

Paresh Khatri Hazardous Materials Specialist Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

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3:03 pm, Feb 07, 2011

Alameda County

Environmental Health

ARCADIS U.S., Inc. 100 Montgomery Street Suite 300 San Francisco California 94104 Tel 415.374.2744 Fax 415.374.2745

ENVIRONMENTAL

Subject:

ACEH Response to UST Cleanup Fund Five Year Review for Fuel Leak Case No. RO0000403 and GeoTracker Global ID T0600100210 BP #11133, 2220 98th Avenue, Oakland, California

Dear Mr. Khatri:

ARCADIS U.S., Inc (ARCADIS) has prepared this letter in response to the State Water Resources Control Board Underground Storage Tank Cleanup Fund (USTCF) 5-Year Review Summary which recommends closure consideration for BP site 11133, located at 2220 98th Avenue, Oakland, California (Site). In light of the USTCF's recommendation, ARCADIS has decided not to implement the proposed sulfate injection pilot test and instead proposes that the site be considered for a low-risk closure based on the following:

- Since 2008, hydrocarbon concentrations in site groundwater have generally exhibited decreasing concentration trends for all constituents of concern (Table 1, Table 2 and Appendix A). These concentrations trends are indicative of a stable and shrinking plume.
- Site geochemical data indicate that there is on-going natural biodegradation at the site, driven by aquifer bacteria that consume hydrocarbons as electron donors, while drawing electron acceptors from the natural groundwater flow and from mineral deposits in the aquifer matrix. Groundwater geochemical parameters at AW-1, where concentrations are the most elevated onsite, show depleted dissolved phase electron acceptors (oxygen, nitrate and sulfate) and elevated carbon dioxide (Table 3) which are indicative active biodegradation.
- IW-3 was recently installed in the vicinity of AW-1 and groundwater analytical
 data indicate low hydrocarbon concentrations at this location (Table 1). The
 low hydrocarbon concentrations observed in the former source area indicate
 that biodegradation of source mass has likely occurred.

Date:

December 16, 2010

Contact:

Hollis Phillips

Phone:

415-374-2744 x13

mail:

Hollis.Phillips@arcadis-us.com

Our ref:

GP09BPNA.C107

- The site has been adequately characterized.
- Exposure pathways, receptors, and potential risks, threats, and other environmental concerns have been identified and assessed.

If you have any questions or comments regarding the contents of this letter, please do not hesitate to contact me at 415.374.2744 x13 or by e-mail at Hollis.Phillips@arcadis-us.com.

Sincerely,

Senior Geologist

Attachments:

Table 1 – Summary of Groundwater Monitoring Data Table 2 – Summary of Fuel Additives Analytical Data

Table 3 – Biodegradation Parameters

Hydrographs

Copies:

File

Electronic copy uploaded to Geotracker



ARCADIS U.S., Inc.
100 Montgomery Street, Suite 300
San Francisco, CA 94104
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www.arcadis-us.com

Re: Letter Response ACEH Response to UST Cleanup Fund Five Year Review Former British Petroleum Station #11133 2220 98th Avenue Oakland, California ACEH Case # RO0000403

ENVIRONMENT

"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:

December 16, 2010

Contact:

Hollis E. Phillips

Phone:

415.374.2744 ext 13

Email:

Hollis.phillips@arcadisus.com

Our ref:

GP09BPNA.C107

Submitted by:

ARCADIS U.S., Inc

HETLILLE

Hollis E. Phillips, PG Project Manager



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

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

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

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

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

		TOC	Depth to	Product	Water Level			Concentra	ntions in (μ	g/L)					
Well and	D O V D	Elevation	Water	Thickness	Elevation	GRO/	_		Ethyl-	Total	14777	DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
AW-1 Cont.															
1/8/2007	P	38.11	16.74		21.37	3700	690	19	110	30	380	2.53	TAMC	6.77	
7/10/2007	P	38.11	17.30		20.81	4,200	560	12	93	40	220	1.79	TAMC	6.90	
1/15/2008	P	38.11	15.96		22.15	5,000	670	<10	490	200	230	0.92	TAMC	6.91	
7/15/2008	P	38.11	18.63		19.48	3,400	340	4.5	27	17	< 0.50	1.80	CEL	6.79	
10/21/2008	P	38.11	19.96		18.15	1,900	160	<5.0	15	<5.0	120	2.40	CEL	7.01	
1/6/2009	P	38.11	19.13		18.98	5,000	670	<5.0	84	<5.0	170	1.37	CEL	6.09	
4/21/2009	P	38.11	16.96		21.15	7,900	510	<10	90	46	160	2.29	CEL	7.28	
7/21/2009	P	38.11	18.72		19.39	5,900	560	<10	92	10	170	17.46	CEL	7.23	у
3/18/2010	P	38.11	13.84		24.27	4,900	260	<10	540	180	<10	0.68	TAMC	6.57	
7/29/2010	NP	38.11	16.95		21.16	3,100	120	1.1	88	5.9	< 0.50	0.92	TAMC	7.4	
AW-2															
4/5/1991		36.83	22.36		14.47	<50	< 0.3	< 0.3	< 0.3	<0.3			SUP		
4/1/1992		36.83	20.81		16.02										
4/2/1992		36.83				130	25	2.3	0.7	2.1			APP		
7/6/1992		36.83	23.57		13.26	<50	< 0.5	< 0.5	< 0.5	< 0.5			ANA		
10/7/1992		36.83	25.24		11.59	< 50	< 0.5	< 0.5	< 0.5	< 0.5			ANA		
1/14/1993		36.83	20.82		16.01	< 50	< 0.5	< 0.5	< 0.5	< 0.5			PACE		m
4/22/1993		36.83	19.37		17.46	<50	< 0.5	< 0.5	< 0.5	<0.5			PACE		m
7/15/1993		36.83	21.29		15.54	< 50	< 0.5	< 0.5	< 0.5	< 0.5	<5.0		PACE		m
10/21/1993		36.83	23.14		13.69	<50	1.3	1.1	0.9	2.1	< 5.0		PACE		m
1/27/1994		36.83	22.34		14.49	< 50	< 0.5	< 0.5	< 0.5	< 0.5			PACE		m
4/21/1994		36.83	21.15		15.68	< 50	< 0.5	< 0.5	< 0.5	<0.5	< 5.0	2.0	PACE		m
9/9/1994		36.83	22.09		14.74	< 50	< 0.5	< 0.5	< 0.5	< 0.5		4.1	PACE		m
12/21/1994		36.83	20.12		16.71	<50	< 0.5	< 0.5	< 0.5	<0.5	<5.0	2.0	PACE		m
1/30/1995		36.83	16.65		20.18	< 50	< 0.50	< 0.50	< 0.50	<1.0		2.5	ATI		
4/10/1995		36.83	16.22		20.61	<50	< 0.50	< 0.50	< 0.50	<1.0		4.4	ATI		
6/29/1995		36.83	17.55		19.28	<50	< 0.50	< 0.50	< 0.50	<1.0		7.8	ATI		
9/18/1995		36.83	19.87		16.96										
9/19/1995		36.83				< 50	< 0.50	< 0.50	< 0.50	<1.0	<5.0	4.5	ATI		
9/19/1995		36.83				<50	< 0.50	< 0.50	< 0.50	<1.0	<5.0		ATI		e

