18/2001	P		--	6.0	14.0	5.39	--	--	270	<0.50	<0.50	<0.50	<0.50	20	--	--
10/1/2001	NP		--	6.0	14.0	6.50	--	--	200	<0.50	<0.50	<0.50	0.81	14	--	--
1/14/2002	P		--	6.0	14.0	5.04	--	--	110	<0.50	<0.50	<0.50	<0.50	6.4	--	--
4/3/2002	P		--	6.0	14.0	7.51	--	--	91	0.72	<0.50	<0.50	<0.50	12	--	--
8/8/2002	P		--	6.0	14.0	9.58	--	--	<50	<0.50	<0.50	<0.50	<0.50	33	0.6	6.3
11/27/2002	P		--	6.0	14.0	7.42	--	--	52	0.72	0.78	<0.50	<0.50	21	1	6.1
2/10/2003	NP		--	6.0	14.0	7.38	--	--	52	<0.50	<0.50	<0.50	<0.50	11	1.7	6.5
6/3/2003	--		--	6.0	14.0	7.30	--	--	71	<0.50	<0.50	<0.50	<0.50	13	3.3	6.3
8/14/2003	--		--	6.0	14.0	7.59	--	--	<50	<0.50	<0.50	<0.50	<0.50	18	0.3	6.1
11/13/2003	P		--	6.0	14.0	7.43	--	--	<50	<0.50	<0.50	<0.50	<0.50	13	0.6	6.1
02/13/2004	P		253.19	6.0	14.0	7.35	--	245.84	59	<0.50	<0.50	<0.50	0.56	8.0	1.0	6.0

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

Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH
									GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE		
VW-1 Cont.																
05/05/2004	P		253.19	6.0	14.0	7.30	--	245.89	<50	0.71	<0.50	<0.50	0.60	11	0.1	6.4
08/30/2004	P		253.19	6.0	14.0	8.50	--	244.69	<50	<0.50	<0.50	<0.50	<0.50	24	0.2	6.2
11/08/2004	P		253.19	6.0	14.0	7.22	--	245.97	230	<0.50	<0.50	<0.50	0.75	27	0.65	5.1
02/07/2005	P		253.19	6.0	14.0	7.25	--	245.94	<50	<0.50	<0.50	<0.50	<0.50	5.1	1.57	5.9
05/09/2005	P		253.19	6.0	14.0	7.10	--	246.09	64	<0.50	<0.50	<0.50	<0.50	6.9	3.5	--
08/11/2005	P		253.19	6.0	14.0	7.89	--	245.30	<50	<0.50	<0.50	<0.50	<0.50	10	0.04	6.3
12/02/2005	P		253.19	6.0	14.0	7.32	--	245.87	130	<0.50	<0.50	<0.50	0.57	9.0	1.85	6.6
02/15/2006	P		253.19	6.0	14.0	7.16	--	246.03	<50	<0.50	<0.50	<0.50	<0.50	2.8	0.9	6.2
5/19/2006	P		253.19	6.0	14.0	7.24	--	245.95	<50	0.71	<0.50	0.65	1.4	3.7	0.85	6.2
8/25/2006	P		253.19	6.0	14.0	7.48	--	245.71	50	<0.50	<0.50	<0.50	<0.50	8.3	0.49	6.2
11/2/2006	P		253.19	6.0	14.0	7.77	--	245.42	57	<0.50	<0.50	<0.50	<0.50	11	1.84	6.88
2/6/2007	NP		253.19	6.0	14.0	7.35	--	245.84	64	<0.50	<0.50	<0.50	<0.50	2.3	0.70	6.92
5/9/2007	NP		253.19	6.0	14.0	7.40	--	245.79	<50	<0.50	<0.50	<0.50	<0.50	3.2	1.16	6.72
8/8/2007	NP		253.19	6.0	14.0	7.85	--	245.34	87	<0.50	<0.50	<0.50	<0.50	1.9	1.46	7.07
11/14/2007	NP		253.19	6.0	14.0	7.52	--	245.67	79	<0.50	<0.50	<0.50	<0.50	3.7	1.49	6.47
2/28/2008	NP		253.19	6.0	14.0	7.22	--	245.97	88	<0.50	<0.50	<0.50	<0.50	0.86	1.36	6.51
5/23/2008	NP		253.19	6.0	14.0	7.40	--	245.79	<50	<0.50	<0.50	<0.50	<0.50	0.91	1.05	6.92
8/21/2008	NP		253.19	6.0	14.0	7.52	--	245.67	<50	<0.50	<0.50	<0.50	<0.50	1.4	1.09	6.99
11/13/2008	NP		253.19	6.0	14.0	7.52	--	245.67	<50	<0.50	<0.50	<0.50	<0.50	1.5	1.12	6.80
2/23/2009	NP		253.19	6.0	14.0	6.85	--	246.34	<50	<0.50	<0.50	<0.50	<0.50	0.84	1.11	5.56
5/14/2009	**NP**		**253.19**	**6.0**	**14.0**	**7.35**	**--**	**245.84**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**1.5**	**1.05**	**6.15**
VW-2																
2/23/1996	--	i	--	--	--	6.92	--	--	--	--	--	--	--	--	--	--
8/8/2002	--	i	--	--	--	10.51	--	--	--	--	--	--	--	--	--	--
VW-3																
8/8/2002	--		--	5.5	14.5	8.85	--	--	<50	<0.50	<0.50	<0.50	<0.50	2.5	0.7	6.1
11/27/2002	--	i	--	5.5	14.5	8.80	--	--	--	--	--	--	--	--	--	--
2/10/2003	--	i	--	5.5	14.5	8.41	--	--	--	--	--	--	--	--	--	--
6/3/2003	--	i	--	5.5	14.5	8.71	--	--	--	--	--	--	--	--	--	--

