



Atlantic Richfield Company
(a BP affiliated company)

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

30 April 2009

Re: First Quarter 2009 Semi-Annual Ground-Water Monitoring Report
Atlantic Richfield Company Station #2169
889 West Grand Avenue, Oakland, California
ACEH Case #RO000072

RECEIVED

10:44 am, May 01, 2009

Alameda County
Environmental Health



"I declare, that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct."

Submitted by:

Paul Supple
Environmental Business Manager

**First Quarter 2009 Semi-Annual
Ground-Water Monitoring Report**
Atlantic Richfield Company Station #2169
889 W. Grand Avenue
Oakland, California

Prepared for

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

Prepared by



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

30 April 2009

Project No. 06-88-621

30 April 2009

Project No. 06-88-621

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

Attn.: Mr. Paul Supple

Re: First Quarter 2009 Semi-Annual Ground-Water Monitoring Report, Atlantic Richfield Company (a BP affiliated company) Station #2169, 889 West Grand Avenue, Oakland, Alameda County, California; ACEH Case #RO000072

Dear Mr. Supple:

Provided herein is the *First Quarter 2009 Semi-Annual Ground-Water Monitoring Report* for Atlantic Richfield Company Station #2169 located at 889 West Grand Avenue, Oakland, Alameda County, California (Site). This report presents results of ground-water monitoring conducted at the Site during First Quarter 2009.

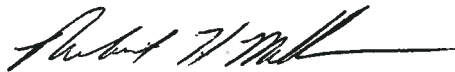
Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (530) 566-1400.

Sincerely,

BROADBENT & ASSOCIATES, INC.



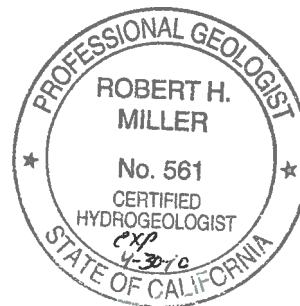
Matthew G. Herrick, P.G., C.HG.
Senior Hydrogeologist



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.:		06-88-621
Primary Agency/Regulatory ID No.:		Alameda County Environmental Health (ACEH) ACEH Case #RO000072
Facility Permits/Permitting Agency:		NA

WORK PERFORMED THIS QUARTER (First Quarter 2009):

1. Submitted *Fourth Quarter 2008 Status Report*. Work performed by BAI.
2. Conducted ground-water monitoring/sampling for First Quarter 2009. Work performed on 8 January 2009 by Stratus Environmental, Inc (Stratus).

WORK PROPOSED FOR NEXT QUARTER (Second Quarter 2009):

1. Per the ACEH 8 January 2009 letter, prepared and submitted the 6 April 2009 *Preferential Pathway Evaluation and Soil & Ground-Water Investigation Work Plan*.
2. Prepared and submitted First Quarter 2009 Semi-Annual 2008 Ground-Water Monitoring Report (contained herein).
3. Upon ACEH approval, begin implementation of the soil and water investigation.

QUARTERLY RESULTS SUMMARY:

Current phase of project:	Ground-water monitoring/sampling
Frequency of ground-water monitoring:	Semi-Annually: A-1 through A-6, AR-1, AR-2, ADR-1, ADR-2
Frequency of ground-water sampling:	Semi-Annually (1Q & 3Q): Wells A-1, A-5, A-6, ADR-1 Annually (3Q): Wells A-2, AR-1, AR-2, ADR-2
Is free product (FP) present on-site:	No
FP recovered this quarter:	None
Cumulative FP recovered:	4.8 gallons: Wells ADR-1 and ADR-2
Current remediation techniques:	Soil Vapor Extraction System shut down in Dec. 2001
Depth to ground water (below TOC):	9.29 ft (A-5) to 11.71 ft (A-3)
General ground-water flow direction:	North-Northwest
Approximate hydraulic gradient:	0.003 ft/ft

DISCUSSION:

The semi-annual round of ground-water monitoring and sampling was conducted at Station #2169 on 8 January 2009 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 9.29 ft at well A-5 to 11.71 ft at well A-3. Resulting ground-water surface elevations ranged from 7.11 ft above mean sea level in up-gradient well A-4 to 6.28 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 0.003 ft/ft, consistent with historical data (see Table 3). Ground-water monitoring field data sheets are provided within Appendix A. Measured depths to ground water and respective ground-

water elevations are summarized in Table 1. Potentiometric ground-water elevation contours are presented in Drawing 1.

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

Gasoline range organics (GRO) were detected above the laboratory reporting limits in three of the four wells sampled at concentrations up to 39,000 micrograms per liter ($\mu\text{g/L}$) in well A-5. Benzene was detected above the laboratory reporting limit in two of the four wells sampled at concentrations of 400 $\mu\text{g/L}$ in well A-1 and 300 $\mu\text{g/L}$ in well A-5. Toluene was detected above the laboratory reporting limits in three of the four wells sampled at concentrations up to 130 $\mu\text{g/L}$ in well A-1. Ethylbenzene was detected above the laboratory reporting limit in two of the four wells sampled at concentrations of 530 $\mu\text{g/L}$ in well A-1 and 2,400 $\mu\text{g/L}$ in well A-5. Total Xylenes were detected above the laboratory reporting limit in three of the four wells sampled at concentrations up to 5,400 $\mu\text{g/L}$ in well A-5. MTBE was detected above the laboratory reporting limit in two of the four wells sampled at concentrations of 1.6 $\mu\text{g/L}$ in well A-6 and 2.4 $\mu\text{g/L}$ in well ADR-1. The remaining fuel additives and oxygenates were not detected above their laboratory reporting limits in the four wells sampled this quarter.