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

		тос	Depth to	Product	Water Level			Concentra	ıtions in (μ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
AW-2 Cont.															
12/7/1995		36.83	21.31		15.52	< 50	< 0.50	< 0.50	< 0.50	<1.0	<5.0	4.9	ATI		
3/28/1996		36.83	15.61		21.22	< 50	< 0.5	<1	<1	<1	<10	4.1	SPL		
6/20/1996		36.83	16.30		20.53	< 50	< 0.5	<1	<1	<1	<10	5.2	SPL		
10/11/1996		36.83	19.60		17.23	< 50	< 0.5	<1.0	<1.0	<1.0	<10	6.0	SPL		
1/2/1997		36.83	15.97		20.86	< 50	< 0.5	<1.0	<1.0	<1.0	<10	6.1	SPL		
4/14/1997		36.83	17.19		19.64	< 50	< 0.5	<1.0	<1.0	<1.0	<10	5.3	SPL		
7/2/1997		36.83	18.11		18.72	< 50	< 0.5	<1.0	<1.0	<1.0	<10	5.7	SPL		
9/30/1997		36.83	18.52		18.31	< 50	< 0.5	<1.0	<1.0	<1.0	860	5.4	SPL		
1/21/1998		36.83	14.46		22.37	160	13	<1.0	<1.0	<1.0	110	4.9	SPL		
4/9/1998		36.83	12.85		23.98										
4/10/1998		36.83				< 50	< 0.5	<1.0	<1.0	<1.0	<10	3.9	SPL		
6/19/1998		36.83	14.37		22.46	60	< 0.5	<1.0	<1.0	<1.0	<10	3.6	SPL		
11/30/1998		36.83	16.90		19.93										
1/21/1999		36.83	16.87		19.96	< 50	<1.0	<1.0	<1.0	<1.0	<1.0		SPL		
4/30/1999		36.83	17.01		19.82										
7/9/1999		36.83	17.83		19.00										
11/3/1999		36.83	19.74		17.09										
1/12/2000		36.83	19.90		16.93	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		PACE		
4/13/2000		36.83	19.75		17.08										
7/26/2000		36.83	19.86		16.97										
10/24/2000		36.83	18.77		18.06										
1/19/2001		36.83													f
7/24/2001		36.83													f
1/18/2002		36.83	15.17		21.66	< 50	< 0.5	< 0.5	< 0.5	<1.0	< 0.5		PACE		
8/1/2002		36.83	17.17		19.66										
1/16/2003		36.83	14.81		22.02	< 50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5		SEQ		p
7/7/2003		36.83	16.65		20.18										
02/05/2004		36.83	15.37		21.46	< 50	3.0	< 0.50	< 0.50	< 0.50	5.1		SEQM	6.6	
07/01/2004		36.83	17.55		19.28										
03/16/2005	P	36.83	14.58		22.25	< 50	0.75	< 0.50	1.1	1.1	< 0.50	1.7	SEQM	6.7	
07/22/2005		36.83	15.41		21.42										

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

		TOC	Depth to	Product	Water Level			Concentra	ations in (µ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/	_		Ethyl-	Total		DO			~
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
AW-2 Cont.															
01/25/2006	P	36.83	14.17		22.66	280	110	<1.0	3.9	8.7	12		SEQM	7.1	
7/6/2006		36.83	14.00		22.83										
1/8/2007	P	36.83	15.85		20.98	1900	550	160	58	180	40	2.09	TAMC	7.2	
7/10/2007		36.83	17.25		19.58										
1/15/2008	P	36.83	15.75		21.08	2,300	900	87	100	140	48	0.83	TAMC	6.79	
7/15/2008	P	36.83	17.99		18.84	6,400	1,700	550	340	940	< 50	2.14	CEL	7.05	
10/21/2008	P	36.83	19.19		17.64	2,600	580	96	110	180	16	1.65	CEL	7.33	
1/6/2009	P	36.83	18.45		18.38	2,100	440	54	67	110	11	0.84	CEL	6.94	
4/21/2009	P	36.83	16.05		20.78	3,400	600	140	99	190	10	1.89	CEL	7.42	
7/21/2009	P	36.83	18.07		18.76	3,200	550	150	98	220	13	9.29	CEL	7.32	у
3/18/2010		36.83	13.92		22.91										
7/29/2010	P	36.83	16.65		20.18	2,400	650	98	170	430	<2.5	0.62	TAMC	7.4	
AW-3															
4/5/1991		39.13	23.90		15.23	5,200	980	450	95	310			SUP		
4/1/1992		39.13	22.50		16.63	4,700	890	47	43	110			APP		
7/6/1992		39.13	23.26		15.87	3,900	3,100	30	80	99			ANA		
10/7/1992		39.13	24.75		14.38	5,000	2,600	< 0.5	< 0.5	59			ANA		
1/14/1993		39.13	23.59		15.54	350	250	< 0.5	< 0.5	< 0.5			PACE		m
4/22/1993		39.13	19.42		19.71	240	71	2.4	0.6	4			PACE		m
7/15/1993		39.13	20.09		19.04	650	71	2.8	1.5	1.1	37.3		PACE		c, m
10/21/1993		39.13				170	6.1	2	1.7	4.4			PACE		e
10/21/1993		39.13	21.88		17.25	160	4.8	1.7	1.6	3.6	8.95		PACE		m
1/27/1994		39.13				90	2.9	0.5	< 0.5	< 0.5			PACE		e
1/27/1994		39.13	22.33		16.80	92	2.1	< 0.5	< 0.5	<0.5	7.37		PACE		m
4/21/1994		39.13	20.96		18.17	150	3.6	0.8	0.9	2.5	9.36	1.3	PACE		m
9/9/1994		39.13	21.60		17.53	53	< 0.5	< 0.5	< 0.5	<0.5		1.9	PACE		m
12/21/1994		39.13													f
1/30/1995		39.13													f
4/10/1995		39.13													f
6/29/1995		39.13	15.41		23.72	<50	< 0.50	< 0.50	< 0.50	<1.0		8.0	ATI		

