Atlantic Richfield Company
(a BP affiliated company)

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

25 April 2008

Re: First Quarter 2008 Semi-Annual Ground-Water Monitoring Report
Atlantic Richfield Company Station #2169
889 West Grand Avenue, Oakland, California
ACEH Case #RO000072

"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 Manager

First Quarter 2008 Semi-Annual Ground-Water Monitoring Report
Atlantic Richfield Company Station #2169
889 W. Grand 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
Chico, California 95926
(530) 566-1400
www.broadbentinc.com

25 April 2008

Project No. 06-08-621

Broadbent & Associates, Inc.
1324 Mangrove Ave., Suite 212
Chico, CA 95926
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BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

25 April 2008 Project No. 06-08-621

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

Attn.: Mr. Paul Supple

Re: First Quarter 2008 Semi-Annual Ground-Water Monitoring Report, Atlantic Richfield Company (a BP affiliated company) Station #2169, 889 West Grand Avenue, Oakland, Alameda County, California; ACEH Case #RO000072

Dear Mr. Supple:

Provided herein is the *First Quarter 2008 Semi-Annual Ground-Water Monitoring Report* for Atlantic Richfield Company Station #2169 located at 889 West Grand Avenue, Oakland, Alameda County, California (Site). This report presents results of ground-water monitoring conducted at the Site during First Quarter 2008.

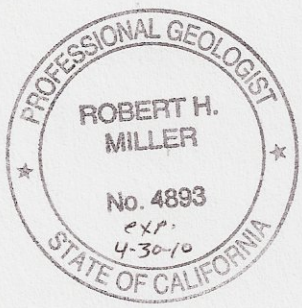
Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (530) 566-1400.

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 #2169 SEMI-ANNUAL GROUND-WATER MONITORING REPORT

Facility: #2169 Address:	889 West Grand 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.:	06-08-621
Primary Agency/Regulatory ID No.:	Alameda County Environmental Health (ACEH) ACEH Case #RO000072
Facility Permits/Permitting Agency:	NA

WORK PERFORMED THIS QUARTER (First Quarter 2008):

1. Submitted Fourth Quarter 2007 Status Report. Work performed by BAI.
2. Conducted ground-water monitoring/sampling for First Quarter 2008. Work performed on 22 February 2008 by Stratus Environmental, Inc (Stratus).

WORK PROPOSED FOR NEXT QUARTER (Second Quarter 2008):

1. Prepared and submitted First Quarter 2008 Semi-Annual 2008 Ground-Water Monitoring Report (contained herein).
2. No environmental field work is anticipated at Station #2169 during Second Quarter 2008.

QUARTERLY RESULTS SUMMARY:

Current phase of project:	**Ground-water monitoring/sampling**
Frequency of ground-water monitoring:	**Semi-Annually: A-1 through A-6, AR-1, AR-2, ADR-1, ADR-2**
Frequency of ground-water sampling:	**Semi-Annually (1Q & 3Q): Wells A-1, A-5, A-6, ADR-1** **Annually (3Q): Wells A-2, AR-1, AR-2, ADR-2**
Is free product (FP) present on-site:	**No**
FP recovered this quarter:	**None**
Cumulative FP recovered:	**4.8 gallons: Wells ADR-1 and ADR-2**
Current remediation techniques:	**Soil Vapor Extraction System shut down in Dec. 2001**
Depth to ground water (below TOC):	**8.02 ft (A-5) to 10.25 ft (A-3)**
General ground-water flow direction:	**North-northwest**
Approximate hydraulic gradient:	**0.005 ft/ft**

DISCUSSION:

The semi-annual round of ground-water monitoring and sampling was conducted at Station #2169 on 22 February 2008 by Stratus. Water levels were gauged in nine of the ten wells at the Site. Stratus stated that well AR-1 could not be located. No other irregularities were noted during water level gauging. Depth to water measurements ranged from 8.02 ft at well A-5 to 10.25 ft at well A-3. Resulting ground-water surface elevations ranged from 9.11 ft above mean sea level in up-gradient well A-4 to 7.68 ft at down-gradient well A-2. Water level elevations reached historic maximum values for each well, as summarized in Table 1. Water level elevations yielded a potentiometric ground-water flow direction and gradient to the north-northwest at approximately 0.005 ft/ft, consistent with historical data (see Table 3). Ground-water monitoring field data sheets are provided within Appendix A. Measured depths to ground water and respective ground-water elevations are summarized in Table 1. Potentiometric ground-water elevation contours are presented in Drawing 1.

Ground-water samples were collected from wells A-1, A-5, A-6, and ADR-1, consistent with the sampling schedule. No irregularities were reported during sampling. Samples were submitted under chain-of-custody protocol to Calscience Environmental Laboratories, Inc. (Garden Grove, California), for analysis of Gasoline Range Organics (GRO, C6-12) by EPA Method 8015B; for Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) by EPA Method 8260B; and tert-Amyl methyl ether (TAME), tert-Butyl alcohol (TBA), Di-isopropyl ether(DIPE), 1,2-Dibromomethane (EDB), 1,2-Dichloroethane (1,2-DCA), Ethanol, Ethyl tert-butyl ether (ETBE), and Methyl tert-butyl ether (MTBE) by EPA Method 8260B. No significant irregularities were encountered during laboratory analysis of the samples. Ground-water sampling field data sheets and the laboratory analytical report, including chain of custody documentation, are provided in Appendix A.

Gasoline range organics (GRO) were detected above the laboratory reporting limits in each of the four wells sampled at concentrations up to 27,000 micrograms per liter (µg/L) in well A-5. Benzene was detected above the laboratory reporting limit in two of the four wells sampled at concentrations up to 410 µg/L in well A-5. Toluene was detected above the laboratory reporting limits in two of the four wells sampled at concentrations up to 98 µg/L in well A-5. Ethylbenzene was detected above the laboratory reporting limit in two of the four wells sampled at concentrations up to 2,600 µg/L in well A-5. Total Xylenes were detected above the laboratory reporting limit in two of the four wells sampled at concentrations up to 4,400 µg/L in well A-5. TAME was detected above the laboratory reporting limit in one of the four wells sampled at a concentration of 0.89 µg/L in well A-6. MTBE was detected above the laboratory reporting limit in two of the four wells sampled at concentrations up to 11 µg/L in well A-6. The remaining fuel additives and oxygenates were not detected above their laboratory reporting limits in the four 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. 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.

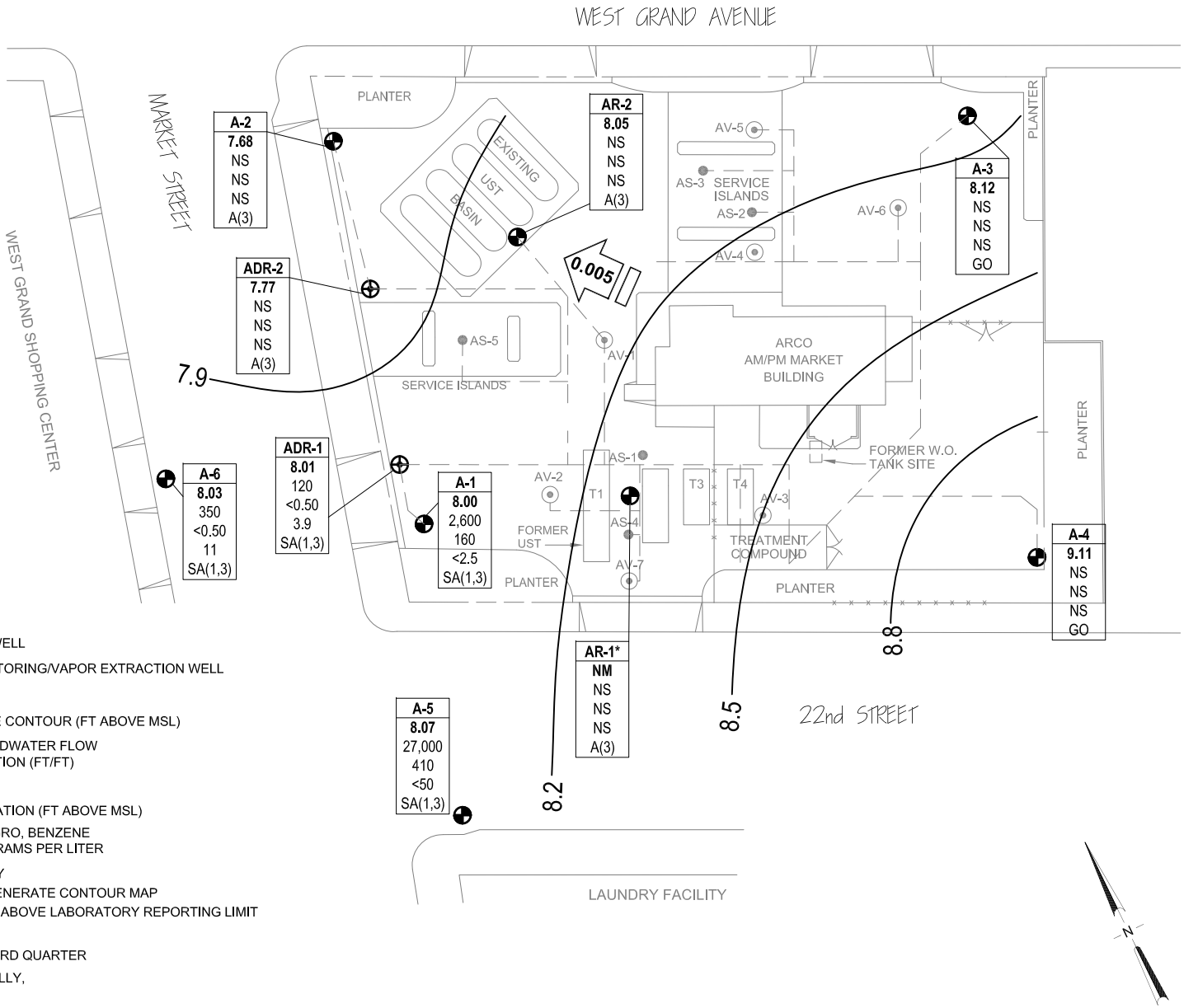
CLOSURE:

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. Ground-Water Elevation Contours and Analytical Summary Map, 22 February 2008, ARCO Service Station #2169, 889 West Grand Avenue, Oakland, California

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses, Station #2169, 889 W. Grand Ave., Oakland, California



LEGEND

- MONITORING WELL
- VAPOR EXTRACTION WELL
- GROUNDWATER MONITORING/VAPOR EXTRACTION WELL
- AIR SPARGING WELL
- 8.8 — GROUNDWATER TABLE CONTOUR (FT ABOVE MSL)
- 0.005 — APPROXIMATE GROUNDWATER FLOW GRADIENT AND DIRECTION (FT/FT)

Well	WELL DESIGNATION
ELEV	GROUNDWATER ELEVATION (FT ABOVE MSL)
GRO / Benzene / MTBE	CONCENTRATION OF GRO, BENZENE AND MTBE IN MICROGRAMS PER LITER
A/Q	SAMPLING FREQUENCY
*	WELL NOT USED TO GENERATE CONTOUR MAP
<	NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMIT
NS	NOT SAMPLED
A(3)	SAMPLED ANNUALLY, 3RD QUARTER
SA	SAMPLED SEMI-ANNUALLY, 1ST & 3RD QUARTERS
GO	GAUGE ONLY

— — REMEDIATION PIPING

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

0 60 120
SCALE (ft)

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California 95926
Project No.: 06-08-621 Date: 4/23/08

