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8:31 am, May 03, 2011  
Alameda County  
Environmental Health

ARCADIS U.S., Inc.  
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San Francisco, California 94104  
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Fax 415.374.2745  
[www.arcadis-us.com](http://www.arcadis-us.com)

Re: First Quarter 2011 Monitoring Report  
Former BP Station #11133  
2220 98<sup>th</sup> Avenue  
Oakland, California  
ACEH Case #RO0000403

ENVIRONMENTAL

"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."

Date:  
04/29/2011

Submitted by:  
ARCADIS U.S., Inc.

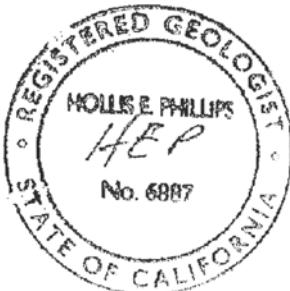
Hollis E. Phillips, PG  
Project Manager

Contact:  
Hollis E. Phillips

Phone:  
415.374.2744 ext 13

Email:  
[Hollis.phillips@arcadis-us.com](mailto:Hollis.phillips@arcadis-us.com)

Our ref:  
GP09BPNA.C107



Imagine the result

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



April 29, 2011

Project No. 09-88-656

ARCADIS-US, INC.  
100 Montgomery Street, Ste. 300  
San Francisco, CA 94104

Attn.: Ms. Hollis Phillips, PG

Re: First Quarter 2011 Monitoring Report, Former BP Service Station #11133, 2220 98<sup>th</sup> Avenue, Oakland, Alameda County, California; ACEH Case #RO0000403

Dear Ms. Phillips:

Attached is the First Quarter 2011 Monitoring Report for Former BP Service Station #11133 located at 2220 98<sup>th</sup> Avenue, Oakland, California. Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (530) 566-1400.

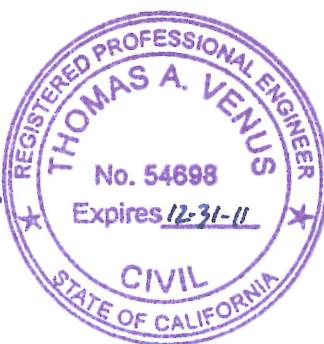
Sincerely,  
BROADBENT & ASSOCIATES, INC.

A handwritten signature in black ink that appears to read "Jason Duda".

Jason Duda  
Project Scientist

A handwritten signature in blue ink that appears to read "Thomas A. Venus".

Thomas A. Venus, P.E.  
Senior Engineer



Enclosures

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

**FIRST QUARTER 2011  
MONITORING REPORT  
FORMER BP SERVICE STATION #11133, OAKLAND, CALIFORNIA**

Broadbent & Associates, Inc. (BAI) is pleased to present this *First Quarter 2011 Monitoring Report* on behalf of ARCADIS-US, Inc. and Atlantic Richfield Company (a BP affiliated company) for Former BP Service Station #11133 located in Oakland, Alameda County, California. Monitoring activities at the site were performed in accordance with the reporting requirements issued by the Alameda County Environmental Health Services Agency (ACEH). Details of work performed, discussion of results, and recommendations are provided below.

Facility Name / Address:	Former BP Service Station #11133 / 2220 98 <sup>th</sup> Avenue, Oakland, CA
Client Project Manager / Title:	Ms. Hollis Phillips, PG
BAI Contact:	Jason Duda, (530) 566-1400
BAI Project No.:	09-88-656
Primary Regulatory Agency / ID No.:	ACEH, Case #RO0000403
Current phase of project:	Monitoring
List of Acronyms / Abbreviations:	See end of report text for list of acronyms/abbreviations used in report.

**WORK PERFORMED THIS QUARTER (First Quarter 2011):**

1. Submitted *Fourth Quarter 2010 Status Report*.
2. Conducted groundwater monitoring/sampling for First Quarter 2011 on February 22, 2011.

**WORK SCHEDULED FOR NEXT QUARTER (Second Quarter 2011):**

1. Submit *First Quarter 2011 Monitoring Report* (contained herein).
2. Collect confirmation samples for wells AW-1, AW-2 and MW-1.
3. ARCADIS will proceed with sulfate injection pilot testing activities dependent upon confirmation sampling results.

**ADDITIONAL WORK RECOMMENDED FOR NEXT QUARTER (Second Quarter 2011)**

1. None.

**GROUNDWATER MONITORING PLAN SUMMARY:**

Groundwater level gauging:	All wells	(Semi-Annually: 1Q & 3Q)
Groundwater sample collection:	MW-1,MW-3,AW-1,AW-4,AW-5, AW-6, & RW-1 AW-2	(Semi-Annually: 1Q & 3Q) (Annually: 3Q)
Biodegradation indicator parameter monitoring:	DO, pH, Total Alkalinity, NO <sub>3</sub> , SO <sub>4</sub> , Soluble Sulfide, CO <sub>2</sub> , CH <sub>4</sub> , Fe <sup>2+</sup> , Mn <sup>2+</sup>	

**QUARTERLY RESULTS SUMMARY:**

**LNAPL**

LNAPL observed this quarter:	None
LNAPL recovered this quarter:	None
Cumulative LNAPL recovered:	None

**Groundwater Elevation and Gradient:**

Depth to groundwater:	5.32 VW-3 to 18.25 AW-9	(ft below TOC)
Gradient direction:	North and West	(compass direction)
Gradient magnitude:	0.022 and 0.035	(ft/ft)
Average change in elevation:	-3.45	(ft since last measurement)

**Laboratory Analytical Data**

Summary:	GRO was detected in AW-4, MW-1 and RW-1. Ethylbenzene was detected in MW-1. MTBE was detected in AW-1, AW-4, AW-5, AW-6, MW-3 and RW-1. TBA was detected in AW-5. Other petroleum
----------	---

hydrocarbon constituents were below detection levels.

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## ACTIVITIES CONDUCTED & RESULTS:

First Quarter 2011 groundwater monitoring was conducted on February 22, 2011 by BAI personnel in accordance with the monitoring plan summary detailed above. Wells AW-8 and VW-2 were not monitored due to a car being parked over well AW-8 and the well head of VW-2 being full of water. Depth to water measurements ranged from 5.32 ft at VW-3 to 18.25 ft at AW-9. Resulting groundwater surface elevations ranged from 19.53 ft at AW-9 to 26.43 ft at MW-1. Groundwater elevations are summarized in Table 1. Water level elevations yielded a potentiometric groundwater flow direction and horizontal gradient to the North and West at approximately 0.022 and 0.035 ft/ft. Field methods used during groundwater monitoring are provided in Appendix A. Field data sheets are included in Appendix B. A Site Location Map is presented as Drawing 1. Potentiometric groundwater elevation contours are presented in Drawing 2.

Groundwater samples were collected on February 22, 2011, consistent with the current monitoring schedule. No irregularities were reported during sampling. Samples were submitted under chain-of-custody protocol to TestAmerica Laboratories, Inc. (Pleasanton, California) for analysis of Gasoline-Range Organics (GRO, C6-C12) by EPA Method 8015M; for Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX), Methyl Tertiary Butyl Ether (MTBE), Ethyl Tertiary Butyl Ether (ETBE), Tert-Amyl Methyl Ether (TAME), Di-Isopropyl Ether (DIPE), 1,2-Dibromomethane (EDB), 1,2-Dichloroethane (1,2-DCA), Tert-Butyl Alcohol (TBA) and Ethanol by EPA Method 8260. Additionally, certain inorganic compounds which are biodegradation indicator parameters were monitored during First Quarter 2011 to evaluate intrinsic bioremediation in groundwater. Indicator parameters monitored include the following: Alkalinity, DO, CO<sub>2</sub>, CH<sub>4</sub>, Fe<sup>2+</sup>, Mn<sup>2+</sup>, NO<sub>3</sub>, SO<sub>3</sub> and SO<sub>4</sub>. Temperature and pH were also measured to determine if the groundwater temperature and pH are conducive for biodegradation to occur. Temperature, pH, DO, were measured in the field. Fe<sup>2+</sup>, alkalinity, Soluble Sulfide, CO<sub>2</sub>, CH<sub>4</sub>, Mn<sup>2+</sup> NO<sub>3</sub> and SO<sub>4</sub> were submitted to TestAmerica Laboratories, Inc. for analysis. There were no significant irregularities except for the laboratory reported that the LCS or LCSD exceeded the control limits for TAME. The laboratory analytical report, including chain-of-custody documentation, is provided in Appendix C.

Hydrocarbons in the GRO range were detected above the laboratory reporting limit in three wells sampled at concentrations up to 1,400 micrograms per liter ( $\mu\text{g/L}$ , parts per billion, ppb) in well MW-1. Ethylbenzene was detected above the laboratory reporting limit in one of the wells sampled at a concentration of 0.92  $\mu\text{g/L}$  in well MW-1. MTBE was detected above the laboratory reporting limit in six wells sampled at concentrations up to 4.6  $\mu\text{g/L}$  in well AW-6. TBA was detected above the laboratory reporting limit in one of the wells sampled at concentrations up to 28  $\mu\text{g/L}$  in well AW-5. The remaining analytes were not detected above their laboratory reporting limits in the wells sampled this last monitoring event.

The resulting laboratory analysis of the inorganic compounds are as follows: CO<sub>2</sub> was detected in seven wells and concentrations ranged from 26 mg/L in well MW-3 to 130 mg/L in well AW-1; CH<sub>4</sub> was detected in six of the wells sampled and concentrations ranged from 0.0038 mg/L in well AW-6 to 1.5 mg/L in well AW-1; NO<sub>3</sub> was detected in one of the wells sampled at a concentration of 1.5 mg/L in well MW-3; SO<sub>3</sub> was detected in seven wells sampled and concentrations ranged from 2.6 mg/L in well AW-1 to 94 mg/L in well MW-1; Ferrous Iron was detected in five of the wells sampled and concentrations ranged from 0.64 mg/L in well RW-1 to 4.3 mg/L in well AW-4; Manganese was detected in seven wells sampled and concentrations ranged from 0.30 mg/L in well MW-3 to 5.4 mg/L in well AW-4. The alkalinity of the seven wells sampled ranged from 110 mg/L to 220 mg/L. Dissolved sulfide was not detected in samples from the seven wells. The pH readings of the seven wells sampled ranged from 6.28 to 6.60. The DO readings of the seven wells sampled ranged from 0.45 mg/L to 1.53 mg/L.

Groundwater monitoring laboratory analytical results are summarized in Table 1 and Table 2. The results of the laboratory analysis of the inorganic compounds can be found in the laboratory analytical report in Appendix C. The most recent GRO, Benzene, and MTBE concentrations are also presented in Drawing 2.

Groundwater monitoring data (GEO\_WELL) and laboratory analytical results (EDF) were uploaded to the GeoTracker AB2886 database. Upload confirmation receipts are provided in Appendix D.

## DISCUSSION:

Groundwater levels were between historic minimum and maximum elevations for each well monitored, except in AW-1 where it reached a historic maximum of 24.86 ft. A potential reason for this historic maximum might be the significant season precipitation prior to this monitoring and sampling event. Groundwater elevations yielded a variable potentiometric groundwater flow direction and horizontal gradient to the North and West at approximately 0.022 ft/ft and 0.035 ft/ft respectively. These are compared against a history of variable directions and gradients presented in Table 3.

This event's detected analytical concentrations were within the historic minimum and maximum ranges recorded for each well, with the following exceptions: GRO reached historic minimum in wells AW-1, MW-1, and RW-1 with concentrations of non-detect, 1,400 µg/L, and 170 µg/L respectively; Benzene reached historic minimum in well AW-1 with a concentration of non-detect; Toluene reached historic minimum in well AW-1 with a concentration of non-detect; MTBE reached historic minimum in wells AW-6 and RW-1 with concentrations of 4.6 µg/L and 0.54 µg/L respectively; TBA reached historic minimum in RW-1 and AW-5 with concentrations of non-detect and 28 µg/L respectively. Recent and historic laboratory analytical results are summarized in Table 1 and Table 2.

## RECOMMENDATIONS:

Based on the concentration trends observed in wells associated with the Site, it is recommended to continue the current monitoring schedule. Although biodegradation parameters provide some secondary, indirect evidence that natural attenuation is occurring, the concentrations still warrant monitoring at this time. The next semi-annual monitoring and sampling event is scheduled to be conducted during the Third Quarter of 2011.

## LIMITATIONS:

The findings presented in this report are based upon observations of field personnel, points investigated, results of laboratory tests performed by TestAmerica Laboratories, Inc. (Pleasanton, California), and our understanding of ACEH requirements. 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 ARCADIS-US, Inc. and Atlantic Richfield Company (a BP affiliated company). It is possible that variations in soil or groundwater conditions could exist beyond points explored in this investigation. Also, changes in site conditions could occur in the future due to variations in rainfall, temperature, regional water usage, or other factors.

## ATTACHMENTS:

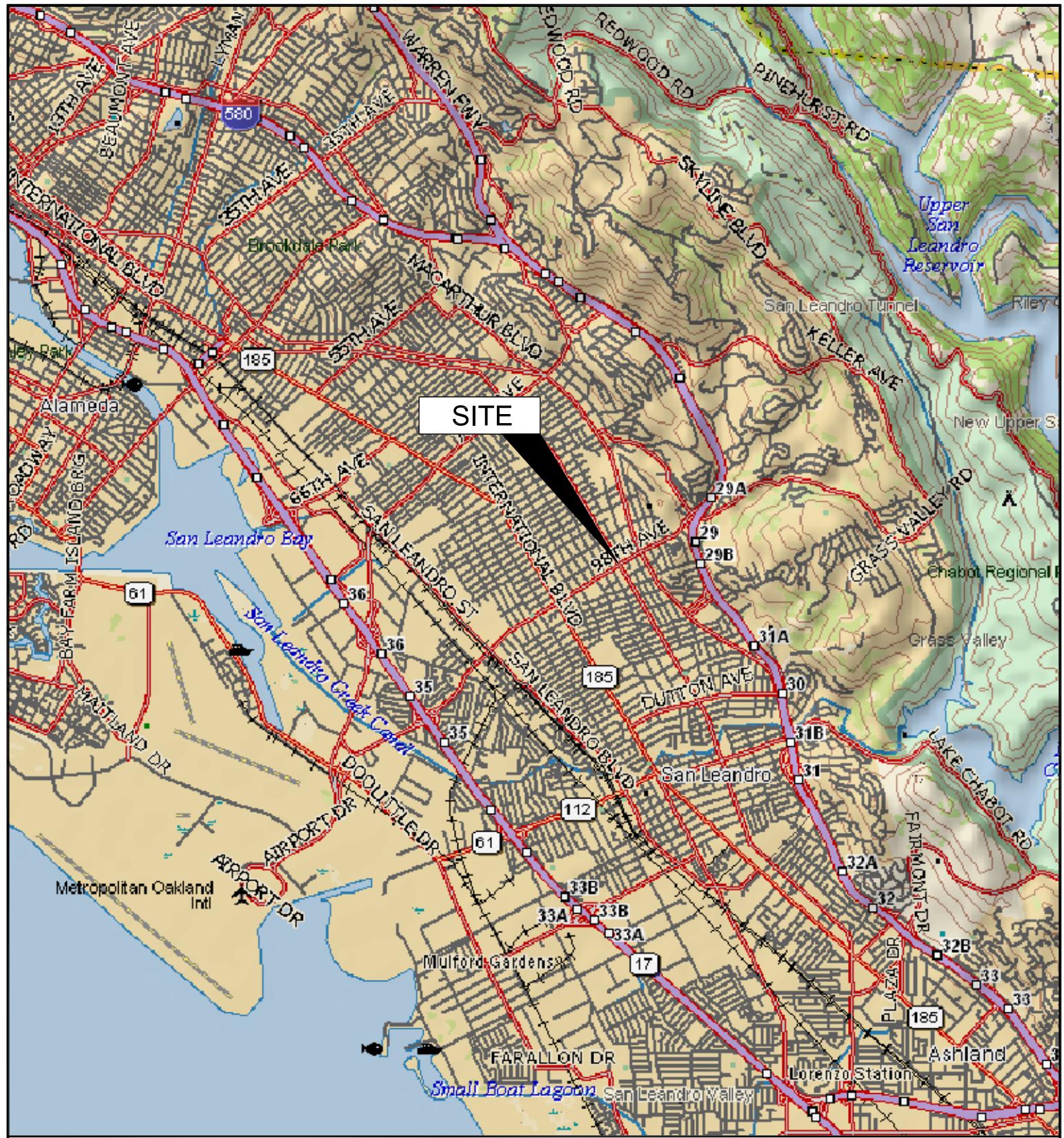
Drawing 1: Site Location Map  
Drawing 2: First Quarter 2011 Groundwater Elevation Contours and Analytical Summary Map, February 22, 2011

Table 1: Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses  
Table 2: Summary of Fuel Additives Analytical Data  
Table 3: Historical Groundwater Flow Direction and Gradient  
Table 4: Bio-Degradation Parameters

- Appendix A: Field Methods
- Appendix B: Field Data Sheets
- Appendix C: Laboratory Report and Chain-of-Custody Documentation
- Appendix D: GeoTracker Upload Confirmation Receipts

#### **LIST OF COMMONLY USED ACCRONYMS/ABBREVIATIONS:**

ACEH:	Alameda County Environmental Health	ft/ft:	feet per foot
BAI:	Broadbent & Associates, Inc.	gal:	Gallons
BTEX:	Benzene, Toluene, Ethylbenzene, Total Xylenes	GRO:	Gasoline-Range Organics
1,2-DCA:	1,2-Dichloroethane	LNAPL:	Light Non-Aqueous Phase Liquid
DIPE:	Di-Isopropyl Ether	MTBE:	Methyl Tertiary Butyl Ether
DO:	Dissolved Oxygen	NO <sub>3</sub> :	Nitrate as Nitrogen
DRO:	Diesel-Range Organics	ppb:	parts per billion
EDB:	1,2-Dibromomethane	SO <sub>4</sub> :	Sulfate
Eh:	Oxidation Reduction Potential	TAME:	Tert-Amyl Methyl Ether
EPA:	Environmental Protection Agency	TBA:	Tertiary Butyl Ether
ETBE:	Ethyl Tertiary Butyl Ether	TOC:	Top of Casing
Fe <sup>2+</sup> :	Ferrous Iron	µg/L:	micrograms per liter



0 1 2  
APPROXIMATE SCALE (mi)

IMAGE SOURCE: DELORME

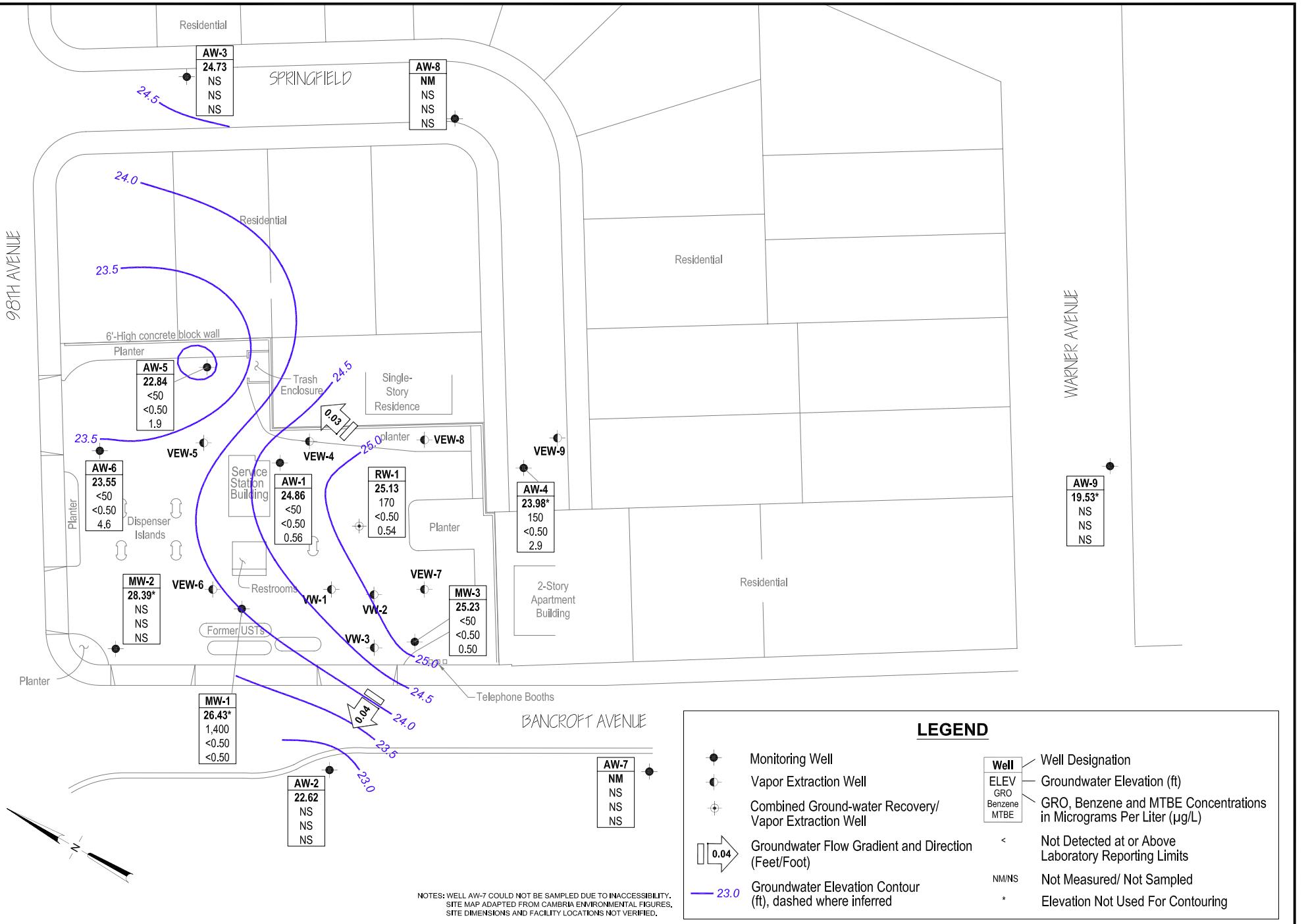


**BROADBENT & ASSOCIATES, INC.**  
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL  
1324 Mangrove Ave. Suite 212, Chico, California 95926  
Project No.: 06-88-656 Date: 9/30/2009

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

Site Location Map

Drawing 1



0 60 120  
  
 SCALE (ft)



**BROADBENT & ASSOCIATES, INC.**  
 ENGINEERING, WATER RESOURCES & ENVIRONMENTAL  
 1324 Mangrove Ave. Suite 212, Chico, California 95926  
 Project No.: 09-88-656 Date: 4/26/2011

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

Groundwater Elevation Contours  
 and Analytical Summary Map  
 22 February 2011

Drawing 2

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

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

Well and Sample Date	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH	Footnote
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>AW-1</b>														
4/5/1991	--	38.11	25.44	0.00	12.67	4,100	1,500	69	100	83	--	--	--	
4/1/1992	--		23.22	0.00	14.89	--	--	--	--	--	--	--	--	
4/2/1992	--		--	--	--	11,000	1,800	210	210	490	--	--	--	
7/6/1992	--		24.89	0.00	13.22	6,500	4,000	40	290	530	--	--	--	
10/7/1992	--		26.55	0.00	11.56	2,900	1,200	25	37	210	--	--	--	e
10/7/1992	--		26.55	0.00	11.56	4,700	1,500	41	47	300	--	--	--	
1/14/1993	--		23.73	0.00	14.38	4,100	1,700	28	130	230	--	--	--	m, e
1/14/1993	--		23.73	0.00	14.38	2,800	830	31	140	240	--	--	--	m
4/22/1993	--		--	--	--	39,000	14,000	530	1,800	6,100	987	--	--	c, m
7/15/1993	--		22.50	0.00	15.61	6,200	2,200	28	210	540	838	--	--	c, m
10/21/1993	--		24.32	0.00	13.79	2,400	820	13	55	120	832	--	--	c, m
1/27/1994	--		23.72	0.00	14.39	3,500	1,400	26	130	220	650	--	--	c, n
4/21/1994	--		22.48	0.00	15.63	40,000	12,000	1,900	1,600	5,000	1,119	1.4	--	m
9/9/1994	--		23.04	0.00	15.07	3,900	1,900	5.5	190	240	--	--	--	e
9/9/1994	--		23.04	0.00	15.07	3,500	1,600	5	200	250	--	2.1	--	m
12/21/1994	--		21.70	0.00	16.41	7,600	3,100	36	370	320	855	1.6	--	m
1/30/1995	--		17.71	0.00	20.40	35,000	23,000	650	3,200	4,100	--	1.7	--	
4/10/1995	--		20.04	0.00	18.07	56,000	17,000	2,000	3,900	10,000	--	--	--	e
4/10/1995	--		20.04	0.00	18.07	60,000	18,000	2,000	4,300	11,000	--	7.9	--	
6/29/1995	--		20.60	0.00	17.51	86,000	12,000	8,400	4,800	18,000	--	--	--	e
6/29/1995	--		20.60	0.00	17.51	72,000	10,000	7,300	4,200	15,000	--	6.2	--	
9/18/1995	--		21.87	0.00	16.24	--	--	--	--	--	--	--	--	
9/19/1995	--		--	--	--	65,000	12,000	3,100	4,400	14,000	1,000	8.5	--	
12/7/1995	--		22.06	0.00	16.05	25,000	8,700	<50	2,500	1,300	1,100	2.9	--	
3/28/1996	--		16.91	0.00	21.20	24,000	11,000	<100	3,200	3,390	<1000	6.6	--	
6/20/1996	--		20.82	0.00	17.29	38,000	6,900	1,100	3,200	7,300	<100	6.4	--	
10/11/1996	--		23.20	0.00	14.91	33,000	8,500	69	3,300	4,230	580	6.3	--	
1/2/1997	--		20.41	0.00	17.70	32,000	8,000	<50	3,100	2,300	700	6.7	--	
4/14/1997	--		21.61	0.00	16.50	--	--	--	--	--	--	--	--	
4/15/1997	--		--	--	--	31,000	5,000	160	2,400	4,540	340	5.4	--	

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

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

Well and Sample Date	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH	Footnote
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>AW-1 Cont.</b>														
7/2/1997	--	38.11	21.17	0.00	16.94	26,000	5,800	<100	2,600	2,200	<1000	6.2	--	
9/30/1997	--		21.48	0.00	16.63	29,000	9,200	17	1,400	130	560	6.9	--	
1/21/1998	--		20.02	0.00	18.09	50,000	6,900	450	3,200	4,450	720	5.8	--	
4/9/1998	--		13.37	0.00	24.74	--	--	--	--	--	--	--	--	
4/10/1998	--		--	--	--	46,000	5,800	1,900	3,000	7,400	1,000	4.3	--	
6/19/1998	--		19.12	0.00	18.99	43,000	6,800	260	3,100	3,490	620	--	--	e
6/19/1998	--		19.12	0.00	18.99	42,000	6,600	200	3,000	3,350	660	4.9	--	
11/30/1998	--		21.13	0.00	16.98	23,000	6,700	<25	3,100	130	710/820	--	--	g
1/21/1999	--		20.77	0.00	17.34	25,000	4,800	54	2,800	780	1,000	--	--	
4/30/1999	--		20.80	0.00	17.31	21,000	5,300	67	2,800	750	1,500	--	--	
7/9/1999	--		20.41	0.00	17.70	11,000	3,000	<10	760	180	1,300	--	--	
11/3/1999	--		20.82	0.00	17.29	--	--	--	--	--	--	--	--	
1/12/2000	--		19.99	0.00	18.12	330,000	5,300	10	2,900	560	2,200	--	--	
4/13/2000	--		20.14	0.00	17.97	--	--	--	--	--	--	--	--	
5/24/2000	--		20.17	0.00	17.94	--	--	--	--	--	--	--	--	
6/1/2000	--		23.05	0.00	15.06	--	--	--	--	--	--	--	--	
6/8/2000	--		17.08	0.00	21.03	--	--	--	--	--	--	--	--	
6/15/2000	--		16.93	0.00	21.18	--	--	--	--	--	--	--	--	
7/26/2000	--		20.07	0.00	18.04	15,000	290	98	77	220	37,000	--	--	
10/24/2000	--		20.10	0.00	18.01	--	--	--	--	--	--	--	--	
1/19/2001	--		19.82	0.00	18.29	7,600	2,220	10.9	415	58.4	1,630	--	--	
7/24/2001	--		19.86	0.00	18.25	9,600	2,140	6.34	281	43	1,440	--	--	
1/18/2002	--		15.60	0.00	22.51	20,000	2,170	75.2	1,800	2,080	1,250	--	--	
8/1/2002	--		19.55	0.00	18.56	14,000	2,150	<12.5	197	42.4	1,120	--	--	
1/16/2003	--		16.32	0.00	21.79	15,000	2,300	75	1,600	1,800	1,100	--	--	p
7/7/2003	--		19.80	0.00	18.31	9,700	1,600	<25	540	110	1,100	--	--	q, u
02/05/2004	--		18.75	0.00	19.36	12,000	2,000	<50	820	590	930	--	6.7	
07/01/2004	P		19.72	0.00	18.39	9,900	2,600	<25	300	<25	1,100	--	6.5	
03/16/2005	P		18.78	0.00	19.33	10,000	1,100	30	630	560	720	0.8	6.7	
07/22/2005	P		15.53	0.00	22.58	8,000	770	5.4	520	50	510	--	6.5	

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

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

Well and Sample Date	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH	Footnote
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>AW-1 Cont.</b>														
01/25/2006	P	38.11	18.10	0.00	20.01	6,400	1,200	10	490	290	490	--	7.0	
7/6/2006	P		17.44	0.00	20.67	6,200	1,300	70	570	180	270	--	6.8	
1/8/2007	P		16.74	0.00	21.37	3700	690	19	110	30	380	2.53	6.77	
7/10/2007	P		17.30	0.00	20.81	4,200	560	12	93	40	220	1.79	6.90	
1/15/2008	P		15.96	0.00	22.15	5,000	670	<10	490	200	230	0.92	6.91	
7/15/2008	P		18.63	0.00	19.48	3,400	340	4.5	27	17	<0.50	1.80	6.79	
10/21/2008	P		19.96	0.00	18.15	1,900	160	<5.0	15	<5.0	120	2.40	7.01	
1/6/2009	P		19.13	0.00	18.98	5,000	670	<5.0	84	<5.0	170	1.37	6.09	
4/21/2009	P		16.96	0.00	21.15	7,900	510	<10	90	46	160	2.29	7.28	
7/21/2009	P		18.72	0.00	19.39	5,900	560	<10	92	10	170	17.46	7.23	y
3/18/2010	P		13.84	0.00	24.27	4,900	260	<10	540	180	<10	0.68	6.57	
7/29/2010	NP		16.95	0.00	21.16	3,100	120	1.1	88	5.9	<0.50	0.92	7.4	
11/12/2010	--		18.92	0.00	19.19	--	--	--	--	--	--	--	--	
<b>2/22/2011</b>	<b>NP</b>		<b>13.25</b>	<b>0.00</b>	<b>24.86</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>0.56</b>	<b>0.75</b>	<b>6.28</b>	
<b>AW-2</b>														
4/5/1991	--	36.83	22.36	0.00	14.47	<50	<0.3	<0.3	<0.3	<0.3	--	--	--	
4/1/1992	--		20.81	0.00	16.02	--	--	--	--	--	--	--	--	
4/2/1992	--		--	--	--	130	25	2.3	0.7	2.1	--	--	--	
7/6/1992	--		23.57	0.00	13.26	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	
10/7/1992	--		25.24	0.00	11.59	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	
1/14/1993	--		20.82	0.00	16.01	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	m
4/22/1993	--		19.37	0.00	17.46	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	m
7/15/1993	--		21.29	0.00	15.54	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	m
10/21/1993	--		23.14	0.00	13.69	<50	1.3	1.1	0.9	2.1	<5.0	--	--	m
1/27/1994	--		22.34	0.00	14.49	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	m
4/21/1994	--		21.15	0.00	15.68	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.0	--	m
9/9/1994	--		22.09	0.00	14.74	<50	<0.5	<0.5	<0.5	<0.5	--	4.1	--	m
12/21/1994	--		20.12	0.00	16.71	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.0	--	m
1/30/1995	--		16.65	0.00	20.18	<50	<0.50	<0.50	<0.50	<1.0	--	2.5	--	
4/10/1995	--		16.22	0.00	20.61	<50	<0.50	<0.50	<0.50	<1.0	--	4.4	--	

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

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Well and Sample Date	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH	Footnote
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
AW-2 Cont.														
6/29/1995	--	36.83	17.55	0.00	19.28	<50	<0.50	<0.50	<0.50	<1.0	--	7.8	--	
9/18/1995	--		19.87	0.00	16.96	--	--	--	--	--	--	--	--	
9/19/1995	--		--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	e
9/19/1995	--		--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	4.5	--	
12/7/1995	--		21.31	0.00	15.52	<50	<0.50	<0.50	<0.50	<1.0	<5.0	4.9	--	
3/28/1996	--		15.61	0.00	21.22	<50	<0.5	<1	<1	<1	<10	4.1	--	
6/20/1996	--		16.30	0.00	20.53	<50	<0.5	<1	<1	<1	<10	5.2	--	
10/11/1996	--		19.60	0.00	17.23	<50	<0.5	<1.0	<1.0	<1.0	<10	6.0	--	
1/2/1997	--		15.97	0.00	20.86	<50	<0.5	<1.0	<1.0	<1.0	<10	6.1	--	
4/14/1997	--		17.19	0.00	19.64	<50	<0.5	<1.0	<1.0	<1.0	<10	5.3	--	
7/2/1997	--		18.11	0.00	18.72	<50	<0.5	<1.0	<1.0	<1.0	<10	5.7	--	
9/30/1997	--		18.52	0.00	18.31	<50	<0.5	<1.0	<1.0	<1.0	860	5.4	--	
1/21/1998	--		14.46	0.00	22.37	160	13	<1.0	<1.0	<1.0	110	4.9	--	
4/9/1998	--		12.85	0.00	23.98	--	--	--	--	--	--	--	--	
4/10/1998	--		--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<10	3.9	--	
6/19/1998	--		14.37	0.00	22.46	60	<0.5	<1.0	<1.0	<1.0	<10	3.6	--	
11/30/1998	--		16.90	0.00	19.93	--	--	--	--	--	--	--	--	
1/21/1999	--		16.87	0.00	19.96	<50	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
4/30/1999	--		17.01	0.00	19.82	--	--	--	--	--	--	--	--	
7/9/1999	--		17.83	0.00	19.00	--	--	--	--	--	--	--	--	
11/3/1999	--		19.74	0.00	17.09	--	--	--	--	--	--	--	--	
1/12/2000	--		19.90	0.00	16.93	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	
4/13/2000	--		19.75	0.00	17.08	--	--	--	--	--	--	--	--	
7/26/2000	--		19.86	0.00	16.97	--	--	--	--	--	--	--	--	
10/24/2000	--		18.77	0.00	18.06	--	--	--	--	--	--	--	--	
1/19/2001	--		--	--	--	--	--	--	--	--	--	--	--	f
7/24/2001	--		--	--	--	--	--	--	--	--	--	--	--	f
1/18/2002	--		15.17	0.00	21.66	<50	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	
8/1/2002	--		17.17	0.00	19.66	--	--	--	--	--	--	--	--	
1/16/2003	--		14.81	0.00	22.02	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	p