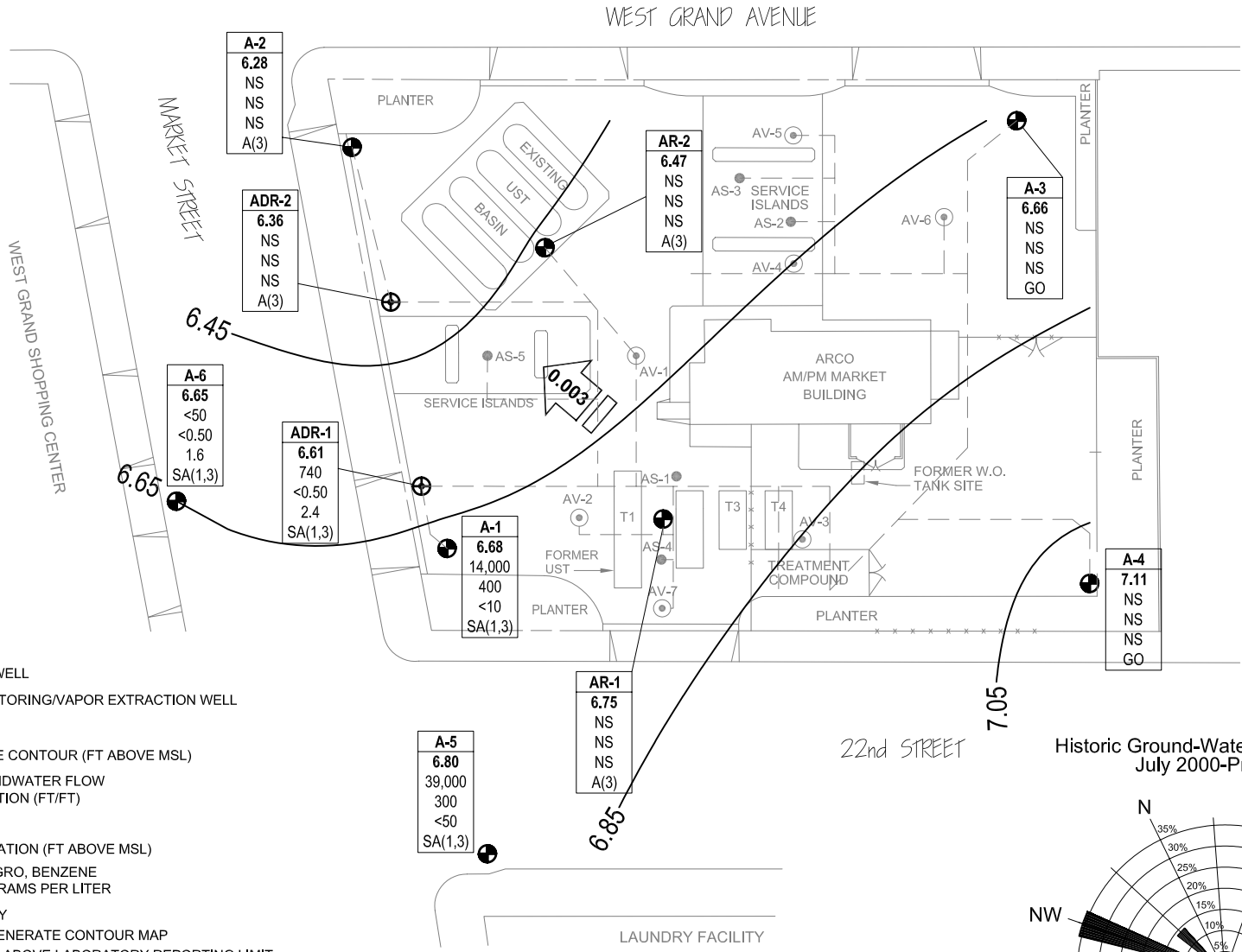
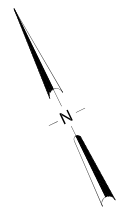
Detected analyte concentrations were within the historic minimum and maximum ranges recorded for each well (dating back to June 2000) with the following exceptions: GRO (14,000 $\mu\text{g/L}$), toluene (130 $\mu\text{g/L}$), ethylbenzene (530 $\mu\text{g/L}$), and total xylenes (790 $\mu\text{g/L}$) each reached historic maximum concentrations in well A-1; GRO (39,000 $\mu\text{g/L}$) reached a historic maximum concentration in well A-5; and MTBE (1.6 $\mu\text{g/L}$) reached a historic minimum concentration in well A-6. 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:

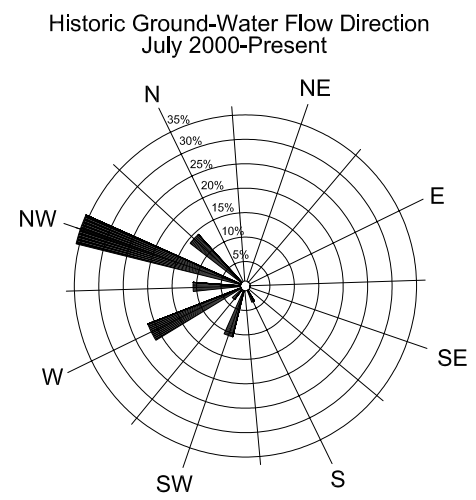
- Drawing 1. Ground-Water Elevation Contours and Analytical Summary Map, 8 January 2009, ARCO Service Station #2169, 889 West Grand Avenue, Oakland, California
- Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses, Station #2169, 889 W. Grand Ave., Oakland, 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
 - 7.05 GROUNDWATER TABLE CONTOUR (FT ABOVE MSL)
 - APPROXIMATE GROUNDWATER FLOW GRADIENT AND DIRECTION (FT/FT)
- | Well | WELL DESIGNATION |
|---------|--|
| ELEV | GROUNDWATER ELEVATION (FT ABOVE MSL) |
| GRO | CONCENTRATION OF GRO, BENZENE AND MTBE IN MICROGRAMS PER LITER |
| Benzene | |
| MTBE | |
- A/Q — SAMPLING FREQUENCY
 - * WELL NOT USED TO GENERATE CONTOUR MAP
 - < NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMIT
 - NS NOT SAMPLED
 - A(3) SAMPLED ANNUALLY, 3RD QUARTER
 - SA SAMPLED SEMI-ANNUALLY, 1ST & 3RD QUARTERS
 - GO GAUGE ONLY
 - — REMEDIATION PIPING

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



BROADBENT & ASSOCIATES, INC.
 ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
 1324 Mangrove Ave. Suite 212, Chico, California 95926
 Project No.: 06-88-621 Date: 3/12/09

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

Ground-Water Elevation Contour
 and Analytical Summary Map
 8 January 2009

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
1/8/2009	NP		16.75	9.00	25.00	10.07	6.68	14,000	400	130	530	790	<10	0.49	7.26

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-2															
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
1/8/2009	--		17.18	10.00	25.00	10.90	6.28	--	--	--	--	--	--	--	--

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

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

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-3															
6/26/2000	--		15.75	9.00	29.50	11.98	3.77	--	--	--	--	--	--	--	--
7/20/2000	--		15.75	9.00	29.50	12.21	3.54	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--
1/8/2009	--		18.37	9.00	29.50	11.71	6.66	--	--	--	--	--	--	--	--
A-4															