ARCO Service Station #2169
889 West Grand Avenue
Oakland, California

Ground-Water Elevation Contour and Analytical Summary Map
22 February 2008

Drawing
1

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

Station #2169, 889 W. Grand Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-1															
6/26/2000	--		14.16	9.00	**25.00**	10.75	3.41	--	--	--	--	--	--	--	--
7/20/2000	--		14.16	9.00	**25.00**	11.01	3.15	3,900	1,100	28	12	46	25	--	--
9/19/2000	--		14.16	9.00	**25.00**	11.26	2.90	4,800	2,400	27	20	57	32	--	--
12/26/2000	--		14.16	9.00	**25.00**	10.96	3.20	429	104	2.85	12.2	9.91	18.7	--	--
3/20/2001	--		14.16	9.00	**25.00**	9.59	4.57	<500	13.9	7.12	13.9	23.2	<25	--	--
6/12/2001	--		14.16	9.00	**25.00**	10.83	3.33	140	2.2	<0.5	8.7	9.2	25	--	--
9/23/2001	--		14.16	9.00	**25.00**	11.43	2.73	<50	<0.50	<0.50	<0.50	<0.50	4.5	--	--
12/28/2001	--		14.16	9.00	**25.00**	8.66	5.50	930	250	7.6	21	13	<25	--	--
3/21/2002	--		14.16	9.00	**25.00**	8.43	5.73	<50	<0.5	<0.5	<0.5	1.2	<2.5	--	--
4/17/2002	--		14.16	9.00	**25.00**	9.36	4.80	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
8/14/2002	--	b	14.16	9.00	**25.00**	11.12	3.04	170	8.4	<0.5	<0.5	1.4	4.9	5.7	7.4
11/27/2002	--	b	14.16	9.00	**25.00**	11.11	3.05	98	2.9	0.75	<0.5	<0.5	6.4	1.6	7.0
2/12/2003	--	d	14.16	9.00	**25.00**	10.10	4.06	73	9.3	<0.50	1	0.53	2.9	2.1	7.2
5/22/2003	--		14.16	9.00	**25.00**	10.18	3.98	400	88	1.6	4.6	11	4.9	1.3	7.4
7/23/2003	--		14.16	9.00	**25.00**	10.85	3.31	140	3.2	<0.50	<0.50	0.56	10	10.8	7.4
11/13/2003	P	f	14.16	9.00	25.00	11.35	2.81	<50	0.64	<0.50	<0.50	<0.50	4.2	4.3	7.75
02/16/2004	P	f, i	16.75	9.00	25.00	9.65	7.10	99	18	<0.50	1.2	0.96	3.2	7.2	7.6
05/06/2004	P		16.75	9.00	25.00	10.57	6.18	<50	0.73	<0.50	<0.50	<0.50	1.9	1.23	6.93
09/02/2004	P		16.75	9.00	25.00	11.05	5.70	64	1.1	<0.50	<0.50	<0.50	1.7	12.1	8.7
11/29/2004	P		16.75	9.00	25.00	10.50	6.25	<50	1.4	<0.50	<0.50	<0.50	<0.50	0.62	7.0
02/02/2005	P		16.75	9.00	25.00	9.18	7.57	56	14	<0.50	<0.50	0.55	5.1	3.2	7.2
05/09/2005	P		16.75	9.00	25.00	9.28	7.47	52	7.8	<0.50	0.53	0.52	2.7	2.1	7.2
08/11/2005	P		16.75	9.00	25.00	10.70	6.05	420	61	<0.50	1.8	1.0	4.2	3.2	6.8
02/09/2006	P	o	16.75	9.00	25.00	9.04	7.71	170	60	1.5	3.5	5.1	5.6	1.69	7.1
8/11/2006	P		16.75	9.00	25.00	10.44	6.31	200	18	<0.50	0.73	0.60	3.7	--	7.2
2/7/2007	NP		16.75	9.00	25.00	10.34	6.41	270	5.5	<0.50	0.95	1.2	20	1.15	7.27
8/14/2007	NP		16.75	9.00	25.00	10.43	6.32	3,500	350	21	110	68	1.8	1.32	7.46
2/22/2008	**P**		**16.75**	**9.00**	**25.00**	**8.75**	**8.00**	**2,600**	**160**	**7.2**	**16**	**11**	**<2.5**	**4.16**	**7.65**
A-2															
6/26/2000	--		14.55	10.00	**25.00**	11.27	3.28	--	--	--	--	--	--	--	--

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

Station #2169, 889 W. Grand Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-2 Cont.															
7/20/2000	--		14.55	10.00	**25.00**	11.52	3.03	<50	<0.5	<0.5	<0.5	<1.0	<3	--	--
9/19/2000	--		14.55	10.00	**25.00**	11.63	2.92	--	--	--	--	--	--	--	--
12/26/2000	--		14.55	10.00	**25.00**	11.44	3.11	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/20/2001	--		14.55	10.00	**25.00**	10.08	4.47	--	--	--	--	--	--	--	--
6/12/2001	--		14.55	10.00	**25.00**	11.35	3.20	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
9/23/2001	--		14.55	10.00	**25.00**	11.92	2.63	--	--	--	--	--	--	--	--
12/28/2001	--		14.55	10.00	**25.00**	9.31	5.24	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/21/2002	--		14.55	10.00	**25.00**	9.05	5.50	--	--	--	--	--	--	--	--
4/17/2002	--		14.55	10.00	**25.00**	9.88	4.67	52	<0.5	<0.5	<0.5	<0.5	26	--	--
8/14/2002	--	c	14.55	10.00	**25.00**	11.62	2.93	<50	<0.5	<0.5	<0.5	1.2	<2.5	3.7	7.2
11/27/2002	--		14.55	10.00	**25.00**	11.56	2.99	--	--	--	--	--	--	--	--
2/12/2003	--	d	14.55	10.00	**25.00**	10.75	3.80	<50	<0.50	<0.50	<0.50	<0.50	12	2.9	7.1
5/22/2003	--		14.55	10.00	**25.00**	10.72	3.83	--	--	--	--	--	--	--	--
7/23/2003	--		14.55	10.00	**25.00**	11.39	3.16	<50	<0.50	<0.50	<0.50	<0.50	2.6	1.3	6.8
11/13/2003	--		14.55	10.00	25.00	11.60	2.95	--	--	--	--	--	--	--	--
02/16/2004	--	i	17.18	10.00	25.00	10.27	6.91	--	--	--	--	--	--	--	--
05/06/2004	--		17.18	10.00	25.00	11.05	6.13	--	--	--	--	--	--	--	--
09/02/2004	P		17.18	10.00	25.00	11.45	5.73	130	<0.50	<0.50	<0.50	<0.50	2.5	5.1	7.4
11/29/2004	--		17.18	10.00	25.00	11.12	6.06	--	--	--	--	--	--	--	--
02/02/2005	--		17.18	10.00	25.00	9.73	7.45	--	--	--	--	--	--	--	--
05/09/2005	--		17.18	10.00	25.00	12.82	4.36	--	--	--	--	--	--	--	--
08/11/2005	P	m	17.18	10.00	25.00	11.29	5.89	120	<0.50	<0.50	<0.50	<0.50	1.2	1.6	7.1
02/09/2006	--		17.18	10.00	25.00	10.43	6.75	--	--	--	--	--	--	--	--
8/11/2006	P		17.18	10.00	25.00	11.12	6.06	<50	<0.50	<0.50	<0.50	<0.50	1.4	1.1	7.0
2/7/2007	--		17.18	10.00	25.00	11.07	6.11	--	--	--	--	--	--	--	--
8/14/2007	NP		17.18	10.00	25.00	11.28	5.90	<50	<0.50	<0.50	<0.50	<0.50	0.65	0.64	7.57
2/22/2008	--		**17.18**	**10.00**	**25.00**	**9.50**	**7.68**	--	--	--	--	--	--	--	--
A-3															
6/26/2000	--		15.75	9.00	**29.50**	11.98	3.77	--	--	--	--	--	--	--	--
7/20/2000	--		15.75	9.00	**29.50**	12.21	3.54	--	--	--	--	--	--	--	--

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

Station #2169, 889 W. Grand Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-3 Cont.															
9/19/2000	--		15.75	9.00	**29.50**	12.50	3.25	--	--	--	--	--	--	--	--
12/26/2000	--		15.75	9.00	**29.50**	12.17	3.58	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/20/2001	--		15.75	9.00	**29.50**	10.70	5.05	--	--	--	--	--	--	--	--
6/12/2001	--		15.75	9.00	**29.50**	12.09	3.66	--	--	--	--	--	--	--	--
9/23/2001	--		15.75	9.00	**29.50**	12.65	3.10	--	--	--	--	--	--	--	--
12/28/2001	--		15.75	9.00	**29.50**	9.94	5.81	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/21/2002	--		15.75	9.00	**29.50**	9.69	6.06	--	--	--	--	--	--	--	--
4/17/2002	--		15.75	9.00	**29.50**	10.61	5.14	--	--	--	--	--	--	--	--
8/14/2002	--		15.75	9.00	**29.50**	12.27	3.48	--	--	--	--	--	--	--	--
11/27/2002	--		15.75	9.00	**29.50**	12.22	3.53	--	--	--	--	--	--	--	--
2/12/2003	--	d	15.75	9.00	**29.50**	11.40	4.35	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.2	6.9
5/22/2003	--		15.75	9.00	**29.50**	11.42	4.33	--	--	--	--	--	--	--	--
7/23/2003	--		15.75	9.00	**29.50**	12.00	3.75	--	--	--	--	--	--	--	--
02/16/2004	--	g, i	18.37	9.00	29.50	10.94	7.43	--	--	--	--	--	--	--	--
05/06/2004	--		18.37	9.00	29.50	11.75	6.62	--	--	--	--	--	--	--	--
09/02/2004	--		18.37	9.00	29.50	12.15	6.22	--	--	--	--	--	--	--	--
11/29/2004	--		18.37	9.00	29.50	11.87	6.50	--	--	--	--	--	--	--	--
02/02/2005	--		18.37	9.00	29.50	10.42	7.95	--	--	--	--	--	--	--	--
05/09/2005	--		18.37	9.00	29.50	10.49	7.88	--	--	--	--	--	--	--	--
08/11/2005	--		18.37	9.00	29.50	12.02	6.35	--	--	--	--	--	--	--	--
02/09/2006	--		18.37	9.00	29.50	11.27	7.10	--	--	--	--	--	--	--	--
8/11/2006	--		18.37	9.00	29.50	11.83	6.54	--	--	--	--	--	--	--	--
2/7/2007	--		18.37	9.00	29.50	11.82	6.55	--	--	--	--	--	--	--	--
8/14/2007	--		18.37	9.00	29.50	12.06	6.31	--	--	--	--	--	--	--	--
2/22/2008	--		**18.37**	**9.00**	**29.50**	**10.25**	**8.12**	--	--	--	--	--	--	--	--
A-4															
6/26/2000	--		15.25	8.00	**28.00**	10.99	4.26	--	--	--	--	--	--	--	--
7/20/2000	--		15.25	8.00	**28.00**	11.16	4.09	--	--	--	--	--	--	--	--
9/19/2000	--		15.25	8.00	**28.00**	11.97	3.28	--	--	--	--	--	--	--	--
12/26/2000	--		15.25	8.00	**28.00**	11.19	4.06	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--