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

Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH
									GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE		
VW-3 Cont.																
8/14/2003	--	i	--	5.5	**14.5**	8.81	--	--	--	--	--	--	--	--	--	--
11/13/2003	--		--	5.5	14.5	8.75	--	--	--	--	--	--	--	--	--	--
02/13/2004	--		252.26	5.5	14.5	8.48	--	243.78	--	--	--	--	--	--	--	--
05/05/2004	--		252.26	5.5	14.5	8.85	--	243.41	--	--	--	--	--	--	--	--
08/30/2004	--		252.26	5.5	14.5	9.07	--	243.19	--	--	--	--	--	--	--	--
11/08/2004	--		252.26	5.5	14.5	8.32	--	243.94	--	--	--	--	--	--	--	--
02/07/2005	--		252.26	5.5	14.5	8.28	--	243.98	--	--	--	--	--	--	--	--
05/09/2005	--		252.26	5.5	14.5	8.44	--	243.82	--	--	--	--	--	--	--	--
08/11/2005	--		252.26	5.5	14.5	8.96	--	243.30	--	--	--	--	--	--	--	--
12/02/2005	--		252.26	5.5	14.5	8.26	--	244.00	--	--	--	--	--	--	--	--
02/15/2006	--		252.26	5.5	14.5	7.61	--	244.65	--	--	--	--	--	--	--	--
5/19/2006	--		252.26	5.5	14.5	8.83	--	243.43	--	--	--	--	--	--	--	--
8/25/2006	--		252.26	5.5	14.5	8.95	--	243.31	--	--	--	--	--	--	--	--
11/2/2006	--		252.26	5.5	14.5	9.08	--	243.18	--	--	--	--	--	--	--	--
2/6/2007	--		252.26	5.5	14.5	8.61	--	243.65	--	--	--	--	--	--	--	--
5/9/2007	--		252.26	5.5	14.5	8.79	--	243.47	--	--	--	--	--	--	--	--
8/8/2007	--		252.26	5.5	14.5	9.10	--	243.16	--	--	--	--	--	--	--	--
11/14/2007	--		252.26	5.5	14.5	8.52	--	243.74	--	--	--	--	--	--	--	--
2/28/2008	--		252.26	5.5	14.5	8.27	--	243.99	--	--	--	--	--	--	--	--
5/23/2008	--		252.26	5.5	14.5	8.95	--	243.31	--	--	--	--	--	--	--	--
8/21/2008	--		252.26	5.5	14.5	9.06	--	243.20	--	--	--	--	--	--	--	--
11/13/2008	--		252.26	5.5	14.5	8.80	--	243.46	--	--	--	--	--	--	--	--
2/23/2009	--		252.26	5.5	14.5	6.60	--	245.66	--	--	--	--	--	--	--	--
5/14/2009	--		**252.26**	**5.5**	**14.5**	**8.70**	--	**243.56**	--	--	--	--	--	--	--	--
VW-4																
5/10/1996	--		--	5.5	**14.5**	8.58	--	--	13,000	2,500	41	420	660	43,000	--	--
8/9/1996	--		--	5.5	**14.5**	11.70	--	--	<50	<0.5	<0.5	<0.5	<0.5	6,200	--	--
11/8/1996	--		--	5.5	**14.5**	9.38	--	--	7,800	510	7	180	370	21,000	--	--
3/21/1997	--		--	5.5	**14.5**	9.11	--	--	10,000	290	10	270	230	8,900	--	--
5/27/1997	--		--	5.5	**14.5**	9.34	--	--	--	--	--	--	--	--	--	--

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

Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Product Thickness (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.																
8/5/1997	--		--	5.5	14.5	9.47	--	--	<10,000	180	<100	<100	110	12,000	--	--
10/29/1997	--		--	5.5	14.5	9.35	--	--	9,800	200	69	260	360	4,900	--	--
2/25/1998	--		--	5.5	14.5	7.08	--	--	<50	2.5	<0.5	<0.5	0.7	<3	--	--
5/12/1998	--		--	5.5	14.5	9.17	--	--	3,200	<20	22	29	52	2,100	--	--
7/28/1998	--		--	5.5	14.5	9.55	--	--	<10,000	<100	<100	<100	<100	5,100	--	--
10/27/1998	--		--	5.5	14.5	9.92	--	--	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--
2/8/1999	--	c	--	5.5	14.5	7.50	--	--	<2,500	<25	<25	28	<25	2,400/3,100	--	--
6/1/1999	NP		--	5.5	14.5	9.87	--	--	2,100	2.5	1.1	2.5	15	3,300	2	6.69
8/25/1999	NP		--	5.5	14.5	9.78	--	--	1,300	4.4	4.9	1.7	2.9	4,600	0.36	7.94
10/29/1999	NP		--	5.5	14.5	9.93	--	--	1,400	<0.5	1.8	1.6	3	4,200	1.18	6.64
2/16/2000	NP		--	5.5	14.5	7.45	--	--	1,800	<0.5	2.9	15	10	3,400	1.01	--
6/23/2000	NP		--	5.5	14.5	9.74	--	--	1,360	<2.00	2.26	<2.00	2.25	4,900	1.5	--
6/23/2000	--	f	--	5.5	14.5	--	--	--	1,260	<2.00	<2.00	<2.00	2.73	2,720	--	--
8/17/2000	NP		--	5.5	14.5	9.95	--	--	2,230	<10.0	<10.0	<10.0	<10.0	5,310	1.13	--
11/10/2000	NP		--	5.5	14.5	9.22	--	--	1,390	18.5	<5.00	<5.00	<5.00	8,840	1.25	--
2/12/2001	NP		--	5.5	14.5	8.99	--	--	1,400	9.42	<2.00	17.8	16.1	3,570	0.91	--
4/13/2001	NP		--	5.5	14.5	7.80	--	--	556	3.82	<1.25	<1.25	<1.25	2,450	--	--
7/18/2001	--	f	--	5.5	14.5	--	--	--	2,000	8.7	2.2	<2.0	<2.0	3,400	--	--
7/18/2001	NP		--	5.5	14.5	7.73	--	--	2,100	9.2	<2.0	<2.0	<2.0	3,700	--	--
10/1/2001	NP		--	5.5	14.5	6.69	--	--	2,000	<10	<10	<10	13	5,900	--	--
10/1/2001	--	f	--	5.5	14.5	--	--	--	1,800	<10	<10	<10	<10	5,800	--	--
1/14/2002	P		--	5.5	14.5	5.93	--	--	580	<2.0	<2.0	<2.0	<2.0	2,700	--	--
4/3/2002	NP		--	5.5	14.5	9.60	--	--	1,400	5.2	16	<5.0	9.6	2,200	--	--
8/8/2002	--	i	--	5.5	14.5	10.01	--	--	--	--	--	--	--	--	--	--
11/27/2002	P		--	5.5	14.5	10.30	--	--	<10,000	<100	<100	<100	<100	3,800	1.7	6.7
2/10/2003	NP		--	5.5	14.5	10.06	--	--	<5,000	<50	<50	<50	<50	2,500	1	6.8
6/3/2003	--		--	5.5	14.5	10.04	--	--	<1,000	<10	<10	<10	<10	440	1.9	6.6
8/14/2003	--		--	5.5	14.5	9.66	--	--	<500	<5.0	<5.0	<5.0	<5.0	170	0.8	6.7
11/13/2003	P		--	5.5	14.5	10.01	--	--	<500	<5.0	<5.0	<5.0	<5.0	130	1.7	6.4
02/13/2004	P		252.69	5.5	14.5	9.34	--	243.35	330	<2.5	<2.5	<2.5	3.0	210	2.0	6.6
05/05/2004	P		252.69	5.5	14.5	10.07	--	242.62	130	<1.0	<1.0	<1.0	<1.0	66	1.2	6.8

