



Atlantic Richfield Company  
(a BP affiliated company)

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San Ramon, CA 94583  
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RECEIVED

1:16 pm, Oct 30, 2008

Alameda County  
Environmental Health



30 October 2008

Re: Third Quarter 2008 Semi-Annual Ground-Water Monitoring Report  
Former BP Service Station # 11133  
2220 98<sup>th</sup> Avenue  
Oakland, California  
ACEH Case #RO0000403

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

Submitted by:

Paul Supple  
Environmental Business Manager

Prepared for

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

Prepared by

**Third Quarter 2008 Semi-Annual  
Ground-Water Monitoring Report**  
Former BP Service Station #11133  
2220 98<sup>th</sup> Avenue  
Oakland, California

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

1324 Mangrove Avenue, Suite 212  
Chico, California 95926  
(530) 566-1400  
[www.broadbentinc.com](http://www.broadbentinc.com)

30 October 2008

Project No. 06-08-656

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



30 October 2008

Project No. 06-08-656

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

Attn.: Mr. Paul Supple

Re: Third Quarter 2008 Semi-Annual Ground-Water Monitoring Report, Former BP Service Station #11133, 2220 98<sup>th</sup> Avenue, Oakland, Alameda County, California;  
ACEH Case #RO0000403

Dear Mr. Supple:

Provided herein is the *Third Quarter 2008 Semi-Annual Ground-Water Monitoring Report* for Former BP Service Station #11133 located at 2220 98<sup>th</sup> Avenue, Oakland, California (Site). This report presents the results of ground-water monitoring conducted at the Site during the Third Quarter of 2008.

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

Sincerely,

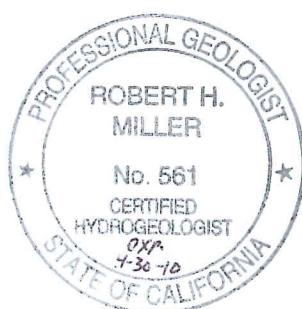
BROADBENT & ASSOCIATES, INC.

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

Thomas A. Venus, P.E.  
Senior Engineer

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

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



Enclosure

cc: Mr. Paresh Khatri, Alameda County Environmental Health (Submitted via ACEH ftp site)  
Ms. Shelby Lathrop, ConocoPhillips, 76 Broadway, Sacramento, California 95818  
Electronic copy uploaded to GeoTracker

## STATION #11133 SEMI-ANNUAL GROUNDWATER MONITORING REPORT

Facility: #11133	Address: 2220 98 <sup>th</sup> Avenue, Oakland
Environmental Business Manager:	Mr. Paul Supple
Consulting Co./Contact Persons:	Broadbent & Associates, Inc.(BAI)/Rob Miller & Tom Venus (530) 566-1400
Primary Agency/Regulatory ID No.:	Alameda County Environmental Health (ACEH) ACEH Case #RO0000403
Consultant Project No.:	06-08-656
Facility Permits/Permitting Agency:	NA

### WORK PERFORMED THIS QUARTER (Third Quarter 2008):

1. Prepared and submitted Second Quarter 2008 Status Report.
2. Conducted semi-annual ground-water monitoring/sampling for Third Quarter 2008.  
Work performed by Stratus Environmental, Inc. (Stratus) on 15 July 2008.

### WORK PROPOSED FOR NEXT QUARTER (Fourth Quarter 2008):

1. Prepared and submitted this Third Quarter 2008 Semi-Annual Ground-Water Monitoring Report (contained herein).
2. Conduct ground-water monitoring/sampling for wells AW-1, AW-2, AW-4, AW-5, AW-6, MW-1, MW-3, RW-1, and VEW-4. Refer to the discussion section for further details.
3. Commence Nitrate/Sulfate Injection Feasibility Pilot Study.

### QUARTERLY RESULTS SUMMARY:

Current phase of project:	<u>Ground-water monitoring/sampling/treatment pilot study</u>
Frequency of ground-water monitoring:	<u>Semi-Annually (1Q &amp; 3Q): Wells MW-1, MW-2, MW-3, AW-1 through AW-9, RW-1</u>
Frequency of ground-water sampling:	<u>Semi-Annually (1Q &amp; 3Q): Wells MW-1, MW-3, AW-1, AW-4, AW-5, AW-6, and RW-1</u> <u>Annually (1Q): Well AW-2</u> <u>Not Sampled: Wells MW-2, AW-3, AW-7, AW-8, AW-9</u>
Is free product (FP) present on-site:	<u>No</u>
FP recovered this quarter:	<u>None</u>
Current remediation techniques:	<u>NA</u>
Depth to ground water (below TOC):	<u>11.07 ft (MW-2) to 19.88 ft (AW-5)</u>
General ground-water flow direction:	<u>West-Southwest</u>
Approximate hydraulic gradient:	<u>0.01 ft/ft</u>

### DISCUSSION:

Third Quarter 2008 semi-annual ground-water monitoring and sampling was conducted at Station #11133 on 15 July 2008 by Stratus. Water levels were gauged in 12 of the 13 wells scheduled to be gauged at the Site. Stratus reported that well AW-7 could not be located (This well has not been able to be located since First Quarter 2001). Wells VW-1 through VW-3 and VEW-4 through VEW-9 were also gauged to assess well integrity. No other irregularities were noted during water level gauging. Depth to ground-water measurements ranged from 11.07 ft at well MW-2 to 19.88 ft at well AW-5. Resulting ground-water surface elevations ranged from 23.54 ft above mean sea level in well MW-3 to 16.67 ft at well MW-2. Water level elevations were between historic minimum and maximum ranges for each well, as summarized in Table 1, with the exception of well MW-2 which reached a historic minimum elevation

this quarter. Water level elevations yielded a potentiometric ground-water flow direction and gradient towards the west-southwest at approximately 0.01 ft/ft. 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. Current and historic ground-water flow directions and gradients are provided in Table 3. Potentiometric ground-water elevation contours are presented in Drawing 1.

Generally consistent with the current ground-water sampling schedule, water samples were collected from nine wells: AW-1, AW-2, AW-4, AW-5, AW-6, MW-1, MW-3, RW-1, and VEW-4. A sample was collected from well VEW-4 in advance of nitrate/sulfate injection pilot testing. Each of the wells sampled during Third Quarter 2008 will be sampled during the upcoming nitrate/sulfate injection pilot test. No irregularities were reported during sampling. Samples were submitted under chain-of-custody protocol to Test America Analytical Testing Corporation (Morgan Hill, California), for analysis of Gasoline Range Organics (GRO, C4-12) by the LUFT GCMS Method; 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. Bio-degradation parameters including dissolved oxygen, oxygen reduction potential, conductivity, pH, temperature, total alkalinity, nitrate, sulfate, soluble sulfide, carbon dioxide, methane, manganese and ferrous iron were also monitored during this quarter. The laboratory reported that the GRO concentrations for the samples collected from wells AW-5 and AW-6 were partly due to individual peak(s) in the quantitation range. The nitrate analysis for the samples collected from wells AW-1 and AW-4 was conducted after the holding time expired. The laboratory also reported that each sample was received after the holding time had expired for soluble sulfide and ferrous iron analyses. No other 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 eight of the nine wells sampled at concentrations up to 6,400 micrograms per liter ( $\mu\text{g/L}$ ) in well AW-2. Benzene was detected above the laboratory reporting limit in three of the nine wells sampled at concentrations up to 1,700  $\mu\text{g/L}$  in well AW-2. Toluene was detected above the laboratory reporting limit in four of the nine wells sampled at concentrations up to 550  $\mu\text{g/L}$  in well AW-2. Ethylbenzene was detected above the laboratory reporting limit in five of the nine wells sampled at concentrations up to 340  $\mu\text{g/L}$  in well AW-2. Total Xylenes were detected above the laboratory reporting limit in five of the nine wells sampled at concentrations up to 940  $\mu\text{g/L}$  in well AW-2. TAME was detected above the laboratory reporting limit in five of the nine wells sampled at concentrations up to 66  $\mu\text{g/L}$  in well AW-6. TBA was detected above the laboratory reporting limit in two of the nine wells sampled at concentrations up to 100  $\mu\text{g/L}$  in well AW-5. MTBE was detected above the laboratory reporting limit in five of the nine wells sampled at concentrations up to 270  $\mu\text{g/L}$  in well AW-6. The remaining fuel additives and oxygenates were not detected above their laboratory reporting limits in the nine wells sampled this quarter. A summary of bio-degradation parameters is provided in Table 4.

Detected analyte concentrations were within the historic minimum and maximum ranges recorded for each well, with the following exceptions: the GRO (6,400  $\mu\text{g/L}$ ), Benzene (1,700  $\mu\text{g/L}$ ), Toluene (550  $\mu\text{g/L}$ ), Ethylbenzene (340  $\mu\text{g/L}$ ) and Total Xylenes (940  $\mu\text{g/L}$ ) concentrations reported in well AW-2 were the highest on record for this well; GRO reached minimum recorded concentrations in wells RW-1 (1,600  $\mu\text{g/L}$ ) and VEW-4 (53  $\mu\text{g/L}$ ); Toluene reached minimum recorded concentrations in wells AW-1 (4.5  $\mu\text{g/L}$ ) and RW-1 (0.66  $\mu\text{g/L}$ ); Ethylbenzene reached minimum concentrations in wells AW-1 (27  $\mu\text{g/L}$ ), MW-1 (8.5  $\mu\text{g/L}$ ) and RW-1 (4.4  $\mu\text{g/L}$ ); Total Xylenes reached minimum recorded concentrations in wells AW-1 (17  $\mu\text{g/L}$ ) and RW-1 (3.0  $\mu\text{g/L}$ ); MTBE reached its minimum recorded concentration in well RW-1 (12  $\mu\text{g/L}$ ); TBA reached minimum recorded concentrations in wells AW-5

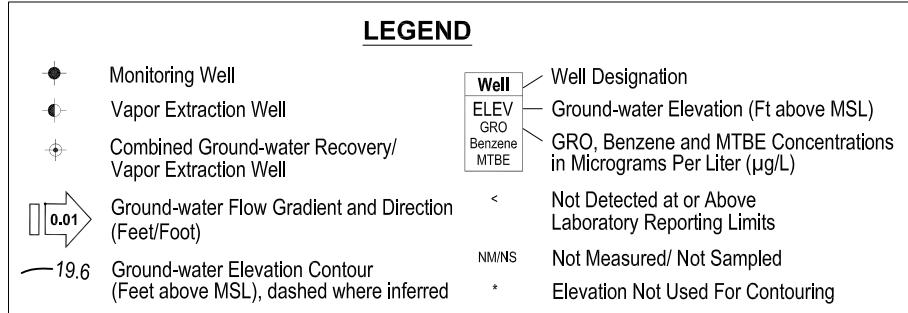
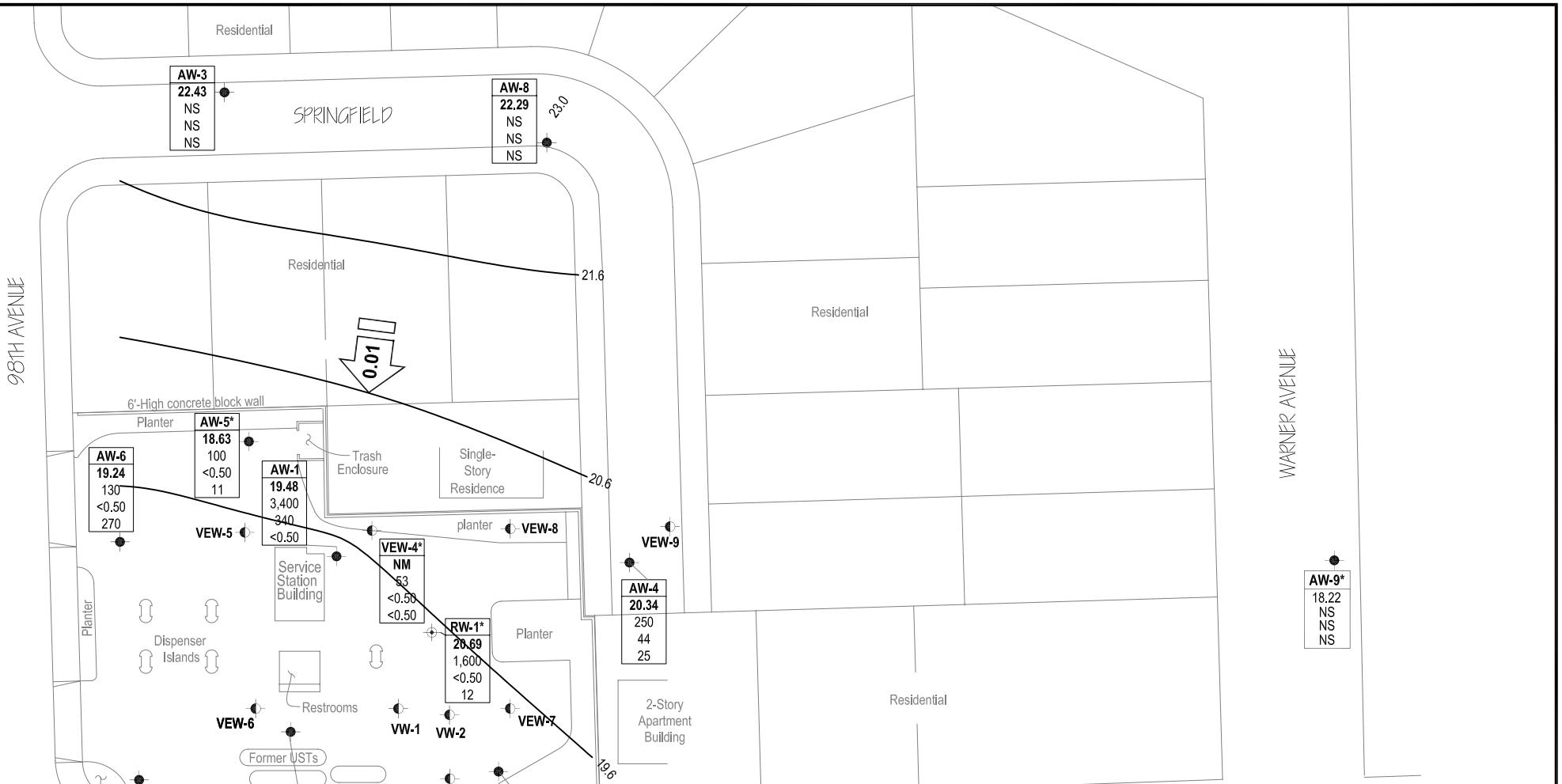
(100 µg/L) and AW-6 (20 µg/L); and TAME reached minimum recorded concentrations in wells AW-1 (15 µg/L) and AW-5 (2.4 µg/L). Historic laboratory analytical results are summarized in Table 1, Table 2 and Table 4. A copy of the laboratory analytical report, including chain-of-custody documentation is provided in Appendix A. Third Quarter 2008 groundwater 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 Test America (Morgan Hill, 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 Contour and Analytical Summary Map, 15 January 2008,  
Former BP Service Station #11133, 2220 98<sup>th</sup> Avenue, Oakland, California
- Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses, Station #11133, 2220 98<sup>th</sup> Avenue, Oakland, California
- Table 2. Summary of Fuel Additives Analytical Data, Station #11133, 2220 98<sup>th</sup> Avenue,  
Oakland, California
- Table 3. Historical Ground-Water Flow Direction and Gradient, Station #11133, 2220 98<sup>th</sup>  
Avenue, Oakland, California
- Table 4. Bio-Degradation Parameters, Station #11133, 2220 98<sup>th</sup> Avenue, Oakland, California
- Appendix A. Stratus Ground-Water Sampling Data Package (Includes Field Data Sheets, Laboratory Report and Chain-of-Custody Documentation)
- Appendix B. GeoTracker Upload Confirmation



0 60 120

SCALE (ft)

**BROADBENT & ASSOCIATES, INC.**  
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL  
1324 Mangrove Ave. Suite 212, Chico, California 95926  
Project No.: 06-08-656 Date: 8/14/2008

Former BP Service Station #11133  
2220 98th Avenue  
Oakland, California

Ground-Water Elevation Contour and Analytical Summary Map  
15 July 2008

Drawing

1

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

Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
<b>AW-1</b>																
4/5/1991	--	38.11	25.44	--	12.67	4,100	1,500	69	100	83	--	--	SUP	--		
4/1/1992	--	38.11	23.22	--	14.89	--	--	--	--	--	--	--	--	--	--	
4/2/1992	--	38.11	--	--	--	11,000	1,800	210	210	490	--	--	APP	--		
7/6/1992	--	38.11	24.89	--	13.22	6,500	4,000	40	290	530	--	--	ANA	--		
10/7/1992	--	38.11	--	--	--	2,900	1,200	25	37	210	--	--	ANA	--	e	
10/7/1992	--	38.11	26.55	--	11.56	4,700	1,500	41	47	300	--	--	ANA	--		
1/14/1993	--	38.11	23.73	--	14.38	2,800	830	31	140	240	--	--	PACE	--	m	
1/14/1993	--	38.11	--	--	--	4,100	1,700	28	130	230	--	--	PACE	--	m, e	
4/22/1993	--	38.11	--	--	--	39,000	14,000	530	1,800	6,100	987	--	PACE	--	c, m	
7/15/1993	--	38.11	22.50	--	15.61	6,200	2,200	28	210	540	838	--	PACE	--	c, m	
10/21/1993	--	38.11	24.32	--	13.79	2,400	820	13	55	120	832	--	PACE	--	c, m	
1/27/1994	--	38.11	23.72	--	14.39	3,500	1,400	26	130	220	650	--	PACE	--	c, n	
4/21/1994	--	38.11	22.48	--	15.63	40,000	12,000	1,900	1,600	5,000	1,119	1.4	PACE	--	m	
9/9/1994	--	38.11	23.04	--	15.07	3,500	1,600	5	200	250	--	2.1	PACE	--	m	
9/9/1994	--	38.11	--	--	--	3,900	1,900	5.5	190	240	--	--	PACE	--	e	
12/21/1994	--	38.11	21.70	--	16.41	7,600	3,100	36	370	320	855	1.6	PACE	--	m	
1/30/1995	--	38.11	17.71	--	20.40	35,000	23,000	650	3,200	4,100	--	1.7	ATI	--		
4/10/1995	--	38.11	20.04	--	18.07	60,000	18,000	2,000	4,300	11,000	--	7.9	ATI	--		
4/10/1995	--	38.11	--	--	--	56,000	17,000	2,000	3,900	10,000	--	--	ATI	--	e	
6/29/1995	--	38.11	20.60	--	17.51	72,000	10,000	7,300	4,200	15,000	--	6.2	ATI	--		
6/29/1995	--	38.11	--	--	--	86,000	12,000	8,400	4,800	18,000	--	--	ATI	--	e	
9/18/1995	--	38.11	21.87	--	16.24	--	--	--	--	--	--	--	--	--	--	
9/19/1995	--	38.11	--	--	--	65,000	12,000	3,100	4,400	14,000	1,000	8.5	ATI	--		
12/7/1995	--	38.11	22.06	--	16.05	25,000	8,700	<50	2,500	1,300	1,100	2.9	ATI	--		
3/28/1996	--	38.11	16.91	--	21.20	24,000	11,000	<100	3,200	3,390	<1000	6.6	SPL	--		
6/20/1996	--	38.11	20.82	--	17.29	38,000	6,900	1,100	3,200	7,300	<100	6.4	SPL	--		
10/11/1996	--	38.11	23.20	--	14.91	33,000	8,500	69	3,300	4,230	580	6.3	SPL	--		
1/2/1997	--	38.11	20.41	--	17.70	32,000	8,000	<50	3,100	2,300	700	6.7	SPL	--		
4/14/1997	--	38.11	21.61	--	16.50	--	--	--	--	--	--	--	--	--		
4/15/1997	--	38.11	--	--	--	31,000	5,000	160	2,400	4,540	340	5.4	SPL	--		
7/2/1997	--	38.11	21.17	--	16.94	26,000	5,800	<100	2,600	2,200	<1000	6.2	SPL	--		

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

Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
AW-1 Cont.																
9/30/1997	--	38.11	21.48	--	16.63	29,000	9,200	17	1,400	130	560	6.9	SPL	--		
1/21/1998	--	38.11	20.02	--	18.09	50,000	6,900	450	3,200	4,450	720	5.8	SPL	--		
4/9/1998	--	38.11	13.37	--	24.74	--	--	--	--	--	--	--	--	--	--	
4/10/1998	--	38.11	--	--	--	46,000	5,800	1,900	3,000	7,400	1,000	4.3	SPL	--		
6/19/1998	--	38.11	19.12	--	18.99	42,000	6,600	200	3,000	3,350	660	4.9	SPL	--		
6/19/1998	--	38.11	--	--	--	43,000	6,800	260	3,100	3,490	620	--	SPL	--	e	
11/30/1998	--	38.11	21.13	--	16.98	23,000	6,700	<25	3,100	130	710/820	--	SPL	--	g	
1/21/1999	--	38.11	20.77	--	17.34	25,000	4,800	54	2,800	780	1,000	--	SPL	--		
4/30/1999	--	38.11	20.80	--	17.31	21,000	5,300	67	2,800	750	1,500	--	SPL	--		
7/9/1999	--	38.11	20.41	--	17.70	11,000	3,000	<10	760	180	1,300	--	SPL	--		
11/3/1999	--	38.11	20.82	--	17.29	--	--	--	--	--	--	--	--	--		
1/12/2000	--	38.11	19.99	--	18.12	330,000	5,300	10	2,900	560	2,200	--	PACE	--		
4/13/2000	--	38.11	20.14	--	17.97	--	--	--	--	--	--	--	--	--		
5/24/2000	--	38.11	20.17	--	17.94	--	--	--	--	--	--	--	--	--		
6/1/2000	--	38.11	23.05	--	15.06	--	--	--	--	--	--	--	--	--		
6/8/2000	--	38.11	17.08	--	21.03	--	--	--	--	--	--	--	--	--		
6/15/2000	--	38.11	16.93	--	21.18	--	--	--	--	--	--	--	--	--		
7/26/2000	--	38.11	20.07	--	18.04	15,000	290	98	77	220	37,000	--	PACE	--		
10/24/2000	--	38.11	20.10	--	18.01	--	--	--	--	--	--	--	--	--		
1/19/2001	--	38.11	19.82	--	18.29	7,600	2,220	10.9	415	58.4	1,630	--	PACE	--		
7/24/2001	--	38.11	19.86	--	18.25	9,600	2,140	6.34	281	43	1,440	--	PACE	--		
1/18/2002	--	38.11	15.60	--	22.51	20,000	2,170	75.2	1,800	2,080	1,250	--	PACE	--		
8/1/2002	--	38.11	19.55	--	18.56	14,000	2,150	<12.5	197	42.4	1,120	--	PACE	--		
1/16/2003	--	38.11	16.32	--	21.79	15,000	2,300	75	1,600	1,800	1,100	--	SEQ	--	p	
7/7/2003	--	38.11	19.80	--	18.31	9,700	1,600	<25	540	110	1,100	--	SEQ	--	q, u	
02/05/2004	--	38.11	18.75	--	19.36	12,000	2,000	<50	820	590	930	--	SEQM	6.7		
07/01/2004	P	38.11	19.72	--	18.39	9,900	2,600	<25	300	<25	1,100	--	SEQM	6.5		
03/16/2005	P	38.11	18.78	--	19.33	10,000	1,100	30	630	560	720	0.8	SEQM	6.7		
07/22/2005	P	38.11	15.53	--	22.58	8,000	770	5.4	520	50	510	--	SEQM	6.5		
01/25/2006	P	38.11	18.10	--	20.01	6,400	1,200	10	490	290	490	--	SEQM	7.0		
7/6/2006	P	38.11	17.44	--	20.67	6,200	1,300	70	570	180	270	--	TAMC	6.8		