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

Station #2169, 889 W. Grand Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-4 Cont.															
3/20/2001	--		15.25	8.00	**28.00**	9.81	5.44	--	--	--	--	--	--	--	--
6/12/2001	--		15.25	8.00	**28.00**	11.12	4.13	--	--	--	--	--	--	--	--
9/23/2001	--		15.25	8.00	**28.00**	11.63	3.62	--	--	--	--	--	--	--	--
12/28/2001	--		15.25	8.00	**28.00**	8.41	6.84	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/21/2002	--		15.25	8.00	**28.00**	8.63	6.62	--	--	--	--	--	--	--	--
4/17/2002	--		15.25	8.00	**28.00**	9.68	5.57	--	--	--	--	--	--	--	--
8/14/2002	--		15.25	8.00	**28.00**	11.31	3.94	--	--	--	--	--	--	--	--
11/27/2002	--		15.25	8.00	**28.00**	11.25	4.00	--	--	--	--	--	--	--	--
2/12/2003	--	d	15.25	8.00	**28.00**	10.37	4.88	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.9	7.1
5/22/2003	--		15.25	8.00	**28.00**	10.42	4.83	--	--	--	--	--	--	--	--
7/23/2003	--		15.25	8.00	**28.00**	11.02	4.23	--	--	--	--	--	--	--	--
02/16/2004	--	g, i	18.01	8.00	28.00	9.65	8.36	--	--	--	--	--	--	--	--
05/06/2004	--		18.01	8.00	28.00	10.68	7.33	--	--	--	--	--	--	--	--
09/02/2004	--		18.01	8.00	28.00	10.83	7.18	--	--	--	--	--	--	--	--
11/29/2004	--		18.01	8.00	28.00	10.50	7.51	--	--	--	--	--	--	--	--
02/02/2005	--		18.01	8.00	28.00	9.22	8.79	--	--	--	--	--	--	--	--
05/09/2005	--		18.01	8.00	28.00	8.98	9.03	--	--	--	--	--	--	--	--
08/11/2005	--		18.01	8.00	28.00	10.99	7.02	--	--	--	--	--	--	--	--
02/09/2006	--		18.01	8.00	28.00	10.15	7.86	--	--	--	--	--	--	--	--
8/11/2006	--		18.01	8.00	28.00	10.30	7.71	--	--	--	--	--	--	--	--
2/7/2007	--		18.01	8.00	28.00	10.63	7.38	--	--	--	--	--	--	--	--
8/14/2007	--		18.01	8.00	28.00	10.70	7.31	--	--	--	--	--	--	--	--
2/22/2008	--		**18.01**	**8.00**	**28.00**	**8.90**	**9.11**	--	--	--	--	--	--	--	--
A-5															
6/26/2000	--		13.51	8.00	**30.00**	10.04	3.47	--	--	--	--	--	--	--	--
7/20/2000	--		13.51	8.00	**30.00**	10.31	3.20	730	140	11	<0.5	8.9	3	--	--
9/19/2000	--		13.51	8.00	**30.00**	10.55	2.96	160	13	<0.5	2.8	1.9	<3	--	--
12/26/2000	--		13.51	8.00	**30.00**	10.37	3.14	8,120	465	108	659	1,450	<250	--	--
3/20/2001	--		13.51	8.00	**30.00**	8.81	4.70	7,990	1,110	473	611	1,580	<250	--	--
6/12/2001	--		13.51	8.00	**30.00**	10.13	3.38	450	91	18	35	95	<5.0	--	--

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

Station #2169, 889 W. Grand Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-5 Cont.															
9/23/2001	--		13.51	8.00	**30.00**	10.80	2.71	110	20	<0.5	5	5	2.7	--	--
12/28/2001	--		13.51	8.00	**30.00**	8.17	5.34	320	24	2	20	27	5	--	--
3/21/2002	--		13.51	8.00	**30.00**	7.78	5.73	2,500	420	85	130	350	31	--	--
4/17/2002	--		13.51	8.00	**30.00**	8.68	4.83	1,300	190	36	67	210	<25	--	--
8/14/2002	--	b	13.51	8.00	**30.00**	10.41	3.10	840	150	<5.0	68	41	<25	1.4	6.8
11/27/2002	--	b	13.51	8.00	**30.00**	10.50	3.01	300	26	2.3	17	6	<0.5	1.16	7.2
2/12/2003	--	d	13.51	8.00	**30.00**	10.81	2.70	<500	74	7	34	45	<5.0	1.0	7.3
5/22/2003	--		13.51	8.00	**30.00**	9.46	4.05	500	100	9	28	47	<5.0	1.0	7.6
7/23/2003	--		13.51	8.00	**30.00**	10.29	3.22	900	100	5.7	65	57	<5.0	4.5	8.4
11/13/2003	NP	f	13.51	8.00	30.00	11.24	2.27	1,800	210	5.1	190	140	<5.0	4.3	7.32
02/16/2004	NP	h, i	16.09	8.00	30.00	9.45	6.64	680	52	15	50	77	<0.50	5.0	7.8
05/06/2004	P		16.09	8.00	30.00	10.28	5.81	1,500	140	13	72	110	<2.5	1.03	6.93
09/02/2004	NP		16.09	8.00	30.00	10.78	5.31	690	69	1.3	42	35	<1.0	1.3	7.1
11/29/2004	NP		16.09	8.00	30.00	10.05	6.04	<5,000	360	<50	190	290	<50	1.0	7.0
02/02/2005	NP		16.09	8.00	30.00	8.37	7.72	220	31	2.3	10	13	<0.50	0.6	7.4
05/09/2005	NP		16.09	8.00	30.00	8.45	7.64	110	1.7	<0.50	1.4	1.1	<0.50	2.5	7.6
08/11/2005	NP		16.09	8.00	30.00	10.11	5.98	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.8	7.3
02/09/2006	NP	o	16.09	8.00	30.00	9.02	7.07	<50	0.62	<0.50	<0.50	<0.50	<0.50	0.89	7.3
8/11/2006	NP		16.09	8.00	30.00	9.77	6.32	400	13	3.4	8.0	58	<0.50	2.16	7.2
2/7/2007	P		16.09	8.00	30.00	9.90	6.19	10,000	670	120	1,100	3,100	<10	2.12	7.03
8/14/2007	NP		16.09	8.00	30.00	9.70	6.39	28,000	260	68	3,000	7,800	<10	1.37	7.80
2/22/2008	**NP**		**16.09**	**8.00**	**30.00**	**8.02**	**8.07**	**27,000**	**410**	**98**	**2,600**	**4,400**	**<50**	**1.36**	**7.42**
A-6															
6/26/2000	--		13.51	8.00	**28.50**	10.09	3.42	--	--	--	--	--	--	--	--
7/20/2000	--		13.51	8.00	**28.50**	10.91	2.60	170	<0.5	<0.5	0.6	2	6	--	--
9/19/2000	--		13.51	8.00	**28.50**	11.27	2.24	<50	<0.5	<0.5	<0.5	<1.0	6	--	--
12/26/2000	--		13.51	8.00	**28.50**	10.65	2.86	56.2	<0.5	<0.5	<0.5	<0.5	8.17	--	--
3/20/2001	--		13.51	8.00	**28.50**	8.72	4.79	216	<0.5	<0.5	<0.5	1.8	19.9	--	--
6/12/2001	--		13.51	8.00	**28.50**	10.80	2.71	80	0.62	<0.5	<0.5	<0.5	15	--	--
9/23/2001	--		13.51	8.00	**28.50**	10.79	2.72	450	1.7	1.9	2.3	3.3	53	--	--

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Station #2169, 889 W. Grand Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-6 Cont.															
12/28/2001	--		13.51	8.00	**28.50**	8.05	5.46	270	0.98	3.5	0.77	1.4	26	--	--
3/21/2002	--		13.51	8.00	**28.50**	7.83	5.68	130	<0.5	<0.5	<0.5	<0.5	19	--	--
4/17/2002	--		13.51	8.00	**28.50**	8.73	4.78	<50	<0.5	<0.5	<0.5	<0.5	16	--	--
8/14/2002	--	b	13.51	8.00	**28.50**	10.43	3.08	980	4.8	2.6	2	4.9	75	1.5	7.1
11/27/2002	--	b	13.51	8.00	**28.50**	10.47	3.04	280	<0.5	0.74	<0.5	<0.5	16	0.9	6.9
2/12/2003	--	d	13.51	8.00	**28.50**	10.44	3.07	51	<0.50	<0.50	<0.50	<0.50	9.9	0.8	7.1
5/22/2003	--		13.51	8.00	**28.50**	9.43	4.08	<50	<0.50	<0.50	<0.50	<0.50	11	1.2	8.2
7/23/2003	--		13.51	8.00	**28.50**	10.27	3.24	120	<0.50	<0.50	<0.50	<0.50	14	>20	9.6
11/13/2003	NP	f	13.51	8.00	28.50	11.20	2.31	<50	<0.50	<0.50	<0.50	<0.50	2.3	6.2	9.0
02/16/2004	NP	h, i	16.10	8.00	28.50	9.76	6.34	50	<0.50	<0.50	<0.50	<0.50	3.9	6.5	8.3
05/06/2004	P		16.10	8.00	28.50	10.03	6.07	110	<0.50	<0.50	<0.50	<0.50	7.1	1.01	7.02
09/02/2004	NP		16.10	8.00	28.50	10.47	5.63	56	<0.50	<0.50	<0.50	<0.50	4.4	3.2	7.4
11/29/2004	NP		16.10	8.00	28.50	9.99	6.11	<50	<0.50	<0.50	<0.50	<0.50	2.9	0.92	6.9
02/02/2005	NP		16.10	8.00	28.50	8.46	7.64	150	<0.50	<0.50	<0.50	<0.50	14	0.5	7.4
05/09/2005	NP		16.10	8.00	28.50	8.55	7.55	93	<0.50	<0.50	<0.50	<0.50	12	3.0	7.2
08/11/2005	NP		16.10	8.00	28.50	10.13	5.97	780	<0.50	<0.50	<0.50	<0.50	14	1.0	6.9
02/09/2006	NP	o	16.10	8.00	28.50	9.23	6.87	210	<0.50	<0.50	<0.50	<0.50	17	1.27	6.8
8/11/2006	NP		16.10	8.00	28.50	9.95	6.15	920	<0.50	<0.50	<0.50	<0.50	21	1.6	7.0
2/7/2007	P		16.10	8.00	28.50	9.72	6.38	170	<0.50	<0.50	<0.50	1.4	7.1	2.18	7.24
8/14/2007	NP		16.10	8.00	28.50	9.82	6.28	<50	<0.50	<0.50	<0.50	<0.50	2.3	1.72	8.22
2/22/2008	**NP**		**16.10**	**8.00**	**28.50**	**8.07**	**8.03**	**350**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**11**	**0.79**	**7.48**
ADR-1															
6/26/2000	--		13.95	5.00	**22.00**	10.55	3.40	--	--	--	--	--	--	--	--
7/20/2000	--		13.95	5.00	**22.00**	10.85	3.10	180	29	<0.5	0.8	<1.0	22	--	--
9/19/2000	--		13.95	5.00	**22.00**	11.08	2.87	120	7.4	<0.5	1.2	<1.0	22	--	--
12/26/2000	--		13.95	5.00	**22.00**	10.93	3.02	<50	1.29	<0.5	<0.5	<0.5	14.7	--	--
3/20/2001	--		13.95	5.00	**22.00**	9.32	4.63	225	23.4	<0.5	8.71	4.13	10.8	--	--
6/12/2001	--		13.95	5.00	**22.00**	10.65	3.30	250	23	0.5	13	4.2	7.5	--	--
9/23/2001	--		13.95	5.00	**22.00**	11.25	2.70	<50	1.4	<0.5	<0.5	0.57	2.8	--	--
12/28/2001	--		13.95	5.00	**22.00**	8.43	5.52	250	16	<0.5	1.2	4.1	6.8	--	--