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						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>AW-2 Cont.</b>														
7/7/2003	--	36.83	16.65	0.00	20.18	--	--	--	--	--	--	--	--	
02/05/2004	--		15.37	0.00	21.46	<50	3.0	<0.50	<0.50	<0.50	5.1	--	6.6	
07/01/2004	--		17.55	0.00	19.28	--	--	--	--	--	--	--	--	
03/16/2005	P		14.58	0.00	22.25	<50	0.75	<0.50	1.1	1.1	<0.50	1.7	6.7	
07/22/2005	--		15.41	0.00	21.42	--	--	--	--	--	--	--	--	
01/25/2006	P		14.17	0.00	22.66	280	110	<1.0	3.9	8.7	12	--	7.1	
7/6/2006	--		14.00	0.00	22.83	--	--	--	--	--	--	--	--	
1/8/2007	P		15.85	0.00	20.98	1900	550	160	58	180	40	2.09	7.2	
7/10/2007	--		17.25	0.00	19.58	--	--	--	--	--	--	--	--	
1/15/2008	P		15.75	0.00	21.08	2,300	900	87	100	140	48	0.83	6.79	
7/15/2008	P		17.99	0.00	18.84	6,400	1,700	550	340	940	<50	2.14	7.05	
10/21/2008	P		19.19	0.00	17.64	2,600	580	96	110	180	16	1.65	7.33	
1/6/2009	P		18.45	0.00	18.38	2,100	440	54	67	110	11	0.84	6.94	
4/21/2009	P		16.05	0.00	20.78	3,400	600	140	99	190	10	1.89	7.42	
7/21/2009	P		18.07	0.00	18.76	3,200	550	150	98	220	13	9.29	7.32	y
3/18/2010	--		13.92	0.00	22.91	--	--	--	--	--	--	--	--	
7/29/2010	P		16.65	0.00	20.18	2,400	650	98	170	430	<2.5	0.62	7.4	
11/12/2010	--		18.10	0.00	18.73	--	--	--	--	--	--	--	--	
<b>2/22/2011</b>	--		<b>14.21</b>	<b>0.00</b>	<b>22.62</b>	--	--	--	--	--	--	--	--	
<b>AW-3</b>														
4/5/1991	--	39.13	23.90	0.00	15.23	5,200	980	450	95	310	--	--	--	
4/1/1992	--		22.50	0.00	16.63	4,700	890	47	43	110	--	--	--	
7/6/1992	--		23.26	0.00	15.87	3,900	3,100	30	80	99	--	--	--	
10/7/1992	--		24.75	0.00	14.38	5,000	2,600	<0.5	<0.5	59	--	--	--	
1/14/1993	--		23.59	0.00	15.54	350	250	<0.5	<0.5	<0.5	--	--	--	m
4/22/1993	--		19.42	0.00	19.71	240	71	2.4	0.6	4	--	--	--	m
7/15/1993	--		20.09	0.00	19.04	650	71	2.8	1.5	1.1	37.3	--	--	c, m
10/21/1993	--		21.88	0.00	17.25	170	6.1	2	1.7	4.4	--	--	--	e
10/21/1993	--		21.88	0.00	17.25	160	4.8	1.7	1.6	3.6	8.95	--	--	m
1/27/1994	--		22.33	0.00	16.80	90	2.9	0.5	<0.5	<0.5	--	--	--	e

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						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>AW-3 Cont.</b>														
1/27/1994	--	39.13	22.33	0.00	16.80	92	2.1	<0.5	<0.5	<0.5	7.37	--	--	m
4/21/1994	--		20.96	0.00	18.17	150	3.6	0.8	0.9	2.5	9.36	1.3	--	m
9/9/1994	--		21.60	0.00	17.53	53	<0.5	<0.5	<0.5	<0.5	--	1.9	--	m
12/21/1994	--		--	--	--	--	--	--	--	--	--	--	--	f
1/30/1995	--		--	--	--	--	--	--	--	--	--	--	--	f
4/10/1995	--		--	--	--	--	--	--	--	--	--	--	--	f
6/29/1995	--		15.41	0.00	23.72	<50	<0.50	<0.50	<0.50	<1.0	--	8.0	--	
9/18/1995	--		17.83	0.00	21.30	--	--	--	--	--	--	--	--	
9/19/1995	--		--	--	--	61,000	11,000	2,900	4,100	13,000	790	7.4	--	
12/7/1995	--		19.27	0.00	19.86	<50	<0.50	<0.50	<0.50	<1.0	<5.0	3.4	--	
12/7/1995	--		19.27	0.00	19.86	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	e
3/28/1996	--		13.85	0.00	25.28	<50	<0.5	<1	<1	<1	<10	--	--	e
3/28/1996	--		13.85	0.00	25.28	<50	<0.5	<1	<1	<1	<10	4.1	--	
6/20/1996	--		14.47	0.00	24.66	<50	<0.5	<1	<1	<1	<10	--	--	e
6/20/1996	--		14.47	0.00	24.66	<50	<0.5	<1	<1	<1	<10	4.2	--	
10/11/1996	--		17.97	0.00	21.16	<50	<0.5	<1.0	<1.0	<1.0	<10	--	--	e
10/11/1996	--		17.97	0.00	21.16	<50	<0.5	<1.0	<1.0	<1.0	<10	4.7	--	
1/2/1997	--		13.00	0.00	26.13	<50	<0.5	<1.0	<1.0	<1.0	<10	5.6	--	
4/14/1997	--		14.36	0.00	24.77	<50	<0.5	<1.0	<1.0	<1.0	<10	5.0	--	
4/15/1997	--		--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<10	--	--	e
7/2/1997	--		15.87	0.00	23.26	<50	<0.5	<1.0	<1.0	<1.0	<10	5.4	--	
9/30/1997	--		17.50	0.00	21.63	<250	<2.5	<5.0	<5.0	<5.0	810	5.7	--	
1/21/1998	--		11.98	0.00	27.15	150	<0.5	<1.0	<1.0	1.2	110	--	--	e
1/21/1998	--		11.98	0.00	27.15	140	<0.5	<1.0	<1.0	<1.0	99	4.6	--	
4/9/1998	--		9.45	0.00	29.68	--	--	--	--	--	--	--	--	
4/10/1998	--		--	--	--	<50	<0.5	<1.0	<1.0	1.6	<10	4.5	--	
4/10/1998	--		--	--	--	<50	<0.5	<1.0	1.4	1.7	<10	--	--	e
6/19/1998	--		12.13	0.00	27.00	<50	<0.5	<1.0	<1.0	<1.0	<10	4.4	--	
11/30/1998	--		15.91	0.00	23.22	--	--	--	--	--	--	--	--	
1/21/1999	--		15.93	0.00	23.20	<50	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	

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						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>AW-3 Cont.</b>														
4/30/1999	--	39.13	15.98	0.00	23.15	--	--	--	--	--	--	--	--	--
7/9/1999	--		14.58	0.00	24.55	--	--	--	--	--	--	--	--	--
11/3/1999	--		17.43	0.00	21.70	--	--	--	--	--	--	--	--	--
1/12/2000	--		18.30	0.00	20.83	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--
4/13/2000	--		18.89	0.00	20.24	--	--	--	--	--	--	--	--	--
7/26/2000	--		18.67	0.00	20.46	--	--	--	--	--	--	--	--	--
10/24/2000	--		18.98	0.00	20.15	--	--	--	--	--	--	--	--	--
1/19/2001	--		16.74	0.00	22.39	--	--	--	--	--	--	--	--	--
7/24/2001	--		18.55	0.00	20.58	--	--	--	--	--	--	--	--	--
1/18/2002	--		14.49	0.00	24.64	--	--	--	--	--	--	--	--	--
8/1/2002	--		14.27	0.00	24.86	--	--	--	--	--	--	--	--	--
1/16/2003	--		14.25	0.00	24.88	--	--	--	--	--	--	--	--	--
7/7/2003	--		14.70	0.00	24.43	--	--	--	--	--	--	--	--	--
02/05/2004	--		14.61	0.00	24.52	--	--	--	--	--	--	--	--	--
07/01/2004	--		15.62	0.00	23.51	--	--	--	--	--	--	--	--	--
03/16/2005	P		12.70	0.00	26.43	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	7.3	
07/22/2005	--		13.44	0.00	25.69	--	--	--	--	--	--	--	--	--
01/25/2006	--		13.56	0.00	25.57	--	--	--	--	--	--	--	--	--
7/6/2006	--		11.60	0.00	27.53	--	--	--	--	--	--	--	--	--
1/8/2007	--		14.97	0.00	24.16	--	--	--	--	--	--	--	--	--
7/10/2007	--		15.81	0.00	23.32	--	--	--	--	--	--	--	--	--
1/15/2008	--		15.97	0.00	23.16	--	--	--	--	--	--	--	--	--
7/15/2008	--		16.70	0.00	22.43	--	--	--	--	--	--	--	--	--
10/21/2008	--		18.16	0.00	20.97	--	--	--	--	--	--	--	--	--
1/6/2009	--		18.35	0.00	20.78	--	--	--	--	--	--	--	--	--
4/21/2009	--		15.57	0.00	23.56	--	--	--	--	--	--	--	--	--
7/21/2009	--		17.22	0.00	21.91	--	--	--	--	--	--	--	--	--
3/18/2010	--		14.25	0.00	24.88	--	--	--	--	--	--	--	--	--
7/29/2010	--		15.23	0.00	23.90	--	--	--	--	--	--	--	--	--
11/12/2010	--		17.12	0.00	22.01	--	--	--	--	--	--	--	--	--

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						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
AW-3 Cont.						--	--	--	--	--	--	--	--	
2/22/2011	--	39.13	14.40	0.00	24.73	--	--	--	--	--	--	--	--	
AW-4														
4/5/1991	--	39.08	25.12	0.00	13.96	110,000	40,000	13,000	2,000	5,500	--	--	--	
4/1/1992	--		23.56	0.00	15.52	210,000	55,000	23,000	2,900	7,000	--	--	--	e
4/1/1992	--		23.56	0.00	15.52	230,000	57,000	31,000	2,900	7,600	--	--	--	
7/6/1992	--		25.87	0.00	13.21	38,000	16,000	5,400	2,000	6,100	--	--	--	
10/7/1992	--		27.53	0.00	11.55	120,000	41,000	26,000	4,700	13,000	--	--	--	
1/14/1993	--		24.12	0.00	14.96	62,000	18,000	14,000	2,700	7,700	1,400	--	--	c, m
4/22/1993	--		21.47	0.00	17.61	18,000	1,100	2,100	320	3,500	--	--	--	m
7/15/1993	--		23.30	0.00	15.78	21,000	820	2,300	590	3,800	1,978	--	--	c, m
10/21/1993	--		25.08	0.00	14.00	11,000	570	83	630	2,300	4,600	--	--	c, m
1/27/1994	--		24.61	0.00	14.47	12,000	420	460	600	2,200	6,400	--	--	c, m
4/21/1994	--		22.96	0.00	16.12	14,000	71	160	29	1,200	13,000	--	--	c, e
4/21/1994	--		22.96	0.00	16.12	12,000	110	250	150	1,900	16,010	1.5	--	c, m
9/9/1994	--		23.85	0.00	15.23	9,700	75	64	280	2,000	--	2.1	--	m
12/21/1994	--		--	--	--	--	--	--	--	--	--	--	--	f
1/30/1995	--		--	--	--	--	--	--	--	--	--	--	--	f
4/10/1995	--		18.07	0.00	21.01	3,700	69	8.7	44	130	--	8.5	--	
6/29/1995	--		19.25	0.00	19.83	8,000	62	190	190	1,100	--	7.5	--	
9/18/1995	--		20.73	0.00	18.35	--	--	--	--	--	--	--	--	
9/19/1995	--		--	--	--	12,000	660	1,600	200	1,900	7,100	8.3	--	
12/7/1995	--		22.49	0.00	16.59	41,000	8,400	7,200	710	6,300	5,200	3.6	--	
3/28/1996	--		16.49	0.00	22.59	--	--	--	--	--	--	--	--	f
6/20/1996	--		16.00	0.00	23.08	<50	<0.5	<1	<1	<1	12	--	--	
10/11/1996	--		19.52	0.00	19.56	36,000	12,000	5,500	<25	3,800	880/1000	6.2	--	g
1/2/1997	--		15.80	0.00	23.28	<50	61	3.8	3.5	8.1	110	--	--	e
1/2/1997	--		15.80	0.00	23.28	<50	<0.5	<1.0	<1.0	<1.0	22	6.4	--	
4/14/1997	--		17.01	0.00	22.07	--	--	--	--	--	--	--	--	
4/15/1997	--		--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<10	5.4	--	
7/2/1997	--		19.68	0.00	19.40	<50	21	<1.0	<1.0	<1.0	41	4.1	--	

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

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

Well and Sample Date	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH	Footnote
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
AW-4 Cont.						--	--	--	--	--	--	--	--	f
9/30/1997	--	39.08	22.71	0.00	16.37	--	--	--	--	--	--	--	--	
1/21/1998	--		15.89	0.00	23.19	13,000	2,900	<10	230	314	3,100	3.9	--	
4/9/1998	--		13.50	0.00	25.58	--	--	--	--	--	--	--	--	
4/10/1998	--		--	--	--	890	<0.5	<1	<1	<1	730	4.9	--	
6/19/1998	--		14.75	0.00	24.33	60	<0.5	<1.0	<1.0	<1.0	34	4.3	--	
11/30/1998	--		19.25	0.00	19.83	--	--	--	--	--	--	--	--	
1/21/1999	--		18.94	0.00	20.14	3,700	830	93	200	360	30	--	--	
4/30/1999	--		19.10	0.00	19.98	--	--	--	--	--	--	--	--	
7/9/1999	--		18.93	0.00	20.15	76,000	12,000	6,600	2,000	8,700	320	--	--	
11/3/1999	--		20.65	0.00	18.43	--	--	--	--	--	--	--	--	
1/12/2000	--		21.21	0.00	17.87	67,000	12,000	3,500	2,900	15,000	280	--	--	
4/13/2000	--		21.33	0.00	17.75	--	--	--	--	--	--	--	--	
5/24/2000	--		19.84	0.00	19.24	--	--	--	--	--	--	--	--	
6/1/2000	--		19.04	0.00	20.04	--	--	--	--	--	--	--	--	
6/8/2000	--		18.32	0.00	20.76	--	--	--	--	--	--	--	--	
6/15/2000	--		16.70	0.00	22.38	--	--	--	--	--	--	--	--	
7/26/2000	--		21.50	0.00	17.58	910	<0.5	<0.5	<0.5	<0.5	3,500	--	--	
10/24/2000	--		22.00	0.00	17.08	--	--	--	--	--	--	--	--	
1/19/2001	--		18.97	0.00	20.11	6,600	2,460	24	497	534	267	--	--	
7/24/2001	--		18.55	0.00	20.53	5,100	1,080	143	409	827	115	--	--	
1/18/2002	--		17.22	0.00	21.86	3,900	442	241	157	681	85.3	--	--	
8/1/2002	--		--	--	--	--	--	--	--	--	--	--	--	f
1/16/2003	--		16.85	0.00	22.23	2,900	260	160	120	590	<120	--	--	p
7/7/2003	--		17.94	0.00	21.14	600	90	7.9	18	36	56	--	--	q
02/05/2004	--		16.94	0.00	22.14	420	40	3.1	15	27	40	--	6.8	
07/01/2004	P		18.24	0.00	20.84	6,000	970	200	310	1,500	64	--	6.7	
03/16/2005	P		16.16	0.00	22.92	3,600	71	31	200	870	23	0.6	6.5	
07/22/2005	P		15.89	0.00	23.19	4,800	750	48	300	840	59	--	6.7	
01/25/2006	P		15.48	0.00	23.60	<500	13	<5.0	14	62	12	--	7.0	
7/6/2006	P		14.87	0.00	24.21	2,800	430	21	230	680	39	--	6.7	

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Well and Sample Date	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH	Footnote
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>AW-4 Cont.</b>														
1/8/2007	P	39.08	16.48	0.00	22.60	190	6.6	<0.50	4.1	14	38	3.00	6.80	
7/10/2007	P		17.95	0.00	21.13	160	2.7	<0.50	0.90	1.0	27	2.54	7.19	
1/15/2008	P		17.70	0.00	21.38	150	<0.50	<0.50	0.71	<0.50	17	1.30	6.75	
7/15/2008	P		18.74	0.00	20.34	250	44	1.1	44	78	25	2.64	6.91	
10/21/2008	P		20.07	0.00	19.01	270	1.6	<1.0	<1.0	<1.0	18	1.54	7.25	
1/6/2009	P		19.45	0.00	19.63	230	0.88	<0.50	<0.50	<0.50	8.3	0.70	6.31	
4/21/2009	P		17.00	0.00	22.08	260	4.6	1.6	21	28	4.1	3.51	7.48	
7/21/2009	P		18.96	0.00	20.12	200	4.8	<0.50	6.9	2.8	8.6	6.14	7.04	y
3/18/2010	P		14.92	0.00	24.16	240	<0.50	<0.50	15	21	2.5	0.79	6.71	
7/29/2010	NP		17.34	0.00	21.74	290	25	<0.50	14	6.5	<0.50	1.07	7.2	
11/12/2010	--		19.10	0.00	19.98	--	--	--	--	--	--	--	--	
<b>2/22/2011</b>	<b>NP</b>		<b>15.10</b>	<b>0.00</b>	<b>23.98</b>	<b>150</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>2.9</b>	<b>0.65</b>	<b>6.51</b>	
<b>AW-5</b>														
4/5/1991	--	38.51	25.48	0.00	13.03	420	31	7.5	20	68	--	--	--	
4/1/1992	--		23.95	0.00	14.56	--	--	--	--	--	--	--	--	
4/2/1992	--		--	--	--	4,000	270	63	190	290	--	--	--	
7/6/1992	--		26.48	0.00	12.03	1,400	160	<2.5	250	58	--	--	--	
10/7/1992	--		28.18	0.00	10.33	360	12	0.6	8.7	5	--	--	--	
1/14/1993	--		24.15	0.00	14.36	1,700	270	7.5	130	62	--	--	--	m
4/22/1993	--		22.43	0.00	16.08	3,500	780	29	240	210	--	--	--	m, e
4/22/1993	--		22.43	0.00	16.08	2,700	780	30	220	180	--	--	--	m
7/15/1993	--		24.31	0.00	14.20	1,300	68	8.3	64	99	<50	--	--	m, e
7/15/1993	--		24.31	0.00	14.20	1,300	69	16	67	120	<50	--	--	m
10/21/1993	--		26.05	0.00	12.46	510	9.6	1.5	17	45	75	--	--	c, m
1/27/1994	--		26.42	0.00	12.09	420	3.3	<0.5	1	0.9	48.9	--	--	m
4/21/1994	--		24.36	0.00	14.15	1,000	110	25	56	27	75	1.3	--	c, m
9/9/1994	--		24.55	0.00	13.96	210	<0.5	<0.5	0.5	0.9	--	2.7	--	m
12/21/1994	--		22.30	0.00	16.21	340	<0.5	15	3.3	1.4	104	--	--	m, e
12/21/1994	--		22.30	0.00	16.21	410	<0.5	20	4.3	1.4	114	1.1	--	m
1/30/1995	--		18.88	0.00	19.63	210	0.6	11	8.8	2	--	1.5	--	

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Well and Sample Date	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH	Footnote	
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
<b>AW-5 Cont.</b>															
4/10/1995	--	38.51	18.44	0.00	20.07	500	1.4	0.59	6.5	4.3	--	8.3	--		
6/29/1995	--		19.92	0.00	18.59	490	1.2	0.58	7.3	2.2	--	6.9	--	d	
9/18/1995	--		22.15	0.00	16.36	--	--	--	--	--	--	--	--		
9/19/1995	--		--	--	--	260	0.62	<0.50	3.1	1.1	110	8.2	--		
12/7/1995	--		23.75	0.00	14.76	60	<0.50	<0.50	<0.50	<1.0	210	4.3	--		
3/28/1996	--		17.76	0.00	20.75	<50	<0.5	<1	<1	<1	63	3.0	--		
6/20/1996	--		18.46	0.00	20.05	<50	<0.5	<1	<1	<1	<10	3.6	--		
10/11/1996	--		21.84	0.00	16.67	<50	<0.5	<1.0	<1.0	<1.0	<10	4.5	--		
1/2/1997	--		18.01	0.00	20.50	<50	<0.5	<1.0	<1.0	<1.0	<10	4.6	--		
4/14/1997	--		19.35	0.00	19.16	<50	<0.5	<1.0	<1.0	<1.0	<10	5.1	--		
7/2/1997	--		20.29	0.00	18.22	<50	<0.5	<1.0	<1.0	<1.0	<10	4.0	--		
9/30/1997	--		23.15	0.00	15.36	<250	<2.5	<5.0	<5.0	<5.0	1,300	6.3	--		
1/21/1998	--		17.33	0.00	21.18	6,100	<0.5	2.1	<1.0	<1.0	3,700	4.5	--		
4/9/1998	--		15.25	0.00	23.26	--	--	--	--	--	--	--	--		
4/10/1998	--		--	--	--	3,500	<0.5	<1.0	<1.0	<1.0	3,000	5.4	--		
6/19/1998	--		17.39	0.00	21.12	3,300	<0.5	<1.0	<1.0	<1.0	2,500	5.2	--		
11/30/1998	--		--	--	--	--	--	--	--	--	--	--	--	f	
1/21/1999	--		21.22	0.00	17.29	2,800	<1.0	<1.0	<1.0	<1.0	1,800	--	--		
4/30/1999	--		21.50	0.00	17.01	--	--	--	--	--	--	--	--		
7/9/1999	--		20.15	0.00	18.36	4,000	<1.0	<1.0	<1.0	<1.0	3400/3500	--	--	g	
11/3/1999	--		22.04	0.00	16.47	--	--	--	--	--	--	--	--		
1/12/2000	--		22.59	0.00	15.92	1,000	7.3	30	6.7	40	4,600	--	--	j (TPH-g/GRO)	
4/13/2000	--		23.11	0.00	15.40	--	--	--	--	--	--	--	--		
7/26/2000	--		22.72	0.00	15.79	1,800	94	35	5.9	27	16,000	--	--		
10/24/2000	--		20.15	0.00	18.36	--	--	--	--	--	--	--	--		
1/19/2001	--		19.79	0.00	18.72	2,600	<0.5	<0.5	<0.5	<0.5	4,580	--	--		
7/24/2001	--		20.17	0.00	18.34	5,400	18.4	17.2	<12.5	40.8	5,170	--	--		
1/18/2002	--		17.34	0.00	21.17	3,800	343	0.738	<0.5	<1.0	3,750	--	--		
8/1/2002	--		19.49	0.00	19.02	5,300	<12.5	<12.5	<12.5	<25	3,470	--	--		
1/16/2003	--		17.30	0.00	21.21	1,400	140	<10	<10	<10	1,600	--	--	p	

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						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
AW-5 Cont.														
7/7/2003	--	38.51	18.43	0.00	20.08	1,400	<10	<10	<10	<10	980	--	--	q
02/05/2004	--		17.24	0.00	21.27	1,800	<10	<10	<10	<10	810	--	6.7	
07/01/2004	P		19.43	0.00	19.08	1,100	<5.0	<5.0	<5.0	<5.0	550	--	6.6	
03/16/2005	P		15.30	0.00	23.21	<5,000	<50	<50	<50	130	890	2.1	6.7	
07/22/2005	P		17.22	0.00	21.29	<500	5.2	<5.0	<5.0	6.9	390	--	6.6	
01/25/2006	P		15.28	0.00	23.23	<500	<5.0	<5.0	<5.0	<5.0	26	--	7.0	
7/6/2006	P		15.93	0.00	22.58	220	<5.0	<5.0	<5.0	<5.0	170	--	6.5	
1/8/2007	P		17.90	0.00	20.61	170	<2.5	<2.5	<2.5	<2.5	220	5.22	6.84	
7/10/2007	P		19.00	0.00	19.51	350	<2.5	<2.5	<2.5	<2.5	360	1.96	7.02	
1/15/2008	P		18.16	0.00	20.35	130	0.54	<0.50	<0.50	<0.50	85	0.90	6.82	w
7/15/2008	P		19.88	0.00	18.63	100	<0.50	<0.50	<0.50	<0.50	11	2.13	6.85	
10/21/2008	P		20.88	0.00	17.63	86	<0.50	<0.50	<0.50	<0.50	63	1.01	7.10	
1/6/2009	P		20.28	0.00	18.23	150	<1.0	<1.0	<1.0	<1.0	26	0.70	6.22	
4/21/2009	P		18.07	0.00	20.44	100	<0.50	<0.50	<0.50	<0.50	5.1	2.09	7.35	
7/21/2009	P		19.70	0.00	18.81	83	<0.50	<0.50	<0.50	<0.50	25	6.50	7.14	y
3/18/2010	P		16.18	0.00	22.33	<50	<0.50	<0.50	<0.50	<1.0	72	0.74	6.64	
7/29/2010	P		18.00	0.00	20.51	<50	<0.50	<0.50	<0.50	<1.0	1.9	1.32	7.0	
11/12/2010	--		19.73	0.00	18.78	--	--	--	--	--	--	--	--	
2/22/2011	NP		15.67	0.00	22.84	<50	<0.50	<0.50	<0.50	<1.0	1.9	0.57	6.40	
AW-6														
4/5/1991	--	37.08	22.48	0.00	14.60	1,100	80	19	1.4	230	--	--	--	
4/1/1992	--		22.50	0.00	14.58	--	--	--	--	--	--	--	--	
4/2/1992	--		--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	
7/6/1992	--		22.74	0.00	14.34	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	
10/7/1992	--		24.64	0.00	12.44	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	
1/14/1993	--		22.36	0.00	14.72	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	m
4/22/1993	--		22.82	0.00	14.26	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	m
7/15/1993	--		20.49	0.00	16.59	<50	<0.5	<0.5	<0.5	0.8	<5.0	--	--	m
10/21/1993	--		22.84	0.00	14.24	<50	0.5	0.6	<0.5	0.7	<5.0	--	--	m
1/27/1994	--		22.33	0.00	14.75	<50	<0.5	0.9	3.1	12	<5.0	--	--	m

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						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>AW-6 Cont.</b>														
4/21/1994	--	37.08	20.66	0.00	16.42	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.7	--	m
9/9/1994	--		21.57	0.00	15.51	<50	0.9	<0.5	<0.5	0.5	--	2.9	--	m
12/21/1994	--		19.40	0.00	17.68	<50	1.8	0.8	0.8	3.2	5.19	1.1	--	m
1/30/1995	--		16.74	0.00	20.34	<50	<0.50	<0.50	<0.50	<1.0	--	--	--	e
1/30/1995	--		16.74	0.00	20.34	<50	<0.50	<0.50	<0.50	<1.0	--	2.2	--	
4/10/1995	--		16.01	0.00	21.07	<50	<0.50	<0.50	<0.50	<1.0	--	8.6	--	
6/29/1995	--		17.54	0.00	19.54	<50	<0.50	<0.50	<0.50	<1.0	--	6.3	--	
9/18/1995	--		19.65	0.00	17.43	--	--	--	--	--	--	--	--	
9/19/1995	--		--	--	--	<50	<0.50	<0.50	<0.50	<1.0	25	8.3	--	
12/7/1995	--		20.35	0.00	16.73	<50	<0.50	<0.50	<0.50	<1.0	16	4.7	--	
3/28/1996	--		14.99	0.00	22.09	<50	<0.5	<1	<1	<1	<10	4.0	--	
6/20/1996	--		15.59	0.00	21.49	<50	<0.5	<1	<1	<1	<10	4.6	--	
10/11/1996	--		19.09	0.00	17.99	<50	<0.5	<1.0	<1.0	<1.0	<10	5.3	--	
1/2/1997	--		15.11	0.00	21.97	<50	<0.5	<1.0	<1.0	<1.0	<10	5.5	--	
4/14/1997	--		16.25	0.00	20.83	<50	<0.5	<1.0	<1.0	<1.0	<10	3.9	--	
7/2/1997	--		17.99	0.00	19.09	<50	<0.5	<1.0	<1.0	<1.0	<10	5.2	--	
9/30/1997	--		20.50	0.00	16.58	<50	<0.5	<1.0	<1.0	<1.0	<10	6.0	--	
1/21/1998	--		15.72	0.00	21.36	160	<0.5	<1.0	<1.0	<1.0	110	5.0	--	
4/9/1998	--		13.31	0.00	23.77	--	--	--	--	--	--	--	--	
4/10/1998	--		--	--	--	370	<0.5	<1.0	<1.0	<1.0	300	4.3	--	
6/19/1998	--		15.18	0.00	21.90	830	2	<1.0	<1.0	<1.0	690	4.0	--	
11/30/1998	--		--	--	--	--	--	--	--	--	--	--	--	f
1/21/1999	--		15.78	0.00	21.30	2,300	<1.0	<1.0	<1.0	<1.0	1,900	--	--	
4/30/1999	--		16.01	0.00	21.07	--	--	--	--	--	--	--	--	
7/9/1999	--		17.63	0.00	19.45	--	--	--	--	--	--	--	--	
11/3/1999	--		18.42	0.00	18.66	--	--	--	--	--	--	--	--	
1/12/2000	--		19.92	0.00	17.16	<50	<0.5	<0.5	<0.5	<0.5	2,700	--	--	
4/13/2000	--		19.87	0.00	17.21	--	--	--	--	--	--	--	--	
7/26/2000	--		19.99	0.00	17.09	--	--	--	--	--	--	--	--	
10/24/2000	--		18.12	0.00	18.96	--	--	--	--	--	--	--	--	

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

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

Well and Sample Date	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH	Footnote
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>AW-6 Cont.</b>														
1/19/2001	--	37.08	17.04	0.00	20.04	2,700	<0.5	<0.5	<0.5	<0.5	4,850	--	--	
7/24/2001	--		17.83	0.00	19.25	--	--	--	--	--	--	--	--	
1/18/2002	--		15.54	0.00	21.54	5,500	614	<0.5	<0.5	<1.0	5,390	--	--	
8/1/2002	--		16.98	0.00	20.10	--	--	--	--	--	--	--	--	
1/16/2003	--		15.05	0.00	22.03	2,900	<20	<20	<20	63	2,500	--	--	p
7/7/2003	--		16.58	0.00	20.50	--	--	--	--	--	--	--	--	
02/05/2004	--		15.84	0.00	21.24	7,000	<50	<50	<50	<50	5,400	--	6.7	
07/01/2004	P		17.91	0.00	19.17	9,600	<50	<50	<50	<50	4,600	--	6.5	
03/16/2005	P		16.04	0.00	21.04	6,700	<25	<25	<25	<25	4,400	3.0	6.8	
07/22/2005	P		14.20	0.00	22.88	<5,000	<50	<50	<50	<50	5,500	--	6.7	
01/25/2006	P		14.17	0.00	22.91	<5,000	<50	<50	<50	<50	3,000	--	7.0	
7/6/2006	P		14.82	0.00	22.26	3,100	<50	<50	<50	<50	2,800	--	6.5	
1/8/2007	P		15.72	0.00	21.36	5100	<50	<50	<50	<50	7400	3.18	6.78	
7/10/2007	P		16.99	0.00	20.09	3,700	<100	<100	<100	<100	3,900	2.09	6.83	w
1/15/2008	P		15.55	0.00	21.53	120	1.1	<1.0	<1.0	<1.0	150	0.58	6.80	w
7/15/2008	P		17.84	0.00	19.24	130	<0.50	<0.50	<0.50	<0.50	270	2.12	6.87	
10/21/2008	P		18.92	0.00	18.16	81	<5.0	<5.0	<5.0	<5.0	160	1.01	7.19	
1/6/2009	P		18.37	0.00	18.71	76	<5.0	<5.0	<5.0	<5.0	97	0.94	6.23	
4/21/2009	P		15.97	0.00	21.11	<50	<0.50	<0.50	<0.50	<0.50	22	4.29	7.38	
7/21/2009	P		17.90	0.00	19.18	76	<0.50	<0.50	<0.50	<0.50	93	10.79	7.09	y
3/18/2010	P		14.13	0.00	22.95	<50	<0.50	<0.50	<0.50	<1.0	93	0.68	6.75	
7/29/2010	P		16.46	0.00	20.62	<50	<0.50	<0.50	<0.50	<1.0	46	0.84	7.0	
11/12/2010	--		17.76	0.00	19.32	--	--	--	--	--	--	--	--	
2/22/2011	P		13.53	0.00	23.55	<50	<0.50	<0.50	<0.50	<1.0	4.6	0.85	6.41	
<b>AW-7</b>														
4/5/1991	--	37.60	23.38	0.00	14.22	<50	0.4	0.7	<0.3	<0.3	--	--	--	
4/1/1992	--		21.92	0.00	15.68	--	--	--	--	--	--	--	--	
4/2/1992	--		--	--	--	<50	<0.5	3.2	1	5.4	--	--	--	
7/6/1992	--		24.50	0.00	13.10	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	
10/7/1992	--		26.18	0.00	11.42	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	