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

Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Product Thickness (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.																
08/30/2004	P		252.69	5.5	14.5	10.32	--	242.37	<500	<5.0	<5.0	<5.0	<5.0	220	1.1	6.6
11/08/2004	P		252.69	5.5	14.5	9.35	--	243.34	480	<2.5	<2.5	<2.5	<2.5	140	1.1	6.0
02/07/2005	P		252.69	5.5	14.5	9.22	--	243.47	180	<0.50	<0.50	<0.50	<0.50	47	1.83	6.5
05/09/2005	P		252.69	5.5	14.5	9.78	--	242.91	120	0.63	<0.50	<0.50	<0.50	37	--	--
08/11/2005	P		252.69	5.5	14.5	10.11	--	242.58	74	<0.50	<0.50	<0.50	<0.50	15	0.7	6.7
12/02/2005	P		252.69	5.5	14.5	9.59	--	243.10	160	<1.0	<1.0	<1.0	<1.0	28	0.75	6.9
02/15/2006	P		252.69	5.5	14.5	8.56	--	244.13	64	<0.50	<0.50	<0.50	<0.50	11	0.9	6.9
5/19/2006	P		252.69	5.5	14.5	9.95	--	242.74	150	<0.50	<0.50	<0.50	1.2	16	0.76	6.7
8/25/2006	P		252.69	5.5	14.5	10.03	--	242.66	140	<0.50	<0.50	<0.50	<0.50	17	1.14	6.7
11/2/2006	P		252.69	5.5	14.5	10.13	--	242.56	120	<0.50	<0.50	<0.50	<0.50	20	1.76	6.49
2/6/2007	NP		252.69	5.5	14.5	9.57	--	243.12	<50	<0.50	<0.50	<0.50	<0.50	1.6	0.98	6.89
5/9/2007	NP		252.69	5.5	14.5	9.75	--	242.94	110	<0.50	<0.50	<0.50	<0.50	21	0.76	6.94
8/8/2007	NP		252.69	5.5	14.5	10.13	--	242.56	140	<0.50	<0.50	<0.50	<0.50	5.4	0.88	6.81
11/14/2007	NP		252.69	5.5	14.5	9.81	--	242.88	150	<0.50	<0.50	<0.50	<0.50	6.4	1.17	6.67
2/28/2008	NP		252.69	5.5	14.5	9.00	--	243.69	<50	<0.50	<0.50	<0.50	<0.50	8.4	0.92	6.55
5/23/2008	NP		252.69	5.5	14.5	9.73	--	242.96	68	<1.0	<1.0	<1.0	<1.0	6.4	1.40	6.92
8/21/2008	NP		252.69	5.5	14.5	10.04	--	242.65	74	<2.5	<2.5	<2.5	<2.5	3.2	1.29	6.89
11/13/2008	NP		252.69	5.5	14.5	9.95	--	242.74	89	<2.0	<2.0	<2.0	<2.0	2.7	1.23	6.93
2/23/2009	NP	1	252.69	5.5	14.5	7.35	--	245.34	290	0.97	<0.50	<0.50	<0.50	27	1.27	5.66
5/14/2009	**NP**		**252.69**	**5.5**	**14.5**	**9.60**	**--**	**243.09**	**<50**	**0.54**	**<0.50**	**<0.50**	**<0.50**	**10**	**1.08**	**7.3**

SYMBOLS AND ABBREVIATIONS:
-- = Not analyzed/applicable/measured/available
< = Not detected at or above laboratory reporting limit
BTEX = Benzene, toluene, ethylbenzene and xylenes
DO = Dissolved oxygen
DTW = Depth to water in ft bgs
ft bgs = feet below ground surface
GRO = Gasoline range organics
GWE = Groundwater elevation measured in ft
mg/L = Milligrams per liter
MTBE = Methyl tert butyl ether
NP = Well 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 = SPH detected and GWE corrected: Corrected elevation (Z') = Z + (h * 0.73) where: Z: measured elevation, h: floating product thickness, 0.73: density ratio of oil to water.
b = MTBE analyzed by EPA method 8240.
c = MTBE, sample also analyzed for fuel oxygenates.
d = Well was decommissioned on 2/12/1996.
e = Well inaccessible.
f = Duplicate
g = Well was dry.
h = Insufficient water to sample.
i = Well is not part of the sampling program and therefore was not sampled.
j = Sheen in well.
k = Could not locate well.
l = Quantitation of unknown hydrocarbon(s) in sample based on gasoline.

NOTES:
Wells surveyed to NAVD'88 datum on 1/27/2004.

Beginning on the first quarter 2003 sampling event (2/10/2003), TPH-g, BTEX and MTBE analyzed by EPA method 8260. Prior to 2/10/2003, BTEX by EPA method 8021B from 10/29/99 to 2/10/03, and 8020 prior to 10/29/99.

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

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

Values for DO and pH were obtained through field measurements.

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 #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-3									
2/10/2003	<40	<20	<0.50	<0.50	<0.50	<0.50	--	--	
08/30/2004	<100	<20	0.72	<0.50	<0.50	<0.50	<0.50	<0.50	
08/11/2005	<100	<20	0.73	<0.50	<0.50	<0.50	<0.50	<0.50	
8/25/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/8/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/21/2008	<300	<10	0.81	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-4									
2/10/2003	<40	<20	<0.50	<0.50	<0.50	<0.50	--	--	
6/3/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	
8/14/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/30/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/11/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/25/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/8/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/21/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-5									
2/10/2003	<200	<100	100	<0.50	<0.50	<0.50	--	--	
6/3/2003	<1,000	<200	160	<5.0	<5.0	<5.0	--	--	
11/13/2003	<1,000	<200	90	<5.0	<5.0	<5.0	--	--	
02/13/2004	<200	41	90	<1.0	<1.0	<1.0	<1.0	<1.0	
05/05/2004	<500	<100	130	<2.5	<2.5	<2.5	<2.5	<2.5	
08/30/2004	<500	100	85	<2.5	<2.5	<2.5	<2.5	<2.5	
11/08/2004	<200	43	69	<1.0	<1.0	<1.0	<1.0	<1.0	
02/07/2005	<200	<40	15	<1.0	<1.0	<1.0	<1.0	<1.0	
05/09/2005	<200	<40	19	<1.0	<1.0	<1.0	<1.0	<1.0	a
08/11/2005	<500	<100	51	<2.5	<2.5	<2.5	<2.5	<2.5	
12/02/2005	<500	<100	13	<2.5	<2.5	<2.5	<2.5	<2.5	
02/15/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
5/19/2006	<300	25	15	<0.50	<0.50	<0.50	<0.50	<0.50	a, c
8/25/2006	<1,500	<100	17	<2.5	<2.5	<2.5	<2.5	<2.5	

Table 2. Summary of Fuel Additives Analytical Data

Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-5 Cont.									
11/2/2006	<600	70	18	<1.0	<1.0	<1.0	<1.0	<1.0	a
2/6/2007	<600	45	13	<1.0	<1.0	<1.0	<1.0	<1.0	
5/9/2007	<600	69	31	<1.0	<1.0	<1.0	<1.0	<1.0	
8/8/2007	<600	<40	11	<1.0	<1.0	<1.0	<1.0	<1.0	
11/14/2007	<600	46	11	<1.0	<1.0	<1.0	<1.0	<1.0	
2/28/2008	<1,500	<50	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
5/23/2008	<300	52	17	<0.50	<0.50	<0.50	<0.50	<0.50	
8/21/2008	<300	40	8.7	<0.50	<0.50	<0.50	<0.50	<0.50	
11/13/2008	<300	27	5.6	<0.50	<0.50	<0.50	<0.50	<0.50	
2/23/2009	<300	14	3.2	<0.50	<0.50	<0.50	<0.50	0.61	
5/14/2009	**<300**	**31**	**5.4**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-6									
2/10/2003	<40	<20	<0.50	<0.50	<0.50	<0.50	--	--	
08/30/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/11/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/25/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/8/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/21/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-7									
2/10/2003	<40	<20	<0.50	<0.50	<0.50	<0.50	--	--	
6/3/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	
8/14/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/11/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/25/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-8									
2/10/2003	<40	<20	<0.50	<0.50	<0.50	<0.50	--	--	
6/3/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	
8/14/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/30/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
02/15/2006	--	--	--	--	--	--	--	--	Well inaccessible

