



Atlantic Richfield Company
(a BP affiliated company)

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Alameda County
Environmental Health

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

15 October 2008

Re: Third 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

Prepared for

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

Prepared by



1324 Mangrove Avenue, Suite 212
Chico, California 95926
(530) 566-1400
www.broadbentinc.com

15 October 2008

Project No. 06-08-621

**Third Quarter 2008 Semi-Annual
Ground-Water Monitoring Report**
Atlantic Richfield Company Station #2169
889 W. Grand Avenue
Oakland, California

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



15 October 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: Third 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 *Third 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 Third 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,

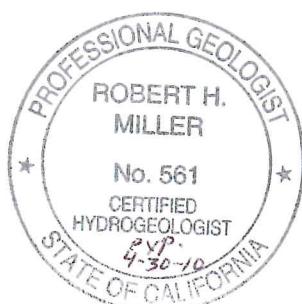
BROADBENT & ASSOCIATES, INC.

A handwritten signature in blue ink that reads "Thomas A. Venus".

Thomas A. Venus, P.E.
Senior Engineer

A handwritten signature in blue ink that reads "Robert H. Miller".

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 (Third Quarter 2008):

1. Submitted Second Quarter 2008 Status Report. Work performed by BAI.
2. Conducted ground-water monitoring/sampling for Third Quarter 2008. Work performed on 12 August 2008 by Stratus Environmental, Inc (Stratus).

WORK PROPOSED FOR NEXT QUARTER (Fourth Quarter 2008):

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

QUARTERLY RESULTS SUMMARY:

Current phase of project:	<u>Ground-water monitoring/sampling</u>
Frequency of ground-water monitoring:	<u>Semi-Annually: A-1 through A-6, AR-1, AR-2, ADR-1, ADR-2</u>
Frequency of ground-water sampling:	<u>Semi-Annually (1Q & 3Q): Wells A-1, A-5, A-6, ADR-1</u> <u>Annually (3Q): Wells A-2, AR-1, AR-2, ADR-2</u>
Is free product (FP) present on-site:	<u>No</u>
FP recovered this quarter:	<u>None</u>
Cumulative FP recovered:	<u>4.8 gallons: Wells ADR-1 and ADR-2</u>
Current remediation techniques:	<u>Soil Vapor Extraction System shut down in Dec. 2001</u>
Depth to ground water (below TOC):	<u>9.50 ft (A-5) to 12.10 ft (A-3)</u>
General ground-water flow direction:	<u>North-northwest</u>
Approximate hydraulic gradient:	<u>0.005 ft/ft</u>

DISCUSSION:

The semi-annual round of ground-water monitoring and sampling was conducted at Station #2169 on 12 August 2008 by Stratus. Water levels were gauged in each of the ten wells at the Site. No irregularities were noted during water level gauging. Depth to water measurements ranged from 9.50 ft at well A-5 to 12.10 ft at well A-3. Resulting ground-water surface elevations ranged from 7.41 ft above mean sea level in up-gradient well A-4 to 5.90 ft at down-gradient well A-2. Water level elevations were between historic minimum and maximum ranges for each well gauged, 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-2, A-5, A-6, AR-1, AR-2, ADR-1, and ADR-2, 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 five of the eight wells sampled at concentrations up to 31,000 micrograms per liter ($\mu\text{g}/\text{L}$) in well A-5. Benzene was detected above the laboratory reporting limit in four of the eight wells sampled at concentrations up to 420 $\mu\text{g}/\text{L}$ in well A-1. Toluene was detected above the laboratory reporting limits in two of the eight wells sampled at concentrations of 7.7 $\mu\text{g}/\text{L}$ in well ADR-1 and 28 $\mu\text{g}/\text{L}$ in well A-1. Ethylbenzene was detected above the laboratory reporting limit in four of the eight wells sampled at concentrations up to 1,800 $\mu\text{g}/\text{L}$ in well A-5. Total Xylenes were detected above the laboratory reporting limit in three of the eight wells sampled at concentrations up to 3,900 $\mu\text{g}/\text{L}$ in well A-5. MTBE was detected above the laboratory reporting limit in four of the eight wells sampled at concentrations up to 6.5 $\mu\text{g}/\text{L}$ in well ADR-1. The remaining fuel additives and oxygenates were not detected above their laboratory reporting limits in the eight wells sampled this quarter.

Detected analyte concentrations were within the historic minimum and maximum ranges recorded for each well with the following exceptions: GRO reached historic maximum concentrations of 7,400 $\mu\text{g}/\text{L}$, 31,000 $\mu\text{g}/\text{L}$, and 1,400 $\mu\text{g}/\text{L}$ in wells A-1, A-5, and ADR-1, respectively; Benzene reached a historic maximum concentration of 46 $\mu\text{g}/\text{L}$ in well ADR-1 and a historic minimum concentration of 0.92 $\mu\text{g}/\text{L}$ in well ADR-2; Toluene reached a historic maximum concentration of 7.7 $\mu\text{g}/\text{L}$ in well ADR-1; Ethylbenzene reached a historic maximum concentration of 190 $\mu\text{g}/\text{L}$ in well A-1 and a historic minimum concentration of 0.8 $\mu\text{g}/\text{L}$ in well ADR-2; Total xylenes reached historic maximum concentrations of 170 $\mu\text{g}/\text{L}$ and 19 $\mu\text{g}/\text{L}$ in wells A-1 and ADR-1, respectively; and MTBE reached a historic minimum concentration of 4.2 $\mu\text{g}/\text{L}$ in well ADR-2. 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:

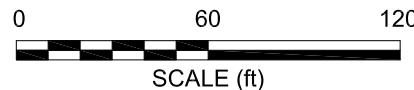
- Drawing 1. Ground-Water Elevation Contours and Analytical Summary Map, 12 August 2008,
ARCO Service Station #2169, 889 West Grand Avenue, Oakland, California
- Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory
Analyses, Station #2169, 889 W. Grand Ave., Oakland, California
- Table 2. Summary of Fuel Additives Analytical Data, Station #2169, 889 W. Grand Ave.,
Oakland, California
- Table 3. Historical Ground-Water Flow Direction and Gradient, Station #2169, 889 W. Grand
Ave., Oakland, California
- Appendix A. Stratus Ground-Water Sampling Data Package (Includes Field Data Sheets, Laboratory
Report, Chain of Custody Documentation, and Field Procedures)
- Appendix B. GeoTracker Upload Confirmations

LEGEND

- MONITORING WELL
- VAPOR EXTRACTION WELL
- ⊕ GROUNDWATER MONITORING/VAPOR EXTRACTION WELL
- AIR SPARGING WELL
- 7.0 GROUNDWATER TABLE CONTOUR (FT ABOVE MSL)
- APPROXIMATE GROUNDWATER FLOW GRADIENT AND DIRECTION (FT/FT)
- | |
|---------|
| Well |
| ELEV |
| GRO |
| Benzene |
| MTBE |

 WELL DESIGNATION
 GROUNDWATER ELEVATION (FT ABOVE MSL)
 CONCENTRATION OF GRO, BENZENE AND MTBE IN MICROGRAMS PER LITER
- AQ — 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.



BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California 95926
Project No.: 06-08-621 Date: 9/10/08

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

Ground-Water Elevation Contour and Analytical Summary Map
12 August 2008

Drawing 1

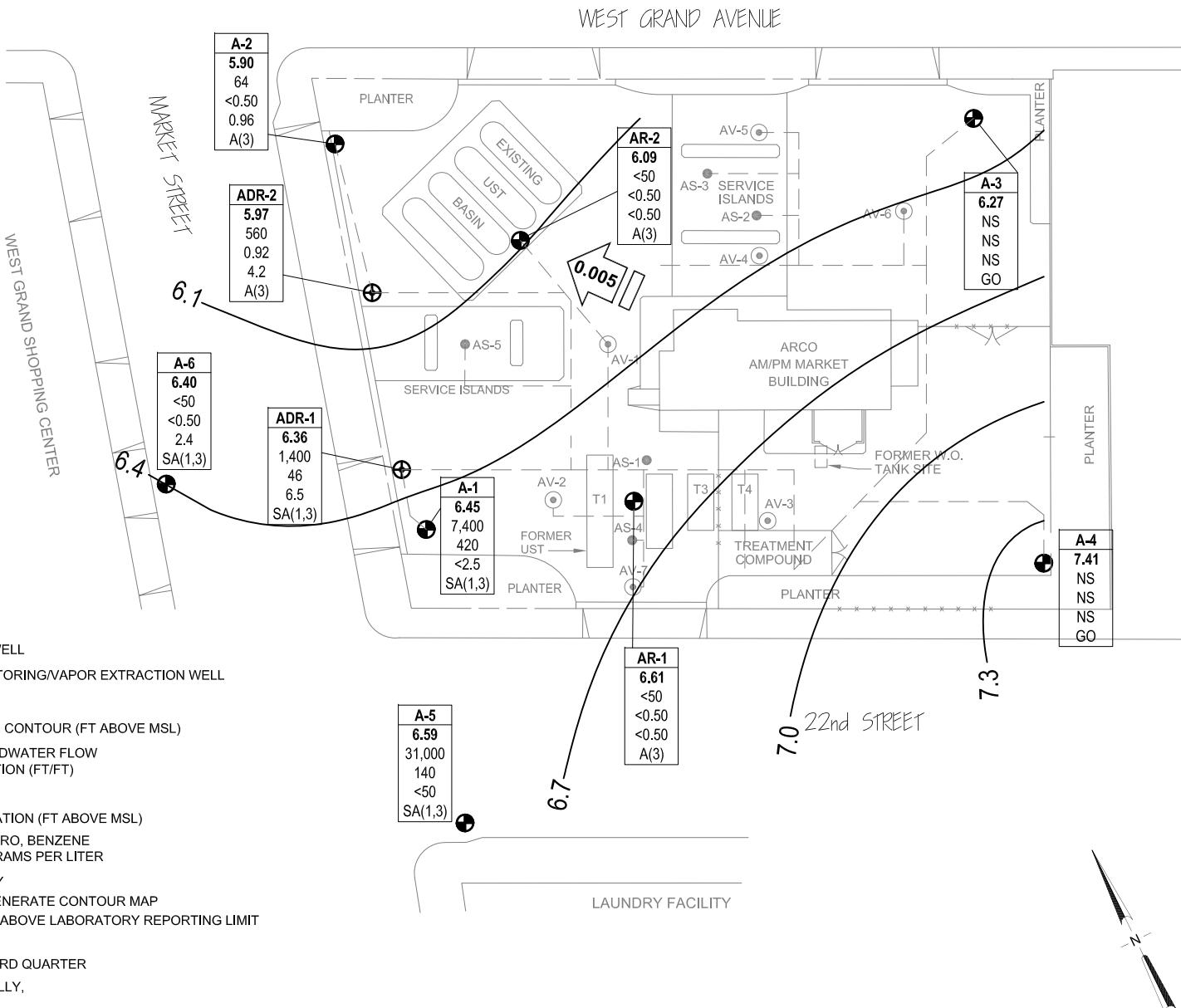


Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

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
8/12/2008	NP		16.75	9.00	25.00	10.30	6.45	7,400	420	28	190	170	<2.5	0.54	9.38
A-2															

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.															
6/26/2000	--		14.55	10.00	25.00	11.27	3.28	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--
8/12/2008	NP		17.18	10.00	25.00	11.28	5.90	64	<0.50	<0.50	<0.50	<0.50	0.96	0.57	9.44
A-3															

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.															
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	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--
8/12/2008	--		18.37	9.00	29.50	12.10	6.27	--	--	--	--	--	--	--	--
A-4															
6/26/2000	--		15.25	8.00	28.00	10.99	4.26	--	--	--	--	--	--	--	--

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.															
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	--	--
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	--	--	--	--	--	--	--	--
8/12/2008	--		18.01	8.00	28.00	10.60	7.41	--	--	--	--	--	--	--	--
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	--	--

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.															
9/19/2000	--		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	--	--
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
8/12/2008	NP		16.09	8.00	30.00	9.50	6.59	31,000	140	<50	1,800	3,900	<50	0.62	9.70
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	--	--

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-6 Cont.															
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	--	--
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	<0.50	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
8/12/2008	NP		16.10	8.00	28.50	9.70	6.40	<50	<0.50	<0.50	<0.50	<0.50	2.4	0.58	9.58
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	--	--

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		
ADR-1 Cont.															
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	--	--
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
8/12/2008	NP		16.56	5.00	22.00	10.20	6.36	1,400	46	7.7	13	19	6.5	0.50	9.32
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	--	--

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		
ADR-2 Cont.															
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	--	--
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	--	--	--	--	--	--	--	--
8/12/2008	NP		17.24	5.00	22.00	11.27	5.97	560	0.92	<0.50	0.80	<0.50	4.2	0.71	9.40
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	--	--

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.															
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
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	--	--	--	--	--	--	--	--	--	--
8/12/2008	NP		18.18	8.00	28.00	11.57	6.61	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.42	9.51
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	--	--

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.															
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	--	--	--	--	--	--	--	--
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	<0.50	1.3
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	--	--	--	--	--	--	--	--
8/12/2008	NP		17.87	8.50	28.50	11.78	6.09	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.37	9.13

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	
8/12/2008	<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)
8/12/2008	<300	<10	0.96	<0.50	<0.50	<0.50	<0.50	<0.50	
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	--	--	

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									
2/12/2003	<400	<200	<5.0	<5.0	<5.0	<5.0	--	--	
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	
8/12/2008	<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	

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.									
2/7/2007	<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)
2/22/2008	<300	<10	11	<0.50	<0.50	0.89	<0.50	<0.50	
8/12/2008	<300	<10	2.4	<0.50	<0.50	<0.50	<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	
8/12/2008	<600	<20	6.5	<1.0	<1.0	<1.0	<1.0	<1.0	
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)

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	
ADR-2 Cont.									
8/12/2008	<300	<10	4.2	<0.50	<0.50	<0.50	<0.50	<0.50	
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	
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	
8/12/2008	<300	<10	<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)
8/12/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	

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	North-Northwest	0.005
8/12/2008	North-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)**



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

September 4, 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: August 12, 2008

Arrival: 9:20 *Departure:* 13:40

Weather Conditions: Clear

Unusual Field Conditions: None noted.