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

		TOC	Depth to	Product	Water Level			Concentra	ntions in (µ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
AW-3 Cont.															
9/18/1995		39.13	17.83		21.30										
9/19/1995		39.13				61,000	11,000	2,900	4,100	13,000	790	7.4	ATI		
12/7/1995		39.13	19.27		19.86	<50	< 0.50	< 0.50	< 0.50	<1.0	< 5.0	3.4	ATI		
12/7/1995		39.13				< 50	< 0.50	< 0.50	< 0.50	<1.0	< 5.0		ATI		e
3/28/1996		39.13				<50	< 0.5	<1	<1	<1	<10		SPL		e
3/28/1996		39.13	13.85		25.28	< 50	< 0.5	<1	<1	<1	<10	4.1	SPL		
6/20/1996		39.13	14.47		24.66	<50	< 0.5	<1	<1	<1	<10	4.2	SPL		
6/20/1996		39.13				< 50	< 0.5	<1	<1	<1	<10		SPL		e
10/11/1996		39.13	17.97		21.16	<50	< 0.5	<1.0	<1.0	<1.0	<10	4.7	SPL		
10/11/1996		39.13				< 50	< 0.5	<1.0	<1.0	<1.0	<10		SPL		e
1/2/1997		39.13	13.00		26.13	<50	< 0.5	<1.0	<1.0	<1.0	<10	5.6	SPL		
4/14/1997		39.13	14.36		24.77	< 50	< 0.5	<1.0	<1.0	<1.0	<10	5.0	SPL		
4/15/1997		39.13				<50	< 0.5	<1.0	<1.0	<1.0	<10		SPL		e
7/2/1997		39.13	15.87		23.26	< 50	< 0.5	<1.0	<1.0	<1.0	<10	5.4	SPL		
9/30/1997		39.13	17.50		21.63	<250	<2.5	<5.0	<5.0	<5.0	810	5.7	SPL		
1/21/1998		39.13	11.98		27.15	140	< 0.5	<1.0	<1.0	<1.0	99	4.6	SPL		
1/21/1998		39.13				150	< 0.5	<1.0	<1.0	1.2	110		SPL		e
4/9/1998		39.13	9.45		29.68										
4/10/1998		39.13				<50	< 0.5	<1.0	1.4	1.7	<10		SPL		e
4/10/1998		39.13				< 50	< 0.5	<1.0	<1.0	1.6	<10	4.5	SPL		
6/19/1998		39.13	12.13		27.00	<50	< 0.5	<1.0	<1.0	<1.0	<10	4.4	SPL		
11/30/1998		39.13	15.91		23.22										
1/21/1999		39.13	15.93		23.20	<50	<1.0	<1.0	<1.0	<1.0	<1.0		SPL		
4/30/1999		39.13	15.98		23.15										
7/9/1999		39.13	14.58		24.55										
11/3/1999		39.13	17.43		21.70										
1/12/2000		39.13	18.30		20.83	<50	<0.5	< 0.5	< 0.5	<0.5	<0.5		PACE		
4/13/2000		39.13	18.89		20.24										
7/26/2000		39.13	18.67		20.46										
10/24/2000		39.13	18.98		20.15										
1/19/2001		39.13	16.74		22.39										

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

		TOC	Depth to	Product	Water Level			Concentra	ntions in (µ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			l
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
AW-3 Cont.															
7/24/2001		39.13	18.55		20.58										
1/18/2002		39.13	14.49		24.64										
8/1/2002		39.13	14.27		24.86										
1/16/2003		39.13	14.25		24.88										
7/7/2003		39.13	14.70		24.43										
02/05/2004		39.13	14.61		24.52										
07/01/2004		39.13	15.62		23.51										
03/16/2005	P	39.13	12.70		26.43	<50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.1	SEQM	7.3	
07/22/2005		39.13	13.44		25.69										
01/25/2006		39.13	13.56		25.57										
7/6/2006		39.13	11.60		27.53										
1/8/2007		39.13	14.97		24.16										
7/10/2007		39.13	15.81		23.32										
1/15/2008		39.13	15.97		23.16										
7/15/2008		39.13	16.70		22.43										
10/21/2008		39.13	18.16		20.97										
1/6/2009		39.13	18.35		20.78										
4/21/2009		39.13	15.57		23.56										
7/21/2009		39.13	17.22		21.91										
3/18/2010		39.13	14.25		24.88										
7/29/2010		39.13	15.23		23.90										
AW-4															
4/5/1991		39.08	25.12		13.96	110,000	40,000	13,000	2,000	5,500			SUP		
4/1/1992		39.08				210,000	55,000	23,000	2,900	7,000			APP		e
4/1/1992		39.08	23.56		15.52	230,000	57,000	31,000	2,900	7,600			APP		
7/6/1992		39.08	25.87		13.21	38,000	16,000	5,400	2,000	6,100			ANA		
10/7/1992		39.08	27.53		11.55	120,000	41,000	26,000	4,700	13,000			ANA		
1/14/1993		39.08	24.12		14.96	62,000	18,000	14,000	2,700	7,700	1,400		PACE		c, m
4/22/1993		39.08	21.47		17.61	18,000	1,100	2,100	320	3,500			PACE		m
7/15/1993		39.08	23.30		15.78	21,000	820	2,300	590	3,800	1,978		PACE		c, m
111511775	1	37.00	25.50		15.70	21,000	020	2,300	370	3,000	1,770				· ,

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

		TOC	Depth to	Product	Water Level			Concentra	ntions in (µ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			1
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
AW-4 Cont.															
10/21/1993		39.08	25.08		14.00	11,000	570	83	630	2,300	4,600		PACE		c, m
1/27/1994		39.08	24.61		14.47	12,000	420	460	600	2,200	6,400		PACE		c, m
4/21/1994		39.08	22.96		16.12	12,000	110	250	150	1,900	16,010	1.5	PACE		c, m
4/21/1994		39.08				14,000	71	160	29	1,200	13,000		PACE		c, e
9/9/1994		39.08	23.85		15.23	9,700	75	64	280	2,000		2.1	PACE		m
12/21/1994		39.08													f
1/30/1995		39.08													f
4/10/1995		39.08	18.07		21.01	3,700	69	8.7	44	130		8.5	ATI		
6/29/1995		39.08	19.25		19.83	8,000	62	190	190	1,100		7.5	ATI		
9/18/1995		39.08	20.73		18.35										
9/19/1995		39.08				12,000	660	1,600	200	1,900	7,100	8.3	ATI		
12/7/1995		39.08	22.49		16.59	41,000	8,400	7,200	710	6,300	5,200	3.6	ATI		
3/28/1996		39.08	16.49		22.59										f
6/20/1996		39.08	16.00		23.08	<50	< 0.5	<1	<1	<1	12		SPL		
10/11/1996		39.08	19.52		19.56	36,000	12,000	5,500	<25	3,800	880/1000	6.2	SPL		g
1/2/1997		39.08	15.80		23.28	< 50	< 0.5	<1.0	<1.0	<1.0	22	6.4	SPL		
1/2/1997		39.08				<50	61	3.8	3.5	8.1	110		SPL		e
4/14/1997		39.08	17.01		22.07										
4/15/1997		39.08				<50	<0.5	<1.0	<1.0	<1.0	<10	5.4	SPL		
7/2/1997		39.08	19.68		19.40	< 50	21	<1.0	<1.0	<1.0	41	4.1	SPL		
9/30/1997		39.08	22.71		16.37										f
1/21/1998		39.08	15.89		23.19	13,000	2,900	<10	230	314	3,100	3.9	SPL		
4/9/1998		39.08	13.50		25.58										
4/10/1998		39.08				890	< 0.5	<1	<1	<1	730	4.9	SPL		
6/19/1998		39.08	14.75		24.33	60	<0.5	<1.0	<1.0	<1.0	34	4.3	SPL		
11/30/1998		39.08	19.25		19.83										
1/21/1999		39.08	18.94		20.14	3,700	830	93	200	360	30				
4/30/1999		39.08	19.10		19.98										
7/9/1999		39.08	18.93		20.15	76,000	12,000	6,600	2,000	8,700	320		SPL		
11/3/1999		39.08	20.65		18.43										
1/12/2000		39.08	21.21		17.87	67,000	12,000	3,500	2,900	15,000	280		PACE		