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

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

Well and Sample Date	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH	Footnote
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
AW-7 Cont.														
1/14/1993	--	37.60	22.03	0.00	15.57	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	m
4/22/1993	--		21.18	0.00	16.42	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	m
7/15/1993	--		22.09	0.00	15.51	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	m
10/21/1993	--		24.05	0.00	13.55	51	5	4.2	3.5	8.2	<5.0	--	--	m
1/27/1994	--		23.40	0.00	14.20	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	m
4/21/1994	--		22.24	0.00	15.36	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.5	--	m
9/9/1994	--		22.94	0.00	14.66	<50	<0.5	<0.5	<0.5	0.5	--	4.3	--	m
12/21/1994	--		20.86	0.00	16.74	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.2	--	m
1/30/1995	--		17.51	0.00	20.09	<50	<0.50	<0.50	<0.50	<1.0	--	2.7	--	
4/10/1995	--		16.69	0.00	20.91	<50	<0.50	<0.50	<0.50	<1.0	--	4.8	--	
6/29/1995	--		18.33	0.00	19.27	<50	<0.50	<0.50	<0.50	<1.0	--	7.6	--	
9/18/1995	--		20.68	0.00	16.92	--	--	--	--	--	--	--	--	
9/19/1995	--		--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	5.1	--	
12/7/1995	--		22.15	0.00	15.45	<50	<0.50	<0.50	<0.50	<1.0	<5.0	5.2	--	
3/28/1996	--		16.38	0.00	21.22	<50	<0.5	<1	<1	<1	<10	3.9	--	
6/20/1996	--		17.02	0.00	20.58	<50	<0.5	<1	<1	<1	<10	5.0	--	
10/11/1996	--		20.47	0.00	17.13	<50	<0.5	<1.0	<1.0	<1.0	<10	6.3	--	
1/2/1997	--		16.70	0.00	20.90	<50	<0.5	<1.0	<1.0	<1.0	<10	6.2	--	
4/14/1997	--		17.96	0.00	19.64	<50	<0.5	<1.0	<1.0	<1.0	<10	5.0	--	
7/2/1997	--		19.11	0.00	18.49	<50	<0.5	<1.0	<1.0	<1.0	<10	5.4	--	
9/30/1997	--		22.97	0.00	14.63	<250	<2.5	<5.0	<5.0	<5.0	1,100	6.5	--	
1/21/1998	--		16.50	0.00	21.10	<50	<0.5	<1.0	<1.0	<1.0	<10	4.9	--	
4/9/1998	--		13.56	0.00	24.04	<50	<0.5	<1.0	<1.0	<1.0	<10	4.9	--	
6/19/1998	--		15.41	0.00	22.19	<50	<0.5	<1.0	<1.0	<1.0	<10	4.4	--	
11/30/1998	--		18.90	0.00	18.70	--	--	--	--	--	--	--	--	
1/21/1999	--		18.39	0.00	19.21	--	--	--	--	--	--	--	--	
4/30/1999	--		18.54	0.00	19.06	--	--	--	--	--	--	--	--	
7/9/1999	--		17.98	0.00	19.62	--	--	--	--	--	--	--	--	
11/3/1999	--		20.22	0.00	17.38	--	--	--	--	--	--	--	--	
1/12/2000	--		19.46	0.00	18.14	--	--	--	--	--	--	--	--	

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Well and Sample Date	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH	Footnote
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>AW-7 Cont.</b>						--	--	--	--	--	--	--	--	
4/13/2000	--	37.60	19.59	0.00	18.01	--	--	--	--	--	--	--	--	
7/26/2000	--		19.69	0.00	17.91	--	--	--	--	--	--	--	--	
10/24/2000	--		18.78	0.00	18.82	--	--	--	--	--	--	--	--	
1/19/2001	--		--	--	--	--	--	--	--	--	--	--	--	f
7/25/2001	--		--	--	--	--	--	--	--	--	--	--	--	f
1/18/2002	--		--	--	--	--	--	--	--	--	--	--	--	o
8/1/2002	--		--	--	--	--	--	--	--	--	--	--	--	o
1/16/2003	--		--	--	--	--	--	--	--	--	--	--	--	o
7/7/2003	--		--	--	--	--	--	--	--	--	--	--	--	o
02/05/2004	--		--	--	--	--	--	--	--	--	--	--	--	o
07/01/2004	--		--	--	--	--	--	--	--	--	--	--	--	o
03/16/2005	--		--	--	--	--	--	--	--	--	--	--	--	o
07/22/2005	--		--	--	--	--	--	--	--	--	--	--	--	o
01/25/2006	--		--	--	--	--	--	--	--	--	--	--	--	o
<b>2/22/2011</b>	--		--	--	--	--	--	--	--	--	--	--	--	f
<b>AW-8</b>														
4/5/1991	--	40.86	26.68	0.00	14.18	80	1.9	2.2	0.5	1.3	--	--	--	
4/1/1992	--		25.11	0.00	15.75	73	<0.5	0.7	<0.5	0.6	--	--	--	
7/6/1992	--		26.43	0.00	14.43	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	
10/7/1992	--		28.59	0.00	12.27	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	
1/14/1993	--		25.55	0.00	15.31	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	m
4/22/1993	--		22.29	0.00	18.57	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	m
7/15/1993	--		23.42	0.00	17.44	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	m
10/21/1993	--		25.15	0.00	15.71	<50	1.9	1.8	1.3	3.3	<5.0	--	--	m
1/27/1994	--		25.42	0.00	15.44	<50	<0.5	0.5	0.6	8.5	<5.0	--	--	m
4/21/1994	--		24.14	0.00	16.72	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.5	--	m
9/9/1994	--		24.55	0.00	16.31	<50	<0.5	<0.5	<0.5	<0.5	--	2.4	--	m
12/21/1994	--		22.72	0.00	18.14	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.1	--	m
1/30/1995	--		19.75	0.00	21.11	<50	<0.50	1	<0.50	1	--	0.8	--	
4/10/1995	--		17.78	0.00	23.08	<50	<0.50	<0.50	<0.50	<1.0	--	8.3	--	

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						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>AW-8 Cont.</b>														
6/29/1995	--	40.86	18.18	0.00	22.68	<50	<0.50	<0.50	<0.50	<1.0	--	8.3	--	
9/18/1995	--		20.20	0.00	20.66	--	--	--	--	--	--	--	--	
9/19/1995	--		--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	7.7	--	
12/7/1995	--		21.54	0.00	19.32	<50	<0.50	<0.50	<0.50	<1.0	<5.0	4.4	--	
3/28/1996	--		15.77	0.00	25.09	<50	<0.5	<1	<1	<1	<10	3.8	--	
6/20/1996	--		16.41	0.00	24.45	<50	<0.5	<1	<1	<1	<10	3.6	--	
10/11/1996	--		19.90	0.00	20.96	<50	<0.5	<1.0	<1.0	<1.0	<10	6.4	--	
1/2/1997	--		15.89	0.00	24.97	<50	<0.5	<1.0	<1.0	<1.0	<10	5.9	--	
4/14/1997	--		17.07	0.00	23.79	<50	<0.5	<1.0	<1.0	<1.0	<10	4.6	--	
7/2/1997	--		18.67	0.00	22.19	<50	<0.5	<1.0	<1.0	<1.0	<10	5.6	--	
9/30/1997	--		22.52	0.00	18.34	<50	<5	<10	<10	<10	820	6.7	--	
1/21/1998	--		16.01	0.00	24.85	<50	<0.5	<1.0	<1.0	<1.0	<10	5.2	--	
4/9/1998	--		11.18	0.00	29.68	<50	<0.5	<1.0	<1.0	<1.0	<10	4.4	--	
6/19/1998	--		13.01	0.00	27.85	<50	<0.5	<1.0	<1.0	<1.0	<10	4.1	--	
11/30/1998	--		17.46	0.00	23.40	--	--	--	--	--	--	--	--	
1/21/1999	--		17.47	0.00	23.39	--	--	--	--	--	--	--	--	
4/30/1999	--		17.60	0.00	23.26	--	--	--	--	--	--	--	--	
7/9/1999	--		16.50	0.00	24.36	--	--	--	--	--	--	--	--	
11/3/1999	--		19.29	0.00	21.57	--	--	--	--	--	--	--	--	
1/12/2000	--		21.49	0.00	19.37	--	--	--	--	--	--	--	--	
4/13/2000	--		21.60	0.00	19.26	--	--	--	--	--	--	--	--	
7/26/2000	--		21.53	0.00	19.33	--	--	--	--	--	--	--	--	
10/24/2000	--		19.37	0.00	21.49	--	--	--	--	--	--	--	--	
1/19/2001	--		18.60	0.00	22.26	--	--	--	--	--	--	--	--	
7/24/2001	--		18.22	0.00	22.64	--	--	--	--	--	--	--	--	
1/18/2002	--		16.29	0.00	24.57	--	--	--	--	--	--	--	--	
8/1/2002	--		17.25	0.00	23.61	--	--	--	--	--	--	--	--	
1/16/2003	--		15.82	0.00	25.04	--	--	--	--	--	--	--	--	
7/7/2003	--		18.55	0.00	22.31	--	--	--	--	--	--	--	--	
02/05/2004	--		--	--	--	--	--	--	--	--	--	--	--	t

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						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
<b>AW-8 Cont.</b>															
07/01/2004	--	40.86	18.25	0.00	22.61	--	--	--	--	--	--	--	--	--	t
03/16/2005	P		15.20	0.00	25.66	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.5	7.3		
07/22/2005	--		--	--	--	--	--	--	--	--	--	--	--	--	f
01/25/2006	--		--	--	--	--	--	--	--	--	--	--	--	--	f
7/6/2006	--		13.05	0.00	27.81	--	--	--	--	--	--	--	--	--	
1/8/2007	--		16.57	0.00	24.29	--	--	--	--	--	--	--	--	--	
7/10/2007	--		17.73	0.00	23.13	--	--	--	--	--	--	--	--	--	
1/15/2008	--		17.88	0.00	22.98	--	--	--	--	--	--	--	--	--	
7/15/2008	--		18.57	0.00	22.29	--	--	--	--	--	--	--	--	--	
10/21/2008	--		20.09	0.00	20.77	--	--	--	--	--	--	--	--	--	
1/6/2009	--		20.20	0.00	20.66	--	--	--	--	--	--	--	--	--	
4/21/2009	--		--	--	--	--	--	--	--	--	--	--	--	--	f
7/21/2009	--		--	--	--	--	--	--	--	--	--	--	--	--	f
3/18/2010	--		15.52	0.00	25.34	--	--	--	--	--	--	--	--	--	
7/29/2010	--		17.03	0.00	23.83	--	--	--	--	--	--	--	--	--	
11/12/2010	--		19.10	0.00	21.76	--	--	--	--	--	--	--	--	--	
2/22/2011	--		--	--	--	--	--	--	--	--	--	--	--	--	f
<b>AW-9</b>															
1/2/1997	--	37.78	10.00	0.00	27.78	<50	<0.5	<1.0	<1.0	<1.0	<10	6.7	--		
4/14/1997	--		--	--	--	--	--	--	--	--	--	--	--	--	f
7/2/1997	--		12.71	0.00	25.07	<50	<0.5	<1.0	<1.0	<1.0	<10	6.0	--		
9/30/1997	--		21.22	0.00	16.56	<50	<0.5	<1.0	<1.0	<1.0	<10	6.8	--		
1/21/1998	--		10.26	0.00	27.52	<50	<0.5	<1.0	<1.0	<1.0	<10	5.3	--		
4/9/1998	--		6.77	0.00	31.01	<50	<0.5	<1.0	<1.0	<1.0	<10	5.6	--		
6/19/1998	--		8.96	0.00	28.82	<50	<0.5	<1.0	<1.0	<1.0	<10	4.8	--		
1/8/2007	--		17.35	0.00	20.43	--	--	--	--	--	--	--	--	--	
7/10/2007	--		18.65	0.00	19.13	--	--	--	--	--	--	--	--	--	
1/15/2008	--		18.51	0.00	19.27	--	--	--	--	--	--	--	--	--	
7/15/2008	--		19.56	0.00	18.22	--	--	--	--	--	--	--	--	--	
10/21/2008	--		21.07	0.00	16.71	--	--	--	--	--	--	--	--	--	

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

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

Well and Sample Date	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH	Footnote
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>AW-9 Cont.</b>						--	--	--	--	--	--	--	--	
1/6/2009	--	37.78	21.00	0.00	16.78	--	--	--	--	--	--	--	--	
4/21/2009	--		18.28	0.00	19.50	--	--	--	--	--	--	--	--	
7/21/2009	--		20.00	0.00	17.78	--	--	--	--	--	--	--	--	
3/18/2010	--		16.45	0.00	21.33	--	--	--	--	--	--	--	--	
7/29/2010	--		18.07	0.00	19.71	--	--	--	--	--	--	--	--	
11/12/2010	--		20.03	0.00	17.75	--	--	--	--	--	--	--	--	
<b>2/22/2011</b>	--		<b>18.25</b>	<b>0.00</b>	<b>19.53</b>	--	--	--	--	--	--	--	--	
<b>IW-1</b>						--	--	--	--	--	--	--	--	
11/12/2010	--	NS	19.39	0.00	--	--	--	--	--	--	--	--	--	
<b>IW-2</b>						--	--	--	--	--	--	0.67	6.27	
<b>IW-3</b>						--	--	--	--	--	--	--	--	
11/12/2010	P	NS	16.95	0.00	--	1,000	5.8	2.9	8.3	8.5	2.5	--	--	
<b>MW-1</b>						--	--	--	--	--	--	--	--	
4/5/1991	--	34.46	--	--	--	--	--	--	--	--	--	--	--	
4/1/1992	--		11.25	0.00	23.21	--	--	--	--	--	--	--	--	
7/6/1992	--		13.61	0.00	20.85	--	--	--	--	--	--	--	--	
10/7/1992	--		15.15	0.00	19.31	--	--	--	--	--	--	--	--	
1/14/1993	--		10.73	0.00	23.73	--	--	--	--	--	--	--	--	
4/22/1993	--		11.64	0.00	22.82	--	--	--	--	--	--	--	--	
7/15/1993	--		13.50	0.00	20.96	--	--	--	--	--	--	--	--	
10/21/1993	--		15.21	0.00	19.25	--	--	--	--	--	--	--	--	
1/27/1994	--		17.48	0.00	16.98	--	--	--	--	--	--	--	--	
4/21/1994	--		10.94	0.00	23.52	110,000	1,400	9,100	3,400	30,000	11,000	1.6	--	c
9/9/1994	--		13.80	0.00	20.66	--	--	--	--	--	--	--	--	
12/21/1994	--		12.60	0.00	21.86	--	--	--	--	--	--	--	--	
1/30/1995	--		--	--	--	--	--	--	--	--	--	--	--	
4/10/1995	--		10.62	0.00	23.84	--	--	--	--	--	--	--	--	

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

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

Well and Sample Date	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH	Footnote
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>MW-1 Cont.</b>														
6/29/1995	--	34.46	18.72	0.00	15.74	--	--	--	--	--	--	--	--	
9/18/1995	--		12.92	0.00	21.54	--	--	--	--	--	--	--	--	
12/7/1995	--		13.82	0.00	20.64	--	--	--	--	--	--	--	--	
3/28/1996	--		10.03	0.00	24.43	--	--	--	--	--	--	--	--	
6/20/1996	--		11.29	0.00	23.17	--	--	--	--	--	--	--	--	
10/11/1996	--		14.86	0.00	19.60	--	--	--	--	--	--	--	--	
1/2/1997	--		11.03	0.00	23.43	--	--	--	--	--	--	--	--	
4/14/1997	--		12.25	0.00	22.21	--	--	--	--	--	--	--	--	
4/15/1997	--		--	--	--	35,000	130	650	1,700	8,200	4,800	--	--	
7/2/1997	--		14.11	0.00	20.35	42,000	<250	<500	2,000	9,600	<5000	5.5	--	
9/30/1997	--		14.40	0.00	20.06	61,000	130	1,100	2,700	14,600	2,000	6.7	--	
1/21/1998	--		7.99	0.00	26.47	14,000	11	60	310	1,790	1,300	4.5	--	
4/9/1998	--		7.89	0.00	26.57	--	--	--	--	--	--	--	--	
4/10/1998	--		--	--	--	45,000	380	520	2,100	6,800	9,300	5.3	--	
6/19/1998	--		10.31	0.00	24.15	35,000	170	100	1,100	3,590	5,000	4.9	--	
11/30/1998	--		11.16	0.00	23.30	10,000	100	24	350	1,040	1800/2800	--	--	g
1/21/1999	--		10.76	0.00	23.70	18,000	120	37	590	1,800	2,700	--	--	
4/30/1999	--		10.78	0.00	23.68	17,000	240	89	1,100	1,900	1,600	--	--	
7/9/1999	--		12.62	0.00	21.84	58,000	140	100	1,800	6,900	1,200	--	--	
11/3/1999	--		14.00	0.00	20.46	20,000	62	42	620	2,100	630	--	--	
1/12/2000	--		15.25	0.00	19.21	72,000	110	120	2,400	8,200	630	--	--	
4/13/2000	--		15.57	0.00	18.89	37,000	300	32	1,000	1,700	810	--	--	
5/24/2000	--		11.75	0.00	22.71	--	--	--	--	--	--	--	--	
6/1/2000	--		11.41	0.00	23.05	--	--	--	--	--	--	--	--	
6/8/2000	--		11.68	0.00	22.78	--	--	--	--	--	--	--	--	
6/15/2000	--		11.85	0.00	22.61	--	--	--	--	--	--	--	--	
7/26/2000	--		16.19	0.00	18.27	10,000	480	210	470	710	1,100	--	--	
10/24/2000	--		13.89	0.00	20.57	9,900	31	7.2	550	1,200	4,400	--	--	
1/19/2001	--		12.90	0.00	21.56	57,000	199	7.66	1,170	3,260	514	--	--	
7/24/2001	--		13.55	0.00	20.91	27,000	96.7	<5.0	548	1,460	285	--	--	

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

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Well and Sample Date	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH	Footnote
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>MW-1 Cont.</b>														
1/18/2002	--	34.46	10.91	0.00	23.55	25,000	150	31.5	597	1,040	138	--	--	
8/1/2002	--		12.97	0.00	21.49	25,000	80.2	17.7	714	1,280	489	--	--	
1/16/2003	--		10.45	0.00	24.01	22,000	170	110	630	670	<500	--	--	p
7/7/2003	--		12.40	0.00	22.06	9,900	42	<5.0	160	150	24	--	--	q, u
02/05/2004	--		10.26	0.00	24.20	6,200	56	11	250	210	9.2	--	6.9	
07/01/2004	--		13.20	0.00	21.26	18,000	<50	<50	210	300	<50	--	--	u
03/16/2005	P		9.62	0.00	24.84	7,600	33	5.4	200	130	<5.0	0.9	6.9	
07/22/2005	P		11.23	0.00	23.23	15,000	<10	<10	110	130	<10	--	6.8	u
01/25/2006	P		8.75	0.00	25.71	8,300	8.4	4.8	130	120	<2.5	--	7.3	u
7/6/2006	P		10.36	0.00	24.10	5,100	<2.5	<2.5	16	12	<2.5	--	6.9	
1/8/2007	P		11.55	0.00	22.91	2700	4.6	0.66	35	27	2.1	1.83	6.92	
7/10/2007	P		13.01	Sheen	21.45	1,800	1.9	<0.50	13	4.8	2.4	2.16	7.04	
1/15/2008	P		10.96	0.00	23.50	2,900	8.0	4.0	84	87	1.2	0.94	7.13	
7/15/2008	P		13.82	0.00	20.64	3,200	<0.50	<0.50	8.5	4.8	<0.50	1.20	7.06	
10/21/2008	P		14.70	0.00	19.76	2,300	2.6	<0.50	5.4	2.4	<0.50	1.99	7.30	
1/6/2009	P		13.67	0.00	20.79	2,600	15	1.8	13	3.4	<0.50	0.67	6.90	
4/21/2009	P		12.31	0.00	22.15	1,500	2.0	<0.50	1.7	<0.50	<0.50	1.99	7.54	
7/21/2009	P		13.85	0.00	20.61	2,900	<0.50	<0.50	4.6	1.2	<0.50	6.20	7.43	y
3/18/2010	P		9.29	Sheen	25.17	1,900	1.2	<0.50	5.2	2.7	<0.50	0.90	6.89	
7/29/2010	NP		12.63	0.00	21.83	1,600	<2.5	<2.5	<2.5	<5.0	<2.5	0.48	7.3	
11/12/2010	--		15.72	0.00	18.74	--	--	--	--	--	--	--	--	
2/22/2011	NP		8.03	0.00	26.43	1400	<0.50	<0.50	0.92	<1.0	<0.50	1.53	6.30	
<b>MW-2</b>														
4/5/1991	--	35.50	16.62	0.00	18.88	<50	0.6	0.9	<0.3	<0.3	--	--	--	
4/1/1992	--		11.25	0.00	24.25	--	--	--	--	--	--	--	--	
4/2/1992	--		--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	
7/6/1992	--		12.72	0.00	22.78	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	
10/7/1992	--		15.08	0.00	20.42	<50	<0.5	1.8	<0.5	2.3	--	--	--	
1/14/1993	--		9.69	0.00	25.81	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	m
4/22/1993	--		10.46	0.00	25.04	<50	<0.5	<0.5	<0.5	<0.5	30	--	--	c

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						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
MW-2 Cont.														
7/15/1993	--	35.50	12.02	0.00	23.48	<50	<0.5	<0.5	<0.5	<0.5	21.7	--	--	c, m
10/21/1993	--		13.12	0.00	22.38	<50	0.7	0.9	<0.5	0.9	14.9	--	--	m
1/27/1994	--		12.01	0.00	23.49	<50	0.6	<0.5	<0.5	<0.5	11.5	--	--	m
4/21/1994	--		10.60	0.00	24.90	<50	<0.5	<0.5	<0.5	<0.5	11.4	1.1	--	m
9/9/1994	--		12.42	0.00	23.08	<50	<0.5	<0.5	<0.5	0.6	--	2.2	--	m
12/21/1994	--		10.85	0.00	24.65	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.2	--	m
1/30/1995	--		8.38	0.00	27.12	<50	<0.50	<0.50	<0.50	<1.0	--	1.7	--	
4/10/1995	--		9.00	0.00	26.50	<50	<0.50	<0.50	<0.50	<1.0	--	7.8	--	
6/29/1995	--		9.91	0.00	25.59	<50	<0.50	<0.50	<0.50	<1.0	--	9.1	--	
9/18/1995	--		10.98	0.00	24.52	--	--	--	--	--	--	--	--	
9/19/1995	--		--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	7.2	--	
12/7/1995	--		12.30	0.00	23.20	<50	<0.50	<0.50	<0.50	<1.0	<5.0	2.4	--	
3/28/1996	--		8.57	0.00	26.93	<50	<0.5	<1	<1	<1	<10	3.2	--	
6/20/1996	--		9.77	0.00	25.73	<50	<0.5	<1	<1	<1	<10	4.2	--	
10/11/1996	--		13.32	0.00	22.18	<50	<0.5	<1.0	<1.0	<1.0	<10	6.3	--	
1/2/1997	--		9.60	0.00	25.90	<50	<0.5	<1.0	<1.0	<1.0	<10	6.7	--	
4/14/1997	--		10.93	0.00	24.57	<50	<0.5	<1.0	<1.0	<1.0	<10	5.7	--	
7/2/1997	--		12.57	0.00	22.93	<50	<0.5	<1.0	<1.0	<1.0	<10	5.9	--	
9/30/1997	--		12.91	0.00	22.59	<50	<0.5	<1.0	<1.0	<1.0	<10	6.3	--	
1/21/1998	--		10.12	0.00	25.38	160	<0.5	<1.0	<1.0	<1.0	100	5.4	--	
4/9/1998	--		6.82	0.00	28.68	--	--	--	--	--	--	--	--	
4/10/1998	--		--	--	--	<50	1	<1.0	<1.0	<1.0	23	5.0	--	
6/19/1998	--		9.00	0.00	26.50	<50	<0.5	<1.0	<1.0	<1.0	<10	4.9	--	
11/30/1998	--		9.44	0.00	26.06	--	--	--	--	--	--	--	--	
1/21/1999	--		8.96	0.00	26.54	<50	<1.0	<1.0	<1.0	<1.0	1.9	--	--	
4/30/1999	--		9.15	0.00	26.35	--	--	--	--	--	--	--	--	
7/9/1999	--		10.82	0.00	24.68	--	--	--	--	--	--	--	--	
11/3/1999	--		11.86	0.00	23.64	--	--	--	--	--	--	--	--	
1/12/2000	--		12.35	0.00	23.15	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	
4/13/2000	--		13.01	0.00	22.49	--	--	--	--	--	--	--	--	

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						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
MW-2 Cont.						--	--	--	--	--	--	--	--	
7/26/2000	--	35.50	13.01	0.00	22.49	--	--	--	--	--	--	--	--	
10/24/2000	--		11.57	0.00	23.93	--	--	--	--	--	--	--	--	
1/19/2001	--		10.52	0.00	24.98	--	--	--	--	--	--	--	--	
7/24/2001	--		11.13	0.00	24.37	--	--	--	--	--	--	--	--	
1/18/2002	--		8.85	0.00	26.65	--	--	--	--	--	--	--	--	
8/1/2002	--		10.47	0.00	25.03	--	--	--	--	--	--	--	--	
1/14/2003	--		8.49	0.00	27.01	--	--	--	--	--	--	--	--	
7/7/2003	--		9.63	0.00	25.87	--	--	--	--	--	--	--	--	
02/05/2004	--		8.40	0.00	27.10	--	--	--	--	--	--	--	--	
07/01/2004	NP		9.94	0.00	25.56	--	--	--	--	--	--	--	--	
03/16/2005	P		8.39	0.00	27.11	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.3	7.1	
07/22/2005	--		8.80	0.00	26.70	--	--	--	--	--	--	--	--	
01/25/2006	--		7.85	0.00	27.65	--	--	--	--	--	--	--	--	
7/6/2006	--		8.33	0.00	27.17	--	--	--	--	--	--	--	--	
1/8/2007	--		9.35	0.00	26.15	--	--	--	--	--	--	--	--	
7/10/2007	--		10.45	0.00	25.05	--	--	--	--	--	--	--	--	
1/15/2008	--		18.83	0.00	16.67	--	--	--	--	--	--	--	--	
7/15/2008	--		11.07	0.00	24.43	--	--	--	--	--	--	--	--	
10/21/2008	--		11.30	0.00	24.20	--	--	--	--	--	--	--	--	
1/6/2009	--		11.00	0.00	24.50	--	--	--	--	--	--	--	--	
4/21/2009	--		10.00	0.00	25.50	--	--	--	--	--	--	--	--	
7/21/2009	--		11.10	0.00	24.40	--	--	--	--	--	--	--	--	
3/18/2010	--		7.93	0.00	27.57	--	--	--	--	--	--	--	--	
7/29/2010	--		10.31	0.00	25.19	--	--	--	--	--	--	--	--	
11/12/2010	--		10.84	0.00	24.66	--	--	--	--	--	--	--	--	
2/22/2011	--		7.11	0.00	28.39	--	--	--	--	--	--	--	--	
MW-3														
4/5/1991	--	36.53	17.84	0.00	18.69	<50	<0.3	<0.3	<0.3	<0.3	--	--	--	
4/1/1992	--		15.64	0.00	20.89	--	--	--	--	--	--	--	--	
4/2/1992	--		--	--	--	<50	1.4	<0.5	<0.5	<0.5	--	--	--	

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						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
MW-3 Cont.														
7/6/1992	--	36.53	19.03	0.00	17.50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	
10/7/1992	--		21.83	0.00	14.70	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	
1/14/1993	--		15.96	0.00	20.57	350	<0.5	<0.5	<0.5	<0.5	714	--	--	c, m
4/22/1993	--		16.20	0.00	20.33	2,800	<0.5	<0.5	<0.5	<0.5	3,600	--	--	c, m
7/15/1993	--		16.82	0.00	19.71	1,400	1.2	<0.5	2	3.5	2,204	--	--	c, m
10/21/1993	--		18.84	0.00	17.69	370	2.1	2.3	2.3	6	847	--	--	c, m
1/27/1994	--		18.00	0.00	18.53	1,300	6.3	<0.5	<0.5	<0.5	3,892	--	--	c, m
4/21/1994	--		16.62	0.00	19.91	2,000	<0.5	<0.5	<0.5	<0.5	3,864	1.4	--	c, m
9/9/1994	--		18.38	0.00	18.15	1,300	<0.5	<0.5	0.5	1.2	--	3.0	--	m
12/21/1994	--		15.28	0.00	21.25	420	16	0.7	3.5	5.9	800	1.9	--	m
1/30/1995	--		12.62	0.00	23.91	<50	<0.50	<0.50	<0.50	<1.0	--	2.5	--	
4/10/1995	--		12.41	0.00	24.12	150	<0.50	<0.50	<0.50	<1.0	--	6.9	--	
6/29/1995	--		14.95	0.00	21.58	100	<0.50	<0.50	<0.50	<1.0	--	6.4	--	d (TPH-g)
9/18/1995	--		15.82	0.00	20.71	--	--	--	--	--	--	--	--	
9/19/1995	--		--	--	--	82	<0.50	<0.50	<0.50	<1.0	260	7.0	--	
12/7/1995	--		17.09	0.00	19.44	<50	<0.50	<0.50	<0.50	<1.0	91	4.5	--	
3/28/1996	--		11.90	0.00	24.63	<50	<0.5	<1	<1	<1	230	4.2	--	
6/20/1996	--		12.66	0.00	23.87	260	<0.5	<1	<1	<1	370	4.4	--	
10/11/1996	--		16.23	0.00	20.30	330	<0.5	<1.0	<1.0	<1.0	440	5.8	--	
1/2/1997	--		12.17	0.00	24.36	<50	<0.5	<1.0	<1.0	<1.0	140	6.0	--	
4/14/1997	--		13.45	0.00	23.08	--	--	--	--	--	--	--	--	
4/15/1997	--		--	--	--	1,500	<0.5	<1.0	<1.0	<1.0	1,800	5.6	--	
7/2/1997	--		15.60	0.00	20.93	880	<0.5	<1.0	<1.0	<1.0	940	5.3	--	
9/30/1997	--		17.16	0.00	19.37	40,000	13,000	2,400	870	3,100	510	6.6	--	
1/21/1998	--		11.77	0.00	24.76	120	<0.5	<1.0	<1.0	<1.0	98	4.7	--	
4/9/1998	--		9.42	0.00	27.11	950	<0.5	<1.0	<1.0	<1.0	890	5.7	--	
6/19/1998	--		15.28	0.00	21.25	1,800	<0.5	<1.0	<1.0	<1.0	1,900	4.7	--	
6/19/1998	--		12.09	0.00	24.44	1,800	<0.5	<1.0	<1.0	<1.0	1,900	4.7	--	
6/19/1998	--		15.28	0.00	21.25	1,800	<0.5	<1.0	<1.0	<1.0	1,900	4.7	--	

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

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Well and Sample Date	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH	Footnote
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>MW-3 Cont.</b>														
1/21/1999	--	36.53	14.67	0.00	21.86	1,100	<1.0	<1.0	<1.0	<1.0	1,200	--	--	
4/30/1999	--		16.00	0.00	20.53	--	--	--	--	--	--	--	--	
7/9/1999	--		14.64	0.00	21.89	470	<1.0	<1.0	<1.0	<1.0	460/470	--	--	g
11/3/1999	--		16.39	0.00	20.14	--	--	--	--	--	--	--	--	
1/12/2000	--		16.80	0.00	19.73	<50	<0.5	<0.5	<0.5	<0.5	34	--	--	
4/13/2000	--		16.43	0.00	20.10	--	--	--	--	--	--	--	--	
7/26/2000	--		16.93	0.00	19.60	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	
10/24/2000	--		15.69	0.00	20.84	--	--	--	--	--	--	--	--	
1/19/2001	--		14.84	0.00	21.69	<50	<0.5	<0.5	<0.5	1	25.9	--	--	
7/23/2001	--		15.11	0.00	21.42	62	<0.5	<0.5	<0.5	<1.5	28.7	--	--	
1/18/2002	--		12.37	0.00	24.16	<50	<0.5	<0.5	<0.5	<1.0	17.8	--	--	
8/1/2002	--		14.44	0.00	22.09	66	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	
1/16/2003	--		12.07	0.00	24.46	<50	<0.50	<0.50	<0.50	<0.50	20	--	--	p
7/7/2003	--		13.90	0.00	22.63	<50	<0.50	<0.50	<0.50	<0.50	8.8	--	--	q
02/05/2004	--		12.60	0.00	23.93	<50	<0.50	<0.50	<0.50	<0.50	4.6	--	7.0	
07/01/2004	--		14.57	0.00	21.96	<50	<0.50	<0.50	<0.50	<0.50	3.3	--	--	
03/16/2005	P		11.03	0.00	25.50	<50	<0.50	<0.50	<0.50	<0.50	4.4	1.5	6.8	
07/22/2005	P		12.68	0.00	23.85	<50	<0.50	<0.50	<0.50	<0.50	4.1	--	6.8	
01/25/2006	P		11.35	0.00	25.18	81	<0.50	<0.50	<0.50	<0.50	3.0	--	6.9	
7/6/2006	P		11.47	0.00	25.06	<50	<0.50	<0.50	<0.50	<0.50	3.0	--	6.9	
1/8/2007	P		12.92	0.00	23.61	<50	<0.50	<0.50	<0.50	<0.50	3.2	2.87	7.12	
7/10/2007	P		14.46	0.00	22.07	<50	<0.50	<0.50	<0.50	<0.50	2.8	2.87	7.25	
1/15/2008	P		12.99	0.00	23.54	<50	<0.50	<0.50	<0.50	<0.50	0.88	1.04	7.10	
7/15/2008	P		15.30	0.00	21.23	<50	<0.50	<0.50	<0.50	<0.50	1.3	1.60	7.06	
10/21/2008	P		16.30	0.00	20.23	<50	<0.50	<0.50	<0.50	<0.50	0.94	2.21	7.28	
1/6/2009	P		15.45	0.00	21.08	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.02	6.43	
4/21/2009	P		13.90	0.00	22.63	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.26	7.59	
7/21/2009	P		15.28	0.00	21.25	<50	<0.50	<0.50	<0.50	<0.50	0.60	15.16	7.43	y
3/18/2010	P		11.65	0.00	24.88	<50	<0.50	<0.50	<0.50	<1.0	<0.50	0.73	7.05	
7/29/2010	NP		13.96	0.00	22.57	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.12	7.8	