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

Station #11133, 2220 98th Ave., Oakland, CA

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						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
AW-1 Cont.																
1/8/2007	P	38.11	16.74	--	21.37	3700	690	19	110	30	380	2.53	TAMC	6.77		
7/10/2007	P	38.11	17.30	--	20.81	4,200	560	12	93	40	220	1.79	TAMC	6.90		
1/15/2008	P	38.11	15.96	--	22.15	5,000	670	<10	490	200	230	0.92	TAMC	6.91		
7/15/2008	P	38.11	18.63	--	19.48	3,400	340	4.5	27	17	<0.50	1.80	CEL	6.79		
AW-2																
4/5/1991	--	36.83	22.36	--	14.47	<50	<0.3	<0.3	<0.3	<0.3	--	--	SUP	--		
4/1/1992	--	36.83	20.81	--	16.02	--	--	--	--	--	--	--	--	--	--	
4/2/1992	--	36.83	--	--	--	130	25	2.3	0.7	2.1	--	--	APP	--		
7/6/1992	--	36.83	23.57	--	13.26	<50	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--		
10/7/1992	--	36.83	25.24	--	11.59	<50	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--		
1/14/1993	--	36.83	20.82	--	16.01	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	m	
4/22/1993	--	36.83	19.37	--	17.46	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	m	
7/15/1993	--	36.83	21.29	--	15.54	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	PACE	--	m	
10/21/1993	--	36.83	23.14	--	13.69	<50	1.3	1.1	0.9	2.1	<5.0	--	PACE	--	m	
1/27/1994	--	36.83	22.34	--	14.49	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	m	
4/21/1994	--	36.83	21.15	--	15.68	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.0	PACE	--	m	
9/9/1994	--	36.83	22.09	--	14.74	<50	<0.5	<0.5	<0.5	<0.5	--	4.1	PACE	--	m	
12/21/1994	--	36.83	20.12	--	16.71	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.0	PACE	--	m	
1/30/1995	--	36.83	16.65	--	20.18	<50	<0.50	<0.50	<0.50	<1.0	--	2.5	ATI	--		
4/10/1995	--	36.83	16.22	--	20.61	<50	<0.50	<0.50	<0.50	<1.0	--	4.4	ATI	--		
6/29/1995	--	36.83	17.55	--	19.28	<50	<0.50	<0.50	<0.50	<1.0	--	7.8	ATI	--		
9/18/1995	--	36.83	19.87	--	16.96	--	--	--	--	--	--	--	--	--		
9/19/1995	--	36.83	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	ATI	--	e	
9/19/1995	--	36.83	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	4.5	ATI	--		
12/7/1995	--	36.83	21.31	--	15.52	<50	<0.50	<0.50	<0.50	<1.0	<5.0	4.9	ATI	--		
3/28/1996	--	36.83	15.61	--	21.22	<50	<0.5	<1	<1	<1	<10	4.1	SPL	--		
6/20/1996	--	36.83	16.30	--	20.53	<50	<0.5	<1	<1	<1	<10	5.2	SPL	--		
10/11/1996	--	36.83	19.60	--	17.23	<50	<0.5	<1.0	<1.0	<1.0	<10	6.0	SPL	--		
1/2/1997	--	36.83	15.97	--	20.86	<50	<0.5	<1.0	<1.0	<1.0	<10	6.1	SPL	--		
4/14/1997	--	36.83	17.19	--	19.64	<50	<0.5	<1.0	<1.0	<1.0	<10	5.3	SPL	--		

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

Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
<b>AW-2 Cont.</b>																
7/2/1997	--	36.83	18.11	--	18.72	<50	<0.5	<1.0	<1.0	<1.0	<10	5.7	SPL	--		
9/30/1997	--	36.83	18.52	--	18.31	<50	<0.5	<1.0	<1.0	<1.0	860	5.4	SPL	--		
1/21/1998	--	36.83	14.46	--	22.37	160	13	<1.0	<1.0	<1.0	110	4.9	SPL	--		
4/9/1998	--	36.83	12.85	--	23.98	--	--	--	--	--	--	--	--	--	--	
4/10/1998	--	36.83	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<10	3.9	SPL	--		
6/19/1998	--	36.83	14.37	--	22.46	60	<0.5	<1.0	<1.0	<1.0	<10	3.6	SPL	--		
11/30/1998	--	36.83	16.90	--	19.93	--	--	--	--	--	--	--	--	--	--	
1/21/1999	--	36.83	16.87	--	19.96	<50	<1.0	<1.0	<1.0	<1.0	<1.0	--	SPL	--		
4/30/1999	--	36.83	17.01	--	19.82	--	--	--	--	--	--	--	--	--	--	
7/9/1999	--	36.83	17.83	--	19.00	--	--	--	--	--	--	--	--	--	--	
11/3/1999	--	36.83	19.74	--	17.09	--	--	--	--	--	--	--	--	--	--	
1/12/2000	--	36.83	19.90	--	16.93	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	PACE	--		
4/13/2000	--	36.83	19.75	--	17.08	--	--	--	--	--	--	--	--	--	--	
7/26/2000	--	36.83	19.86	--	16.97	--	--	--	--	--	--	--	--	--	--	
10/24/2000	--	36.83	18.77	--	18.06	--	--	--	--	--	--	--	--	--	--	
1/19/2001	--	36.83	--	--	--	--	--	--	--	--	--	--	--	--	f	
7/24/2001	--	36.83	--	--	--	--	--	--	--	--	--	--	--	--	f	
1/18/2002	--	36.83	15.17	--	21.66	<50	<0.5	<0.5	<0.5	<1.0	<0.5	--	PACE	--		
8/1/2002	--	36.83	17.17	--	19.66	--	--	--	--	--	--	--	--	--	--	
1/16/2003	--	36.83	14.81	--	22.02	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	SEQ	--	p	
7/7/2003	--	36.83	16.65	--	20.18	--	--	--	--	--	--	--	--	--	--	
02/05/2004	--	36.83	15.37	--	21.46	<50	3.0	<0.50	<0.50	<0.50	5.1	--	SEQM	6.6		
07/01/2004	--	36.83	17.55	--	19.28	--	--	--	--	--	--	--	--	--	--	
03/16/2005	P	36.83	14.58	--	22.25	<50	0.75	<0.50	1.1	1.1	<0.50	1.7	SEQM	6.7		
07/22/2005	--	36.83	15.41	--	21.42	--	--	--	--	--	--	--	--	--	--	
01/25/2006	P	36.83	14.17	--	22.66	280	110	<1.0	3.9	8.7	12	--	SEQM	7.1		
7/6/2006	--	36.83	14.00	--	22.83	--	--	--	--	--	--	--	--	--	--	
1/8/2007	P	36.83	15.85	--	20.98	1900	550	160	58	180	40	2.09	TAMC	7.2		
7/10/2007	--	36.83	17.25	--	19.58	--	--	--	--	--	--	--	--	--	--	
1/15/2008	P	36.83	15.75	--	21.08	2,300	900	87	100	140	48	0.83	TAMC	6.79		
<b>7/15/2008</b>	<b>P</b>	<b>36.83</b>	<b>17.99</b>	--	<b>18.84</b>	<b>6,400</b>	<b>1,700</b>	<b>550</b>	<b>340</b>	<b>940</b>	<b>&lt;50</b>	<b>2.14</b>	<b>CEL</b>	<b>7.05</b>		

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

Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
AW-2																
AW-3																
4/5/1991	--	39.13	23.90	--	15.23	5,200	980	450	95	310	--	--	SUP	--		
4/1/1992	--	39.13	22.50	--	16.63	4,700	890	47	43	110	--	--	APP	--		
7/6/1992	--	39.13	23.26	--	15.87	3,900	3,100	30	80	99	--	--	ANA	--		
10/7/1992	--	39.13	24.75	--	14.38	5,000	2,600	<0.5	<0.5	59	--	--	ANA	--		
1/14/1993	--	39.13	23.59	--	15.54	350	250	<0.5	<0.5	<0.5	--	--	PACE	--	m	
4/22/1993	--	39.13	19.42	--	19.71	240	71	2.4	0.6	4	--	--	PACE	--	m	
7/15/1993	--	39.13	20.09	--	19.04	650	71	2.8	1.5	1.1	37.3	--	PACE	--	c, m	
10/21/1993	--	39.13	--	--	--	170	6.1	2	1.7	4.4	--	--	PACE	--	e	
10/21/1993	--	39.13	21.88	--	17.25	160	4.8	1.7	1.6	3.6	8.95	--	PACE	--	m	
1/27/1994	--	39.13	--	--	--	90	2.9	0.5	<0.5	<0.5	--	--	PACE	--	e	
1/27/1994	--	39.13	22.33	--	16.80	92	2.1	<0.5	<0.5	<0.5	7.37	--	PACE	--	m	
4/21/1994	--	39.13	20.96	--	18.17	150	3.6	0.8	0.9	2.5	9.36	1.3	PACE	--	m	
9/9/1994	--	39.13	21.60	--	17.53	53	<0.5	<0.5	<0.5	<0.5	--	1.9	PACE	--	m	
12/21/1994	--	39.13	--	--	--	--	--	--	--	--	--	--	--	--	f	
1/30/1995	--	39.13	--	--	--	--	--	--	--	--	--	--	--	--	f	
4/10/1995	--	39.13	--	--	--	--	--	--	--	--	--	--	--	--	f	
6/29/1995	--	39.13	15.41	--	23.72	<50	<0.50	<0.50	<0.50	<1.0	--	8.0	ATI	--		
9/18/1995	--	39.13	17.83	--	21.30	--	--	--	--	--	--	--	--	--		
9/19/1995	--	39.13	--	--	--	61,000	11,000	2,900	4,100	13,000	790	7.4	ATI	--		
12/7/1995	--	39.13	19.27	--	19.86	<50	<0.50	<0.50	<0.50	<1.0	<5.0	3.4	ATI	--		
12/7/1995	--	39.13	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	ATI	--	e	
3/28/1996	--	39.13	13.85	--	25.28	<50	<0.5	<1	<1	<1	<10	4.1	SPL	--		
3/28/1996	--	39.13	--	--	--	<50	<0.5	<1	<1	<1	<10	--	SPL	--	e	
6/20/1996	--	39.13	14.47	--	24.66	<50	<0.5	<1	<1	<1	<10	4.2	SPL	--		
6/20/1996	--	39.13	--	--	--	<50	<0.5	<1	<1	<1	<10	--	SPL	--	e	
10/11/1996	--	39.13	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<10	--	SPL	--	e	
10/11/1996	--	39.13	17.97	--	21.16	<50	<0.5	<1.0	<1.0	<1.0	<10	4.7	SPL	--		
1/2/1997	--	39.13	13.00	--	26.13	<50	<0.5	<1.0	<1.0	<1.0	<10	5.6	SPL	--		
4/14/1997	--	39.13	14.36	--	24.77	<50	<0.5	<1.0	<1.0	<1.0	<10	5.0	SPL	--		

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Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
AW-3 Cont.																
4/15/1997	--	39.13	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<10	--	SPL	--	e	
7/2/1997	--	39.13	15.87	--	23.26	<50	<0.5	<1.0	<1.0	<1.0	<10	5.4	SPL	--		
9/30/1997	--	39.13	17.50	--	21.63	<250	<2.5	<5.0	<5.0	<5.0	810	5.7	SPL	--		
1/21/1998	--	39.13	11.98	--	27.15	140	<0.5	<1.0	<1.0	<1.0	99	4.6	SPL	--		
1/21/1998	--	39.13	--	--	--	150	<0.5	<1.0	<1.0	1.2	110	--	SPL	--	e	
4/9/1998	--	39.13	9.45	--	29.68	--	--	--	--	--	--	--	--	--	--	
4/10/1998	--	39.13	--	--	--	<50	<0.5	<1.0	<1.0	1.6	<10	4.5	SPL	--		
4/10/1998	--	39.13	--	--	--	<50	<0.5	<1.0	1.4	1.7	<10	--	SPL	--	e	
6/19/1998	--	39.13	12.13	--	27.00	<50	<0.5	<1.0	<1.0	<1.0	<10	4.4	SPL	--		
11/30/1998	--	39.13	15.91	--	23.22	--	--	--	--	--	--	--	--	--	--	
1/21/1999	--	39.13	15.93	--	23.20	<50	<1.0	<1.0	<1.0	<1.0	<1.0	--	SPL	--		
4/30/1999	--	39.13	15.98	--	23.15	--	--	--	--	--	--	--	--	--	--	
7/9/1999	--	39.13	14.58	--	24.55	--	--	--	--	--	--	--	--	--	--	
11/3/1999	--	39.13	17.43	--	21.70	--	--	--	--	--	--	--	--	--	--	
1/12/2000	--	39.13	18.30	--	20.83	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	PACE	--		
4/13/2000	--	39.13	18.89	--	20.24	--	--	--	--	--	--	--	--	--	--	
7/26/2000	--	39.13	18.67	--	20.46	--	--	--	--	--	--	--	--	--	--	
10/24/2000	--	39.13	18.98	--	20.15	--	--	--	--	--	--	--	--	--	--	
1/19/2001	--	39.13	16.74	--	22.39	--	--	--	--	--	--	--	--	--	--	
7/24/2001	--	39.13	18.55	--	20.58	--	--	--	--	--	--	--	--	--	--	
1/18/2002	--	39.13	14.49	--	24.64	--	--	--	--	--	--	--	--	--	--	
8/1/2002	--	39.13	14.27	--	24.86	--	--	--	--	--	--	--	--	--	--	
1/16/2003	--	39.13	14.25	--	24.88	--	--	--	--	--	--	--	--	--	--	
7/7/2003	--	39.13	14.70	--	24.43	--	--	--	--	--	--	--	--	--	--	
02/05/2004	--	39.13	14.61	--	24.52	--	--	--	--	--	--	--	--	--	--	
07/01/2004	--	39.13	15.62	--	23.51	--	--	--	--	--	--	--	--	--	--	
03/16/2005	P	39.13	12.70	--	26.43	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	SEQM	7.3		
07/22/2005	--	39.13	13.44	--	25.69	--	--	--	--	--	--	--	--	--	--	
01/25/2006	--	39.13	13.56	--	25.57	--	--	--	--	--	--	--	--	--	--	
7/6/2006	--	39.13	11.60	--	27.53	--	--	--	--	--	--	--	--	--	--	
1/8/2007	--	39.13	14.97	--	24.16	--	--	--	--	--	--	--	--	--	--	

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						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
AW-3 Cont.																
7/10/2007	--	39.13	15.81	--	23.32	--	--	--	--	--	--	--	--	--	--	
1/15/2008	--	39.13	15.97	--	23.16	--	--	--	--	--	--	--	--	--	--	
<b>7/15/2008</b>	<b>--</b>	<b>39.13</b>	<b>16.70</b>	<b>--</b>	<b>22.43</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	
AW-4																
4/5/1991	--	39.08	25.12	--	13.96	110,000	40,000	13,000	2,000	5,500	--	--	SUP	--		
4/1/1992	--	39.08	--	--	--	210,000	55,000	23,000	2,900	7,000	--	--	APP	--	e	
4/1/1992	--	39.08	23.56	--	15.52	230,000	57,000	31,000	2,900	7,600	--	--	APP	--		
7/6/1992	--	39.08	25.87	--	13.21	38,000	16,000	5,400	2,000	6,100	--	--	ANA	--		
10/7/1992	--	39.08	27.53	--	11.55	120,000	41,000	26,000	4,700	13,000	--	--	ANA	--		
1/14/1993	--	39.08	24.12	--	14.96	62,000	18,000	14,000	2,700	7,700	1,400	--	PACE	--	c, m	
4/22/1993	--	39.08	21.47	--	17.61	18,000	1,100	2,100	320	3,500	--	--	PACE	--	m	
7/15/1993	--	39.08	23.30	--	15.78	21,000	820	2,300	590	3,800	1,978	--	PACE	--	c, m	
10/21/1993	--	39.08	25.08	--	14.00	11,000	570	83	630	2,300	4,600	--	PACE	--	c, m	
1/27/1994	--	39.08	24.61	--	14.47	12,000	420	460	600	2,200	6,400	--	PACE	--	c, m	
4/21/1994	--	39.08	22.96	--	16.12	12,000	110	250	150	1,900	16,010	1.5	PACE	--	c, m	
4/21/1994	--	39.08	--	--	--	14,000	71	160	29	1,200	13,000	--	PACE	--	c, e	
9/9/1994	--	39.08	23.85	--	15.23	9,700	75	64	280	2,000	--	2.1	PACE	--	m	
12/21/1994	--	39.08	--	--	--	--	--	--	--	--	--	--	--	--	f	
1/30/1995	--	39.08	--	--	--	--	--	--	--	--	--	--	--	--	f	
4/10/1995	--	39.08	18.07	--	21.01	3,700	69	8.7	44	130	--	8.5	ATI	--		
6/29/1995	--	39.08	19.25	--	19.83	8,000	62	190	190	1,100	--	7.5	ATI	--		
9/18/1995	--	39.08	20.73	--	18.35	--	--	--	--	--	--	--	--	--	--	
9/19/1995	--	39.08	--	--	--	12,000	660	1,600	200	1,900	7,100	8.3	ATI	--		
12/7/1995	--	39.08	22.49	--	16.59	41,000	8,400	7,200	710	6,300	5,200	3.6	ATI	--		
3/28/1996	--	39.08	16.49	--	22.59	--	--	--	--	--	--	--	--	--	f	
6/20/1996	--	39.08	16.00	--	23.08	<50	<0.5	<1	<1	<1	12	--	SPL	--		
10/11/1996	--	39.08	19.52	--	19.56	36,000	12,000	5,500	<25	3,800	880/1000	6.2	SPL	--	g	
1/2/1997	--	39.08	--	--	--	<50	61	3.8	3.5	8.1	110	--	SPL	--	e	
1/2/1997	--	39.08	15.80	--	23.28	<50	<0.5	<1.0	<1.0	<1.0	22	6.4	SPL	--		
4/14/1997	--	39.08	17.01	--	22.07	--	--	--	--	--	--	--	--	--	--	

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Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
AW-4 Cont.																
4/15/1997	--	39.08	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<10	5.4	SPL	--		
7/2/1997	--	39.08	19.68	--	19.40	<50	21	<1.0	<1.0	<1.0	41	4.1	SPL	--		
9/30/1997	--	39.08	22.71	--	16.37	--	--	--	--	--	--	--	--	--	f	
1/21/1998	--	39.08	15.89	--	23.19	13,000	2,900	<10	230	314	3,100	3.9	SPL	--		
4/9/1998	--	39.08	13.50	--	25.58	--	--	--	--	--	--	--	--	--		
4/10/1998	--	39.08	--	--	--	890	<0.5	<1	<1	<1	730	4.9	SPL	--		
6/19/1998	--	39.08	14.75	--	24.33	60	<0.5	<1.0	<1.0	<1.0	34	4.3	SPL	--		
11/30/1998	--	39.08	19.25	--	19.83	--	--	--	--	--	--	--	--	--	--	
1/21/1999	--	39.08	18.94	--	20.14	3,700	830	93	200	360	30	--	--	--		
4/30/1999	--	39.08	19.10	--	19.98	--	--	--	--	--	--	--	--	--		
7/9/1999	--	39.08	18.93	--	20.15	76,000	12,000	6,600	2,000	8,700	320	--	SPL	--		
11/3/1999	--	39.08	20.65	--	18.43	--	--	--	--	--	--	--	--	--	--	
1/12/2000	--	39.08	21.21	--	17.87	67,000	12,000	3,500	2,900	15,000	280	--	PACE	--		
4/13/2000	--	39.08	21.33	--	17.75	--	--	--	--	--	--	--	--	--	--	
5/24/2000	--	39.08	19.84	--	19.24	--	--	--	--	--	--	--	--	--		
6/1/2000	--	39.08	19.04	--	20.04	--	--	--	--	--	--	--	--	--	--	
6/8/2000	--	39.08	18.32	--	20.76	--	--	--	--	--	--	--	--	--		
6/15/2000	--	39.08	16.70	--	22.38	--	--	--	--	--	--	--	--	--	--	
7/26/2000	--	39.08	21.50	--	17.58	910	<0.5	<0.5	<0.5	<0.5	3,500	--	PACE	--		
10/24/2000	--	39.08	22.00	--	17.08	--	--	--	--	--	--	--	--	--	--	
1/19/2001	--	39.08	18.97	--	20.11	6,600	2,460	24	497	534	267	--	PACE	--		
7/24/2001	--	39.08	18.55	--	20.53	5,100	1,080	143	409	827	115	--	PACE	--		
1/18/2002	--	39.08	17.22	--	21.86	3,900	442	241	157	681	85.3	--	PACE	--		
8/1/2002	--	39.08	--	--	--	--	--	--	--	--	--	--	--	--	f	
1/16/2003	--	39.08	16.85	--	22.23	2,900	260	160	120	590	<120	--	SEQ	--	p	
7/7/2003	--	39.08	17.94	--	21.14	600	90	7.9	18	36	56	--	SEQ	--	q	
02/05/2004	--	39.08	16.94	--	22.14	420	40	3.1	15	27	40	--	SEQM	6.8		
07/01/2004	P	39.08	18.24	--	20.84	6,000	970	200	310	1,500	64	--	SEQM	6.7		
03/16/2005	P	39.08	16.16	--	22.92	3,600	71	31	200	870	23	0.6	SEQM	6.5		
07/22/2005	P	39.08	15.89	--	23.19	4,800	750	48	300	840	59	--	SEQM	6.7		
01/25/2006	P	39.08	15.48	--	23.60	<500	13	<5.0	14	62	12	--	SEQM	7.0		

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Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
AW-4 Cont.																
7/6/2006	P	39.08	14.87	--	24.21	2,800	430	21	230	680	39	--	TAMC	6.7		
1/8/2007	P	39.08	16.48	--	22.60	190	6.6	<0.50	4.1	14	38	3.00	TAMC	6.80		
7/10/2007	P	39.08	17.95	--	21.13	160	2.7	<0.50	0.90	1.0	27	2.54	TAMC	7.19		
1/15/2008	P	39.08	17.70	--	21.38	150	<0.50	<0.50	0.71	<0.50	17	1.30	TAMC	6.75		
<b>7/15/2008</b>	<b>P</b>	<b>39.08</b>	<b>18.74</b>	--	<b>20.34</b>	<b>250</b>	<b>44</b>	<b>1.1</b>	<b>44</b>	<b>78</b>	<b>25</b>	<b>2.64</b>	<b>CEL</b>	<b>6.91</b>		
AW-5																
4/5/1991	--	38.51	25.48	--	13.03	420	31	7.5	20	68	--	--	SUP	--		
4/1/1992	--	38.51	23.95	--	14.56	--	--	--	--	--	--	--	--	--		
4/2/1992	--	38.51	--	--	--	4,000	270	63	190	290	--	--	APP	--		
7/6/1992	--	38.51	26.48	--	12.03	1,400	160	<2.5	250	58	--	--	ANA	--		
10/7/1992	--	38.51	28.18	--	10.33	360	12	0.6	8.7	5	--	--	ANA	--		
1/14/1993	--	38.51	24.15	--	14.36	1,700	270	7.5	130	62	--	--	PACE	--	m	
4/22/1993	--	38.51	--	--	--	3,500	780	29	240	210	--	--	PACE	--	m, e	
4/22/1993	--	38.51	22.43	--	16.08	2,700	780	30	220	180	--	--	PACE	--	m	
7/15/1993	--	38.51	--	--	--	1,300	68	8.3	64	99	<50	--	PACE	--	m, e	
7/15/1993	--	38.51	24.31	--	14.20	1,300	69	16	67	120	<50	--	PACE	--	m	
10/21/1993	--	38.51	26.05	--	12.46	510	9.6	1.5	17	45	75	--	PACE	--	c, m	
1/27/1994	--	38.51	26.42	--	12.09	420	3.3	<0.5	1	0.9	48.9	--	PACE	--	m	
4/21/1994	--	38.51	24.36	--	14.15	1,000	110	25	56	27	75	1.3	PACE	--	c, m	
9/9/1994	--	38.51	24.55	--	13.96	210	<0.5	<0.5	0.5	0.9	--	2.7	PACE	--	m	
12/21/1994	--	38.51	--	--	--	340	<0.5	15	3.3	1.4	104	--	PACE	--	m, e	
12/21/1994	--	38.51	22.30	--	16.21	410	<0.5	20	4.3	1.4	114	1.1	PACE	--	m	
1/30/1995	--	38.51	18.88	--	19.63	210	0.6	11	8.8	2	--	1.5	ATI	--		
4/10/1995	--	38.51	18.44	--	20.07	500	1.4	0.59	6.5	4.3	--	8.3	ATI	--		
6/29/1995	--	38.51	19.92	--	18.59	490	1.2	0.58	7.3	2.2	--	6.9	ATI	--	d	
9/18/1995	--	38.51	22.15	--	16.36	--	--	--	--	--	--	--	--	--	--	
9/19/1995	--	38.51	--	--	--	260	0.62	<0.50	3.1	1.1	110	8.2	ATI	--		
12/7/1995	--	38.51	23.75	--	14.76	60	<0.50	<0.50	<0.50	<1.0	210	4.3	ATI	--		
3/28/1996	--	38.51	17.76	--	20.75	<50	<0.5	<1	<1	<1	63	3.0	SPL	--		
6/20/1996	--	38.51	18.46	--	20.05	<50	<0.5	<1	<1	<1	<10	3.6	SPL	--		