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

		TOC	Depth to	Product	Water Level			Concentra	ations in (µ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
AW-4 Cont.															
4/13/2000		39.08	21.33		17.75										
5/24/2000		39.08	19.84		19.24										
6/1/2000		39.08	19.04		20.04										
6/8/2000		39.08	18.32		20.76										
6/15/2000		39.08	16.70		22.38										
7/26/2000		39.08	21.50		17.58	910	< 0.5	< 0.5	< 0.5	< 0.5	3,500		PACE		
10/24/2000		39.08	22.00		17.08										
1/19/2001		39.08	18.97		20.11	6,600	2,460	24	497	534	267		PACE		
7/24/2001		39.08	18.55		20.53	5,100	1,080	143	409	827	115		PACE		
1/18/2002		39.08	17.22		21.86	3,900	442	241	157	681	85.3		PACE		
8/1/2002		39.08													f
1/16/2003		39.08	16.85		22.23	2,900	260	160	120	590	<120		SEQ		p
7/7/2003		39.08	17.94		21.14	600	90	7.9	18	36	56		SEQ		q
02/05/2004		39.08	16.94		22.14	420	40	3.1	15	27	40		SEQM	6.8	
07/01/2004	P	39.08	18.24		20.84	6,000	970	200	310	1,500	64		SEQM	6.7	
03/16/2005	P	39.08	16.16		22.92	3,600	71	31	200	870	23	0.6	SEQM	6.5	
07/22/2005	P	39.08	15.89		23.19	4,800	750	48	300	840	59		SEQM	6.7	
01/25/2006	P	39.08	15.48		23.60	< 500	13	< 5.0	14	62	12		SEQM	7.0	
7/6/2006	P	39.08	14.87		24.21	2,800	430	21	230	680	39		TAMC	6.7	
1/8/2007	P	39.08	16.48		22.60	190	6.6	< 0.50	4.1	14	38	3.00	TAMC	6.80	
7/10/2007	P	39.08	17.95		21.13	160	2.7	< 0.50	0.90	1.0	27	2.54	TAMC	7.19	
1/15/2008	P	39.08	17.70		21.38	150	< 0.50	< 0.50	0.71	< 0.50	17	1.30	TAMC	6.75	
7/15/2008	P	39.08	18.74		20.34	250	44	1.1	44	78	25	2.64	CEL	6.91	
10/21/2008	P	39.08	20.07		19.01	270	1.6	<1.0	<1.0	<1.0	18	1.54	CEL	7.25	
1/6/2009	P	39.08	19.45		19.63	230	0.88	< 0.50	< 0.50	< 0.50	8.3	0.70	CEL	6.31	
4/21/2009	P	39.08	17.00		22.08	260	4.6	1.6	21	28	4.1	3.51	CEL	7.48	
7/21/2009	P	39.08	18.96		20.12	200	4.8	< 0.50	6.9	2.8	8.6	6.14	CEL	7.04	у
3/18/2010	P	39.08	14.92		24.16	240	< 0.50	< 0.50	15	21	2.5	0.79	TAMC	6.71	
7/29/2010	NP	39.08	17.34		21.74	290	25	<0.50	14	6.5	<0.50	1.07	TAMC	7.2	
AW-5															
	I		l		l										

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

		TOC	Depth to	Product	Water Level			Concentra	ntions in (µ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			l
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
AW-5 Cont.															
4/5/1991		38.51	25.48		13.03	420	31	7.5	20	68			SUP		
4/1/1992		38.51	23.95		14.56										
4/2/1992		38.51				4,000	270	63	190	290			APP		
7/6/1992		38.51	26.48		12.03	1,400	160	<2.5	250	58			ANA		
10/7/1992		38.51	28.18		10.33	360	12	0.6	8.7	5			ANA		
1/14/1993		38.51	24.15		14.36	1,700	270	7.5	130	62			PACE		m
4/22/1993		38.51	22.43		16.08	2,700	780	30	220	180			PACE		m
4/22/1993		38.51				3,500	780	29	240	210			PACE		m, e
7/15/1993		38.51	24.31		14.20	1,300	69	16	67	120	<50		PACE		m
7/15/1993		38.51				1,300	68	8.3	64	99	< 50		PACE		m, e
10/21/1993		38.51	26.05		12.46	510	9.6	1.5	17	45	75		PACE		c, m
1/27/1994		38.51	26.42		12.09	420	3.3	< 0.5	1	0.9	48.9		PACE		m
4/21/1994		38.51	24.36		14.15	1,000	110	25	56	27	75	1.3	PACE		c, m
9/9/1994		38.51	24.55		13.96	210	< 0.5	< 0.5	0.5	0.9		2.7	PACE		m
12/21/1994		38.51	22.30		16.21	410	< 0.5	20	4.3	1.4	114	1.1	PACE		m
12/21/1994		38.51				340	< 0.5	15	3.3	1.4	104		PACE		m, e
1/30/1995		38.51	18.88		19.63	210	0.6	11	8.8	2		1.5	ATI		
4/10/1995		38.51	18.44		20.07	500	1.4	0.59	6.5	4.3		8.3	ATI		
6/29/1995		38.51	19.92		18.59	490	1.2	0.58	7.3	2.2		6.9	ATI		d
9/18/1995		38.51	22.15		16.36										
9/19/1995		38.51				260	0.62	< 0.50	3.1	1.1	110	8.2	ATI		
12/7/1995		38.51	23.75		14.76	60	< 0.50	< 0.50	< 0.50	<1.0	210	4.3	ATI		
3/28/1996		38.51	17.76		20.75	< 50	< 0.5	<1	<1	<1	63	3.0	SPL		
6/20/1996		38.51	18.46		20.05	<50	< 0.5	<1	<1	<1	<10	3.6	SPL		
10/11/1996		38.51	21.84		16.67	<50	<0.5	<1.0	<1.0	<1.0	<10	4.5	SPL		
1/2/1997		38.51	18.01		20.50	<50	< 0.5	<1.0	<1.0	<1.0	<10	4.6	SPL		
4/14/1997		38.51	19.35		19.16	<50	<0.5	<1.0	<1.0	<1.0	<10	5.1	SPL		
7/2/1997		38.51	20.29		18.22	<50	< 0.5	<1.0	<1.0	<1.0	<10	4.0	SPL		
9/30/1997		38.51	23.15		15.36	<250	<2.5	<5.0	<5.0	<5.0	1,300	6.3	SPL		
1/21/1998		38.51	17.33		21.18	6,100	< 0.5	2.1	<1.0	<1.0	3,700	4.5	SPL		
4/9/1998		38.51	15.25		23.26										