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Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
ADR-1 Cont.															
3/21/2002	--		13.95	5.00	**22.00**	8.27	5.68	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
4/17/2002	--		13.95	5.00	**22.00**	9.17	4.78	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
8/14/2002	--		13.95	5.00	**22.00**	11.88	2.07	<50	1.1	<0.5	<0.5	<0.5	<2.5	3.4	6.7
11/27/2002	--		13.95	5.00	**22.00**	10.91	3.04	<50	0.54	<0.5	<0.5	<0.5	1.1	1.8	6.8
2/12/2003	--	d	13.95	5.00	**22.00**	9.95	4.00	<50	<0.50	<0.50	<0.50	<0.50	0.73	1.9	7.2
5/22/2003	--		13.95	5.00	**22.00**	9.86	4.09	<50	0.96	<0.50	<0.50	<0.50	3.5	1.2	7.3
7/23/2003	--		13.95	5.00	**22.00**	10.59	3.36	<50	2.5	<0.50	0.56	<0.50	4	>20	9.4
11/13/2003	--	f	13.95	5.00	22.00	11.15	2.80	<50	0.60	<0.50	<0.50	<0.50	1.6	8.5	8.2
02/16/2004	NP	f, i	16.56	5.00	22.00	9.43	7.13	<50	<0.50	<0.50	<0.50	<0.50	1.6	5.5	9.6
05/07/2004	NP		16.56	5.00	22.00	10.41	6.15	<500	5.3	<5.0	<5.0	<5.0	<5.0	1.72	7.0
09/02/2004	NP		16.56	5.00	22.00	10.73	5.83	<50	<0.50	<0.50	<0.50	<0.50	0.84	18.1	8.4
11/29/2004	NP		16.56	5.00	22.00	10.30	6.26	<50	3.0	<0.50	<0.50	<0.50	<0.50	0.77	6.9
02/02/2005	NP		16.56	5.00	22.00	9.02	7.54	<50	<0.50	<0.50	<0.50	<0.50	3.4	0.5	7.5
05/09/2005	NP		16.56	5.00	22.00	8.92	7.64	<50	<0.50	<0.50	<0.50	<0.50	2.6	2.9	7.3
08/11/2005	NP		16.56	5.00	22.00	10.57	5.99	67	2.8	<0.50	<0.50	<0.50	4.0	0.6	6.0
02/09/2006	NP	o	16.56	5.00	22.00	10.05	6.51	<50	<0.50	<0.50	<0.50	<0.50	2.9	1.09	7.0
8/11/2006	NP		16.56	5.00	22.00	10.20	6.36	76	<0.50	<0.50	<0.50	<0.50	2.2	1.06	7.1
2/7/2007	NP		16.56	5.00	22.00	10.15	6.41	<50	<0.50	<0.50	<0.50	<0.50	3.8	0.64	7.33
8/14/2007	NP		16.56	5.00	22.00	10.30	6.26	560	11	1.7	12	2.5	3.6	0.94	7.38
2/22/2008	**NP**		**16.56**	**5.00**	**22.00**	**8.55**	**8.01**	**120**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**3.9**	**1.52**	**6.95**
ADR-2															
6/26/2000	--		14.64	5.00	**22.00**	11.22	3.42	--	--	--	--	--	--	--	--
7/20/2000	--		14.64	5.00	**22.00**	11.60	3.04	12,000	410	2.5	540	720	23	--	--
9/19/2000	--		14.64	5.00	**22.00**	11.81	2.83	1,400	530	5	680	740	34	--	--
12/26/2000	--		14.64	5.00	**22.00**	11.52	3.12	901	26.6	<5.0	21.4	32.5	32.8	--	--
3/20/2001	--	j	14.64	5.00	**22.00**	10.10	4.54	--	--	--	--	--	--	--	--
6/12/2001	--	j	14.64	5.00	**22.00**	11.41	3.23	--	--	--	--	--	--	--	--
9/23/2001	--		14.64	5.00	**22.00**	11.98	2.66	5,300	370	<5.0	550	96	60	--	--
12/28/2001	--		14.64	5.00	**22.00**	9.48	5.16	2,600	190	<5.0	160	29	61	--	--
3/21/2002	--		14.64	5.00	**22.00**	9.10	5.54	180	6	<0.5	4.5	3.2	15	--	--

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Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
ADR-2 Cont.															
4/17/2002	--		14.64	5.00	**22.00**	9.93	4.71	730	86	<0.5	13	<0.5	<25	--	--
8/14/2002	--	b	14.64	5.00	**22.00**	12.09	2.55	1,300	170	<10	100	47	<50	0.9	7.0
11/27/2002	--	b	14.64	5.00	**22.00**	11.66	2.98	1,800	240	3.1	120	14	74	0.6	6.9
2/12/2003	--	d	14.64	5.00	**22.00**	10.74	3.90	760	120	<5.0	15	5.2	22	1.3	7.1
5/22/2003	--		14.64	5.00	**22.00**	10.67	3.97	520	110	<5.0	7.1	<5.0	9.7	0.7	7.6
7/23/2003	--		14.64	5.00	**22.00**	11.38	3.26	140	2.8	<0.50	5	0.98	8.4	>20	9.4
02/16/2004	--	f, i	17.24	5.00	22.00	10.26	6.98	--	--	--	--	--	--	--	--
05/06/2004	--		17.24	5.00	22.00	11.05	6.19	--	--	--	--	--	--	--	--
09/02/2004	P		17.24	5.00	22.00	11.50	5.74	<500	67	<5.0	71	12	5.6	0.7	7.4
11/29/2004	--		17.24	5.00	22.00	11.20	6.04	--	--	--	--	--	--	--	--
02/02/2005	--		17.24	5.00	22.00	9.76	7.48	--	--	--	--	--	--	--	--
05/09/2005	--		17.24	5.00	22.00	11.18	6.06	--	--	--	--	--	--	--	--
08/11/2005	NP		17.24	5.00	22.00	11.30	5.94	1,900	200	<2.5	160	9.6	9.0	0.6	6.6
02/09/2006	--		17.24	5.00	22.00	9.60	7.64	--	--	--	--	--	--	--	--
8/11/2006	NP		17.24	5.00	22.00	11.13	6.11	570	54	<1.0	2.2	<1.0	4.6	0.8	7.1
2/7/2007	--		17.24	5.00	22.00	11.08	6.16	--	--	--	--	--	--	--	--
8/14/2007	NP		17.24	5.00	22.00	11.28	5.96	520	5.4	<0.50	3.6	<0.50	5.3	0.65	7.37
2/22/2008	--		**17.24**	**5.00**	**22.00**	**9.47**	**7.77**	--	--	--	--	--	--	--	--
AR-1															
6/26/2000	--		15.61	8.00	**28.00**	11.59	4.02	--	--	--	--	--	--	--	--
7/20/2000	--		15.61	8.00	**28.00**	12.06	3.55	<50	<0.5	<0.5	<0.5	<1.0	6	--	--
9/19/2000	--		15.61	8.00	**28.00**	11.89	3.72	<50	<0.5	<0.5	<0.5	<1.0	<3	--	--
12/26/2000	--		15.61	8.00	**28.00**	11.95	3.66	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
03/20/01	--	a	15.61	8.00	**28.00**	--	--	--	--	--	--	--	--	--	--
6/12/2001	--		15.61	8.00	**28.00**	11.87	3.74	<50	<0.5	<0.5	<0.5	<0.5	17	--	--
9/23/2001	--		15.61	8.00	**28.00**	12.42	3.19	--	--	--	--	--	--	--	--
12/28/2001	--		15.61	8.00	**28.00**	7.62	7.99	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/21/2002	--		15.61	8.00	**28.00**	9.37	6.24	--	--	--	--	--	--	--	--
4/17/2002	--		15.61	8.00	**28.00**	10.43	5.18	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
8/14/2002	--		15.61	8.00	**28.00**	12.08	3.53	<50	<0.5	<0.5	<0.5	1.3	<2.5	2.2	7.9

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

Station #2169, 889 W. Grand Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
AR-1 Cont.															
11/27/2002	--		15.61	8.00	**28.00**	12.00	3.61	--	--	--	--	--	--	--	--
2/12/2003	--	d	15.61	8.00	**28.00**	10.89	4.72	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.8	7.9
5/22/2003	--		15.61	8.00	**28.00**	11.18	4.43	--	--	--	--	--	--	--	--
7/23/2003	--		15.61	8.00	**28.00**	11.73	3.88	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.3	7.7
11/13/2003	--		15.61	8.00	28.00	12.05	3.56	--	--	--	--	--	--	--	--
02/16/2004	--		18.18	8.00	28.00	10.35	7.83	--	--	--	--	--	--	--	--
05/06/2004	--		18.18	8.00	28.00	11.60	6.58	--	--	--	--	--	--	--	--
09/02/2004	P		18.18	8.00	28.00	11.88	6.30	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.2	7.8
11/29/2004	--		18.18	8.00	28.00	11.55	6.63	--	--	--	--	--	--	--	--
02/02/2005	--		18.18	8.00	28.00	9.92	8.26	--	--	--	--	--	--	--	--
05/09/2005	--		18.18	8.00	28.00	10.19	7.99	--	--	--	--	--	--	--	--
08/11/2005	P	n	18.18	8.00	28.00	11.80	6.38	<50	<0.50	<0.50	<0.50	<0.50	<0.50	7.4	7.6
02/09/2006	--		18.18	8.00	28.00	10.49	7.69	--	--	--	--	--	--	--	--
8/11/2006	P		18.18	8.00	28.00	11.48	6.70	<50	<0.50	<0.50	<0.50	<0.50	<0.50	5.42	8.1
2/7/2007	--	e	18.18	8.00	28.00	--	--	--	--	--	--	--	--	--	--
8/14/2007	--	e	18.18	8.00	28.00	--	--	--	--	--	--	--	--	--	--
2/22/2008	--	**e**	**18.18**	**8.00**	**28.00**	--	--	--	--	--	--	--	--	--	--
AR-2															
6/26/2000	--		15.28	8.50	**28.50**	11.79	3.49	--	--	--	--	--	--	--	--
7/20/2000	--		15.28	8.50	**28.50**	12.07	3.21	<50	<0.5	<0.5	<0.5	<1.0	<3	--	--
9/19/2000	--		15.28	8.50	**28.50**	12.08	3.20	<50	<0.5	<0.5	<0.5	<1.0	<3	--	--
12/26/2000	--		15.28	8.50	**28.50**	11.95	3.33	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/20/2001	--		15.28	8.50	**28.50**	10.50	4.78	--	--	--	--	--	--	--	--
6/12/2001	--		15.28	8.50	**28.50**	11.73	3.55	<50	<0.5	<0.5	<0.5	<0.5	82	--	--
9/23/2001	--		15.28	8.50	**28.50**	12.43	2.85	--	--	--	--	--	--	--	--
12/28/2001	--		15.28	8.50	**28.50**	8.60	6.68	<50	<0.5	<0.5	<0.5	<0.5	30	--	--
3/21/2002	--		15.28	8.50	**28.50**	9.49	5.79	--	--	--	--	--	--	--	--
4/17/2002	--		15.28	8.50	**28.50**	10.37	4.91	<50	<0.5	<0.5	<0.5	<0.5	3.2	--	--
8/14/2002	--		15.28	8.50	**28.50**	12.13	3.15	<50	<0.5	<0.5	<0.5	<0.5	<2.5	1.4	7.9
11/27/2002	--		15.28	8.50	**28.50**	12.08	3.20	--	--	--	--	--	--	--	--