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						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
MW-3 Cont.						--	--	--	--	--	--	--	--	
11/12/2010	--	36.53	15.38	0.00	21.15	--	--	--	--	--	--	--	--	
2/22/2011	P		11.30	0.00	25.23	<50	<0.50	<0.50	<0.50	<1.0	0.50	0.70	6.60	
QC-2														
10/7/1992	--	37.73	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	i
1/14/1993	--		--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	i, m
4/22/1993	--		--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	i, m
7/15/1993	--		--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	i, m
10/21/1993	--		--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	i
1/27/1994	--		--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	i
4/21/1994	--		--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	i
9/9/1994	--		--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	i
12/21/1994	--		--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	i
1/30/1995	--		--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	--	--	i
4/10/1995	--		--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	--	--	i
6/27/1995	--		--	--	--	<50	<0.50	<0.50	<0.50	<1.0	--	--	--	i
9/19/1995	--		--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	i
12/7/1995	--		--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	i
3/28/1996	--		--	--	--	<50	<0.5	<1	<1	<1	<10	--	--	i
6/20/1996	--		--	--	--	<50	<0.5	<1	<1	<1	<10	--	--	i
RW-1														
4/5/1991	--	37.73	--	--	--	--	--	--	--	--	--	--	--	
4/1/1992	--		22.81	0.00	14.92	--	--	--	--	--	--	--	--	
7/6/1992	--		26.92	0.00	10.81	--	--	--	--	--	--	--	--	
10/7/1992	--		28.51	0.00	9.22	--	--	--	--	--	--	--	--	
1/14/1993	--		23.75	0.00	13.98	--	--	--	--	--	--	--	--	
4/22/1993	--		22.70	0.00	15.03	--	--	--	--	--	--	--	--	
7/15/1993	--		26.10	0.00	11.63	--	--	--	--	--	--	--	--	
10/21/1993	--		25.40	0.00	12.33	--	--	--	--	--	--	--	--	
1/27/1994	--		28.02	0.00	9.71	--	--	--	--	--	--	--	--	

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

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Well and Sample Date	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH	Footnote
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
<b>RW-1 Cont.</b>														
4/21/1994	--	37.73	23.10	0.00	14.63	--	--	--	--	--	--	--	--	
9/9/1994	--		24.39	0.00	13.34	--	--	--	--	--	--	--	--	
12/21/1994	--		--	--	--	--	--	--	--	--	--	--	--	h
12/7/1995	--		25.71	0.00	12.02	150,000	34,000	35,000	4,300	21,000	2,700	--	--	
3/28/1996	--		16.75	0.00	20.98	--	--	--	--	--	--	--	--	
6/20/1996	--		25.10	0.00	12.63	--	--	--	--	--	--	--	--	h
10/11/1996	--		25.51	0.00	12.22	130,000	20,000	32,000	2,800	20,700	1400/1200	7.4	--	g
1/2/1997	--		24.49	0.00	13.24	--	--	--	--	--	--	--	--	
4/14/1997	--		23.99	0.00	13.74	--	--	--	--	--	--	--	--	
4/15/1997	--		--	--	--	1,800,000	38,000	190,000	48,000	281,000	<25000	--	--	
7/2/1997	--		16.40	0.00	21.33	130,000	19,000	54,000	4,700	33,400	<10000	--	--	e
7/2/1997	--		16.40	0.00	21.33	140,000	19,000	55,000	4,400	32,400	<10000	5.7	--	
9/30/1997	--		27.97	0.00	9.76	140,000	17,000	29,000	2,500	15,900	1,200	--	--	e
9/30/1997	--		27.97	0.00	9.76	110,000	13,000	22,000	2,000	12,500	1,100	7.0	--	
1/21/1998	--		14.14	0.00	23.59	270,000	21,000	48,000	3,500	25,000	1,100	4.8	--	
4/9/1998	--		25.01	0.00	12.72	--	--	--	--	--	--	--	--	
4/10/1998	--		--	--	--	220,000	26,000	46,000	4,400	24,500	<2500	5.1	--	
6/19/1998	--		11.43	0.00	26.30	180,000	19,000	32,000	3,000	17,400	<2500	4.6	--	
11/30/1998	--		7.87	0.00	29.86	--	--	--	--	--	--	--	--	
1/21/1999	--		18.90	0.00	18.83	260,000	24,000	46,000	5,100	30,000	1,700	--	--	
7/9/1999	--		18.58	0.00	19.15	--	--	--	--	--	--	--	--	
11/3/1999	--		20.85	0.00	16.88	160,000	19,000	37,000	3,800	25,000	1,500	--	--	
1/12/2000	--		21.20	0.00	16.53	240,000	18,000	46,000	5,800	26,000	2,100	--	--	
4/13/2000	--		21.71	0.00	16.02	120,000	2,100	33,000	2,800	28,000	1,500	--	--	
5/24/2000	--		21.89	0.00	15.84	--	--	--	--	--	--	--	--	
6/1/2000	--		16.30	0.00	21.43	--	--	--	--	--	--	--	--	
6/8/2000	--		17.88	0.00	19.85	--	--	--	--	--	--	--	--	
6/15/2000	--		16.72	0.00	21.01	--	--	--	--	--	--	--	--	
6/20/2000	--		21.04	0.00	16.69	--	--	--	--	--	--	--	--	
7/7/2000	--		17.21	0.00	20.52	--	--	--	--	--	--	--	--	

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						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
<b>RW-1 Cont.</b>															
7/20/2000	--	37.73	21.87	0.00	15.86	--	--	--	--	--	--	--	--	--	
7/26/2000	--		21.45	0.00	16.28	67,000	160	5,300	2,100	18,000	1,100	--	--		
7/31/2000	--		22.11	0.00	15.62	--	--	--	--	--	--	--	--	--	
8/8/2000	--		17.80	0.00	19.93	--	--	--	--	--	--	--	--	--	
8/16/2000	--		17.92	0.00	19.81	--	--	--	--	--	--	--	--	--	
8/23/2000	--		18.11	0.00	19.62	--	--	--	--	--	--	--	--	--	
10/24/2000	--		18.93	0.00	18.80	--	--	--	--	--	--	--	--	--	
10/25/2000	--		19.04	0.00	18.69	360,000	18,000	78,000	34,000	180,000	2,100	--	--	k	
1/19/2001	--		18.19	0.00	19.54	110,000	9,450	19,600	3,510	21,100	1,270	--	--		
7/24/2001	--		17.93	0.00	19.80	--	--	--	--	--	--	--	--	--	1
1/18/2002	--		14.87	0.00	22.86	63,000	2,060	4,370	1,770	13,900	491	--	--		
8/1/2002	--		16.84	0.00	20.89	60,000	1,210	2,200	1,520	10,600	390	--	--		
1/16/2003	--		14.42	0.00	23.31	34,000	2,500	2,700	780	5,300	680	--	--	p	
7/7/2003	--		16.11	0.00	21.62	50,000	640	280	1,600	10,000	<250	--	--	q, u	
07/01/2004	P		16.75	0.00	20.98	47,000	320	87	1,900	7,500	72	--	6.7		
03/16/2005	P		12.48	0.00	25.25	17,000	28	23	350	590	53	1.0	6.8		
07/22/2005	P		14.40	0.00	23.33	5,900	50	35	120	220	51	--	6.7	u	
01/25/2006	P		12.00	0.00	25.73	7,000	22	5.9	190	--	34	--	7.1		
7/6/2006	P		13.01	0.00	24.72	16,000	37	14	470	230	64	--	6.8		
1/8/2007	P		14.75	0.00	22.98	2400	16	10	56	54	22	3.61	6.86		
7/10/2007	P		16.21	0.00	21.52	3,800	4.4	2.8	72	22	21	2.65	6.98		
1/15/2008	P		14.63	0.00	23.10	1,700	21	1.6	45	10	14	1.31	6.82		
7/15/2008	P		17.04	0.00	20.69	1,600	<0.50	0.66	4.4	3.0	12	1.32	6.95		
10/21/2008	P		18.44	0.00	19.29	3,600	<0.50	1.3	19	10	12	0.79	7.17		
1/6/2009	P		17.50	0.00	20.23	1,300	<0.50	<0.50	1.6	2.7	7.0	1.02	6.43		
4/21/2009	P		15.37	0.00	22.36	2,000	27	1.9	30	16	6.0	0.86	7.38	x	
7/21/2009	P		17.20	0.00	20.53	870	<0.50	<0.50	<0.50	0.57	7.0	13.31	7.35	y	
3/18/2010	P		12.87	Sheen	24.86	2,500	<2.5	<2.5	2.7	<5.0	<2.5	0.74	6.73		
7/29/2010	NP		15.90	0.00	21.83	450	<0.50	<0.50	<0.50	1.4	3.5	--	7.1		
11/12/2010	--		17.25	0.00	20.48	--	--	--	--	--	--	--	--	--	

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						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
RW-1 Cont.															
2/22/2011	NP	37.73	12.60	0.00	25.13	170	<0.50	<0.50	<0.50	<1.0	0.54	0.45	6.5		
<b>VEW-4</b>															
07/22/2005	P	NS	14.04	0.00	--	680	41	24	20	67	<0.50	--	6.8		
1/15/2008	P		15.05	0.00	--	350	19	1.1	5.0	3.3	<0.50	0.54	6.99		
7/15/2008	P		17.24	0.00	--	53	<0.50	<0.50	<0.50	<0.50	<0.50	0.59	6.95		
10/21/2008	--		--	--	--	--	--	--	--	--	--	--	--	v	
1/6/2009	--		18.00	0.00	--	--	--	--	--	--	--	--	--	--	
4/21/2009	P		15.81	0.00	--	610	5.9	0.64	4.0	1.9	<0.50	1.99	7.41		
7/21/2009	P		17.60	0.00	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	8.99	7.24	y	
3/18/2010	--		12.91	0.00	--	--	--	--	--	--	--	--	--	--	
7/29/2010	--		15.82	0.00	--	--	--	--	--	--	--	--	--	--	
11/12/2010	--		17.68	0.00	--	--	--	--	--	--	--	--	--	--	
2/22/2011	--		13.33	0.00	--	--	--	--	--	--	--	--	--	--	
<b>VEW-5</b>															
07/22/2005	--	NS	--	--	--	--	--	--	--	--	--	--	--	v	
1/15/2008	--		--	--	--	--	--	--	--	--	--	--	--	v	
7/15/2008	--		--	--	--	--	--	--	--	--	--	--	--	v	
10/21/2008	--		--	--	--	--	--	--	--	--	--	--	--	v	
1/6/2009	--		--	--	--	--	--	--	--	--	--	--	--	v	
4/21/2009	--		--	--	--	--	--	--	--	--	--	--	--	v	
7/21/2009	--		--	--	--	--	--	--	--	--	--	--	--	v	
3/18/2010	--		--	--	--	--	--	--	--	--	--	--	--	v	
7/29/2010	--		--	--	--	--	--	--	--	--	--	--	--	v	
11/12/2010	--		--	--	--	--	--	--	--	--	--	--	--	v	
2/22/2011	--		10.07	0.00	--	--	--	--	--	--	--	--	--	--	
<b>VEW-6</b>															
1/15/2008	--	NS	11.83	0.00	--	--	--	--	--	--	--	--	--	--	
7/15/2008	--		14.81	0.00	--	--	--	--	--	--	--	--	--		
10/21/2008	--		16.02	0.00	--	--	--	--	--	--	--	--	--	--	

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

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

Well and Sample Date	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH	Footnote
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
VEW-6 Cont.						--	--	--	--	--	--	--	--	
1/6/2009	--	NS	14.70	0.00	--	--	--	--	--	--	--	--	--	
4/21/2009	--		13.34	0.00	--	--	--	--	--	--	--	--	--	
7/21/2009	--		14.90	0.00	--	--	--	--	--	--	--	--	--	
3/18/2010	--		10.39	0.00	--	--	--	--	--	--	--	--	--	
7/29/2010	--		14.65	0.00	--	--	--	--	--	--	--	--	--	
11/12/2010	--		14.73	0.00	--	--	--	--	--	--	--	--	--	
2/22/2011	--		13.33	0.00	--	--	--	--	--	--	--	--	--	
VEW-7						--	--	--	--	--	--	--	--	
1/15/2008	--	NS	13.24	0.00	--	--	--	--	--	--	--	--	--	
7/15/2008	--		15.91	0.00	--	--	--	--	--	--	--	--	--	
10/21/2008	--		16.89	0.00	--	--	--	--	--	--	--	--	--	
1/6/2009	--		16.00	0.00	--	--	--	--	--	--	--	--	--	
4/21/2009	--		14.30	0.00	--	--	--	--	--	--	--	--	--	
7/21/2009	--		15.98	0.00	--	--	--	--	--	--	--	--	--	
3/18/2010	--		11.16	0.00	--	--	--	--	--	--	--	--	--	
7/29/2010	--		14.67	0.00	--	--	--	--	--	--	--	--	--	
11/12/2010	--		16.10	0.00	--	--	--	--	--	--	--	--	--	
2/22/2011	--		11.17	0.00	--	--	--	--	--	--	--	--	--	
VEW-8	P	NS	14.24	0.00	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	6.8	
07/22/2005	P	NS	14.24	0.00	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	6.8	
1/15/2008	--		--	--	--	--	--	--	--	--	--	--	--	v
7/15/2008	--		--	--	--	--	--	--	--	--	--	--	--	v
10/21/2008	--		--	--	--	--	--	--	--	--	--	--	--	v
1/6/2009	--		--	--	--	--	--	--	--	--	--	--	--	v
4/21/2009	--		16.53	0.00	--	--	--	--	--	--	--	--	--	
7/21/2009	--		--	--	--	--	--	--	--	--	--	--	--	v
3/18/2010	--		14.05	0.00	--	--	--	--	--	--	--	--	--	
7/29/2010	--		16.24	0.00	--	--	--	--	--	--	--	--	--	
11/12/2010	--		--	--	--	--	--	--	--	--	--	--	--	v

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

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

Well and Sample Date	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH	Footnote
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
VEW-8 Cont.						--	--	--	--	--	--	--	--	--
2/22/2011	--	NS	13.69	0.00	--	--	--	--	--	--	--	--	--	--
VEW-9						--	--	--	--	--	--	--	--	--
1/15/2008	--	NS	5.31	0.00	--	--	--	--	--	--	--	--	--	--
7/15/2008	--		--	--	--	--	--	--	--	--	--	--	--	v
10/21/2008	--		--	--	--	--	--	--	--	--	--	--	--	v
1/6/2009	--		--	--	--	--	--	--	--	--	--	--	--	f
4/21/2009	--		6.18	0.00	--	--	--	--	--	--	--	--	--	--
7/21/2009	--		--	--	--	--	--	--	--	--	--	--	--	v
3/18/2010	--		5.32	0.00	--	--	--	--	--	--	--	--	--	--
7/29/2010	--		7.03	0.00	--	--	--	--	--	--	--	--	--	a
11/12/2010	--		--	--	--	--	--	--	--	--	--	--	--	v
2/22/2011	--		5.50	0.00	--	--	--	--	--	--	--	--	--	--
VW-1						--	--	--	--	--	--	--	--	--
1/15/2008	--	NS	--	--	--	--	--	--	--	--	--	--	--	v
7/15/2008	--		--	--	--	--	--	--	--	--	--	--	--	v
10/21/2008	--		--	--	--	--	--	--	--	--	--	--	--	v
1/6/2009	--		--	--	--	--	--	--	--	--	--	--	--	v
4/21/2009	--		--	--	--	--	--	--	--	--	--	--	--	v
7/21/2009	--		--	--	--	--	--	--	--	--	--	--	--	v
3/18/2010	--		9.80	0.00	--	--	--	--	--	--	--	--	--	--
7/29/2010	--		--	--	--	--	--	--	--	--	--	--	--	v
11/12/2010	--		--	--	--	--	--	--	--	--	--	--	--	v
2/22/2011	--		9.56	0.00	--	--	--	--	--	--	--	--	--	--
VW-2						--	--	--	--	--	--	--	--	--
1/15/2008	--	NS	0.25	0.00	--	--	--	--	--	--	--	--	--	--
7/15/2008	--		0.65	0.00	--	--	--	--	--	--	--	--	--	
10/21/2008	--		0.68	0.00	--	--	--	--	--	--	--	--	--	
1/6/2009	--		0.45	0.00	--	--	--	--	--	--	--	--	--	
4/21/2009	--		0.45	0.00	--	--	--	--	--	--	--	--	--	

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

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

Well and Sample Date	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH	Footnote
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
VW-2 Cont.						--	--	--	--	--	--	--	--	
7/21/2009	--	NS	0.52	0.00	--	--	--	--	--	--	--	--	--	
3/18/2010	--		0.50	0.00	--	--	--	--	--	--	--	--	--	
7/29/2010	--		--	--	--	--	--	--	--	--	--	--	--	b
11/12/2010	--		0.81	0.00	--	--	--	--	--	--	--	--	--	
2/22/2011	--		--	--	--	--	--	--	--	--	--	--	--	b
VW-3						--	--	--	--	--	--	--	--	
1/15/2008	--	NS	2.08	0.00	--	--	--	--	--	--	--	--	--	
7/15/2008	--		4.10	0.00	--	--	--	--	--	--	--	--	--	
10/21/2008	--		4.95	0.00	--	--	--	--	--	--	--	--	--	
1/6/2009	--		5.40	0.00	--	--	--	--	--	--	--	--	--	
4/21/2009	--		4.57	0.00	--	--	--	--	--	--	--	--	--	
7/21/2009	--		5.22	0.00	--	--	--	--	--	--	--	--	--	
3/18/2010	--		5.42	0.00	--	--	--	--	--	--	--	--	--	
7/29/2010	--		5.60	0.00	--	--	--	--	--	--	--	--	--	
11/12/2010	--		6.06	0.00	--	--	--	--	--	--	--	--	--	
2/22/2011	--		5.32	0.00	--	--	--	--	--	--	--	--	--	
OW-1						--	--	--	--	--	--	--	--	
11/12/2010	--	NS	19.01	0.00	--	--	--	--	--	--	--	--	--	

Symbols & Abbreviations:

-- = 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.

MP = Micro Purged

Footnotes:

a = Mud in well

b = Well full of water

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

x = Sample taken from VOA vial with air bubble > 6mm diameter

y = DO value suspect

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

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

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**  
**Former BP Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
AW-1									
4/22/1993	--	--	987	--	--	--	--	--	
7/15/1993	--	--	838	--	--	--	--	--	
10/21/1993	--	--	832	--	--	--	--	--	
1/27/1994	--	--	650	--	--	--	--	--	
4/21/1994	--	--	1,119	--	--	--	--	--	
12/21/1994	--	--	855	--	--	--	--	--	
9/19/1995	--	--	1,000	--	--	--	--	--	
12/7/1995	--	--	1,100	--	--	--	--	--	
3/28/1996	--	--	<1000	--	--	--	--	--	
6/20/1996	--	--	<100	--	--	--	--	--	
10/11/1996	--	--	580	--	--	--	--	--	
1/2/1997	--	--	700	--	--	--	--	--	
4/15/1997	--	--	340	--	--	--	--	--	
7/2/1997	--	--	<1000	--	--	--	--	--	
9/30/1997	--	--	560	--	--	--	--	--	
1/21/1998	--	--	720	--	--	--	--	--	
4/10/1998	--	--	1,000	--	--	--	--	--	
6/19/1998	--	--	620	--	--	--	--	--	
6/19/1998	--	--	660	--	--	--	--	--	
11/30/1998	--	--	710/820	--	--	--	--	--	
1/21/1999	--	--	1,000	--	--	--	--	--	
4/30/1999	--	--	1,500	--	--	--	--	--	
7/9/1999	--	--	1,300	--	--	--	--	--	
1/12/2000	--	--	2,200	--	--	--	--	--	
7/26/2000	--	--	37,000	--	--	--	--	--	
1/19/2001	--	--	1,630	--	--	--	--	--	
7/24/2001	--	--	1,440	--	--	--	--	--	
1/18/2002	--	--	1,250	--	--	--	--	--	
8/1/2002	--	--	1,120	--	--	--	--	--	
1/16/2003	--	--	1,100	--	--	--	--	--	
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	

**Table 2. Summary of Fuel Additives Analytical Data**  
**Former BP Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>AW-1 Cont.</b>									
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	
7/15/2008	<300	<10	<0.50	<0.50	<0.50	15	<0.50	<0.50	
10/21/2008	<3,000	390	120	<5.0	<5.0	22	<5.0	<5.0	
1/6/2009	<3,000	190	170	<5.0	<5.0	28	<5.0	<5.0	
4/21/2009	<6,000	<200	160	<10	<10	27	<10	<10	
7/21/2009	<6,000	<200	170	<10	<10	30	<10	<10	
3/18/2010	<2,000	<80	<10	<10	<10	19	<10	<10	
7/29/2010	<100	<4.0	<0.50	<0.50	<0.50	16	<0.50	<0.50	
<b>2/22/2011</b>	<b>&lt;250</b>	<b>&lt;4.0</b>	<b>0.56</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>AW-2</b>									
7/15/1993	--	--	<5.0	--	--	--	--	--	
10/21/1993	--	--	<5.0	--	--	--	--	--	
4/21/1994	--	--	<5.0	--	--	--	--	--	
12/21/1994	--	--	<5.0	--	--	--	--	--	
9/19/1995	--	--	<5.0	--	--	--	--	--	
9/19/1995	--	--	<5.0	--	--	--	--	--	
12/7/1995	--	--	<5.0	--	--	--	--	--	
3/28/1996	--	--	<10	--	--	--	--	--	
6/20/1996	--	--	<10	--	--	--	--	--	
10/11/1996	--	--	<10	--	--	--	--	--	
1/2/1997	--	--	<10	--	--	--	--	--	
4/14/1997	--	--	<10	--	--	--	--	--	
7/2/1997	--	--	<10	--	--	--	--	--	
9/30/1997	--	--	860	--	--	--	--	--	

**Table 2. Summary of Fuel Additives Analytical Data**  
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Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>AW-2 Cont.</b>									
1/21/1998	--	--	110	--	--	--	--	--	
4/10/1998	--	--	<10	--	--	--	--	--	
6/19/1998	--	--	<10	--	--	--	--	--	
1/21/1999	--	--	<1.0	--	--	--	--	--	
1/12/2000	--	--	<0.5	--	--	--	--	--	
1/18/2002	--	--	<0.5	--	--	--	--	--	
1/16/2003	--	--	<2.5	--	--	--	--	--	
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	
7/15/2008	<30,000	<1,000	<50	<50	<50	<50	<50	<50	
10/21/2008	<7,500	<250	16	<12	<12	<12	<12	<12	
1/6/2009	<6,000	<200	11	<10	<10	<10	<10	<10	
4/21/2009	<6,000	<200	10	<10	<10	<10	<10	<10	
7/21/2009	<6,000	<200	13	<10	<10	<10	<10	<10	
7/29/2010	<500	<20	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
<b>AW-3</b>									
7/15/1993	--	--	37.3	--	--	--	--	--	
10/21/1993	--	--	8.95	--	--	--	--	--	
1/27/1994	--	--	7.37	--	--	--	--	--	
4/21/1994	--	--	9.36	--	--	--	--	--	
9/19/1995	--	--	790	--	--	--	--	--	
12/7/1995	--	--	<5.0	--	--	--	--	--	
12/7/1995	--	--	<5.0	--	--	--	--	--	
3/28/1996	--	--	<10	--	--	--	--	--	
3/28/1996	--	--	<10	--	--	--	--	--	
6/20/1996	--	--	<10	--	--	--	--	--	
6/20/1996	--	--	<10	--	--	--	--	--	
10/11/1996	--	--	<10	--	--	--	--	--	

**Table 2. Summary of Fuel Additives Analytical Data**  
**Former BP Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>AW-3 Cont.</b>									
10/11/1996	--	--	<10	--	--	--	--	--	
1/2/1997	--	--	<10	--	--	--	--	--	
4/14/1997	--	--	<10	--	--	--	--	--	
4/15/1997	--	--	<10	--	--	--	--	--	
7/2/1997	--	--	<10	--	--	--	--	--	
9/30/1997	--	--	810	--	--	--	--	--	
1/21/1998	--	--	110	--	--	--	--	--	
1/21/1998	--	--	99	--	--	--	--	--	
4/10/1998	--	--	<10	--	--	--	--	--	
4/10/1998	--	--	<10	--	--	--	--	--	
6/19/1998	--	--	<10	--	--	--	--	--	
1/21/1999	--	--	<1.0	--	--	--	--	--	
1/12/2000	--	--	<0.5	--	--	--	--	--	
03/16/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>AW-4</b>									
1/14/1993	--	--	1,400	--	--	--	--	--	
7/15/1993	--	--	1,978	--	--	--	--	--	
10/21/1993	--	--	4,600	--	--	--	--	--	
1/27/1994	--	--	6,400	--	--	--	--	--	
4/21/1994	--	--	13,000	--	--	--	--	--	
4/21/1994	--	--	16,010	--	--	--	--	--	
9/19/1995	--	--	7,100	--	--	--	--	--	
12/7/1995	--	--	5,200	--	--	--	--	--	
6/20/1996	--	--	12	--	--	--	--	--	
10/11/1996	--	--	880/1000	--	--	--	--	--	
1/2/1997	--	--	110	--	--	--	--	--	
1/2/1997	--	--	22	--	--	--	--	--	
4/15/1997	--	--	<10	--	--	--	--	--	
7/2/1997	--	--	41	--	--	--	--	--	
1/21/1998	--	--	3,100	--	--	--	--	--	
4/10/1998	--	--	730	--	--	--	--	--	

**Table 2. Summary of Fuel Additives Analytical Data**  
**Former BP Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>AW-4 Cont.</b>									
6/19/1998	--	--	34	--	--	--	--	--	
1/21/1999	--	--	30	--	--	--	--	--	
7/9/1999	--	--	320	--	--	--	--	--	
1/12/2000	--	--	280	--	--	--	--	--	
7/26/2000	--	--	3,500	--	--	--	--	--	
1/19/2001	--	--	267	--	--	--	--	--	
7/24/2001	--	--	115	--	--	--	--	--	
1/18/2002	--	--	85.3	--	--	--	--	--	
1/16/2003	--	--	<120	--	--	--	--	--	
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	
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	
10/21/2008	<600	<20	18	<1.0	<1.0	1.9	<1.0	<1.0	
1/6/2009	<300	<10	8.3	<0.50	<0.50	0.81	<0.50	<0.50	
4/21/2009	<300	<10	4.1	<0.50	<0.50	<0.50	<0.50	<0.50	
7/21/2009	<300	<10	8.6	<0.50	<0.50	0.89	<0.50	<0.50	
3/18/2010	<100	<4.0	2.5	<0.50	<0.50	<0.50	<0.50	<0.50	
7/29/2010	<100	<4.0	<0.50	<0.50	<0.50	0.57	<0.50	<0.50	
2/22/2011	<250	<4.0	2.9	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>AW-5</b>									
7/15/1993	--	--	<50	--	--	--	--	--	
7/15/1993	--	--	<50	--	--	--	--	--	
10/21/1993	--	--	75	--	--	--	--	--	

**Table 2. Summary of Fuel Additives Analytical Data**  
**Former BP Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>AW-5 Cont.</b>									
1/27/1994	--	--	48.9	--	--	--	--	--	
4/21/1994	--	--	75	--	--	--	--	--	
12/21/1994	--	--	104	--	--	--	--	--	
12/21/1994	--	--	114	--	--	--	--	--	
9/19/1995	--	--	110	--	--	--	--	--	
12/7/1995	--	--	210	--	--	--	--	--	
3/28/1996	--	--	63	--	--	--	--	--	
6/20/1996	--	--	<10	--	--	--	--	--	
10/11/1996	--	--	<10	--	--	--	--	--	
1/2/1997	--	--	<10	--	--	--	--	--	
4/14/1997	--	--	<10	--	--	--	--	--	
7/2/1997	--	--	<10	--	--	--	--	--	
9/30/1997	--	--	1,300	--	--	--	--	--	
1/21/1998	--	--	3,700	--	--	--	--	--	
4/10/1998	--	--	3,000	--	--	--	--	--	
6/19/1998	--	--	2,500	--	--	--	--	--	
1/21/1999	--	--	1,800	--	--	--	--	--	
7/9/1999	--	--	3400/3500	--	--	--	--	--	
1/12/2000	--	--	4,600	--	--	--	--	--	
7/26/2000	--	--	16,000	--	--	--	--	--	
1/19/2001	--	--	4,580	--	--	--	--	--	
7/24/2001	--	--	5,170	--	--	--	--	--	
1/18/2002	--	--	3,750	--	--	--	--	--	
8/1/2002	--	--	3,470	--	--	--	--	--	
1/16/2003	--	--	1,600	--	--	--	--	--	
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	

**Table 2. Summary of Fuel Additives Analytical Data**  
**Former BP Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>AW-5 Cont.</b>									
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	
10/21/2008	<300	130	63	<0.50	<0.50	16	<0.50	<0.50	
1/6/2009	<600	150	26	<1.0	<1.0	5.0	<1.0	<1.0	
4/21/2009	<300	130	5.1	<0.50	<0.50	1.3	<0.50	<0.50	
7/21/2009	<300	110	25	<0.50	<0.50	5.2	<0.50	<0.50	
3/18/2010	<100	52	72	<0.50	<0.50	16	<0.50	<0.50	
7/29/2010	<100	44	1.9	<0.50	<0.50	<0.50	<0.50	<0.50	
2/22/2011	<250	28	1.9	0.50	<0.50	<0.50	<0.50	<0.50	
<b>AW-6</b>									
7/15/1993	--	--	<5.0	--	--	--	--	--	
10/21/1993	--	--	<5.0	--	--	--	--	--	
1/27/1994	--	--	<5.0	--	--	--	--	--	
4/21/1994	--	--	<5.0	--	--	--	--	--	
12/21/1994	--	--	5.19	--	--	--	--	--	
9/19/1995	--	--	25	--	--	--	--	--	
12/7/1995	--	--	16	--	--	--	--	--	
3/28/1996	--	--	<10	--	--	--	--	--	
6/20/1996	--	--	<10	--	--	--	--	--	
10/11/1996	--	--	<10	--	--	--	--	--	
1/2/1997	--	--	<10	--	--	--	--	--	
4/14/1997	--	--	<10	--	--	--	--	--	
7/2/1997	--	--	<10	--	--	--	--	--	
9/30/1997	--	--	<10	--	--	--	--	--	
1/21/1998	--	--	110	--	--	--	--	--	
4/10/1998	--	--	300	--	--	--	--	--	
6/19/1998	--	--	690	--	--	--	--	--	
1/21/1999	--	--	1,900	--	--	--	--	--	
1/12/2000	--	--	2,700	--	--	--	--	--	

**Table 2. Summary of Fuel Additives Analytical Data**  
**Former BP Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>AW-6 Cont.</b>									
1/19/2001	--	--	4,850	--	--	--	--	--	
1/18/2002	--	--	5,390	--	--	--	--	--	
1/16/2003	--	--	2,500	--	--	--	--	--	
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	
10/21/2008	<3,000	<100	160	<5.0	<5.0	37	<5.0	<5.0	
1/6/2009	<3,000	<100	97	<5.0	<5.0	23	<5.0	<5.0	
4/21/2009	<300	26	22	<0.50	<0.50	3.0	<0.50	<0.50	
7/21/2009	<300	<10	93	<0.50	<0.50	28	<0.50	<0.50	
3/18/2010	<100	83	93	<0.50	<0.50	22	<0.50	<0.50	
7/29/2010	<100	<4.0	46	<0.50	<0.50	10	<0.50	<0.50	
2/22/2011	<250	<4.0	4.6	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>AW-7</b>									
7/15/1993	--	--	<5.0	--	--	--	--	--	
10/21/1993	--	--	<5.0	--	--	--	--	--	
1/27/1994	--	--	<5.0	--	--	--	--	--	
4/21/1994	--	--	<5.0	--	--	--	--	--	
12/21/1994	--	--	<5.0	--	--	--	--	--	
9/19/1995	--	--	<5.0	--	--	--	--	--	
12/7/1995	--	--	<5.0	--	--	--	--	--	
3/28/1996	--	--	<10	--	--	--	--	--	
6/20/1996	--	--	<10	--	--	--	--	--	
10/11/1996	--	--	<10	--	--	--	--	--	

**Table 2. Summary of Fuel Additives Analytical Data**  
**Former BP Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>AW-7 Cont.</b>									
1/2/1997	--	--	<10	--	--	--	--	--	
4/14/1997	--	--	<10	--	--	--	--	--	
7/2/1997	--	--	<10	--	--	--	--	--	
9/30/1997	--	--	1,100	--	--	--	--	--	
1/21/1998	--	--	<10	--	--	--	--	--	
4/9/1998	--	--	<10	--	--	--	--	--	
6/19/1998	--	--	<10	--	--	--	--	--	
<b>AW-8</b>									
7/15/1993	--	--	<5.0	--	--	--	--	--	
10/21/1993	--	--	<5.0	--	--	--	--	--	
1/27/1994	--	--	<5.0	--	--	--	--	--	
4/21/1994	--	--	<5.0	--	--	--	--	--	
12/21/1994	--	--	<5.0	--	--	--	--	--	
9/19/1995	--	--	<5.0	--	--	--	--	--	
12/7/1995	--	--	<5.0	--	--	--	--	--	
3/28/1996	--	--	<10	--	--	--	--	--	
6/20/1996	--	--	<10	--	--	--	--	--	
10/11/1996	--	--	<10	--	--	--	--	--	
1/2/1997	--	--	<10	--	--	--	--	--	
4/14/1997	--	--	<10	--	--	--	--	--	
7/2/1997	--	--	<10	--	--	--	--	--	
9/30/1997	--	--	820	--	--	--	--	--	
1/21/1998	--	--	<10	--	--	--	--	--	
4/9/1998	--	--	<10	--	--	--	--	--	
6/19/1998	--	--	<10	--	--	--	--	--	
03/16/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	a
<b>AW-9</b>									
1/2/1997	--	--	<10	--	--	--	--	--	
7/2/1997	--	--	<10	--	--	--	--	--	
9/30/1997	--	--	<10	--	--	--	--	--	

**Table 2. Summary of Fuel Additives Analytical Data**  
**Former BP Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>AW-9 Cont.</b>									
1/21/1998	--	--	<10	--	--	--	--	--	
4/9/1998	--	--	<10	--	--	--	--	--	
6/19/1998	--	--	<10	--	--	--	--	--	
<b>IW-1</b>									
<b>IW-2</b>									
<b>IW-3</b>									
11/12/2010	--	--	2.5	--	--	--	--	--	
<b>MW-1</b>									
4/21/1994	--	--	11,000	--	--	--	--	--	
4/15/1997	--	--	4,800	--	--	--	--	--	
7/2/1997	--	--	<5000	--	--	--	--	--	
9/30/1997	--	--	2,000	--	--	--	--	--	
1/21/1998	--	--	1,300	--	--	--	--	--	
4/10/1998	--	--	9,300	--	--	--	--	--	
6/19/1998	--	--	5,000	--	--	--	--	--	
11/30/1998	--	--	1800/2800	--	--	--	--	--	
1/21/1999	--	--	2,700	--	--	--	--	--	
4/30/1999	--	--	1,600	--	--	--	--	--	
7/9/1999	--	--	1,200	--	--	--	--	--	
11/3/1999	--	--	630	--	--	--	--	--	
1/12/2000	--	--	630	--	--	--	--	--	
4/13/2000	--	--	810	--	--	--	--	--	
7/26/2000	--	--	1,100	--	--	--	--	--	
10/24/2000	--	--	4,400	--	--	--	--	--	
1/19/2001	--	--	514	--	--	--	--	--	
7/24/2001	--	--	285	--	--	--	--	--	
1/18/2002	--	--	138	--	--	--	--	--	
8/1/2002	--	--	489	--	--	--	--	--	
1/16/2003	--	--	<500	--	--	--	--	--	