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

		TOC	Depth to	Product	Water Level			Concentra	tions in (μ	g/L)					_
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
AW-5 Cont.															
4/10/1998		38.51				3,500	< 0.5	<1.0	<1.0	<1.0	3,000	5.4	SPL		
6/19/1998		38.51	17.39		21.12	3,300	< 0.5	<1.0	<1.0	<1.0	2,500	5.2	SPL		
11/30/1998		38.51													f
1/21/1999		38.51	21.22		17.29	2,800	<1.0	<1.0	<1.0	<1.0	1,800		SPL		
4/30/1999		38.51	21.50		17.01										
7/9/1999		38.51	20.15		18.36	4,000	<1.0	<1.0	<1.0	<1.0	3400/3500		SPL		g
11/3/1999		38.51	22.04		16.47										
1/12/2000		38.51	22.59		15.92	1,000	7.3	30	6.7	40	4,600		PACE		j (TPH-g/GRO)
4/13/2000		38.51	23.11		15.40										
7/26/2000		38.51	22.72		15.79	1,800	94	35	5.9	27	16,000		PACE		
10/24/2000		38.51	20.15		18.36										
1/19/2001		38.51	19.79		18.72	2,600	< 0.5	< 0.5	< 0.5	< 0.5	4,580		PACE		
7/24/2001		38.51	20.17		18.34	5,400	18.4	17.2	<12.5	40.8	5,170		PACE		
1/18/2002		38.51	17.34		21.17	3,800	343	0.738	< 0.5	<1.0	3,750		PACE		
8/1/2002		38.51	19.49		19.02	5,300	<12.5	<12.5	<12.5	<25	3,470		PACE		
1/16/2003		38.51	17.30		21.21	1,400	140	<10	<10	<10	1,600		SEQ		p
7/7/2003		38.51	18.43		20.08	1,400	<10	<10	<10	<10	980		SEQ		q
02/05/2004		38.51	17.24		21.27	1,800	<10	<10	<10	<10	810		SEQM	6.7	
07/01/2004	P	38.51	19.43		19.08	1,100	<5.0	<5.0	<5.0	<5.0	550		SEQM	6.6	
03/16/2005	P	38.51	15.30		23.21	<5,000	< 50	< 50	< 50	130	890	2.1	SEQM	6.7	
07/22/2005	P	38.51	17.22		21.29	< 500	5.2	<5.0	< 5.0	6.9	390		SEQM	6.6	
01/25/2006	P	38.51	15.28		23.23	< 500	< 5.0	< 5.0	< 5.0	<5.0	26		SEQM	7.0	
7/6/2006	P	38.51	15.93		22.58	220	<5.0	<5.0	< 5.0	<5.0	170		TAMC	6.5	
1/8/2007	P	38.51	17.90		20.61	170	<2.5	<2.5	<2.5	<2.5	220	5.22	TAMC	6.84	
7/10/2007	P	38.51	19.00		19.51	350	<2.5	<2.5	<2.5	<2.5	360	1.96	TAMC	7.02	
1/15/2008	P	38.51	18.16		20.35	130	0.54	< 0.50	< 0.50	< 0.50	85	0.90	TAMC	6.82	W
7/15/2008	P	38.51	19.88		18.63	100	< 0.50	< 0.50	< 0.50	< 0.50	11	2.13	CEL	6.85	
10/21/2008	P	38.51	20.88		17.63	86	< 0.50	< 0.50	< 0.50	< 0.50	63	1.01	CEL	7.10	
1/6/2009	P	38.51	20.28		18.23	150	<1.0	<1.0	<1.0	<1.0	26	0.70	CEL	6.22	
4/21/2009	P	38.51	18.07		20.44	100	< 0.50	< 0.50	< 0.50	< 0.50	5.1	2.09	CEL	7.35	
7/21/2009	P	38.51	19.70		18.81	83	< 0.50	< 0.50	< 0.50	< 0.50	25	6.50	CEL	7.14	у

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

		TOC	Depth to	Product	Water Level			Concentra	ntions in (µ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
AW-5 Cont.															
3/18/2010	P	38.51	16.18		22.33	<50	< 0.50	< 0.50	< 0.50	<1.0	72	0.74	TAMC	6.64	
7/29/2010	P	38.51	18.00		20.51	<50	< 0.50	<0.50	< 0.50	<1.0	1.9	1.32	TAMC	7.0	
AW-6															
4/5/1991		37.08	22.48		14.60	1,100	80	19	1.4	230			SUP		
4/1/1992		37.08	22.50		14.58										
4/2/1992		37.08				<50	< 0.5	<0.5	< 0.5	< 0.5			APP		
7/6/1992		37.08	22.74		14.34	< 50	< 0.5	< 0.5	< 0.5	< 0.5			ANA		
10/7/1992		37.08	24.64		12.44	<50	< 0.5	< 0.5	< 0.5	< 0.5			ANA		
1/14/1993		37.08	22.36		14.72	< 50	< 0.5	< 0.5	< 0.5	< 0.5			PACE		m
4/22/1993		37.08	22.82		14.26	<50	< 0.5	< 0.5	< 0.5	<0.5			PACE		m
7/15/1993		37.08	20.49		16.59	< 50	< 0.5	< 0.5	< 0.5	0.8	< 5.0		PACE		m
10/21/1993		37.08	22.84		14.24	<50	0.5	0.6	< 0.5	0.7	< 5.0		PACE		m
1/27/1994		37.08	22.33		14.75	< 50	< 0.5	0.9	3.1	12	< 5.0		PACE		m
4/21/1994		37.08	20.66		16.42	<50	< 0.5	< 0.5	< 0.5	<0.5	< 5.0	1.7	PACE		m
9/9/1994		37.08	21.57		15.51	< 50	0.9	< 0.5	< 0.5	0.5		2.9	PACE		m
12/21/1994		37.08	19.40		17.68	<50	1.8	0.8	0.8	3.2	5.19	1.1	PACE		m
1/30/1995		37.08	16.74		20.34	< 50	< 0.50	< 0.50	< 0.50	<1.0		2.2	ATI		
1/30/1995		37.08				<50	< 0.50	< 0.50	< 0.50	<1.0			ATI		e
4/10/1995		37.08	16.01		21.07	< 50	< 0.50	< 0.50	< 0.50	<1.0		8.6	ATI		
6/29/1995		37.08	17.54		19.54	<50	< 0.50	< 0.50	< 0.50	<1.0		6.3	ATI		
9/18/1995		37.08	19.65		17.43										
9/19/1995		37.08				<50	< 0.50	< 0.50	< 0.50	<1.0	25	8.3	ATI		
12/7/1995		37.08	20.35		16.73	< 50	< 0.50	< 0.50	< 0.50	<1.0	16	4.7	ATI		
3/28/1996		37.08	14.99		22.09	<50	<0.5	<1	<1	<1	<10	4.0	SPL		
6/20/1996		37.08	15.59		21.49	< 50	< 0.5	<1	<1	<1	<10	4.6	SPL		
10/11/1996		37.08	19.09		17.99	<50	<0.5	<1.0	<1.0	<1.0	<10	5.3	SPL		
1/2/1997		37.08	15.11		21.97	< 50	< 0.5	<1.0	<1.0	<1.0	<10	5.5	SPL		
4/14/1997		37.08	16.25		20.83	<50	<0.5	<1.0	<1.0	<1.0	<10	3.9	SPL		
7/2/1997		37.08	17.99		19.09	<50	< 0.5	<1.0	<1.0	<1.0	<10	5.2	SPL		
9/30/1997		37.08	20.50		16.58	<50	<0.5	<1.0	<1.0	<1.0	<10	6.0	SPL		