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Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
AW-5 Cont.																
10/11/1996	--	38.51	21.84	--	16.67	<50	<0.5	<1.0	<1.0	<1.0	<10	4.5	SPL	--		
1/2/1997	--	38.51	18.01	--	20.50	<50	<0.5	<1.0	<1.0	<1.0	<10	4.6	SPL	--		
4/14/1997	--	38.51	19.35	--	19.16	<50	<0.5	<1.0	<1.0	<1.0	<10	5.1	SPL	--		
7/2/1997	--	38.51	20.29	--	18.22	<50	<0.5	<1.0	<1.0	<1.0	<10	4.0	SPL	--		
9/30/1997	--	38.51	23.15	--	15.36	<250	<2.5	<5.0	<5.0	<5.0	1,300	6.3	SPL	--		
1/21/1998	--	38.51	17.33	--	21.18	6,100	<0.5	2.1	<1.0	<1.0	3,700	4.5	SPL	--		
4/9/1998	--	38.51	15.25	--	23.26	--	--	--	--	--	--	--	--	--	--	
4/10/1998	--	38.51	--	--	--	3,500	<0.5	<1.0	<1.0	<1.0	3,000	5.4	SPL	--		
6/19/1998	--	38.51	17.39	--	21.12	3,300	<0.5	<1.0	<1.0	<1.0	2,500	5.2	SPL	--		
11/30/1998	--	38.51	--	--	--	--	--	--	--	--	--	--	--	--	f	
1/21/1999	--	38.51	21.22	--	17.29	2,800	<1.0	<1.0	<1.0	<1.0	1,800	--	SPL	--		
4/30/1999	--	38.51	21.50	--	17.01	--	--	--	--	--	--	--	--	--		
7/9/1999	--	38.51	20.15	--	18.36	4,000	<1.0	<1.0	<1.0	<1.0	3400/3500	--	SPL	--	g	
11/3/1999	--	38.51	22.04	--	16.47	--	--	--	--	--	--	--	--	--		
1/12/2000	--	38.51	22.59	--	15.92	1,000	7.3	30	6.7	40	4,600	--	PACE	--	j (TPH-g/GRO)	
4/13/2000	--	38.51	23.11	--	15.40	--	--	--	--	--	--	--	--	--		
7/26/2000	--	38.51	22.72	--	15.79	1,800	94	35	5.9	27	16,000	--	PACE	--		
10/24/2000	--	38.51	20.15	--	18.36	--	--	--	--	--	--	--	--	--		
1/19/2001	--	38.51	19.79	--	18.72	2,600	<0.5	<0.5	<0.5	<0.5	4,580	--	PACE	--		
7/24/2001	--	38.51	20.17	--	18.34	5,400	18.4	17.2	<12.5	40.8	5,170	--	PACE	--		
1/18/2002	--	38.51	17.34	--	21.17	3,800	343	0.738	<0.5	<1.0	3,750	--	PACE	--		
8/1/2002	--	38.51	19.49	--	19.02	5,300	<12.5	<12.5	<12.5	<25	3,470	--	PACE	--		
1/16/2003	--	38.51	17.30	--	21.21	1,400	140	<10	<10	<10	1,600	--	SEQ	--	p	
7/7/2003	--	38.51	18.43	--	20.08	1,400	<10	<10	<10	<10	980	--	SEQ	--	q	
02/05/2004	--	38.51	17.24	--	21.27	1,800	<10	<10	<10	<10	810	--	SEQM	6.7		
07/01/2004	P	38.51	19.43	--	19.08	1,100	<5.0	<5.0	<5.0	<5.0	550	--	SEQM	6.6		
03/16/2005	P	38.51	15.30	--	23.21	<5,000	<50	<50	<50	<50	130	890	2.1	SEQM	6.7	
07/22/2005	P	38.51	17.22	--	21.29	<500	5.2	<5.0	<5.0	6.9	390	--	SEQM	6.6		
01/25/2006	P	38.51	15.28	--	23.23	<500	<5.0	<5.0	<5.0	<5.0	26	--	SEQM	7.0		
7/6/2006	P	38.51	15.93	--	22.58	220	<5.0	<5.0	<5.0	<5.0	170	--	TAMC	6.5		
1/8/2007	P	38.51	17.90	--	20.61	170	<2.5	<2.5	<2.5	<2.5	220	5.22	TAMC	6.84		

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Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
AW-5 Cont.																
7/10/2007	P	38.51	19.00	--	19.51	350	<2.5	<2.5	<2.5	<2.5	360	1.96	TAMC	7.02		
1/15/2008	P	38.51	18.16	--	20.35	130	0.54	<0.50	<0.50	<0.50	85	0.90	TAMC	6.82	w	
<b>7/15/2008</b>	<b>P</b>	<b>38.51</b>	<b>19.88</b>	--	<b>18.63</b>	<b>100</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>11</b>	<b>2.13</b>	<b>CEL</b>	<b>6.85</b>		
AW-6																
4/5/1991	--	37.08	22.48	--	14.60	1,100	80	19	1.4	230	--	--	SUP	--		
4/1/1992	--	37.08	22.50	--	14.58	--	--	--	--	--	--	--	--	--	--	
4/2/1992	--	37.08	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	APP	--		
7/6/1992	--	37.08	22.74	--	14.34	<50	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--		
10/7/1992	--	37.08	24.64	--	12.44	<50	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--		
1/14/1993	--	37.08	22.36	--	14.72	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	m	
4/22/1993	--	37.08	22.82	--	14.26	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	m	
7/15/1993	--	37.08	20.49	--	16.59	<50	<0.5	<0.5	<0.5	0.8	<5.0	--	PACE	--	m	
10/21/1993	--	37.08	22.84	--	14.24	<50	0.5	0.6	<0.5	0.7	<5.0	--	PACE	--	m	
1/27/1994	--	37.08	22.33	--	14.75	<50	<0.5	0.9	3.1	12	<5.0	--	PACE	--	m	
4/21/1994	--	37.08	20.66	--	16.42	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.7	PACE	--	m	
9/9/1994	--	37.08	21.57	--	15.51	<50	0.9	<0.5	<0.5	0.5	--	2.9	PACE	--	m	
12/21/1994	--	37.08	19.40	--	17.68	<50	1.8	0.8	0.8	3.2	5.19	1.1	PACE	--	m	
1/30/1995	--	37.08	16.74	--	20.34	<50	<0.50	<0.50	<0.50	<1.0	--	2.2	ATI	--		
1/30/1995	--	37.08	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	--	ATI	--	e	
4/10/1995	--	37.08	16.01	--	21.07	<50	<0.50	<0.50	<0.50	<1.0	--	8.6	ATI	--		
6/29/1995	--	37.08	17.54	--	19.54	<50	<0.50	<0.50	<0.50	<1.0	--	6.3	ATI	--		
9/18/1995	--	37.08	19.65	--	17.43	--	--	--	--	--	--	--	--	--	--	
9/19/1995	--	37.08	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	25	8.3	ATI	--		
12/7/1995	--	37.08	20.35	--	16.73	<50	<0.50	<0.50	<0.50	<1.0	16	4.7	ATI	--		
3/28/1996	--	37.08	14.99	--	22.09	<50	<0.5	<1	<1	<1	<10	4.0	SPL	--		
6/20/1996	--	37.08	15.59	--	21.49	<50	<0.5	<1	<1	<1	<10	4.6	SPL	--		
10/11/1996	--	37.08	19.09	--	17.99	<50	<0.5	<1.0	<1.0	<1.0	<10	5.3	SPL	--		
1/2/1997	--	37.08	15.11	--	21.97	<50	<0.5	<1.0	<1.0	<1.0	<10	5.5	SPL	--		
4/14/1997	--	37.08	16.25	--	20.83	<50	<0.5	<1.0	<1.0	<1.0	<10	3.9	SPL	--		
7/2/1997	--	37.08	17.99	--	19.09	<50	<0.5	<1.0	<1.0	<1.0	<10	5.2	SPL	--		

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Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
<b>AW-6 Cont.</b>																
9/30/1997	--	37.08	20.50	--	16.58	<50	<0.5	<1.0	<1.0	<1.0	<10	6.0	SPL	--		
1/21/1998	--	37.08	15.72	--	21.36	160	<0.5	<1.0	<1.0	<1.0	110	5.0	SPL	--		
4/9/1998	--	37.08	13.31	--	23.77	--	--	--	--	--	--	--	--	--	--	
4/10/1998	--	37.08	--	--	--	370	<0.5	<1.0	<1.0	<1.0	300	4.3	SPL	--		
6/19/1998	--	37.08	15.18	--	21.90	830	2	<1.0	<1.0	<1.0	690	4.0	SPL	--		
11/30/1998	--	37.08	--	--	--	--	--	--	--	--	--	--	--	--	f	
1/21/1999	--	37.08	15.78	--	21.30	2,300	<1.0	<1.0	<1.0	<1.0	1,900	--	SPL	--		
4/30/1999	--	37.08	16.01	--	21.07	--	--	--	--	--	--	--	--	--	--	
7/9/1999	--	37.08	17.63	--	19.45	--	--	--	--	--	--	--	--	--	--	
11/3/1999	--	37.08	18.42	--	18.66	--	--	--	--	--	--	--	--	--	--	
1/12/2000	--	37.08	19.92	--	17.16	<50	<0.5	<0.5	<0.5	<0.5	2,700	--	PACE	--		
4/13/2000	--	37.08	19.87	--	17.21	--	--	--	--	--	--	--	--	--	--	
7/26/2000	--	37.08	19.99	--	17.09	--	--	--	--	--	--	--	--	--	--	
10/24/2000	--	37.08	18.12	--	18.96	--	--	--	--	--	--	--	--	--	--	
1/19/2001	--	37.08	17.04	--	20.04	2,700	<0.5	<0.5	<0.5	<0.5	4,850	--	PACE	--		
7/24/2001	--	37.08	17.83	--	19.25	--	--	--	--	--	--	--	--	--	--	
1/18/2002	--	37.08	15.54	--	21.54	5,500	614	<0.5	<0.5	<1.0	5,390	--	PACE	--		
8/1/2002	--	37.08	16.98	--	20.10	--	--	--	--	--	--	--	--	--	--	
1/16/2003	--	37.08	15.05	--	22.03	2,900	<20	<20	<20	63	2,500	--	SEQ	--	p	
7/7/2003	--	37.08	16.58	--	20.50	--	--	--	--	--	--	--	--	--	--	
02/05/2004	--	37.08	15.84	--	21.24	7,000	<50	<50	<50	<50	5,400	--	SEQM	6.7		
07/01/2004	P	37.08	17.91	--	19.17	9,600	<50	<50	<50	<50	4,600	--	SEQM	6.5		
03/16/2005	P	37.08	16.04	--	21.04	6,700	<25	<25	<25	<25	4,400	3.0	SEQM	6.8		
07/22/2005	P	37.08	14.20	--	22.88	<5,000	<50	<50	<50	<50	5,500	--	SEQM	6.7		
01/25/2006	P	37.08	14.17	--	22.91	<5,000	<50	<50	<50	<50	3,000	--	SEQM	7.0		
7/6/2006	P	37.08	14.82	--	22.26	3,100	<50	<50	<50	<50	2,800	--	TAMC	6.5		
1/8/2007	P	37.08	15.72	--	21.36	5100	<50	<50	<50	<50	7400	3.18	TAMC	6.78		
7/10/2007	P	37.08	16.99	--	20.09	3,700	<100	<100	<100	<100	3,900	2.09	TAMC	6.83	w	
1/15/2008	P	37.08	15.55	--	21.53	120	1.1	<1.0	<1.0	<1.0	150	0.58	TAMC	6.80	w	
<b>7/15/2008</b>	<b>P</b>	<b>37.08</b>	<b>17.84</b>	--	<b>19.24</b>	<b>130</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>270</b>	<b>2.12</b>	<b>CEL</b>	<b>6.87</b>		

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

Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
AW-7																
4/5/1991	--	37.60	23.38	--	14.22	<50	0.4	0.7	<0.3	<0.3	--	--	SUP	--		
4/1/1992	--	37.60	21.92	--	15.68	--	--	--	--	--	--	--	--	--	--	
4/2/1992	--	37.60	--	--	--	<50	<0.5	3.2	1	5.4	--	--	APP	--		
7/6/1992	--	37.60	24.50	--	13.10	<50	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--		
10/7/1992	--	37.60	26.18	--	11.42	<50	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--		
1/14/1993	--	37.60	22.03	--	15.57	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	m	
4/22/1993	--	37.60	21.18	--	16.42	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	m	
7/15/1993	--	37.60	22.09	--	15.51	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	PACE	--	m	
10/21/1993	--	37.60	24.05	--	13.55	51	5	4.2	3.5	8.2	<5.0	--	PACE	--	m	
1/27/1994	--	37.60	23.40	--	14.20	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	PACE	--	m	
4/21/1994	--	37.60	22.24	--	15.36	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.5	PACE	--	m	
9/9/1994	--	37.60	22.94	--	14.66	<50	<0.5	<0.5	<0.5	0.5	--	4.3	PACE	--	m	
12/21/1994	--	37.60	20.86	--	16.74	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.2	PACE	--	m	
1/30/1995	--	37.60	17.51	--	20.09	<50	<0.50	<0.50	<0.50	<1.0	--	2.7	ATI	--		
4/10/1995	--	37.60	16.69	--	20.91	<50	<0.50	<0.50	<0.50	<1.0	--	4.8	ATI	--		
6/29/1995	--	37.60	18.33	--	19.27	<50	<0.50	<0.50	<0.50	<1.0	--	7.6	ATI	--		
9/18/1995	--	37.60	20.68	--	16.92	--	--	--	--	--	--	--	--	--		
9/19/1995	--	37.60	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	5.1	ATI	--		
12/7/1995	--	37.60	22.15	--	15.45	<50	<0.50	<0.50	<0.50	<1.0	<5.0	5.2	ATI	--		
3/28/1996	--	37.60	16.38	--	21.22	<50	<0.5	<1	<1	<1	<10	3.9	SPL	--		
6/20/1996	--	37.60	17.02	--	20.58	<50	<0.5	<1	<1	<1	<10	5.0	SPL	--		
10/11/1996	--	37.60	20.47	--	17.13	<50	<0.5	<1.0	<1.0	<1.0	<10	6.3	SPL	--		
1/2/1997	--	37.60	16.70	--	20.90	<50	<0.5	<1.0	<1.0	<1.0	<10	6.2	SPL	--		
4/14/1997	--	37.60	17.96	--	19.64	<50	<0.5	<1.0	<1.0	<1.0	<10	5.0	SPL	--		
7/2/1997	--	37.60	19.11	--	18.49	<50	<0.5	<1.0	<1.0	<1.0	<10	5.4	SPL	--		
9/30/1997	--	37.60	22.97	--	14.63	<250	<2.5	<5.0	<5.0	<5.0	1,100	6.5	SPL	--		
1/21/1998	--	37.60	16.50	--	21.10	<50	<0.5	<1.0	<1.0	<1.0	<10	4.9	SPL	--		
4/9/1998	--	37.60	13.56	--	24.04	<50	<0.5	<1.0	<1.0	<1.0	<10	4.9	SPL	--		
6/19/1998	--	37.60	15.41	--	22.19	<50	<0.5	<1.0	<1.0	<1.0	<10	4.4	SPL	--		
11/30/1998	--	37.60	18.90	--	18.70	--	--	--	--	--	--	--	--	--	--	
1/21/1999	--	37.60	18.39	--	19.21	--	--	--	--	--	--	--	--	--		

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

Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
AW-7 Cont.																
4/30/1999	--	37.60	18.54	--	19.06	--	--	--	--	--	--	--	--	--	--	
7/9/1999	--	37.60	17.98	--	19.62	--	--	--	--	--	--	--	--	--	--	
11/3/1999	--	37.60	20.22	--	17.38	--	--	--	--	--	--	--	--	--	--	
1/12/2000	--	37.60	19.46	--	18.14	--	--	--	--	--	--	--	--	--	--	
4/13/2000	--	37.60	19.59	--	18.01	--	--	--	--	--	--	--	--	--	--	
7/26/2000	--	37.60	19.69	--	17.91	--	--	--	--	--	--	--	--	--	--	
10/24/2000	--	37.60	18.78	--	18.82	--	--	--	--	--	--	--	--	--	--	
1/19/2001	--	37.60	--	--	--	--	--	--	--	--	--	--	--	--	--	f
7/25/2001	--	37.60	--	--	--	--	--	--	--	--	--	--	--	--	--	f
1/18/2002	--	37.60	--	--	--	--	--	--	--	--	--	--	--	--	--	o
8/1/2002	--	37.60	--	--	--	--	--	--	--	--	--	--	--	--	--	o
1/16/2003	--	37.60	--	--	--	--	--	--	--	--	--	--	--	--	--	o
7/7/2003	--	37.60	--	--	--	--	--	--	--	--	--	--	--	--	--	o
02/05/2004	--	37.60	--	--	--	--	--	--	--	--	--	--	--	--	--	o
07/01/2004	--	37.60	--	--	--	--	--	--	--	--	--	--	--	--	--	o
03/16/2005	--	37.60	--	--	--	--	--	--	--	--	--	--	--	--	--	o
07/22/2005	--	37.60	--	--	--	--	--	--	--	--	--	--	--	--	--	o
01/25/2006	--	37.60	--	--	--	--	--	--	--	--	--	--	--	--	--	o
AW-8																
4/5/1991	--	40.86	26.68	--	14.18	80	1.9	2.2	0.5	1.3	--	--	SUP	--	--	
4/1/1992	--	40.86	25.11	--	15.75	73	<0.5	0.7	<0.5	0.6	--	--	APP	--	--	
7/6/1992	--	40.86	26.43	--	14.43	<50	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--	--	
10/7/1992	--	40.86	28.59	--	12.27	<50	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--	--	
1/14/1993	--	40.86	25.55	--	15.31	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	m	
4/22/1993	--	40.86	22.29	--	18.57	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	m	
7/15/1993	--	40.86	23.42	--	17.44	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	PACE	--	m	
10/21/1993	--	40.86	25.15	--	15.71	<50	1.9	1.8	1.3	3.3	<5.0	--	PACE	--	m	
1/27/1994	--	40.86	25.42	--	15.44	<50	<0.5	0.5	0.6	8.5	<5.0	--	PACE	--	m	
4/21/1994	--	40.86	24.14	--	16.72	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.5	PACE	--	m	
9/9/1994	--	40.86	24.55	--	16.31	<50	<0.5	<0.5	<0.5	<0.5	--	2.4	PACE	--	m	

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

Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
AW-8 Cont.																
12/21/1994	--	40.86	22.72	--	18.14	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.1	PACE	--	m	
1/30/1995	--	40.86	19.75	--	21.11	<50	<0.50	1	<0.50	1	--	0.8	ATI	--		
4/10/1995	--	40.86	17.78	--	23.08	<50	<0.50	<0.50	<0.50	<1.0	--	8.3	ATI	--		
6/29/1995	--	40.86	18.18	--	22.68	<50	<0.50	<0.50	<0.50	<1.0	--	8.3	ATI	--		
9/18/1995	--	40.86	20.20	--	20.66	--	--	--	--	--	--	--	--	--	--	
9/19/1995	--	40.86	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	7.7	ATI	--		
12/7/1995	--	40.86	21.54	--	19.32	<50	<0.50	<0.50	<0.50	<1.0	<5.0	4.4	ATI	--		
3/28/1996	--	40.86	15.77	--	25.09	<50	<0.5	<1	<1	<1	<10	3.8	SPL	--		
6/20/1996	--	40.86	16.41	--	24.45	<50	<0.5	<1	<1	<1	<10	3.6	SPL	--		
10/11/1996	--	40.86	19.90	--	20.96	<50	<0.5	<1.0	<1.0	<1.0	<10	6.4	SPL	--		
1/2/1997	--	40.86	15.89	--	24.97	<50	<0.5	<1.0	<1.0	<1.0	<10	5.9	SPL	--		
4/14/1997	--	40.86	17.07	--	23.79	<50	<0.5	<1.0	<1.0	<1.0	<10	4.6	SPL	--		
7/2/1997	--	40.86	18.67	--	22.19	<50	<0.5	<1.0	<1.0	<1.0	<10	5.6	SPL	--		
9/30/1997	--	40.86	22.52	--	18.34	<50	<5	<10	<10	<10	820	6.7	SPL	--		
1/21/1998	--	40.86	16.01	--	24.85	<50	<0.5	<1.0	<1.0	<1.0	<10	5.2	SPL	--		
4/9/1998	--	40.86	11.18	--	29.68	<50	<0.5	<1.0	<1.0	<1.0	<10	4.4	SPL	--		
6/19/1998	--	40.86	13.01	--	27.85	<50	<0.5	<1.0	<1.0	<1.0	<10	4.1	SPL	--		
11/30/1998	--	40.86	17.46	--	23.40	--	--	--	--	--	--	--	--	--	--	
1/21/1999	--	40.86	17.47	--	23.39	--	--	--	--	--	--	--	--	--	--	
4/30/1999	--	40.86	17.60	--	23.26	--	--	--	--	--	--	--	--	--	--	
7/9/1999	--	40.86	16.50	--	24.36	--	--	--	--	--	--	--	--	--	--	
11/3/1999	--	40.86	19.29	--	21.57	--	--	--	--	--	--	--	--	--	--	
1/12/2000	--	40.86	21.49	--	19.37	--	--	--	--	--	--	--	--	--	--	
4/13/2000	--	40.86	21.60	--	19.26	--	--	--	--	--	--	--	--	--	--	
7/26/2000	--	40.86	21.53	--	19.33	--	--	--	--	--	--	--	--	--	--	
10/24/2000	--	40.86	19.37	--	21.49	--	--	--	--	--	--	--	--	--	--	
1/19/2001	--	40.86	18.60	--	22.26	--	--	--	--	--	--	--	--	--	--	
7/24/2001	--	40.86	18.22	--	22.64	--	--	--	--	--	--	--	--	--	--	
1/18/2002	--	40.86	16.29	--	24.57	--	--	--	--	--	--	--	--	--	--	
8/1/2002	--	40.86	17.25	--	23.61	--	--	--	--	--	--	--	--	--	--	
1/16/2003	--	40.86	15.82	--	25.04	--	--	--	--	--	--	--	--	--	--	

**Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
<b>AW-8 Cont.</b>																
7/7/2003	--	40.86	18.55	--	22.31	--	--	--	--	--	--	--	--	--	--	
02/05/2004	--	40.86	--	--	--	--	--	--	--	--	--	--	--	--	--	t
07/01/2004	--	40.86	18.25	--	22.61	--	--	--	--	--	--	--	--	--	--	t
03/16/2005	P	40.86	15.20	--	25.66	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.5	SEQM	7.3		
07/22/2005	--	40.86	--	--	--	--	--	--	--	--	--	--	--	--	--	f
01/25/2006	--	40.86	--	--	--	--	--	--	--	--	--	--	--	--	--	f
7/6/2006	--	40.86	13.05	--	27.81	--	--	--	--	--	--	--	--	--	--	
1/8/2007	--	40.86	16.57	--	24.29	--	--	--	--	--	--	--	--	--	--	
7/10/2007	--	40.86	17.73	--	23.13	--	--	--	--	--	--	--	--	--	--	
1/15/2008	--	40.86	17.88	--	22.98	--	--	--	--	--	--	--	--	--	--	
<b>7/15/2008</b>	<b>--</b>	<b>40.86</b>	<b>18.57</b>	<b>--</b>	<b>22.29</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	
<b>AW-9</b>																
1/2/1997	--	37.78	10.00	--	27.78	<50	<0.5	<1.0	<1.0	<1.0	<10	6.7	SPL	--		
4/14/1997	--	37.78	--	--	--	--	--	--	--	--	--	--	--	--	--	f
7/2/1997	--	37.78	12.71	--	25.07	<50	<0.5	<1.0	<1.0	<1.0	<10	6.0	SPL	--		
9/30/1997	--	37.78	21.22	--	16.56	<50	<0.5	<1.0	<1.0	<1.0	<10	6.8	SPL	--		
1/21/1998	--	37.78	10.26	--	27.52	<50	<0.5	<1.0	<1.0	<1.0	<10	5.3	SPL	--		
4/9/1998	--	37.78	6.77	--	31.01	<50	<0.5	<1.0	<1.0	<1.0	<10	5.6	SPL	--		
6/19/1998	--	37.78	8.96	--	28.82	<50	<0.5	<1.0	<1.0	<1.0	<10	4.8	SPL	--		
1/8/2007	--	37.78	17.35	--	20.43	--	--	--	--	--	--	--	--	--	--	
7/10/2007	--	37.78	18.65	--	19.13	--	--	--	--	--	--	--	--	--	--	
1/15/2008	--	37.78	18.51	--	19.27	--	--	--	--	--	--	--	--	--	--	
<b>7/15/2008</b>	<b>--</b>	<b>37.78</b>	<b>19.56</b>	<b>--</b>	<b>18.22</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	
<b>MW-1</b>																
4/5/1991	--	34.46	--	--	--	--	--	--	--	--	--	--	--	--	--	
4/1/1992	--	34.46	11.25	--	23.21	--	--	--	--	--	--	--	--	--	--	
7/6/1992	--	34.46	13.61	--	20.85	--	--	--	--	--	--	--	--	--	--	
10/7/1992	--	34.46	15.15	--	19.31	--	--	--	--	--	--	--	--	--	--	
1/14/1993	--	34.46	10.73	--	23.73	--	--	--	--	--	--	--	--	--	--	