**Table 2. Summary of Fuel Additives Analytical Data**  
**Former BP Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Footnote
	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	
7/15/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
10/21/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
1/6/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
4/21/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
7/21/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
3/18/2010	<100	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
7/29/2010	<500	<20	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
2/22/2011	<250	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>MW-2</b>									
4/22/1993	--	--	30	--	--	--	--	--	
7/15/1993	--	--	21.7	--	--	--	--	--	
10/21/1993	--	--	14.9	--	--	--	--	--	
1/27/1994	--	--	11.5	--	--	--	--	--	
4/21/1994	--	--	11.4	--	--	--	--	--	
12/21/1994	--	--	<5.0	--	--	--	--	--	
9/19/1995	--	--	<5.0	--	--	--	--	--	
12/7/1995	--	--	<5.0	--	--	--	--	--	
3/28/1996	--	--	<10	--	--	--	--	--	
6/20/1996	--	--	<10	--	--	--	--	--	
10/11/1996	--	--	<10	--	--	--	--	--	
1/2/1997	--	--	<10	--	--	--	--	--	

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**Former BP Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>MW-2 Cont.</b>									
4/14/1997	--	--	<10	--	--	--	--	--	
7/2/1997	--	--	<10	--	--	--	--	--	
9/30/1997	--	--	<10	--	--	--	--	--	
1/21/1998	--	--	100	--	--	--	--	--	
4/10/1998	--	--	23	--	--	--	--	--	
6/19/1998	--	--	<10	--	--	--	--	--	
1/21/1999	--	--	1.9	--	--	--	--	--	
1/12/2000	--	--	<0.5	--	--	--	--	--	
03/16/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>MW-3</b>									
1/14/1993	--	--	714	--	--	--	--	--	
4/22/1993	--	--	3,600	--	--	--	--	--	
7/15/1993	--	--	2,204	--	--	--	--	--	
10/21/1993	--	--	847	--	--	--	--	--	
1/27/1994	--	--	3,892	--	--	--	--	--	
4/21/1994	--	--	3,864	--	--	--	--	--	
12/21/1994	--	--	800	--	--	--	--	--	
9/19/1995	--	--	260	--	--	--	--	--	
12/7/1995	--	--	91	--	--	--	--	--	
3/28/1996	--	--	230	--	--	--	--	--	
6/20/1996	--	--	370	--	--	--	--	--	
10/11/1996	--	--	440	--	--	--	--	--	
1/2/1997	--	--	140	--	--	--	--	--	
4/15/1997	--	--	1,800	--	--	--	--	--	
7/2/1997	--	--	940	--	--	--	--	--	
9/30/1997	--	--	510	--	--	--	--	--	
1/21/1998	--	--	98	--	--	--	--	--	
4/9/1998	--	--	890	--	--	--	--	--	
6/19/1998	--	--	1,900	--	--	--	--	--	
6/19/1998	--	--	1,900	--	--	--	--	--	
6/19/1998	--	--	1,900	--	--	--	--	--	

**Table 2. Summary of Fuel Additives Analytical Data**  
**Former BP Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>MW-3 Cont.</b>									
6/19/1998	--	--	1,900	--	--	--	--	--	
1/21/1999	--	--	1,200	--	--	--	--	--	
7/9/1999	--	--	460/470	--	--	--	--	--	
1/12/2000	--	--	34	--	--	--	--	--	
7/26/2000	--	--	<0.5	--	--	--	--	--	
1/19/2001	--	--	25.9	--	--	--	--	--	
7/23/2001	--	--	28.7	--	--	--	--	--	
1/18/2002	--	--	17.8	--	--	--	--	--	
8/1/2002	--	--	<0.5	--	--	--	--	--	
1/16/2003	--	--	20	--	--	--	--	--	
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	
7/15/2008	<300	<10	1.3	<0.50	<0.50	<0.50	<0.50	<0.50	
10/21/2008	<300	<10	0.94	<0.50	<0.50	<0.50	<0.50	<0.50	
1/6/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
4/21/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
7/21/2009	<300	<10	0.60	<0.50	<0.50	<0.50	<0.50	<0.50	
3/18/2010	<100	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
7/29/2010	<100	17	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>2/22/2011</b>	<b>&lt;250</b>	<b>&lt;4.0</b>	<b>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>QC-2</b>									
7/15/1993	--	--	<5.0	--	--	--	--	--	
9/19/1995	--	--	<5.0	--	--	--	--	--	

**Table 2. Summary of Fuel Additives Analytical Data**  
**Former BP Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>QC-2 Cont.</b>									
12/7/1995	--	--	<5.0	--	--	--	--	--	
3/28/1996	--	--	<10	--	--	--	--	--	
6/20/1996	--	--	<10	--	--	--	--	--	
<b>RW-1</b>									
12/7/1995	--	--	2,700	--	--	--	--	--	
10/11/1996	--	--	1400/1200	--	--	--	--	--	
4/15/1997	--	--	<25000	--	--	--	--	--	
7/2/1997	--	--	<10000	--	--	--	--	--	
7/2/1997	--	--	<10000	--	--	--	--	--	
9/30/1997	--	--	1,200	--	--	--	--	--	
9/30/1997	--	--	1,100	--	--	--	--	--	
1/21/1998	--	--	1,100	--	--	--	--	--	
4/10/1998	--	--	<2500	--	--	--	--	--	
6/19/1998	--	--	<2500	--	--	--	--	--	
1/21/1999	--	--	1,700	--	--	--	--	--	
11/3/1999	--	--	1,500	--	--	--	--	--	
1/12/2000	--	--	2,100	--	--	--	--	--	
4/13/2000	--	--	1,500	--	--	--	--	--	
7/26/2000	--	--	1,100	--	--	--	--	--	
10/25/2000	--	--	2,100	--	--	--	--	--	
1/19/2001	--	--	1,270	--	--	--	--	--	
1/18/2002	--	--	491	--	--	--	--	--	
8/1/2002	--	--	390	--	--	--	--	--	
1/16/2003	--	--	680	--	--	--	--	--	
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	
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	--	

**Table 2. Summary of Fuel Additives Analytical Data**  
**Former BP Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>RW-1 Cont.</b>									
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	
7/15/2008	<300	<10	12	<0.50	<0.50	1.0	<0.50	<0.50	
10/21/2008	<300	17	12	<0.50	<0.50	<0.50	<0.50	<0.50	
1/6/2009	<300	14	7.0	<0.50	<0.50	0.63	<0.50	<0.50	
4/21/2009	<300	47	6.0	<0.50	<0.50	0.58	<0.50	<0.50	b
7/21/2009	<300	15	7.0	<0.50	<0.50	0.67	<0.50	<0.50	
3/18/2010	<500	<20	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
7/29/2010	<100	11	3.5	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>2/22/2011</b>	<b>&lt;250</b>	<b>&lt;4.0</b>	<b>0.54</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-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	
7/15/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
4/21/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
7/21/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>VEW-5</b>									
<b>VEW-6</b>									
<b>VEW-7</b>									
<b>VEW-8</b>									
07/22/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>VEW-9</b>									
<b>VW-1</b>									
<b>VW-2</b>									
<b>VW-3</b>									

**Table 2. Summary of Fuel Additives Analytical Data**  
**Former BP Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
OW-1									

Symbols & Abbreviations:

-- = 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

b = Sample taken from VOA vial with air bubble > 6mm diameter

Notes:

All volatile organic compounds analyzed using EPA Method 8260B

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 Groundwater Flow Direction and Gradient**  
**Former BP Station #11133, 2220 98th Ave., Oakland, CA**

Date Measured	Approximate Gradient Direction	Approximate Gradient Magnitude (ft/ft)
1/25/2006	Variable: East to Southwest	0.03 to 0.09
7/6/2006	Variable: East to West towards Center	0.04 to 0.05
1/8/2007	Variable: East to West towards Center	0.03 to 0.05
7/10/2007	West	0.01
1/15/2008	West-Southwest	0.006
7/15/2008	West-Southwest	0.01
10/21/2008	West-Southwest	0.01
1/6/2009	West	0.009
4/21/2009	West	0.01
7/21/2009	West	0.01
3/18/2010	West	0.008
7/29/2010	West	0.008
11/12/2010	West-Southwest	0.01
<b>2/22/2011</b>	<b>Varaible: North to West</b>	<b>0.03 to 0.04</b>

Notes:

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**  
**Former BP Station #11133, 2220 98th Ave., Oakland, CA**

Well and Sample Date	Concentrations in (mg/L)										ORP (mV)	pH	Footnote
	Dissolved Oxygen	Nitrate (NO <sub>3</sub> )	Manganese	Ferrous Iron	Sulfate (SO <sub>4</sub> )	Dissolved Sulfide	Hydrogen Sulfide	Dissolved CO <sub>2</sub>	Methane	Total Alkalinity			
AW-1													
4/21/1994	1.4	--	--	--	--	--	--	--	--	--	--	--	
9/9/1994	2.1	--	--	--	--	--	--	--	--	--	--	--	
12/21/1994	1.6	--	--	--	--	--	--	--	--	--	--	--	
1/30/1995	1.7	--	--	--	--	--	--	--	--	--	--	--	
4/10/1995	7.9	--	--	--	--	--	--	--	--	--	--	--	
6/29/1995	6.2	--	--	--	--	--	--	--	--	--	--	--	
9/19/1995	8.5	--	--	--	--	--	--	--	--	--	--	--	
12/7/1995	2.9	--	--	--	--	--	--	--	--	--	--	--	
3/28/1996	6.6	--	--	--	--	--	--	--	--	--	--	--	
6/20/1996	6.4	--	--	--	--	--	--	--	--	--	--	--	
10/11/1996	6.3	--	--	--	--	--	--	--	--	--	--	--	
1/2/1997	6.7	--	--	--	--	--	--	--	--	--	--	--	
4/15/1997	5.4	--	--	--	--	--	--	--	--	--	--	--	
7/2/1997	6.2	--	--	--	--	--	--	--	--	--	--	--	
9/30/1997	6.9	--	--	--	--	--	--	--	--	--	--	--	
1/21/1998	5.8	--	--	--	--	--	--	--	--	--	--	--	
4/10/1998	4.3	--	--	--	--	--	--	--	--	--	--	--	
6/19/1998	4.9	--	--	--	--	--	--	--	--	--	--	--	
02/05/2004	--	--	--	--	--	--	--	--	--	--	--	6.7	
07/01/2004	--	--	--	--	--	--	--	--	--	--	--	6.5	
03/16/2005	0.8	<0.5	6.5	3.4	0.58	<1.000	--	81.4	3.29	420	-10	6.7	
07/22/2005	--	--	--	--	--	--	--	--	--	--	--	6.5	
01/25/2006	--	--	--	--	--	--	--	--	--	--	--	7.0	
7/6/2006	--	--	--	--	--	--	--	--	--	--	--	6.8	
1/8/2007	2.53	--	--	--	--	--	--	--	--	--	--	6.77	
7/10/2007	1.79	--	--	--	--	--	--	--	--	--	--	6.90	
1/15/2008	0.92	<0.5	6.4	3.2	1.9	<1.000	--	190	3.2	410	-58	6.91	a, b
7/15/2008	1.80	<0.1	7.2	6.0	<1	<1.000	--	400	2.09	488	-96.5	6.79	
10/21/2008	2.40	<0.1	8.08	2.0	2.5	<0.050	--	178	0.381	498	-130.1	7.01	b, c
1/6/2009	1.37	<0.1	7.81	3.0	1.4	<0.050	--	190	0.593	446	-128	6.09	
4/21/2009	2.29	<0.1	7.07	3.6	1.8	<0.050	--	189	1.65	456	-126.7	7.28	

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

Well and Sample Date	Concentrations in (mg/L)										ORP (mV)	pH	Footnote
	Dissolved Oxygen	Nitrate (NO <sub>3</sub> )	Manganese	Ferrous Iron	Sulfate (SO <sub>4</sub> )	Dissolved Sulfide	Hydrogen Sulfide	Dissolved CO <sub>2</sub>	Methane	Total Alkalinity			
<b>AW-1 Cont.</b>													
7/21/2009	17.46	<0.1	7.64	2.9	1.8	<0.050	--	278	1.92	480	-137.6	7.23	a, e
3/18/2010	0.68	--	--	--	--	--	--	--	--	--	-38	6.57	
7/29/2010	0.92	--	--	--	--	--	--	--	--	--	--	7.4	
2/22/2011	0.75	<1.0	0.53	3.8	2.6	<0.100	--	130	1.5	150	--	6.28	
<b>AW-2</b>													
4/21/1994	2.0	--	--	--	--	--	--	--	--	--	--	--	
9/9/1994	4.1	--	--	--	--	--	--	--	--	--	--	--	
12/21/1994	2.0	--	--	--	--	--	--	--	--	--	--	--	
1/30/1995	2.5	--	--	--	--	--	--	--	--	--	--	--	
4/10/1995	4.4	--	--	--	--	--	--	--	--	--	--	--	
6/29/1995	7.8	--	--	--	--	--	--	--	--	--	--	--	
9/19/1995	4.5	--	--	--	--	--	--	--	--	--	--	--	
12/7/1995	4.9	--	--	--	--	--	--	--	--	--	--	--	
3/28/1996	4.1	--	--	--	--	--	--	--	--	--	--	--	
6/20/1996	5.2	--	--	--	--	--	--	--	--	--	--	--	
10/11/1996	6.0	--	--	--	--	--	--	--	--	--	--	--	
1/2/1997	6.1	--	--	--	--	--	--	--	--	--	--	--	
4/14/1997	5.3	--	--	--	--	--	--	--	--	--	--	--	
7/2/1997	5.7	--	--	--	--	--	--	--	--	--	--	--	
9/30/1997	5.4	--	--	--	--	--	--	--	--	--	--	--	
1/21/1998	4.9	--	--	--	--	--	--	--	--	--	--	--	
4/10/1998	3.9	--	--	--	--	--	--	--	--	--	--	--	
6/19/1998	3.6	--	--	--	--	--	--	--	--	--	--	--	
02/05/2004	--	--	--	--	--	--	--	--	--	--	--	6.6	
03/16/2005	1.7	--	--	--	--	--	--	--	--	--	--	6.7	
01/25/2006	--	--	--	--	--	--	--	--	--	--	--	7.1	
1/8/2007	2.09	--	--	--	--	--	--	--	--	--	--	7.2	
1/15/2008	0.83	4.4	1.1	<0.5	21	<1.000	--	52	0.21	190	-88	6.79	a
7/15/2008	2.14	0.44	1.57	0.5	38	<0.050	--	100	0.00742	168	-190.1	7.05	
10/21/2008	1.65	0.89	1.13	0.5	36	<0.050	--	24.2	0.111	176	-47.2	7.33	c, d

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

Well and Sample Date	Concentrations in (mg/L)										Total Alkalinity	ORP (mV)	pH	Footnote
	Dissolved Oxygen	Nitrate (NO <sub>3</sub> )	Manganese	Ferrous Iron	Sulfate (SO <sub>4</sub> )	Dissolved Sulfide	Hydrogen Sulfide	Dissolved CO <sub>2</sub>	Methane					
<b>AW-2 Cont.</b>														
1/6/2009	0.84	0.39	0.996	0.6	22	<0.050	--	28.1	0.0504	168	129	6.94		
4/21/2009	1.89	0.86	1.24	0.39	22	<0.050	--	37.6	0.209	162	53.3	7.42		
7/21/2009	9.29	0.16	0.63	0.1	29	<0.050	--	38.2	0.174	144	97.3	7.32	a, e	
7/29/2010	0.62	--	--	--	--	--	--	--	--	--	--	--	7.4	
<b>AW-3</b>														
4/21/1994	1.3	--	--	--	--	--	--	--	--	--	--	--	--	
9/9/1994	1.9	--	--	--	--	--	--	--	--	--	--	--	--	
6/29/1995	8.0	--	--	--	--	--	--	--	--	--	--	--	--	
9/19/1995	7.4	--	--	--	--	--	--	--	--	--	--	--	--	
12/7/1995	3.4	--	--	--	--	--	--	--	--	--	--	--	--	
3/28/1996	4.1	--	--	--	--	--	--	--	--	--	--	--	--	
6/20/1996	4.2	--	--	--	--	--	--	--	--	--	--	--	--	
10/11/1996	4.7	--	--	--	--	--	--	--	--	--	--	--	--	
1/2/1997	5.6	--	--	--	--	--	--	--	--	--	--	--	--	
4/14/1997	5.0	--	--	--	--	--	--	--	--	--	--	--	--	
7/2/1997	5.4	--	--	--	--	--	--	--	--	--	--	--	--	
9/30/1997	5.7	--	--	--	--	--	--	--	--	--	--	--	--	
1/21/1998	4.6	--	--	--	--	--	--	--	--	--	--	--	--	
4/10/1998	4.5	--	--	--	--	--	--	--	--	--	--	--	--	
6/19/1998	4.4	--	--	--	--	--	--	--	--	--	--	--	--	
03/16/2005	1.1	--	--	--	--	--	--	--	--	--	--	--	7.3	
<b>AW-4</b>														
4/21/1994	1.5	--	--	--	--	--	--	--	--	--	--	--	--	
9/9/1994	2.1	--	--	--	--	--	--	--	--	--	--	--	--	
4/10/1995	8.5	--	--	--	--	--	--	--	--	--	--	--	--	
6/29/1995	7.5	--	--	--	--	--	--	--	--	--	--	--	--	
9/19/1995	8.3	--	--	--	--	--	--	--	--	--	--	--	--	
12/7/1995	3.6	--	--	--	--	--	--	--	--	--	--	--	--	
10/11/1996	6.2	--	--	--	--	--	--	--	--	--	--	--	--	

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

Well and Sample Date	Concentrations in (mg/L)										ORP (mV)	pH	Footnote
	Dissolved Oxygen	Nitrate (NO3)	Manganese	Ferrous Iron	Sulfate (SO4)	Dissolved Sulfide	Hydrogen Sulfide	Dissolved CO2	Methane	Total Alkalinity			
<b>AW-4 Cont.</b>													
1/2/1997	6.4	--	--	--	--	--	--	--	--	--	--	--	
4/15/1997	5.4	--	--	--	--	--	--	--	--	--	--	--	
7/2/1997	4.1	--	--	--	--	--	--	--	--	--	--	--	
1/21/1998	3.9	--	--	--	--	--	--	--	--	--	--	--	
4/10/1998	4.9	--	--	--	--	--	--	--	--	--	--	--	
6/19/1998	4.3	--	--	--	--	--	--	--	--	--	--	--	
02/05/2004	--	--	--	--	--	--	--	--	--	--	--	6.8	
07/01/2004	--	--	--	--	--	--	--	--	--	--	--	6.7	
03/16/2005	0.6	<0.5	5.6	1.4	71	<1.000	--	54.2	0.585	310	10	6.5	
07/22/2005	--	--	--	--	--	--	--	--	--	--	--	6.7	
01/25/2006	--	--	--	--	--	--	--	--	--	--	--	7.0	
7/6/2006	--	--	--	--	--	--	--	--	--	--	--	6.7	
1/8/2007	3.00	--	--	--	--	--	--	--	--	--	--	6.80	
7/10/2007	2.54	--	--	--	--	--	--	--	--	--	--	7.19	
1/15/2008	1.30	<0.5	5	1.5	82	<1.000	--	120	0.61	390	-91	6.75	a, b
7/15/2008	2.64	<0.1	7.11	6.0	47	<0.050	--	354	0.777	598	-90.0	6.91	
10/21/2008	1.54	<0.1	8.44	3.0	61	<0.050	--	101	0.0753	510	-123.3	7.25	c, d
1/6/2009	0.70	<0.1	6.33	0.5	78	<0.050	--	76.4	0.148	400	-29	6.31	
4/21/2009	3.51	<0.1	4.88	3.4	83	<0.050	--	77.5	0.33	328	-102.9	7.48	
7/21/2009	6.14	<0.1	7.34	2.5	68	<0.050	--	75.3	0.638	414	-159.9	7.04	a, e
3/18/2010	0.79	--	--	--	--	--	--	--	--	--	-57	6.71	
7/29/2010	1.07	--	--	--	--	--	--	--	--	--	--	7.2	
2/22/2011	0.65	<1.0	5.4	4.3	84	<0.100	--	82	0.68	310	--	6.51	
<b>AW-5</b>													
4/21/1994	1.3	--	--	--	--	--	--	--	--	--	--	--	
9/9/1994	2.7	--	--	--	--	--	--	--	--	--	--	--	
12/21/1994	1.1	--	--	--	--	--	--	--	--	--	--	--	
1/30/1995	1.5	--	--	--	--	--	--	--	--	--	--	--	
4/10/1995	8.3	--	--	--	--	--	--	--	--	--	--	--	
6/29/1995	6.9	--	--	--	--	--	--	--	--	--	--	--	

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

Well and Sample Date	Concentrations in (mg/L)										ORP (mV)	pH	Footnote
	Dissolved Oxygen	Nitrate (NO <sub>3</sub> )	Manganese	Ferrous Iron	Sulfate (SO <sub>4</sub> )	Dissolved Sulfide	Hydrogen Sulfide	Dissolved CO <sub>2</sub>	Methane	Total Alkalinity			
<b>AW-5 Cont.</b>													
9/19/1995	8.2	--	--	--	--	--	--	--	--	--	--	--	
12/7/1995	4.3	--	--	--	--	--	--	--	--	--	--	--	
3/28/1996	3.0	--	--	--	--	--	--	--	--	--	--	--	
6/20/1996	3.6	--	--	--	--	--	--	--	--	--	--	--	
10/11/1996	4.5	--	--	--	--	--	--	--	--	--	--	--	
1/2/1997	4.6	--	--	--	--	--	--	--	--	--	--	--	
4/14/1997	5.1	--	--	--	--	--	--	--	--	--	--	--	
7/2/1997	4.0	--	--	--	--	--	--	--	--	--	--	--	
9/30/1997	6.3	--	--	--	--	--	--	--	--	--	--	--	
1/21/1998	4.5	--	--	--	--	--	--	--	--	--	--	--	
4/10/1998	5.4	--	--	--	--	--	--	--	--	--	--	--	
6/19/1998	5.2	--	--	--	--	--	--	--	--	--	--	--	
02/05/2004	--	--	--	--	--	--	--	--	--	--	--	6.7	
07/01/2004	--	--	--	--	--	--	--	--	--	--	--	6.6	
03/16/2005	2.1	--	--	--	--	--	--	--	--	--	--	6.7	
07/22/2005	--	--	--	--	--	--	--	--	--	--	--	6.6	
01/25/2006	--	--	--	--	--	--	--	--	--	--	--	7.0	
7/6/2006	--	--	--	--	--	--	--	--	--	--	--	6.5	
1/8/2007	5.22	--	--	--	--	--	--	--	--	--	--	6.84	
7/10/2007	1.96	--	--	--	--	--	--	--	--	--	--	7.02	
1/15/2008	0.90	<0.5	2.3	1.4	12	<1.000	--	79	0.12	230	-101	6.82	a
7/15/2008	2.13	<0.1	2.56	0.5	12	<0.050	--	161	0.00929	238	-97.9	6.85	
10/21/2008	1.01	<0.1	1.68	0.5	14	<0.050	--	57.8	0.0598	216	-84.9	7.10	c, d
1/6/2009	0.70	<0.1	2.92	0.5	13	<0.050	--	52.4	0.106	224	-79	6.22	
4/21/2009	2.09	<0.1	2.71	1.5	10	<0.050	--	57.7	0.142	216	-43.8	7.35	
7/21/2009	6.50	<0.1	2.43	1.1	9.3	<0.050	--	63.7	0.0913	226	-139.1	7.14	a, e
3/18/2010	0.74	--	--	--	--	--	--	--	--	--	--	6.64	
7/29/2010	1.32	--	--	--	--	--	--	--	--	--	--	7.0	
2/22/2011	0.57	<1.0	2.3	1.2	15	<0.100	--	52	0.081	200	--	6.40	
<b>AW-6</b>													

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

Well and Sample Date	Concentrations in (mg/L)										ORP (mV)	pH	Footnote
	Dissolved Oxygen	Nitrate (NO <sub>3</sub> )	Manganese	Ferrous Iron	Sulfate (SO <sub>4</sub> )	Dissolved Sulfide	Hydrogen Sulfide	Dissolved CO <sub>2</sub>	Methane	Total Alkalinity			
<b>AW-6 Cont.</b>													
4/21/1994	1.7	--	--	--	--	--	--	--	--	--	--	--	
9/9/1994	2.9	--	--	--	--	--	--	--	--	--	--	--	
12/21/1994	1.1	--	--	--	--	--	--	--	--	--	--	--	
1/30/1995	2.2	--	--	--	--	--	--	--	--	--	--	--	
4/10/1995	8.6	--	--	--	--	--	--	--	--	--	--	--	
6/29/1995	6.3	--	--	--	--	--	--	--	--	--	--	--	
9/19/1995	8.3	--	--	--	--	--	--	--	--	--	--	--	
12/7/1995	4.7	--	--	--	--	--	--	--	--	--	--	--	
3/28/1996	4.0	--	--	--	--	--	--	--	--	--	--	--	
6/20/1996	4.6	--	--	--	--	--	--	--	--	--	--	--	
10/11/1996	5.3	--	--	--	--	--	--	--	--	--	--	--	
1/2/1997	5.5	--	--	--	--	--	--	--	--	--	--	--	
4/14/1997	3.9	--	--	--	--	--	--	--	--	--	--	--	
7/2/1997	5.2	--	--	--	--	--	--	--	--	--	--	--	
9/30/1997	6.0	--	--	--	--	--	--	--	--	--	--	--	
1/21/1998	5.0	--	--	--	--	--	--	--	--	--	--	--	
4/10/1998	4.3	--	--	--	--	--	--	--	--	--	--	--	
6/19/1998	4.0	--	--	--	--	--	--	--	--	--	--	--	
02/05/2004	--	--	--	--	--	--	--	--	--	--	--	6.7	
07/01/2004	--	--	--	--	--	--	--	--	--	--	--	6.5	
03/16/2005	3.0	--	--	--	--	--	--	--	--	--	--	6.8	
07/22/2005	--	--	--	--	--	--	--	--	--	--	--	6.7	
01/25/2006	--	--	--	--	--	--	--	--	--	--	--	7.0	
7/6/2006	--	--	--	--	--	--	--	--	--	--	--	6.5	
1/8/2007	3.18	--	--	--	--	--	--	--	--	--	--	6.78	
7/10/2007	2.09	--	--	--	--	--	--	--	--	--	--	6.83	
1/15/2008	0.58	<0.5	1.2	<0.1	21	<1.000	--	41	0.05	150	-94	6.80	a
7/15/2008	2.12	<0.1	1.37	0.0	23	<0.050	--	163	0.00127	160	-40.8	6.87	
10/21/2008	1.01	<0.1	1.29	0.5	20	<0.050	--	39.4	0.104	152	-33.9	7.19	c, d
1/6/2009	0.94	<0.1	1.36	0.5	21	<0.050	--	37.5	0.0691	156	-25	6.23	
4/21/2009	4.29	<0.1	0.167	<0.1	17	<0.050	--	46.6	0.00112	166	35.0	7.38	

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

Well and Sample Date	Concentrations in (mg/L)										ORP (mV)	pH	Footnote
	Dissolved Oxygen	Nitrate (NO <sub>3</sub> )	Manganese	Ferrous Iron	Sulfate (SO <sub>4</sub> )	Dissolved Sulfide	Hydrogen Sulfide	Dissolved CO <sub>2</sub>	Methane	Total Alkalinity			
<b>AW-6 Cont.</b>													
7/21/2009	10.79	<0.1	2.05	<0.1	16	<0.050	--	39.1	0.127	168	-39.9	7.09	a, e
3/18/2010	0.68	--	--	--	--	--	--	--	--	--	-32	6.75	
7/29/2010	0.84	--	--	--	--	--	--	--	--	--	--	7.0	
2/22/2011	0.85	<1.0	0.2	<0.10	31	<0.100	--	38	0.0038	150	--	6.41	
<b>AW-7</b>													
4/21/1994	2.5	--	--	--	--	--	--	--	--	--	--	--	
9/9/1994	4.3	--	--	--	--	--	--	--	--	--	--	--	
12/21/1994	2.2	--	--	--	--	--	--	--	--	--	--	--	
1/30/1995	2.7	--	--	--	--	--	--	--	--	--	--	--	
4/10/1995	4.8	--	--	--	--	--	--	--	--	--	--	--	
6/29/1995	7.6	--	--	--	--	--	--	--	--	--	--	--	
9/19/1995	5.1	--	--	--	--	--	--	--	--	--	--	--	
12/7/1995	5.2	--	--	--	--	--	--	--	--	--	--	--	
3/28/1996	3.9	--	--	--	--	--	--	--	--	--	--	--	
6/20/1996	5.0	--	--	--	--	--	--	--	--	--	--	--	
10/11/1996	6.3	--	--	--	--	--	--	--	--	--	--	--	
1/2/1997	6.2	--	--	--	--	--	--	--	--	--	--	--	
4/14/1997	5.0	--	--	--	--	--	--	--	--	--	--	--	
7/2/1997	5.4	--	--	--	--	--	--	--	--	--	--	--	
9/30/1997	6.5	--	--	--	--	--	--	--	--	--	--	--	
1/21/1998	4.9	--	--	--	--	--	--	--	--	--	--	--	
4/9/1998	4.9	--	--	--	--	--	--	--	--	--	--	--	
6/19/1998	4.4	--	--	--	--	--	--	--	--	--	--	--	
<b>AW-8</b>													
4/21/1994	1.5	--	--	--	--	--	--	--	--	--	--	--	
9/9/1994	2.4	--	--	--	--	--	--	--	--	--	--	--	
12/21/1994	1.1	--	--	--	--	--	--	--	--	--	--	--	
1/30/1995	0.8	--	--	--	--	--	--	--	--	--	--	--	
4/10/1995	8.3	--	--	--	--	--	--	--	--	--	--	--	

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

Well and Sample Date	Concentrations in (mg/L)										ORP (mV)	pH	Footnote
	Dissolved Oxygen	Nitrate (NO <sub>3</sub> )	Manganese	Ferrous Iron	Sulfate (SO <sub>4</sub> )	Dissolved Sulfide	Hydrogen Sulfide	Dissolved CO <sub>2</sub>	Methane	Total Alkalinity			
<b>AW-8 Cont.</b>													
6/29/1995	8.3	--	--	--	--	--	--	--	--	--	--	--	
9/19/1995	7.7	--	--	--	--	--	--	--	--	--	--	--	
12/7/1995	4.4	--	--	--	--	--	--	--	--	--	--	--	
3/28/1996	3.8	--	--	--	--	--	--	--	--	--	--	--	
6/20/1996	3.6	--	--	--	--	--	--	--	--	--	--	--	
10/11/1996	6.4	--	--	--	--	--	--	--	--	--	--	--	
1/2/1997	5.9	--	--	--	--	--	--	--	--	--	--	--	
4/14/1997	4.6	--	--	--	--	--	--	--	--	--	--	--	
7/2/1997	5.6	--	--	--	--	--	--	--	--	--	--	--	
9/30/1997	6.7	--	--	--	--	--	--	--	--	--	--	--	
1/21/1998	5.2	--	--	--	--	--	--	--	--	--	--	--	
4/9/1998	4.4	--	--	--	--	--	--	--	--	--	--	--	
6/19/1998	4.1	--	--	--	--	--	--	--	--	--	--	--	
03/16/2005	1.5	--	--	--	--	--	--	--	--	--	--	7.3	
<b>AW-9</b>													
1/2/1997	6.7	--	--	--	--	--	--	--	--	--	--	--	
7/2/1997	6.0	--	--	--	--	--	--	--	--	--	--	--	
9/30/1997	6.8	--	--	--	--	--	--	--	--	--	--	--	
1/21/1998	5.3	--	--	--	--	--	--	--	--	--	--	--	
4/9/1998	5.6	--	--	--	--	--	--	--	--	--	--	--	
6/19/1998	4.8	--	--	--	--	--	--	--	--	--	--	--	
<b>IW-1</b>													
<b>IW-2</b>													
11/12/2010	0.67	--	--	--	--	--	--	--	--	--	--	6.27	
<b>IW-3</b>													
<b>MW-1</b>													
4/21/1994	1.6	--	--	--	--	--	--	--	--	--	--	--	
7/2/1997	5.5	--	--	--	--	--	--	--	--	--	--	--	

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

Well and Sample Date	Concentrations in (mg/L)										ORP (mV)	pH	Footnote
	Dissolved Oxygen	Nitrate (NO3)	Manganese	Ferrous Iron	Sulfate (SO4)	Dissolved Sulfide	Hydrogen Sulfide	Dissolved CO2	Methane	Total Alkalinity			
<b>MW-1 Cont.</b>													
9/30/1997	6.7	--	--	--	--	--	--	--	--	--	--	--	--
1/21/1998	4.5	--	--	--	--	--	--	--	--	--	--	--	
4/10/1998	5.3	--	--	--	--	--	--	--	--	--	--	--	
6/19/1998	4.9	--	--	--	--	--	--	--	--	--	--	--	
02/05/2004	--	--	--	--	--	--	--	--	--	--	--	6.9	
03/16/2005	0.9	<0.5	7.7	2.7	13	<1.000	--	49.9	4.55	310	-175	6.9	
07/22/2005	--	--	--	--	--	--	--	--	--	--	--	6.8	
01/25/2006	--	--	--	--	--	--	--	--	--	--	--	7.3	
7/6/2006	--	--	--	--	--	--	--	--	--	--	--	6.9	
1/8/2007	1.83	--	--	--	--	--	--	--	--	--	--	6.92	
7/10/2007	2.16	--	--	--	--	--	--	--	--	--	--	7.04	
1/15/2008	0.94	<0.5	8.1	1.3	51	<1.000	--	67	2.9	320	-150	7.13	a
7/15/2008	1.20	<0.1	8.39	0.5	50	<0.050	--	29.2	1.09	326	-174.7	7.06	
10/21/2008	1.99	<0.1	8.05	4.0	27	<0.050	--	18.7	0.303	360	-200.0	7.30	c
1/6/2009	0.67	<0.1	10.1	1.6	59	<0.050	--	21.3	0.277	368	225	6.90	
4/21/2009	1.99	<0.1	8.54	1.7	90	<0.050	--	59.3	0.839	326	-196.9	7.54	
7/21/2009	6.20	<0.1	9.25	0.46	120	<0.050	--	67.2	1.12	320	-208.3	7.43	a, e
3/18/2010	0.90	--	--	--	--	--	--	--	--	--	-70	6.89	
7/29/2010	0.48	--	--	--	--	--	--	--	--	--	--	7.3	
2/22/2011	1.53	<1.0	4.7	2.1	94	<0.100	--	54	0.29	220	--	6.30	
<b>MW-2</b>													
4/21/1994	1.1	--	--	--	--	--	--	--	--	--	--	--	
9/9/1994	2.2	--	--	--	--	--	--	--	--	--	--	--	
12/21/1994	1.2	--	--	--	--	--	--	--	--	--	--	--	
1/30/1995	1.7	--	--	--	--	--	--	--	--	--	--	--	
4/10/1995	7.8	--	--	--	--	--	--	--	--	--	--	--	
6/29/1995	9.1	--	--	--	--	--	--	--	--	--	--	--	
9/19/1995	7.2	--	--	--	--	--	--	--	--	--	--	--	
12/7/1995	2.4	--	--	--	--	--	--	--	--	--	--	--	
3/28/1996	3.2	--	--	--	--	--	--	--	--	--	--	--	