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

		TOC	Depth to	Product	Water Level			Concentra	tions in (μ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
AW-6 Cont.															
1/21/1998		37.08	15.72		21.36	160	< 0.5	<1.0	<1.0	<1.0	110	5.0	SPL		
4/9/1998		37.08	13.31		23.77										
4/10/1998		37.08				370	< 0.5	<1.0	<1.0	<1.0	300	4.3	SPL		
6/19/1998		37.08	15.18		21.90	830	2	<1.0	<1.0	<1.0	690	4.0	SPL		
11/30/1998		37.08													f
1/21/1999		37.08	15.78		21.30	2,300	<1.0	<1.0	<1.0	<1.0	1,900		SPL		
4/30/1999		37.08	16.01		21.07										
7/9/1999		37.08	17.63		19.45										
11/3/1999		37.08	18.42		18.66										
1/12/2000		37.08	19.92		17.16	< 50	< 0.5	< 0.5	< 0.5	< 0.5	2,700		PACE		
4/13/2000		37.08	19.87		17.21										
7/26/2000		37.08	19.99		17.09										
10/24/2000		37.08	18.12		18.96										
1/19/2001		37.08	17.04		20.04	2,700	< 0.5	< 0.5	< 0.5	< 0.5	4,850		PACE		
7/24/2001		37.08	17.83		19.25										
1/18/2002		37.08	15.54		21.54	5,500	614	< 0.5	< 0.5	<1.0	5,390		PACE		
8/1/2002		37.08	16.98		20.10										
1/16/2003		37.08	15.05		22.03	2,900	<20	<20	<20	63	2,500		SEQ		p
7/7/2003		37.08	16.58		20.50										
02/05/2004		37.08	15.84		21.24	7,000	<50	< 50	< 50	< 50	5,400		SEQM	6.7	
07/01/2004	P	37.08	17.91		19.17	9,600	<50	<50	< 50	<50	4,600		SEQM	6.5	
03/16/2005	P	37.08	16.04		21.04	6,700	<25	<25	<25	<25	4,400	3.0	SEQM	6.8	
07/22/2005	P	37.08	14.20		22.88	<5,000	<50	<50	< 50	<50	5,500		SEQM	6.7	
01/25/2006	P	37.08	14.17		22.91	<5,000	<50	< 50	< 50	< 50	3,000		SEQM	7.0	
7/6/2006	P	37.08	14.82		22.26	3,100	<50	<50	< 50	<50	2,800		TAMC	6.5	
1/8/2007	P	37.08	15.72		21.36	5100	<50	<50	< 50	<50	7400	3.18	TAMC	6.78	
7/10/2007	P	37.08	16.99		20.09	3,700	<100	<100	<100	<100	3,900	2.09	TAMC	6.83	W
1/15/2008	P	37.08	15.55		21.53	120	1.1	<1.0	<1.0	<1.0	150	0.58	TAMC	6.80	W
7/15/2008	P	37.08	17.84		19.24	130	< 0.50	< 0.50	< 0.50	< 0.50	270	2.12	CEL	6.87	
10/21/2008	P	37.08	18.92		18.16	81	<5.0	< 5.0	< 5.0	< 5.0	160	1.01	CEL	7.19	
1/6/2009	P	37.08	18.37		18.71	76	<5.0	<5.0	<5.0	<5.0	97	0.94	CEL	6.23	

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

		тос	Depth to	Product	Water Level			Concentra	ations in (µ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
AW-6 Cont.															
4/21/2009	P	37.08	15.97		21.11	< 50	< 0.50	< 0.50	< 0.50	< 0.50	22	4.29	CEL	7.38	
7/21/2009	P	37.08	17.90		19.18	76	< 0.50	< 0.50	< 0.50	< 0.50	93	10.79	CEL	7.09	у
3/18/2010	P	37.08	14.13		22.95	< 50	< 0.50	< 0.50	< 0.50	<1.0	93	0.68	TAMC	6.75	
7/29/2010	P	37.08	16.46		20.62	<50	< 0.50	< 0.50	< 0.50	<1.0	46	0.84	TAMC	7.0	
AW-7															
4/5/1991		37.60	23.38		14.22	< 50	0.4	0.7	< 0.3	<0.3			SUP		
4/1/1992		37.60	21.92		15.68										
4/2/1992		37.60				< 50	< 0.5	3.2	1	5.4			APP		
7/6/1992		37.60	24.50		13.10	< 50	< 0.5	< 0.5	< 0.5	< 0.5			ANA		
10/7/1992		37.60	26.18		11.42	< 50	< 0.5	< 0.5	< 0.5	< 0.5			ANA		
1/14/1993		37.60	22.03		15.57	< 50	< 0.5	< 0.5	< 0.5	< 0.5			PACE		m
4/22/1993		37.60	21.18		16.42	< 50	< 0.5	< 0.5	< 0.5	<0.5			PACE		m
7/15/1993		37.60	22.09		15.51	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0		PACE		m
10/21/1993		37.60	24.05		13.55	51	5	4.2	3.5	8.2	< 5.0		PACE		m
1/27/1994		37.60	23.40		14.20	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0		PACE		m
4/21/1994		37.60	22.24		15.36	< 50	< 0.5	< 0.5	< 0.5	<0.5	< 5.0	2.5	PACE		m
9/9/1994		37.60	22.94		14.66	< 50	< 0.5	< 0.5	< 0.5	0.5		4.3	PACE		m
12/21/1994		37.60	20.86		16.74	<50	< 0.5	< 0.5	< 0.5	<0.5	< 5.0	2.2	PACE		m
1/30/1995		37.60	17.51		20.09	< 50	< 0.50	< 0.50	< 0.50	<1.0		2.7	ATI		
4/10/1995		37.60	16.69		20.91	< 50	< 0.50	< 0.50	< 0.50	<1.0		4.8	ATI		
6/29/1995		37.60	18.33		19.27	< 50	< 0.50	< 0.50	< 0.50	<1.0		7.6	ATI		
9/18/1995		37.60	20.68		16.92										
9/19/1995		37.60				< 50	< 0.50	< 0.50	< 0.50	<1.0	< 5.0	5.1	ATI		
12/7/1995		37.60	22.15		15.45	< 50	< 0.50	< 0.50	< 0.50	<1.0	< 5.0	5.2	ATI		
3/28/1996		37.60	16.38		21.22	< 50	< 0.5	<1	<1	<1	<10	3.9	SPL		
6/20/1996		37.60	17.02		20.58	< 50	<0.5	<1	<1	<1	<10	5.0	SPL		
10/11/1996		37.60	20.47		17.13	< 50	< 0.5	<1.0	<1.0	<1.0	<10	6.3	SPL		
1/2/1997		37.60	16.70		20.90	< 50	< 0.5	<1.0	<1.0	<1.0	<10	6.2	SPL		
4/14/1997		37.60	17.96		19.64	< 50	< 0.5	<1.0	<1.0	<1.0	<10	5.0	SPL		
7/2/1997		37.60	19.11		18.49	<50	< 0.5	<1.0	<1.0	<1.0	<10	5.4	SPL		