Scope of Work Performed: Quarterly monitoring and sampling

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,

Jay R. Johnson
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-720 0913:40

Gauge Date: 8/24/05

Project Name: *889 Grand Ave., Oakland*

Field Technician: Jacry

Project Number: 2169

TOC = Top of Well Casting Plateau

TOC = Top of Well Casing Ele
TOS = Depth to Top of Screen

DTS = Depth to Top of Screen

DTW = Depth to Groundwater Below TOC

DIA # Well Casino Planets

ELEV = Groundwater Elevation

DUP = Duplicate

FW: Arturo Heimlich

pH/Conductivity/temperature Meter - YSI Model 63

DO Meter - YSI 55 Series (DO is always measured before pump)

Please refer to groundwater sampling field notes for details.

Calibration Date

PH 5-17-58

Conductivity σ / $\Omega^{-1} \cdot m^{-1}$

DO 8/18-8

BP VALLEY PORTFOLIO

PROJECT #: 2169 PURGED BY: J.C. WELL ID.: A-1
CLIENT NAME: _____ SAMPLED BY: J.C. SAMPLE ID.: A-1
LOCATION: Oakland - 889 W. Grand Avenue QA SAMPLES: _____

DATE PURGED 8-17-08 START (2400hr) 11:47 END (2400hr) 11:59
DATE SAMPLED 8-17-08 SAMPLE TIME (2400hr) 11:53

SAMPLE TYPE: Groundwater x Surface Water Treatment Efficient Other

CASING DIAMETER: 2" 3" 4" 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) 223.65 GAGING VOLUME (cu ft) 50

DEPTH TO WATER (ft) = 1400 Casing Volume (gal) = 10000

CALCULATED PURGE (gal) = _____

FIELD MEASUREMENTS

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 10.00 FT SAMPLE INFORMATION
SAMPLE TURBIDITY: 6.1 NTU

SAMPLE TURBIDITY: *Clear*

80% RECHARGE: YES NO ANALYSES: TWO

ANALYSES: *S.W.O.*

ODOR: Yes SAMPLE VESSEL / PRESERVATIVE: 600 mL - 4% acetic acid

PURGING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC or disposable)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated

Other: _____

WELL INTEGRITY: 2000 LOCK#: MAP-27-000

REMARKS *BC Aug 1999*

www.english-test.net

Digitized by srujanika@gmail.com

SIGNATURE: _____ Page ____ of ____

BP VALLEY PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

PROJECT #:	2169	PURGED BY:	JG	WELL I.D.:	A-2		
CLIENT NAME:		SAMPLED BY:	SC	SAMPLE I.D.:	A-2		
LOCATION:	Oakland - 889 W. Grand Avenue	QA SAMPLES:					
DATE PURGED	8-12-08	START (2400hr)	11:16	END (2400hr)	11:21		
DATE SAMPLED	8-12-08	SAMPLE TIME (2400hr)	11:20				
SAMPLE TYPE:	Groundwater <input checked="" type="checkbox"/>	Surface Water		Treatment Effluent			
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) =	24.48	CASING VOLUME (gal) = 5.0					
DEPTH TO WATER (feet) =	11.28	CALCULATED PURGE (gal) = 15.0					
WATER COLUMN HEIGHT (feet) =	13.2	ACTUAL PURGE (gal) = N/A - 0					
FIELD MEASUREMENTS							
DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
8-12-08	11:21	5	72.0	787	9.44	clr	
<i>f</i>							
SAMPLE INFORMATION							
SAMPLE DEPTH TO WATER:	11:28	SAMPLE TURBIDITY: clear					
80% RECHARGE:	<input checked="" type="checkbox"/> YES	NO	ANALYSES: SWO				
ODOR:	<i>No</i>	SAMPLE VESSEL / PRESERVATIVE: <i>Co-Vac-HCC</i>					
PURGING EQUIPMENT				SAMPLING EQUIPMENT			
Bladder Pump	Bailer (Teflon)	Bladder Pump	Bailer (Teflon)				
Centrifugal Pump	Bailer (PVC)	Centrifugal Pump	Bailer (PVC or <input checked="" type="checkbox"/> 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#:	<i>110-28</i>				
REMARKS:	<i>DO 0-57</i>						
SIGNATURE:	<i>[Signature]</i>						
					Page _____ of _____		

BP VALLEY PORTFOLIO

PROJECT #: 2169 PURGED BY: Jo WELL I.D.: A-6
CLIENT NAME: _____ SAMPLED BY: Jo SAMPLE I.D.: A-6
LOCATION: Oakland - 889 W. Grand Avenue QA SAMPLES: _____

DATE PURGED 8-12-07 START (2400hr) 10:47 END (2400hr) 10:58
DATE SAMPLED 8-12-07 SAMPLE TIME (2400hr) 10:50

SAMPLE TYPE: Groundwater Surface Water Treatment Effluent Other

Surface treated Treatment applied 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) = 76.75 Casing Volume (gal) = 3.9

DEPTH TO WATER (feet) = 9.70 CALCULATED PURGE (gal) = 3.5

WATER COLUMN HEIGHT (feet) = 17.0 ACTUAL PURGE (gal) = NP

FIELD MEASUREMENTS

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 3' 7" SAMPLE TURBIDITY: Cf sec

SAMPLE TURBIDITY: Clear

80% RECHARGE: YES NO ANALYSES: *SWL*

ODOR: *Ammonia* SAMPLE VESSEL / PRESERVATIVE: *100 mL Erlenmeyer*

PURGING EQUIPMENT

<u>Bladder Pump</u>	Bailer (Teflon)
<u>Centrifugal Pump</u>	Bailer (PVC)
<u>Submersible Pump</u>	Bailer (Stainless Steel)
<u>Peristaltic Pump</u>	Dedicated

Other:

Pump Depth: -

SAMPLING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC or disposable)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated

Other:

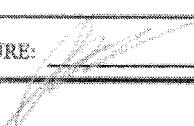
WELL INTEGRITY: *R. pool*

LOCKE *MS. 12. B. 1*

REMARKS- PC-9-18

CHICKEN TITI TATE  **Price** 

BP VALLEY PORTFOLIO
WATER SAMPLE FIELD DATA SHEET

PROJECT #:	2169	PURGED BY:	J.C.	WELL ID.:	AP-1		
CLIENT NAME:		SAMPLED BY:	J.C.	SAMPLE ID.:	AP-1		
LOCATION:	Oakland - 889 W. Grand Avenue			QA SAMPLES:			
DATE PURGED	8-12-08	START (2400hr)	13:00	END (2400hr)	13:06		
DATE SAMPLED	8-12-08	SAMPLE TIME (2400hr)	13:05				
SAMPLE TYPE:	Groundwater <input checked="" type="checkbox"/>	Surface Water		Treatment Effluent			
CASING DIAMETER:	2"	3"	4"	5"	6" <input checked="" type="checkbox"/>		
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(2.60) Other _____		
DEPTH TO BOTTOM (feet) =	22.44			CASING VOLUME (gal) =	23.8		
DEPTH TO WATER (feet) =	11.57			CALCULATED PURGE (gal) =	76.4		
WATER COLUMN HEIGHT (feet) =	15.7			ACTUAL PURGE (gal) =	NP-0		
FIELD MEASUREMENTS							
DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (microhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
8-12-08	13:06	20	77.0	21.02	9.51	clear	
SAMPLE INFORMATION							
SAMPLE DEPTH TO WATER:	11.57			SAMPLE TURBIDITY: clear			
80% RECHARGE:	<input checked="" type="checkbox"/> YES	NO	ANALYSES:	SW-O			
ODOR:	NO			SAMPLE VESSEL / PRESERVATIVE: G-Vac-Ha			
PURGING EQUIPMENT				SAMPLING EQUIPMENT			
Bladder Pump	Bailer (Teflon)	Bladder Pump	Bailer (Teflon)				
Centrifugal Pump	Bailer (PVC)	Centrifugal Pump	<input checked="" type="checkbox"/> PVC or <input checked="" type="checkbox"/> 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#:	N/A		
REMARKS:	D.O. 0.42						
SIGNATURE:				Page	of		