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

Station #2169, 889 W. Grand Ave., Oakland, CA

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
AR-2 Cont.															
2/12/2003	--	d	15.28	8.50	**28.50**	11.15	4.13	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.2	7.5
5/22/2003	--		15.28	8.50	**28.50**	11.18	4.10	--	--	--	--	--	--	--	--
7/23/2003	--		15.28	8.50	**28.50**	11.85	3.43	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.3	8.2
11/13/2003	--	f	15.28	8.50	28.50	11.98	3.30	--	--	--	--	--	--	--	--
02/16/2004	--	f, i	17.87	8.50	28.50	10.69	7.18	--	--	--	--	--	--	--	--
05/06/2004	--		17.87	8.50	28.50	11.55	6.32	--	--	--	--	--	--	--	--
09/02/2004	--	k	17.87	8.50	28.50	--	--	--	--	--	--	--	--	--	--
09/20/2004	NP		17.87	8.50	28.50	11.98	5.89	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.2	10.4
11/29/2004	--		17.87	8.50	28.50	12.62	5.25	--	--	--	--	--	--	--	--
02/02/2005	--		17.87	8.50	28.50	10.12	7.75	--	--	--	--	--	--	--	--
05/09/2005	--		17.87	8.50	28.50	10.13	7.74	--	--	--	--	--	--	--	--
08/11/2005	NP		17.87	8.50	28.50	11.73	6.14	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.8	7.3
02/09/2006	--		17.87	8.50	28.50	10.03	7.84	--	--	--	--	--	--	--	--
8/11/2006	NP		17.87	8.50	28.50	11.61	6.26	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.1	7.4
2/7/2007	--		17.87	8.50	28.50	11.52	6.35	--	--	--	--	--	--	--	--
8/14/2007	NP		17.87	8.50	28.50	11.75	6.12	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.86	7.41
2/22/2008	--		**17.87**	**8.50**	**28.50**	**9.82**	**8.05**	--	--	--	--	--	--	--	--

ABBREVIATIONS & SYMBOLS:
-- = Not analyzed/applicable/measured/available
< = Not detected at or above specified laboratory reporting limit
DO = Dissolved oxygen
DTW = Depth to water in ft bgs
ft bgs = Feet below ground surface
ft MSL = Feet above mean sea level
GRO = Gasoline range organics
GWE = Groundwater elevation measured in ft MSL
mg/L = Milligrams per liter
MTBE = Methyl tert-butyl ether analyzed by EPA Method 8021B unless otherwise noted
NP = Well not purged prior to sampling
P = Well purged prior to sampling
TOC = Top of casing measured in ft MSL
TPH-g = Total petroleum hydrocarbons as gasoline
µg/L = Micrograms per liter

FOOTNOTES:
a = Well was covered by stockpiled soil and not accessible.
b = GRO/TPH-g chromatogram pattern: Gasoline C6-C10.
c = Primary and confirmation results for xylene varied by greater than 40% RPD. The values may still be useful for their intended purpose.
d = TPH-g, BTEX, and MTBE analyzed using EPA Method 8260B starting first quarter 2003.
e = Well inaccessible.
f = ORC sock in well.
g = Well removed from annual sampling schedule.
h = ORC sock removed prior to gauging.
i = Site re-survey to NAV'88 datum on January 30, 2004.
j = Sheen in well.
k = Car parked over well AR-2 during monitoring event on 9/2/04. Well was sampled 9/20/04.
m = Hydrocarbon result partly due to individual peak(s) in quant. range.
n = Possible low bias for GRO due to CCV falling outside acceptance criteria.
o = Initial analysis within holding time but failed QA/QC criteria.

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

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

Top and bottom of screen depths for wells ADR-1 and ADR-2 are estimated from EMCON sampling sheets.

Values for DO and pH were obtained through field measurements.

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 #2169, 889 W. Grand Ave., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
A-1									
2/12/2003	<40	<20	2.9	<0.50	<0.50	<0.50	--	--	
5/22/2003	<100	<20	4.9	<0.50	<0.50	<0.50	--	--	
7/23/2003	<100	<20	10	<0.50	<0.50	<0.50	<0.50	<0.50	
11/13/2003	<100	<20	4.2	<0.50	<0.50	<0.50	--	--	
02/16/2004	<100	<20	3.2	<0.50	<0.50	<0.50	<0.50	<0.50	
05/06/2004	<100	<20	1.9	<0.50	<0.50	<0.50	<0.50	<0.50	
09/02/2004	<100	<20	1.7	<0.50	<0.50	<0.50	<0.50	<0.50	
11/29/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
02/02/2005	<100	<20	5.1	<0.50	<0.50	<0.50	<0.50	<0.50	a
05/09/2005	<100	<20	2.7	<0.50	<0.50	<0.50	<0.50	<0.50	
08/11/2005	<100	<20	4.2	<0.50	<0.50	<0.50	<0.50	<0.50	a
02/09/2006	<300	<20	5.6	<0.50	<0.50	<0.50	<0.50	<0.50	b
8/11/2006	<300	<20	3.7	<0.50	<0.50	<0.50	<0.50	<0.50	
2/7/2007	<300	<20	20	<0.50	<0.50	<0.50	<0.50	<0.50	
8/14/2007	<300	<20	1.8	<0.50	<0.50	<0.50	<0.50	<0.50	d (1,2-DCA)
2/22/2008	**<1,500**	**<50**	**<2.5**	**<2.5**	**<2.5**	**<2.5**	**<2.5**	**<2.5**	
A-2									
2/12/2003	<40	<20	12	<0.50	<0.50	<0.50	--	--	
7/23/2003	<100	<20	2.6	<0.50	<0.50	<0.50	<0.50	<0.50	
09/02/2004	<100	<20	2.5	<0.50	<0.50	<0.50	<0.50	<0.50	
08/11/2005	<100	<20	1.2	<0.50	<0.50	<0.50	<0.50	<0.50	a
8/11/2006	<300	<20	1.4	<0.50	<0.50	<0.50	<0.50	<0.50	
8/14/2007	<300	<20	0.65	<0.50	<0.50	<0.50	<0.50	<0.50	d (1,2-DCA)
A-3									
2/12/2003	<40	<20	<0.50	<0.50	<0.50	<0.50	--	--	
A-4									
2/12/2003	<40	<20	<0.50	<0.50	<0.50	<0.50	--	--	
A-5									
2/12/2003	<400	<200	<5.0	<5.0	<5.0	<5.0	--	--	

Table 2. Summary of Fuel Additives Analytical Data

Station #2169, 889 W. Grand Ave., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
A-5 Cont.									
5/22/2003	<1,000	<200	<5.0	<5.0	<5.0	<5.0	--	--	
7/23/2003	<1,000	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
11/13/2003	<1,000	<200	<5.0	<5.0	<5.0	<5.0	--	--	
02/16/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
05/06/2004	<500	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
09/02/2004	<200	<40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
11/29/2004	<10,000	<2,000	<50	<50	<50	<50	<50	<50	
02/02/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
05/09/2005	<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	a
02/09/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	b
8/11/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
2/7/2007	<6,000	<400	<10	<10	<10	<10	<10	<10	
8/14/2007	<6,000	<400	<10	<10	<10	<10	<10	<10	d (1,2-DCA)
2/22/2008	**<30,000**	**<1,000**	**<50**	**<50**	**<50**	**<50**	**<50**	**<50**	
A-6									
2/12/2003	<40	<20	9.9	<0.50	<0.50	<0.50	--	--	
5/22/2003	<100	<20	11	<0.50	<0.50	0.6	--	--	
7/23/2003	<100	<20	14	<0.50	<0.50	0.54	<0.50	<0.50	
11/13/2003	<100	<20	2.3	<0.50	<0.50	<0.50	--	--	
02/16/2004	<100	<20	3.9	<0.50	<0.50	<0.50	<0.50	<0.50	
05/06/2004	<100	<20	7.1	<0.50	<0.50	<0.50	<0.50	<0.50	
09/02/2004	<100	<20	4.4	<0.50	<0.50	<0.50	<0.50	<0.50	
11/29/2004	<100	<20	2.9	<0.50	<0.50	<0.50	<0.50	<0.50	
02/02/2005	<100	<20	14	<0.50	<0.50	0.91	<0.50	<0.50	a
05/09/2005	<100	<20	12	<0.50	<0.50	0.66	<0.50	<0.50	
08/11/2005	<100	<20	14	<0.50	<0.50	2.2	<0.50	<0.50	a
02/09/2006	<300	<20	17	<0.50	<0.50	1.2	<0.50	<0.50	b
8/11/2006	<300	<20	21	<0.50	<0.50	<0.50	<0.50	<0.50	
2/7/2007	<300	<20	7.1	<0.50	<0.50	<0.50	<0.50	<0.50	
8/14/2007	<300	<20	2.3	<0.50	<0.50	<0.50	<0.50	<0.50	d (1,2-DCA)

Table 2. Summary of Fuel Additives Analytical Data

Station #2169, 889 W. Grand Ave., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
A-6 Cont.									
2/22/2008	**<300**	**<10**	**11**	**<0.50**	**<0.50**	**0.89**	**<0.50**	**<0.50**	
ADR-1									
2/12/2003	<40	<20	0.73	<0.50	<0.50	<0.50	--	--	
5/22/2003	<100	<20	3.5	<0.50	<0.50	<0.50	--	--	
7/23/2003	<100	<20	4	<0.50	<0.50	<0.50	<0.50	<0.50	
11/13/2003	<100	<20	1.6	<0.50	<0.50	<0.50	--	--	
02/16/2004	<100	<20	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	
05/07/2004	<1,000	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
09/02/2004	<100	<20	0.84	<0.50	<0.50	<0.50	<0.50	<0.50	
11/29/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
02/02/2005	<100	<20	3.4	<0.50	<0.50	<0.50	<0.50	<0.50	a
05/09/2005	<100	<20	2.6	<0.50	<0.50	<0.50	<0.50	<0.50	
08/11/2005	<100	<20	4.0	<0.50	<0.50	<0.50	<0.50	<0.50	a
02/09/2006	<300	<20	2.9	<0.50	<0.50	<0.50	<0.50	<0.50	b
8/11/2006	<300	<20	2.2	<0.50	<0.50	<0.50	<0.50	<0.50	
2/7/2007	<300	<20	3.8	<0.50	<0.50	<0.50	<0.50	<0.50	
8/14/2007	<300	<20	3.6	<0.50	<0.50	<0.50	<0.50	<0.50	d (1,2-DCA)
2/22/2008	**<300**	**<10**	**3.9**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
ADR-2									
2/12/2003	<400	<200	22	<5.0	<5.0	<5.0	--	--	
5/22/2003	<1,000	<200	9.7	<5.0	<5.0	<5.0	--	--	
7/23/2003	<100	<20	8.4	<0.50	<0.50	<0.50	<0.50	<0.50	
09/02/2004	<1,000	<200	5.6	<5.0	<5.0	<5.0	<5.0	<5.0	
08/11/2005	<500	<100	9.0	<2.5	<2.5	<2.5	<2.5	<2.5	a
8/11/2006	<600	<40	4.6	<1.0	<1.0	<1.0	<1.0	<1.0	a, c
8/14/2007	<300	<20	5.3	<0.50	<0.50	<0.50	<0.50	<0.50	d (1,2-DCA)
AR-1									
2/12/2003	<40	<20	<0.50	<0.50	<0.50	<0.50	--	--	
7/23/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
09/02/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	

Table 2. Summary of Fuel Additives Analytical Data

Station #2169, 889 W. Grand Ave., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
AR-1 Cont.									
08/11/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/11/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
AR-2									
2/12/2003	<40	<20	<0.50	<0.50	<0.50	<0.50	--	--	
7/23/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
09/20/2004	<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	a
8/11/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/14/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	d (1,2-DCA)

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

FOOTNOTES:
a = Calibration verification was within method limits but outside contract limits for ethanol.
b = Initial analysis within holding time but failed QA/QC criteria.
c = Possible high bias due to CCV failing outside acceptance criteria for TBA.
d = CCV recovery above limit; analyte not detected.