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

		TOC	Depth to	Product	Water Level			Concentra	ntions in (µ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
AW-7 Cont.															
9/30/1997		37.60	22.97		14.63	<250	<2.5	< 5.0	<5.0	<5.0	1,100	6.5	SPL		
1/21/1998		37.60	16.50		21.10	< 50	< 0.5	<1.0	<1.0	<1.0	<10	4.9	SPL		
4/9/1998		37.60	13.56		24.04	<50	< 0.5	<1.0	<1.0	<1.0	<10	4.9	SPL		
6/19/1998		37.60	15.41		22.19	<50	< 0.5	<1.0	<1.0	<1.0	<10	4.4	SPL		
11/30/1998		37.60	18.90		18.70										
1/21/1999		37.60	18.39		19.21										
4/30/1999		37.60	18.54		19.06										
7/9/1999		37.60	17.98		19.62										
11/3/1999		37.60	20.22		17.38										
1/12/2000		37.60	19.46		18.14										
4/13/2000		37.60	19.59		18.01										
7/26/2000		37.60	19.69		17.91										
10/24/2000		37.60	18.78		18.82										
1/19/2001		37.60													f
7/25/2001		37.60													f
1/18/2002		37.60													0
8/1/2002		37.60													0
1/16/2003		37.60													0
7/7/2003		37.60													0
02/05/2004		37.60													0
07/01/2004		37.60													0
03/16/2005		37.60													0
07/22/2005		37.60													0
01/25/2006		37.60													0
AW-8															
4/5/1991		40.86	26.68		14.18	80	1.9	2.2	0.5	1.3			SUP		
4/1/1992		40.86	25.11		15.75	73	< 0.5	0.7	< 0.5	0.6			APP		
7/6/1992		40.86	26.43		14.43	< 50	< 0.5	< 0.5	< 0.5	<0.5			ANA		
10/7/1992		40.86	28.59		12.27	<50	< 0.5	< 0.5	< 0.5	< 0.5			ANA		
1/14/1993		40.86	25.55		15.31	<50	< 0.5	< 0.5	< 0.5	< 0.5			PACE		m

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

		TOC	Depth to	Product	Water Level			Concentra	ıtions in (μ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
AW-8 Cont.															
4/22/1993		40.86	22.29		18.57	< 50	< 0.5	< 0.5	< 0.5	< 0.5			PACE		m
7/15/1993		40.86	23.42		17.44	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0		PACE		m
10/21/1993		40.86	25.15		15.71	< 50	1.9	1.8	1.3	3.3	<5.0		PACE		m
1/27/1994		40.86	25.42		15.44	< 50	< 0.5	0.5	0.6	8.5	< 5.0		PACE		m
4/21/1994		40.86	24.14		16.72	<50	< 0.5	< 0.5	< 0.5	< 0.5	<5.0	1.5	PACE		m
9/9/1994		40.86	24.55		16.31	<50	< 0.5	< 0.5	< 0.5	< 0.5		2.4	PACE		m
12/21/1994		40.86	22.72		18.14	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	1.1	PACE		m
1/30/1995		40.86	19.75		21.11	<50	< 0.50	1	< 0.50	1		0.8	ATI		
4/10/1995		40.86	17.78		23.08	<50	< 0.50	< 0.50	< 0.50	<1.0		8.3	ATI		
6/29/1995		40.86	18.18		22.68	<50	< 0.50	< 0.50	< 0.50	<1.0		8.3	ATI		
9/18/1995		40.86	20.20		20.66										
9/19/1995		40.86				< 50	< 0.50	< 0.50	< 0.50	<1.0	< 5.0	7.7	ATI		
12/7/1995		40.86	21.54		19.32	<50	< 0.50	< 0.50	< 0.50	<1.0	<5.0	4.4	ATI		
3/28/1996		40.86	15.77		25.09	< 50	< 0.5	<1	<1	<1	<10	3.8	SPL		
6/20/1996		40.86	16.41		24.45	<50	< 0.5	<1	<1	<1	<10	3.6	SPL		
10/11/1996		40.86	19.90		20.96	< 50	< 0.5	<1.0	<1.0	<1.0	<10	6.4	SPL		
1/2/1997		40.86	15.89		24.97	<50	< 0.5	<1.0	<1.0	<1.0	<10	5.9	SPL		
4/14/1997		40.86	17.07		23.79	< 50	< 0.5	<1.0	<1.0	<1.0	<10	4.6	SPL		
7/2/1997		40.86	18.67		22.19	<50	< 0.5	<1.0	<1.0	<1.0	<10	5.6	SPL		
9/30/1997		40.86	22.52		18.34	< 50	<5	<10	<10	<10	820	6.7	SPL		
1/21/1998		40.86	16.01		24.85	<50	< 0.5	<1.0	<1.0	<1.0	<10	5.2	SPL		
4/9/1998		40.86	11.18		29.68	< 50	< 0.5	<1.0	<1.0	<1.0	<10	4.4	SPL		
6/19/1998		40.86	13.01		27.85	<50	< 0.5	<1.0	<1.0	<1.0	<10	4.1	SPL		
11/30/1998		40.86	17.46		23.40										
1/21/1999		40.86	17.47		23.39										
4/30/1999		40.86	17.60		23.26										
7/9/1999		40.86	16.50		24.36										
11/3/1999		40.86	19.29		21.57										
1/12/2000		40.86	21.49		19.37										
4/13/2000		40.86	21.60		19.26										
7/26/2000		40.86	21.53		19.33										

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

		TOC	Depth to	Product	Water Level			Concentra	ations in (µ	g/L)					
Well and	D O V D	Elevation	Water	Thickness	Elevation	GRO/	_		Ethyl-	Total	MEDE	DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
AW-8 Cont.															
10/24/2000		40.86	19.37		21.49										
1/19/2001		40.86	18.60		22.26										
7/24/2001		40.86	18.22		22.64										
1/18/2002		40.86	16.29		24.57										
8/1/2002		40.86	17.25		23.61										
1/16/2003		40.86	15.82		25.04										
7/7/2003		40.86	18.55		22.31										
02/05/2004		40.86													t
07/01/2004		40.86	18.25		22.61										t
03/16/2005	P	40.86	15.20		25.66	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.5	SEQM	7.3	
07/22/2005		40.86													f
01/25/2006		40.86													f
7/6/2006		40.86	13.05		27.81										
1/8/2007		40.86	16.57		24.29										
7/10/2007		40.86	17.73		23.13										
1/15/2008		40.86	17.88		22.98										
7/15/2008		40.86	18.57		22.29										
10/21/2008		40.86	20.09		20.77										
1/6/2009		40.86	20.20		20.66										
4/21/2009		40.86													f
7/21/2009		40.86													f
3/18/2010		40.86	15.52		25.34										
7/29/2010		40.86	17.03		23.83										
AW-9															
1/2/1997		37.78	10.00		27.78	<50	<0.5	<1.0	<1.0	<1.0	<10	6.7	SPL		
4/14/1997		37.78													f
7/2/1997		37.78	12.71		25.07	<50	<0.5	<1.0	<1.0	<1.0	<10	6.0	SPL		
9/30/1997		37.78	21.22		16.56	<50	<0.5	<1.0	<1.0	<1.0	<10	6.8	SPL		
1/21/1998		37.78	10.26		27.52	<50	<0.5	<1.0	<1.0	<1.0	<10	5.3	SPL		
4/9/1998		37.78	6.77		31.01	<50	<0.5	<1.0	<1.0	<1.0	<10	5.6	SPL		