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Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
MW-1 Cont.																
4/22/1993	--	34.46	11.64	--	22.82	--	--	--	--	--	--	--	--	--	--	
7/15/1993	--	34.46	13.50	--	20.96	--	--	--	--	--	--	--	--	--	--	
10/21/1993	--	34.46	15.21	--	19.25	--	--	--	--	--	--	--	--	--	--	
1/27/1994	--	34.46	17.48	--	16.98	--	--	--	--	--	--	--	--	--	--	
4/21/1994	--	34.46	10.94	--	23.52	110,000	1,400	9,100	3,400	30,000	11,000	1.6	PACE	--	c	
9/9/1994	--	34.46	13.80	--	20.66	--	--	--	--	--	--	--	--	--	--	
12/21/1994	--	34.46	12.60	--	21.86	--	--	--	--	--	--	--	--	--	--	
1/30/1995	--	34.46	--	--	--	--	--	--	--	--	--	--	--	--	--	
4/10/1995	--	34.46	10.62	--	23.84	--	--	--	--	--	--	--	--	--	--	
6/29/1995	--	34.46	18.72	--	15.74	--	--	--	--	--	--	--	--	--	--	
9/18/1995	--	34.46	12.92	--	21.54	--	--	--	--	--	--	--	--	--	--	
12/7/1995	--	34.46	13.82	--	20.64	--	--	--	--	--	--	--	--	--	--	
3/28/1996	--	34.46	10.03	--	24.43	--	--	--	--	--	--	--	--	--	--	
6/20/1996	--	34.46	11.29	--	23.17	--	--	--	--	--	--	--	--	--	--	
10/11/1996	--	34.46	14.86	--	19.60	--	--	--	--	--	--	--	--	--	--	
1/2/1997	--	34.46	11.03	--	23.43	--	--	--	--	--	--	--	--	--	--	
4/14/1997	--	34.46	12.25	--	22.21	--	--	--	--	--	--	--	--	--	--	
4/15/1997	--	34.46	--	--	--	35,000	130	650	1,700	8,200	4,800	--	SPL	--		
7/2/1997	--	34.46	14.11	--	20.35	42,000	<250	<500	2,000	9,600	<5000	5.5	SPL	--		
9/30/1997	--	34.46	14.40	--	20.06	61,000	130	1,100	2,700	14,600	2,000	6.7	SPL	--		
1/21/1998	--	34.46	7.99	--	26.47	14,000	11	60	310	1,790	1,300	4.5	SPL	--		
4/9/1998	--	34.46	7.89	--	26.57	--	--	--	--	--	--	--	--	--	--	
4/10/1998	--	34.46	--	--	--	45,000	380	520	2,100	6,800	9,300	5.3	SPL	--		
6/19/1998	--	34.46	10.31	--	24.15	35,000	170	100	1,100	3,590	5,000	4.9	SPL	--		
11/30/1998	--	34.46	11.16	--	23.30	10,000	100	24	350	1,040	1800/2800	--	SPL	--	g	
1/21/1999	--	34.46	10.76	--	23.70	18,000	120	37	590	1,800	2,700	--	SPL	--		
4/30/1999	--	34.46	10.78	--	23.68	17,000	240	89	1,100	1,900	1,600	--	SPL	--		
7/9/1999	--	34.46	12.62	--	21.84	58,000	140	100	1,800	6,900	1,200	--	SPL	--		
11/3/1999	--	34.46	14.00	--	20.46	20,000	62	42	620	2,100	630	--	PACE	--		
1/12/2000	--	34.46	15.25	--	19.21	72,000	110	120	2,400	8,200	630	--	PACE	--		
4/13/2000	--	34.46	15.57	--	18.89	37,000	300	32	1,000	1,700	810	--	PACE	--		

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Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments		
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE						
MW-1 Cont.																	
5/24/2000	--	34.46	11.75	--	22.71	--	--	--	--	--	--	--	--	--	--		
6/1/2000	--	34.46	11.41	--	23.05	--	--	--	--	--	--	--	--	--	--		
6/8/2000	--	34.46	11.68	--	22.78	--	--	--	--	--	--	--	--	--	--		
6/15/2000	--	34.46	11.85	--	22.61	--	--	--	--	--	--	--	--	--	--		
7/26/2000	--	34.46	16.19	--	18.27	10,000	480	210	470	710	1,100	--	PACE	--			
10/24/2000	--	34.46	13.89	--	20.57	9,900	31	7.2	550	1,200	4,400	--	PACE	--			
1/19/2001	--	34.46	12.90	--	21.56	57,000	199	7.66	1,170	3,260	514	--	PACE	--			
7/24/2001	--	34.46	13.55	--	20.91	27,000	96.7	<5.0	548	1,460	285	--	PACE	--			
1/18/2002	--	34.46	10.91	--	23.55	25,000	150	31.5	597	1,040	138	--	PACE	--			
8/1/2002	--	34.46	12.97	--	21.49	25,000	80.2	17.7	714	1,280	489	--	PACE	--			
1/16/2003	--	34.46	10.45	--	24.01	22,000	170	110	630	670	<500	--	SEQ	--	p		
7/7/2003	--	34.46	12.40	--	22.06	9,900	42	<5.0	160	150	24	--	SEQ	--	q, u		
02/05/2004	--	34.46	10.26	--	24.20	6,200	56	11	250	210	9.2	--	SEQM	6.9			
07/01/2004	--	34.46	13.20	--	21.26	18,000	<50	<50	210	300	<50	--	SEQM	--	u		
03/16/2005	P	34.46	9.62	--	24.84	7,600	33	5.4	200	130	<5.0	0.9	SEQM	6.9			
07/22/2005	P	34.46	11.23	--	23.23	15,000	<10	<10	110	130	<10	--	SEQM	6.8	u		
01/25/2006	P	34.46	8.75	--	25.71	8,300	8.4	4.8	130	120	<2.5	--	SEQM	7.3	u		
7/6/2006	P	34.46	10.36	--	24.10	5,100	<2.5	<2.5	16	12	<2.5	--	TAMC	6.9			
1/8/2007	P	34.46	11.55	--	22.91	2700	4.6	0.66	35	27	2.1	1.83	TAMC	6.92			
7/10/2007	P	34.46	13.01	SHEEN	21.45	1,800	1.9	<0.50	13	4.8	2.4	2.16	TAMC	7.04			
1/15/2008	P	34.46	10.96	--	23.50	2,900	8.0	4.0	84	87	1.2	0.94	TAMC	7.13			
7/15/2008	P	<b>34.46</b>	<b>13.82</b>	--	<b>20.64</b>	<b>3,200</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>8.5</b>	<b>4.8</b>	<b>&lt;0.50</b>	<b>1.20</b>	<b>CEL</b>	<b>7.06</b>			
MW-2																	
4/5/1991	--	35.50	16.62	--	18.88	<50	0.6	0.9	<0.3	<0.3	--	--	SUP	--			
4/1/1992	--	35.50	11.25	--	24.25	--	--	--	--	--	--	--	--	--			
4/2/1992	--	35.50	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	APP	--			
7/6/1992	--	35.50	12.72	--	22.78	<50	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--			
10/7/1992	--	35.50	15.08	--	20.42	<50	<0.5	1.8	<0.5	2.3	--	--	ANA	--			
1/14/1993	--	35.50	9.69	--	25.81	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	m		
4/22/1993	--	35.50	10.46	--	25.04	<50	<0.5	<0.5	<0.5	<0.5	30	--	PACE	--	c		

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Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
MW-2 Cont.																
7/15/1993	--	35.50	12.02	--	23.48	<50	<0.5	<0.5	<0.5	<0.5	21.7	--	PACE	--	c, m	
10/21/1993	--	35.50	13.12	--	22.38	<50	0.7	0.9	<0.5	0.9	14.9	--	PACE	--	m	
1/27/1994	--	35.50	12.01	--	23.49	<50	0.6	<0.5	<0.5	<0.5	11.5	--	PACE	--	m	
4/21/1994	--	35.50	10.60	--	24.90	<50	<0.5	<0.5	<0.5	<0.5	11.4	1.1	PACE	--	m	
9/9/1994	--	35.50	12.42	--	23.08	<50	<0.5	<0.5	<0.5	0.6	--	2.2	PACE	--	m	
12/21/1994	--	35.50	10.85	--	24.65	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.2	PACE	--	m	
1/30/1995	--	35.50	8.38	--	27.12	<50	<0.50	<0.50	<0.50	<1.0	--	1.7	ATI	--		
4/10/1995	--	35.50	9.00	--	26.50	<50	<0.50	<0.50	<0.50	<1.0	--	7.8	ATI	--		
6/29/1995	--	35.50	9.91	--	25.59	<50	<0.50	<0.50	<0.50	<1.0	--	9.1	ATI	--		
9/18/1995	--	35.50	10.98	--	24.52	--	--	--	--	--	--	--	--	--	--	
9/19/1995	--	35.50	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	7.2	ATI	--		
12/7/1995	--	35.50	12.30	--	23.20	<50	<0.50	<0.50	<0.50	<1.0	<5.0	2.4	ATI	--		
3/28/1996	--	35.50	8.57	--	26.93	<50	<0.5	<1	<1	<1	<10	3.2	SPL	--		
6/20/1996	--	35.50	9.77	--	25.73	<50	<0.5	<1	<1	<1	<10	4.2	SPL	--		
10/11/1996	--	35.50	13.32	--	22.18	<50	<0.5	<1.0	<1.0	<1.0	<10	6.3	SPL	--		
1/2/1997	--	35.50	9.60	--	25.90	<50	<0.5	<1.0	<1.0	<1.0	<10	6.7	SPL	--		
4/14/1997	--	35.50	10.93	--	24.57	<50	<0.5	<1.0	<1.0	<1.0	<10	5.7	SPL	--		
7/2/1997	--	35.50	12.57	--	22.93	<50	<0.5	<1.0	<1.0	<1.0	<10	5.9	SPL	--		
9/30/1997	--	35.50	12.91	--	22.59	<50	<0.5	<1.0	<1.0	<1.0	<10	6.3	SPL	--		
1/21/1998	--	35.50	10.12	--	25.38	160	<0.5	<1.0	<1.0	<1.0	100	5.4	SPL	--		
4/9/1998	--	35.50	6.82	--	28.68	--	--	--	--	--	--	--	--	--	--	
4/10/1998	--	35.50	--	--	--	<50	1	<1.0	<1.0	<1.0	23	5.0	SPL	--		
6/19/1998	--	35.50	9.00	--	26.50	<50	<0.5	<1.0	<1.0	<1.0	<10	4.9	SPL	--		
11/30/1998	--	35.50	9.44	--	26.06	--	--	--	--	--	--	--	--	--	--	
1/21/1999	--	35.50	8.96	--	26.54	<50	<1.0	<1.0	<1.0	<1.0	1.9	--	SPL	--		
4/30/1999	--	35.50	9.15	--	26.35	--	--	--	--	--	--	--	--	--	--	
7/9/1999	--	35.50	10.82	--	24.68	--	--	--	--	--	--	--	--	--	--	
11/3/1999	--	35.50	11.86	--	23.64	--	--	--	--	--	--	--	--	--	--	
1/12/2000	--	35.50	12.35	--	23.15	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	PACE	--		
4/13/2000	--	35.50	13.01	--	22.49	--	--	--	--	--	--	--	--	--	--	
7/26/2000	--	35.50	13.01	--	22.49	--	--	--	--	--	--	--	--	--	--	

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Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
MW-2 Cont.																
10/24/2000	--	35.50	11.57	--	23.93	--	--	--	--	--	--	--	--	--	--	
1/19/2001	--	35.50	10.52	--	24.98	--	--	--	--	--	--	--	--	--	--	
7/24/2001	--	35.50	11.13	--	24.37	--	--	--	--	--	--	--	--	--	--	
1/18/2002	--	35.50	8.85	--	26.65	--	--	--	--	--	--	--	--	--	--	
8/1/2002	--	35.50	10.47	--	25.03	--	--	--	--	--	--	--	--	--	--	
1/14/2003	--	35.50	8.49	--	27.01	--	--	--	--	--	--	--	--	--	--	
7/7/2003	--	35.50	9.63	--	25.87	--	--	--	--	--	--	--	--	--	--	
02/05/2004	--	35.50	8.40	--	27.10	--	--	--	--	--	--	--	--	--	--	
07/01/2004	NP	35.50	9.94	--	25.56	--	--	--	--	--	--	--	--	--	--	
03/16/2005	P	35.50	8.39	--	27.11	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.3	SEQM	7.1	
07/22/2005	--	35.50	8.80	--	26.70	--	--	--	--	--	--	--	--	--	--	
01/25/2006	--	35.50	7.85	--	27.65	--	--	--	--	--	--	--	--	--	--	
7/6/2006	--	35.50	8.33	--	27.17	--	--	--	--	--	--	--	--	--	--	
1/8/2007	--	35.50	9.35	--	26.15	--	--	--	--	--	--	--	--	--	--	
7/10/2007	--	35.50	10.45	--	25.05	--	--	--	--	--	--	--	--	--	--	
1/15/2008	--	35.50	18.83	--	16.67	--	--	--	--	--	--	--	--	--	--	
7/15/2008	--	35.50	11.07	--	24.43	--	--	--	--	--	--	--	--	--	--	
MW-3																
4/5/1991	--	36.53	17.84	--	18.69	<50	<0.3	<0.3	<0.3	<0.3	--	--	SUP	--		
4/1/1992	--	36.53	15.64	--	20.89	--	--	--	--	--	--	--	--	--	--	
4/2/1992	--	36.53	--	--	--	<50	1.4	<0.5	<0.5	<0.5	--	--	APP	--		
7/6/1992	--	36.53	19.03	--	17.50	<50	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--		
10/7/1992	--	36.53	21.83	--	14.70	<50	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--		
1/14/1993	--	36.53	15.96	--	20.57	350	<0.5	<0.5	<0.5	<0.5	714	--	PACE	--	c, m	
4/22/1993	--	36.53	16.20	--	20.33	2,800	<0.5	<0.5	<0.5	<0.5	3,600	--	PACE	--	c, m	
7/15/1993	--	36.53	16.82	--	19.71	1,400	1.2	<0.5	2	3.5	2,204	--	PACE	--	c, m	
10/21/1993	--	36.53	18.84	--	17.69	370	2.1	2.3	2.3	6	847	--	PACE	--	c, m	
1/27/1994	--	36.53	18.00	--	18.53	1,300	6.3	<0.5	<0.5	<0.5	3,892	--	PACE	--	c, m	
4/21/1994	--	36.53	16.62	--	19.91	2,000	<0.5	<0.5	<0.5	<0.5	3,864	1.4	PACE	--	c, m	
9/9/1994	--	36.53	18.38	--	18.15	1,300	<0.5	<0.5	0.5	1.2	--	3.0	PACE	--	m	

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						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
MW-3 Cont.																
12/21/1994	--	36.53	15.28	--	21.25	420	16	0.7	3.5	5.9	800	1.9	PACE	--	m	
1/30/1995	--	36.53	12.62	--	23.91	<50	<0.50	<0.50	<0.50	<1.0	--	2.5	ATI	--		
4/10/1995	--	36.53	12.41	--	24.12	150	<0.50	<0.50	<0.50	<1.0	--	6.9	ATI	--		
6/29/1995	--	36.53	14.95	--	21.58	100	<0.50	<0.50	<0.50	<1.0	--	6.4	ATI	--	d (TPH-g)	
9/18/1995	--	36.53	15.82	--	20.71	--	--	--	--	--	--	--	--	--		
9/19/1995	--	36.53	--	--	--	82	<0.50	<0.50	<0.50	<1.0	260	7.0	ATI	--		
12/7/1995	--	36.53	17.09	--	19.44	<50	<0.50	<0.50	<0.50	<1.0	91	4.5	ATI	--		
3/28/1996	--	36.53	11.90	--	24.63	<50	<0.5	<1	<1	<1	230	4.2	SPL	--		
6/20/1996	--	36.53	12.66	--	23.87	260	<0.5	<1	<1	<1	370	4.4	SPL	--		
10/11/1996	--	36.53	16.23	--	20.30	330	<0.5	<1.0	<1.0	<1.0	440	5.8	SPL	--		
1/2/1997	--	36.53	12.17	--	24.36	<50	<0.5	<1.0	<1.0	<1.0	140	6.0	SPL	--		
4/14/1997	--	36.53	13.45	--	23.08	--	--	--	--	--	--	--	--	--		
4/15/1997	--	36.53	--	--	--	1,500	<0.5	<1.0	<1.0	<1.0	1,800	5.6	SPL	--		
7/2/1997	--	36.53	15.60	--	20.93	880	<0.5	<1.0	<1.0	<1.0	940	5.3	SPL	--		
9/30/1997	--	36.53	17.16	--	19.37	40,000	13,000	2,400	870	3,100	510	6.6	SPL	--		
1/21/1998	--	36.53	11.77	--	24.76	120	<0.5	<1.0	<1.0	<1.0	98	4.7	SPL	--		
4/9/1998	--	36.53	9.42	--	27.11	950	<0.5	<1.0	<1.0	<1.0	890	5.7	SPL	--		
6/19/1998	--	36.53	12.09	--	24.44	1,800	<0.5	<1.0	<1.0	<1.0	1,900	4.7	SPL	--		
6/19/1998	--	36.53	15.28	--	21.25	1,800	<0.5	<1.0	<1.0	<1.0	1,900	4.7	SPL	--		
1/21/1999	--	36.53	14.67	--	21.86	1,100	<1.0	<1.0	<1.0	<1.0	1,200	--	SPL	--		
4/30/1999	--	36.53	16.00	--	20.53	--	--	--	--	--	--	--	--	--		
7/9/1999	--	36.53	14.64	--	21.89	470	<1.0	<1.0	<1.0	<1.0	460/470	--	SPL	--	g	
11/3/1999	--	36.53	16.39	--	20.14	--	--	--	--	--	--	--	--	--		
1/12/2000	--	36.53	16.80	--	19.73	<50	<0.5	<0.5	<0.5	<0.5	34	--	PACE	--		
4/13/2000	--	36.53	16.43	--	20.10	--	--	--	--	--	--	--	--	--		
7/26/2000	--	36.53	16.93	--	19.60	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	PACE	--		
10/24/2000	--	36.53	15.69	--	20.84	--	--	--	--	--	--	--	--	--		
1/19/2001	--	36.53	14.84	--	21.69	<50	<0.5	<0.5	<0.5	1	25.9	--	PACE	--		
7/23/2001	--	36.53	15.11	--	21.42	62	<0.5	<0.5	<0.5	<1.5	28.7	--	PACE	--		
1/18/2002	--	36.53	12.37	--	24.16	<50	<0.5	<0.5	<0.5	<1.0	17.8	--	PACE	--		
8/1/2002	--	36.53	14.44	--	22.09	66	<0.5	<0.5	<0.5	<1.0	<0.5	--	PACE	--		

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						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
MW-3 Cont.																
1/16/2003	--	36.53	12.07	--	24.46	<50	<0.50	<0.50	<0.50	<0.50	20	--	SEQ	--	p	
7/7/2003	--	36.53	13.90	--	22.63	<50	<0.50	<0.50	<0.50	<0.50	8.8	--	SEQ	--	q	
02/05/2004	--	36.53	12.60	--	23.93	<50	<0.50	<0.50	<0.50	<0.50	4.6	--	SEQM	7.0		
07/01/2004	--	36.53	14.57	--	21.96	<50	<0.50	<0.50	<0.50	<0.50	3.3	--	SEQM	--		
03/16/2005	P	36.53	11.03	--	25.50	<50	<0.50	<0.50	<0.50	<0.50	4.4	1.5	SEQM	6.8		
07/22/2005	P	36.53	12.68	--	23.85	<50	<0.50	<0.50	<0.50	<0.50	4.1	--	SEQM	6.8		
01/25/2006	P	36.53	11.35	--	25.18	81	<0.50	<0.50	<0.50	<0.50	3.0	--	SEQM	6.9		
7/6/2006	P	36.53	11.47	--	25.06	<50	<0.50	<0.50	<0.50	<0.50	3.0	--	TAMC	6.9		
1/8/2007	P	36.53	12.92	--	23.61	<50	<0.50	<0.50	<0.50	<0.50	3.2	2.87	TAMC	7.12		
7/10/2007	P	36.53	14.46	--	22.07	<50	<0.50	<0.50	<0.50	<0.50	2.8	2.87	TAMC	7.25		
1/15/2008	P	36.53	12.99	--	23.54	<50	<0.50	<0.50	<0.50	<0.50	0.88	1.04	TAMC	7.10		
7/15/2008	P	36.53	15.30	--	21.23	<50	<0.50	<0.50	<0.50	<0.50	1.3	1.60	CEL	7.06		
QC-2																
10/7/1992	--	37.73	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	ANA	--	i	
1/14/1993	--	37.73	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	i, m	
4/22/1993	--	37.73	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	i, m	
7/15/1993	--	37.73	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	PACE	--	i, m	
10/21/1993	--	37.73	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	i	
1/27/1994	--	37.73	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	i	
4/21/1994	--	37.73	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	i	
9/9/1994	--	37.73	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	i	
12/21/1994	--	37.73	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	PACE	--	i	
1/30/1995	--	37.73	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	--	ATI	--	i	
4/10/1995	--	37.73	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	--	ATI	--	i	
6/27/1995	--	37.73	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	--	ATI	--	i	
9/19/1995	--	37.73	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	ATI	--	i	
12/7/1995	--	37.73	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	ATI	--	i	
3/28/1996	--	37.73	--	--	--	<50	<0.5	<1	<1	<1	<10	--	SPL	--	i	
6/20/1996	--	37.73	--	--	--	<50	<0.5	<1	<1	<1	<10	--	SPL	--	i	

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

Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
RW-1						--	--	--	--	--	--	--	--	--	--	
4/5/1991	--	37.73	--	--	--	--	--	--	--	--	--	--	--	--	--	
4/1/1992	--	37.73	22.81	--	14.92	--	--	--	--	--	--	--	--	--	--	
7/6/1992	--	37.73	26.92	--	10.81	--	--	--	--	--	--	--	--	--	--	
10/7/1992	--	37.73	28.51	--	9.22	--	--	--	--	--	--	--	--	--	--	
1/14/1993	--	37.73	23.75	--	13.98	--	--	--	--	--	--	--	--	--	--	
4/22/1993	--	37.73	22.70	--	15.03	--	--	--	--	--	--	--	--	--	--	
7/15/1993	--	37.73	26.10	--	11.63	--	--	--	--	--	--	--	--	--	--	
10/21/1993	--	37.73	25.40	--	12.33	--	--	--	--	--	--	--	--	--	--	
1/27/1994	--	37.73	28.02	--	9.71	--	--	--	--	--	--	--	--	--	--	
4/21/1994	--	37.73	23.10	--	14.63	--	--	--	--	--	--	--	--	--	--	
9/9/1994	--	37.73	24.39	--	13.34	--	--	--	--	--	--	--	--	--	--	
12/21/1994	--	37.73	--	--	--	--	--	--	--	--	--	--	--	--	--	h
12/7/1995	--	37.73	25.71	--	12.02	150,000	34,000	35,000	4,300	21,000	2,700	--	ATI	--		
3/28/1996	--	37.73	16.75	--	20.98	--	--	--	--	--	--	--	--	--	--	
6/20/1996	--	37.73	25.10	--	12.63	--	--	--	--	--	--	--	--	--	--	h
10/11/1996	--	37.73	25.51	--	12.22	130,000	20,000	32,000	2,800	20,700	1400/1200	7.4	SPL	--	g	
1/2/1997	--	37.73	24.49	--	13.24	--	--	--	--	--	--	--	--	--	--	
4/14/1997	--	37.73	23.99	--	13.74	--	--	--	--	--	--	--	--	--	--	
4/15/1997	--	37.73	--	--	--	1,800,000	38,000	190,000	48,000	281,000	<25000	--	SPL	--		
7/2/1997	--	37.73	--	--	--	130,000	19,000	54,000	4,700	33,400	<10000	--	SPL	--	e	
7/2/1997	--	37.73	16.40	--	21.33	140,000	19,000	55,000	4,400	32,400	<10000	5.7	SPL	--		
9/30/1997	--	37.73	--	--	--	140,000	17,000	29,000	2,500	15,900	1,200	--	SPL	--	e	
9/30/1997	--	37.73	27.97	--	9.76	110,000	13,000	22,000	2,000	12,500	1,100	7.0	SPL	--		
1/21/1998	--	37.73	14.14	--	23.59	270,000	21,000	48,000	3,500	25,000	1,100	4.8	SPL	--		
4/9/1998	--	37.73	25.01	--	12.72	--	--	--	--	--	--	--	--	--		
4/10/1998	--	37.73	--	--	--	220,000	26,000	46,000	4,400	24,500	<2500	5.1	SPL	--		
6/19/1998	--	37.73	11.43	--	26.30	180,000	19,000	32,000	3,000	17,400	<2500	4.6	SPL	--		
11/30/1998	--	37.73	7.87	--	29.86	--	--	--	--	--	--	--	--	--	--	
1/21/1999	--	37.73	18.90	--	18.83	260,000	24,000	46,000	5,100	30,000	1,700	--	SPL	--		
7/9/1999	--	37.73	18.58	--	19.15	--	--	--	--	--	--	--	--	--	--	
11/3/1999	--	37.73	20.85	--	16.88	160,000	19,000	37,000	3,800	25,000	1,500	--	PACE	--		