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

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

Table 3. Historical Ground-Water Flow Direction and Gradient

Station #2169, 889 W. Grand Ave., Oakland, CA

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
7/20/2000	Northwest	0.004
9/19/2000	West-Northwest	0.003
12/26/2000	Northwest	0.004
3/20/2001	Northwest	0.003
6/12/2001	Northwest	0.004
9/23/2001	Northwest	0.004
12/28/2001	Variable	Variable
3/21/2002	Northwest	0.004
4/17/2002	Northwest	0.003
8/14/2002	West	0.003
11/27/2002	West	0.003
2/12/2003	South	0.005
5/22/2003	West to Northwest	0.002 to 0.003
7/23/2003	Southwest to Northwest	0.005 to 0.004
11/13/2003	Southwest	0.009
2/16/2004	Southwest	0.009
5/6/2004	Southwest	0.004
9/2/2004	West-Northwest	0.005
11/29/2004	West to Southwest	0.005 to 0.006
2/2/2005	Northwest to Southwest	0.005
5/9/2005	Northwest	0.01
8/11/2005	West	0.004
2/9/2006	West	0.003
8/11/2006	Northwest*	0.005
2/7/2007	North-Northwest*	0.004
8/14/2007	Northwest	0.005
2/22/2008	**Noth-Northwest**	**0.005**

* = Base map provided to Broadbent & Associates, Inc. incorrectly oriented north arrow 47° east of true north. Flow directions from Broadbent & Associates, Inc. reports for Third Quarter 2006 and First Quarter 2007 corrected in table above.

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 SHEETS, LABORATORY REPORT, CHAIN OF CUSTODY DOCUMENTATION AND FIELD PROCEDURES)

STRATUS
ENVIRONMENTAL, INC.

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

April 3, 2008

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

Re: Groundwater Sampling Data Package, BP Service Station No. 2169, located at 889 West Grand Avenue, Oakland, California.

General Information

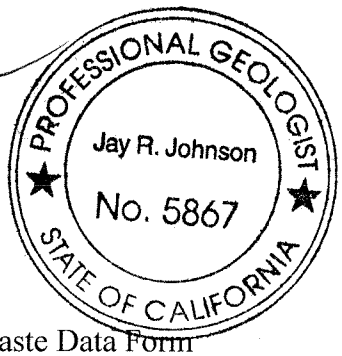
Data Submittal Prepared / Reviewed by: Becky Carroll / Jay Johnson
Phone Number: (530) 676-6000
On-Site Supplier Representative: Jerry Gonzales

Sampling Date: February 22, 2008
Arrival: 9:00 *Departure:* 11:35
Weather Conditions: Partly Cloudy
Unusual Field Conditions: None
Scope of Work Performed: Well AR-1 could not be located. We will attempt to locate the well by other means (e.g. metal detector) the next monitoring event.
Variations from Work Scope: None noted

This submittal presents the tabulation of data collected in association with routine groundwater monitoring. The attachments include field data 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

AK-900 DP-1135

Gauge Date: 2/22/08 **Project Name:** *Oakland - 889 W. Grand Avenue*

Field Technician: Jorge **Project Number:** *2169*

TOC = Top of Well Casing Elevation
DTP = Depth to Free Product (FP or NAPH) Below TOC
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	DTP	DTW	DTB	DIA	ELEV			
A-1	10:00			8.75	23.65					
A-2	9:20			9.50	24.48					
A-3	9:30			10.25	28.70					
A-4	9:35			8.90	27.50					
A-5	10:04			8.02	24.00					
A-6	10:12			8.07	26.75					
AK-1										Did not [illegible] locate well [illegible]
AK-2	9:40			9.82	28.50					
ADR-1	9:55			8.55	20.75					
ADR-2	9:44			9.47	25.57					

Cal pH 7.00 9:00 2-22

EC 1413

BP VALLEY PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 2169 PURGED BY: JLe WELL I.D.: A-1

CLIENT NAME: SAMPLED BY: JLe SAMPLE I.D.: A1

LOCATION: Oakland - 889 W. Grand Avenue QA SAMPLES:

DATE PURGED 2/22/08 START (2400hr) 11:12 END (2400hr) 11:18

DATE SAMPLED 2/22/08 SAMPLE TIME (2400hr) 11:25

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

CASING DIAMETER:	2"	3"	4"	5"	6"	8"	Other
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )

DEPTH TO BOTTOM (feet) = 23.65 CASING VOLUME (gal) = 5.6

DEPTH TO WATER (feet) = 8.75 CALCULATED PURGE (gal) = 16.8

WATER COLUMN HEIGHT (feet) = 14.3 ACTUAL PURGE (gal) = 17.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
2/22/08	11:09	5.6	18.9	1665	7.64	clear	
"	11:16	11.5	19.1	1671	7.67	"	
"	11:18	17.5	19.1	1693	7.65	"	

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 9.08 SAMPLE TURBIDITY: clear

80% RECHARGE: ____ YES ____ NO ANALYSES: 5-w-O

ODOR: yes 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: 20

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#: Mac

REMARKS: DO 4.16

SIGNATURE: JLe

BP VALLEY PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 2169 PURGED BY: JC WELL I.D.: A-5

CLIENT NAME: _____ SAMPLED BY: JC SAMPLE I.D.: A-5

LOCATION: Oakland - 889 W. Grand Avenue QA SAMPLES: _____

DATE PURGED _____ START (2400hr) 10:38 END (2400hr) 10:41

DATE SAMPLED _____ SAMPLE TIME (2400hr) 10:40

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

CASING DIAMETER:	2"	3"	4"	5"	6"	8"	Other
Casing Volume: (gallons per foot)	X (0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )

DEPTH TO BOTTOM (feet) = 24.00 CASING VOLUME (gal) = 2.6

DEPTH TO WATER (feet) = 8.02 CALCULATED PURGE (gal) = 8.5

WATER COLUMN HEIGHT (feet) = 15.3 ACTUAL PURGE (gal) = NP

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
	1041		172	1031		clear	

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 8.02 SAMPLE TURBIDITY: clear

80% RECHARGE: X YES ___ NO ANALYSES: S-W-O

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

PURGING EQUIPMENT

___ Bladder Pump ___ Bailer (Teflon)
___ Centrifugal Pump ___ Bailer (PVC)
___ Submersible Pump ___ Bailer (Stainless Steel)
___ Peristaltic Pump ___ Dedicated _____
Other: _____
Pump Depth: 8

SAMPLING EQUIPMENT

___ Bladder Pump ___ Bailer (Teflon)
___ Centrifugal Pump X Bailer (___ PVC or X disposable)
___ Submersible Pump ___ Bailer (Stainless Steel)
___ Peristaltic Pump ___ Dedicated _____
Other: _____

WELL INTEGRITY: good LOCK#: Master

REMARKS: DO. 1.25

SIGNATURE: _____ Page ___ of ___

BP VALLEY PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 2169 PURGED BY: JG WELL I.D.: MW-6

CLIENT NAME: SAMPLED BY: JG SAMPLE I.D.: MW-6

LOCATION: Oakland - 889 W. Grand Avenue QA SAMPLES:

DATE PURGED 2-22-08 START (2400hr) 1049 END (2400hr) 1051

DATE SAMPLED 2/22/08 SAMPLE TIME (2400hr) 1050

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

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

Casing Volume: (gallons per foot)

DEPTH TO BOTTOM (feet) = 26.75 CASING VOLUME (gal) = 2.1

DEPTH TO WATER (feet) = 8.07 CALCULATED PURGE (gal) = 6.5

WATER COLUMN HEIGHT (feet) = 18.6 ACTUAL PURGE (gal) = NP 0

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
2/22/08	1051	0	16.7	708	7.18	clear	
				NR			

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 8.07 SAMPLE TURBIDITY: clear

80% RECHARGE: X YES ___ NO ANALYSES: 8260

ODOR: no SAMPLE VESSEL / PRESERVATIVE: 6 VOA-HCl

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
___ Bladder Pump	___ Bailer (Teflon)	___ Bladder Pump	___ Bailer (Teflon)
___ Centrifugal Pump	___ Bailer (PVC)	___ Centrifugal Pump	X Bailer (___ PVC or X disposable)
___ Submersible Pump	___ Bailer (Stainless Steel)	___ Submersible Pump	___ Bailer (Stainless Steel)
___ Peristaltic Pump	___ Dedicated ____	___ Peristaltic Pump	___ Dedicated ____
Other: ____		Other: ____	
Pump Depth: ____			

WELL INTEGRITY: good LOCK#: Master

REMARKS: DO. 0.79

SIGNATURE: Page ___ of ___

BP VALLEY PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 2169 PURGED BY: JG WELL I.D.: ADR-1

CLIENT NAME: SAMPLED BY: JG SAMPLE I.D.: ADR-1

LOCATION: Oakland - 889 W. Grand Avenue QA SAMPLES:

DATE PURGED 2/22/08 START (2400hr) 10:59 END (2400hr) 11:04

DATE SAMPLED 2/22/08 SAMPLE TIME (2400hr) 1180

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

CASING DIAMETER:	2"	3"	4"	5"	6"	8"	Other
Casing Volume: (gallons per foot)	(0.17)	(0.38)	X (0.67)	(1.02)	(1.50)	(2.60)	( )

DEPTH TO BOTTOM (feet) = 20.77 CASING VOLUME (gal) = 8.1

DEPTH TO WATER (feet) = 8.55 CALCULATED PURGE (gal) = 24.5

WATER COLUMN HEIGHT (feet) = 12.2 ACTUAL PURGE (gal) = NP 0

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
2/22/08	11:04	0	17.6	976	6.75	clear	
			NA				

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 8.55 SAMPLE TURBIDITY: clear

80% RECHARGE: X YES ___ NO ANALYSES: 5-W-O

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

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
___ Bladder Pump	___ Bailer (Teflon)	___ Bladder Pump	___ Bailer (Teflon)
___ Centrifugal Pump	___ Bailer (PVC)	___ Centrifugal Pump	X Bailer (___ PVC or X disposable)
___ Submersible Pump	___ Bailer (Stainless Steel)	___ Submersible Pump	___ Bailer (Stainless Steel)
___ Peristalic Pump	___ Dedicated ____	___ Peristalic Pump	___ Dedicated ____
Other: ____		Other: ____	
Pump Depth: ____			

WELL INTEGRITY: Good LOCK#: Master

REMARKS: DO 1.52

SIGNATURE: Page ___ of ___

NO. 668563

NON-HAZARDOUS WASTE DATA FORM

TO BE COMPLETED BY GENERATOR

SITE:

EPA I.D. NO. NOT REQUIRED

NAME BP WEST COAST PRODUCTS LLC ARCO #2169

PROFILE NO.

ADDRESS P.O. BOX 80249
RANCHO SANTA MARGARITA

CITY, STATE, ZIP CA 92688

PHONE NO. ( )

CONTAINERS: No. VOLUME 12 Yards 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. BESI#		
4.			8.		

PROPERTIES: 7-10 ☐ 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 Moothart BESI for BP — 2/23/15
TYPED OR PRINTED FULL NAME & SIGNATURE — DATE

TRANSPORTER

Transporter #1 Transporter #2

EPA I.D. NO.