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

Well and Sample Date	Concentrations in (mg/L)										ORP (mV)	pH	Footnote
	Dissolved Oxygen	Nitrate (NO <sub>3</sub> )	Manganese	Ferrous Iron	Sulfate (SO <sub>4</sub> )	Dissolved Sulfide	Hydrogen Sulfide	Dissolved CO <sub>2</sub>	Methane	Total Alkalinity			
<b>MW-2 Cont.</b>													
6/20/1996	4.2	--	--	--	--	--	--	--	--	--	--	--	
10/11/1996	6.3	--	--	--	--	--	--	--	--	--	--	--	
1/2/1997	6.7	--	--	--	--	--	--	--	--	--	--	--	
4/14/1997	5.7	--	--	--	--	--	--	--	--	--	--	--	
7/2/1997	5.9	--	--	--	--	--	--	--	--	--	--	--	
9/30/1997	6.3	--	--	--	--	--	--	--	--	--	--	--	
1/21/1998	5.4	--	--	--	--	--	--	--	--	--	--	--	
4/10/1998	5.0	--	--	--	--	--	--	--	--	--	--	--	
6/19/1998	4.9	--	--	--	--	--	--	--	--	--	--	--	
03/16/2005	1.3	5.3	2.2	0.7	38	<1.000	--	7.37	<0.0010	85	30	7.1	
<b>MW-3</b>													
4/21/1994	1.4	--	--	--	--	--	--	--	--	--	--	--	
9/9/1994	3.0	--	--	--	--	--	--	--	--	--	--	--	
12/21/1994	1.9	--	--	--	--	--	--	--	--	--	--	--	
1/30/1995	2.5	--	--	--	--	--	--	--	--	--	--	--	
4/10/1995	6.9	--	--	--	--	--	--	--	--	--	--	--	
6/29/1995	6.4	--	--	--	--	--	--	--	--	--	--	--	
9/19/1995	7.0	--	--	--	--	--	--	--	--	--	--	--	
12/7/1995	4.5	--	--	--	--	--	--	--	--	--	--	--	
3/28/1996	4.2	--	--	--	--	--	--	--	--	--	--	--	
6/20/1996	4.4	--	--	--	--	--	--	--	--	--	--	--	
10/11/1996	5.8	--	--	--	--	--	--	--	--	--	--	--	
1/2/1997	6.0	--	--	--	--	--	--	--	--	--	--	--	
4/15/1997	5.6	--	--	--	--	--	--	--	--	--	--	--	
7/2/1997	5.3	--	--	--	--	--	--	--	--	--	--	--	
9/30/1997	6.6	--	--	--	--	--	--	--	--	--	--	--	
1/21/1998	4.7	--	--	--	--	--	--	--	--	--	--	--	
4/9/1998	5.7	--	--	--	--	--	--	--	--	--	--	--	
6/19/1998	4.7	--	--	--	--	--	--	--	--	--	--	--	
6/19/1998	4.7	--	--	--	--	--	--	--	--	--	--	--	

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

Well and Sample Date	Concentrations in (mg/L)										ORP (mV)	pH	Footnote
	Dissolved Oxygen	Nitrate (NO <sub>3</sub> )	Manganese	Ferrous Iron	Sulfate (SO <sub>4</sub> )	Dissolved Sulfide	Hydrogen Sulfide	Dissolved CO <sub>2</sub>	Methane	Total Alkalinity			
<b>MW-3 Cont.</b>													
6/19/1998	4.7	--	--	--	--	--	--	--	--	--	--	--	
6/19/1998	4.7	--	--	--	--	--	--	--	--	--	--	--	
02/05/2004	--	--	--	--	--	--	--	--	--	--	--	7.0	
03/16/2005	1.5	--	--	--	--	--	--	--	--	--	--	6.8	
07/22/2005	--	--	--	--	--	--	--	--	--	--	--	6.8	
01/25/2006	--	--	--	--	--	--	--	--	--	--	--	6.9	
7/6/2006	--	--	--	--	--	--	--	--	--	--	--	6.9	
1/8/2007	2.87	--	--	--	--	--	--	--	--	--	--	7.12	
7/10/2007	2.87	--	--	--	--	--	--	--	--	--	--	7.25	
1/15/2008	1.04	2.5	0.12	<0.1	44	<1.000	--	29	<0.0010	130	-128	7.10	a
7/15/2008	1.60	0.82	0.0618	0.5	78	<0.050	--	29	<0.0010	112	-47.6	7.06	
10/21/2008	2.21	0.64	0.0193	0.5	52	<0.050	--	15.4	<0.0010	92	-120.6	7.28	c
1/6/2009	1.02	0.42	0.0255	0.0	38	<0.050	--	14	<0.0010	94	-22	6.43	
4/21/2009	2.26	0.36	0.0469	<0.1	44	<0.050	--	22.4	<0.0010	108	-119.9	7.59	
7/21/2009	15.16	0.97	0.153	<0.1	48	<0.050	--	20.9	<0.0010	116	-35.5	7.43	a, e
3/18/2010	0.73	--	--	--	--	--	--	--	--	--	-50	7.05	
7/29/2010	1.12	--	--	--	--	--	--	--	--	--	--	7.8	
2/22/2011	0.70	1.5	0.3	<0.10	54	<0.100	--	26	<0.0010	130	--	6.60	
<b>QC-2</b>													
<b>RW-1</b>													
10/11/1996	7.4	--	--	--	--	--	--	--	--	--	--	--	
7/2/1997	5.7	--	--	--	--	--	--	--	--	--	--	--	
9/30/1997	7.0	--	--	--	--	--	--	--	--	--	--	--	
1/21/1998	4.8	--	--	--	--	--	--	--	--	--	--	--	
4/10/1998	5.1	--	--	--	--	--	--	--	--	--	--	--	
6/19/1998	4.6	--	--	--	--	--	--	--	--	--	--	--	
07/01/2004	--	--	--	--	--	--	--	--	--	--	--	6.7	
03/16/2005	1.0	--	--	--	--	--	--	--	--	--	--	6.8	
07/22/2005	--	--	--	--	--	--	--	--	--	--	--	6.7	

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

Well and Sample Date	Concentrations in (mg/L)										ORP (mV)	pH	Footnote
	Dissolved Oxygen	Nitrate (NO <sub>3</sub> )	Manganese	Ferrous Iron	Sulfate (SO <sub>4</sub> )	Dissolved Sulfide	Hydrogen Sulfide	Dissolved CO <sub>2</sub>	Methane	Total Alkalinity			
<b>RW-1 Cont.</b>													
01/25/2006	--	--	--	--	--	--	--	--	--	--	--	7.1	
7/6/2006	--	--	--	--	--	--	--	--	--	--	--	6.8	
1/8/2007	3.61	--	--	--	--	--	--	--	--	--	--	6.86	
7/10/2007	2.65	--	--	--	--	--	--	--	--	--	--	6.98	
1/15/2008	1.31	<0.5	6.1	1.8	5	<1.000	--	110	1.1	350	-143	6.82	a
7/15/2008	1.32	<0.1	7.03	0.5	21	<0.050	--	212	0.212	358	-239.9	6.95	
10/21/2008	0.79	<0.1	6.84	1.0	10	<0.050	--	73.5	1.35	352	-188.4	7.17	b, c
1/6/2009	1.02	<0.1	6.41	1.0	13	<0.050	--	64.7	0.279	322	-279	6.43	
4/21/2009	0.86	<0.1	6.79	0.67	5.2	0.100	--	77.4	1.27	370	-159.1	7.38	
7/21/2009	13.31	<0.1	7.38	0.13	30	<0.050	--	62.8	0.479	356	-252.5	7.35	a, e
3/18/2010	0.74	--	--	--	--	--	--	--	--	--	-102	6.73	
7/29/2010	--	--	--	--	--	--	--	--	--	--	--	7.1	
2/22/2011	0.45	<1.0	1.6	0.64	15	<0.100	--	28	0.05	110	--	6.5	
<b>VEW-4</b>													
07/22/2005	--	--	--	--	--	--	--	--	--	--	--	6.8	
1/15/2008	0.54	3	0.88	<0.5	31	<1.000	--	50	0.84	210	-36	6.99	a
7/15/2008	0.59	<0.1	2.15	2.0	22	<0.050	--	90.9	0.174	254	-29	6.95	
4/21/2009	1.99	<0.1	2.8	0.2	13	<0.050	--	44.7	0.365	254	-110.1	7.41	
7/21/2009	8.99	<0.1	0.891	<0.1	24	<0.050	--	41.1	0.00207	254	-40.3	7.24	a, e
<b>VEW-5</b>													
<b>VEW-6</b>													
<b>VEW-7</b>													
<b>VEW-8</b>													
07/22/2005	--	--	--	--	--	--	--	--	--	--	--	6.8	
<b>VEW-9</b>													
<b>VW-1</b>													

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

Well and Sample Date	Concentrations in (mg/L)										ORP (mV)	pH	Footnote
	Dissolved Oxygen	Nitrate (NO <sub>3</sub> )	Manganese	Ferrous Iron	Sulfate (SO <sub>4</sub> )	Dissolved Sulfide	Hydrogen Sulfide	Dissolved CO <sub>2</sub>	Methane	Total Alkalinity			
VW-2													
VW-3													
OW-1													

Symbols & Abbreviations:

< = 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

c = Sample received after holding time expired for dissolved sulfide analysis

d = Sample received after holding time expired for nitrate analysis

e = DO value suspect

Notes:

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**  
**FIELD METHODS**

## BROADBENT & ASSOCIATES INC. FIELD PROCEDURES

### A.1 QUALITY ASSURANCE/QUALITY CONTROL FIELD PROTOCOLS

Field protocols have been implemented to enhance the accuracy and reliability of data collection, ground-water sample collection, transportation and laboratory analysis. Discussion of these protocols is provided below.

#### A.1.1 Water Level & Free-Product Measurement

Prior to ground-water sample collection from each monitoring well, the presence of separate-phase hydrocarbons (SPH or free product, FP) and depth to ground water shall be measured. Depth to ground water will be measured with a standard water level indicator that has been decontaminated prior to its use in accordance with procedures discussed below. Depth to groundwater will be gauged from a saw cut notch at the top of the well casing on each well head. Where FP is suspected, the initial gauging will be done with an oil-water interface probe. Once depth to water has been measured, the first retrieval of a new disposable bailer will be scrutinized for the presence of SPH/FP.

#### A.1.2 Monitoring Well Purging

Subsequent to measuring depth to ground water and prior to the collection of ground-water samples, purging of standing water within the monitoring well will be performed if called for. Consistent with the American Society for Testing and Materials (ASTM) Standard D6452-99, Section 7.1, the well will be purged of approximately three wetted-casing volumes of water, or until the well is dewatered, or until monitored field parameters indicate stabilization. The well will be purged using a pre-cleaned disposable bailer or submersible pump and disposable plastic tubing dedicated to each individual well. The well will be purged at a low flow rate to minimize the possibility of purging the well dry. So that the sample collected is representative of formation water, several field parameters will be monitored during the purging process. The sample will not be collected until these parameters (i.e. temperature, pH, and conductivity) have stabilized to within 10% of the previously measured value. If a well is purged dry, the sample should not be collected until the well has recovered to a minimum 50% of its initial volume.

#### A.1.3 Ground-Water Sample Collection

Once the wells are satisfactorily purged, water samples will be collected from each well. Water samples for organic analyses will be collected using a pre-cleaned, new, disposable bailer and transferred into the appropriate, new, laboratory-prepared containers such that no head space or air bubbles are present in the sample container (if appropriate to the analysis). The samples will be properly labeled (i.e. sample identification, sampler initials, date/time of collection, site location, requested analyses), placed in an ice chest with bagged ice or ice substitute, and delivered to the contracted analytical laboratory.

#### A.1.4 Surface Water Sample Collection

Unless specified otherwise, surface water samples will be collected from mid-depth in the central area of the associated surface water body. Water samples will be collected into appropriate, new, laboratory-prepared containers by dipping the container into the surface water unless the container has a preservative present. If a sample preservative is present, a new, cleaned non-preserved surrogate container will be used to obtain the sample which will then be directly transferred into a new, laboratory-provided, preserved container. Samples will be properly labeled and transported as described above.

#### A.1.5 Decontamination Protocol

Prior to use in each well, re-usable ground-water sampling equipment (e.g., water level indicator, oil-interface probe, purge pump, etc.) will be decontaminated. Decontamination protocol will include thoroughly cleaning with a solution of Liquinox, rinsing with clean water, and final rinsing with control water (potable water of known quality, distilled, or de-ionized water). Pre-cleaned new disposable bailers and disposable plastic tubing will be dedicated to each individual well.

#### A.1.6 Chain of Custody Procedures

Sample identification documents will be carefully prepared so identification and chain of custody can be maintained and sample disposition can be controlled. The sample identification documents include Chain-of-Custody (COC) records and Daily Field Report forms. Chain of custody procedures are outlined below.

##### Field Custody Procedures

The field sampler is individually responsible for the care and custody of the samples collected until they are properly transferred.

Samples will have unique labels. The information on these labels will correspond to the COC which shows the identification of individual samples and the contents of the shipping container. The original COC will accompany the shipment and a copy will be retained by the field sampler.

##### Transfer of Custody and Shipment

A COC will accompany samples during transfer and shipment. When transferring samples, the individual relinquishing and the individual receiving the samples will each sign, date, and note the time on the COC. This documents the sample custody transfer.

Samples will be packaged properly for shipment and dispatched to the appropriate laboratory for analysis, with a separate COC accompanying each shipment. Shipments will be accompanied by the original COC. Samples will be delivered by BAI personnel to the laboratory, or shipped by responsible courier. When a shipping courier is utilized, the sample shipment number will be identified on the COC.

#### A.1.7 Field Records

In addition to sample identification numbers and COC records, Daily Field Report records will be maintained by field staff to provide daily records of significant events, observations, and measurements during field investigations. These documents will contain observed information such as: the personnel present, site conditions, sampling procedures, measurement procedures, calibration records, equipment used, supplies used, etc. Field measurements will be recorded on the appropriate forms. Entries on the data forms will be signed and dated. The data forms will be kept as permanent file records.

**APPENDIX B**

**FIELD DATA SHEETS**

DATE: 11/02/22

PERSONNEL:

WEATHER:

PROJECT NO.: 11133

COMMENTS:

Equip.	Geosquirt	Tubing	Bailers	DO	wli	Ec/pH

Well ID	Time	MEASURING POINT	DTW (FT)	PRODUCT THICKNESS	pH	Cond. (X100)	Temp. (C/F)	DO (mg/l)	Redox (mV)	Iron (mg/l)	Alk. (mg/l)	WELL HEAD CONDITION: VAULT, BOLTS, CAP, LOCK, ETC
mr-1	1315	T0C	8.03									
mr-2	1412		7.11									
mr-3	1414		11.30									
tr-1	1055		13.25									
tr-2	1502		14.21									
tr-3	1439		14.40									
tr-4	1444		15.10									
tr-5	1157		15.67									
tr-6	1256		13.53									
tr-7	—	—	—	—	—	—	—	—	—	—	—	Car parked on well
tr-8	—	—	—	—	—	—	—	—	—	—	—	full of water
tr-9	1510		18.25									
RW-1	0909		12.60	—								
VW-1	1401		9.54									
VW-2	—	—	—	—	—	—	—	—	—	—	—	
VW-3	1407		5.32									
VW-4			13.33									
VW-5	1352		10.07									
VW-6	139		9.24									
VW-7	1404		11.17									
VW-8	1355		13.69									
VW-9	1444		5.50									



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

**Groundwater Sampling Data Sheet**

Well I.D.:

AW-4

Project Name/Location:

III 33

Project #: 09-98-650

Sampler's Name:

GF SB

Date: 10/22/2

Purging Equipment:

MN

Sampling Equipment:

MP

Casing Type: PVC

Casing Diameter:

inch

**\*UNIT CASING VOLUMES**

Total Well Depth:

feet

2" = 0.16 gal/lin ft.

Depth to Water:

1510

feet

3" = 0.37 gal/lin ft.

Water Column Thickness:

feet

4" = 0.65 gal/lin ft.

Unit Casing Volume\*:

x gallon / foot

6" = 1.47 gal/lin ft.

Casing Water Volume:

= gallons

Casing Volume:

x 3 each

Estimated Purge Volume:

= gallons

Free product measurement (if present):

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance ( $\mu$ S)	Temperature (Fahrenheit)	pH	Observations
0	1454	0.65	-234		699	65.76	6.52	15.50
0.25	1457	X	X	X	905	66.10	6.63	15.50
1.0	13.05	X	X	X	711	66.11	6.81	16.0
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged:

1 gallons

Depth to Water at Sample Collection:

1510 feet

Sample Collection Time:

1510

Purged Dry? (Y / N)

Comments:

MP



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ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

**Groundwater Sampling Data Sheet**

Well I.D.:

MW-3

Project Name/Location:

III 33

Project #: 09/88-686

Sampler's Name:

GFSB

Date: 10/22

Purging Equipment:

MP

Sampling Equipment:

MF

Casing Type: PVC

Casing Diameter: \_\_\_\_\_ inch

**\*UNIT CASING VOLUMES**

Total Well Depth: \_\_\_\_\_ feet

2" = 0.16 gal/in ft.

Depth to Water: \_\_\_\_\_ feet

3" = 0.37 gal/in ft.

Water Column Thickness: \_\_\_\_\_ feet

4" = 0.65 gal/in ft.

Unit Casing Volume\*: \_\_\_\_\_ x \_\_\_\_\_ gallon / foot

6" = 1.47 gal/in ft.

Casing Water Volume: \_\_\_\_\_ = \_\_\_\_\_ gallons

Casing Volume: \_\_\_\_\_ x 3 each

Estimated Purge Volume: \_\_\_\_\_ = \_\_\_\_\_ gallons

Free product measurement (if present):

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance ( $\mu$ S)	Temperature (Fahrenheit)	pH	Observations
0	1408	0.76	41.7		337	64.01	6.59	
0.75	1418	X	X	X	344	64.97	6.53	
1.25	1423	X	X	X	341	64.81	6.60	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 1.25 gallons

Depth to Water at Sample Collection: — feet

Sample Collection Time: 1423 Purged Dry? (Y/N) N

Comments:





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**Groundwater Sampling Data Sheet**

Well I.D.:

AW-6

Project Name/Location:

1133

Project #: 09-58-655

Sampler's Name:

EFSB

Date: 11/22

Purging Equipment:

MP

Sampling Equipment:

MP

Casing Type: PVC

Casing Diameter: \_\_\_\_\_ inch

**\*UNIT CASING VOLUMES**

Total Well Depth: \_\_\_\_\_ feet

2" = 0.16 gal/lin ft.

Depth to Water: \_\_\_\_\_ feet

3" = 0.37 gal/lin ft.

Water Column Thickness: \_\_\_\_\_ feet

4" = 0.65 gal/lin ft.

Unit Casing Volume\*: \_\_\_\_\_ x \_\_\_\_\_ gallon / foot

6" = 1.47 gal/lin ft.

Casing Water Volume: \_\_\_\_\_ = \_\_\_\_\_ gallons

Casing Volume: \_\_\_\_\_ x 3 each

Estimated Purge Volume: \_\_\_\_\_ = \_\_\_\_\_ gallons

Free product measurement (if present): \_\_\_\_\_

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance ( $\mu$ S)	Temperature (Fahrenheit)	pH	Observations
0	1244	0.85	106		367	68.92	6.55	014.8
0.5	1247	X	X	X	345	68.68	6.68	14.8
0.75	1252	X	X	X	344	68.56	6.60	14.8
1.0	1255	X	X	X	344	68.54	6.41	14.9
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: \_\_\_\_\_ gallons

Depth to Water at Sample Collection: \_\_\_\_\_ feet

Sample Collection Time: \_\_\_\_\_

Purged Dry? (Y/N)

Comments:

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**Groundwater Sampling Data Sheet**

Well I.D.: AW-S

Project Name/Location: 11133

Project #: 09.88635

Sampler's Name: GFSB

Date: 11/02/22

Purging Equipment: mp

Sampling Equipment: MP

Casing Type: PVC

Casing Diameter: \_\_\_\_\_ inch

**\*UNIT CASING VOLUMES**

Total Well Depth: \_\_\_\_\_ feet

2" = 0.16 gal/lin ft.

Depth to Water: 15.67 feet

3" = 0.37 gal/lin ft.

Water Column Thickness: \_\_\_\_\_ feet

4" = 0.65 gal/lin ft.

Unit Casing Volume\*: x gallon / foot

6" = 1.47 gal/lin ft.

Casing Water Volume: \_\_\_\_\_ gallons

Casing Volume: x 3 each

Estimated Purge Volume: \_\_\_\_\_ gallons

Free product measurement (if present): \_\_\_\_\_

Purged (gallons)	Time (24:00)	DO	ORP (mv)	Fe	Conductance ( $\mu$ S)	Temperature (Fahrenheit)	pH	Observations
0	12/01/2022 05:57	6.97			392	66.07	6.55	16.0
25	12/14	X	X	X	396	67.97	6.45	16.0
1	12/17	X	X	X	396	67.81	6.46	
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 1 gallons

Depth to Water at Sample Collection: - feet

Sample Collection Time: 12:22

Purged Dry? (Y/N) N

Comments: MP



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**Groundwater Sampling Data Sheet**

Well I.D.: AW-1

Project Name/Location: 11133

Project #: 09-44636

Sampler's Name: GSPB

Date: 11/22/22

Purging Equipment: MP

Sampling Equipment: MP

Casing Type: PVC

Casing Diameter: \_\_\_\_\_ inch

**\*UNIT CASING VOLUMES**

Total Well Depth: \_\_\_\_\_ feet

2" = 0.16 gal/lin ft.

Depth to Water: \_\_\_\_\_ feet

3" = 0.37 gal/lin ft.

Water Column Thickness: \_\_\_\_\_ feet

4" = 0.65 gal/lin ft.

Unit Casing Volume\*: \_\_\_\_\_ x gallon / foot

6" = 1.47 gal/lin ft.

Casing Water Volume: \_\_\_\_\_ = gallons

Casing Volume: \_\_\_\_\_ x 3 each

Estimated Purge Volume: \_\_\_\_\_ = gallons

Free product measurement (if present): \_\_\_\_\_

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance ( $\mu$ S)	Temperature (Fahrenheit)	pH	Observations
0	1102	0.95	BS		170	67.61	6.39	14.40'
0.25	1110	X	X	X	169	67.21	6.26	14.80
0.5	1115	X	X	X	169	67.32	6.28	15.10
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 0.5 gallons

Depth to Water at Sample Collection: feet

Sample Collection Time: 1117

Purged Dry? (Y/N)

Comments: MP



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ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

**Groundwater Sampling Data Sheet**

Well I.D.:

RW-1

Project Name/Location:

11133

Project #: 09-88-050

Sampler's Name:

GFSB

Date: 11/02/22

Purging Equipment:

MP

Sampling Equipment:

MP

Casing Type: PVC

6

inch

**\*UNIT CASING VOLUMES**

Total Well Depth:

feet

2" = 0.16 gal/lin ft.

Depth to Water:

12.00

feet

3" = 0.37 gal/lin ft.

Water Column Thickness:

feet

4" = 0.65 gal/lin ft.

Unit Casing Volume\*:

x

gallon / foot

6" = 1.47 gal/lin ft.

Casing Water Volume:

=

gallons

Casing Volume:

x 3

each

Estimated Purge Volume:

=

gallons

Free product measurement (if present):

Purged (gallons)	Time (24:00)	DO	ORP (mv)	Fe	Conductance ( $\mu$ S)	Temperature (Fahrenheit)	pH	Observations
0	10/04	0.45	121.8	-	278	68.8	6.39	07/w 13.0
1.5	10/20	X	X	X	210	67.86	6.56	13.3
2.0	10/26	X	X	X	824	68.1	6.5	13.5
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged:

210

gallons

Depth to Water at Sample Collection:

13.0

feet

Sample Collection Time:

10/26

Purged Dry? (Y/N)

Comments: M: 20 purge



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

**Groundwater Sampling Data Sheet**

Well I.D.: MW-1

Project Name/Location: 11133

Project #: OF 88-656

Sampler's Name: GFSB

Date: 10/22/88

Purging Equipment: MP

Sampling Equipment: MP

Casing Type: PVC

Casing Diameter: \_\_\_\_\_ inch

**\*UNIT CASING VOLUMES**

Total Well Depth: \_\_\_\_\_ feet

2" = 0.16 gal/lin ft.

Depth to Water: 5.03 feet

3" = 0.37 gal/lin ft.

Water Column Thickness: = \_\_\_\_\_ feet

4" = 0.65 gal/lin ft.

Unit Casing Volume\*: x \_\_\_\_\_ gallon / foot

6" = 1.47 gal/lin ft.

Casing Water Volume: = \_\_\_\_\_ gallons

Casing Volume: x 3 each

Estimated Purge Volume: = \_\_\_\_\_ gallons

Free product measurement (if present): \_\_\_\_\_

Purged (gallons)	Time (24:00)	DO	ORP (mV)	Fe	Conductance ( $\mu$ S)	Temperature (Fahrenheit)	pH	Observations
0	1321	1.53	115		408	63.96	6.52	@ 8.7
GS	1332	X	X	X	410	64.14	6.38	@ 8.7
1	1336	X	X	X	421	64.43	6.91	@ 8.7
1.5	1340	X	X	X	443	64.67	6.44	
2	1345	X	X	X	495	64.73	6.30	@ 8.7
		X	X	X				
		X	X	X				
		X	X	X				

Total Water Volume Purged: 2 gallons

Depth to Water at Sample Collection: 2 feet

Sample Collection Time: 1348

Purged Dry? (Y / N) C

Comments: MP

**APPENDIX C**

**LABORATORY REPORT  
AND CHAIN-OF-CUSTODY DOCUMENTATION**

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925)484-1919

TestAmerica Job ID: 720-33514-1

Client Project/Site: BP #11133, Oakland

For:

ARCADIS U.S., Inc.

155 Montgomery Street

Suite 1500

San Francisco, California 94104

Attn: Project Manager Hollis Phillips

Authorized for release by:

03/08/2011 05:10:31 PM

Dimple Sharma

Project Manager I

dimple.sharma@testamericainc.com

### LINKS

Review your project  
results through

TotalAccess

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Ask  
The  
Expert

Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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# Qualifier Definition/Glossary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits

## Glossary

Glossary	Glossary Description
☀	Listed under the "D" column to designate that the result is reported on a dry weight basis.

1

2

3

4

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14

## Case Narrative

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

---

**Job ID: 720-33514-1**

---

**Laboratory: TestAmerica San Francisco**

**Narrative**

**Job Narrative  
720-33514-1**

**Comments**

No additional comments.

**Receipt**

The time on containers for RW-1 (02/22/11) say 10:35. COC says 10:50.

All other samples were received in good condition within temperature requirements.

**GC/MS VOA**

Method 8260B: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 86615 exceeded control limits for the following analytes: TAME. The samples associated with this batch non-detects for the affected analyte; therefore, the data have been reported.

No other analytical or quality issues were noted.

**Metals**

Method 200.7 Rev 4.4: The serial dilution performed for the following sample was outside control limits: 720-33419-B-4-A for Mn

No other analytical or quality issues were noted.

**General Chemistry**

No analytical or quality issues were noted.

1

2

3

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# Detection Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

## Client Sample ID: AW-4 (02/22/11)

Lab Sample ID: 720-33514-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	2.9		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Gasoline Range Organics (GRO)	150		50		ug/L	1		8260B/CA_LUFTM	Total/NA
-C6-C12									
Carbon dioxide	82		0.17		mg/L	1.0		RSK SOP-175	total
Methane	0.68		0.0010		mg/L	1.0		RSK SOP-175	total
Manganese	5.4		0.020		mg/L	1		200.7 Rev 4.4	Total/NA
Sulfate	84		10		mg/L	10		300.0	Total/NA
Alkalinity	310		5.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO <sub>3</sub>	310		5.0		mg/L	1		SM 2320B	Total/NA
Ferrous Iron	4.3		0.10		mg/L	1		SM 3500 FE D	Total/NA

## Client Sample ID: MW-3 (02/22/11)

Lab Sample ID: 720-33514-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	0.50		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Carbon dioxide	26		0.17		mg/L	1.0		RSK SOP-175	total
Manganese	0.30		0.020		mg/L	1		200.7 Rev 4.4	Total/NA
Sulfate	54		10		mg/L	10		300.0	Total/NA
Nitrate as NO <sub>3</sub>	1.5		1.0		mg/L	1		300.0	Total/NA
Alkalinity	130		5.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO <sub>3</sub>	130		5.0		mg/L	1		SM 2320B	Total/NA

## Client Sample ID: AW-6 (02/22/11)

Lab Sample ID: 720-33514-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	4.6		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Carbon dioxide	38		0.17		mg/L	1.0		RSK SOP-175	total
Methane	0.0038		0.0010		mg/L	1.0		RSK SOP-175	total
Manganese	0.20		0.020		mg/L	1		200.7 Rev 4.4	Total/NA
Sulfate	31		10		mg/L	10		300.0	Total/NA
Alkalinity	150		5.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO <sub>3</sub>	150		5.0		mg/L	1		SM 2320B	Total/NA

## Client Sample ID: AW-5 (02/22/11)

Lab Sample ID: 720-33514-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	1.9		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
TBA	28		4.0		ug/L	1		8260B/CA_LUFTM	Total/NA
Carbon dioxide	52		0.17		mg/L	1.0		RSK SOP-175	total
Methane	0.081		0.0010		mg/L	1.0		RSK SOP-175	total
Manganese	2.3		0.020		mg/L	1		200.7 Rev 4.4	Total/NA
Sulfate	15		1.0		mg/L	1		300.0	Total/NA
Alkalinity	200		5.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO <sub>3</sub>	200		5.0		mg/L	1		SM 2320B	Total/NA
Ferrous Iron	1.2		0.10		mg/L	1		SM 3500 FE D	Total/NA

## Client Sample ID: AW-1 (02/22/11)

Lab Sample ID: 720-33514-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	0.56		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Carbon dioxide	130		0.17		mg/L	1.0		RSK SOP-175	total
Methane	1.5		0.0010		mg/L	1.0		RSK SOP-175	total
Manganese	0.53		0.020		mg/L	1		200.7 Rev 4.4	Total/NA
Sulfate	2.6		1.0		mg/L	1		300.0	Total/NA

TestAmerica San Francisco

# Detection Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

## Client Sample ID: AW-1 (02/22/11) (Continued)

Lab Sample ID: 720-33514-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	150		5.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO <sub>3</sub>	150		5.0		mg/L	1		SM 2320B	Total/NA
Ferrous Iron	3.8		0.10		mg/L	1		SM 3500 FE D	Total/NA

## Client Sample ID: RW-1 (02/22/11)

Lab Sample ID: 720-33514-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	0.54		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Gasoline Range Organics (GRO) -C6-C12	170		50		ug/L	1		8260B/CA_LUFTM	Total/NA
Carbon dioxide	28		0.17		mg/L	1.0		RSK SOP-175	total
Methane	0.050		0.0010		mg/L	1.0		RSK SOP-175	total
Manganese	1.6		0.020		mg/L	1		200.7 Rev 4.4	Total/NA
Sulfate	15		1.0		mg/L	1		300.0	Total/NA
Alkalinity	110		5.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO <sub>3</sub>	110		5.0		mg/L	1		SM 2320B	Total/NA
Ferrous Iron	0.64		0.10		mg/L	1		SM 3500 FE D	Total/NA

## Client Sample ID: MW-1 (02/22/11)

Lab Sample ID: 720-33514-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	0.92		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Gasoline Range Organics (GRO) -C6-C12	1400		50		ug/L	1		8260B/CA_LUFTM	Total/NA
Carbon dioxide	54		0.17		mg/L	1.0		RSK SOP-175	total
Methane	0.29		0.0010		mg/L	1.0		RSK SOP-175	total
Manganese	4.7		0.020		mg/L	1		200.7 Rev 4.4	Total/NA
Sulfate	94		10		mg/L	10		300.0	Total/NA
Alkalinity	220		5.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO <sub>3</sub>	220		5.0		mg/L	1		SM 2320B	Total/NA
Ferrous Iron	2.1		0.10		mg/L	1		SM 3500 FE D	Total/NA

# Analytical Data

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

**Client Sample ID: AW-4 (02/22/11)**

**Lab Sample ID: 720-33514-1**

Date Collected: 02/22/11 15:10

Matrix: Water

Date Received: 02/22/11 16:13

## Method: 8260B/CA LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	2.9		0.50		ug/L			02/23/11 03:55	1
Benzene	ND		0.50		ug/L			02/23/11 03:55	1
EDB	ND		0.50		ug/L			02/23/11 03:55	1
1,2-DCA	ND		0.50		ug/L			02/23/11 03:55	1
Ethylbenzene	ND		0.50		ug/L			02/23/11 03:55	1
Toluene	ND		0.50		ug/L			02/23/11 03:55	1
Xylenes, Total	ND		1.0		ug/L			02/23/11 03:55	1
<b>Gasoline Range Organics (GRO) -C6-C12</b>	<b>150</b>		50		ug/L			02/23/11 03:55	1
TBA	ND		4.0		ug/L			02/23/11 03:55	1
Ethanol	ND		250		ug/L			02/23/11 03:55	1
DIPE	ND		0.50		ug/L			02/23/11 03:55	1
TAME	ND *		0.50		ug/L			02/23/11 03:55	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/23/11 03:55	1
<b>Surrogate</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	102		67 - 130					02/23/11 03:55	1
1,2-Dichloroethane-d4 (Surr)	113		67 - 130					02/23/11 03:55	1
Toluene-d8 (Surr)	100		70 - 130					02/23/11 03:55	1