Table 2. Summary of Fuel Additives Analytical Data

Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-8 Cont.									
8/25/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
VW-1									
2/10/2003	<40	<20	11	<0.50	<0.50	<0.50	--	--	
6/3/2003	<100	<20	13	<0.50	<0.50	<0.50	--	--	
8/14/2003	<100	<20	18	<0.50	<0.50	<0.50	<0.50	<0.50	
11/13/2003	<100	<20	13	<0.50	<0.50	<0.50	--	--	
02/13/2004	<100	<20	8.0	<0.50	<0.50	<0.50	<0.50	<0.50	
05/05/2004	<100	<20	11	<0.50	<0.50	<0.50	<0.50	<0.50	
08/30/2004	<100	<20	24	<0.50	<0.50	<0.50	<0.50	<0.50	
11/08/2004	<100	<20	27	<0.50	<0.50	<0.50	<0.50	<0.50	
02/07/2005	<100	<20	5.1	<0.50	<0.50	<0.50	<0.50	<0.50	
05/09/2005	<100	<20	6.9	<0.50	<0.50	<0.50	<0.50	<0.50	
08/11/2005	<100	<20	10	<0.50	<0.50	<0.50	<0.50	<0.50	
12/02/2005	<100	<20	9.0	<0.50	<0.50	<0.50	<0.50	<0.50	a
02/15/2006	<300	<20	2.8	<0.50	<0.50	<0.50	<0.50	<0.50	
5/19/2006	<300	<20	3.7	<0.50	<0.50	<0.50	<0.50	<0.50	a, c
8/25/2006	<300	<20	8.3	<0.50	<0.50	<0.50	<0.50	<0.50	
11/2/2006	<300	<20	11	<0.50	<0.50	<0.50	<0.50	<0.50	a
2/6/2007	<300	<20	2.3	<0.50	<0.50	<0.50	<0.50	<0.50	
5/9/2007	<300	<20	3.2	<0.50	<0.50	<0.50	<0.50	<0.50	
8/8/2007	<300	<20	1.9	<0.50	<0.50	<0.50	<0.50	<0.50	
11/14/2007	<300	<20	3.7	<0.50	<0.50	<0.50	<0.50	<0.50	
2/28/2008	<300	<10	0.86	<0.50	<0.50	<0.50	<0.50	<0.50	
5/23/2008	<300	<10	0.91	<0.50	<0.50	<0.50	<0.50	<0.50	
8/21/2008	<300	<10	1.4	<0.50	<0.50	<0.50	<0.50	<0.50	
11/13/2008	<300	<10	1.5	<0.50	<0.50	<0.50	<0.50	<0.50	
2/23/2009	<300	<10	0.84	<0.50	<0.50	<0.50	<0.50	<0.50	
5/14/2009	**<300**	**<10**	**1.5**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
VW-3									
VW-4									

Table 2. Summary of Fuel Additives Analytical Data

Station #6002, 6235 Seminary Ave., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
VW-4 Cont.									
2/10/2003	<4,000	<2,000	2500	<0.50	<0.50	<0.50	--	--	
6/3/2003	<2,000	4,100	440	<10	<10	<10	--	--	
8/14/2003	<1,000	3,200	170	<5.0	<5.0	<5.0	<5.0	<5.0	
11/13/2003	<1,000	3,300	130	<5.0	<5.0	<5.0	--	--	
02/13/2004	<500	1,300	210	<2.5	<2.5	<2.5	<2.5	<2.5	
05/05/2004	<200	1,500	66	<1.0	1.3	<1.0	<1.0	<1.0	
08/30/2004	<1,000	5,400	220	<5.0	5.4	<5.0	<5.0	<5.0	
11/08/2004	<500	2,700	140	<2.5	<2.5	<2.5	<2.5	<2.5	
02/07/2005	<100	1,000	47	<0.50	0.89	<0.50	<0.50	<0.50	
05/09/2005	<100	1,200	37	<0.50	0.92	<0.50	<0.50	<0.50	
08/11/2005	<100	2,000	15	<0.50	1.8	<0.50	<0.50	<0.50	b
12/02/2005	<200	2,400	28	<1.0	2.2	<1.0	<1.0	<1.0	
02/15/2006	<300	230	11	<0.50	<0.50	<0.50	<0.50	<0.50	
5/19/2006	<300	580	16	<0.50	<0.50	<0.50	<0.50	<0.50	a
8/25/2006	<300	1,900	17	<0.50	1.9	<0.50	<0.50	<0.50	
11/2/2006	<300	2,400	20	<0.50	2.3	<0.50	<0.50	<0.50	a
2/6/2007	<300	<20	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	
5/9/2007	<300	410	21	<0.50	<0.50	<0.50	<0.50	<0.50	
8/8/2007	<300	1,300	5.4	<0.50	1.2	<0.50	<0.50	<0.50	
11/14/2007	<300	1,700	6.4	<0.50	1.7	<0.50	<0.50	<0.50	
2/28/2008	<300	59	8.4	<0.50	<0.50	<0.50	<0.50	<0.50	
5/23/2008	<600	280	6.4	<1.0	<1.0	<1.0	<1.0	<1.0	
8/21/2008	<1,500	720	3.2	<2.5	<2.5	<2.5	<2.5	<2.5	
11/13/2008	<1,200	940	2.7	<2.0	<2.0	<2.0	<2.0	<2.0	
2/23/2009	<300	99	27	<0.50	<0.50	<0.50	<0.50	<0.50	
5/14/2009	**<300**	**100**	**10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	

SYMBOLS AND ABBREVIATIONS:
-- = Not analyzed/applicable/measured/available
< = Not detected at or above the 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 = Calibration verification for ethanol was within the method limits but outside the contract limits.
b = The initial analysis for TBA was within holding time but required dilution.

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

The data within this table collected prior to August 2002 was provided to URS by RM and their previous consultants. URS has not verified the accuracy of this information.

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 #6002, 6235 Seminary Ave., Oakland, CA

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
3/15/1995	West-Southwest	0.08
5/30/1995	West-Southwest	0.08
9/1/1995	West-Southwest	0.09
11/13/1995	West-Southwest	0.08
2/23/1996	West-Southwest	0.08
5/10/1996	West-Southwest	0.08
8/9/1996	Southwest	0.08
11/8/1996	Southwest	0.06
3/21/1997	West-Southwest	0.05
5/27/1997	West-Southwest	0.07
8/5/1997	West	0.08
10/29/1997	West-Southwest	0.04
2/25/1998	West-Southwest	0.05
5/12/1998	West	0.07
7/28/1998	West	0.07
10/27/1998	West-Southwest	0.06
2/8/1999	West-Southwest	0.07
6/1/1999	West-Northwest	0.07
8/25/1999	West-Southwest	0.07
10/29/1999	West	0.07
2/16/2000	Southwest	0.05
6/23/2000	West	0.04
8/17/2000	West	0.09
11/10/2000	West-Southwest	0.08
2/12/2001	West-Southwest	0.07
4/13/2001	West	0.09
7/18/2001	West	0.08
10/1/2001	West-Southwest	0.08
1/14/2002	West-Southwest	0.07
4/3/2002	West-Southwest	0.08
8/8/2002	West-Southwest	0.09
11/27/2002	West-Southwest	0.08
2/10/2003	Southwest	0.06
6/3/2003	West	0.07
8/14/2003	West-Southwest	0.07
11/13/2003	West-Southwest	0.07
2/13/2004	Southwest	0.05
5/4/2004	Southwest	0.06
8/30/2004	Southwest	0.07
11/8/2004	Southwest	0.10
2/7/2005	Southwest	0.1
5/9/2005	Southwest	0.07

Table 3. Historical Ground-Water Flow Direction and Gradient

Station #6002, 6235 Seminary Ave., Oakland, CA

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
8/11/2005	West	0.07
12/2/2005	Southwest	0.10
2/15/2006	Southwest	0.07
4/28/2006	West	0.07
8/25/2006	West	0.07
11/2/2006	West	0.09
2/6/2007	West	0.05
5/9/2007	West	0.05
8/8/2007	West	0.05
11/14/2007	West	0.06
2/28/2008	West-Southwest	0.06
5/23/2008	West-Southwest	0.06
8/21/2008	West-Southwest	0.07
11/13/2008	West	0.08
2/23/2009	West	0.05
5/14/2009	**West-Southwest**	**0.06**

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

STRATUS GROUND-WATER SAMPLING DATA PACKAGE
(INCLUDES FIELD DATA SHEET, LABORATORY ANALYTICAL REPORT WITH CHAIN-OF-CUSTORDY DOCUMENTATION, AND FIELD PROCEDURES)

STRATUS
ENVIRONMENTAL, INC.