NAME STRATUS ENVIRONMENTAL

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 1105 AIRPORT RD #C ☐ LANDFILL ☐ OTHER

CITY, STATE, ZIP RIO VISTA, CA 94571

PHONE NO. 530-753-1829

TYPED OR PRINTED FULL NAME & SIGNATURE — DATE

GEN	OLD/NEW	L A	TONS	
TRANS		S B		
C/O		RT/CO	H'ANDF NONE	DISCREPANCY

Atlantic Richfield Company
bp
A BP affiliated company

Chain of Custody Record

Project Name: BP 2169
BP BU/AR Region/Enfos Segment: BP > Americas > West > Retail > CA > Alameda>2169
State or Lead Regulatory Agency:
Requested Due Date (mm/dd/yy):

On-site Time:	9:00 Temp: 57
Off-site Time:	11:35 Temp: 63
Sky Conditions:	Partly cloudy
Meteorological Events:	None
Wind Speed:	7 MPH Direction: NW

Lab Name: Calscience	BP/AR Facility No.: 2169	Consultant/Contractor: Stratus Environmental, Inc.
Address: 7440 Lincoln Way	BP/AR Facility Address: 889 W. Grand Avenue, Oakland	Address: 3330 Cameron Park Drive, Suite 550
Garden Grove, CA 92841	Site Lat/Long:	Cameron Park, CA 95682
Lab PM: Linda Scharpenberg	California Global ID #: T0600100112	Consultant/Contractor Project No.: E2169-04
Tele/Fax: 714-895-5494 714-895-7501(fax)	Enfos Project No.: G0C2D-0025	Consultant/Contractor PM: Jay Johnson
BP/AR PM Contact: Paul Supple	Provision or RCOP (circle one) Provision	Tele/Fax: (530) 676-6000 / (530) 676-6005
Address: 2010 Crow Canyon Place, Suite 150	Phase/WBS: 04-Monitoring	Report Type & QC Level: Level 1 with EDF
San Ramon, CA	Sub Phase/Task: 03-Analytical	E-mail EDD To: cjewitt@stratusinc.net
Tele/Fax: 925-275-3506	Cost Element: 01-Contractor labor	Invoice to: Atlantic Richfield Co.

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: BTEX/Oxy* by 8260	Requested Analysis: 1,2 DCA	Requested Analysis: EDB	Requested Analysis: Ethanol by 8260	Requested Analysis: GRO by 8015m	Sample Point Lat/Long and Comments *Oxy = MTBD, TAME, ETBE, DIPE, TBA
1	A-1	11:25	2/24/09		X			6				X		X	X	X	X	X	
2	A-5	1040	"		X			3				X		X	X	X	X	X	
3	A-6	1050	"		X			3				X		X	X	X	X	X	
4	ADR-1	11:00	"		X			3				X		X	X	X	X	X	
5	TB 2169	6:00			X			2				X							HOLD
6																			
7																			
8																			
9																			
10																			

Sampler's Name: Jerry Gonzales	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Stratus Env						
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

Special Instructions: Please cc results to: rmiller@broadbentinc.com

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.

March 05, 2008

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

Subject: **Calscience Work Order No.: 08-02-1875**
Client Reference: BP 2169

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/26/2008 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,

Linda Scharpenberg

Calscience Environmental
Laboratories, Inc.
Linda Scharpenberg
Project Manager

Calscience
Environmental
Laboratories, Inc.

CASE NARRATIVE – 08-02-1875

Data Qualifiers - EPA 8260:

Batch 080303S02:

The % recoveries for ethanol in the MS/MSD were above acceptance criteria. The % recoveries were within acceptance criteria in the LCS/LCSD. The MS/MSD has been flagged "3" within the report.

"3" = LM

LM = MS and/or MSD above acceptance limits. See Blank Spike (LCS).
AY = Matrix interference suspected

Batch 080303S02:

The % recovery for EDB in the LCSD was above acceptance criteria. The % recoveries were within acceptance criteria in the MS/MSD and LCS. The samples were all non-detect for EDB. The LCSD has been flagged "X" within the report.

"X" = LQ

LQ = LCS recovery above method control limits.
AY = Matrix interference suspected

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	02/26/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-02-1875
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: BP 2169

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
A-1	**08-02-1875-1-E**	**02/22/08 11:25**	**Aqueous**	**GC 4**	**02/26/08**	**02/26/08 20:58**	**080226B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	2600	1000	20		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	99	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
A-5	**08-02-1875-2-E**	**02/22/08 10:40**	**Aqueous**	**GC 4**	**02/26/08**	**02/26/08 21:31**	**080226B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	27000	1000	20		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	106	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
A-6	**08-02-1875-3-E**	**02/22/08 10:50**	**Aqueous**	**GC 4**	**02/26/08**	**02/26/08 19:19**	**080226B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	350	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	103	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
ADR-1	**08-02-1875-4-E**	**02/22/08 11:00**	**Aqueous**	**GC 4**	**02/26/08**	**02/26/08 22:04**	**080226B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	120	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	109	38-134			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	02/26/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-02-1875
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: BP 2169

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-37**	**N/A**	**Aqueous**	**GC 4**	**02/26/08**	**02/26/08 17:40**	**080226B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	103	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: 02/26/08
Work Order No: 08-02-1875
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: BP 2169

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
A-1	**08-02-1875-1-B**	**02/22/08 11:25**	**Aqueous**	**GC/MS Z**	**03/03/08**	**03/04/08 02:26**	**080303L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	160	2.5	5		Methyl-t-Butyl Ether (MTBE)	ND	2.5	5	
1,2-Dibromoethane	ND	2.5	5		Tert-Butyl Alcohol (TBA)	ND	50	5	
1,2-Dichloroethane	ND	2.5	5		Diisopropyl Ether (DIPE)	ND	2.5	5	
Ethylbenzene	16	2.5	5		Ethyl-t-Butyl Ether (ETBE)	ND	2.5	5	
Toluene	7.2	2.5	5		Tert-Amyl-Methyl Ether (TAME)	ND	2.5	5	
Xylenes (total)	11	2.5	5		Ethanol	ND	1500	5	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	101	73-157			Dibromofluoromethane	104	82-142		
Toluene-d8	99	82-112			1,4-Bromofluorobenzene	99	75-105		

A-5	**08-02-1875-2-B**	**02/22/08 10:40**	**Aqueous**	**GC/MS Z**	**03/04/08**	**03/04/08 14:26**	**080304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	410	50	100		Methyl-t-Butyl Ether (MTBE)	ND	50	100	
1,2-Dibromoethane	ND	50	100		Tert-Butyl Alcohol (TBA)	ND	1000	100	
1,2-Dichloroethane	ND	50	100		Diisopropyl Ether (DIPE)	ND	50	100	
Ethylbenzene	2600	50	100		Ethyl-t-Butyl Ether (ETBE)	ND	50	100	
Toluene	98	50	100		Tert-Amyl-Methyl Ether (TAME)	ND	50	100	
Xylenes (total)	4400	50	100		Ethanol	ND	30000	100	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	99	73-157			Dibromofluoromethane	102	82-142		
Toluene-d8	97	82-112			1,4-Bromofluorobenzene	102	75-105		

A-6	**08-02-1875-3-A**	**02/22/08 10:50**	**Aqueous**	**GC/MS Z**	**03/03/08**	**03/03/08 17:52**	**080303L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	11	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)	0.89	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	101	73-157			Dibromofluoromethane	105	82-142		
Toluene-d8	107	82-112			1,4-Bromofluorobenzene	102	75-105		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	02/26/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-02-1875
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	ug/L
Project: BP 2169			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
ADR-1	**08-02-1875-4-A**	**02/22/08 11:00**	**Aqueous**	**GC/MS Z**	**03/03/08**	**03/03/08 18:22**	**080303L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	3.9	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	103	73-157			Dibromofluoromethane	102	82-142		
Toluene-d8	100	82-112			1,4-Bromofluorobenzene	100	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-63**	**N/A**	**Aqueous**	**GC/MS Z**	**03/03/08**	**03/03/08 11:18**	**080303L01**

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	109	73-157			Dibromofluoromethane	109	82-142		
Toluene-d8	97	82-112			1,4-Bromofluorobenzene	89	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-64**	**N/A**	**Aqueous**	**GC/MS Z**	**03/03/08**	**03/03/08 23:55**	**080303L02**

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	122	73-157			Dibromofluoromethane	122	82-142		
Toluene-d8	93	82-112			1,4-Bromofluorobenzene	87	75-105		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	02/26/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-02-1875
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	ug/L
Project: BP 2169			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-66**	**N/A**	**Aqueous**	**GC/MS Z**	**03/04/08**	**03/04/08 11:25**	**080304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	112	73-157			Dibromofluoromethane	115	82-142		
Toluene-d8	95	82-112			1,4-Bromofluorobenzene	88	75-105		

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

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received: 02/26/08
3330 Cameron Park Drive, Suite 550	Work Order No: 08-02-1875
Cameron Park, CA 95682-8861	Preparation: EPA 5030B
	Method: EPA 8015B (M)

Project BP 2169

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
A-6	**Aqueous**	**GC 4**	**02/26/08**	**02/26/08**	**080226S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	103	105	38-134	2	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

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

Date Received: 02/26/08
Work Order No: 08-02-1875
Preparation: EPA 5030B
Method: EPA 8260B

Project BP 2169

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-02-1959-1	**Aqueous**	**GC/MS Z**	**03/03/08**	**03/03/08**	**080303S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	109	111	86-122	2	0-8	
Carbon Tetrachloride	105	107	78-138	2	0-9	
Chlorobenzene	110	112	90-120	1	0-9	
1,2-Dibromoethane	115	107	70-130	8	0-30	
1,2-Dichlorobenzene	109	108	89-119	1	0-10	
1,1-Dichloroethene	117	123	52-142	5	0-23	
Ethylbenzene	111	114	70-130	3	0-30	
Toluene	110	113	85-127	3	0-12	
Trichloroethene	106	108	78-126	1	0-10	
Vinyl Chloride	90	93	56-140	3	0-21	
Methyl-t-Butyl Ether (MTBE)	121	109	64-136	10	0-28	
Tert-Butyl Alcohol (TBA)	114	119	27-183	4	0-60	
Diisopropyl Ether (DIPE)	112	109	78-126	3	0-16	
Ethyl-t-Butyl Ether (ETBE)	117	113	67-133	3	0-21	
Tert-Amyl-Methyl Ether (TAME)	127	118	63-141	7	0-21	
Ethanol	99	133	11-167	29	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received: 02/26/08
3330 Cameron Park Drive, Suite 550	Work Order No: 08-02-1875
Cameron Park, CA 95682-8861	Preparation: EPA 5030B
	Method: EPA 8260B

Project BP 2169

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-02-2228-7	**Aqueous**	**GC/MS Z**	**03/03/08**	**03/04/08**	**080303S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	106	104	86-122	3	0-8	
Carbon Tetrachloride	102	99	78-138	3	0-9	
Chlorobenzene	111	108	90-120	2	0-9	
1,2-Dibromoethane	111	105	70-130	6	0-30	
1,2-Dichlorobenzene	107	105	89-119	1	0-10	
1,1-Dichloroethene	103	104	52-142	1	0-23	
Ethylbenzene	108	106	70-130	3	0-30	
Toluene	107	102	85-127	5	0-12	
Trichloroethene	102	99	78-126	2	0-10	
Vinyl Chloride	90	80	56-140	12	0-21	
Methyl-t-Butyl Ether (MTBE)	105	105	64-136	0	0-28	
Tert-Butyl Alcohol (TBA)	106	107	27-183	1	0-60	
Diisopropyl Ether (DIPE)	107	106	78-126	1	0-16	
Ethyl-t-Butyl Ether (ETBE)	105	105	67-133	0	0-21	
Tert-Amyl-Methyl Ether (TAME)	112	110	63-141	2	0-21	
Ethanol	237	321	11-167	30	0-64	3