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

Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
RW-1 Cont.																
1/12/2000	--	37.73	21.20	--	16.53	240,000	18,000	46,000	5,800	26,000	2,100	--	PACE	--		
4/13/2000	--	37.73	21.71	--	16.02	120,000	2,100	33,000	2,800	28,000	1,500	--	PACE	--		
5/24/2000	--	37.73	21.89	--	15.84	--	--	--	--	--	--	--	--	--	--	
6/1/2000	--	37.73	16.30	--	21.43	--	--	--	--	--	--	--	--	--	--	
6/8/2000	--	37.73	17.88	--	19.85	--	--	--	--	--	--	--	--	--	--	
6/15/2000	--	37.73	16.72	--	21.01	--	--	--	--	--	--	--	--	--	--	
6/20/2000	--	37.73	21.04	--	16.69	--	--	--	--	--	--	--	--	--	--	
7/7/2000	--	37.73	17.21	--	20.52	--	--	--	--	--	--	--	--	--	--	
7/20/2000	--	37.73	21.87	--	15.86	--	--	--	--	--	--	--	--	--	--	
7/26/2000	--	37.73	21.45	--	16.28	67,000	160	5,300	2,100	18,000	1,100	--	PACE	--		
7/31/2000	--	37.73	22.11	--	15.62	--	--	--	--	--	--	--	--	--	--	
8/8/2000	--	37.73	17.80	--	19.93	--	--	--	--	--	--	--	--	--	--	
8/16/2000	--	37.73	17.92	--	19.81	--	--	--	--	--	--	--	--	--	--	
8/23/2000	--	37.73	18.11	--	19.62	--	--	--	--	--	--	--	--	--	--	
10/24/2000	--	37.73	18.93	--	18.80	--	--	--	--	--	--	--	--	--	--	
10/25/2000	--	37.73	19.04	--	18.69	360,000	18,000	78,000	34,000	180,000	2,100	--	PACE	--	k	
1/19/2001	--	37.73	18.19	--	19.54	110,000	9,450	19,600	3,510	21,100	1,270	--	PACE	--		
7/24/2001	--	37.73	17.93	--	19.80	--	--	--	--	--	--	--	--	--	1	
1/18/2002	--	37.73	14.87	--	22.86	63,000	2,060	4,370	1,770	13,900	491	--	PACE	--		
8/1/2002	--	37.73	16.84	--	20.89	60,000	1,210	2,200	1,520	10,600	390	--	PACE	--		
1/16/2003	--	37.73	14.42	--	23.31	34,000	2,500	2,700	780	5,300	680	--	SEQ	--	p	
7/7/2003	--	37.73	16.11	--	21.62	50,000	640	280	1,600	10,000	<250	--	SEQ	--	q, u	
07/01/2004	P	37.73	16.75	--	20.98	47,000	320	87	1,900	7,500	72	--	SEQM	6.7		
03/16/2005	P	37.73	12.48	--	25.25	17,000	28	23	350	590	53	1.0	SEQM	6.8		
07/22/2005	P	37.73	14.40	--	23.33	5,900	50	35	120	220	51	--	SEQM	6.7	u	
01/25/2006	P	37.73	12.00	--	25.73	7,000	22	5.9	190	--	34	--	SEQM	7.1		
7/6/2006	P	37.73	13.01	--	24.72	16,000	37	14	470	230	64	--	TAMC	6.8		
1/8/2007	P	37.73	14.75	--	22.98	2400	16	10	56	54	22	3.61	TAMC	6.86		
7/10/2007	P	37.73	16.21	--	21.52	3,800	4.4	2.8	72	22	21	2.65	TAMC	6.98		
1/15/2008	P	37.73	14.63	--	23.10	1,700	21	1.6	45	10	14	1.31	TAMC	6.82		
<b>7/15/2008</b>	<b>P</b>	<b>37.73</b>	<b>17.04</b>	--	<b>20.69</b>	<b>1,600</b>	<b>&lt;0.50</b>	<b>0.66</b>	<b>4.4</b>	<b>3.0</b>	<b>12</b>	<b>1.32</b>	<b>CEL</b>	<b>6.95</b>		

**Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses**  
**Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE					
RW-1																
VEW-4																
07/22/2005	P	--	14.04	--	--	680	41	24	20	67	<0.50	--	SEQM	6.8		
1/15/2008	P	--	15.05	--	--	350	19	1.1	5.0	3.3	<0.50	0.54	TAMC	6.99		
7/15/2008	P	--	17.24	--	--	53	<0.50	<0.50	<0.50	<0.50	<0.50	0.59	CEL	6.95		
VEW-5																
07/22/2005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	v
1/15/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	v
7/15/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	v
VEW-6																
1/15/2008	--	--	11.83	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2008	--	--	14.81	--	--	--	--	--	--	--	--	--	--	--	--	
VEW-7																
1/15/2008	--	--	13.24	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2008	--	--	15.91	--	--	--	--	--	--	--	--	--	--	--	--	
VEW-8																
07/22/2005	P	--	14.24	--	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	SEQM	6.8		
1/15/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	v
7/15/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	v
VEW-9																
1/15/2008	--	--	5.31	--	--	--	--	--	--	--	--	--	--	--	--	
7/15/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	v
VW-1																
1/15/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	v
7/15/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	v
VW-2																
1/15/2008	--	--	0.25	--	--	--	--	--	--	--	--	--	--	--	--	

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Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	Comments
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
VW-2 Cont.						--	--	--	--	--	--	--	--	--	
7/15/2008	--	--	<b>0.65</b>	--	--	--	--	--	--	--	--	--	--	--	
VW-3						--	--	--	--	--	--	--	--	--	
1/15/2008	--	--	2.08	--	--	--	--	--	--	--	--	--	--	--	
7/15/2008	--	--	<b>4.10</b>	--	--	--	--	--	--	--	--	--	--	--	

**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 in ft MSL

mg/L = Milligrams per liter

MTBE = Methyl tert-butyl ether

NP = Well not purged prior to sampling

P = Well purged prior to sampling

TOC = Top of casing in ft MSL

TPH-g = Total petroleum hydrocarbons as gasoline

µg/L = Micrograms per liter

ANA = Anametrix, Inc.

PACE = Pace, Inc.

ATI = Analytical Technologies, Inc.

CEI = Ceimic Corporation

SPL = Southern Petroleum Laboratories

SEQ/SEQM= Sequoia Analytical/Sequoia Analytical Morgan Hill Laboratories

CEL = CalScience Environmental Laboratories, Inc.

**FOOTNOTES:**

c = A copy of the documentation for this data is included in Appendix C of Alistoreport 10-025-13-003.

d = MTBE peak. See documentation in Appendix C of Alisto report 10-025-13-003.

e = Blind duplicate.

f = Well inaccessible.

g = EPA Methods 8020/8260 used.

h = Well not monitored and/or sampled due to vapor extraction system.

i = Travel blank.

j = This gasoline does not include MTBE.

k = Well was sampled on a different date from the other wells due to lack of proper equipment.

l = Unable to sample due to nature of product.

m = A copy of the documentation for this data is included in Blaine Tech Services, Inc., Report 010724-B-2. The data for sampling events January 14, 1993 and April 22, 1993 has been destroyed. No chromatograms could be located for samples AW-2 on January 27, 1994, and for samples AW-1, AW-2, AW-3, AW-4, AW-5, AW-6, AW-7, AW-8, MW-2 and MW-3 on September 9, 1994.

n = On June 1, 2001, after reviewing chromatograms, Sequoia reported the value as <5.0.

o = Unable to locate well.

p = TPH-g data analyzed by EPA Method 8015B modified; BTEX and MTBE by EPA Method 8021B

q = TPH-g, BTEX, and MTBE analyzed by EPA method 8260B beginning on the third quarter 2003 sampling event 07/07/03.

r = Discrete peak at C5.

t = Well was not gauged during the quarter due to an oversite by the technician.

u = Sheen in well.

v = Well was dry.

w = Hydrocarbon result partly due to individ. peak(s) in quant. range.

**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.

Values for DO and pH were obtained through field measurements.

GWEs adjusted assuming a specific gravity of 0.75 for free product

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 #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>AW-1</b>									
7/7/2003	<5,000	<1,000	1,100	<25	<25	190	--	--	
02/05/2004	<10,000	<2,000	930	<50	<50	160	<50	<50	
07/01/2004	<5,000	<1,000	1,100	<25	<25	170	<25	<25	
03/16/2005	<5,000	<1,000	720	<25	<25	130	<25	<25	
07/22/2005	<1,000	<200	510	<5.0	<5.0	93	31	<5.0	
01/25/2006	<6,000	<400	490	<10	<10	94	21	<10	
7/6/2006	<6,000	<400	270	<10	<10	49	<10	<10	
1/8/2007	<3000	240	380	<5.0	<5.0	64	<5.0	--	
7/10/2007	<6,000	<400	220	<10	<10	36	<10	<10	
1/15/2008	<6,000	<400	230	<10	<10	45	<10	<10	
<b>7/15/2008</b>	<b>&lt;300</b>	<b>&lt;10</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>15</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	
<b>AW-2</b>									
02/05/2004	<100	<20	5.1	<0.50	<0.50	<0.50	<0.50	<0.50	
03/16/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
01/25/2006	<600	<40	12	<1.0	<1.0	1.0	<1.0	<1.0	
1/8/2007	<3000	<200	40	<5.0	<5.0	<5.0	<5.0	--	
1/15/2008	<6,000	<400	48	<10	<10	<10	<10	<10	
<b>7/15/2008</b>	<b>&lt;30,000</b>	<b>&lt;1,000</b>	<b>&lt;50</b>	<b>&lt;50</b>	<b>&lt;50</b>	<b>&lt;50</b>	<b>&lt;50</b>	<b>&lt;50</b>	
<b>AW-3</b>									
03/16/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>AW-4</b>									
7/7/2003	<1,000	<200	56	<5.0	<5.0	<5.0	--	--	
02/05/2004	<200	<40	40	<1.0	<1.0	3.7	<1.0	<1.0	
07/01/2004	<1,000	<200	64	<5.0	<5.0	9.6	<5.0	<5.0	
03/16/2005	<500	<100	23	<2.5	<2.5	<2.5	<2.5	<2.5	
07/22/2005	<2,000	<400	59	<10	<10	<10	<10	<10	
01/25/2006	<3,000	<200	12	<5.0	<5.0	<5.0	<5.0	<5.0	
7/6/2006	<3,000	<5.0	39	<5.0	<5.0	<5.0	<5.0	<5.0	
1/8/2007	<300	<20	38	<0.50	<0.50	6.2	<0.50	--	
7/10/2007	<300	<20	27	<0.50	<0.50	4.2	<0.50	<0.50	

Table 2. Summary of Fuel Additives Analytical Data

Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>AW-4 Cont.</b>									
1/15/2008	<300	<20	17	<0.50	<0.50	2.3	<0.50	<0.50	
7/15/2008	<300	<10	25	<0.50	<0.50	3.4	<0.50	<0.50	
<b>AW-5</b>									
7/7/2003	<2,000	1,200	980	<10	<10	210	--	--	
02/05/2004	<2,000	1,200	810	<10	<10	160	<10	<10	
07/01/2004	<1,000	1,600	550	<5.0	<5.0	94	<5.0	<5.0	
03/16/2005	<10,000	2,100	890	<50	<50	190	<50	<50	
07/22/2005	<1,000	370	390	<5.0	<5.0	78	<5.0	<5.0	
01/25/2006	<3,000	580	26	<5.0	<5.0	5.2	<5.0	<5.0	
7/6/2006	<3,000	240	170	<5.0	<5.0	37	<5.0	<5.0	
1/8/2007	<1500	240	220	<2.5	<2.5	51	<2.5	--	
7/10/2007	<1,500	110	360	<2.5	<2.5	92	<2.5	<2.5	
1/15/2008	<300	200	85	<0.50	<0.50	21	<0.50	<0.50	
7/15/2008	<300	100	11	<0.50	<0.50	2.4	<0.50	<0.50	
<b>AW-6</b>									
02/05/2004	<10,000	<2,000	5,400	<50	<50	1,800	<50	<50	
07/01/2004	<10,000	<2,000	4,600	<50	<50	1,600	<50	<50	
03/16/2005	<5,000	<1,000	4,400	<25	<25	1,400	<25	<25	
07/22/2005	<10,000	<2,000	5,500	<50	<50	1,400	<50	<50	
01/25/2006	<30,000	<2,000	3,000	<50	<50	940	<50	<50	
7/6/2006	<30,000	<2,000	2,800	<50	<50	780	<50	<50	
1/8/2007	<30000	<2000	7400	<50	<50	1900	<50	--	
7/10/2007	<60,000	<4,000	3,900	<100	<100	890	<100	<100	
1/15/2008	<600	<40	150	<1.0	<1.0	42	<1.0	<1.0	
7/15/2008	<300	20	270	<0.50	<0.50	66	<0.50	<0.50	
<b>AW-7</b>									
<b>AW-8</b>									
03/16/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	a
<b>MW-1</b>									

Table 2. Summary of Fuel Additives Analytical Data

Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>MW-1 Cont.</b>									
7/7/2003	<1,000	<200	24	<5.0	<5.0	<5.0	--	--	
02/05/2004	<1,000	<200	9.2	<5.0	<5.0	<5.0	<5.0	<5.0	
07/01/2004	<10,000	<2,000	<50	<50	<50	<50	<50	<50	
03/16/2005	<1,000	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
07/22/2005	<2,000	<400	<10	<10	<10	<10	<10	<10	
01/25/2006	<1,500	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
7/6/2006	<1,500	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
1/8/2007	<300	<20	2.1	<0.50	<0.50	<0.50	<0.50	--	
7/10/2007	<300	<20	2.4	<0.50	<0.50	<0.50	<0.50	<0.50	
1/15/2008	<300	<20	1.2	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>7/15/2008</b>	<b>&lt;300</b>	<b>&lt;10</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	
<b>MW-2</b>									
03/16/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>MW-3</b>									
7/7/2003	<100	<20	8.8	<0.50	<0.50	0.65	--	--	
02/05/2004	<100	<20	4.6	<0.50	<0.50	<0.50	<0.50	<0.50	
07/01/2004	<100	<20	3.3	<0.50	<0.50	<0.50	<0.50	<0.50	
03/16/2005	<100	<20	4.4	<0.50	<0.50	<0.50	<0.50	<0.50	
07/22/2005	<100	<20	4.1	<0.50	<0.50	<0.50	<0.50	<0.50	
01/25/2006	<300	<20	3.0	<0.50	<0.50	<0.50	<0.50	<0.50	
7/6/2006	<300	<50	3.0	<0.50	<0.50	<0.50	<0.50	<0.50	
1/8/2007	<300	<20	3.2	<0.50	<0.50	<0.50	<0.50	--	
7/10/2007	<300	<20	2.8	<0.50	<0.50	<0.50	<0.50	<0.50	
1/15/2008	<300	<20	0.88	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>7/15/2008</b>	<b>&lt;300</b>	<b>&lt;10</b>	<b>1.3</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	
<b>RW-1</b>									
7/7/2003	<50,000	<10,000	<250	<250	<250	<250	--	--	
07/01/2004	<10,000	<2,000	72	<50	<50	<50	<50	<50	
03/16/2005	<2,000	<400	53	<10	<10	<10	<10	<10	
07/22/2005	<500	<100	51	<2.5	<2.5	5.6	<2.5	<2.5	

Table 2. Summary of Fuel Additives Analytical Data

Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>RW-1 Cont.</b>									
01/25/2006	<3,000	<200	34	<5.0	<5.0	<5.0	<5.0	<5.0	
7/6/2006	<6,000	<400	64	<10	<10	<10	<10	<10	
1/8/2007	<6000	<400	22	<10	<10	<10	<10	--	
7/10/2007	<600	<40	21	<1.0	<1.0	<1.0	<1.0	<1.0	
1/15/2008	<600	<40	14	<1.0	<1.0	1.3	<1.0	<1.0	
<b>7/15/2008</b>	<b>&lt;300</b>	<b>&lt;10</b>	<b>12</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>1.0</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	
<b>VEW-4</b>									
07/22/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
1/15/2008	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>7/15/2008</b>	<b>&lt;300</b>	<b>&lt;10</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	
<b>VEW-5</b>									
<b>VEW-8</b>									
07/22/2005	<100	<20	<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

µg/L = Micrograms per Liter

**FOOTNOTES:**

a = Calibration verification for ethanol is within method limits but outside contractual limits.

**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 #11133, 2220 98th Ave., Oakland, CA

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
1/25/2006	Variable: East to Southwest	0.03 to 0.09
7/6/2006	Variable: East to W towards Center	0.04 to 0.05
1/8/2007	Variable: East to W towards Center	0.03 to 0.05
7/10/2007	West	0.01
1/15/2008	West-Southwest	0.006
<b>7/15/2008</b>	<b>West-Southwest</b>	<b>0.01</b>

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 4. Bio-Degradation Parameters**  
**Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	pH	ORP (mV)	Total Alkalinity (µg/L)	DO (mg/L)	Nitrate NO3 (µg/L)	Sulfate SO4 (µg/L)	Soluble Sulfide (µg/L)	CO2 (µg/L)	Methane (µg/L)	Manganese (µg/L)	Ferrous Iron (mg/L)	Comments
<b>AW-1</b>												
3/16/2005	6.7	-10	420,000	0.8	<500	580	<1,000	81,400	3,290	6,500	3.4	
1/15/2008	6.91	-58	410,000	0.92	<500	1,900	<1,000	190,000	3,200	6,400	3.2	a, b
<b>7/15/2008</b>	<b>6.79</b>	<b>-96.5</b>	<b>488,000</b>	<b>6.0</b>	<b>&lt;100</b>	<b>&lt;1,000</b>	<b>&lt;1,000</b>	<b>400,000</b>	<b>2,090</b>	<b>7,200</b>	<b>6.0</b>	
<b>AW-2</b>												
1/15/2008	6.79	-88	190,000	0.83	4,400	21,000	<1,000	52,000	210	1,100	<0.5	a
<b>7/15/2008</b>	<b>7.05</b>	<b>-190.1</b>	<b>168,000</b>	<b>2.14</b>	<b>440</b>	<b>38,000</b>	<b>&lt;50</b>	<b>100,000</b>	<b>7.42</b>	<b>1,570</b>	<b>0.5</b>	
<b>AW-4</b>												
3/16/2005	6.5	10	310,000	0.6	<500	71,000	<1,000	54,200	585	5,600	1.4	
1/15/2008	6.75	-91	390,000	1.30	<500	82,000	<1,000	120,000	610	5,000	1.5	a, b
<b>7/15/2008</b>	<b>6.91</b>	<b>-90.0</b>	<b>598,000</b>	<b>2.64</b>	<b>&lt;100</b>	<b>47,000</b>	<b>&lt;50</b>	<b>354,000</b>	<b>777</b>	<b>7,110</b>	<b>6.0</b>	
<b>AW-5</b>												
1/15/2008	6.82	-101	230,000	0.90	<500	12,000	<1,000	79,000	120	2,300	1.4	a
<b>7/15/2008</b>	<b>6.85</b>	<b>-97.9</b>	<b>238,000</b>	<b>2.13</b>	<b>&lt;100</b>	<b>12,000</b>	<b>&lt;50</b>	<b>161,000</b>	<b>9.29</b>	<b>2,560</b>	<b>0.5</b>	
<b>AW-6</b>												
1/15/2008	6.80	-94	150,000	0.58	<500	21,000	<1,000	41,000	50	1,200	<0.1	a
<b>7/15/2008</b>	<b>6.87</b>	<b>-40.8</b>	<b>160,000</b>	<b>2.12</b>	<b>&lt;100</b>	<b>23,000</b>	<b>&lt;50</b>	<b>163,000</b>	<b>1.27</b>	<b>1,370</b>	<b>0.0</b>	
<b>MW-1</b>												
3/16/2005	6.9	-175	310,000	0.9	<500	13,000	<1,000	49,900	4,550	7,700	2.7	
1/15/2008	7.13	-150	320,000	0.94	<500	51,000	<1,000	67,000	2,900	8,100	1.3	a
<b>7/15/2008</b>	<b>7.06</b>	<b>-174.7</b>	<b>326,000</b>	<b>1.20</b>	<b>&lt;100</b>	<b>50,000</b>	<b>&lt;50</b>	<b>29,200</b>	<b>1,090</b>	<b>8,390</b>	<b>0.5</b>	
<b>MW-2</b>												
3/16/2005	7.1	30	85,000	1.3	5,300	38,000	<1,000	7,370	<1.0	2,200	0.7	
<b>MW-3</b>												
1/15/2008	7.10	-128	130,000	1.04	2,500	44,000	<1,000	29,000	<1.0	120	<0.1	a
<b>7/15/2008</b>	<b>7.06</b>	<b>-47.6</b>	<b>112,000</b>	<b>1.60</b>	<b>820</b>	<b>78,000</b>	<b>&lt;50</b>	<b>29,000</b>	<b>&lt;1.0</b>	<b>61.8</b>	<b>0.5</b>	
<b>RW-1</b>												

**Table 4. Bio-Degradation Parameters**  
**Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	pH	ORP (mV)	Total Alkalinity ( $\mu\text{g/L}$ )	DO (mg/L)	Nitrate NO <sub>3</sub> ( $\mu\text{g/L}$ )	Sulfate SO <sub>4</sub> ( $\mu\text{g/L}$ )	Soluble Sulfide ( $\mu\text{g/L}$ )	CO <sub>2</sub> ( $\mu\text{g/L}$ )	Methane ( $\mu\text{g/L}$ )	Manganese ( $\mu\text{g/L}$ )	Ferrous Iron (mg/L)	Comments
<b>RW-1 Cont.</b>												
1/15/2008	6.82	-143	350,000	1.31	<500	5,000	<1,000	110,000	1,100	6,100	1.8	a
7/15/2008	<b>6.95</b>	<b>-239.9</b>	<b>358,000</b>	<b>1.32</b>	<b>&lt;100</b>	<b>21,000</b>	<b>&lt;50</b>	<b>212,000</b>	<b>212</b>	<b>7,030</b>	<b>0.5</b>	
<b>VEW-4</b>												
1/15/2008	6.99	-36	210,000	0.54	3,000	31,000	<1,000	50,000	840	880	<0.5	a
7/15/2008	<b>6.95</b>	<b>-29</b>	<b>254,000</b>	<b>0.59</b>	<b>&lt;100</b>	<b>22,000</b>	<b>&lt;50</b>	<b>90,900</b>	<b>174</b>	<b>2,150</b>	<b>2.0</b>	

**ABBREVIATIONS AND SYMBOLS:**

< = Not detected at or above specified laboratory reporting limit

ORP = Oxygen reduction potential

DO = Dissolved oxygen

CO<sub>2</sub> = Carbon dioxide

mV = Millivolts

µg/L = Micrograms per liter

mg/L = Milligrams per liter

**FOOTNOTES:**

a = Sample received after holding time expired for soluble sulfide and ferrous iron analyses

b = Sample analyzed after holding time expired for nitrate analysis

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  
AND CHAIN-OF-CUSTODY DOCUMENTATION)**



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

August 1, 2008

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

Re: Groundwater Sampling Data Package, BP Service Station No. 11133, located at 2220 98<sup>th</sup> 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:* July 15, 2008

*Arrival:* 5:52      *Departure:* 11:30

*Weather Conditions:* Clear

*Unusual Field Conditions:* None noted.

*Scope of Work Performed:* Quarterly monitoring and sampling.

*Variations from Work Scope:* Well VW-1, VEW-5, VEW-8, VEW-9 all purged dry before three casing volumes could be removed. Well AW-7 could not be located to gauge this event.