BP VALLEY PORTFOLIO
WATER SAMPLE FIELD DATA SHEET

PROJECT #: 2169

PURGED BY: Jc

WELL I.D.: A R-2

CLIENT NAME: _____

SAMPLED BY: T

SAMPLE I.D.: A R-2

LOCATION: Oakland - 889 W. Grand Avenue

QA SAMPLES: _____

DATE PURGED 8-12-08

START (2400hr) 10:31

END (2400hr) 10:32

DATE SAMPLED 8-12-08

SAMPLE TIME (2400hr) 10:35

SAMPLE TYPE: Groundwater

Surface Water

Treatment Effluent

Other

CASING DIAMETER: 2"

3"

4"

Casing Volume: (gallons per foot) (0.17)

(0.38)

(0.67)

(1.02)

(1.50)

(2.60)

()

Other

DEPTH TO BOTTOM (feet) = 28.50

CASING VOLUME (gal) = 11.2

DEPTH TO WATER (feet) = 11.78

CALCULATED PURGE (gal) = 33.6

WATER COLUMN HEIGHT (feet) = 16.7

ACTUAL PURGE (gal) = NP-0

FIELD MEASUREMENTS

DATE 8-12-08

TIME (2400hr) 10:32

VOLUME (gal) 10

TEMP (degrees F) 77.9

CONDUCTIVITY (umhos/cm) 4425

pH (units) 9.13

COLOR (visual) clear

TURBIDITY (NTU)

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 11.78

SAMPLE TURBIDITY: clear

80% RECHARGE: YES NO

ANALYSES: SWO

ODOR: N/A

SAMPLE VESSEL / PRESERVATIVE: 6 Vial-H2O

PURGING EQUIPMENT

Bladder Pump

Bailer (Teflon)

Centrifugal Pump

Bailer (PVC)

Submersible Pump

Bailer (Stainless Steel)

Peristaltic Pump

Dedicated

Other: _____

Pump Depth: _____

SAMPLING EQUIPMENT

Bladder Pump

Bailer (Teflon)

Centrifugal Pump

Bailer (PVC or disposable)

Submersible Pump

Bailer (Stainless Steel)

Peristaltic Pump

Dedicated

Other: _____

WELL INTEGRITY: good

LOCK#: Mastex

REMARKS: Do. 037

SIGNATURE: John C.

Page ____ of ____

BP VALLEY PORTFOLIO
WATER SAMPLE FIELD DATA SHEET

PROJECT #: 2169 PURGED BY: JG WELL I.D.: ADR-1
CLIENT NAME: SAMPLED BY: JF SAMPLE I.D.: ADR-1
LOCATION: Oakland - 889 W. Grand Avenue QA SAMPLES:

DATE PURGED 8/12/88 START (2400hr) 12:06 END (2400hr) 12:11
DATE SAMPLED 8/12/88 SAMPLE TIME (2400hr) 12:10

SAMPLE TYPE: Groundwater Surface Water Treatment Effluent Other

ANSWER

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) = 20.75 Casing Volume (gal) = 1000

DEPTH TO WATER (feet) = 10.20 CALCULATED PURGE (gal) = 36.3

WATER COLUMN HEIGHT (feet) = 10.3 ACTUAL PURGE (gpm) =

FIELD MEASUREMENTS

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 10.20 SAMPLE TURBIDITY: 2.9 NTU

SAMPLE TURBIDITY: C-1-Ear.

80% RECHARGE: YES NO ANALYSES: S. 100

G. Wattle

ODOR: TOAD SAMPLE VESSEL / PRESERVATIVE: V

PURGING EQUIPMENT

SAMPLING EQUIPMENT

<u>Bladder Pump</u>	Bailer (Teflon)
<u>Centrifugal Pump</u>	Bailer (PVC)
<u>Submersible Pump</u>	Bailer (Stainless Steel)
<u>Peristaltic Pump</u>	Dedicated

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC or disposable)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated

Others:

Other:

WILL D. TIGHE *See M. H. F.*

LOCK# 146-767

REMARKS.—Page 58

SIGNATURE:

Page _____ of _____

BP VALLEY PORTFOLIO
WATER SAMPLE FIELD DATA SHEET

PROJECT #: <u>2169</u>	PURGED BY: <u>Jc</u>	WELL I.D.: <u>ADR-2</u>				
CLIENT NAME: _____	SAMPLED BY: <u>Jc</u>	SAMPLE I.D.: <u>ADR-2</u>				
LOCATION: <u>Oakland - 889 W. Grand Avenue</u>	QA SAMPLES: _____					
DATE PURGED: <u>8/12/08</u>	START (2400hr) <u>17:28</u>	END (2400hr) <u>11:39</u>				
DATE SAMPLED: <u>8/12/08</u>	SAMPLE TIME (2400hr) <u>17:33</u>					
SAMPLE TYPE: <u>Groundwater</u> <input checked="" type="checkbox"/>	Surface Water <input type="checkbox"/>	Treatment Effluent <input type="checkbox"/>				
CASING DIAMETER: <u>2"</u>	<u>3"</u>	<u>4"</u> <input checked="" type="checkbox"/>	<u>5"</u>	<u>6"</u>	<u>8"</u>	Other _____
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)
DEPTH TO BOTTOM (feet) =	<u>23.57</u>			CASING VOLUME (gal) = <u>4.5</u>		
DEPTH TO WATER (feet) =	<u>11.37</u>			CALCULATED PURGE (gal) = <u>28.7</u>		
WATER COLUMN HEIGHT (feet) =	<u>14.3</u>			ACTUAL PURGE (gal) = <u>NP</u>		
FIELD MEASUREMENTS						
DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)
<u>8/12/08</u>	<u>11:34</u>	<u>6</u>	<u>71.3</u>	<u>8.82</u>	<u>7.90</u>	<u>Clear</u>
SAMPLE INFORMATION						
SAMPLE DEPTH TO WATER:	<u>11.37</u>			SAMPLE TURBIDITY: <u>Clear</u>		
80% RECHARGE: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	ANALYSES: <u>SWVO</u>					
ODOR: <u>NO</u>	SAMPLE VESSEL / PRESERVATIVE: <u>6 Vac-Hole</u>					
PURGING EQUIPMENT				SAMPLING EQUIPMENT		
Bladder Pump	Bailer (Teflon)		Bladder Pump	Bailer (Teflon)		
Centrifugal Pump	Bailer (PVC)		Centrifugal Pump	<input checked="" type="checkbox"/> Bailer (PVC or <input checked="" type="checkbox"/> disposable)		
Submersible Pump	Bailer (Stainless Steel)		Submersible Pump	Bailer (Stainless Steel)		
Peristaltic Pump	Dedicated		Peristaltic Pump	Dedicated		
Other: _____				Other: _____		
Pump Depth: _____						
WELL INTEGRITY: <u>good</u>				LOCK#: <u>11:34</u>		
REMARKS: <u>D8-0-91</u>						
SIGNATURE: 				Page <u> </u> of <u> </u>		

WELLHEAD OBSERVATION FORM

Site Name/Number: 2169

Date: 8-12-96

Technician: J. W. Murphy



DRUM INVENTORY

Drums on site? Yes No (circle)

Type and # Steel Plastic

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

GENERAL SITE CONDITIONS

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

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



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:	920	Temp:	70
Off-site Time:	1390	Temp:	78
Sky Conditions:	Clear		
Meteorological Events:	None		
Wind Speed:	00	Direction:	

Lab Name: Calscience
Address: 7440 Lincoln Way Garden Grove, CA 92841
Lab PM: Linda Schapenberg
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: bcarroll@stratusinc.net
Invoice to: Atlantic Richfield Co.