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.															
6/26/2000	--		15.25	8.00	28.00	10.99	4.26	--	--	--	--	--	--	--	--
7/20/2000	--		15.25	8.00	28.00	11.16	4.09	--	--	--	--	--	--	--	--
9/19/2000	--		15.25	8.00	28.00	11.97	3.28	--	--	--	--	--	--	--	--
12/26/2000	--		15.25	8.00	28.00	11.19	4.06	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
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	--	--	--	--	--	--	--	--
1/8/2009	--		18.01	8.00	28.00	10.90	7.11	--	--	--	--	--	--	--	--
A-5															

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

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

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
A-5 Cont.															
6/26/2000	--		13.51	8.00	30.00	10.04	3.47	--	--	--	--	--	--	--	--
7/20/2000	--		13.51	8.00	30.00	10.31	3.20	730	140	11	<0.5	8.9	3	--	--
9/19/2000	--		13.51	8.00	30.00	10.55	2.96	160	13	<0.5	2.8	1.9	<3	--	--
12/26/2000	--		13.51	8.00	30.00	10.37	3.14	8,120	465	108	659	1,450	<250	--	--
3/20/2001	--		13.51	8.00	30.00	8.81	4.70	7,990	1,110	473	611	1,580	<250	--	--
6/12/2001	--		13.51	8.00	30.00	10.13	3.38	450	91	18	35	95	<5.0	--	--
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
1/8/2009	NP		16.09	8.00	30.00	9.29	6.80	39,000	300	53	2,400	5,400	<50	0.67	7.59

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															
6/26/2000	--		13.51	8.00	28.50	10.09	3.42	--	--	--	--	--	--	--	--
7/20/2000	--		13.51	8.00	28.50	10.91	2.60	170	<0.5	<0.5	0.6	2	6	--	--
9/19/2000	--		13.51	8.00	28.50	11.27	2.24	<50	<0.5	<0.5	<0.5	<1.0	6	--	--
12/26/2000	--		13.51	8.00	28.50	10.65	2.86	56.2	<0.5	<0.5	<0.5	<0.5	8.17	--	--
3/20/2001	--		13.51	8.00	28.50	8.72	4.79	216	<0.5	<0.5	<0.5	1.8	19.9	--	--
6/12/2001	--		13.51	8.00	28.50	10.80	2.71	80	0.62	<0.5	<0.5	<0.5	15	--	--
9/23/2001	--		13.51	8.00	28.50	10.79	2.72	450	1.7	1.9	2.3	3.3	53	--	--
12/28/2001	--		13.51	8.00	28.50	8.05	5.46	270	0.98	3.5	0.77	1.4	26	--	--
3/21/2002	--		13.51	8.00	28.50	7.83	5.68	130	<0.5	<0.5	<0.5	<0.5	19	--	--
4/17/2002	--		13.51	8.00	28.50	8.73	4.78	<50	<0.5	<0.5	<0.5	<0.5	16	--	--
8/14/2002	--	b	13.51	8.00	28.50	10.43	3.08	980	4.8	2.6	2	4.9	75	1.5	7.1
11/27/2002	--	b	13.51	8.00	28.50	10.47	3.04	280	<0.5	0.74	<0.5	<0.5	16	0.9	6.9
2/12/2003	--	d	13.51	8.00	28.50	10.44	3.07	51	<0.50	<0.50	<0.50	<0.50	9.9	0.8	7.1
5/22/2003	--		13.51	8.00	28.50	9.43	4.08	<50	<0.50	<0.50	<0.50	<0.50	11	1.2	8.2
7/23/2003	--		13.51	8.00	28.50	10.27	3.24	120	<0.50	<0.50	<0.50	<0.50	14	>20	9.6
11/13/2003	NP	f	13.51	8.00	28.50	11.20	2.31	<50	<0.50	<0.50	<0.50	<0.50	2.3	6.2	9.0
02/16/2004	NP	h, i	16.10	8.00	28.50	9.76	6.34	50	<0.50	<0.50	<0.50	<0.50	3.9	6.5	8.3
05/06/2004	P		16.10	8.00	28.50	10.03	6.07	110	<0.50	<0.50	<0.50	<0.50	7.1	1.01	7.02
09/02/2004	NP		16.10	8.00	28.50	10.47	5.63	56	<0.50	<0.50	<0.50	<0.50	4.4	3.2	7.4
11/29/2004	NP		16.10	8.00	28.50	9.99	6.11	<50	<0.50	<0.50	<0.50	<0.50	2.9	0.92	6.9
02/02/2005	NP		16.10	8.00	28.50	8.46	7.64	150	<0.50	<0.50	<0.50	<0.50	14	0.5	7.4
05/09/2005	NP		16.10	8.00	28.50	8.55	7.55	93	<0.50	<0.50	<0.50	<0.50	12	3.0	7.2
08/11/2005	NP		16.10	8.00	28.50	10.13	5.97	780	<0.50	<0.50	<0.50	<0.50	14	1.0	6.9
02/09/2006	NP	o	16.10	8.00	28.50	9.23	6.87	210	<0.50	<0.50	<0.50	<0.50	17	1.27	6.8
8/11/2006	NP		16.10	8.00	28.50	9.95	6.15	920	<0.50	<0.50	<0.50	<0.50	21	1.6	7.0
2/7/2007	P		16.10	8.00	28.50	9.72	6.38	170	<0.50	<0.50	<0.50	1.4	7.1	2.18	7.24
8/14/2007	NP		16.10	8.00	28.50	9.82	6.28	<50	<0.50	<0.50	<0.50	<0.50	2.3	1.72	8.22
2/22/2008	NP		16.10	8.00	28.50	8.07	8.03	350	<0.50	<0.50	<0.50	<0.50	11	0.79	7.48
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
1/8/2009	NP		16.10	8.00	28.50	9.45	6.65	<50	<0.50	<0.50	<0.50	<0.50	1.6	0.61	7.32

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															
6/26/2000	--		13.95	5.00	22.00	10.55	3.40	--	--	--	--	--	--	--	--
7/20/2000	--		13.95	5.00	22.00	10.85	3.10	180	29	<0.5	0.8	<1.0	22	--	--
9/19/2000	--		13.95	5.00	22.00	11.08	2.87	120	7.4	<0.5	1.2	<1.0	22	--	--
12/26/2000	--		13.95	5.00	22.00	10.93	3.02	<50	1.29	<0.5	<0.5	<0.5	14.7	--	--
3/20/2001	--		13.95	5.00	22.00	9.32	4.63	225	23.4	<0.5	8.71	4.13	10.8	--	--
6/12/2001	--		13.95	5.00	22.00	10.65	3.30	250	23	0.5	13	4.2	7.5	--	--
9/23/2001	--		13.95	5.00	22.00	11.25	2.70	<50	1.4	<0.5	<0.5	0.57	2.8	--	--
12/28/2001	--		13.95	5.00	22.00	8.43	5.52	250	16	<0.5	1.2	4.1	6.8	--	--
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
1/8/2009	NP		16.56	5.00	22.00	9.95	6.61	740	<0.50	0.94	<0.50	0.58	2.4	0.47	7.36