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, and certified analytical results. 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*

AT. 5152

## HYDROLOGIC DATA SHEET

Gauge Date: 7/15/06

Project Name: Oakland - 2220 98th Avenue

Field Technician: Roberto

Project Number: 11133

**TOC** = Top of Well Casing Elevation  
**DTP** = Depth to Free Product (FP or NAPH) Below TOC  
**DTW** = Depth to Groundwater Below TOC  
**DTB** = Depth to Bottom of Well Casing Below TOC

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

Equipment Calibrated 10/1  
7/15/08

**BP ALAMEDA PORTFOLIO**  
**WATER SAMPLE FIELD DATA SHEET**

PROJECT #: 11133 PURGED BY: RH WELL I.D.: MW-1  
CLIENT NAME: SAMPLED BY: RH SAMPLE I.D.: MW-1  
LOCATION: Oakland - 2220 98th Avenue QA SAMPLES:

DATE PURGED 7/15/08 START (2400hr) 11:02 END (2400hr) 11:19  
 DATE SAMPLED 7/15/08 SAMPLE TIME (2400hr) 11:17  
 SAMPLE TYPE:  Groundwater  Surface Water  Treatment Effluent  Other  
 CASING DIAMETER: 2"  3"  4"  5"  6"

DEPTH TO BOTTOM (feet) =	<u>28.18</u>	CASING VOLUME (gal) =	<u>2.3</u>
DEPTH TO WATER (feet) =	<u>13.82</u>	CALCULATED PURGE (gal) =	<u>6.9</u>
WATER COLUMN HEIGHT (feet) =	<u>14.36</u>	ACTUAL PURGE (gal) =	<u>8</u>

## FIELD MEASUREMENTS

SAMPLE DEPTH TO WATER: 14.27 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE: ✓ YES        NO ANALYSES: SWD  
ODOR: NO SAMPLE VESSEL/PRESERVATIVE: 6 VONS-HCL / ZAMORA / 2000S / 1LPCSY / 250  
PIPING EQUIPMENT:

## PURGING EQUIPMENT

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

## **SAMPLING EQUIPMENT**

**Stagger Pumps**      **Ballast Pumps**

**Other:** \_\_\_\_\_

Pump Depth: 28  
WELL INTEGRITY: GOOD

## **SAMPLING EQUIPMENT**

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

1980

LOCK#: 778674 B

WELL INTEGRITY: GOOD LOCK#: MASTER  
REMARKS: 100% GROUT

~~TR 800 3.2 ppm~~

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卷之三







**BP ALAMEDA PORTFOLIO**  
**WATER SAMPLE FIELD DATA SHEET**

PROJECT #: 11133 PURGED BY: P H WELL I.D.: A W - 4  
CLIENT NAME: SAMPLED BY: R H SAMPLE I.D.: A W - 4  
LOCATION: Oakland - 2220 98th Avenue Q.A. DATE: 10/10/00

DATE PURGED 7/15/08 START (2400hr) 8:26 END (2400hr) 8:42  
 DATE SAMPLED 7/15/08 SAMPLE TIME (2400hr) 8:40  
 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) (2.16)

DEPTH TO BOTTOM (feet) =	<u>32.67</u>	CASING VOLUME (gal) =	<u>212</u>
DEPTH TO WATER (feet) =	<u>18.74</u>	CALCULATED PURGE (gal) =	<u>148</u>
WATER COLUMN HEIGHT (feet) =	<u>13.93</u>	ACTUAL PURGE (gal) =	<u>6</u>

## FIELD MEASUREMENTS

SAMPLE DEPTH TO WATER:	19.38	SAMPLE INFORMATION	SAMPLE TURBIDITY:	clear
80% RECHARGE:	<input checked="" type="checkbox"/> YES	NO	ANALYSES:	SWO
ODOR:	NO	SAMPLE VESSEL / PRESERVATIVE: GLASS BOTTLE - 16 POLY - 2 ANNEALED, 1/2 PT.		
PURGING EQUIPMENT		SAMPLING EQUIPMENT		

PURGING EQUIPMENT	SAMPLING EQUIPMENT
Bladder Pump	Bailer (Teflon)
Centrifugal Pump	Bailer (PVC)
Submersible Pump	Bailer (Stainless Steel)
Peristaltic Pump	Dedicated _____
Other: _____	Bladder Pump
Pump Depth: <u>21.00</u>	Bailer (Teflon)
	Centrifugal Pump
	Submersible Pump
	Peristaltic Pump
	Bailer (PVC or _____ disposable)
	Bailer (Stainless Steel)
	Dedicated _____
	Other: _____

WELL INTEGRITY:	GOOD	LOCK#:	MASTER
REMARKS:	IRON 6.0PPM		
SIGNATURE:			
		Page	of

Page \_\_\_\_\_ of \_\_\_\_\_

**BP ALAMEDA PORTFOLIO**  
**WATER SAMPLE FIELD DATA SHEET**

PROJECT #: 11133 PURGED BY: P H WELL I.D.: A W - 5  
CLIENT NAME: SAMPLED BY: R Y SAMPLE I.D.: A W - 5  
LOCATION: Oakland - 2220 98th Avenue QA SAMPLES

DATE PURGED 7/15/08 START (2400hr) 9:13 END (2400hr) 9:29  
DATE SAMPLED 7/15/08 SAMPLE TIME (2400hr) 9:13

SAMPLE TYPE:  Groundwater  Surface Water  Treatment Effluent  Other

CASING DIAMETER:  2"  3"  4"  5"  6"  7"

Casing Volume: (gallons per foot)

	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) -	16.2	8.1	6.0	4.8	3.8	2.5	1.5

DEPTH TO BOTTOM (feet) =	<u>42.90</u>	CASING VOLUME (gal) =	<u>37</u>
DEPTH TO WATER (feet) =	<u>12.88</u>	CALCULATED PURGE (gal) =	<u>AP</u>
WATER COLUMN HEIGHT (feet) =	<u>31.02</u>	ACTUAL PURGE (gal) =	<u>10</u>

## FIELD MEASUREMENTS

SAMPLE DEPTH TO WATER: 20.04 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

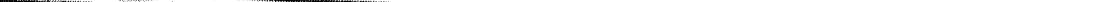
80% RECHARGE: YES NO ANALYSES: SW 9

80% RECHARGE: YES NO ANALYSES: SW 0  
ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 250 ml. vials

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
<input type="checkbox"/> Bladder Pump	Baller (Teflon)	<input type="checkbox"/> Bladder Pump	Baller (Teflon)
<input type="checkbox"/> Centrifugal Pump	Baller (PVC)	<input type="checkbox"/> Centrifugal Pump	Baller (PVC or <input type="checkbox"/> disposable)
<input type="checkbox"/> Submersible Pump	Baller (Stainless Steel)	<input type="checkbox"/> Submersible Pump	Baller (Stainless Steel)
<input type="checkbox"/> Peristaltic Pump	Dedicated _____	<input type="checkbox"/> Peristaltic Pump	Dedicated _____
Other: _____		Other: _____	
Pump Depth: <u>21.0</u>			

WELL INTEGRITY: GOOD LOCK#: MASTER  
REMARKS: 180° flange

*1000-1100 AM*

SIGNATURE: 

Page \_\_\_\_\_ of \_\_\_\_\_







# WELLHEAD OBSERVATION FORM

Site Name/Number: BP11133

Date: 7/15/08

Technician: ROBERTO



Well I.D.	Box in Good Condition?	Lock Missing?	Water in Wellbox?	Water Level Relative to Cap?	Well Cap?	Bolts Missing?	Bolts Stripped?	Bolt Holes Stripped?	Cracked or Broken Lid?	Cracked or Broken Box?	Grout Level more than 1ft below TOC?	Additional Comments <small>(such as missing lid, concrete needs repairs, or other - explain)</small>
	X = Yes Blank = No	X = Yes (replaced) Blank = No	X = Yes Blank = No	A = Above cap B = Below cap L = Level w/ cap	I = Inset H = Missing or Completely Destroyed	X = Yes Blank = No	X = Yes Blank = No	X = Yes Blank = No	X = Yes Blank = No	X = Yes Blank = No	X = Yes Blank = No	
MW-1	+	—	—	B	I	NA	NA	NA	—	—	—	NO BOLTS NEEDED
MW-2	+	—	—	B	I	NA	NA	NA	—	—	—	NO BOLTS NEEDED
MW-3	+	—	—	B	I	NA	NA	NA	—	—	—	NO BOLTS NEEDED
AW-1	+	—	—	B	I	—	—	—	—	—	—	NO BOLTS NEEDED
AW-2	X	—	—	B	I	—	—	—	—	—	—	—
AW-3	+	—	—	B	I	NA	NA	NA	—	—	—	—
AW-4	+	—	—	B	I	NA	NA	NA	—	—	—	NO BOLTS NEEDED
AW-5	+	—	—	B	I	NA	NA	NA	—	—	—	NO BOLTS NEEDED
AW-6	X	—	—	B	I	—	—	—	—	—	—	—
AW-7	GANT LOCATE	WELL BOAT	—	—	—	—	—	—	—	—	—	—
AW-8	+	—	—	B	I	—	—	—	—	—	—	—
AW-9	+	—	—	B	I	—	—	—	—	—	—	—
RW-1	+	—	—	B	I	—	—	—	—	—	—	—
VW-1	+	—	—	B	I	—	—	—	—	—	—	—
VW-2	+	—	—	B	I	—	—	—	—	—	—	—
VW-3	+	—	—	B	I	—	—	—	—	—	—	—

## DRUM INVENTORY

Drums on site?

Yes

(circle)

Type and #

Steel: \_\_\_\_\_

Plastic: \_\_\_\_\_

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

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

## GENERAL SITE CONDITIONS

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

## **WELLHEAD OBSERVATION FORM**

Site Name/Number 11133

Date: 7/16/08

Technician: ROBERT



## **DRUM INVENTORY**

Drums on site? Yes  No  (circle)  
Type and #: Steel: \_\_\_\_\_ Plastic: \_\_\_\_\_

Note whether drums are full or empty, solids or liquids

## **GENERAL SITE CONDITIONS**

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

Draag heden in en blijven tot de eeuw.

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

# Atlantic Richfield Company

A BP affiliated company

## Chain of Custody Record

Project Name: ARCO 11133

BP BU/AR Region/Envos Segment: BP > Americas > West > Retail > Alameda > 1

State or Lead Regulatory Agency:

Requested Due Date (mm/dd/yy):

Page 1 of 2

On-site Time:	5:55:2	Temp:	76
Off-site Time:	11:30	Temp:	85
Sky Conditions:	clear		
Meteorological Events:	NA		
Wind Speed:	0	Direction:	NA

Address: 7440 Lincoln Way Garden Grove, CA 92841				BP/AR Facility No.: 11133 BP/AR Facility Address: 2220 98th Avenue, Oakland Site Lat/Long:				Consultant/Contractor: Stratus Environmental, Inc. Address: 3330 Cameron Park Drive, Suite 550 Cameron Park, CA 95682															
Lab PM: Linda Scharpenberg Tele/Fax: 714-895-5494 714-895-7501(fax)				California Global ID No.: T0600100210 Envos Project No.: G07TT-0042				Consultant/Contractor Project No.: Consultant/Contractor PM: Jay Johnson TeleFax: (530) 676-6000 / (530) 676-6005															
BP/AR PM Contact: Paul Supple Address: 2010 Crow Canyon Place, Suite 150 San Ramon, CA Tele/Fax: 925-275-3506				Provision or DOC (check one) Provision Phase/WBS: 04-Monitoring Sub Phase/Task: 03-Analytical Cost Element: 01-Contractor labor				Report Type & QC Level: Level I with EDF E-mail EDD To: bcarrasco@stratusinc.net Invoice to: Atlantic Richfield Co.															
Lab Bottle Order No:				Matrix				Preservative				Requested Analysis											
Item No.	Sample Description	Time	Date	Solids	Water/Liquid	Air	Laboratory No.	No. of Containers	Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Merchandise	Oil/Gas/Texons* by \$360	1,4-DCA by \$360	Ethanol by \$360	EDB by \$360	Nitrate and Nitrite (EPA 300)	Manganese (EPA 200-2)	Dissolved Sulfide (EPA 276-2)	Methane and Carbon Dioxide (RS Kerr 175)	Alkalinity (EPA 310-1)	
1	MW-1	11:17	10/8/08	X				12						X	X	X	X	X	X	X	X	X	
2	MW-3	10:53		X				12						X	X	X	X	X	X	X	X	X	
3	AW-1	9:52		X				12						X	X	X	X	X	X	X	X	X	
4	AW-2	8:17		X				12						X	X	X	X	X	X	X	X	X	
5	AW-4	8:40		X				12						X	X	X	X	X	X	X	X	X	
6	AW-5	9:27		X				12						X	X	X	X	X	X	X	X	X	
7	AW-6	9:05		X				12						X	X	X	X	X	X	X	X	X	
8	RW-1	10:33		X				12						X	X	X	X	X	X	X	X	X	
9	WV-1																						
10	VEW-4	9:11	V	X				12						X	X	X	X	X	X	X	X	X	
Sampler's Name: ROBERTO HEIMLICH Sampler's Company: DOULOS BV								Relinquished By / Affiliation				Date	Time	Accepted By / Affiliation				Date	Time				
Shipment Date:																							
Shipment Method:																							
Shipment Tracking No.:																							
Special Instructions:								Please cc results to rmiller@broadbentinc.com															
Custody Seals In Place: Yes / No				Temp Blank: Yes / No				Cooler Temp on Receipt: °F/C				Trip Blank: Yes / No				MS/MSD Sample Submitted: Yes / No							



A BP affiliated company

### Chain of Custody Record

Project Name: ARCO 11133

BP BU/AR Region/Enofos Segment:

BP > Americas > West > Retail > Alameda > II

State or Lead Regulatory Agency:

Requested Due Date (mm/dd/yy):

Page 2 of 2

On-site Time:	56:52	Temp:	76
Off-site Time:	11:30	Temp:	85
Sky Conditions:	clear		
Meteorological Events:	NA		
Wind Speed:	0	Direction:	NA

Lab Name:	Calscience	BP/AR Facility No.:	11133	Consultant/Contractor:	Stratus Environmental, Inc.			
Address:	7440 Lincoln Way Garden Grove, CA 92841	BP/AR Facility Address:	2220 98th Avenue, Oakland	Address:	3330 Cameron Park Drive, Suite 550 Cameron Park, CA 95682			
Lab PM:	Linda Scharpenberg	Site Lat/Long:		Consultant/Contractor Project No.:				
Tele/Fax:	714-895-5494 714-895-7501(fax)	California Global ID No.:	T0600100210	Consultant/Contractor PM:	Jay Johnson			
BP/AR PM Contact:	Paul Sepple	Enfoss Project No.:	G0777-0042	Tele/Fax:	(530) 676-6000 / (530) 676-6005			
Address:	2010 Crew Canyon Place, Suite 150 San Ramon, CA	Provision or OOC (check one)	Provision	Report Type & QC Level:	Level I with EDF			
TeleFax:	925-275-3506	Phase/WBS:	04-Monitoring	E-mail EDD To:	bcarroll@stratusinc.net			
Lab Bottle Order No.:		Sub Phase/Task:	03-Analytical	Invoice to:	Atlantic Richfield Co.			
Item No.	Sample Description	Date	Matrix	Laboratory No.	Preservative	Requested Analysis	Sample Point Lat/Long and Comments	
1	TB-11133 7/15/08	6:00	1/1 Solid Water/Gel Air		No. of Containers Unpreserved H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> HCl Methanol GROBTEX/Oily * by \$260 1,2-DCA by \$260 Ethanol by \$260 EDTA by \$260	Nitrate and Nitrite (EPA 300) Manganese (EPA 2007) Passivated Surface (EPA 376.2) Methane and Carbon Dioxide (ES-Kart 175) Nitroaromatic (EPA 310-1)	HOLD	Oxy* = MTBE, TAME, ETBE, DIPE, TBA
2								
3								
4								
5								
6								
7								
8								
9								
10								
Sampler's Name:	ROBERT HEIMICH	Relinquished By / Affiliation			Date	Date		
Sampler's Company:	DOULDS ENVI				Time	Accepted By / Affiliation	Date	Time
Shipment Date:								
Shipment Method:								
Shipment Tracking No.:								
Special Instructions:	Please cc results to rmiller@broadbentinc.com							
Custody Seal In Place: Yes / No	Temp Blank: Yes / No	Cooler Temp on Receipt:	°F/C	Trip Blank: Yes / No	MS/MSD Sample Submitted: Yes / No			

NO. 666754

## NON-HAZARDOUS WASTE DATA FORM

SITE 1

EPA  
ID.  
NO.

NOT REQUIRED

NAME BP WEST COAST PRODUCTS LLC ARCO # 11133  
 ADDRESS P.O. BOX R0246  
RANCHO SANTA MARGARITA  
 CITY, STATE, ZIP CA 92688

2220 98TH AVECALIFORNIAPROFILE  
NO.PHONE NO. 714-369-1113

TO BE COMPLETED BY GENERATOR

CONTAINERS No. 1VOLUME 74.5 GAL

WEIGHT

TYPE:  TANK TRUCK  DUMP TRUCK  DRUMS  CARTONS  OTHERWASTE DESCRIPTION: NON-HAZARDOUS WATER  
COMPONENTS OF WASTEGENERATING PROCESS: DRYING/DECON WATER  
COMPONENTS OF WASTE1. WATER 99-100%5.    2. TOLUENE <1%6.    3.    7.    4.    8.    PROPERTIES: 7-8H  SOLID  LIQUID  SLUDGE  SLURRY  OTHERHANDLING INSTRUCTIONS: WEAR ALL APPROPRIATE PROTECTIVE CLOTHINGTHE GENERATOR CERTIFIES THAT THE  
WASTE AS DESCRIBED IS 100%  
NON-HAZARDOUS.LAWRENCE HEMMICK FOR BP  
TYPED OR PRINTED FULL NAME & SIGNATURE7/16/92  
DATE

Transporter #1

Transporter #2

NAME STRATEGIC ENVIRONMENTALEPA  
ID.  
NO.ADDRESS 3320 CALMIRON PARK DRSERVICE ORDER NO.  CITY, STATE, ZIP AMERON PARK, CA 92622PICK UP DATE 7/16/92PHONE NO. 650-676-2021LAWRENCE HEMMICK  
TYPED OR PRINTED FULL NAME & SIGNATURE7/16/92  
DATE

TRUCK, UNIT, I.D. NO.

EPA  
ID.  
NO.

DISPOSAL METHOD

 LANDFILL  OTHERNAME INSTRAY, INC.ADDRESS 1105 AIRPORT RD. #CCITY, STATE, ZIP SD VISTA, CA 92071PHONE NO. 619-753-1829

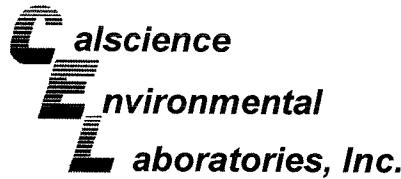
TYPED OR PRINTED FULL NAME &amp; SIGNATURE

DATE

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

DISCREPANCY

TSD FACILITY	DISCREPANCY				
	GEN	OLD/NEW	L	A	TONS
TRANS		S	B		
CO		RT/CD	HWDF	NONE	



July 30, 2008

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

Subject: **Calscience Work Order No.: 08-07-1409**  
**Client Reference: ARCO 11133**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 7/16/2008 and analyzed in accordance with the attached chain-of-custody.

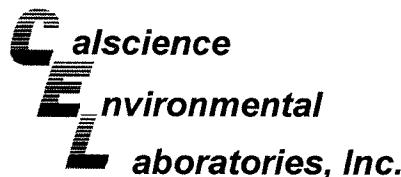
Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows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

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

Sincerely,

A handwritten signature in black ink that reads "Philip Savelle for Linda Scharpenberg".

Calscience Environmental  
Laboratories, Inc.  
Linda Scharpenberg  
Project Manager



## Analytical Report

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

Date Received: 07/16/08  
Work Order No: 08-07-1409  
Preparation: N/A  
Method: RSK-175M

Project: ARCO 11133

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	08-07-1409-1-H	07/15/08 11:17	Aqueous	GC 14	N/A	07/21/08 00:00	080721L01

Parameter	Result	RL	DF	Qual	Units
Carbon Dioxide	29200	17.0	10		ug/L

MW-3	08-07-1409-2-H	07/15/08 10:53	Aqueous	GC 14	N/A	07/21/08 00:00	080721L01
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Parameter	Result	RL	DF	Qual	Units
Carbon Dioxide	29000	17.0	10		ug/L

AW-1	08-07-1409-3-H	07/15/08 09:52	Aqueous	GC 14	N/A	07/21/08 00:00	080721L01
------	----------------	----------------	---------	-------	-----	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Carbon Dioxide	400000	170	100		ug/L

AW-2	08-07-1409-4-H	07/15/08 08:17	Aqueous	GC 14	N/A	07/21/08 00:00	080721L01
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Parameter	Result	RL	DF	Qual	Units
Carbon Dioxide	100000	170	100		ug/L

AW-4	08-07-1409-5-H	07/15/08 08:40	Aqueous	GC 14	N/A	07/21/08 00:00	080721L01
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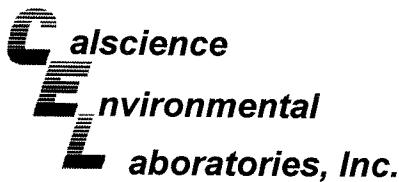
Parameter	Result	RL	DF	Qual	Units
Carbon Dioxide	354000	170	100		ug/L

AW-5	08-07-1409-6-H	07/15/08 09:27	Aqueous	GC 14	N/A	07/21/08 00:00	080721L01
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Parameter	Result	RL	DF	Qual	Units
Carbon Dioxide	161000	170	100		ug/L

---

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: 07/16/08  
Work Order No: 08-07-1409  
Preparation: N/A  
Method: RSK-175M

Project: ARCO 11133

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AW-6	08-07-1409-7-H	07/15/08 09:05	Aqueous	GC 14	N/A	07/21/08 00:00	080721L01

Parameter	Result	RL	DF	Qual	Units
Carbon Dioxide	163000	170	100		ug/L

RW-1	08-07-1409-8-H	07/15/08 10:33	Aqueous	GC 14	N/A	07/21/08 00:00	080721L01
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Parameter	Result	RL	DF	Qual	Units
Carbon Dioxide	212000	170	100		ug/L

VEW-4	08-07-1409-9-H	07/15/08 10:11	Aqueous	GC 14	N/A	07/21/08 00:00	080721L01
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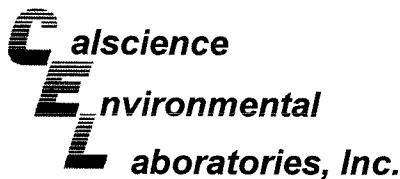
Parameter	Result	RL	DF	Qual	Units
Carbon Dioxide	90900	170	100		ug/L

Method Blank	099-12-659-17	N/A	Aqueous	GC 14	N/A	07/21/08 00:00	080721L01
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Parameter	Result	RL	DF	Qual	Units
Carbon Dioxide	ND	1.70	1		ug/L

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

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



## Analytical Report

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

Date Received: 07/16/08  
Work Order No: 08-07-1409  
Preparation: N/A  
Method: RSK-175M

Project: ARCO 11133

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	08-07-1409-1-G	07/15/08 11:17	Aqueous	GC 14	N/A	07/22/08 00:00	080722L01

Parameter	Result	RL	DF	Qual	Units
Methane	1090	10.0	10		ug/L

MW-3	08-07-1409-2-G	07/15/08 10:53	Aqueous	GC 14	N/A	07/22/08 00:00	080722L01
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Parameter	Result	RL	DF	Qual	Units
Methane	ND	1.00	1		ug/L

AW-1	08-07-1409-3-G	07/15/08 09:52	Aqueous	GC 14	N/A	07/22/08 00:00	080722L01
------	----------------	----------------	---------	-------	-----	----------------	-----------

Parameter	Result	RL	DF	Qual	Units
Methane	2090	10.0	10		ug/L

AW-2	08-07-1409-4-G	07/15/08 08:17	Aqueous	GC 14	N/A	07/21/08 00:00	080722L01
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Parameter	Result	RL	DF	Qual	Units
Methane	7.42	1.00	1		ug/L

AW-4	08-07-1409-5-G	07/15/08 08:40	Aqueous	GC 14	N/A	07/22/08 00:00	080722L01
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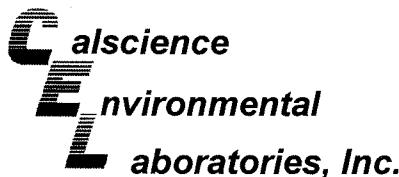
Parameter	Result	RL	DF	Qual	Units
Methane	777	10.0	10		ug/L

AW-5	08-07-1409-6-G	07/15/08 09:27	Aqueous	GC 14	N/A	07/22/08 00:00	080722L01
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Parameter	Result	RL	DF	Qual	Units
Methane	9.29	1.00	1		ug/L