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix	Laboratory No.	No. of Containers	Preservative				Requested Analysis				Sample Point Lat/Long and Comments *Oxy = MTBD, TAME, ETBE, DIPE, TBA	
							Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	PTEX338* by 8260F3	1,2 DCA	EDB	Tetanol by 8260	
1	A-1	1153	8-12-8	X		6				X		X	X	X	X	
2	A-2	1120		X		1				X		X	X	X	X	
3	A-5	1105		X						X		X	X	X	X	
4	A-6	1050		X						X		X	X	X	X	
5	AR-1	1305		X						X		X	X	X	X	
6	AR-2	1035		X						X		X	X	X	X	
7	ADR-1	1210		X						X		X	X	X	X	
8	ADR-2	1133		X						X		X	X	X	X	
9	TB 2169	500		X		2				X		X	X	X	X	HOLD
10																

Sampler's Name: Jerry Gonzales

Sampler's Company: Douglas Env

Shipment Date:

Shipment Method:

Shipment Tracking No:

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

Relinquished By / Affiliation

Date

Time

Accepted By / Affiliation

Date

Time

Custody Seals In Place: Yes / No

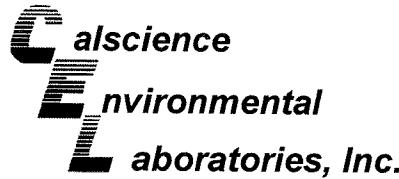
Temp Blank: Yes / No

Cooler Temp on Receipt:

°F/C

Trip Blank: Yes / No

MS/MSD Sample Submitted: Yes / No



August 29, 2008

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

Subject: **Calscience Work Order No.: 08-08-1391**
Client Reference: BP 2169

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 8/15/2008 and analyzed in accordance with the attached chain-of-custody.

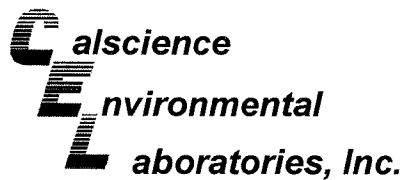
Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows 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,

Philip Sanelle for

Calscience Environmental
Laboratories, Inc.
Linda Scharpenberg
Project Manager



Analytical Report

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

Date Received: 08/15/08
Work Order No: 08-08-1391
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP 2169

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
A-1	08-08-1391-1-E	08/12/08 11:53	Aqueous	GC 30	08/19/08	08/19/08 14:53	080819B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	7400	1000	20		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	92	38-134			

A-2	08-08-1391-2-E	08/12/08 11:20	Aqueous	GC 30	08/19/08	08/19/08 15:27	080819B01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	64	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	79	38-134			

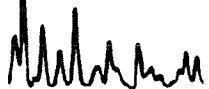
A-5	08-08-1391-3-E	08/12/08 11:05	Aqueous	GC 30	08/19/08	08/19/08 16:00	080819B01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	31000	1000	20		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	112	38-134			

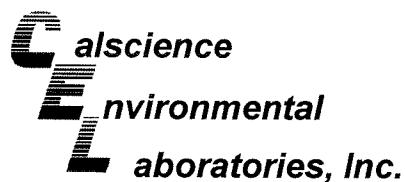
A-6	08-08-1391-4-E	08/12/08 10:50	Aqueous	GC 30	08/19/08	08/19/08 16:34	080819B01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	79	38-134			

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



7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL:(714) 895-5494 • FAX: (714) 894-7501



Analytical Report

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

Date Received: 08/15/08
Work Order No: 08-08-1391
Preparation: EPA 5030B
Method: EPA 8015B (M)

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
AR-1	08-08-1391-5-E	08/12/08 13:05	Aqueous	GC 30	08/19/08	08/19/08 17:08	080819B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
<u>Surrogates:</u> REC (%) Control Limits Qual					
1,4-Bromofluorobenzene	79	38-134			

AR-2	08-08-1391-6-E	08/12/08 10:35	Aqueous	GC 30	08/19/08	08/19/08 17:41	080819B01
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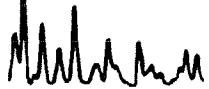
Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
<u>Surrogates:</u> REC (%) Control Limits Qual					
1,4-Bromofluorobenzene	77	38-134			

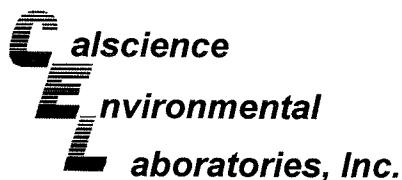
ADR-1	08-08-1391-7-E	08/12/08 12:10	Aqueous	GC 30	08/19/08	08/19/08 18:15	080819B01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	1400	50	1		ug/L
<u>Surrogates:</u> REC (%) Control Limits Qual					
1,4-Bromofluorobenzene	132	38-134			

ADR-2	08-08-1391-8-D	08/12/08 11:33	Aqueous	GC 30	08/20/08	08/20/08 16:41	080820B01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	560	50	1		ug/L
<u>Surrogates:</u> REC (%) Control Limits Qual					
1,4-Bromofluorobenzene	83	38-134			

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




Analytical Report

A rectangular stamp with the words "ANALYTICAL REPORT" in a stylized font, with "ANALYTICAL" on top and "REPORT" on the bottom right.

Stratus Environmental, inc.	Date Received:	08/15/08
3330 Cameron Park Drive, Suite 550	Work Order No:	08-08-1391
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: BP 2169

Page 3 of 3

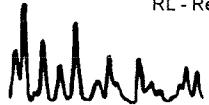
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-695-237	N/A	Aqueous	GC 30	08/19/08	08/19/08 11:31	080819B01

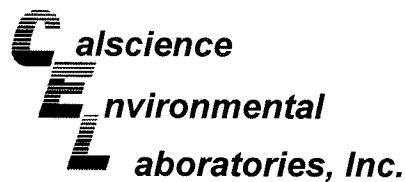
Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	83	38-134			

Method Blank	099-12-695-240	N/A	Aqueous	GC 30	08/20/08	08/20/08 11:05	080820B01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	69	38-134			

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





Analytical Report

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

Date Received: 08/15/08
Work Order No: 08-08-1391
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: BP 2169

Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
A-1	08-08-1391-1-A	08/12/08 11:53	Aqueous	GC/MS BB	08/21/08	08/22/08 03:00	080821L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	420	10	20		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	190	2.5	5		Ethyl-t-Butyl Ether (ETBE)	ND	2.5	5	
Toluene	28	2.5	5		Tert-Amyl-Methyl Ether (TAME)	ND	2.5	5	
Xylenes (total)	170	2.5	5		Ethanol	ND	1500	5	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	118	73-157			Dibromofluoromethane	118	82-142		
Toluene-d8	96	82-112			1,4-Bromofluorobenzene	95	75-105		

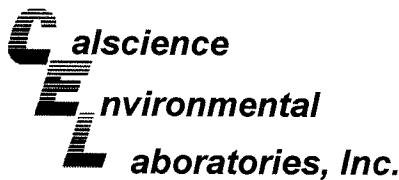
A-2	08-08-1391-2-B	08/12/08 11:20	Aqueous	GC/MS BB	08/22/08	08/22/08 13:33	080822L01
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	0.96	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (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	111	82-142		
Toluene-d8	98	82-112			1,4-Bromofluorobenzene	80	75-105		

A-5	08-08-1391-3-A	08/12/08 11:05	Aqueous	GC/MS BB	08/21/08	08/22/08 04:06	080821L02
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	140	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	1800	50	100		Ethyl-t-Butyl Ether (ETBE)	ND	50	100	
Toluene	ND	50	100		Tert-Amyl-Methyl Ether (TAME)	ND	50	100	
Xylenes (total)	3900	50	100		Ethanol	ND	30000	100	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	122	73-157			Dibromofluoromethane	120	82-142		
Toluene-d8	100	82-112			1,4-Bromofluorobenzene	93	75-105		

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



Analytical Report

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

Date Received: 08/15/08
Work Order No: 08-08-1391
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: BP 2169

Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
A-6	08-08-1391-4-A	08/12/08 10:50	Aqueous	GC/MS BB	08/21/08	08/22/08 04:39	080821L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	2.4	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	119	73-157			Dibromofluoromethane	118	82-142		
Toluene-d8	96	82-112			1,4-Bromofluorobenzene	86	75-105		

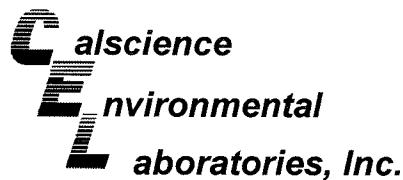
AR-1	08-08-1391-5-A	08/12/08 13:05	Aqueous	GC/MS BB	08/21/08	08/22/08 05:12	080821L02
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (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	132	73-157			Dibromofluoromethane	129	82-142		
Toluene-d8	87	82-112			1,4-Bromofluorobenzene	86	75-105		

AR-2	08-08-1391-6-A	08/12/08 10:35	Aqueous	GC/MS BB	08/21/08	08/22/08 05:45	080821L02
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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	131	73-157			Dibromofluoromethane	127	82-142		
Toluene-d8	97	82-112			1,4-Bromofluorobenzene	92	75-105		

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



Analytical Report

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

Date Received: 08/15/08
Work Order No: 08-08-1391
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: BP 2169

Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
ADR-1	08-08-1391-7-B	08/12/08 12:10	Aqueous	GC/MS BB	08/22/08	08/22/08 14:40	080822L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	46	1.0	2		Methyl-t-Butyl Ether (MTBE)	6.5	1.0	2	
1,2-Dibromoethane	ND	1.0	2		Tert-Butyl Alcohol (TBA)	ND	20	2	
1,2-Dichloroethane	ND	1.0	2		Diisopropyl Ether (DIPE)	ND	1.0	2	
Ethylbenzene	13	1.0	2		Ethyl-t-Butyl Ether (ETBE)	ND	1.0	2	
Toluene	7.7	1.0	2		Tert-Amyl-Methyl Ether (TAME)	ND	1.0	2	
Xylenes (total)	19	1.0	2		Ethanol	ND	600	2	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	119	73-157			Dibromofluoromethane	116	82-142		
Toluene-d8	102	82-112			1,4-Bromofluorobenzene	105	75-105		

ADR-2	08-08-1391-8-B	08/12/08 11:33	Aqueous	GC/MS BB	08/22/08	08/22/08 14:07	080822L01
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.92	0.50	1		Methyl-t-Butyl Ether (MTBE)	4.2	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	0.80	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	98	73-157			Dibromofluoromethane	103	82-142		
Toluene-d8	102	82-112			1,4-Bromofluorobenzene	103	75-105		

Method Blank	099-12-703-405	N/A	Aqueous	GC/MS BB	08/21/08	08/22/08 01:20	080821L02
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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	108	73-157			Dibromofluoromethane	107	82-142		
Toluene-d8	96	82-112			1,4-Bromofluorobenzene	95	75-105		

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



Analytical Report

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

Date Received: 08/15/08
Work Order No: 08-08-1391
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

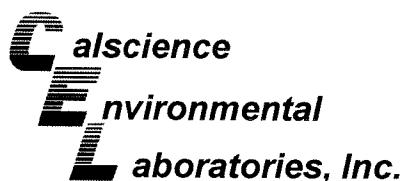
Project: BP 2169

Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-703-406	N/A	Aqueous	GC/MS BB	08/22/08	08/22/08 13:00	080822L01

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	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	102	73-157			Dibromofluoromethane	107	82-142		
Toluene-d8	93	82-112			1,4-Bromofluorobenzene	88	75-105		

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



Quality Control - Spike/Spike Duplicate

Sample ID: 080819S01
Date Analyzed: 08/19/08
Method: EPA 8015B (M)

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

Date Received: 08/15/08
Work Order No: 08-08-1391
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project BP 2169

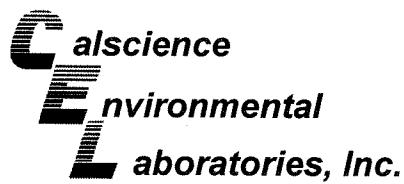
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-08-1393-2	Aqueous	GC 30	08/19/08	08/19/08	080819S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	95	102	38-134	8	0-25	

RPD - Relative Percent Difference , CL - Control Limit



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Quality Control - Spike/Spike Duplicate



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

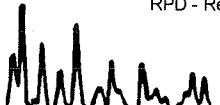
Date Received: 08/15/08
Work Order No: 08-08-1391
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project BP 2169

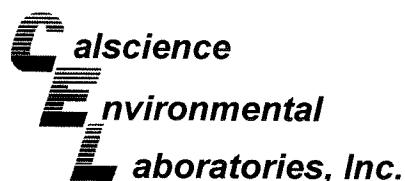
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-08-1389-1	Aqueous	GC 30	08/20/08	08/20/08	080820S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	97	102	38-134	5	0-25	

RPD - Relative Percent Difference , CL - Control Limit



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Quality Control - Spike/Spike Duplicate

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

Date Received: 08/15/08
Work Order No: 08-08-1391
Preparation: EPA 5030B
Method: EPA 8260B