3330 Cameron Park Drive, Ste 550
Cameron Park, California 95682
(530) 676-6004 ~ Fax: (530) 676-6005

May 20, 2009

Mr. Rob Miller
Broadbent & Associates, Inc.
2000 Kirman Avenue
Reno, NV 89502

Re: Groundwater Sampling Data Package, ARCO Service Station No. 6002, located at 6235 Seminary Avenue, Oakland, California.

General Information

Data Submittal Prepared / Reviewed by: Carol Huff / Jay Johnson
Phone Number: (530) 676-6000
On-Site Supplier Representative: Jerry Gonzales

Sampling Date: May 14, 2009

Unusual Field Conditions: None noted.

Scope of Work Performed: Quarterly monitoring and sampling.

Variations from Work Scope: Well MW-8 is located in a residential backyard. No one was home to grant access to the gate, which was locked.

This submittal presents the data collected in association with routine groundwater monitoring. The attachments include field sheets, non-hazardous waste data form, chain of custody documentation, certified analytical results, and field procedures for groundwater sampling documentation. The information is being provided to BP-ARCO's Scoping Supplier for use in preparing a report for regulatory submittal. This submittal is limited to presentation of collected data and does not include data interpretation or conclusions or recommendations.

Any questions concerning this submittal should be addressed to the Preparer/Reviewer identified above.

Sincerely,

STRATUS ENVIRONMENTAL, INC.

Jay R. Johnson, P.G.
Project Manager

Attachments:

- Field Data Sheets
- Non-Hazardous Waste Data Form
- Chain of Custody Documentation
- Certified Analytical Results
- Field Procedures for Groundwater Sampling

cc: Mr. Paul Supple, BP/ARCO

BP Alameda Portfolio

HYDROLOGIC DATA SHEET

Ar 11:15 DP 12:50

Gauge Date: 5/14/09 **Project Name:** 6235 Seminary Ave., Oakland

Field Technician: Jerry **Project Number:** 6002

TOC = Top of Well Casing Elevation
TOS = Depth to Top of Screen
DTW = Depth to Groundwater Below TOC
DTB = Depth to Bottom of Well Casing Below TOC

DIA = Well Casing Diameter
ELEV = Groundwater Elevation
DUP = Duplicate

WELL OR LOCATION	TIME	MEASUREMENT						PURGE & SAMPLE	SHEEN CONFIRMATION (w/bailer)	COMMENTS
		TOC	TOS	DTW	DTB	DIA	ELEV			
MW-3	1139			8.37	24.30					
MW-4	1149			10.77	24.05					
MW-5	1152			12.08	24.90					
MW-6	1131			9.50	32.90					
MW-7	1145			11.80	13.18					
MW-8										No access to well
VW-1	1155			7.35	13.12					
VW-3	1201			8.70	14.10					
VW-4	1205			9.60	14.21					
~~DUP-4~~										

Calibration Date

pH/Conductivity/temperature Meter - YSI Model 63 — pH 5/14/09

DO Meter - YSI 55 Series — Conductivity 5/14/09

Please refer to groundwater sampling field procedures — DO 5/14/09

BP ALAMEDA PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 6002 PURGED BY: JS WELL I.D.: VW-1

CLIENT NAME: SAMPLED BY: JS SAMPLE I.D.: VW-1

LOCATION: Oakland - 6235 Seminary Ave. QA SAMPLES:

DATE PURGED 5/14/09 START (2400hr) 12:10 END (2400hr) 12:13

DATE SAMPLED 5/14/09 SAMPLE TIME (2400hr) 12:11

SAMPLE TYPE: Groundwater x Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" ____ (0.17) 3" ____ (0.38) 4" X (0.67) 5" ____ (1.02) 6" ____ (1.50) 8" ____ (2.60) Other ____ ( )

Casing Volume: (gallons per foot)

DEPTH TO BOTTOM (feet) = 13.12 CASING VOLUME (gal) = 3.8

DEPTH TO WATER (feet) = 7.35 CALCULATED PURGE (gal) = 11.5

WATER COLUMN HEIGHT (feet) = 5.7 ACTUAL PURGE (gal) = NP - 0

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
5/14/09	12:11	0	21.7	612	6.15	clear	
		ND	Purge				

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 7.35 SAMPLE TURBIDITY: clear

80% RECHARGE: X YES ___ NO ANALYSES: SVO

ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 6 Voa - HCl

PURGING EQUIPMENT

___ Bladder Pump ___ Bailer (Teflon)
___ Centrifugal Pump ___ Bailer (PVC)
___ Submersible Pump ___ Bailer (Stainless Steel)
___ Peristalic Pump ___ Dedicated ____

Other: NA

Pump Depth: ____

SAMPLING EQUIPMENT

___ Bladder Pump ___ Bailer (Teflon)
___ Centrifugal Pump X Bailer (___ PVC or X disposable)
___ Submersible Pump ___ Bailer (Stainless Steel)
___ Peristalic Pump ___ Dedicated ____

Other: ____

WELL INTEGRITY: Good LOCK#: MASTER

REMARKS: DO - 10.5

SIGNATURE: [signature] Page ___ of ___

BP ALAMEDA PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 6002 | PURGED BY: JS | WELL I.D.: VW-4

CLIENT NAME: | SAMPLED BY: JS | SAMPLE I.D.: VW-4

LOCATION: Oakland - 6235 Seminary Ave. | QA SAMPLES:

DATE PURGED 5/14/09 | START (2400hr) 1214 | END (2400hr) 1226

DATE SAMPLED 5/14/09 | SAMPLE TIME (2400hr) 1215

SAMPLE TYPE: Groundwater x | Surface Water ___ | Treatment Effluent ___ | Other ___

CASING DIAMETER: Casing Volume: (gallons per foot)

2"	3"	4"	5"	6"	8"	Other
(0.17)	(0.38)	X (0.67)	(1.02)	(1.50)	(2.60)	( )

DEPTH TO BOTTOM (feet) = 14.21 | CASING VOLUME (gal) = 3.0

DEPTH TO WATER (feet) = 9.60 | CALCULATED PURGE (gal) = 9.2

WATER COLUMN HEIGHT (feet) = 4.6 | ACTUAL PURGE (gal) = No purge

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
5/14/09	1214	0	20.2	533	7.3	clear	
				No Purge			

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 9.60 | SAMPLE TURBIDITY: clear

80% RECHARGE: X YES ___ NO | ANALYSES: 5 WD

ODOR: NO | SAMPLE VESSEL / PRESERVATIVE: 6 Voa-HCL

PURGING EQUIPMENT

- ___ Bladder Pump
- X Centrifugal Pump
- ___ Submersible Pump
- ___ Peristalic Pump
- ___ Bailer (Teflon)
- ___ Bailer (PVC)
- ___ Bailer (Stainless Steel)
- ___ Dedicated ___