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received: 02/26/08
3330 Cameron Park Drive, Suite 550	Work Order No: 08-02-1875
Cameron Park, CA 95682-8861	Preparation: EPA 5030B
	Method: EPA 8260B

Project BP 2169

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-02-2084-11	**Aqueous**	**GC/MS Z**	**03/04/08**	**03/04/08**	**080304S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	98	99	86-122	1	0-8	
Carbon Tetrachloride	97	96	78-138	1	0-9	
Chlorobenzene	99	101	90-120	2	0-9	
1,2-Dibromoethane	96	100	70-130	4	0-30	
1,2-Dichlorobenzene	94	97	89-119	3	0-10	
1,1-Dichloroethene	100	107	52-142	6	0-23	
Ethylbenzene	100	102	70-130	2	0-30	
Toluene	98	99	85-127	0	0-12	
Trichloroethene	94	96	78-126	2	0-10	
Vinyl Chloride	75	78	56-140	4	0-21	
Methyl-t-Butyl Ether (MTBE)	93	94	64-136	1	0-28	
Tert-Butyl Alcohol (TBA)	98	101	27-183	3	0-60	
Diisopropyl Ether (DIPE)	97	96	78-126	1	0-16	
Ethyl-t-Butyl Ether (ETBE)	94	94	67-133	1	0-21	
Tert-Amyl-Methyl Ether (TAME)	99	102	63-141	3	0-21	
Ethanol	92	94	11-167	3	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:	08-02-1875
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: BP 2169

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-37	**Aqueous**	**GC 4**	**02/26/08**	**02/26/08**	**080226B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	105	102	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:	08-02-1875
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: BP 2169

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-63	**Aqueous**	**GC/MS Z**	**03/03/08**	**03/03/08**	**080303L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	101	102	87-117	1	0-7	
Carbon Tetrachloride	98	99	78-132	1	0-8	
Chlorobenzene	102	103	88-118	1	0-8	
1,2-Dibromoethane	102	102	80-120	0	0-20	
1,2-Dichlorobenzene	104	102	88-118	2	0-8	
1,1-Dichloroethene	112	114	71-131	1	0-14	
Ethylbenzene	104	105	80-120	1	0-20	
Toluene	100	102	85-127	2	0-7	
Trichloroethene	100	101	85-121	1	0-11	
Vinyl Chloride	86	84	64-136	2	0-10	
Methyl-t-Butyl Ether (MTBE)	108	111	67-133	3	0-16	
Tert-Butyl Alcohol (TBA)	103	100	34-154	2	0-19	
Diisopropyl Ether (DIPE)	102	104	80-122	2	0-8	
Ethyl-t-Butyl Ether (ETBE)	110	113	73-127	3	0-11	
Tert-Amyl-Methyl Ether (TAME)	117	119	69-135	2	0-12	
Ethanol	92	102	34-124	10	0-44	

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:	08-02-1875
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: BP 2169

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-64	**Aqueous**	**GC/MS Z**	**03/03/08**	**03/03/08**	**080303L02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	107	110	87-117	3	0-7	
Carbon Tetrachloride	107	109	78-132	2	0-8	
Chlorobenzene	109	111	88-118	2	0-8	
1,2-Dibromoethane	110	122	80-120	11	0-20	X
1,2-Dichlorobenzene	106	108	88-118	2	0-8	
1,1-Dichloroethene	118	119	71-131	1	0-14	
Ethylbenzene	112	110	80-120	1	0-20	
Toluene	106	109	85-127	2	0-7	
Trichloroethene	105	107	85-121	2	0-11	
Vinyl Chloride	90	88	64-136	3	0-10	
Methyl-t-Butyl Ether (MTBE)	108	120	67-133	11	0-16	
Tert-Butyl Alcohol (TBA)	101	108	34-154	7	0-19	
Diisopropyl Ether (DIPE)	106	113	80-122	6	0-8	
Ethyl-t-Butyl Ether (ETBE)	106	115	73-127	8	0-11	
Tert-Amyl-Methyl Ether (TAME)	113	124	69-135	9	0-12	
Ethanol	111	103	34-124	8	0-44	

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: 08-02-1875
Cameron Park, CA 95682-8861	Preparation: EPA 5030B
	Method: EPA 8260B

Project: BP 2169

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-66	**Aqueous**	**GC/MS Z**	**03/04/08**	**03/04/08**	**080304L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100	97	87-117	2	0-7	
Carbon Tetrachloride	96	93	78-132	3	0-8	
Chlorobenzene	101	99	88-118	2	0-8	
1,2-Dibromoethane	103	100	80-120	3	0-20	
1,2-Dichlorobenzene	98	97	88-118	1	0-8	
1,1-Dichloroethene	110	94	71-131	15	0-14	X
Ethylbenzene	102	101	80-120	1	0-20	
Toluene	100	96	85-127	3	0-7	
Trichloroethene	95	93	85-121	3	0-11	
Vinyl Chloride	78	79	64-136	2	0-10	
Methyl-t-Butyl Ether (MTBE)	98	98	67-133	0	0-16	
Tert-Butyl Alcohol (TBA)	101	93	34-154	8	0-19	
Diisopropyl Ether (DIPE)	97	98	80-122	0	0-8	
Ethyl-t-Butyl Ether (ETBE)	98	98	73-127	0	0-11	
Tert-Amyl-Methyl Ether (TAME)	105	104	69-135	0	0-12	
Ethanol	99	92	34-124	7	0-44	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 08-02-1875

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Atlantic Richfield Company
bp
A BP affiliated company

Chain of Custody Record

Project Name: BP 2169 (1675)
BP BU/AR Region/Enfos Segment: BP > Americas > West > Retail > CA > Alameda>2169
State or Lead Regulatory Agency:
Requested Due Date (mm/dd/yy):

On-site Time: 9:00	Temp: 57
Off-site Time: 11:35	Temp: 63
Sky Conditions: Partly cloudy	
Meteorological Events: None	
Wind Speed: 7 mph	Direction: NW

Lab Name: Calscience	
Address: 7440 Lincoln Way	
Garden Grove, CA 92841	
Lab PM: Linda Scharpenberg	
Tele/Fax: 714-895-5494 714-895-7501(fax)	
BP/AR PM Contact: Paul Supple	
Address: 2010 Crow Canyon Place, Suite 150	
San Ramon, CA	
Tele/Fax: 925-275-3506	

BP/AR Facility No.:	2169
BP/AR Facility Address:	889 W. Grand Avenue, Oakland
Site Lat/Long:	
California Global ID #:	T0600100112
Enfos Project No.:	G0C2D-0025
Provision or RCOP (circle one)	Provision
Phase/WBS:	04-Monitoring
Sub Phase/Task:	03-Analytical
Cost Element:	01-Contractor labor

Consultant/Contractor:	Stratus Environmental, Inc.
Address:	3330 Cameron Park Drive, Suite 550
	Cameron Park, CA 95682
Consultant/Contractor Project No.:	E2169-04
Consultant/Contractor PM:	Jay Johnson
Tele/Fax:	(530) 676-6000 / (530) 676-6005
Report Type & QC Level:	Level 1 with EDF
E-mail EDD To:	cjewitt@stratusinc.net
Invoice to:	Atlantic Richfield Co.

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: BTEX/Oxy* by 8260	Requested Analysis: 1,2 DCA	Requested Analysis: EDB	Requested Analysis: Ethanol by 8260	Requested Analysis: GRO by 8015m	Sample Point Lat/Long and Comments *Oxy = MTBD, TAME, ETBE, DIPE, TBA
1	A-1	11:25	2/22/08		X			6				X		X	X	X	X	X	
2	A-5	1040	"		X			1				X		X	X	X	X	X	
3	A-6	1050	"		X			1				X		X	X	X	X	X	
4	ADR-1	11:00	"		X			1				X		X	X	X	X	X	
5	TB 2169	600			X			2				X							HOLD
6																			
7																			
8																			
9																			
10																			

Sampler's Name:	Jerry Gonzales
Sampler's Company:	Stratus ENV
Shipment Date:	
Shipment Method:	
Shipment Tracking No:	105748768

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
				2/26/08	0930

Special Instructions: Please cc results to: rmiller@broadbentinc.com

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 #: 08 - 02 - 1875

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: Stratus DATE: 2/26/08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

4.1 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: JP

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Present: _____

Initial: JP

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.	✓		
Tedlar bag(s) free of condensation			✓

Initial: JP

COMMENTS:

ATTACHMENT

FIELD PROCEDURES FOR GROUNDWATER SAMPLING

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

Equipment Calibration

Standard groundwater sampling equipment – pH/Conductivity/Temperature meter, and dissolved oxygen (DO) meters are calibrated prior to all field work. All calibration is conducted in accordance with equipment manufacturer's recommended procedure and buffer solutions. MSDS for all buffer solutions are maintained in Stratus vehicles. Calibration is completed everyday prior to field work and also once a week. The pH probe is calibrated for a pH of 7.0 daily and for 4.0, 7.0 and 10.0 weekly. The conductivity probe is calibrated for 1413 µs daily and 1413 µs and 447 µs weekly. The temperature probe is calibrated weekly with a NIST-traceable thermometer. The DO probe is calibrated for 100% oxygen daily and 0% and 100% oxygen weekly. All calibration logs are maintained in the Stratus office.

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 CONFIRMATIONS

Electronic Submittal Information

UPLOADING A GEO_WELL FILE

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

Submittal Title:	**1Q08 GEO_WELL 2169**
Facility Global ID:	**T0600100112**
Facility Name:	**ARCO #02169**
Submittal Date/Time:	**4/9/2008 9:55:57 AM**
Confirmation Number:	**1575224936**

Back to Main Menu

Electronic Submittal Information

Main Menu | View/Add Facilities | Upload EDD | Check EDD

Your EDF file has been successfully uploaded!

Confirmation Number: 4466781973
Date/Time of Submittal: 4/9/2008 9:58:13 AM
Facility Global ID: T0600100112
Facility Name: ARCO #02169
Submittal Title: 1Q08 GW Monitoring
Submittal Type: GW Monitoring Report

Click here to view the detections report for this upload.

ARCO #02169
889 GRAND
OAKLAND, CA 94607

Regional Board - Case #: 01-0120
SAN FRANCISCO BAY RWQCB (REGION 2)
Local Agency (lead agency) - Case #: RO0000072
ALAMEDA COUNTY LOP - **(PK)**

CONF #	TITLE	QUARTER
4466781973	1Q08 GW Monitoring	Q1 2008

SUBMITTED BY	SUBMIT DATE	STATUS
Broadbent & Associates, Inc.	4/9/2008	PENDING REVIEW

SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	4
# FIELD POINTS WITH DETECTIONS	4
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	4
SAMPLE MATRIX TYPES	WATER

METHOD QA/QC REPORT

METHODS USED	M8015,SW8260B
TESTED FOR REQUIRED ANALYTES?	Y
LAB NOTE DATA QUALIFIERS	Y

QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS	0
METHOD HOLDING TIME VIOLATIONS	0
LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT	0
LAB BLANK DETECTIONS	0
DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?	
- LAB METHOD BLANK	Y
- MATRIX SPIKE	Y
- MATRIX SPIKE DUPLICATE	Y
- BLANK SPIKE	Y
- SURROGATE SPIKE	Y

WATER SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	N
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	N
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	Y

SOIL SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	n/a
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%	n/a
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	n/a

FIELD QC SAMPLES

SAMPLE	COLLECTED	DETECTIONS > REPDL
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0