Project BP 2169

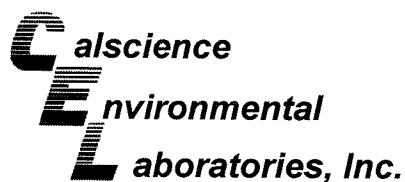
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-08-1521-1	Aqueous	GC/MS BB	08/21/08	08/21/08	080821S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	97	98	86-122	2	0-8	
Carbon Tetrachloride	99	98	78-138	1	0-9	
Chlorobenzene	103	101	90-120	1	0-9	
1,2-Dibromoethane	102	101	70-130	1	0-30	
1,2-Dichlorobenzene	101	98	89-119	3	0-10	
1,1-Dichloroethene	82	89	52-142	9	0-23	
Ethylbenzene	97	96	70-130	1	0-30	
Toluene	100	96	85-127	4	0-12	
Trichloroethene	97	93	78-126	3	0-10	
Vinyl Chloride	114	112	56-140	2	0-21	
Methyl-t-Butyl Ether (MTBE)	106	107	64-136	1	0-28	
Tert-Butyl Alcohol (TBA)	98	91	27-183	8	0-60	
Diisopropyl Ether (DIPE)	105	103	78-126	1	0-16	
Ethyl-t-Butyl Ether (ETBE)	107	107	67-133	0	0-21	
Tert-Amyl-Methyl Ether (TAME)	106	111	63-141	5	0-21	
Ethanol	101	84	11-167	19	0-64	

RPD - Relative Percent Difference , CL - Control Limit



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Quality Control - Spike/Spike Duplicate

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

Date Received: 08/15/08
Work Order No: 08-08-1391
Preparation: EPA 5030B
Method: EPA 8260B

Project BP 2169

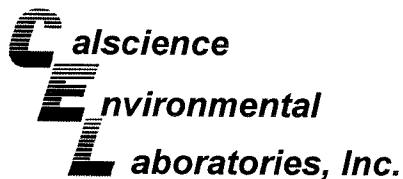
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
A-2	Aqueous	GC/MS BB	08/22/08	08/22/08	080822S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	94	105	86-122	11	0-8	BA,AY
Carbon Tetrachloride	97	107	78-138	10	0-9	BA,AY
Chlorobenzene	98	110	90-120	12	0-9	BA,AY
1,2-Dibromoethane	94	105	70-130	10	0-30	
1,2-Dichlorobenzene	96	106	89-119	10	0-10	
1,1-Dichloroethene	87	94	52-142	8	0-23	
Ethylbenzene	101	113	70-130	11	0-30	
Toluene	96	108	85-127	12	0-12	
Trichloroethene	39	9	78-126	7	0-10	LN,AY
Vinyl Chloride	100	96	56-140	3	0-21	
Methyl-t-Butyl Ether (MTBE)	97	103	64-136	6	0-28	
Tert-Butyl Alcohol (TBA)	95	95	27-183	0	0-60	
Diisopropyl Ether (DIPE)	95	102	78-126	8	0-16	
Ethyl-t-Butyl Ether (ETBE)	98	106	67-133	8	0-21	
Tert-Amyl-Methyl Ether (TAME)	99	108	63-141	9	0-21	
Ethanol	105	110	11-167	4	0-64	

RPD - Relative Percent Difference , CL - Control Limit



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Quality Control - LCS/LCS Duplicate

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

Date Received: N/A
Work Order No: 08-08-1391
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP 2169

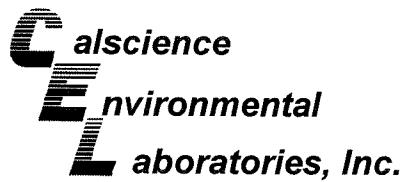
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-237	Aqueous	GC 30	08/19/08	08/19/08	080819B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	90	95	78-120	5	0-20	

RPD - Relative Percent Difference , CL - Control Limit



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Quality Control - LCS/LCS Duplicate



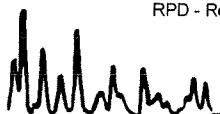
Stratus Environmental, inc.	Date Received:	N/A
3330 Cameron Park Drive, Suite 550	Work Order No:	08-08-1391
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: BP 2169

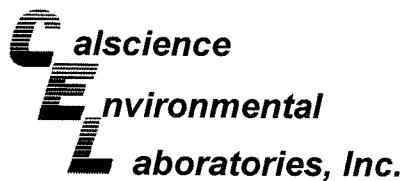
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-240	Aqueous	GC 30	08/20/08	08/20/08	080820B01

Parameter	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Gasoline Range Organics (C6-C12)	105	95	78-120	10	0-20	

RPD - Relative Percent Difference , CL - Control Limit



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Quality Control - LCS/LCS Duplicate



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

Date Received: N/A
Work Order No: 08-08-1391
Preparation: EPA 5030B
Method: EPA 8260B

Project: BP 2169

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed		LCS/LCSD Batch Number	
099-12-703-405	Aqueous	GC/MS BB	08/21/08	08/21/08		080821L02	
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	99	99	87-117	82-122	0	0-7	
Carbon Tetrachloride	99	102	78-132	69-141	4	0-8	
Chlorobenzene	104	100	88-118	83-123	4	0-8	
1,2-Dibromoethane	99	99	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	99	101	88-118	83-123	2	0-8	
1,1-Dichloroethene	88	100	71-131	61-141	14	0-14	
Ethylbenzene	105	101	80-120	73-127	4	0-20	
Toluene	100	99	85-127	78-134	1	0-7	
Trichloroethene	109	110	85-121	79-127	1	0-11	
Vinyl Chloride	115	117	64-136	52-148	1	0-10	
Methyl-t-Butyl Ether (MTBE)	101	104	67-133	56-144	3	0-16	
Tert-Butyl Alcohol (TBA)	95	91	34-154	14-174	5	0-19	
Diisopropyl Ether (DIPE)	103	104	80-122	73-129	0	0-8	
Ethyl-t-Butyl Ether (ETBE)	105	107	73-127	64-136	2	0-11	
Tert-Amyl-Methyl Ether (TAME)	106	105	69-135	58-146	1	0-12	
Ethanol	99	94	34-124	19-139	5	0-44	

Total number of LCS compounds : 16

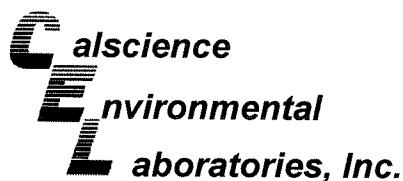
Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate

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

Date Received: N/A
Work Order No: 08-08-1391
Preparation: EPA 5030B
Method: EPA 8260B

Project: BP 2169

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed		LCS/LCSD Batch Number
099-12-703-406	Aqueous	GC/MS BB	08/22/08	08/22/08		080822L01
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL
Benzene	96	96	87-117	82-122	0	0-7
Carbon Tetrachloride	100	100	78-132	69-141	0	0-8
Chlorobenzene	103	102	88-118	83-123	1	0-8
1,2-Dibromoethane	93	100	80-120	73-127	7	0-20
1,2-Dichlorobenzene	98	97	88-118	83-123	0	0-8
1,1-Dichloroethene	84	93	71-131	61-141	11	0-14
Ethylbenzene	107	102	80-120	73-127	5	0-20
Toluene	99	97	85-127	78-134	2	0-7
Trichloroethene	100	99	85-121	79-127	1	0-11
Vinyl Chloride	110	109	64-136	52-148	2	0-10
Methyl-t-Butyl Ether (MTBE)	88	93	67-133	56-144	5	0-16
Tert-Butyl Alcohol (TBA)	97	101	34-154	14-174	4	0-19
Diisopropyl Ether (DIPE)	93	91	80-122	73-129	2	0-8
Ethyl-t-Butyl Ether (ETBE)	93	93	73-127	64-136	1	0-11
Tert-Amyl-Methyl Ether (TAME)	95	96	69-135	58-146	1	0-12
Ethanol	107	107	34-124	19-139	0	0-44