Other: ___

Pump Depth: ___

SAMPLING EQUIPMENT

- ___ Bladder Pump
- ___ Centrifugal Pump
- ___ Submersible Pump
- ___ Peristalic Pump
- ___ Bailer (Teflon)
- X Bailer (___ PVC or X disposable)
- ___ Bailer (Stainless Steel)
- ___ Dedicated ___

Other: ___

WELL INTEGRITY: Good | LOCK#: Master

REMARKS: DO 1.08

SIGNATURE: [signature] | Page ___ of ___

BP ALAMEDA PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 6002 | PURGED BY: JS | WELL I.D.: MW-5

CLIENT NAME: | SAMPLED BY: JS | SAMPLE I.D.: MW-5

LOCATION: Oakland - 6235 Seminary Ave. | QA SAMPLES:

DATE PURGED 5/14/09 | START (2400hr) 1236 | END (2400hr) 1238

DATE SAMPLED 5/14/09 | SAMPLE TIME (2400hr) 1237

SAMPLE TYPE: Groundwater x | Surface Water ___ | Treatment Effluent ___ | Other ___

CASING DIAMETER: Casing Volume: (gallons per foot)

2"	3"	4"	5"	6"	8"	Other
(0.17)	(0.38)	x (0.67)	(1.02)	(1.50)	(2.60)	( )

DEPTH TO BOTTOM (feet) = 24.90 | CASING VOLUME (gal) = 7.9

DEPTH TO WATER (feet) = 12.08 | CALCULATED PURGE (gal) = 23.9

WATER COLUMN HEIGHT (feet) = 11.9 | ACTUAL PURGE (gal) = No purge

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
5/14/09	1237	0	19.8	5411	6.65	clear	
			NO PURGE				

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 12.08 | SAMPLE TURBIDITY: Clear

80% RECHARGE: x YES ___ NO | ANALYSES: 5 WD

ODOR: NO | SAMPLE VESSEL / PRESERVATIVE: 6 Voa HCl

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristalic Pump
___ Bailer (Teflon)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated ___
Other: ___
Pump Depth: ___

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristalic Pump
___ Bailer (Teflon)
x Bailer (___ PVC or x disposable)
___ Bailer (Stainless Steel)
___ Dedicated ___
Other: ___

WELL INTEGRITY: good | LOCK#: Master

REMARKS: DO. 1.19

SIGNATURE: | Page ___ of ___

WELLHEAD OBSERVATION FORM

Site Name/Number: 6002 *Date:* 5/14/09 *Technican:* Jerry

Well I.D.	Box in Good Condition? X = Yes Blank = No	Lock Missing? X = Yes (replaced) Blank = No	Water in Wellbox? X = Yes Blank = No	Water Level Relative to Cap? A = Above cap B = Below cap L = Level w/cap	Well Cap? I = Intact M = Missing or Compromised (replaced)	Bolts Missing? X = Yes Blank = No	Bolts Stripped? X = Yes Blank = No	Bolt Holes Stripped? X = Yes Blank = No	Cracked or Broken Lid? X = Yes Blank = No	Cracked or Broken Box? X = Yes Blank = No	Grout Level more than 1ft below TOC? X = Yes Blank = No	Additional Comments (such as missing lid, concrete needs replacement, or other - explain)
MW3	X											
MW4	X											
MW5	X		X	B								
MW6	X											
MW7	X											
MW8												No access to well
VW1	X											
VW2	X											
VW3	X											

DRUM INVENTORY

Drums on site? Yes (No) (circle)

Type and # Steel: _____ Plastic: _____

Note whether drums are full or empty, solids or liquids:

_____

_____

Drum label info (description, date, contact info):

_____

_____

GENERAL SITE CONDITIONS

Make notes on housekeeping conditions (such as trash around remediation system enclosure/compound, bent or missing bollards, signs missing from compound fences, grafitti on compound, etc.)

_____

_____

_____

_____

_____

_____

NO. 669810

NON-HAZARDOUS WASTE DATA FORM

TO BE COMPLETED BY GENERATOR

SITE#

EPA I.D. NO. NOT REQUIRED

NAME BP WEST COAST PRODUCTS LLC ARCO #

PROFILE NO.

ADDRESS P.O. BOX 80249
RANCHO SANTA MARGARITA

CITY, STATE, ZIP CA 92688

PHONE NO. ( )

CONTAINERS: No. VOLUME WEIGHT

TYPE: ☐ TANK TRUCK ☐ DUMP TRUCK ☐ DRUMS ☐ CARTONS ☐ OTHER

WASTE DESCRIPTION NON-HAZARDOUS WATER GENERATING PROCESS WELL PURGING/DECON WATER

COMPONENTS OF WASTE	PPM	%	COMPONENTS OF WASTE	PPM	%
1. WATER		99-100%	5.		
2. TPH		<1%	6.		
3.			7. BES1#		
4.			8.		

PROPERTIES: 7-10 pH ☐ SOLID ☐ LIQUID ☐ SLUDGE ☐ SLURRY ☐ OTHER

HANDLING INSTRUCTIONS: WEAR ALL APPROPRIATE PROTECTIVE CLOTHING

THE GENERATOR CERTIFIES THAT THE WASTE AS DESCRIBED IS 100% NON-HAZARDOUS.

Larry Hoppart BES1 for BP — TYPED OR PRINTED FULL NAME & SIGNATURE — DATE

TRANSPORTER

Transporter #1 Transporter #2

NAME STRATUS ENVIRONMENTAL

EPA I.D. NO.

ADDRESS 3330 CAMERON PARK DR

SERVICE ORDER NO.

CITY, STATE, ZIP CAMERON PARK, CA 95682

PICK UP DATE

PHONE NO. 530-676-2031

TRUCK, UNIT, I.D. NO.

TYPED OR PRINTED FULL NAME & SIGNATURE — DATE

TSD FACILITY

NAME INSTRAT, INC.

EPA I.D. NO.

DISPOSAL METHOD

ADDRESS 1103 AIRPORT RD #C

☐ LANDFILL ☐ OTHER

CITY, STATE, ZIP RIO VISTA, CA 94571

PHONE NO. 530-753-1623

TYPED OR PRINTED FULL NAME & SIGNATURE — DATE

GEN	OLD/NEW	L	A	TONS
TRANS		S	B	
C/O		RT/CD	HWDF NONE	

DISCREPANCY

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name: BP 6002 | Req Due Date (mm/dd/yy): 14 Day TAT | Rush TAT: Yes ___ No X

BP/ARC Facility No: 6002 | Lab Work Order Number:

Lab Name: CalScience	BP/ARC Facility Address: 6235 Seminary Avenue	Consultant/Contractor: Stratus Environmental Inc
Lab Address: 7440 Lincoln Way, Garden Grove, CA 92841	City, State, ZIP Code: Oakland Ca	Consultant/Contractor Project No:
Lab PM: Richard Villafania	Lead Regulatory Agency: Alameda	Address: 3330 Cameron Park Drive, #550, Cameron Park, CA 95682
Lab Phone: 714-895-5494 Fax: 714-895-7501	California Global ID No.: T0600100105	Consultant/Contractor PM: Jay Johnson
Lab Shipping Accnt:	Enfos Proposal No: 000RY-0002	Phone: 530-676-6000 Fax: 530-676-6005
Lab Bottle Order No:	Accounting Mode: Provision X OOC-BU ___ OOC-RM ___	Email EDD To: chuff@stratusinc.net
Other Info:	Stage: Operate Activity: Monitor	Invoice To: BP/ARC X Contractor ___

BP/ARC EBM: Paul Supple
EBM Phone: (925) 275-3801
EBM Email: paul.supple@bp.com

Report Type & QC Level: Standard X Full Data Package ___

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

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor		Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		GRO by 8015M	BTEX/5 FO* by 8260B	Ethanol by 8260B	EDB by 8260B	1,2-DCA by 8260B						Comments: *Oxy = MTBE, TAME, ETBE, DIPE, TBA
	MW-5	5/14/09	1239		X			6				X			X	X	X	X	X						
	VW-1		12:11		X			6				X			X	X	X	X	X						
	VW-4		12:25		X			6				X			X	X	X	X	X						
	TB-6002-05142009		500		X			2				X													ON HOLD

Sampler's Name: Jerry [illegible]
Sampler's Company: [illegible] Inc.
Shipment Method: Ship Date:
Shipment Tracking No.