## Method: RSK SOP-175 - RSK SOP-175 - Dissolved Gases in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	82		0.17		mg/L		02/25/11 06:00	02/25/11 07:14	1.0
Methane	0.68		0.0010		mg/L		02/25/11 06:00	02/25/11 10:21	1.0

## Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	5.4		0.020		mg/L		02/23/11 08:31	02/23/11 15:57	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	84		10		mg/L			02/22/11 17:53	10
Nitrate as NO3	ND		1.0		mg/L			02/22/11 17:36	1
Alkalinity	310		5.0		mg/L			02/23/11 10:23	1
Bicarbonate Alkalinity as CaCO3	310		5.0		mg/L			02/23/11 10:23	1
Carbonate Alkalinity as CaCO3	ND		5.0		mg/L			02/23/11 10:23	1
Hydroxide Alkalinity	ND		5.0		mg/L			02/23/11 10:23	1
Ferrous Iron	4.3		0.10		mg/L			02/22/11 18:35	1

## Method: SM4500-S D - INORGANICS - dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Sulfide	ND		0.10		mg/l		02/22/11 15:10	02/24/11 17:09	1.0

# Analytical Data

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

**Client Sample ID: MW-3 (02/22/11)**

**Lab Sample ID: 720-33514-2**

**Matrix: Water**

Date Collected: 02/22/11 14:25  
Date Received: 02/22/11 16:13

## Method: 8260B/CA LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	0.50		0.50		ug/L			02/23/11 01:13	1
Benzene	ND		0.50		ug/L			02/23/11 01:13	1
EDB	ND		0.50		ug/L			02/23/11 01:13	1
1,2-DCA	ND		0.50		ug/L			02/23/11 01:13	1
Ethylbenzene	ND		0.50		ug/L			02/23/11 01:13	1
Toluene	ND		0.50		ug/L			02/23/11 01:13	1
Xylenes, Total	ND		1.0		ug/L			02/23/11 01:13	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			02/23/11 01:13	1
TBA	ND		4.0		ug/L			02/23/11 01:13	1
Ethanol	ND		250		ug/L			02/23/11 01:13	1
DIPE	ND		0.50		ug/L			02/23/11 01:13	1
TAME	ND *		0.50		ug/L			02/23/11 01:13	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/23/11 01:13	1
<b>Surrogate</b>		<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	100			67 - 130				02/23/11 01:13	1
1,2-Dichloroethane-d4 (Surr)	107			67 - 130				02/23/11 01:13	1
Toluene-d8 (Surr)	99			70 - 130				02/23/11 01:13	1

## Method: RSK SOP-175 - RSK SOP-175 - Dissolved Gases in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	26		0.17		mg/L		02/25/11 06:00	02/25/11 07:26	1.0
Methane	ND		0.0010		mg/L		02/25/11 06:00	02/25/11 08:51	1.0

## Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.30		0.020		mg/L		02/23/11 08:31	02/23/11 16:01	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	54		10		mg/L			02/22/11 18:28	10
Nitrate as NO3	1.5		1.0		mg/L			02/22/11 18:10	1
Alkalinity	130		5.0		mg/L			02/23/11 10:29	1
Bicarbonate Alkalinity as CaCO3	130		5.0		mg/L			02/23/11 10:29	1
Carbonate Alkalinity as CaCO3	ND		5.0		mg/L			02/23/11 10:29	1
Hydroxide Alkalinity	ND		5.0		mg/L			02/23/11 10:29	1
Ferrous Iron	ND		0.10		mg/L			02/22/11 18:35	1

## Method: SM4500-S D - INORGANICS - dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Sulfide	ND		0.10		mg/l		02/22/11 14:25	02/24/11 17:09	1.0

# Analytical Data

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

**Client Sample ID: AW-6 (02/22/11)**

**Lab Sample ID: 720-33514-3**

Date Collected: 02/22/11 13:00  
Date Received: 02/22/11 16:13

Matrix: Water

## Method: 8260B/CA LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	4.6		0.50		ug/L			02/23/11 01:46	1
Benzene	ND		0.50		ug/L			02/23/11 01:46	1
EDB	ND		0.50		ug/L			02/23/11 01:46	1
1,2-DCA	ND		0.50		ug/L			02/23/11 01:46	1
Ethylbenzene	ND		0.50		ug/L			02/23/11 01:46	1
Toluene	ND		0.50		ug/L			02/23/11 01:46	1
Xylenes, Total	ND		1.0		ug/L			02/23/11 01:46	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			02/23/11 01:46	1
TBA	ND		4.0		ug/L			02/23/11 01:46	1
Ethanol	ND		250		ug/L			02/23/11 01:46	1
DIPE	ND		0.50		ug/L			02/23/11 01:46	1
TAME	ND *		0.50		ug/L			02/23/11 01:46	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/23/11 01:46	1
<b>Surrogate</b>		<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	100			67 - 130				02/23/11 01:46	1
1,2-Dichloroethane-d4 (Surr)	112			67 - 130				02/23/11 01:46	1
Toluene-d8 (Surr)	100			70 - 130				02/23/11 01:46	1

## Method: RSK SOP-175 - RSK SOP-175 - Dissolved Gases in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	38		0.17		mg/L		02/25/11 06:00	02/25/11 07:41	1.0
Methane	0.0038		0.0010		mg/L		02/25/11 06:00	02/25/11 09:04	1.0

## Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.20		0.020		mg/L		02/23/11 08:31	02/23/11 16:06	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	31		10		mg/L			02/22/11 19:36	10
Nitrate as NO3	ND		1.0		mg/L			02/22/11 19:19	1
Alkalinity	150		5.0		mg/L			02/23/11 10:34	1
Bicarbonate Alkalinity as CaCO3	150		5.0		mg/L			02/23/11 10:34	1
Carbonate Alkalinity as CaCO3	ND		5.0		mg/L			02/23/11 10:34	1
Hydroxide Alkalinity	ND		5.0		mg/L			02/23/11 10:34	1
Ferrous Iron	ND		0.10		mg/L			02/22/11 18:35	1

## Method: SM4500-S D - INORGANICS - dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Sulfide	ND		0.10		mg/l		02/22/11 13:00	02/24/11 17:09	1.0

# Analytical Data

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

**Client Sample ID: AW-5 (02/22/11)**

**Lab Sample ID: 720-33514-4**

**Matrix: Water**

Date Collected: 02/22/11 12:20  
Date Received: 02/22/11 16:13

## Method: 8260B/CA LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	1.9		0.50		ug/L			02/23/11 02:18	1
Benzene	ND		0.50		ug/L			02/23/11 02:18	1
EDB	ND		0.50		ug/L			02/23/11 02:18	1
1,2-DCA	ND		0.50		ug/L			02/23/11 02:18	1
Ethylbenzene	ND		0.50		ug/L			02/23/11 02:18	1
Toluene	ND		0.50		ug/L			02/23/11 02:18	1
Xylenes, Total	ND		1.0		ug/L			02/23/11 02:18	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			02/23/11 02:18	1
TBA	28		4.0		ug/L			02/23/11 02:18	1
Ethanol	ND		250		ug/L			02/23/11 02:18	1
DIPE	ND		0.50		ug/L			02/23/11 02:18	1
TAME	ND *		0.50		ug/L			02/23/11 02:18	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/23/11 02:18	1
<b>Surrogate</b>		<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	102			67 - 130				02/23/11 02:18	1
1,2-Dichloroethane-d4 (Surr)	115			67 - 130				02/23/11 02:18	1
Toluene-d8 (Surr)	100			70 - 130				02/23/11 02:18	1

## Method: RSK SOP-175 - RSK SOP-175 - Dissolved Gases in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	52		0.17		mg/L		02/25/11 06:00	02/25/11 07:53	1.0
Methane	0.081		0.0010		mg/L		02/25/11 06:00	02/25/11 09:17	1.0

## Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	2.3		0.020		mg/L		02/23/11 08:31	02/23/11 16:10	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	15		1.0		mg/L			02/22/11 20:45	1
Nitrate as NO3	ND		1.0		mg/L			02/22/11 20:45	1
Alkalinity	200		5.0		mg/L			02/23/11 10:40	1
Bicarbonate Alkalinity as CaCO3	200		5.0		mg/L			02/23/11 10:40	1
Carbonate Alkalinity as CaCO3	ND		5.0		mg/L			02/23/11 10:40	1
Hydroxide Alkalinity	ND		5.0		mg/L			02/23/11 10:40	1
Ferrous Iron	1.2		0.10		mg/L			02/22/11 18:35	1

## Method: SM4500-S D - INORGANICS - dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Sulfide	ND		0.10		mg/l		02/22/11 12:20	02/24/11 17:09	1.0

# Analytical Data

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

**Client Sample ID: AW-1 (02/22/11)**

**Lab Sample ID: 720-33514-5**

Date Collected: 02/22/11 11:17  
Date Received: 02/22/11 16:13

Matrix: Water

## Method: 8260B/CA LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	0.56		0.50		ug/L			02/24/11 18:17	1
Benzene	ND		0.50		ug/L			02/24/11 18:17	1
EDB	ND		0.50		ug/L			02/24/11 18:17	1
1,2-DCA	ND		0.50		ug/L			02/24/11 18:17	1
Ethylbenzene	ND		0.50		ug/L			02/24/11 18:17	1
Toluene	ND		0.50		ug/L			02/24/11 18:17	1
Xylenes, Total	ND		1.0		ug/L			02/24/11 18:17	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			02/24/11 18:17	1
TBA	ND		4.0		ug/L			02/24/11 18:17	1
Ethanol	ND		250		ug/L			02/24/11 18:17	1
DIPE	ND		0.50		ug/L			02/24/11 18:17	1
TAME	ND		0.50		ug/L			02/24/11 18:17	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/24/11 18:17	1
<b>Surrogate</b>		<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	104			67 - 130				02/24/11 18:17	1
1,2-Dichloroethane-d4 (Surr)	109			67 - 130				02/24/11 18:17	1
Toluene-d8 (Surr)	99			70 - 130				02/24/11 18:17	1

## Method: RSK SOP-175 - RSK SOP-175 - Dissolved Gases in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	130		0.17		mg/L		02/25/11 06:00	02/25/11 08:09	1.0
Methane	1.5		0.0010		mg/L		02/25/11 06:00	02/25/11 09:31	1.0

## Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.53		0.020		mg/L		02/23/11 08:31	02/23/11 16:14	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2.6		1.0		mg/L			02/22/11 22:28	1
Nitrate as NO3	ND		1.0		mg/L			02/22/11 22:28	1
Alkalinity	150		5.0		mg/L			02/23/11 10:45	1
Bicarbonate Alkalinity as CaCO3	150		5.0		mg/L			02/23/11 10:45	1
Carbonate Alkalinity as CaCO3	ND		5.0		mg/L			02/23/11 10:45	1
Hydroxide Alkalinity	ND		5.0		mg/L			02/23/11 10:45	1
Ferrous Iron	3.8		0.10		mg/L			02/22/11 18:35	1

## Method: SM4500-S D - INORGANICS - dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Sulfide	ND		0.10		mg/l		02/22/11 11:17	02/24/11 17:09	1.0

# Analytical Data

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

**Client Sample ID: RW-1 (02/22/11)**

**Lab Sample ID: 720-33514-6**

**Matrix: Water**

Date Collected: 02/22/11 10:50  
Date Received: 02/22/11 16:13

## Method: 8260B/CA LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	0.54		0.50		ug/L			02/23/11 02:49	1
Benzene	ND		0.50		ug/L			02/23/11 02:49	1
EDB	ND		0.50		ug/L			02/23/11 02:49	1
1,2-DCA	ND		0.50		ug/L			02/23/11 02:49	1
Ethylbenzene	ND		0.50		ug/L			02/23/11 02:49	1
Toluene	ND		0.50		ug/L			02/23/11 02:49	1
Xylenes, Total	ND		1.0		ug/L			02/23/11 02:49	1
<b>Gasoline Range Organics (GRO) -C6-C12</b>	<b>170</b>		50		ug/L			02/23/11 02:49	1
TBA	ND		4.0		ug/L			02/23/11 02:49	1
Ethanol	ND		250		ug/L			02/23/11 02:49	1
DIPE	ND		0.50		ug/L			02/23/11 02:49	1
TAME	ND *		0.50		ug/L			02/23/11 02:49	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/23/11 02:49	1
<b>Surrogate</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	102		67 - 130					02/23/11 02:49	1
1,2-Dichloroethane-d4 (Surr)	115		67 - 130					02/23/11 02:49	1
Toluene-d8 (Surr)	101		70 - 130					02/23/11 02:49	1

## Method: RSK SOP-175 - RSK SOP-175 - Dissolved Gases in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	28		0.17		mg/L		02/25/11 06:00	02/25/11 08:22	1.0
Methane	0.050		0.0010		mg/L		02/25/11 06:00	02/25/11 09:46	1.0

## Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	1.6		0.020		mg/L		02/23/11 08:31	02/23/11 16:18	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	15		1.0		mg/L			02/22/11 23:02	1
Nitrate as NO3	ND		1.0		mg/L			02/22/11 23:02	1
Alkalinity	110		5.0		mg/L			02/23/11 10:51	1
Bicarbonate Alkalinity as CaCO3	110		5.0		mg/L			02/23/11 10:51	1
Carbonate Alkalinity as CaCO3	ND		5.0		mg/L			02/23/11 10:51	1
Hydroxide Alkalinity	ND		5.0		mg/L			02/23/11 10:51	1
Ferrous Iron	0.64		0.10		mg/L			02/22/11 18:35	1

## Method: SM4500-S D - INORGANICS - dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Sulfide	ND		0.10		mg/l		02/22/11 10:50	02/24/11 17:09	1.0

# Analytical Data

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

**Client Sample ID: MW-1 (02/22/11)**

**Lab Sample ID: 720-33514-7**

**Matrix: Water**

Date Collected: 02/22/11 13:48  
Date Received: 02/22/11 16:13

## Method: 8260B/CA LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		0.50		ug/L			02/23/11 03:22	1
Benzene	ND		0.50		ug/L			02/23/11 03:22	1
EDB	ND		0.50		ug/L			02/23/11 03:22	1
1,2-DCA	ND		0.50		ug/L			02/23/11 03:22	1
Ethylbenzene	0.92		0.50		ug/L			02/23/11 03:22	1
Toluene	ND		0.50		ug/L			02/23/11 03:22	1
Xylenes, Total	ND		1.0		ug/L			02/23/11 03:22	1
Gasoline Range Organics (GRO) -C6-C12	1400		50		ug/L			02/23/11 03:22	1
TBA	ND		4.0		ug/L			02/23/11 03:22	1
Ethanol	ND		250		ug/L			02/23/11 03:22	1
DIPE	ND		0.50		ug/L			02/23/11 03:22	1
TAME	ND *		0.50		ug/L			02/23/11 03:22	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/23/11 03:22	1
<b>Surrogate</b>		<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	106			67 - 130				02/23/11 03:22	1
1,2-Dichloroethane-d4 (Surr)	120			67 - 130				02/23/11 03:22	1
Toluene-d8 (Surr)	99			70 - 130				02/23/11 03:22	1

## Method: RSK SOP-175 - RSK SOP-175 - Dissolved Gases in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	54		0.17		mg/L		02/25/11 06:00	02/25/11 08:39	1.0
Methane	0.29		0.0010		mg/L		02/25/11 06:00	02/25/11 10:08	1.0

## Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	4.7		0.020		mg/L		02/23/11 08:31	02/23/11 16:22	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	94		10		mg/L			02/22/11 23:54	10
Nitrate as NO3	ND		1.0		mg/L			02/22/11 23:37	1
Alkalinity	220		5.0		mg/L			02/23/11 10:57	1
Bicarbonate Alkalinity as CaCO3	220		5.0		mg/L			02/23/11 10:57	1
Carbonate Alkalinity as CaCO3	ND		5.0		mg/L			02/23/11 10:57	1
Hydroxide Alkalinity	ND		5.0		mg/L			02/23/11 10:57	1
Ferrous Iron	2.1		0.10		mg/L			02/22/11 18:35	1

## Method: SM4500-S D - INORGANICS - dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Sulfide	ND		0.10		mg/l		02/22/11 13:48	02/24/11 17:09	1.0

# Quality Control Data

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS

**Lab Sample ID: MB 720-86615/5**

**Matrix: Water**

**Analysis Batch: 86615**

**Client Sample ID: MB 720-86615/5**

**Prep Type: Total/NA**

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
MTBE	ND		0.50		ug/L			02/22/11 20:23	1
Benzene	ND		0.50		ug/L			02/22/11 20:23	1
EDB	ND		0.50		ug/L			02/22/11 20:23	1
1,2-DCA	ND		0.50		ug/L			02/22/11 20:23	1
Ethylbenzene	ND		0.50		ug/L			02/22/11 20:23	1
Toluene	ND		0.50		ug/L			02/22/11 20:23	1
Xylenes, Total	ND		1.0		ug/L			02/22/11 20:23	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			02/22/11 20:23	1
TBA	ND		4.0		ug/L			02/22/11 20:23	1
Ethanol	ND		250		ug/L			02/22/11 20:23	1
DIPE	ND		0.50		ug/L			02/22/11 20:23	1
TAME	ND		0.50		ug/L			02/22/11 20:23	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/22/11 20:23	1
Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac			
	% Recovery	Qualifier							
4-Bromofluorobenzene	103		67 - 130					02/22/11 20:23	1
1,2-Dichloroethane-d4 (Surr)	116		67 - 130					02/22/11 20:23	1
Toluene-d8 (Surr)	99		70 - 130					02/22/11 20:23	1

**Lab Sample ID: LCS 720-86615/6**

**Matrix: Water**

**Analysis Batch: 86615**

**Client Sample ID: LCS 720-86615/6**

**Prep Type: Total/NA**

Analyte	Spike		Result	LCS Qualifier	Unit	D	% Rec	Limits	% Rec.
	Added								
MTBE	25.0		30.2		ug/L		121	62 - 130	
Benzene	25.0		25.9		ug/L		104	82 - 127	
EDB	25.0		30.9		ug/L		124	70 - 130	
1,2-DCA	25.0		28.6		ug/L		115	70 - 126	
Ethylbenzene	25.0		24.3		ug/L		97	86 - 135	
Toluene	25.0		25.2		ug/L		101	83 - 129	
TBA	500		492		ug/L		98	82 - 116	
Ethanol	500		424		ug/L		85	31 - 216	
DIPE	25.0		30.1		ug/L		120	74 - 155	
TAME	25.0	*	34.7	*	ug/L		139	79 - 129	
Ethyl t-butyl ether	25.0		32.2		ug/L		129	70 - 130	

Surrogate	LCS		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	102		67 - 130
1,2-Dichloroethane-d4 (Surr)	113		67 - 130
Toluene-d8 (Surr)	100		70 - 130

**Lab Sample ID: LCS 720-86615/8**

**Matrix: Water**

**Analysis Batch: 86615**

**Client Sample ID: LCS 720-86615/8**

**Prep Type: Total/NA**

Analyte	Spike		Result	LCS Qualifier	Unit	D	% Rec	Limits	% Rec.
	Added								
Gasoline Range Organics (GRO) -C6-C12	500		457		ug/L		91	58 - 106	

# Quality Control Data

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-86615/8**

**Matrix: Water**

**Analysis Batch: 86615**

**Client Sample ID: LCS 720-86615/8**

**Prep Type: Total/NA**

Surrogate	LCS	LCS	% Recovery	Qualifier	Limits
4-Bromofluorobenzene			103		67 - 130
1,2-Dichloroethane-d4 (Surr)			115		67 - 130
Toluene-d8 (Surr)			101		70 - 130

**Lab Sample ID: LCSD 720-86615/7**

**Matrix: Water**

**Analysis Batch: 86615**

**Client Sample ID: LCSD 720-86615/7**

**Prep Type: Total/NA**

Analyte	Spike		LCSD Result	LCSD Qualifier	Unit	D	% Rec	Limits	RPD	Limit
	Added									
MTBE		25.0	29.3		ug/L		117	62 - 130	3	20
Benzene		25.0	25.9		ug/L		104	82 - 127	0	20
EDB		25.0	30.1		ug/L		120	70 - 130	3	20
1,2-DCA		25.0	27.8		ug/L		111	70 - 126	3	20
Ethylbenzene		25.0	24.4		ug/L		98	86 - 135	0	20
Toluene		25.0	25.5		ug/L		102	83 - 129	1	20
TBA		500	496		ug/L		99	82 - 116	1	20
Ethanol		500	459		ug/L		92	31 - 216	8	30
DIPE		25.0	29.4		ug/L		118	74 - 155	2	20
TAME		25.0	33.8 *		ug/L		135	79 - 129	3	20
Ethyl t-butyl ether		25.0	31.5		ug/L		126	70 - 130	2	20

Surrogate	LCSD	LCSD	% Recovery	Qualifier	Limits
4-Bromofluorobenzene			99		67 - 130
1,2-Dichloroethane-d4 (Surr)			110		67 - 130
Toluene-d8 (Surr)			101		70 - 130

**Lab Sample ID: LCSD 720-86615/9**

**Matrix: Water**

**Analysis Batch: 86615**

**Client Sample ID: LCSD 720-86615/9**

**Prep Type: Total/NA**

Analyte	Spike		LCSD Result	LCSD Qualifier	Unit	D	% Rec	Limits	RPD	Limit
	Added									
Gasoline Range Organics (GRO) -C6-C12		500	451		ug/L		90	58 - 106	1	20

Surrogate	LCSD	LCSD	% Recovery	Qualifier	Limits
4-Bromofluorobenzene			102		67 - 130
1,2-Dichloroethane-d4 (Surr)			115		67 - 130
Toluene-d8 (Surr)			100		70 - 130

**Lab Sample ID: 720-33514-2 MS**

**Matrix: Water**

**Analysis Batch: 86615**

**Client Sample ID: MW-3 (02/22/11)**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	% Rec.			
	Result	Qualifier	Added	Result	Qualifier	Unit	D	% Rec	Limits
MTBE	0.50		25.0	30.0		ug/L	118	60 - 138	
Benzene	ND		25.0	25.4		ug/L	102	60 - 140	
EDB	ND		25.0	30.5		ug/L	122	60 - 140	
1,2-DCA	ND		25.0	27.7		ug/L	111	60 - 140	
Ethylbenzene	ND		25.0	24.4		ug/L	97	60 - 140	

TestAmerica San Francisco

# Quality Control Data

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: 720-33514-2 MS**

**Matrix: Water**

**Analysis Batch: 86615**

**Client Sample ID: MW-3 (02/22/11)**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	% Rec.	% Rec.
	Result	Qualifier	Added	Result	Qualifier				
Toluene	ND		25.0	25.1		ug/L		100	60 - 140
TBA	ND		500	482		ug/L		96	60 - 140
Ethanol	ND		500	427		ug/L		85	60 - 140
DIPE	ND		25.0	28.5		ug/L		114	60 - 140
TAME	ND *		25.0	32.3		ug/L		129	60 - 140
Ethyl t-butyl ether	ND		25.0	30.5		ug/L		122	60 - 140
<b>Surrogate</b>									
	MS	MS							
	% Recovery	Qualifier							
4-Bromofluorobenzene	100			67 - 130					
1,2-Dichloroethane-d4 (Surr)	108			67 - 130					
Toluene-d8 (Surr)	99			70 - 130					

**Lab Sample ID: 720-33514-2 MSD**

**Matrix: Water**

**Analysis Batch: 86615**

**Client Sample ID: MW-3 (02/22/11)**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	% Rec.	% Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
MTBE	0.50		25.0	27.9		ug/L		109	60 - 138	7	20
Benzene	ND		25.0	25.6		ug/L		102	60 - 140	0	20
EDB	ND		25.0	29.0		ug/L		116	60 - 140	5	20
1,2-DCA	ND		25.0	26.5		ug/L		106	60 - 140	4	20
Ethylbenzene	ND		25.0	24.2		ug/L		97	60 - 140	0	20
Toluene	ND		25.0	25.3		ug/L		101	60 - 140	1	20
TBA	ND		500	490		ug/L		98	60 - 140	2	20
Ethanol	ND		500	483		ug/L		97	60 - 140	12	20
DIPE	ND		25.0	28.0		ug/L		112	60 - 140	2	20
TAME	ND *		25.0	31.0		ug/L		124	60 - 140	4	20
Ethyl t-butyl ether	ND		25.0	29.3		ug/L		117	60 - 140	4	20
<b>Surrogate</b>											
	MSD	MSD									
	% Recovery	Qualifier									
4-Bromofluorobenzene	98			67 - 130							
1,2-Dichloroethane-d4 (Surr)	104			67 - 130							
Toluene-d8 (Surr)	100			70 - 130							

**Lab Sample ID: MB 720-86751/5**

**Matrix: Water**

**Analysis Batch: 86751**

**Client Sample ID: MB 720-86751/5**

**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
MTBE	ND		0.50		ug/L			02/24/11 10:52	1
Benzene	ND		0.50		ug/L			02/24/11 10:52	1
EDB	ND		0.50		ug/L			02/24/11 10:52	1
1,2-DCA	ND		0.50		ug/L			02/24/11 10:52	1
Ethylbenzene	ND		0.50		ug/L			02/24/11 10:52	1
Toluene	ND		0.50		ug/L			02/24/11 10:52	1
Xylenes, Total	ND		1.0		ug/L			02/24/11 10:52	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			02/24/11 10:52	1
TBA	ND		4.0		ug/L			02/24/11 10:52	1
Ethanol	ND		250		ug/L			02/24/11 10:52	1

# Quality Control Data

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: MB 720-86751/5**

**Matrix: Water**

**Analysis Batch: 86751**

**Client Sample ID: MB 720-86751/5**

**Prep Type: Total/NA**

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
DIPE	ND		0.50		ug/L			02/24/11 10:52	1
TAME	ND		0.50		ug/L			02/24/11 10:52	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/24/11 10:52	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
4-Bromofluorobenzene	108		67 - 130			1
1,2-Dichloroethane-d4 (Surr)	122		67 - 130			1
Toluene-d8 (Surr)	104		70 - 130			1

**Lab Sample ID: LCS 720-86751/11**

**Matrix: Water**

**Analysis Batch: 86751**

**Client Sample ID: LCS 720-86751/11**

**Prep Type: Total/NA**

Analyte	Spike		Result	LCS	LCS	Unit	D	% Rec	Limits
	Added								
MTBE	25.0		26.8			ug/L		107	62 - 130
Benzene	25.0		23.7			ug/L		95	82 - 127
EDB	25.0		26.3			ug/L		105	70 - 130
1,2-DCA	25.0		26.3			ug/L		105	70 - 126
Ethylbenzene	25.0		24.6			ug/L		98	86 - 135
Toluene	25.0		24.0			ug/L		96	83 - 129
TBA	500		467			ug/L		93	82 - 116
Ethanol	500		562			ug/L		112	31 - 216
DIPE	25.0		24.0			ug/L		96	74 - 155
TAME	25.0		28.6			ug/L		115	79 - 129
Ethyl t-butyl ether	25.0		26.5			ug/L		106	70 - 130

Surrogate	LCS		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	104		67 - 130
1,2-Dichloroethane-d4 (Surr)	111		67 - 130
Toluene-d8 (Surr)	101		70 - 130

**Lab Sample ID: LCS 720-86751/8**

**Matrix: Water**

**Analysis Batch: 86751**

**Client Sample ID: LCS 720-86751/8**

**Prep Type: Total/NA**

Analyte	Spike		Result	LCS	LCS	Unit	D	% Rec	Limits
	Added								
Gasoline Range Organics (GRO) -C6-C12	500		441			ug/L		88	58 - 106

Surrogate	LCS		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	106		67 - 130
1,2-Dichloroethane-d4 (Surr)	119		67 - 130
Toluene-d8 (Surr)	101		70 - 130

# Quality Control Data

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-86751/12

Client Sample ID: LCSD 720-86751/12

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 86751

Analyte		Spike	LCSD	LCSD	Unit	D	% Rec	Limits	RPD	RPD Limit
		Added	Result	Qualifier						
MTBE		25.0	26.5		ug/L		106	62 - 130	1	20
Benzene		25.0	23.9		ug/L		96	82 - 127	1	20
EDB		25.0	26.2		ug/L		105	70 - 130	0	20
1,2-DCA		25.0	26.5		ug/L		106	70 - 126	1	20
Ethylbenzene		25.0	25.0		ug/L		100	86 - 135	2	20
Toluene		25.0	24.5		ug/L		98	83 - 129	2	20
TBA		500	471		ug/L		94	82 - 116	1	20
Ethanol		500	573		ug/L		115	31 - 216	2	30
DIPE		25.0	24.1		ug/L		97	74 - 155	1	20
TAME		25.0	28.1		ug/L		112	79 - 129	2	20
Ethyl t-butyl ether		25.0	26.0		ug/L		104	70 - 130	2	20
<b>Surrogate</b>		<b>LCSD</b>	<b>LCSD</b>							
		% Recovery	Qualifier	Limits						
4-Bromofluorobenzene		104		67 - 130						
1,2-Dichloroethane-d4 (Surr)		109		67 - 130						
Toluene-d8 (Surr)		100		70 - 130						

Lab Sample ID: LCSD 720-86751/9

Client Sample ID: LCSD 720-86751/9

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 86751

Analyte		Spike	LCSD	LCSD	Unit	D	% Rec	Limits	RPD	RPD Limit
		Added	Result	Qualifier						
Gasoline Range Organics (GRO) -C6-C12		500	434		ug/L		87	58 - 106	2	20
<b>Surrogate</b>		<b>LCSD</b>	<b>LCSD</b>							
		% Recovery	Qualifier	Limits						
4-Bromofluorobenzene		106		67 - 130						
1,2-Dichloroethane-d4 (Surr)		117		67 - 130						
Toluene-d8 (Surr)		102		70 - 130						

## Method: RSK SOP-175 - RSK SOP-175 - Dissolved Gases in Water

Lab Sample ID: 11B0174-BLK1

Client Sample ID: 11B0174-BLK1

Matrix: Water

Prep Type: total

Analysis Batch: 11B0174

Prep Batch: 11B0174\_P

Analyte	Blank	Blank	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Carbon dioxide	ND		0.17		mg/L		02/25/11 05:30	02/25/11 06:32	1.00

Lab Sample ID: 11B0174-BS1

Client Sample ID: 11B0174-BS1

Matrix: Water

Prep Type: total

Analysis Batch: 11B0174

Prep Batch: 11B0174\_P

Analyte	Spike	LCs	LCS	Unit	D	% Rec	Limits
	Added	Result	Qualifier				
Carbon dioxide	16.88	16.4		mg/L		97	70 - 130

# Quality Control Data

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

## Method: RSK SOP-175 - RSK SOP-175 - Dissolved Gases in Water (Continued)

**Lab Sample ID: 11B0174-BSD1**

**Matrix: Water**

**Analysis Batch: 11B0174**

**Client Sample ID: 11B0174-BSD1**

**Prep Type: total**

**Prep Batch: 11B0174\_P**

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	% Rec.	RPD
Carbon dioxide	16.88	16.7		mg/L		99	70 - 130

**Lab Sample ID: 11B0175-BLK1**

**Matrix: Water**

**Analysis Batch: 11B0175**

**Client Sample ID: 11B0175-BLK1**

**Prep Type: total**

**Prep Batch: 11B0175\_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		0.0010		mg/L		02/25/11 05:30	02/25/11 06:45	1.00

**Lab Sample ID: 11B0175-BS1**

**Matrix: Water**

**Analysis Batch: 11B0175**

**Client Sample ID: 11B0175-BS1**

**Prep Type: total**

**Prep Batch: 11B0175\_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec.	Limits
Methane	0.04767	0.0491		mg/L		103	70 - 125

**Lab Sample ID: 11B0175-BSD1**

**Matrix: Water**

**Analysis Batch: 11B0175**

**Client Sample ID: 11B0175-BSD1**

**Prep Type: total**

**Prep Batch: 11B0175\_P**

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	% Rec.	RPD
Methane	0.04767	0.0492		mg/L		103	70 - 125

## Method: 200.7 Rev 4.4 - Metals (ICP)

**Lab Sample ID: MB 720-86648/1-A**

**Matrix: Water**

**Analysis Batch: 86709**

**Client Sample ID: MB 720-86648/1-A**

**Prep Type: Total/NA**

**Prep Batch: 86648**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		0.020		mg/L		02/23/11 08:31	02/23/11 14:56	1

**Lab Sample ID: LCS 720-86648/2-A**

**Matrix: Water**

**Analysis Batch: 86709**

**Client Sample ID: LCS 720-86648/2-A**

**Prep Type: Total/NA**

**Prep Batch: 86648**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec.	Limits
Manganese	1.00	0.993		mg/L		99	85 - 115

**Lab Sample ID: LCSD 720-86648/3-A**

**Matrix: Water**

**Analysis Batch: 86709**

**Client Sample ID: LCSD 720-86648/3-A**

**Prep Type: Total/NA**

**Prep Batch: 86648**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec.	RPD
Manganese	1.00	0.962		mg/L		96	85 - 115

# Quality Control Data

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID:** MB 720-86556/4

**Matrix:** Water

**Analysis Batch:** 86556

**Client Sample ID:** MB 720-86556/4

**Prep Type:** Total/NA

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Sulfate	ND		1.0		mg/L			02/22/11 08:27	1
Nitrate as NO <sub>3</sub>	ND		1.0		mg/L			02/22/11 08:27	1

**Lab Sample ID:** LCS 720-86556/5

**Matrix:** Water

**Analysis Batch:** 86556

**Client Sample ID:** LCS 720-86556/5

**Prep Type:** Total/NA

Analyte	Spike		LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec.	Limits
	Added								
Sulfate	10.0		10.7		mg/L		107	90 - 110	
Nitrate as NO <sub>3</sub>	10.0		9.64		mg/L		96	90 - 110	

**Lab Sample ID:** LCSD 720-86556/6

**Matrix:** Water

**Analysis Batch:** 86556

**Client Sample ID:** LCSD 720-86556/6

**Prep Type:** Total/NA

Analyte	Spike		LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.	RPD	Limit
	Added									
Sulfate	10.0		9.52		mg/L		95	90 - 110	12	20
Nitrate as NO <sub>3</sub>	10.0		9.53		mg/L		95	90 - 110	1	20