---

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: 07/16/08  
Work Order No: 08-07-1409  
Preparation: N/A  
Method: RSK-175M

Project: ARCO 11133

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AW-6	08-07-1409-7-G	07/15/08 09:05	Aqueous	GC 14	N/A	07/22/08 00:00	080722L01

Parameter	Result	RL	DF	Qual	Units
Methane	1.27	1.00	1		ug/L

RW-1	08-07-1409-8-G	07/15/08 10:33	Aqueous	GC 14	N/A	07/22/08 00:00	080722L01
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Parameter	Result	RL	DF	Qual	Units
Methane	212	10.0	10		ug/L

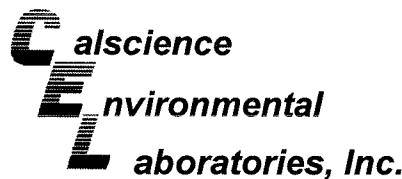
VEW-4	08-07-1409-9-G	07/15/08 10:11	Aqueous	GC 14	N/A	07/22/08 00:00	080722L01
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Parameter	Result	RL	DF	Qual	Units
Methane	174	1.00	1		ug/L

Method Blank	099-12-663-234	N/A	Aqueous	GC 14	N/A	07/22/08 00:00	080722L01
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Parameter	Result	RL	DF	Qual	Units
Methane	ND	1.00	1		ug/L

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: 07/16/08  
Work Order No: 08-07-1409  
Preparation: EPA 3010A Total  
Method: EPA 200.7

Project: ARCO 11133

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	08-07-1409-1-K	07/15/08 11:17	Aqueous	ICP 5300	07/17/08	07/18/08 12:35	080717LA11

Parameter	Result	RL	DF	Qual	Units
Manganese	8390	5.00	1		ug/L

MW-3	08-07-1409-2-K	07/15/08 10:53	Aqueous	ICP 5300	07/17/08	07/18/08 12:49	080717LA11
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Parameter	Result	RL	DF	Qual	Units
Manganese	61.8	5.00	1		ug/L

AW-1	08-07-1409-3-K	07/15/08 09:52	Aqueous	ICP 5300	07/17/08	07/18/08 13:01	080717LA11
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Parameter	Result	RL	DF	Qual	Units
Manganese	7200	5.00	1		ug/L

AW-2	08-07-1409-4-K	07/15/08 08:17	Aqueous	ICP 5300	07/17/08	07/18/08 13:04	080717LA11
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Parameter	Result	RL	DF	Qual	Units
Manganese	1570	5.00	1		ug/L

AW-4	08-07-1409-5-K	07/15/08 08:40	Aqueous	ICP 5300	07/17/08	07/18/08 13:07	080717LA11
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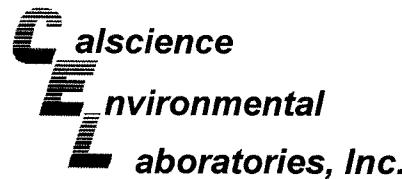
Parameter	Result	RL	DF	Qual	Units
Manganese	7110	5.00	1		ug/L

AW-5	08-07-1409-6-K	07/15/08 09:27	Aqueous	ICP 5300	07/17/08	07/18/08 13:10	080717LA11
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Parameter	Result	RL	DF	Qual	Units
Manganese	2560	5.00	1		ug/L

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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: 07/16/08  
Work Order No: 08-07-1409  
Preparation: EPA 3010A Total  
Method: EPA 200.7

Project: ARCO 11133

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AW-6	08-07-1409-7-K	07/15/08 09:05	Aqueous	ICP 5300	07/17/08	07/18/08 13:13	080717LA11

Parameter	Result	RL	DF	Qual	Units
Manganese	1370	5.00	1		ug/L

RW-1	08-07-1409-8-K	07/15/08 10:33	Aqueous	ICP 5300	07/17/08	07/18/08 13:16	080717LA11
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Parameter	Result	RL	DF	Qual	Units
Manganese	7030	5.00	1		ug/L

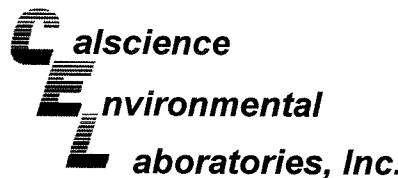
VEW-4	08-07-1409-9-K	07/15/08 10:11	Aqueous	ICP 5300	07/17/08	07/18/08 13:19	080717LA11
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Parameter	Result	RL	DF	Qual	Units
Manganese	2150	5.00	1		ug/L

Method Blank	097-01-012-3,509	N/A	Aqueous	ICP 5300	07/17/08	07/18/08 12:23	080717LA11
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Parameter	Result	RL	DF	Qual	Units
Manganese	ND	5.00	1		ug/L

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: 07/16/08  
Work Order No: 08-07-1409  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: ARCO 11133

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	08-07-1409-1-D	07/15/08 11:17	Aqueous	GC 4	07/18/08	07/18/08 16:05	080718B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	3200	100	2		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	79	38-134			

MW-3	08-07-1409-2-D	07/15/08 10:53	Aqueous	GC 4	07/18/08	07/18/08 14:27	080718B01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	55	38-134			

AW-1	08-07-1409-3-D	07/15/08 09:52	Aqueous	GC 4	07/18/08	07/18/08 16:38	080718B01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	3400	500	10		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	67	38-134			

AW-2	08-07-1409-4-D	07/15/08 08:17	Aqueous	GC 4	07/18/08	07/18/08 17:11	080718B01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	6400	500	10		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	68	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: 07/16/08  
Work Order No: 08-07-1409  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: ARCO 11133

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AW-4	08-07-1409-5-D	07/15/08 08:40	Aqueous	GC 4	07/18/08	07/18/08 17:44	080718B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	250	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	65	38-134			

AW-5	08-07-1409-6-D	07/15/08 09:27	Aqueous	GC 4	07/18/08	07/18/08 18:17	080718B01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	100	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	67	38-134			

AW-6	08-07-1409-7-D	07/15/08 09:05	Aqueous	GC 4	07/18/08	07/18/08 18:50	080718B01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	130	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	64	38-134			

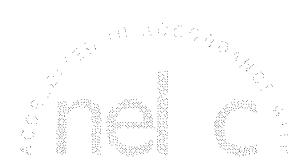
RW-1	08-07-1409-8-D	07/15/08 10:33	Aqueous	GC 4	07/18/08	07/18/08 19:23	080718B01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	1600	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	80	38-134			

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: 07/16/08  
Work Order No: 08-07-1409  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: ARCO 11133

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VEW-4	08-07-1409-9-D	07/15/08 10:11	Aqueous	GC 4	07/18/08	07/18/08 19:56	080718B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	53	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	59	38-134			

Method Blank	099-12-695-200	N/A	Aqueous	GC 4	07/18/08	07/18/08 12:48	080718B01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	68	38-134			

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



## Analytical Report

Analyses performed in accordance with APHA-AWWA-CWEA Standard Methods

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

Date Received: 07/16/08  
Work Order No: 08-07-1409  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: ARCO 11133

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	08-07-1409-1-A	07/15/08 11:17	Aqueous	GC/MS L	07/25/08	07/25/08 18:29	080725L01

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	8.5	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)	4.8	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	100	73-157			Dibromofluoromethane	102	82-142		
Toluene-d8	109	82-112			1,4-Bromofluorobenzene	107	75-105		LH

MW-3	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
	08-07-1409-2-A	07/15/08 10:53	Aqueous	GC/MS L	07/24/08	07/25/08 01:18	080724L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	1.3	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	102	82-142		
Toluene-d8	100	82-112			1,4-Bromofluorobenzene	95	75-105		

AW-1	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
	08-07-1409-3-A	07/15/08 09:52	Aqueous	GC/MS L	07/24/08	07/25/08 01:50	080724L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	340	10	20		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	27	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	4.5	0.50	1		Tert-Amyl-Methyl Ether (TAME)	15	0.50	1	
Xylenes (total)	17	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	91	73-157			Dibromofluoromethane	101	82-142		
Toluene-d8	108	82-112			1,4-Bromofluorobenzene	97	75-105		

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



## Analytical Report

Analyst: [Signature]

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

Date Received: 07/16/08  
Work Order No: 08-07-1409  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: ARCO 11133

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AW-2	08-07-1409-4-A	07/15/08 08:17	Aqueous	GC/MS L	07/25/08	07/25/08 15:49	080725L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	1700	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	340	50	100		Ethyl-t-Butyl Ether (ETBE)	ND	50	100	
Toluene	550	50	100		Tert-Amyl-Methyl Ether (TAME)	ND	50	100	
Xylenes (total)	940	50	100		Ethanol	ND	30000	100	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	101	73-157			Dibromofluoromethane	103	82-142		
Toluene-d8	101	82-112			1,4-Bromofluorobenzene	102	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AW-4	08-07-1409-5-A	07/15/08 08:40	Aqueous	GC/MS L	07/25/08	07/25/08 16:21	080725L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	44	1.0	2		Methyl-t-Butyl Ether (MTBE)	25	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	44	1.0	2		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	1.1	0.50	1		Tert-Amyl-Methyl Ether (TAME)	3.4	0.50	1	
Xylenes (total)	78	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	108	73-157			Dibromofluoromethane	106	82-142		
Toluene-d8	103	82-112			1,4-Bromofluorobenzene	105	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AW-5	08-07-1409-6-A	07/15/08 09:27	Aqueous	GC/MS L	07/24/08	07/25/08 03:26	080724L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	11	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	100	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	2.4	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	92	73-157			Dibromofluoromethane	97	82-142		
Toluene-d8	102	82-112			1,4-Bromofluorobenzene	100	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: 07/16/08  
Work Order No: 08-07-1409  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: ARCO 11133

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AW-6	08-07-1409-7-A	07/15/08 09:05	Aqueous	GC/MS L	07/25/08	07/25/08 16:53	080725L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	270	5.0	10	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	20	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)	66	5.0	10	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	102	73-157			Dibromofluoromethane	102	82-142		
Toluene-d8	100	82-112			1,4-Bromofluorobenzene	102	75-105		

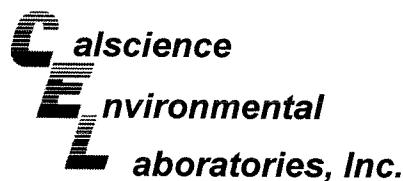
RW-1	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
	08-07-1409-8-B	07/15/08 10:33	Aqueous	GC/MS L	07/26/08	07/26/08 18:48	080726L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	12	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	4.4	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	0.66	0.50	1		Tert-Amyl-Methyl Ether (TAME)	1.0	0.50	1	
Xylenes (total)	3.0	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	99	73-157			Dibromofluoromethane	101	82-142		
Toluene-d8	110	82-112			1,4-Bromofluorobenzene	105	75-105		

VEW-4	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
	08-07-1409-9-A	07/15/08 10:11	Aqueous	GC/MS L	07/25/08	07/25/08 17:57	080725L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	101	73-157			Dibromofluoromethane	101	82-142		
Toluene-d8	102	82-112			1,4-Bromofluorobenzene	98	75-105		

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



## Analytical Report

ARCO IN ACCORDANCE  
TO THE CALIFORNIA  
LABORATORIES  
REGULATIONS

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

Date Received: 07/16/08  
Work Order No: 08-07-1409  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: ARCO 11133

Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	099-12-703-334	N/A	Aqueous	GC/MS L	07/24/08	07/25/08 00:46	080724L02

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	
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>		<b>Qual</b>	<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>		<b>Qual</b>
1,2-Dichloroethane-d4	105	73-157			Dibromofluoromethane	112	82-142		
Toluene-d8	100	82-112			1,4-Bromofluorobenzene	93	75-105		

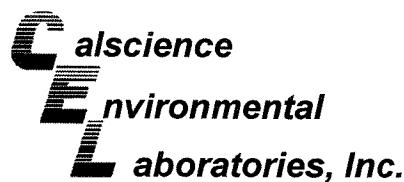
Method Blank	099-12-703-336	N/A	Aqueous	GC/MS L	07/25/08	07/25/08 12:36	080725L01
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (Dipe)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>		<b>Qual</b>	<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>		<b>Qual</b>
1,2-Dichloroethane-d4	92	73-157			Dibromofluoromethane	95	82-142		
Toluene-d8	104	82-112			1,4-Bromofluorobenzene	99	75-105		

Method Blank	099-12-703-340	N/A	Aqueous	GC/MS L	07/26/08	07/26/08 12:55	080726L01
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (Dipe)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>		<b>Qual</b>	<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>		<b>Qual</b>
1,2-Dichloroethane-d4	93	73-157			Dibromofluoromethane	93	82-142		
Toluene-d8	107	82-112			1,4-Bromofluorobenzene	98	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: 07/16/08  
Work Order No: 08-07-1409

Project: ARCO 11133

Page 1 of 3

Client Sample Number	Lab Sample Number	Date Collected	Matrix
MW-1	08-07-1409-1	07/15/08	Aqueous

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Nitrate (as N)	ND	100	1		ug/L	N/A	07/17/08	EPA 300.0
Sulfate	50000	10000	10		ug/L	N/A	07/17/08	EPA 300.0
Alkalinity, Total (as CaCO <sub>3</sub> )	326000	100	1		ug/L	N/A	07/21/08	SM 2320B
Sulfide, Dissolved	ND	50	1		ug/L	07/16/08	07/16/08	SM 4500 S2 - D

MW-3	08-07-1409-2	07/15/08	Aqueous
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Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Nitrate (as N)	820	100	1		ug/L	N/A	07/17/08	EPA 300.0
Sulfate	78000	10000	10		ug/L	N/A	07/17/08	EPA 300.0
Alkalinity, Total (as CaCO <sub>3</sub> )	112000	100	1		ug/L	N/A	07/21/08	SM 2320B
Sulfide, Dissolved	ND	50	1		ug/L	07/16/08	07/16/08	SM 4500 S2 - D

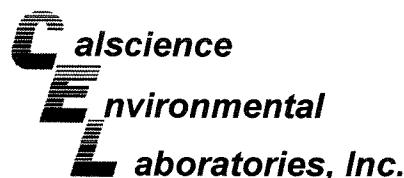
AW-1	08-07-1409-3	07/15/08	Aqueous
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Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Nitrate (as N)	ND	100	1		ug/L	N/A	07/17/08	EPA 300.0
Sulfate	ND	1000	1		ug/L	N/A	07/17/08	EPA 300.0
Alkalinity, Total (as CaCO <sub>3</sub> )	488000	100	1		ug/L	N/A	07/21/08	SM 2320B
Sulfide, Dissolved	ND	50	1		ug/L	07/16/08	07/16/08	SM 4500 S2 - D

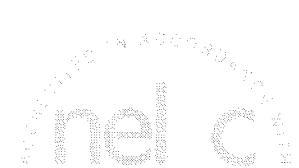
AW-2	08-07-1409-4	07/15/08	Aqueous
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Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Nitrate (as N)	440	100	1		ug/L	N/A	07/17/08	EPA 300.0
Sulfate	38000	5000	5		ug/L	N/A	07/17/08	EPA 300.0
Alkalinity, Total (as CaCO <sub>3</sub> )	168000	100	1		ug/L	N/A	07/21/08	SM 2320B
Sulfide, Dissolved	ND	50	1		ug/L	07/16/08	07/16/08	SM 4500 S2 - D

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: 07/16/08  
Work Order No: 08-07-1409

Project: ARCO 11133

Page 2 of 3

Client Sample Number	Lab Sample Number	Date Collected	Matrix
AW-4	08-07-1409-5	07/15/08	Aqueous

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Nitrate (as N)	ND	100	1		ug/L	N/A	07/17/08	EPA 300.0
Sulfate	47000	10000	10		ug/L	N/A	07/17/08	EPA 300.0
Alkalinity, Total (as CaCO <sub>3</sub> )	598000	100	1		ug/L	N/A	07/21/08	SM 2320B
Sulfide, Dissolved	ND	50	1		ug/L	07/16/08	07/16/08	SM 4500 S2 - D

Client Sample Number	Lab Sample Number	Date Collected	Matrix
AW-5	08-07-1409-6	07/15/08	Aqueous

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Nitrate (as N)	ND	100	1		ug/L	N/A	07/17/08	EPA 300.0
Sulfate	12000	2000	2		ug/L	N/A	07/17/08	EPA 300.0
Alkalinity, Total (as CaCO <sub>3</sub> )	238000	100	1		ug/L	N/A	07/21/08	SM 2320B
Sulfide, Dissolved	ND	50	1		ug/L	07/16/08	07/16/08	SM 4500 S2 - D

Client Sample Number	Lab Sample Number	Date Collected	Matrix
AW-6	08-07-1409-7	07/15/08	Aqueous

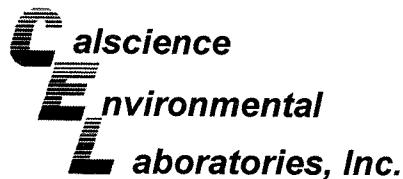
Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Nitrate (as N)	ND	100	1		ug/L	N/A	07/17/08	EPA 300.0
Sulfate	23000	5000	5		ug/L	N/A	07/17/08	EPA 300.0
Alkalinity, Total (as CaCO <sub>3</sub> )	160000	100	1		ug/L	N/A	07/21/08	SM 2320B
Sulfide, Dissolved	ND	50	1		ug/L	07/16/08	07/16/08	SM 4500 S2 - D

Client Sample Number	Lab Sample Number	Date Collected	Matrix
RW-1	08-07-1409-8	07/15/08	Aqueous

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Nitrate (as N)	ND	100	1		ug/L	N/A	07/17/08	EPA 300.0
Sulfate	21000	5000	5		ug/L	N/A	07/17/08	EPA 300.0
Alkalinity, Total (as CaCO <sub>3</sub> )	358000	100	1		ug/L	N/A	07/21/08	SM 2320B
Sulfide, Dissolved	ND	50	1		ug/L	07/16/08	07/16/08	SM 4500 S2 - D

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

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## Analytical Report

ANALYTICAL REPORT  
Final C

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

Date Received: 07/16/08  
Work Order No: 08-07-1409

Project: ARCO 11133

Page 3 of 3

Client Sample Number	Lab Sample Number	Date Collected	Matrix
VEW-4	08-07-1409-9	07/15/08	Aqueous

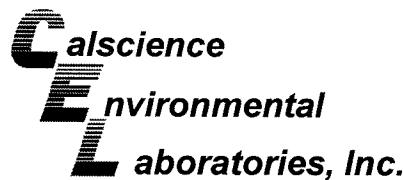
Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Nitrate (as N)	ND	100	1		ug/L	N/A	07/17/08	EPA 300.0
Sulfate	22000	5000	5		ug/L	N/A	07/17/08	EPA 300.0
Alkalinity, Total (as CaCO <sub>3</sub> )	254000	100	1		ug/L	N/A	07/21/08	SM 2320B
Sulfide, Dissolved	ND	50	1		ug/L	07/16/08	07/16/08	SM 4500 S2 - D

Method Blank	N/A	Aqueous
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Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Nitrate (as N)	ND	100	1		ug/L	N/A	07/16/08	EPA 300.0
Sulfate	ND	1000	1		ug/L	N/A	07/16/08	EPA 300.0
Alkalinity, Total (as CaCO <sub>3</sub> )	ND	1.0	1		ug/L	N/A	07/21/08	SM 2320B
Sulfide, Dissolved	ND	50	1		ug/L	07/16/08	07/16/08	SM 4500 S2 - D

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

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## Quality Control - Duplicate



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Cameron Park, CA 95682-8861

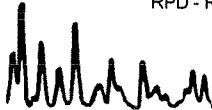
Date Received: 07/16/08  
Work Order No: 08-07-1409  
Preparation: N/A  
Method: RSK-175M

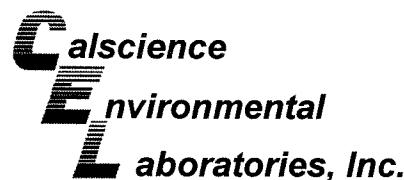
Project: ARCO 11133

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
AW-5	Aqueous	GC 14	N/A	07/21/08	080621D01

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Carbon Dioxide	161000	174000	8	0-20	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Duplicate

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

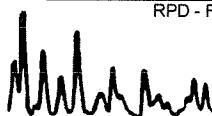
Date Received: 07/16/08  
Work Order No: 08-07-1409  
Preparation: N/A  
Method: RSK-175M

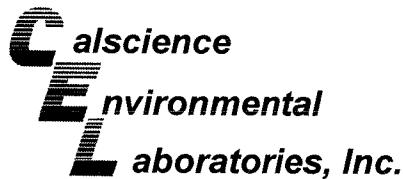
Project: ARCO 11133

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
AW-5	Aqueous	GC 14	N/A	07/22/08	080722D01

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Methane	9.29	7.96	15	0-20	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate

ANALYSIS IN ACCORDANCE  
WITH THE CALIFORNIA  
HEALTH AND SAFETY CODE  
AND THE USE OF  
THE CALIFORNIA  
ENVIRONMENTAL  
PROTECTION  
AGENCY'S  
TEST METHODS  
FOR DETERMINATION  
OF HAZARDOUS  
CONTAMINANTS  
IN WATER

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

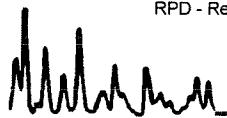
Date Received: 07/16/08  
Work Order No: 08-07-1409  
Preparation: EPA 3010A Total  
Method: EPA 200.7

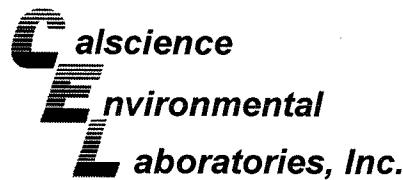
Project ARCO 11133

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-1	Aqueous	ICP 5300	07/17/08	07/18/08	080717SA11

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Manganese	4X	4X	80-120	4X	0-20	BB

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - PDS / PDSD

A circular seal containing the text "ANALYTICAL SERVICES LABORATORY" around the top edge and "QUALITY CONTROL" in the center. The bottom half of the seal contains the letters "nel" in a large, stylized font.

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Stratus Environmental, inc.	Date Received	07/16/08
3330 Cameron Park Drive, Suite 550	Work Order No:	08-07-1409
Cameron Park, CA 95682-8861	Preparation:	EPA 3010A Total
	Method:	EPA 200.7

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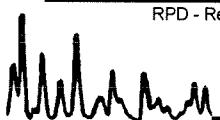
Project: ARCO 11133

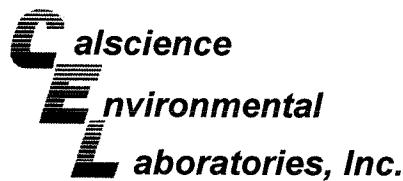
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
MW-1	Aqueous	ICP 5300	07/17/08	07/18/08	080717SA11

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Manganese	4X	4X	75-125	4X	0-20	BB

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RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - Spike/Spike Duplicate

ANALYSIS  
RESULTS  
ARCO

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

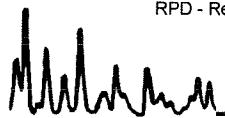
Date Received: 07/16/08  
Work Order No: 08-07-1409  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project ARCO 11133

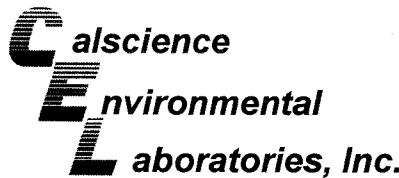
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-3	Aqueous	GC 4	07/18/08	07/18/08	080718S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	84	83	38-134	2	0-25	

RPD - Relative Percent Difference , CL - Control Limit



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## Quality Control - Spike/Spike Duplicate

SOLARIS  
AN ACQUA  
SOLARIS  
SOLARIS

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

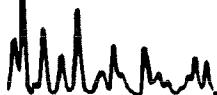
Date Received: 07/16/08  
Work Order No: 08-07-1409  
Preparation: EPA 5030B  
Method: EPA 8260B

Project ARCO 11133

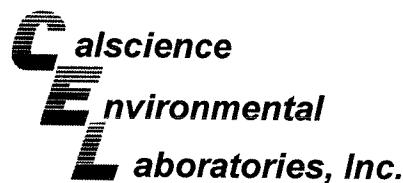
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-07-1530-1	Aqueous	GC/MS L	07/24/08	07/24/08	080724S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	102	105	86-122	2	0-8	
Carbon Tetrachloride	101	104	78-138	3	0-9	
Chlorobenzene	104	104	90-120	0	0-9	
1,2-Dibromoethane	106	112	70-130	6	0-30	
1,2-Dichlorobenzene	108	109	89-119	1	0-10	
1,1-Dichloroethene	99	104	52-142	5	0-23	
Ethylbenzene	109	106	70-130	3	0-30	
Toluene	109	107	85-127	2	0-12	
Trichloroethene	103	105	78-126	1	0-10	
Vinyl Chloride	97	107	56-140	10	0-21	
Methyl-t-Butyl Ether (MTBE)	105	118	64-136	11	0-28	
Tert-Butyl Alcohol (TBA)	99	100	27-183	0	0-60	
Diisopropyl Ether (DIPE)	94	109	78-126	15	0-16	
Ethyl-t-Butyl Ether (ETBE)	101	112	67-133	10	0-21	
Tert-Amyl-Methyl Ether (TAME)	105	116	63-141	9	0-21	
Ethanol	97	93	11-167	4	0-64	

RPD - Relative Percent Difference , CL - Control Limit



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## Quality Control - Spike/Spike Duplicate

ANALYSIS  
SOLVED  
Calscience Environmental Laboratories, Inc.