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															
6/26/2000	--		14.64	5.00	22.00	11.22	3.42	--	--	--	--	--	--	--	--
7/20/2000	--		14.64	5.00	22.00	11.60	3.04	12,000	410	2.5	540	720	23	--	--
9/19/2000	--		14.64	5.00	22.00	11.81	2.83	1,400	530	5	680	740	34	--	--
12/26/2000	--		14.64	5.00	22.00	11.52	3.12	901	26.6	<5.0	21.4	32.5	32.8	--	--
3/20/2001	--	j	14.64	5.00	22.00	10.10	4.54	--	--	--	--	--	--	--	--
6/12/2001	--	j	14.64	5.00	22.00	11.41	3.23	--	--	--	--	--	--	--	--
9/23/2001	--		14.64	5.00	22.00	11.98	2.66	5,300	370	<5.0	550	96	60	--	--
12/28/2001	--		14.64	5.00	22.00	9.48	5.16	2,600	190	<5.0	160	29	61	--	--
3/21/2002	--		14.64	5.00	22.00	9.10	5.54	180	6	<0.5	4.5	3.2	15	--	--
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
1/8/2009	--		17.24	5.00	22.00	10.88	6.36	--	--	--	--	--	--	--	--
AR-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		
AR-1 Cont.															
6/26/2000	--		15.61	8.00	28.00	11.59	4.02	--	--	--	--	--	--	--	--
7/20/2000	--		15.61	8.00	28.00	12.06	3.55	<50	<0.5	<0.5	<0.5	<1.0	6	--	--
9/19/2000	--		15.61	8.00	28.00	11.89	3.72	<50	<0.5	<0.5	<0.5	<1.0	<3	--	--
12/26/2000	--		15.61	8.00	28.00	11.95	3.66	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
03/20/01	--	a	15.61	8.00	28.00	--	--	--	--	--	--	--	--	--	--
6/12/2001	--		15.61	8.00	28.00	11.87	3.74	<50	<0.5	<0.5	<0.5	<0.5	17	--	--
9/23/2001	--		15.61	8.00	28.00	12.42	3.19	--	--	--	--	--	--	--	--
12/28/2001	--		15.61	8.00	28.00	7.62	7.99	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/21/2002	--		15.61	8.00	28.00	9.37	6.24	--	--	--	--	--	--	--	--
4/17/2002	--		15.61	8.00	28.00	10.43	5.18	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
8/14/2002	--		15.61	8.00	28.00	12.08	3.53	<50	<0.5	<0.5	<0.5	1.3	<2.5	2.2	7.9
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
1/8/2009	--		18.18	8.00	28.00	11.43	6.75	--	--	--	--	--	--	--	--

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															
6/26/2000	--		15.28	8.50	28.50	11.79	3.49	--	--	--	--	--	--	--	--
7/20/2000	--		15.28	8.50	28.50	12.07	3.21	<50	<0.5	<0.5	<0.5	<1.0	<3	--	--
9/19/2000	--		15.28	8.50	28.50	12.08	3.20	<50	<0.5	<0.5	<0.5	<1.0	<3	--	--
12/26/2000	--		15.28	8.50	28.50	11.95	3.33	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/20/2001	--		15.28	8.50	28.50	10.50	4.78	--	--	--	--	--	--	--	--
6/12/2001	--		15.28	8.50	28.50	11.73	3.55	<50	<0.5	<0.5	<0.5	<0.5	82	--	--
9/23/2001	--		15.28	8.50	28.50	12.43	2.85	--	--	--	--	--	--	--	--
12/28/2001	--		15.28	8.50	28.50	8.60	6.68	<50	<0.5	<0.5	<0.5	<0.5	30	--	--
3/21/2002	--		15.28	8.50	28.50	9.49	5.79	--	--	--	--	--	--	--	--
4/17/2002	--		15.28	8.50	28.50	10.37	4.91	<50	<0.5	<0.5	<0.5	<0.5	3.2	--	--
8/14/2002	--		15.28	8.50	28.50	12.13	3.15	<50	<0.5	<0.5	<0.5	<0.5	<2.5	1.4	7.9
11/27/2002	--		15.28	8.50	28.50	12.08	3.20	--	--	--	--	--	--	--	--
2/12/2003	--	d	15.28	8.50	28.50	11.15	4.13	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.2	7.5
5/22/2003	--		15.28	8.50	28.50	11.18	4.10	--	--	--	--	--	--	--	--
7/23/2003	--		15.28	8.50	28.50	11.85	3.43	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.3	8.2
11/13/2003	--	f	15.28	8.50	28.50	11.98	3.30	--	--	--	--	--	--	--	--
02/16/2004	--	f, i	17.87	8.50	28.50	10.69	7.18	--	--	--	--	--	--	--	--
05/06/2004	--		17.87	8.50	28.50	11.55	6.32	--	--	--	--	--	--	--	--
09/02/2004	--	k	17.87	8.50	28.50	--	--	--	--	--	--	--	--	--	--
09/20/2004	NP		17.87	8.50	28.50	11.98	5.89	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.2	10.4
11/29/2004	--		17.87	8.50	28.50	12.62	5.25	--	--	--	--	--	--	--	--
02/02/2005	--		17.87	8.50	28.50	10.12	7.75	--	--	--	--	--	--	--	--
05/09/2005	--		17.87	8.50	28.50	10.13	7.74	--	--	--	--	--	--	--	--
08/11/2005	NP		17.87	8.50	28.50	11.73	6.14	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.8	7.3
02/09/2006	--		17.87	8.50	28.50	10.03	7.84	--	--	--	--	--	--	--	--
8/11/2006	NP		17.87	8.50	28.50	11.61	6.26	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.1	7.4
2/7/2007	--		17.87	8.50	28.50	11.52	6.35	--	--	--	--	--	--	--	--
8/14/2007	NP		17.87	8.50	28.50	11.75	6.12	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.86	7.41
2/22/2008	--		17.87	8.50	28.50	9.82	8.05	--	--	--	--	--	--	--	--
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
1/8/2009	--		17.87	8.50	28.50	11.40	6.47	--	--	--	--	--	--	--	--

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															

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.