**Lab Sample ID:** MB 720-86657/39

**Matrix:** Water

**Analysis Batch:** 86657

**Client Sample ID:** MB 720-86657/39

**Prep Type:** Total/NA

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Sulfate	ND		1.0		mg/L			02/22/11 19:53	1
Nitrate as NO <sub>3</sub>	ND		1.0		mg/L			02/22/11 19:53	1

**Lab Sample ID:** LCS 720-86657/40

**Matrix:** Water

**Analysis Batch:** 86657

**Client Sample ID:** LCS 720-86657/40

**Prep Type:** Total/NA

Analyte	Spike		LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec.	Limits
	Added								
Sulfate	10.0		10.2		mg/L		102	90 - 110	
Nitrate as NO <sub>3</sub>	10.0		10.2		mg/L		102	90 - 110	

**Lab Sample ID:** LCSD 720-86657/41

**Matrix:** Water

**Analysis Batch:** 86657

**Client Sample ID:** LCSD 720-86657/41

**Prep Type:** Total/NA

Analyte	Spike		LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.	RPD	Limit
	Added									
Sulfate	10.0		10.6		mg/L		106	90 - 110	4	20
Nitrate as NO <sub>3</sub>	10.0		9.25		mg/L		93	90 - 110	9	20

**Lab Sample ID:** 720-33514-A-4 MS

**Matrix:** Water

**Analysis Batch:** 86657

**Client Sample ID:** 720-33514-A-4 MS

**Prep Type:** Total/NA

Analyte	Sample		Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec.
	Result	Qualifier							
Sulfate	15		100	113		mg/L		99	80 - 120
Nitrate as NO <sub>3</sub>	ND		100	97.9		mg/L		98	80 - 120

# Quality Control Data

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID:** 720-33514-A-4 MSD

**Matrix:** Water

**Analysis Batch:** 86657

**Client Sample ID:** 720-33514-A-4 MSD

**Prep Type:** Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	% Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier			% Rec.		
Sulfate	15		100	110		mg/L		96	80 - 120	3
Nitrate as NO <sub>3</sub>	ND		100	85.6		mg/L		86	80 - 120	13

## Method: SM 2320B - Alkalinity

**Lab Sample ID:** MB 720-86676/2

**Matrix:** Water

**Analysis Batch:** 86676

**Client Sample ID:** MB 720-86676/2

**Prep Type:** Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Alkalinity	ND		5.0		mg/L			02/23/11 10:03	1
Bicarbonate Alkalinity as CaCO <sub>3</sub>	ND		5.0		mg/L			02/23/11 10:03	1
Carbonate Alkalinity as CaCO <sub>3</sub>	ND		5.0		mg/L			02/23/11 10:03	1
Hydroxide Alkalinity	ND		5.0		mg/L			02/23/11 10:03	1

**Lab Sample ID:** LCS 720-86676/3

**Matrix:** Water

**Analysis Batch:** 86676

**Client Sample ID:** LCS 720-86676/3

**Prep Type:** Total/NA

Analyte	MB	MB	Spike	LCS	LCS	Unit	D	% Rec.	Dil Fac
	Result	Qualifier	Added	Result	Qualifier			% Rec.	
Alkalinity	ND		250	254		mg/L		102	80 - 120

**Lab Sample ID:** LCSD 720-86676/4

**Matrix:** Water

**Analysis Batch:** 86676

**Client Sample ID:** LCSD 720-86676/4

**Prep Type:** Total/NA

Analyte	MB	MB	Spike	LCSD	LCSD	Unit	D	% Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier			% Rec.		
Alkalinity	ND		250	256		mg/L		103	80 - 120	1

## Method: SM 3500 FE D - Iron, Ferrous and Ferric

**Lab Sample ID:** MB 720-86625/9

**Matrix:** Water

**Analysis Batch:** 86625

**Client Sample ID:** MB 720-86625/9

**Prep Type:** Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Ferrous Iron	ND		0.10		mg/L			02/22/11 18:35	1

**Lab Sample ID:** LCS 720-86625/10

**Matrix:** Water

**Analysis Batch:** 86625

**Client Sample ID:** LCS 720-86625/10

**Prep Type:** Total/NA

Analyte	MB	MB	Spike	LCSD	LCSD	Unit	D	% Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier			% Rec.		
Ferrous Iron	ND		1.00	0.982		mg/L		98	80 - 120	

# Quality Control Data

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

## Method: SM 3500 FE D - Iron, Ferrous and Ferric (Continued)

**Lab Sample ID: LCSD 720-86625/11**

**Matrix: Water**

**Analysis Batch: 86625**

**Client Sample ID: LCSD 720-86625/11**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec.	RPD
Ferrous Iron	1.00	0.973		mg/L	97	80 - 120	1

**Lab Sample ID: 720-33514-2 MS**

**Matrix: Water**

**Analysis Batch: 86625**

**Client Sample ID: MW-3 (02/22/11)**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec.
Ferrous Iron	ND		1.00	1.02		mg/L	97	75 - 125

**Lab Sample ID: 720-33514-2 MSD**

**Matrix: Water**

**Analysis Batch: 86625**

**Client Sample ID: MW-3 (02/22/11)**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec.
Ferrous Iron	ND		1.00	1.04		mg/L	99	75 - 125

## Method: SM4500-S D - INORGANICS

**Lab Sample ID: 11B3118-BLK1**

**Matrix: Water**

**Analysis Batch: 11B3118**

**Client Sample ID: 11B3118-BLK1**

**Prep Type: dissolved**

**Prep Batch: 11B3118\_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Sulfide	ND		0.10		mg/l		02/24/11 15:32	02/24/11 17:09	1.00

**Lab Sample ID: 11B3118-BS1**

**Matrix: Water**

**Analysis Batch: 11B3118**

**Client Sample ID: 11B3118-BS1**

**Prep Type: dissolved**

**Prep Batch: 11B3118\_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec.
Dissolved Sulfide	0.700	0.713		mg/l	102	80 - 120

# QC Association Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

## GC/MS VOA

### Analysis Batch: 86615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-33514-2 MS	MW-3 (02/22/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-33514-2 MSD	MW-3 (02/22/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-33514-2	MW-3 (02/22/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-33514-3	AW-6 (02/22/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-33514-4	AW-5 (02/22/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-33514-6	RW-1 (02/22/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-33514-7	MW-1 (02/22/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-33514-1	AW-4 (02/22/11)	Total/NA	Water	8260B/CA_LUF TMS	
MB 720-86615/5	MB 720-86615/5	Total/NA	Water	8260B/CA_LUF TMS	
LCS 720-86615/6	LCS 720-86615/6	Total/NA	Water	8260B/CA_LUF TMS	
LCSD 720-86615/7	LCSD 720-86615/7	Total/NA	Water	8260B/CA_LUF TMS	
LCS 720-86615/8	LCS 720-86615/8	Total/NA	Water	8260B/CA_LUF TMS	
LCSD 720-86615/9	LCSD 720-86615/9	Total/NA	Water	8260B/CA_LUF TMS	

### Analysis Batch: 86751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-86751/11	LCS 720-86751/11	Total/NA	Water	8260B/CA_LUF TMS	
LCSD 720-86751/12	LCSD 720-86751/12	Total/NA	Water	8260B/CA_LUF TMS	
720-33514-5	AW-1 (02/22/11)	Total/NA	Water	8260B/CA_LUF TMS	
MB 720-86751/5	MB 720-86751/5	Total/NA	Water	8260B/CA_LUF TMS	
LCS 720-86751/8	LCS 720-86751/8	Total/NA	Water	8260B/CA_LUF TMS	
LCSD 720-86751/9	LCSD 720-86751/9	Total/NA	Water	8260B/CA_LUF TMS	

## GC Volatiles

### Analysis Batch: 11B0174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11B0174-BS1	11B0174-BS1	total	Water	RSK SOP-175	11B0174_P
11B0174-BSD1	11B0174-BSD1	total	Water	RSK SOP-175	11B0174_P
11B0174-BLK1	11B0174-BLK1	total	Water	RSK SOP-175	11B0174_P
720-33514-1	AW-4 (02/22/11)	total	Water	RSK SOP-175	11B0174_P
720-33514-2	MW-3 (02/22/11)	total	Water	RSK SOP-175	11B0174_P
720-33514-3	AW-6 (02/22/11)	total	Water	RSK SOP-175	11B0174_P
720-33514-4	AW-5 (02/22/11)	total	Water	RSK SOP-175	11B0174_P
720-33514-5	AW-1 (02/22/11)	total	Water	RSK SOP-175	11B0174_P
720-33514-6	RW-1 (02/22/11)	total	Water	RSK SOP-175	11B0174_P
720-33514-7	MW-1 (02/22/11)	total	Water	RSK SOP-175	11B0174_P

### Prep Batch: 11B0174\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11B0174-BS1	11B0174-BS1	total	Water	METHOD-GC-RSK	

TestAmerica San Francisco

# QC Association Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

## GC Volatiles (Continued)

### Prep Batch: 11B0174\_P (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11B0174-BSD1	11B0174-BSD1	total	Water	METHOD-GC-R SK	
11B0174-BLK1	11B0174-BLK1	total	Water	METHOD-GC-R SK	
720-33514-1	AW-4 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-2	MW-3 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-3	AW-6 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-4	AW-5 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-5	AW-1 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-6	RW-1 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-7	MW-1 (02/22/11)	total	Water	METHOD-GC-R SK	

### Analysis Batch: 11B0175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11B0175-BS1	11B0175-BS1	total	Water	RSK SOP-175	11B0175_P
11B0175-BSD1	11B0175-BSD1	total	Water	RSK SOP-175	11B0175_P
11B0175-BLK1	11B0175-BLK1	total	Water	RSK SOP-175	11B0175_P
720-33514-2	MW-3 (02/22/11)	total	Water	RSK SOP-175	11B0175_P
720-33514-3	AW-6 (02/22/11)	total	Water	RSK SOP-175	11B0175_P
720-33514-4	AW-5 (02/22/11)	total	Water	RSK SOP-175	11B0175_P
720-33514-5	AW-1 (02/22/11)	total	Water	RSK SOP-175	11B0175_P
720-33514-6	RW-1 (02/22/11)	total	Water	RSK SOP-175	11B0175_P
720-33514-7	MW-1 (02/22/11)	total	Water	RSK SOP-175	11B0175_P
720-33514-1	AW-4 (02/22/11)	total	Water	RSK SOP-175	11B0175_P

### Prep Batch: 11B0175\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11B0175-BS1	11B0175-BS1	total	Water	METHOD-GC-R SK	
11B0175-BSD1	11B0175-BSD1	total	Water	METHOD-GC-R SK	
11B0175-BLK1	11B0175-BLK1	total	Water	METHOD-GC-R SK	
720-33514-2	MW-3 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-3	AW-6 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-4	AW-5 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-5	AW-1 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-6	RW-1 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-7	MW-1 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-1	AW-4 (02/22/11)	total	Water	METHOD-GC-R SK	

## Metals

### Prep Batch: 86648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-86648/1-A	MB 720-86648/1-A	Total/NA	Water	200.7	
720-33514-1	AW-4 (02/22/11)	Total/NA	Water	200.7	

TestAmerica San Francisco

# QC Association Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

## Metals (Continued)

### Prep Batch: 86648 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-33514-2	MW-3 (02/22/11)	Total/NA	Water	200.7	
720-33514-3	AW-6 (02/22/11)	Total/NA	Water	200.7	
720-33514-4	AW-5 (02/22/11)	Total/NA	Water	200.7	
720-33514-5	AW-1 (02/22/11)	Total/NA	Water	200.7	
720-33514-6	RW-1 (02/22/11)	Total/NA	Water	200.7	
LCS 720-86648/2-A	LCS 720-86648/2-A	Total/NA	Water	200.7	
720-33514-7	MW-1 (02/22/11)	Total/NA	Water	200.7	
LCSD 720-86648/3-A	LCSD 720-86648/3-A	Total/NA	Water	200.7	

### Analysis Batch: 86709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-86648/1-A	MB 720-86648/1-A	Total/NA	Water	200.7 Rev 4.4	86648
720-33514-1	AW-4 (02/22/11)	Total/NA	Water	200.7 Rev 4.4	86648
720-33514-2	MW-3 (02/22/11)	Total/NA	Water	200.7 Rev 4.4	86648
720-33514-3	AW-6 (02/22/11)	Total/NA	Water	200.7 Rev 4.4	86648
720-33514-4	AW-5 (02/22/11)	Total/NA	Water	200.7 Rev 4.4	86648
LCS 720-86648/2-A	LCS 720-86648/2-A	Total/NA	Water	200.7 Rev 4.4	86648
720-33514-5	AW-1 (02/22/11)	Total/NA	Water	200.7 Rev 4.4	86648
720-33514-6	RW-1 (02/22/11)	Total/NA	Water	200.7 Rev 4.4	86648
720-33514-7	MW-1 (02/22/11)	Total/NA	Water	200.7 Rev 4.4	86648
LCSD 720-86648/3-A	LCSD 720-86648/3-A	Total/NA	Water	200.7 Rev 4.4	86648

## General Chemistry

### Analysis Batch: 86556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-33514-1	AW-4 (02/22/11)	Total/NA	Water	300.0	
720-33514-1	AW-4 (02/22/11)	Total/NA	Water	300.0	
720-33514-2	MW-3 (02/22/11)	Total/NA	Water	300.0	
720-33514-2	MW-3 (02/22/11)	Total/NA	Water	300.0	
720-33514-3	AW-6 (02/22/11)	Total/NA	Water	300.0	
720-33514-3	AW-6 (02/22/11)	Total/NA	Water	300.0	
MB 720-86556/4	MB 720-86556/4	Total/NA	Water	300.0	
LCS 720-86556/5	LCS 720-86556/5	Total/NA	Water	300.0	
LCSD 720-86556/6	LCSD 720-86556/6	Total/NA	Water	300.0	

### Analysis Batch: 86625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-86625/10	LCS 720-86625/10	Total/NA	Water	SM 3500 FE D	
LCSD 720-86625/11	LCSD 720-86625/11	Total/NA	Water	SM 3500 FE D	
720-33514-1	AW-4 (02/22/11)	Total/NA	Water	SM 3500 FE D	
720-33514-2	MW-3 (02/22/11)	Total/NA	Water	SM 3500 FE D	
720-33514-2 MS	MW-3 (02/22/11)	Total/NA	Water	SM 3500 FE D	
720-33514-2 MSD	MW-3 (02/22/11)	Total/NA	Water	SM 3500 FE D	
720-33514-3	AW-6 (02/22/11)	Total/NA	Water	SM 3500 FE D	
720-33514-4	AW-5 (02/22/11)	Total/NA	Water	SM 3500 FE D	
720-33514-5	AW-1 (02/22/11)	Total/NA	Water	SM 3500 FE D	
720-33514-6	RW-1 (02/22/11)	Total/NA	Water	SM 3500 FE D	
720-33514-7	MW-1 (02/22/11)	Total/NA	Water	SM 3500 FE D	
MB 720-86625/9	MB 720-86625/9	Total/NA	Water	SM 3500 FE D	

# QC Association Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

## General Chemistry (Continued)

### Analysis Batch: 86657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-86657/39	MB 720-86657/39	Total/NA	Water	300.0	
LCS 720-86657/40	LCS 720-86657/40	Total/NA	Water	300.0	
LCSD 720-86657/41	LCSD 720-86657/41	Total/NA	Water	300.0	
720-33514-4	AW-5 (02/22/11)	Total/NA	Water	300.0	
720-33514-A-4 MS	720-33514-A-4 MS	Total/NA	Water	300.0	
720-33514-A-4 MSD	720-33514-A-4 MSD	Total/NA	Water	300.0	
720-33514-5	AW-1 (02/22/11)	Total/NA	Water	300.0	
720-33514-6	RW-1 (02/22/11)	Total/NA	Water	300.0	
720-33514-7	MW-1 (02/22/11)	Total/NA	Water	300.0	
720-33514-7	MW-1 (02/22/11)	Total/NA	Water	300.0	

### Analysis Batch: 86676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-33514-6	RW-1 (02/22/11)	Total/NA	Water	SM 2320B	
720-33514-7	MW-1 (02/22/11)	Total/NA	Water	SM 2320B	
MB 720-86676/2	MB 720-86676/2	Total/NA	Water	SM 2320B	
LCS 720-86676/3	LCS 720-86676/3	Total/NA	Water	SM 2320B	
LCSD 720-86676/4	LCSD 720-86676/4	Total/NA	Water	SM 2320B	
720-33514-1	AW-4 (02/22/11)	Total/NA	Water	SM 2320B	
720-33514-2	MW-3 (02/22/11)	Total/NA	Water	SM 2320B	
720-33514-3	AW-6 (02/22/11)	Total/NA	Water	SM 2320B	
720-33514-4	AW-5 (02/22/11)	Total/NA	Water	SM 2320B	
720-33514-5	AW-1 (02/22/11)	Total/NA	Water	SM 2320B	

## Wet Chemistry

### Analysis Batch: 11B3118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11B3118-BLK1	11B3118-BLK1	Dissolved	Water	SM4500-S D	11B3118_P
11B3118-BS1	11B3118-BS1	Dissolved	Water	SM4500-S D	11B3118_P
720-33514-1	AW-4 (02/22/11)	Dissolved	Water	SM4500-S D	11B3118_P
720-33514-2	MW-3 (02/22/11)	Dissolved	Water	SM4500-S D	11B3118_P
720-33514-3	AW-6 (02/22/11)	Dissolved	Water	SM4500-S D	11B3118_P
720-33514-4	AW-5 (02/22/11)	Dissolved	Water	SM4500-S D	11B3118_P
720-33514-5	AW-1 (02/22/11)	Dissolved	Water	SM4500-S D	11B3118_P
720-33514-6	RW-1 (02/22/11)	Dissolved	Water	SM4500-S D	11B3118_P
720-33514-7	MW-1 (02/22/11)	Dissolved	Water	SM4500-S D	11B3118_P

### Prep Batch: 11B3118\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11B3118-BLK1	11B3118-BLK1	Dissolved	Water	General Prep	
11B3118-BS1	11B3118-BS1	Dissolved	Water	General Prep	
720-33514-1	AW-4 (02/22/11)	Dissolved	Water	General Prep	
720-33514-2	MW-3 (02/22/11)	Dissolved	Water	General Prep	
720-33514-3	AW-6 (02/22/11)	Dissolved	Water	General Prep	
720-33514-4	AW-5 (02/22/11)	Dissolved	Water	General Prep	
720-33514-5	AW-1 (02/22/11)	Dissolved	Water	General Prep	
720-33514-6	RW-1 (02/22/11)	Dissolved	Water	General Prep	
720-33514-7	MW-1 (02/22/11)	Dissolved	Water	General Prep	

# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

**Client Sample ID: AW-4 (02/22/11)**

**Lab Sample ID: 720-33514-1**

Date Collected: 02/22/11 15:10

Matrix: Water

Date Received: 02/22/11 16:13

Prep Type	Batch Type	Batch Method	Dilution Run	Batch Factor	Prepared Number	Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1	86615	02/23/11 03:55	YB	TestAmerica San Francisco
total	Prep	METHOD-GC-R SK		1.0	11B0174_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0174	02/25/11 07:14	EI	TestAmerica Los Angeles
total	Prep	METHOD-GC-R SK		1.0	11B0175_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0175	02/25/11 10:21	EI	TestAmerica Los Angeles
Total/NA	Prep	200.7			86648	02/23/11 08:31	ET	TestAmerica San Francisco
Total/NA	Analysis	200.7 Rev 4.4		1	86709	02/23/11 15:57	BA	TestAmerica San Francisco
Total/NA	Analysis	300.0		1	86556	02/22/11 17:36	MJK	TestAmerica San Francisco
Total/NA	Analysis	300.0		10	86556	02/22/11 17:53	MJK	TestAmerica San Francisco
Total/NA	Analysis	SM 3500 FE D		1	86625	02/22/11 18:35	EYT	TestAmerica San Francisco
Total/NA	Analysis	SM 2320B		1	86676	02/23/11 10:23	daf	TestAmerica San Francisco
Dissolved	Prep	General Prep		1.0	11B3118_P	02/22/11 15:10	RW	TestAmerica Irvine
Dissolved	Analysis	SM4500-S D		1.0	11B3118	02/24/11 17:09	RW	TestAmerica Irvine

**Client Sample ID: MW-3 (02/22/11)**

**Lab Sample ID: 720-33514-2**

Date Collected: 02/22/11 14:25

Matrix: Water

Date Received: 02/22/11 16:13

Prep Type	Batch Type	Batch Method	Dilution Run	Batch Factor	Prepared Number	Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1	86615	02/23/11 01:13	YB	TestAmerica San Francisco
total	Prep	METHOD-GC-R SK		1.0	11B0174_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0174	02/25/11 07:26	EI	TestAmerica Los Angeles
total	Prep	METHOD-GC-R SK		1.0	11B0175_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0175	02/25/11 08:51	EI	TestAmerica Los Angeles
Total/NA	Prep	200.7			86648	02/23/11 08:31	ET	TestAmerica San Francisco
Total/NA	Analysis	200.7 Rev 4.4		1	86709	02/23/11 16:01	BA	TestAmerica San Francisco
Total/NA	Analysis	300.0		1	86556	02/22/11 18:10	MJK	TestAmerica San Francisco
Total/NA	Analysis	300.0		10	86556	02/22/11 18:28	MJK	TestAmerica San Francisco
Total/NA	Analysis	SM 3500 FE D		1	86625	02/22/11 18:35	EYT	TestAmerica San Francisco
Total/NA	Analysis	SM 2320B		1	86676	02/23/11 10:29	daf	TestAmerica San Francisco
Dissolved	Prep	General Prep		1.0	11B3118_P	02/22/11 14:25	RW	TestAmerica Irvine
Dissolved	Analysis	SM4500-S D		1.0	11B3118	02/24/11 17:09	RW	TestAmerica Irvine

**Client Sample ID: AW-6 (02/22/11)**

**Lab Sample ID: 720-33514-3**

Date Collected: 02/22/11 13:00

Matrix: Water

Date Received: 02/22/11 16:13

Prep Type	Batch Type	Batch Method	Dilution Run	Batch Factor	Prepared Number	Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1	86615	02/23/11 01:46	YB	TestAmerica San Francisco
total	Prep	METHOD-GC-R SK		1.0	11B0174_P	02/25/11 06:00	yz	TestAmerica Los Angeles

TestAmerica San Francisco

# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

**Client Sample ID: AW-6 (02/22/11)**

**Lab Sample ID: 720-33514-3**

Date Collected: 02/22/11 13:00

Matrix: Water

Date Received: 02/22/11 16:13

Prep Type	Batch Type	Batch Method	Dilution Run	Batch Factor	Prepared Number	Or Analyzed	Analyst	Lab
total	Analysis	RSK SOP-175		1.0	11B0174	02/25/11 07:41	EI	TestAmerica Los Angeles
total	Prep	METHOD-GC-R SK		1.0	11B0175_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0175	02/25/11 09:04	EI	TestAmerica Los Angeles
Total/NA	Prep	200.7			86648	02/23/11 08:31	ET	TestAmerica San Francisco
Total/NA	Analysis	200.7 Rev 4.4		1	86709	02/23/11 16:06	BA	TestAmerica San Francisco
Total/NA	Analysis	300.0		1	86556	02/22/11 19:19	MJK	TestAmerica San Francisco
Total/NA	Analysis	300.0		10	86556	02/22/11 19:36	MJK	TestAmerica San Francisco
Total/NA	Analysis	SM 3500 FE D		1	86625	02/22/11 18:35	EYT	TestAmerica San Francisco
Total/NA	Analysis	SM 2320B		1	86676	02/23/11 10:34	daf	TestAmerica San Francisco
Dissolved	Prep	General Prep		1.0	11B3118_P	02/22/11 13:00	RW	TestAmerica Irvine
Dissolved	Analysis	SM4500-S D		1.0	11B3118	02/24/11 17:09	RW	TestAmerica Irvine

**Client Sample ID: AW-5 (02/22/11)**

**Lab Sample ID: 720-33514-4**

Date Collected: 02/22/11 12:20

Matrix: Water

Date Received: 02/22/11 16:13

Prep Type	Batch Type	Batch Method	Dilution Run	Batch Factor	Prepared Number	Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1	86615	02/23/11 02:18	YB	TestAmerica San Francisco
total	Prep	METHOD-GC-R SK		1.0	11B0174_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0174	02/25/11 07:53	EI	TestAmerica Los Angeles
total	Prep	METHOD-GC-R SK		1.0	11B0175_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0175	02/25/11 09:17	EI	TestAmerica Los Angeles
Total/NA	Prep	200.7			86648	02/23/11 08:31	ET	TestAmerica San Francisco
Total/NA	Analysis	200.7 Rev 4.4		1	86709	02/23/11 16:10	BA	TestAmerica San Francisco
Total/NA	Analysis	SM 3500 FE D		1	86625	02/22/11 18:35	EYT	TestAmerica San Francisco
Total/NA	Analysis	300.0		1	86657	02/22/11 20:45	MJK	TestAmerica San Francisco
Total/NA	Analysis	SM 2320B		1	86676	02/23/11 10:40	daf	TestAmerica San Francisco
Dissolved	Prep	General Prep		1.0	11B3118_P	02/22/11 12:20	RW	TestAmerica Irvine
Dissolved	Analysis	SM4500-S D		1.0	11B3118	02/24/11 17:09	RW	TestAmerica Irvine

**Client Sample ID: AW-1 (02/22/11)**

**Lab Sample ID: 720-33514-5**

Date Collected: 02/22/11 11:17

Matrix: Water

Date Received: 02/22/11 16:13

Prep Type	Batch Type	Batch Method	Dilution Run	Batch Factor	Prepared Number	Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1	86751	02/24/11 18:17	LL	TestAmerica San Francisco
total	Prep	METHOD-GC-R SK		1.0	11B0174_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0174	02/25/11 08:09	EI	TestAmerica Los Angeles
total	Prep	METHOD-GC-R SK		1.0	11B0175_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0175	02/25/11 09:31	EI	TestAmerica Los Angeles
Total/NA	Prep	200.7			86648	02/23/11 08:31	ET	TestAmerica San Francisco

TestAmerica San Francisco

# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

**Client Sample ID: AW-1 (02/22/11)**

**Lab Sample ID: 720-33514-5**

**Matrix: Water**

Date Collected: 02/22/11 11:17  
Date Received: 02/22/11 16:13

Prep Type	Batch Type	Batch Method	Dilution Run	Batch Factor Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	200.7 Rev 4.4		1 86709	02/23/11 16:14	BA	TestAmerica San Francisco
Total/NA	Analysis	SM 3500 FE D		1 86625	02/22/11 18:35	EYT	TestAmerica San Francisco
Total/NA	Analysis	300.0		1 86657	02/22/11 22:28	MJK	TestAmerica San Francisco
Total/NA	Analysis	SM 2320B		1 86676	02/23/11 10:45	daf	TestAmerica San Francisco
Dissolved	Prep	General Prep		1.0 11B3118_P	02/22/11 11:17	RW	TestAmerica Irvine
Dissolved	Analysis	SM4500-S D		1.0 11B3118	02/24/11 17:09	RW	TestAmerica Irvine

**Client Sample ID: RW-1 (02/22/11)**

**Lab Sample ID: 720-33514-6**

**Matrix: Water**

Date Collected: 02/22/11 10:50  
Date Received: 02/22/11 16:13

Prep Type	Batch Type	Batch Method	Dilution Run	Batch Factor Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1 86615	02/23/11 02:49	YB	TestAmerica San Francisco
total	Prep	METHOD-GC-R SK		1.0 11B0174_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0 11B0174	02/25/11 08:22	EI	TestAmerica Los Angeles
total	Prep	METHOD-GC-R SK		1.0 11B0175_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0 11B0175	02/25/11 09:46	EI	TestAmerica Los Angeles
Total/NA	Prep	200.7		86648	02/23/11 08:31	ET	TestAmerica San Francisco
Total/NA	Analysis	200.7 Rev 4.4		1 86709	02/23/11 16:18	BA	TestAmerica San Francisco
Total/NA	Analysis	SM 3500 FE D		1 86625	02/22/11 18:35	EYT	TestAmerica San Francisco
Total/NA	Analysis	300.0		1 86657	02/22/11 23:02	MJK	TestAmerica San Francisco
Total/NA	Analysis	SM 2320B		1 86676	02/23/11 10:51	daf	TestAmerica San Francisco
Dissolved	Prep	General Prep		1.0 11B3118_P	02/22/11 10:50	RW	TestAmerica Irvine
Dissolved	Analysis	SM4500-S D		1.0 11B3118	02/24/11 17:09	RW	TestAmerica Irvine

**Client Sample ID: MW-1 (02/22/11)**

**Lab Sample ID: 720-33514-7**

**Matrix: Water**

Date Collected: 02/22/11 13:48  
Date Received: 02/22/11 16:13

Prep Type	Batch Type	Batch Method	Dilution Run	Batch Factor Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1 86615	02/23/11 03:22	YB	TestAmerica San Francisco
total	Prep	METHOD-GC-R SK		1.0 11B0174_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0 11B0174	02/25/11 08:39	EI	TestAmerica Los Angeles
total	Prep	METHOD-GC-R SK		1.0 11B0175_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0 11B0175	02/25/11 10:08	EI	TestAmerica Los Angeles
Total/NA	Prep	200.7		86648	02/23/11 08:31	ET	TestAmerica San Francisco
Total/NA	Analysis	200.7 Rev 4.4		1 86709	02/23/11 16:22	BA	TestAmerica San Francisco
Total/NA	Analysis	SM 3500 FE D		1 86625	02/22/11 18:35	EYT	TestAmerica San Francisco
Total/NA	Analysis	300.0		1 86657	02/22/11 23:37	MJK	TestAmerica San Francisco
Total/NA	Analysis	300.0		10 86657	02/22/11 23:54	MJK	TestAmerica San Francisco
Total/NA	Analysis	SM 2320B		1 86676	02/23/11 10:57	daf	TestAmerica San Francisco

TestAmerica San Francisco

# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

**Client Sample ID: MW-1 (02/22/11)**

**Lab Sample ID: 720-33514-7**

**Matrix: Water**

Date Collected: 02/22/11 13:48

Date Received: 02/22/11 16:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Dissolved	Prep	General Prep		1.0	11B3118_P	02/22/11 13:48	RW	TestAmerica Irvine
Dissolved	Analysis	SM4500-S D		1.0	11B3118	02/24/11 17:09	RW	TestAmerica Irvine

## Certification Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Laboratory	Authority	Program	EPA Region	Certification ID	* Expiration Date
TestAmerica San Francisco	California	State Program	9	2496	01/31/12
TestAmerica Irvine		USDA		P330-09-00080	04/29/12
TestAmerica Irvine	Arizona	State Program	9	AZ0671	10/13/11
TestAmerica Irvine	California	LA Cty Sanitation Districts	9	10256	01/31/12
TestAmerica Irvine	California	NELAC	9	1108CA	01/31/12
TestAmerica Irvine	California	State Program	9	2706	06/30/12
TestAmerica Irvine	Guam	State Program	9	Cert. No. 10.001r	01/23/11
TestAmerica Irvine	Hawaii	State Program	9	N/A	01/31/11
TestAmerica Irvine	Nevada	State Program	9	CA015312007A	07/31/11
TestAmerica Irvine	New Mexico	State Program	6	N/A	01/31/11
TestAmerica Irvine	Northern Mariana Islands	State Program	9	MP0002	01/31/11
TestAmerica Los Angeles	California	NELAC	9	CA200013	07/19/11
TestAmerica Los Angeles	Florida	NELAC	4	E87652	06/30/11
TestAmerica Los Angeles	New York	NELAC	2	11851	04/01/11

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

\* Any expired certifications in this list are currently pending renewal and are considered valid.

## Method Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFT MS	8260B / CA LUFT MS	SW846	TAL SF
RSK SOP-175	RSK SOP-175 - Dissolved Gases in Water		TAL LA
200.7 Rev 4.4	Metals (ICP)	EPA	TAL SF
300.0	Anions, Ion Chromatography	MCAWW	TAL SF
SM 2320B	Alkalinity	SM	TAL SF
SM 3500 FE D	Iron, Ferrous and Ferric	SM	TAL SF
SM4500-S D	INORGANICS		TAL IRV

### Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Avenue, Suite 100, Irvine, CA 92614, TEL (949) 261-1022

TAL LA = TestAmerica Los Angeles, 3585 Cadillac Avenue, Suite A, Costa Mesa, CA 92626, TEL 714-258-8610

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

## Sample Summary

Client: ARCADIS U.S., Inc.  
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-33514-1	AW-4 (02/22/11)	Water	02/22/11 15:10	02/22/11 16:13
720-33514-2	MW-3 (02/22/11)	Water	02/22/11 14:25	02/22/11 16:13
720-33514-3	AW-6 (02/22/11)	Water	02/22/11 13:00	02/22/11 16:13
720-33514-4	AW-5 (02/22/11)	Water	02/22/11 12:20	02/22/11 16:13
720-33514-5	AW-1 (02/22/11)	Water	02/22/11 11:17	02/22/11 16:13
720-33514-6	RW-1 (02/22/11)	Water	02/22/11 10:50	02/22/11 16:13
720-33514-7	MW-1 (02/22/11)	Water	02/22/11 13:48	02/22/11 16:13

## San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

phone 925.484.1919 fax 925.600.3002

**720-33514** Chain of Custody Record

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING

THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Laboratories, Inc.**

03/08/2011

## Login Sample Receipt Check List

Client: ARCADIS U.S., Inc.

Job Number: 720-33514-1

**Login Number:** 33514

**List Source:** TestAmerica San Francisco

**Creator:** Apostol, Anita

**List Number:** 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

**APPENDIX D**

**GEOTRACKER UPLOAD CONFIRMATION RECEIPTS**

STATE WATER RESOURCES CONTROL BOARD

**GEOTRACKER ESI**

UPLOADING A EDF FILE

**SUCCESS**

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

Submittal Type: EDF - Monitoring Report - Quarterly  
Submittal Title: 1Q11 GW Monitoring  
Facility Global ID: T0600100210  
Facility Name: BP #11133  
File Name: 720-33514-1.zip  
Organization Name: Broadbent & Associates, Inc.  
Username: BROADBENT-C  
IP Address: 67.118.40.90  
Submittal Date/Time: 4/19/2011 3:05:47 PM  
Confirmation Number: **8537931084**

[VIEW QC REPORT](#)

[VIEW DETECTIONS REPORT](#)

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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>	1Q11 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>	4/19/2011 3:04:46 PM
<u>Confirmation Number:</u>	<b>8808194756</b>