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
[illegible]					

Special Instructions: TB Sample ON HOLD! Co[illegible]

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.

May 29, 2009

Jay Johnson
Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Subject: **Calscience Work Order No.: 09-05-1550**
Client Reference: BP 6002

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 5/16/2009 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

Stratus Environmental, inc.		Date Received:	05/16/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-1550
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: BP 6002

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-5	**09-05-1550-1-D**	**05/14/09 12:39**	**Aqueous**	**GC 4**	**05/26/09**	**05/27/09 08:22**	**090526B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	4200	250	5		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	107	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VW-1	**09-05-1550-2-D**	**05/14/09 12:11**	**Aqueous**	**GC 4**	**05/26/09**	**05/27/09 08:55**	**090526B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	113	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VW-4	**09-05-1550-3-D**	**05/14/09 12:25**	**Aqueous**	**GC 4**	**05/26/09**	**05/27/09 09:28**	**090526B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	95	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-551**	**N/A**	**Aqueous**	**GC 4**	**05/26/09**	**05/27/09 02:21**	**090526B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	47	38-134			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 05/16/09
Work Order No: 09-05-1550
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: BP 6002

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-5	**09-05-1550-1-A**	**05/14/09 12:39**	**Aqueous**	**GC/MS BB**	**05/26/09**	**05/26/09 13:54**	**090526L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	5.4	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	31	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	3.6	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	1.0	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	1.8	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	82	73-145			Dibromofluoromethane	95	81-135		
Toluene-d8	102	83-119			1,4-Bromofluorobenzene	110	74-110		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VW-1	**09-05-1550-2-A**	**05/14/09 12:11**	**Aqueous**	**GC/MS BB**	**05/26/09**	**05/26/09 14:25**	**090526L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	1.5	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	89	73-145			Dibromofluoromethane	94	81-135		
Toluene-d8	97	83-119			1,4-Bromofluorobenzene	102	74-110		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VW-4	**09-05-1550-3-A**	**05/14/09 12:25**	**Aqueous**	**GC/MS BB**	**05/26/09**	**05/26/09 14:57**	**090526L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.54	0.50	1		Methyl-t-Butyl Ether (MTBE)	10	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	100	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	91	73-145			Dibromofluoromethane	92	81-135		
Toluene-d8	97	83-119			1,4-Bromofluorobenzene	104	74-110		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	05/16/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-05-1550
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: BP 6002		Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-894**	**N/A**	**Aqueous**	**GC/MS BB**	**05/26/09**	**05/26/09 12:41**	**090526L01**

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	73-145			Dibromofluoromethane	98	81-135		
Toluene-d8	100	83-119			1,4-Bromofluorobenzene	99	74-110		

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

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	05/16/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-1550
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project BP 6002

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-05-1757-3	**Aqueous**	**GC 4**	**05/26/09**	**05/27/09**	**090526S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	104	104	38-134	1	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	05/16/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-1550
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project BP 6002

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
VW-1	**Aqueous**	**GC/MS BB**	**05/26/09**	**05/26/09**	**090526S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100	99	86-122	1	0-8	
Carbon Tetrachloride	100	98	78-138	2	0-9	
Chlorobenzene	100	101	90-120	1	0-9	
1,2-Dibromoethane	93	101	70-130	8	0-30	
1,2-Dichlorobenzene	100	104	89-119	4	0-10	
1,1-Dichloroethene	101	99	52-142	1	0-23	
Ethylbenzene	100	98	70-130	2	0-30	
Toluene	99	99	85-127	0	0-12	
Trichloroethene	98	97	78-126	1	0-10	
Vinyl Chloride	79	76	56-140	4	0-21	
Methyl-t-Butyl Ether (MTBE)	94	104	64-136	8	0-28	
Tert-Butyl Alcohol (TBA)	107	104	27-183	4	0-60	
Diisopropyl Ether (DIPE)	99	103	78-126	3	0-16	
Ethyl-t-Butyl Ether (ETBE)	99	104	67-133	5	0-21	
Tert-Amyl-Methyl Ether (TAME)	96	103	63-141	7	0-21	
Ethanol	100	96	11-167	4	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.	Date Received: N/A
3330 Cameron Park Drive, Suite 550	Work Order No: 09-05-1550
Cameron Park, CA 95682-8861	Preparation: EPA 5030B
	Method: EPA 8015B (M)

Project: BP 6002

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-551	**Aqueous**	**GC 4**	**05/26/09**	**05/27/09**	**090526B02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	108	110	78-120	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.	Date Received: N/A
3330 Cameron Park Drive, Suite 550	Work Order No: 09-05-1550
Cameron Park, CA 95682-8861	Preparation: EPA 5030B
	Method: EPA 8260B

Project: BP 6002

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-894	Aqueous	GC/MS BB	05/26/09	05/26/09	090526L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	99	100	87-117	82-122	1	0-7	
Carbon Tetrachloride	103	102	78-132	69-141	2	0-8	
Chlorobenzene	101	101	88-118	83-123	0	0-8	
1,2-Dibromoethane	100	99	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	104	105	88-118	83-123	1	0-8	
1,1-Dichloroethene	103	101	71-131	61-141	2	0-14	
Ethylbenzene	100	99	80-120	73-127	1	0-20	
Toluene	102	101	85-127	78-134	0	0-7	
Trichloroethene	100	101	85-121	79-127	1	0-11	
Vinyl Chloride	79	81	64-136	52-148	2	0-10	
Methyl-t-Butyl Ether (MTBE)	98	102	67-133	56-144	3	0-16	
Tert-Butyl Alcohol (TBA)	100	98	34-154	14-174	2	0-19	
Diisopropyl Ether (DIPE)	97	99	80-122	73-129	2	0-8	
Ethyl-t-Butyl Ether (ETBE)	98	102	73-127	64-136	4	0-11	
Tert-Amyl-Methyl Ether (TAME)	98	101	69-135	58-146	3	0-12	
Ethanol	95	97	34-124	19-139	2	0-44	

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: 09-05-1550

Qualifier	Definition
AX	Sample too dilute to quantify surrogate.
AZ	Surrogate recovery outside of acceptance limits due to matrix interference.
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.
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: 09-05-1550

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

1550

BP/ARC Project Name: BP 6002
BP/ARC Facility No: 6002
Req Due Date (mm/dd/yy): 14 Day TAT
Rush TAT: Yes ___ No X
Lab Work Order Number:

Lab Name: CalScience	BP/ARC Facility Address: 6235 Seminary Avenue	Consultant/Contractor: Stratus Environmental Inc.
Lab Address: 7440 Lincoln Way, Garden Grove, CA 92841	City, State, ZIP Code: Oakland Ca	Consultant/Contractor Project No:
Lab PM: Richard Villafania	Lead Regulatory Agency: Alameda	Address: 3330 Cameron Park Drive, #550, Cameron Park, CA 95682
Lab Phone: 714-895-5494 Fax: 714-895-7501	California Global ID No.: T0600100105	Consultant/Contractor PM: Jay Johnson
Lab Shipping Accnt:	Enfos Proposal No: 000RY-0002	Phone: 530-676-6000 Fax: 530-676-6005
Lab Bottle Order No:	Accounting Mode: Provision X OOC-BU ___ OOC-RM ___	Email EDD To: chuff@stratusinc.net
Other Info:	Stage: Operate Activity: Monitor	Invoice To: BP/ARC X Contractor ___
BP/ARC EBM: Paul Supple		
EBM Phone: (925) 275-3801		
EBM Email: paul.supple@bp.com		

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 by 8015M	BTEX/5 FO* by 8260B	Ethanol by 8260B	EDB by 8260B	1,2-DCA by 8260B						Report Type & QC Level
1	MW-5	5/14/09	1237		X			6				X			X	X	X	X	X						
2	VW-1	"	12:11		X			6				X			X	X	X	X	X						
3	VW-4	"	12:25		X			6				X			X	X	X	X	X						
4	TB-6002- 05142009	"	500		X			2				X													ON HOLD

Standard X
Full Data Package ___

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

Comments

*Oxy = MTBE, TAME, ETBE, DIPE, TBA

Sampler's Name: Jerry Gonzales	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Stratus Environmental Inc.						
Shipment Method: GSO Ship Date:						
Shipment Tracking No: 106279990					5/16/09	0940

Special Instructions: TB Sample ON HOLD! Cc results to bpedf@broadbentinc.com

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 #: 09-05-1 5 5 0

SAMPLE RECEIPT FORM

Cooler 1 **of** 1

CLIENT: Stratus **DATE:** 05/16/09

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

Temperature 2.6 °C - 0.2 °C (CF) = 2.4 °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:** [illegible]

CUSTODY SEALS INTACT:

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

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

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑ 30 5.16.09	☑	☐
☐ 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** ☐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** ☐100PB ☐100PB**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____ **Other:** ☐_____ **Checked/Labeled by:** MH

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar (Wide-mouth) B: Bottle (Narrow-mouth) **Reviewed by:** [illegible]

Preservative: h: HCL n: HNO3 na$_2$:Na$_2$S$_2$O$_3$ Na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered **Scanned by:** MH

ATTACHMENT

FIELD PROCEDURES FOR GROUNDWATER SAMPLING

The sampling procedures for groundwater monitoring events are contained in this appendix.

Groundwater and Liquid-Phase Petroleum Hydrocarbon Depth Assessment

Prior to measuring the depth to liquid in the well, the well caps are removed and the liquid level allowed to stabilize. A water/hydrocarbon interface probe is used to assess the liquid-phase petroleum hydrocarbon (LPH) thickness, if present, and a water level indicator is used to measure the groundwater depth in monitoring wells that do not contain LPH. Depth to groundwater or LPH is measured from a datum point at the top of each monitoring well casing. The datum point is typically a notch cut in the north side of the casing edge. If a water level indicator is used, the tip is subjectively analyzed for hydrocarbon sheen.

Subjective Analysis of Groundwater

Prior to purging, a water sample is collected from the monitoring well for subjective assessment. The sample is retrieved by gently lowering a clean, disposable bailer to approximately one-half the bailer length past the air/liquid interface. The bailer is then retrieved, and the sample contained within the bailer is examined for floating LPH and the appearance of a LPH sheen.

Monitoring Well Sampling

In many cases, determining whether to purge or not to purge wells prior to sample collection is made in the field and is often based on depth to water relative to the screen interval of the well. Site-specific field data sheets present details associated with the purge method and equipment used.

Monitoring wells, when purged, use a pump or bailer until pH, temperature, and conductivity of the purge water has stabilized and a minimum of three well volumes of water has been removed. Field measuring equipment is calibrated and maintained according to the manufacturer's instructions. If three well volumes cannot be removed in one half hour's time the well is allowed to recharge to 80% of original level. After recharging, a groundwater sample is then collected from each of the wells using disposable bailers.

A Teflon bailer, electric submersible or bladder pump will be the only equipment used for well sampling. When samples for volatile organic analysis are being collected, the pump flow will be regulated at approximately 100 milliliters per minute to minimize pump effluent turbulence and aeration. Glass bottles of at least 40-milliliters volume and fitted with Teflon-lined septa will be used in sampling for volatile organics. These

bottles will be filled completely to prevent air accumulation in the bottle. A positive meniscus forms when the bottle is completely full. A convex Teflon septum will be placed over the positive meniscus to eliminate air. After the bottle is capped, it is inverted and tapped to verify that it contains no air bubbles. The sample containers for other parameters will be filled, filtered as required, and capped. Glass and plastic bottles used by Stratus to collect groundwater samples are supplied by the laboratory.

Groundwater Sample Labeling and Preservation

Samples are collected in appropriate containers supplied by the laboratory. All required chemical preservation is added to the bottles prior to delivery to Stratus. Sample label information includes a unique sample identification number, job identification number, date, and time. After labeling, all groundwater samples are placed in a Ziploc® type bag and placed in an ice chest cooled to approximately 4° Celsius. Upon arriving at Stratus' office the samples are transferred to a locked refrigerator cooled to approximately 4° Celsius. Chemical preservation is controlled by the required analysis and is noted on the chain-of-custody form. Trip and temperature blanks supplied by the laboratory accompany the groundwater sample containers and groundwater samples.

Sample Identification and Chain-of-Custody Procedures

Sample identification and chain-of-custody procedures document sample possession from the time of collection to ultimate disposal. Each sample container submitted for analysis has a label affixed to identify the job number, sampler, date and time of sample collection, and a sample number unique to that sample. This information, in addition to a description of the sample, field measurements made, sampling methodology, names of on-site personnel, and any other pertinent field observations, is recorded in the field records. The samples are analyzed by a California-certified laboratory.

A chain-of-custody form is used to record possession of the sample from time of collection to its arrival at the laboratory. When the samples are shipped, the person in custody of them relinquishes the samples by signing the chain-of-custody form and noting the time. The sample-control officer at the laboratory verifies sample integrity and confirms that the samples are collected in the proper containers, preserved correctly, and contain adequate volumes for analysis. These conditions are noted on a Laboratory Sample Receipt Checklist that becomes part of the laboratory report upon request.

If these conditions are met, each sample is assigned a unique log number for identification throughout analysis and reporting. The log number is recorded on the chain-of-custody form and in the legally-required log book maintained by the laboratory. The sample description, date received, client's name, and other relevant information is also recorded.

Equipment Cleaning

All reusable sampling equipments are cleaned using phosphate-free detergents and rinsed with de-ionized water.

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:	**2Q09 GEO_WELL 6002**
Facility Global ID:	**T0600100105**
Facility Name:	**ARCO #6002**
File Name:	**GEO_WELL.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**6/17/2009 4:16:03 PM**
Confirmation Number:	**6305853605**

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 - Quarterly**
Submittal Title:	**2Q09 GW Monitoring**
Facility Global ID:	**T0600100105**
Facility Name:	**ARCO #6002**
File Name:	**09051550.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**6/17/2009 4:18:28 PM**
Confirmation Number:	**1345526456**

VIEW QC REPORT

VIEW DETECTIONS REPORT