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

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

**Table 2. Summary of Fuel Additives Analytical Data
Station #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	
1/8/2009	<6,000	<200	<10	<10	<10	<10	<10	<10	
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	
1/8/2009	<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

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.									
8/11/2006	<300	<20	21	<0.50	<0.50	<0.50	<0.50	<0.50	
2/7/2007	<300	<20	7.1	<0.50	<0.50	<0.50	<0.50	<0.50	
8/14/2007	<300	<20	2.3	<0.50	<0.50	<0.50	<0.50	<0.50	d (1,2-DCA)
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	
1/8/2009	<300	<10	1.6	<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	
1/8/2009	<300	<10	2.4	<0.50	<0.50	<0.50	<0.50	<0.50	
ADR-2									
2/12/2003	<400	<200	22	<5.0	<5.0	<5.0	--	--	
5/22/2003	<1,000	<200	9.7	<5.0	<5.0	<5.0	--	--	
7/23/2003	<100	<20	8.4	<0.50	<0.50	<0.50	<0.50	<0.50	
09/02/2004	<1,000	<200	5.6	<5.0	<5.0	<5.0	<5.0	<5.0	

**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.									
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)
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**

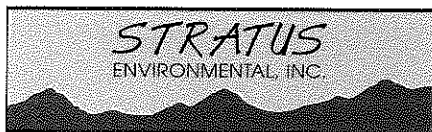
Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
7/20/2000	Northwest	0.004
9/19/2000	West-Northwest	0.003
12/26/2000	Northwest	0.004
3/20/2001	Northwest	0.003
6/12/2001	Northwest	0.004
9/23/2001	Northwest	0.004
12/28/2001	Variable	Variable
3/21/2002	Northwest	0.004
4/17/2002	Northwest	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
1/8/2009	North-Northwest	0.003

* = 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.

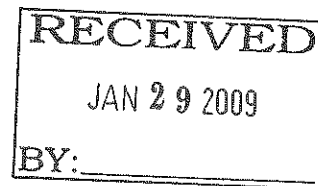
APPENDIX A

**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

January 21, 2009



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: Roberto Heimlich

Sampling Date: January 8, 2009

Arrival: 10:00 *Departure:* 12:15

Weather Conditions: Clear

Unusual Field Conditions: None noted.

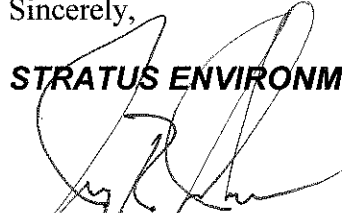
Scope of Work Performed: Quarterly monitoring and sampling

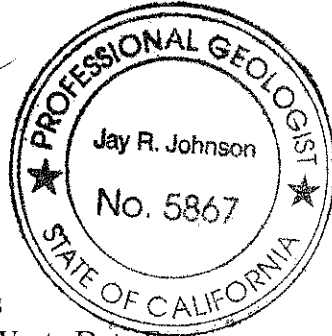
Variations from Work Scope: None noted

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,

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

WATER SAMPLE FIELD DATA SHEET

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

DATE PURGED 1/8/09 NP START (2400hr) 11:23 END (2400hr) 11:32
 DATE SAMPLED 1/8/09 SAMPLE TIME (2400hr) 11:30
 SAMPLE TYPE: Groundwater Surface Water _____ Treatment Effluent _____ Other _____

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

DEPTH TO BOTTOM (feet) = 23.65 CASING VOLUME (gal) = _____
 DEPTH TO WATER (feet) = 10.07 CALCULATED PURGE (gal) = NP
 WATER COLUMN HEIGHT (feet) = 13.5 ACTUAL PURGE (gal) = _____

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>1/8/09</u>	<u>11:26</u>	<u>NP</u>	<u>20.2</u>	<u>629</u>	<u>7.26</u>	<u>clear</u>	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

NO PURGE

SAMPLE DEPTH TO WATER: 10.07 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE: ~~YES~~ NO ANALYSES: SWO
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 6 VOAS/HCL

PURGING EQUIPMENT

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

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#: MASTER
 REMARKS: DO 0.49

SIGNATURE: [Signature] Page _____ of _____

BP ALAMEDA PORTFOLIO
WATER SAMPLE FIELD DATA SHEET

PROJECT #: 2169 PURGED BY: RH WELL I.D.: A-5
 CLIENT NAME: _____ SAMPLED BY: RH SAMPLE I.D.: A-5
 LOCATION: Oakland - 889 W. Grand Avenue QA SAMPLES: _____

DATE PURGED 1/8/09 NP START (2400hr) 11:54 END (2400hr) 12:03
 DATE SAMPLED 1/8/09 SAMPLE TIME (2400hr) 12:01
 SAMPLE TYPE: Groundwater Surface Water _____ Treatment Effluent _____ Other _____

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

DEPTH TO BOTTOM (feet) = 24.00 CASING VOLUME (gal) = _____
 DEPTH TO WATER (feet) = 9.29 CALCULATED PURGE (gal) = _____
 WATER COLUMN HEIGHT (feet) = 14.7 ACTUAL PURGE (gal) = NP

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>1/8/09</u>	<u>11:57</u>	<u>NP</u>	<u>17.7</u>	<u>603</u>	<u>7.59</u>	<u>clear</u>	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

NO PURGE

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 9.29 SAMPLE TURBIDITY: clear
 80% RECHARGE: YES NO ANALYSES: SWO
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 6 VOAS/HCL

PURGING EQUIPMENT

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

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#: MASTER
 REMARKS: DO 0.67

SIGNATURE: [Signature]

BP ALAMEDA PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

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

DATE PURGED 1/8/09 NP START (2400hr) 11:40 END (2400hr) 11:49
 DATE SAMPLED 1/8/09 SAMPLE TIME (2400hr) 11:47
 SAMPLE TYPE: Groundwater Surface Water _____ Treatment Effluent _____ Other _____

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

DEPTH TO BOTTOM (feet) = 26.75 CASING VOLUME (gal) = _____
 DEPTH TO WATER (feet) = 9.45 CALCULATED PURGE (gal) = _____
 WATER COLUMN HEIGHT (feet) = 17.3 ACTUAL PURGE (gal) = NP

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>1/8/09</u>	<u>11:43</u>	<u>NP</u>	<u>19.3</u>	<u>717</u>	<u>7.32</u>	<u>clear</u>	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

NO PURGE

SAMPLE DEPTH TO WATER: 9.45 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE: YES NO ANALYSES: SWD
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 6 VOAS / HCL