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

Date Received: 07/16/08  
Work Order No: 08-07-1409  
Preparation: EPA 5030B  
Method: EPA 8260B

Project ARCO 11133

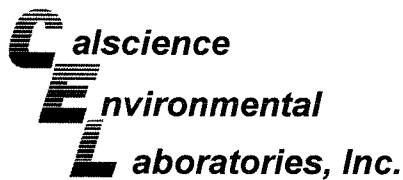
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-07-1660-10	Aqueous	GC/MS L	07/25/08	07/25/08	080725S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	105	105	86-122	1	0-8	
Carbon Tetrachloride	105	104	78-138	1	0-9	
Chlorobenzene	106	107	90-120	1	0-9	
1,2-Dibromoethane	110	107	70-130	3	0-30	
1,2-Dichlorobenzene	110	111	89-119	1	0-10	
1,1-Dichloroethene	104	102	52-142	2	0-23	
Ethylbenzene	111	110	70-130	0	0-30	
Toluene	108	110	85-127	2	0-12	
Trichloroethene	106	106	78-126	0	0-10	
Vinyl Chloride	100	108	56-140	7	0-21	
Methyl-t-Butyl Ether (MTBE)	108	107	64-136	0	0-28	
Tert-Butyl Alcohol (TBA)	101	90	27-183	11	0-60	
Diisopropyl Ether (DIPE)	105	105	78-126	0	0-16	
Ethyl-t-Butyl Ether (ETBE)	106	109	67-133	2	0-21	
Tert-Amyl-Methyl Ether (TAME)	107	111	63-141	3	0-21	
Ethanol	90	90	11-167	0	0-64	

RPD - Relative Percent Difference , CL - Control Limit



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## Quality Control - Spike/Spike Duplicate

ANALYTICAL  
SOLARIS INC.

Stratus Environmental, inc.  
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Date Received: 07/16/08  
Work Order No: 08-07-1409  
Preparation: EPA 5030B  
Method: EPA 8260B

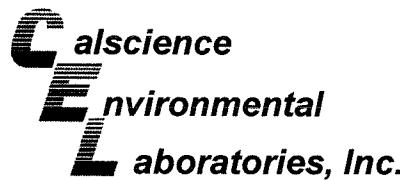
Project ARCO 11133

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-07-1660-3	Aqueous	GC/MS L	07/26/08	07/26/08	080726S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	101	99	86-122	2	0-8	
Carbon Tetrachloride	100	91	78-138	10	0-9	4
Chlorobenzene	99	99	90-120	0	0-9	
1,2-Dibromoethane	114	108	70-130	6	0-30	
1,2-Dichlorobenzene	105	106	89-119	0	0-10	
1,1-Dichloroethene	102	92	52-142	10	0-23	
Ethylbenzene	105	104	70-130	1	0-30	
Toluene	103	106	85-127	3	0-12	
Trichloroethene	102	97	78-126	5	0-10	
Vinyl Chloride	107	101	56-140	6	0-21	
Methyl-t-Butyl Ether (MTBE)	110	103	64-136	3	0-28	
Tert-Butyl Alcohol (TBA)	110	110	27-183	0	0-60	
Diisopropyl Ether (DIPE)	104	97	78-126	7	0-16	
Ethyl-t-Butyl Ether (ETBE)	108	109	67-133	1	0-21	
Tert-Amyl-Methyl Ether (TAME)	108	113	63-141	4	0-21	
Ethanol	104	103	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

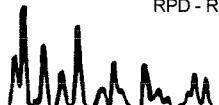
Date Received: N/A  
Work Order No: 08-07-1409

Project: ARCO 11133

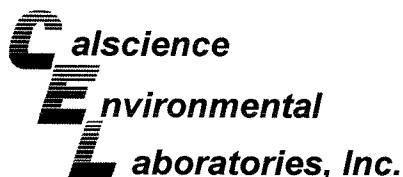
Matrix: Aqueous

<u>Parameter</u>	<u>Method</u>	<u>Quality Control Sample ID</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>MS% REC</u>	<u>MSD % REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Nitrate (as N)	EPA 300.0	MW-1	07/17/08	N/A	92	94	58-142	1	0-6	
Sulfate	EPA 300.0	MW-1	07/17/08	N/A	96	97	49-133	1	0-3	

RPD - Relative Percent Difference , CL - Control Limit



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## Quality Control - Duplicate

Sample ID: 100000000000  
nel C

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3330 Cameron Park Drive, Suite 550  
Cameron Park, CA 95682-8861

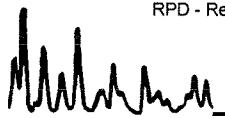
Date Received: N/A  
Work Order No: 08-07-1409

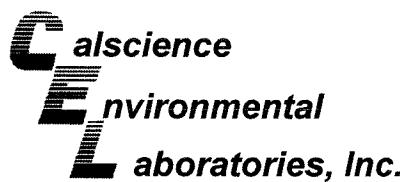
Project: ARCO 11133

**Matrix: Aqueous**

Parameter	Method	QC Sample ID	Date Analyzed	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Alkalinity, Total (as CaCO <sub>3</sub> )	SM 2320B	08-07-1376-1	07/21/08	340000	342000	1	0-25	
Bicarbonate (as CaCO <sub>3</sub> )	SM 2320B	08-07-1376-1	07/21/08	340000	342000	1	0-25	
Carbonate (as CaCO <sub>3</sub> )	SM 2320B	08-07-1376-1	07/21/08	ND	ND	NA	0-25	
Hydroxide (as CaCO <sub>3</sub> )	SM 2320B	08-07-1376-1	07/21/08	ND	ND	NA	0-25	
Sulfide, Dissolved	SM 4500 S2 - D	MW-1	07/16/08	ND	ND	NA	0-25	

RPD - Relative Percent Difference , CL - Control Limit





### Quality Control - LCS/LCS Duplicate

REPORT NO. ARCO-080721L01

Date: 07/21/08

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3330 Cameron Park Drive, Suite 550  
Cameron Park, CA 95682-8861

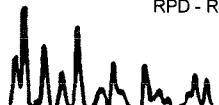
Date Received: N/A  
Work Order No: 08-07-1409  
Preparation: N/A  
Method: RSK-175M

Project: ARCO 11133

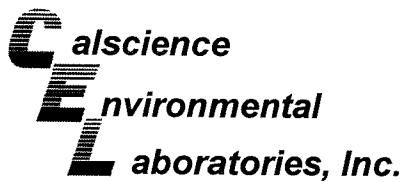
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-659-17	Aqueous	GC 14	N/A	07/21/08	080721L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Carbon Dioxide	93	93	80-120	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit



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## Quality Control - LCS/LCS Duplicate

Analyst Signature  
Date: 08/07/08

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3330 Cameron Park Drive, Suite 550  
Cameron Park, CA 95682-8861

Date Received:	N/A
Work Order No:	08-07-1409
Preparation:	N/A
Method:	RSK-175M

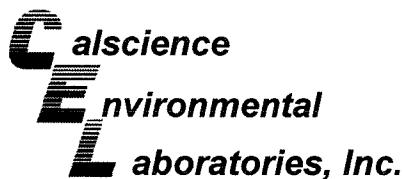
Project: ARCO 11133

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-663-234	Aqueous	GC 14	N/A	07/22/08	080722L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Methane	96	92	79-109	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate



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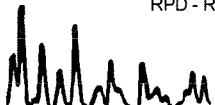
Date Received: N/A  
Work Order No: 08-07-1409  
Preparation: EPA 3010A Total  
Method: EPA 200.7

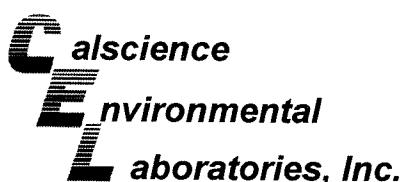
Project: ARCO 11133

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-01-012-3,509	Aqueous	ICP 5300	07/17/08	07/18/08	080717LA11

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Manganese	102	105	85-115	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate

ARCO 11133

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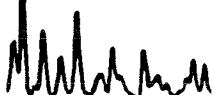
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Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: ARCO 11133

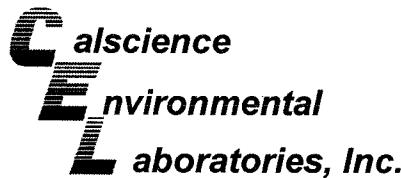
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-200	Aqueous	GC 4	07/18/08	07/18/08	080718B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	83	81	78-120	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit



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## Quality Control - LCS/LCS Duplicate

ANALYST: [Signature]  
Date: [Signature]

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

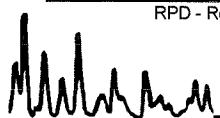
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Work Order No: 08-07-1409  
Preparation: EPA 5030B  
Method: EPA 8260B

Project: ARCO 11133

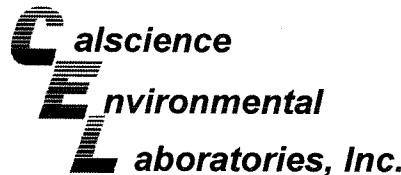
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-334	Aqueous	GC/MS L	07/24/08	07/24/08	080724L02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	107	105	87-117	2	0-7	
Carbon Tetrachloride	118	116	78-132	1	0-8	
Chlorobenzene	105	105	88-118	0	0-8	
1,2-Dibromoethane	102	105	80-120	3	0-20	
1,2-Dichlorobenzene	110	108	88-118	2	0-8	
1,1-Dichloroethene	113	113	71-131	0	0-14	
Ethylbenzene	112	109	80-120	3	0-20	
Toluene	106	105	85-127	1	0-7	
Trichloroethene	107	107	85-121	0	0-11	
Vinyl Chloride	114	113	64-136	1	0-10	
Methyl-t-Butyl Ether (MTBE)	99	102	67-133	3	0-16	
Tert-Butyl Alcohol (TBA)	82	86	34-154	4	0-19	
Diisopropyl Ether (DIPE)	103	103	80-122	0	0-8	
Ethyl-t-Butyl Ether (ETBE)	101	103	73-127	2	0-11	
Tert-Amyl-Methyl Ether (TAME)	96	97	69-135	1	0-12	
Ethanol	87	93	34-124	6	0-44	

RPD - Relative Percent Difference , CL - Control Limit



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## Quality Control - LCS/LCS Duplicate

ANALYSIS ACCORDING  
TO THE METHODS  
STATED ON THIS FORM  
ARE UNAUDITED  
AND ARE FOR INFORMATION  
ONLY.

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

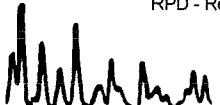
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Work Order No: 08-07-1409  
Preparation: EPA 5030B  
Method: EPA 8260B

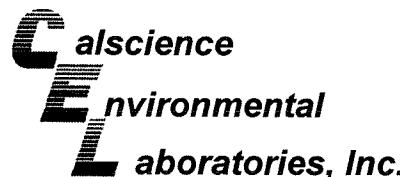
Project: ARCO 11133

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-336	Aqueous	GC/MS L	07/25/08	07/25/08	080725L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	104	103	87-117	0	0-7	
Carbon Tetrachloride	95	95	78-132	1	0-8	
Chlorobenzene	105	104	88-118	1	0-8	
1,2-Dibromoethane	108	109	80-120	1	0-20	
1,2-Dichlorobenzene	111	110	88-118	1	0-8	
1,1-Dichloroethene	98	98	71-131	0	0-14	
Ethylbenzene	108	108	80-120	1	0-20	
Toluene	109	109	85-127	0	0-7	
Trichloroethene	101	102	85-121	1	0-11	
Vinyl Chloride	106	105	64-136	1	0-10	
Methyl-t-Butyl Ether (MTBE)	109	108	67-133	1	0-16	
Tert-Butyl Alcohol (TBA)	105	109	34-154	3	0-19	
Diisopropyl Ether (DIPE)	100	106	80-122	6	0-8	
Ethyl-t-Butyl Ether (ETBE)	111	111	73-127	0	0-11	
Tert-Amyl-Methyl Ether (TAME)	112	115	69-135	2	0-12	
Ethanol	116	105	34-124	10	0-44	

RPD - Relative Percent Difference , CL - Control Limit





## Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.  
3330 Cameron Park Drive, Suite 550  
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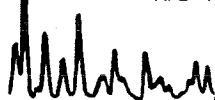
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Work Order No: 08-07-1409  
Preparation: EPA 5030B  
Method: EPA 8260B

Project: ARCO 11133

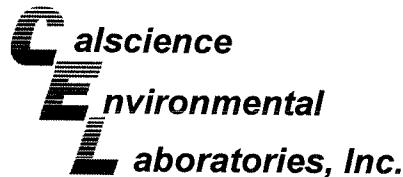
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-340	Aqueous	GC/MS L	07/26/08	07/26/08	080726L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	96	97	87-117	0	0-7	
Carbon Tetrachloride	91	91	78-132	0	0-8	
Chlorobenzene	100	102	88-118	2	0-8	
1,2-Dibromoethane	100	99	80-120	1	0-20	
1,2-Dichlorobenzene	105	106	88-118	1	0-8	
1,1-Dichloroethene	92	92	71-131	0	0-14	
Ethylbenzene	104	107	80-120	3	0-20	
Toluene	105	107	85-127	2	0-7	
Trichloroethene	95	95	85-121	0	0-11	
Vinyl Chloride	99	104	64-136	5	0-10	
Methyl-t-Butyl Ether (MTBE)	101	98	67-133	4	0-16	
Tert-Butyl Alcohol (TBA)	90	88	34-154	2	0-19	
Diisopropyl Ether (DIPE)	93	91	80-122	3	0-8	
Ethyl-t-Butyl Ether (ETBE)	102	99	73-127	3	0-11	
Tert-Amyl-Methyl Ether (TAME)	106	106	69-135	0	0-12	
Ethanol	90	90	34-124	1	0-44	

RPD - Relative Percent Difference , CL - Control Limit



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## Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.  
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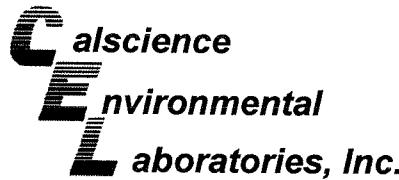
Date Received: N/A  
Work Order No: 08-07-1409

Project: ARCO 11133

**Matrix: Aqueous**

Parameter	Method	Quality Control Sample ID	Date Extracted	Date Analyzed	LCS % REC	LCSD % REC	%REC CL	RPD	RPD CL	Qual
Nitrate (as N)	EPA 300.0	099-05-118-4,634	N/A	07/16/08	96	94	87-111	1	0-12	
Sulfate	EPA 300.0	099-05-118-4,634	N/A	07/16/08	101	100	89-107	1	0-13	

RPD - Relative Percent Difference , CL - Control Limit



## Glossary of Terms and Qualifiers

Work Order Number: 08-07-1409

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



## Chain of Custody Record

Project Name: ARCO 11133

BP BU/AR Region/Envos Segment:

BP > Americas > West > Retail > Alameda > 11

State or Lead Regulatory Agency:

Requested Due Date (mm/dd/yy):

1409

Page 1 of 2

On-site Time:	5:52	Temp:	76
Off-site Time:	11:30	Temp:	85
Sky Conditions:	clear		
Meteorological Events:	NA		
Wind Speed:	0	Direction:	NA

Address: 7440 Lincoln Way Garden Grove, CA 92841				BP/AR Facility No.: 11133 BP/AR Facility Address: 2220 98th Avenue, Oakland Site Lat/Long:				Consultant/Contractor: Stratus Environmental, Inc. Address: 3330 Cameron Park Drive, Suite 550 Cameron Park, CA 95682																
Lab PM: Linda Scharpenberg Tele/Fax: 714-895-5494 714-895-7501(fax)				California Global ID No.: T0600100210 Envos Project No.: G07TT-0042 Provision or OOC (circle one) Provision				Consultant/Contractor Project No.: Consultant/Contractor PM: Jay Johnson Tele/Fax: (530) 676-6000 / (530) 676-6005 Report Type & QC Level: Level I with EDF E-mail EDD To: bcarrol@stratusinc.net Invoice to: Atlantic Richfield Co.																
BP/AR PM Contact: Paul Supple Address: 2010 Crow Canyon Place, Suite 150 San Ramon, CA Tele/Fax: 925-275-3506				Phase/WBS: 04-Monitoring Sub Phase/Task: 03-Analytical Cost Element: 01-Contractor labor																				
Lab Bottle Order No:				Matrix				Preservative				Requested Analysis												
Item No.	Sample Description	Time	Date	Soil/Solid	Water/Liquid	Air	Laboratory No.	No. of Containers	Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Merchandise	GRO/IBTEX/Oxy* by 8260	1,2-DCA by 8260	Ethanol by 8260	EDB by 8260	Nitrate and Sulfate (EPA 300)	Manganese (EPA 200.7)	Dissolved Silicate (EPA 376.2)	Methane and Carbon Dioxide (RS Kerr 175)	Alkalinity (EPA 310.1)		
1	MW-1	11:17	7/15/08	X				12						X	X	X	X	X	X	X	X	X	X	
2	MW-3	10:53		X				12						X	X	X	X	X	X	X	X	X	X	
3	AW-1	9:52		X				12						X	X	X	X	X	X	X	X	X	X	
4	AW-2	8:17		X				12						X	X	X	X	X	X	X	X	X	X	
5	AW-4	8:40		X				12						X	X	X	X	X	X	X	X	X	X	
6	AW-5	9:27		X				12						X	X	X	X	X	X	X	X	X	X	
7	AW-6	9:05		X				12						X	X	X	X	X	X	X	X	X	X	
8	RW-1	10:33		X				12						X	X	X	X	X	X	X	X	X	X	
9	VEW-1							12						X	X	X	X	X	X	X	X	X	X	
10	VEW-4	10:11	V	X				12						X	X	X	X	X	X	X	X	X	X	
Sampler's Name: ROBERTO HEIMLICH Sampler's Company: DOULOS ENVI				Relinquished By / Affiliation				Date	Time	Accepted By / Affiliation				Date	Time									
Shipment Date:																								
Shipment Method: 105867026				PEEL OFF HERE																				
Shipment Tracking No:				GSD						116-08 1015 Wobath														
Special Instructions: Please cc results to rmiller@broadbentinc.com																								
Custody Seals In Place: Yes / No				Temp Blank: Yes / No				Cooler Temp on Receipt: °F/C				Trip Blank: Yes / No				MS/MSD Sample Submitted: Yes / No								



## Chain of Custody Record

Project Name: ARCO 11133

BP BU/AR Region/Enfos Segment:

State or Lead Regulatory Agency:

Requested Due Date (mm/dd/yy):

(1409)

Page 2 of 2

On-site Time:	5:52	Temp:	76
Off-site Time:	11:30	Temp:	85
Sky Conditions:	clear		
Meteorological Events:	NA		
Wind Speed:	0	Direction:	NA

Lab Name: Calscience	BP/AR Facility No.: 11133	Consultant/Contractor: Stratus Environmental, Inc.
Address: 7440 Lincoln Way Garden Grove, CA 92841	BP/AR Facility Address: 2220 98th Avenue, Oakland	Address: 3330 Cameron Park Drive, Suite 550 Cameron Park, CA 95682
Lab PM: Linda Scharpenberg	Site Lat/Long:	Consultant/Contractor Project No.:
Tele/Fax: 714-895-5494 714-895-7501(fax)	California Global ID No.: T0600100210	Consultant/Contractor PM: Jay Johnson
BP/AR PM Contact: Paul Supple	Enfos Project No.: G07TT-0042	Tele/Fax: (530) 676-6000 / (530) 676-6005
Address: 2010 Crow Canyon Place, Suite 150 San Ramon, CA	Provision or OOC (circle one) Provision	Report Type & QC Level: Level I with EDF
Tele/Fax: 925-275-3506	Phase/WBS: 04-Monitoring	E-mail EDD To: bcarrol@stratusinc.net
Lab Bottle Order No:	Sub Phase/Task: 03-Analytical	Invoice to: Atlantic Richfield Co.
	Cost Element: 01-Contractor labor	

Item No.	Sample Description	Time	Date	Matrix	Laboratory No.	No. of Containers	Preservative	Requested Analysis								Sample Point Lat/Long and Comments Oxy* = MTBE, TAME, ETBE, DIPE, TBA	
								CRO/TEX/Oxy* by 8260	1,2-DCA by 8260	Ethanol by 8260	EDB by 8260	Nitrate and Sulfate (EPA 300)	Manganese (EPA 200.7)	Dissolved Sulfide (EPA 376.2)	Methane and Carbon Dioxide (FS Kerr 175)	Alkalinity (EPA 310.1)	
10	TB-11133 7/15/08	6:00	7/15/08	X		2	Unpreserved										HOLD
2								X	X	X	X	X	X	X	X		
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler's Name: ROBERTO NEIMICH  
Sampler's Company: DOULOS ENV.

Shipment Date:

Shipment Method:

Shipment Tracking No: 105867025

Special Instructions:

Please cc results to rmiller@broadbentinc.com

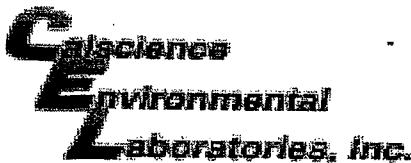
GSO

7-16-08 10:55

Woburn MA

7-16-08 10:55

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 #: 08 -   -    Cooler 1 of 1

## SAMPLE RECEIPT FORM

CLIENT: STRATUSDATE: 7-16-08**TEMPERATURE – SAMPLES RECEIVED BY:****CALSCIENCE COURIER:**

- Chilled, cooler with temperature blank provided.
  - Chilled, cooler without temperature blank.
  - Chilled and placed in cooler with wet ice.
  - Ambient and placed in cooler with wet ice.
  - Ambient temperature (For Air & Filter only).
- °C Temperature blank.

**LABORATORY (Other than Calscience Courier):**

- 4.2 °C Temperature blank.
- °C IR thermometer.
- Ambient temperature (For Air & Filter only).

Initial: WB**CUSTODY SEAL INTACT:**Sample(s):       Cooler: /No (Not Intact) :       Not Present:       Initial: WB**SAMPLE CONDITION:**Yes        No        N/A       Chain-Of-Custody document(s) received with samples.....       Sampler's name indicated on COC.....       Sample container label(s) consistent with custody papers.....       Sample container(s) intact and good condition.....       Correct containers and volume for analyses requested.....       Proper preservation noted on sample label(s).....       VOA vial(s) free of headspace.....       Tedlar bag(s) free of condensation.....              Initial: WB**COMMENTS:**

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## ATTACHMENT

### **FIELD PROCEDURES FOR GROUNDWATER SAMPLING**

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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  $\mu\text{s}$  daily and 1413  $\mu\text{s}$  and 447  $\mu\text{s}$  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 CONFIRMATION**

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STATE WATER RESOURCES CONTROL BOARD

# GEOTRACKER ESI

UPLOADING A GEO\_WELL FILE

## SUCCESS

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

<u>Submittal Type:</u>	GEO_WELL
<u>Submittal Title:</u>	3Q08 GEO_WELL 11133
<u>Facility Global ID:</u>	T0600100210
<u>Facility Name:</u>	BP #11133
<u>File Name:</u>	GEO_WELL.zip
<u>Organization Name:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	9/9/2008 1:09:34 PM
<u>Confirmation Number:</u>	<b>9073360621</b>

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# GEOTRACKER ESI

UPLOADING A EDF FILE

## SUCCESS

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

Submittal Type: GWM\_R  
Submittal Title: 3Q08 GW Monitoring  
Facility Global ID: T0600100210  
Facility Name: BP #11133  
File Name: 08071409.zip  
Organization Name: Broadbent & Associates, Inc.  
Username: BROADBENT-C  
IP Address: 67.118.40.90  
Submittal Date/Time: 9/9/2008 1:10:19 PM  
Confirmation Number: 7515532553

[VIEW QC REPORT](#)

[VIEW DETECTIONS REPORT](#)

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