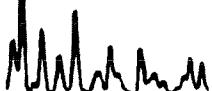
Total number of LCS compounds : 16

Total number of ME compounds : 0

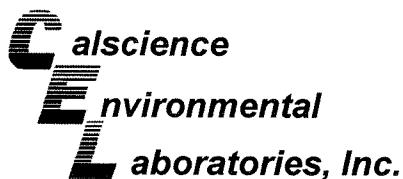
Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit



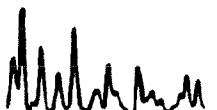
7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL:(714) 895-5494 • FAX: (714) 894-7501



Glossary of Terms and Qualifiers

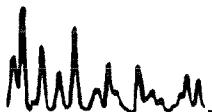
Work Order Number: 08-08-1391

<u>Qualifier</u>	<u>Definition</u>
AX	Sample too dilute to quantify surrogate.
AY	Matrix interference suspected.
BA	Relative percent difference out of control.
BA,AY	Relative percent difference out of control, matrix interference suspected.
BB	Sample > 4x spike concentration.
BF	Reporting limits raised due to high hydrocarbon background.
BH	Reporting limits raised due to high level of non-target analytes.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
BY	Sample received at improper temperature.
CL	Initial analysis within holding time but required dilution.
CQ	Analyte concentration greater than 10 times the blank concentration.
CU	Surrogate concentration diluted to not detectable during analysis.
DF	Reporting limits elevated due to matrix interferences.
ET	Sample was extracted past end of recommended max. holding time.
EY	Result exceeds normal dynamic range; reported as a min est.
GN	Surrogate recovery is outside of control limits.
GS	Internal standard recovery is outside method recovery limit.
IB	CCV recovery abovelimit; analyte not detected.
IH	Calibrtn. verif. recov. below method CL for this analyte.
IJ	Calibrtn. verif. recov. above method CL for this analyte.
J,DX	J=EPA Flag -Estimated value; DX= Value < lowest standard (MQL), but > than MDL.
LA	Confirmatory analysis was past holding time.
LG	Surrogate recovery below the acceptance limit.
LH	Surrogate recovery above the acceptance limit.
LM,AY	MS and/or MSD above acceptance limits. See Blank Spike (LCS). Matrix interference suspected.
LN,AY	MS and/or MSD below acceptance limits. See Blank Spike (LCS). Matrix interference suspected.
LQ	LCS recovery above method control limits.



Work Order Number: 08-08-1391

<u>Qualifier</u>	<u>Definition</u>
LR	LCS recovery below method control limits.
MB	Analyte present in the method blank.
MG	Analyte is a suspected lab contaminant.
PC	Sample taken from VOA vial with air bubble > 6mm diameter.
PI	Primary and confirm results varied by > than 40% RPD.
RB	RPD exceeded method control limit; % recoveries within limits.





A BP affiliated company

Chain of Custody Record

Project Name: BP 2169

BP BU/AR Region/Envos Segment: BP > Americas > West > Retail > CA > Alameda>2169

State or Lead Regulatory Agency:

Requested Due Date (mm/dd/yy): 1391

Page 1 of 1

On-site Time: <u>920</u>	Temp: <u>70</u>
Off-site Time: <u>1390</u>	Temp: <u>78</u>
Sky Conditions: <u>clear</u>	
Meteorological Events: <u>none</u>	
Wind Speed: <u>0</u>	Direction: <u>—</u>

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

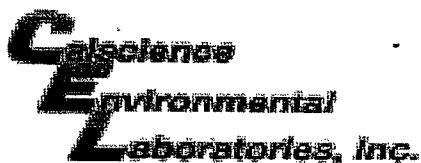
BP/AR Facility No.: 2169
 BP/AR Facility Address: 889 W. Grand Avenue, Oakland
 Site Lat/Long:
 California Global ID #: T0600100112
 Envos Project No.: G0C2D-0025
 Provision or RCOP (circle one) Provision
 Phase/WBS: 04-Monitoring
 Sub Phase/Task: 03-Analytical
 Cost Element: 01-Contractor labor

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: bcarroll@stratusinc.net
 Invoice to: Atlantic Richfield Co.

Item No.	Sample Description	Time	Date	Matrix	Laboratory No.	No. of Containers	Preservative					Requested Analysis					Sample Point Lat/Long and Comments *Oxy = MTBD, TAME, ETBE, DIPE, TBA
							Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	BTEX/Oxy* by 8260B	1,2 DCA	EDB	Ethanol by 8260	GRO by 8015M	
1	A-1	1153	8-12-8	X		6				X		X	X	X	X		
2	A-2	1120		X		1					X		X	X	X	X	
3	A-5	1105		X						X		X	X	X	X		
4	A-6	1050		X						X		X	X	X	X		
5	AR-1	1305		X						X		X	X	X	X		
6	AR-2	1035		X						X		X	X	X	X		
7	ADR-1	1210		X						X		X	X	X	X		
8	ADR-2	1133		X						X		X	X	X	X		
9	TB 2169-	500		X		2				X		X	X	X	X		HOLD
10																	

Sampler's Name: <u>Jerry Gonzales</u>	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: <u>Douglas E&I</u>	<u>Jerry Gonzales</u>			<u>GLC</u>		
Shipment Date:						
Shipment Method:						
Shipment Tracking No: <u>1057AB767</u>	<u>GLC</u>			<u>PL</u>	<u>10-15-08</u>	<u>10:00</u>

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
----------------------------------	----------------------	------------------------------	----------------------	-----------------------------------

WORK ORDER #: 08 - 0 8 - 1 3 9 1Cooler 1 of 1**SAMPLE RECEIPT FORM**CLIENT: StratusDATE: 8/15/08**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 (For Air & Filter Only).
- °C Temperature blank.

LABORATORY (Other than Calscience Courier):

- 3.6 °C Temperature blank.
- °C IR Thermometer.
- Ambient temperature (For Air & Filter Only).

Initial: JF**CUSTODY SEAL INTACT:**Sample(s): _____ Cooler: No (Not Intact) : _____ Not Present: _____Initial: JF**SAMPLE CONDITION:**

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

Initial: JF**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

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_WELL FILE

SUCCESS

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

<u>Submittal Type:</u>	GEO_WELL
<u>Submittal Title:</u>	3Q08 GEO_WELL 2169
<u>Facility Global ID:</u>	T0600100112
<u>Facility Name:</u>	ARCO #02169
<u>File Name:</u>	GEO_WELL.zip
<u>Organization Name:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	9/12/2008 9:44:40 AM
<u>Confirmation Number:</u>	5745909750

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STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A EDF FILE

SUCCESS

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

Submittal Type: GWM_R
Submittal Title: 3Q08 GW Monitoring
Facility Global ID: T0600100112
Facility Name: ARCO #02169
File Name: 08081391.zip
Organization Name: Broadbent & Associates, Inc.
Username: BROADBENT-C
IP Address: 67.118.40.90
Submittal Date/Time: 9/12/2008 9:46:05 AM
Confirmation Number: **5595397055**

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[VIEW DETECTIONS REPORT](#)

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