PURGING EQUIPMENT

Bladder Pump
 Centrifugal Pump
 Submersible Pump
 Peristaltic Pump
 Other: _____
 Pump Depth: NA

Bailer (Teflon)
 Bailer (PVC)
 Bailer (Stainless Steel)
 Dedicated
NA

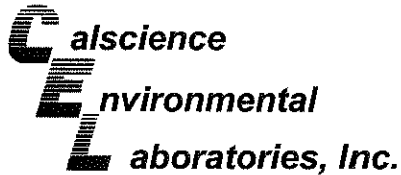
SAMPLING EQUIPMENT

Bladder Pump
 Centrifugal Pump
 Submersible Pump
 Peristaltic Pump
 Other: _____

Bailer (Teflon)
 Bailer (PVC or disposable)
 Bailer (Stainless Steel)
 Dedicated

WELL INTEGRITY: GOOD LOCK#: MASTER
 REMARKS: DO D. 61

SIGNATURE: [Signature] Page _____ of _____



January 20, 2009

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

Subject: **Calscience Work Order No.: 09-01-0599**
Client Reference: **BP 2169**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 1/9/2009 and analyzed in accordance with the attached chain-of-custody.

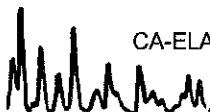
Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

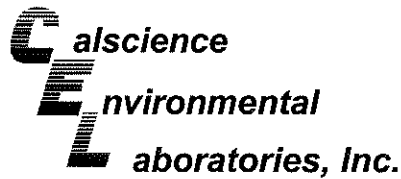
If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard Villafania".

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager





Analytical Report



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

Date Received: 01/09/09
Work Order No: 09-01-0599
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP 2169

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
A-1	09-01-0599-1-E	01/08/09 11:30	Aqueous	GC 4	01/09/09	01/10/09 09:06	090109B02

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	14000	500	10		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	72	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
A-5	09-01-0599-2-E	01/08/09 12:01	Aqueous	GC 4	01/09/09	01/10/09 09:39	090109B02

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	39000	1000	20		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	78	38-134			

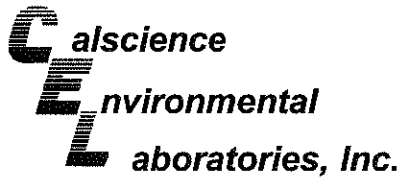
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
A-6	09-01-0599-3-E	01/08/09 11:47	Aqueous	GC 4	01/09/09	01/10/09 10:12	090109B02

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	74	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
ADR-1	09-01-0599-4-E	01/08/09 11:15	Aqueous	GC 4	01/09/09	01/10/09 06:54	090109B02

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	740	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	74	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: 01/09/09
 Work Order No: 09-01-0599
 Preparation: EPA 5030B
 Method: EPA 8015B (M)

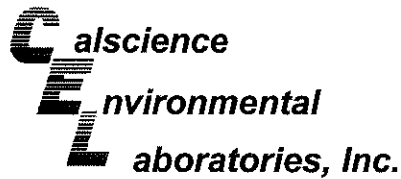
Project: BP 2169

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-695-394	N/A	Aqueous	GC 4	01/09/09	01/10/09 04:42	090109B02

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	67	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: 01/09/09
Work Order No: 09-01-0599
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: BP 2169

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
A-1	09-01-0599-1-A	01/08/09 11:30	Aqueous	GC/MS BB	01/13/09	01/13/09 21:48	090113L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	400	10	20		Methyl-t-Butyl Ether (MTBE)	ND	10	20	
1,2-Dibromoethane	ND	10	20		Tert-Butyl Alcohol (TBA)	ND	200	20	
1,2-Dichloroethane	ND	10	20		Diisopropyl Ether (DIPE)	ND	10	20	
Ethylbenzene	530	10	20		Ethyl-t-Butyl Ether (ETBE)	ND	10	20	
Toluene	130	10	20		Tert-Amyl-Methyl Ether (TAME)	ND	10	20	
Xylenes (total)	790	10	20		Ethanol	ND	6000	20	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	84	73-157			Dibromofluoromethane	99	82-142		
Toluene-d8	99	82-112			1,4-Bromofluorobenzene	92	75-105		

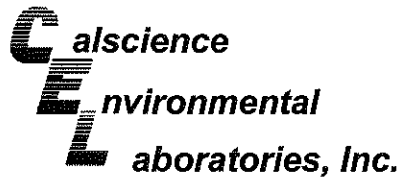
A-5	09-01-0599-2-A	01/08/09 12:01	Aqueous	GC/MS BB	01/13/09	01/13/09 22:18	090113L01
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	300	50	100		Methyl-t-Butyl Ether (MTBE)	ND	50	100	
1,2-Dibromoethane	ND	50	100		Tert-Butyl Alcohol (TBA)	ND	1000	100	
1,2-Dichloroethane	ND	50	100		Diisopropyl Ether (DIPE)	ND	50	100	
Ethylbenzene	2400	50	100		Ethyl-t-Butyl Ether (ETBE)	ND	50	100	
Toluene	53	50	100		Tert-Amyl-Methyl Ether (TAME)	ND	50	100	
Xylenes (total)	5400	50	100		Ethanol	ND	30000	100	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	93	73-157			Dibromofluoromethane	104	82-142		
Toluene-d8	98	82-112			1,4-Bromofluorobenzene	96	75-105		

A-6	09-01-0599-3-B	01/08/09 11:47	Aqueous	GC/MS BB	01/13/09	01/13/09 14:45	090113L01
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	1.6	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	98	73-157			Dibromofluoromethane	101	82-142		
Toluene-d8	96	82-112			1,4-Bromofluorobenzene	102	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: 01/09/09
Work Order No: 09-01-0599
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: BP 2169

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
ADR-1	09-01-0599-4-B	01/08/09 11:15	Aqueous	GC/MS BB	01/14/09	01/14/09 18:35	090114L01

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	0.94	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	0.58	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	76	73-157			Dibromofluoromethane	95	82-142		
Toluene-d8	96	82-112			1,4-Bromofluorobenzene	92	75-105		

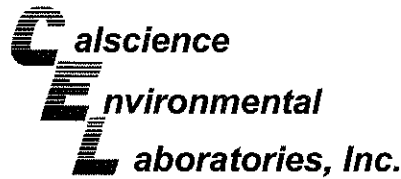
Method Blank	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-703-649	N/A	Aqueous	GC/MS BB	01/13/09	01/13/09 14:15	090113L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	103	73-157			Dibromofluoromethane	105	82-142		
Toluene-d8	93	82-112			1,4-Bromofluorobenzene	105	75-105		

Method Blank	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-703-651	N/A	Aqueous	GC/MS BB	01/14/09	01/14/09 14:03	090114L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	103	73-157			Dibromofluoromethane	107	82-142		
Toluene-d8	95	82-112			1,4-Bromofluorobenzene	99	75-105		

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



Quality Control - Spike/Spike Duplicate



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

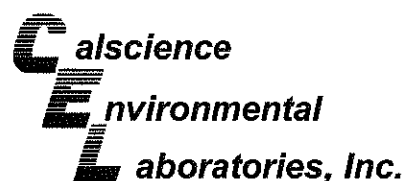
Date Received: 01/09/09
Work Order No: 09-01-0599
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project BP 2169

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
ADR-1	Aqueous	GC 4	01/09/09	01/10/09	090109S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	106	108	38-134	2	0-25	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - Spike/Spike Duplicate



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

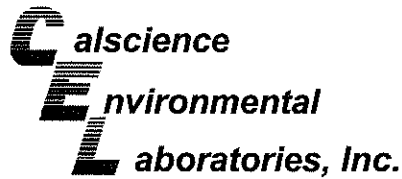
Date Received: 01/09/09
Work Order No: 09-01-0599
Preparation: EPA 5030B
Method: EPA 8260B

Project BP 2169

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
A-6	Aqueous	GC/MS BB	01/13/09	01/13/09	090113S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	96	97	86-122	1	0-8	
Carbon Tetrachloride	89	94	78-138	5	0-9	
Chlorobenzene	101	102	90-120	1	0-9	
1,2-Dibromoethane	83	77	70-130	8	0-30	
1,2-Dichlorobenzene	99	99	89-119	1	0-10	
1,1-Dichloroethene	98	98	52-142	0	0-23	
Ethylbenzene	79	82	70-130	4	0-30	
Toluene	92	94	85-127	2	0-12	
Trichloroethene	93	94	78-126	1	0-10	
Vinyl Chloride	87	89	56-140	2	0-21	
Methyl-t-Butyl Ether (MTBE)	87	85	64-136	2	0-28	
Tert-Butyl Alcohol (TBA)	109	107	27-183	2	0-60	
Diisopropyl Ether (DIPE)	91	92	78-126	1	0-16	
Ethyl-t-Butyl Ether (ETBE)	87	84	67-133	3	0-21	
Tert-Amyl-Methyl Ether (TAME)	84	82	63-141	3	0-21	
Ethanol	105	104	11-167	1	0-64	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - Spike/Spike Duplicate



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

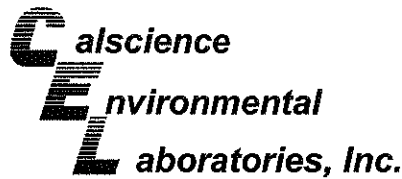
Date Received: 01/09/09
Work Order No: 09-01-0599
Preparation: EPA 5030B
Method: EPA 8260B

Project BP 2169

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-01-1009-1	Aqueous	GC/MS BB	01/14/09	01/14/09	090114S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	98	96	86-122	2	0-8	
Carbon Tetrachloride	94	92	78-138	2	0-9	
Chlorobenzene	105	101	90-120	4	0-9	
1,2-Dibromoethane	78	82	70-130	6	0-30	
1,2-Dichlorobenzene	98	100	89-119	2	0-10	
1,1-Dichloroethene	105	95	52-142	10	0-23	
Ethylbenzene	82	78	70-130	4	0-30	
Toluene	92	90	85-127	3	0-12	
Trichloroethene	95	91	78-126	4	0-10	
Vinyl Chloride	91	92	56-140	1	0-21	
Methyl-t-Butyl Ether (MTBE)	82	90	64-136	9	0-28	
Tert-Butyl Alcohol (TBA)	113	109	27-183	4	0-60	
Diisopropyl Ether (DIPE)	91	93	78-126	2	0-16	
Ethyl-t-Butyl Ether (ETBE)	81	83	67-133	3	0-21	
Tert-Amyl-Methyl Ether (TAME)	74	78	63-141	6	0-21	
Ethanol	99	101	11-167	2	0-64	

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

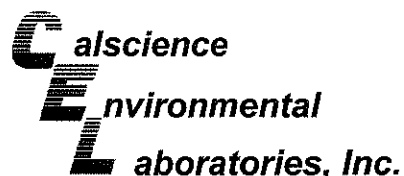
Date Received: N/A
 Work Order No: 09-01-0599
 Preparation: EPA 5030B
 Method: EPA 8015B (M)

Project: BP 2169

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-394	Aqueous	GC 4	01/09/09	01/10/09	090109B02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	105	104	78-120	1	0-20	

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: 09-01-0599
Preparation: EPA 5030B
Method: EPA 8260B

Project: BP 2169

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-12-703-649	Aqueous	GC/MS BB	01/13/09	01/13/09	090113L01		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	96	100	87-117	82-122	4	0-7	
Carbon Tetrachloride	89	95	78-132	69-141	7	0-8	
Chlorobenzene	102	102	88-118	83-123	0	0-8	
1,2-Dibromoethane	83	85	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	101	105	88-118	83-123	4	0-8	
1,1-Dichloroethene	101	103	71-131	61-141	2	0-14	
Ethylbenzene	88	86	80-120	73-127	2	0-20	
Toluene	92	97	85-127	78-134	5	0-7	
Trichloroethene	94	96	85-121	79-127	2	0-11	
Vinyl Chloride	96	94	64-136	52-148	1	0-10	
Methyl-t-Butyl Ether (MTBE)	89	94	67-133	56-144	6	0-16	
Tert-Butyl Alcohol (TBA)	105	101	34-154	14-174	5	0-19	
Diisopropyl Ether (DIPE)	93	96	80-122	73-129	4	0-8	
Ethyl-t-Butyl Ether (ETBE)	86	91	73-127	64-136	6	0-11	
Tert-Amyl-Methyl Ether (TAME)	83	90	69-135	58-146	8	0-12	
Ethanol	100	90	34-124	19-139	11	0-44	

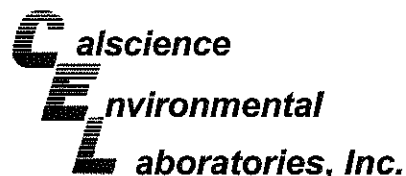
Total number of LCS compounds : 16

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: 09-01-0599
Preparation: EPA 5030B
Method: EPA 8260B

Project: BP 2169

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-12-703-651	Aqueous	GC/MS BB	01/14/09	01/14/09	090114L01		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	97	95	87-117	82-122	2	0-7	
Carbon Tetrachloride	92	89	78-132	69-141	3	0-8	
Chlorobenzene	102	101	88-118	83-123	1	0-8	
1,2-Dibromoethane	85	82	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	99	100	88-118	83-123	1	0-8	
1,1-Dichloroethene	103	102	71-131	61-141	1	0-14	
Ethylbenzene	84	83	80-120	73-127	2	0-20	
Toluene	94	92	85-127	78-134	2	0-7	
Trichloroethene	95	93	85-121	79-127	2	0-11	
Vinyl Chloride	92	91	64-136	52-148	1	0-10	
Methyl-t-Butyl Ether (MTBE)	91	91	67-133	56-144	1	0-16	
Tert-Butyl Alcohol (TBA)	107	108	34-154	14-174	1	0-19	
Diisopropyl Ether (DIPE)	92	91	80-122	73-129	1	0-8	
Ethyl-t-Butyl Ether (ETBE)	85	84	73-127	64-136	1	0-11	
Tert-Amyl-Methyl Ether (TAME)	81	80	69-135	58-146	1	0-12	
Ethanol	93	99	34-124	19-139	6	0-44	

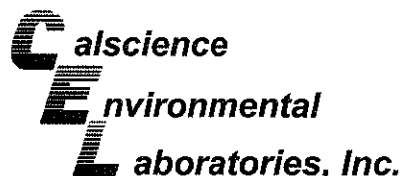
Total number of LCS compounds : 16

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



Glossary of Terms and Qualifiers



Work Order Number: 09-01-0599

<u>Qualifier</u>	<u>Definition</u>
AX	Sample too dilute to quantify surrogate.
BA	There was no MS/MSD analyzed with this batch due to insufficient sample volume (NR = not reported). See Blank Spike/Blank Spike Duplicate.
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.
GS	Internal standard recovery is outside method recovery limit.
IB	CCV recovery above limit; 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.
LR	LCS recovery below method control limits.

A handwritten signature in black ink, appearing to be "M. M. M.", is located at the bottom left of the page.

Work Order Number: 09-01-0599

<u>Qualifier</u>	<u>Definition</u>
MB	Analyte present in the method blank.
MG	Analyte is a suspected lab contaminate.
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.





bp
A BP affiliated company

Chain of Custody Record

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

0599

On-site Time: <u>10:00</u>	Temp: <u>57</u>
Off-site Time: <u>12:15</u>	Temp: <u>58</u>
Sky Conditions: <u>clear</u>	
Meteorological Events: <u>NA</u>	
Wind Speed: <u>NA</u>	Direction: <u>0</u>

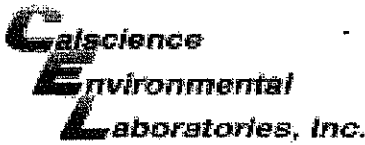
Lab Name: <u>Calscience</u>	BP/AR Facility No.: <u>2169</u>	Consultant/Contractor: <u>Stratus Environmental, Inc.</u>
Address: <u>7440 Lincoln Way</u> <u>Garden Grove, CA 92841</u>	BP/AR Facility Address: <u>889 W. Grand Avenue, Oakland</u>	Address: <u>3330 Cameron Park Drive, Suite 550</u> <u>Cameron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

Lab Bottle Order No:				Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis					Sample Point Lat/Long and Comments *Oxy = MTBD, TAME, ETBE, DIPE, TBA			
Item No.	Sample Description	Time	Date	Soil/Solid	Water/Liquid	Air			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	BTEX/Oxy* by 8260	1,2 DCA	EDB	Ethanol by 8260	GRO by 8260				
1	A-1	11:30	1/8/09	X			6			X		X	X	X	X	X						
2	A-5	12:01	↓	X			6			X		X	X	X	X	X						
3	A-6	11:47	↓	X			6			X		X	X	X	X	X						
4	ADR-1	11:15	↓	X			6			X		X	X	X	X	X						
5	TB 2169 1/8/09-5:00	5:00	↓	X			2			X		X	X	X	X	X						HOLD
6																						
7																						
8																						
9																						
10																						

Sampler's Name: <u>ROBERTO HEIMLICH</u>	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: <u>DOULOS ENV.</u>						
Shipment Date:						
Shipment Method: <u>(GEO)</u>						
Shipment Tracking No: <u>106193416</u>				<u>[Signature]</u>	<u>1/9/09</u>	<u>1030</u>

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

Custody Seals In Place: Yes / No	Temp Blank: Yes / No	Cooler Temp on Receipt: °F/C	Trip Blank: Yes / No	MS/MSD Sample Submitted: Yes / No
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WORK ORDER #: 09-01-0599

SAMPLE RECEIPT FORM

Cooler 4 of 1

CLIENT: Stratus Env.

DATE: 01/09/09

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

Temperature 3.7 °C - 0.2 °C (CF) = 3.5 °C Blank Sample

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

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

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

Ambient Temperature: Air Filter Metals Only PCBs Only Initial: BF

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Initial: BF

Sample _____ No (Not Intact) Not Present Initial: BF

SAMPLE CONDITION:

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

CONTAINER TYPE:

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve EnCores® TerraCores® _____

Water: VOA VOA⁶h VOAna₂ 125AGB 125AGBh 125AGBpo₄ 1AGB 1AGBna₂

1AGBs 500AGB 500AGBs 250CGB 250CGBs 1PB 500PB 500PBna 250PB

250PBn 125PB 125PBznn 100PBsterile 100PBna₂ _____ _____ _____

Air: Tedlar® Summa® _____

Container: C:Clear A:Amber P:Poly/Plastic G:Glass J:Jar B:Bottle

Preservative: h:HCL n:HNO₃ na₂:Na₂S₂O₃ na:NaOH po₄:H₃PO₄ s:H₂SO₄ znn:ZnAc₂+NaOH

Checked/Labeled by: BF

Reviewed by: WLC

Scanned by: BF

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>	1Q09 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>	4/24/2009 11:18:43 AM
<u>Confirmation Number:</u>	1544292628

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!

<u>Submittal Type:</u>	EDF - Monitoring Report - Quarterly
<u>Submittal Title:</u>	1Q09 GW Monitoring
<u>Facility Global ID:</u>	T0600100112
<u>Facility Name:</u>	ARCO #02169
<u>File Name:</u>	09010599.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>	4/24/2009 11:25:55 AM
<u>Confirmation Number:</u>	4348690211

[VIEW QC REPORT](#)

[VIEW DETECTIONS REPORT](#)