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

		TOC	Depth to	Product	Water Level			Concentra	ntions in (µ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
AW-9 Cont.															
6/19/1998		37.78	8.96		28.82	<50	< 0.5	<1.0	<1.0	<1.0	<10	4.8	SPL		
1/8/2007		37.78	17.35		20.43										
7/10/2007		37.78	18.65		19.13										
1/15/2008		37.78	18.51		19.27										
7/15/2008		37.78	19.56		18.22										
10/21/2008		37.78	21.07		16.71										
1/6/2009		37.78	21.00		16.78										
4/21/2009		37.78	18.28		19.50										
7/21/2009		37.78	20.00		17.78										
3/18/2010		37.78	16.45		21.33										
7/29/2010		37.78	18.07	-	19.71										
MW-1															
4/5/1991		34.46													
4/1/1992		34.46	11.25		23.21										
7/6/1992		34.46	13.61		20.85										
10/7/1992		34.46	15.15		19.31										
1/14/1993		34.46	10.73		23.73										
4/22/1993		34.46	11.64		22.82										
7/15/1993		34.46	13.50		20.96										
10/21/1993		34.46	15.21		19.25										
1/27/1994		34.46	17.48		16.98										
4/21/1994		34.46	10.94		23.52	110,000	1,400	9,100	3,400	30,000	11,000	1.6	PACE		С
9/9/1994		34.46	13.80		20.66										
12/21/1994		34.46	12.60		21.86										
1/30/1995		34.46													
4/10/1995		34.46	10.62		23.84										
6/29/1995		34.46	18.72		15.74										
9/18/1995		34.46	12.92		21.54										
12/7/1995		34.46	13.82		20.64										
3/28/1996		34.46	10.03		24.43										

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

		TOC	Depth to	Product	Water Level			Concentra	ntions in (µ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
MW-1 Cont.															
6/20/1996		34.46	11.29		23.17										
10/11/1996		34.46	14.86		19.60										
1/2/1997		34.46	11.03		23.43										
4/14/1997		34.46	12.25		22.21										
4/15/1997		34.46				35,000	130	650	1,700	8,200	4,800		SPL		
7/2/1997		34.46	14.11		20.35	42,000	<250	< 500	2,000	9,600	< 5000	5.5	SPL		
9/30/1997		34.46	14.40		20.06	61,000	130	1,100	2,700	14,600	2,000	6.7	SPL		
1/21/1998		34.46	7.99		26.47	14,000	11	60	310	1,790	1,300	4.5	SPL		
4/9/1998		34.46	7.89		26.57										
4/10/1998		34.46				45,000	380	520	2,100	6,800	9,300	5.3	SPL		
6/19/1998		34.46	10.31		24.15	35,000	170	100	1,100	3,590	5,000	4.9	SPL		
11/30/1998		34.46	11.16		23.30	10,000	100	24	350	1,040	1800/2800		SPL		g
1/21/1999		34.46	10.76		23.70	18,000	120	37	590	1,800	2,700		SPL		
4/30/1999		34.46	10.78		23.68	17,000	240	89	1,100	1,900	1,600		SPL		
7/9/1999		34.46	12.62		21.84	58,000	140	100	1,800	6,900	1,200		SPL		
11/3/1999		34.46	14.00		20.46	20,000	62	42	620	2,100	630		PACE		
1/12/2000		34.46	15.25		19.21	72,000	110	120	2,400	8,200	630		PACE		
4/13/2000		34.46	15.57		18.89	37,000	300	32	1,000	1,700	810		PACE		
5/24/2000		34.46	11.75		22.71										
6/1/2000		34.46	11.41		23.05										
6/8/2000		34.46	11.68		22.78										
6/15/2000		34.46	11.85		22.61										
7/26/2000		34.46	16.19		18.27	10,000	480	210	470	710	1,100		PACE		
10/24/2000		34.46	13.89		20.57	9,900	31	7.2	550	1,200	4,400		PACE		
1/19/2001		34.46	12.90		21.56	57,000	199	7.66	1,170	3,260	514		PACE		
7/24/2001		34.46	13.55		20.91	27,000	96.7	<5.0	548	1,460	285		PACE		
1/18/2002		34.46	10.91		23.55	25,000	150	31.5	597	1,040	138		PACE		
8/1/2002		34.46	12.97		21.49	25,000	80.2	17.7	714	1,280	489		PACE		
1/16/2003		34.46	10.45		24.01	22,000	170	110	630	670	< 500		SEQ		p
7/7/2003		34.46	12.40		22.06	9,900	42	<5.0	160	150	24		SEQ		q, u
02/05/2004		34.46	10.26		24.20	6,200	56	11	250	210	9.2		SEQM	6.9	

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

		TOC	Depth to	Product	Water Level			Concentra	ntions in (µ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
MW-1 Cont.															
07/01/2004		34.46	13.20		21.26	18,000	<50	<50	210	300	<50		SEQM		u
03/16/2005	P	34.46	9.62		24.84	7,600	33	5.4	200	130	< 5.0	0.9	SEQM	6.9	
07/22/2005	P	34.46	11.23		23.23	15,000	<10	<10	110	130	<10		SEQM	6.8	u
01/25/2006	P	34.46	8.75		25.71	8,300	8.4	4.8	130	120	<2.5		SEQM	7.3	u
7/6/2006	P	34.46	10.36		24.10	5,100	<2.5	<2.5	16	12	<2.5		TAMC	6.9	
1/8/2007	P	34.46	11.55		22.91	2700	4.6	0.66	35	27	2.1	1.83	TAMC	6.92	
7/10/2007	P	34.46	13.01	SHEEN	21.45	1,800	1.9	< 0.50	13	4.8	2.4	2.16	TAMC	7.04	
1/15/2008	P	34.46	10.96		23.50	2,900	8.0	4.0	84	87	1.2	0.94	TAMC	7.13	
7/15/2008	P	34.46	13.82		20.64	3,200	< 0.50	< 0.50	8.5	4.8	< 0.50	1.20	CEL	7.06	
10/21/2008	P	34.46	14.70		19.76	2,300	2.6	< 0.50	5.4	2.4	< 0.50	1.99	CEL	7.30	
1/6/2009	P	34.46	13.67		20.79	2,600	15	1.8	13	3.4	< 0.50	0.67	CEL	6.90	
4/21/2009	P	34.46	12.31		22.15	1,500	2.0	< 0.50	1.7	< 0.50	< 0.50	1.99	CEL	7.54	
7/21/2009	P	34.46	13.85		20.61	2,900	< 0.50	< 0.50	4.6	1.2	< 0.50	6.20	CEL	7.43	y
3/18/2010	P	34.46	9.29	SHEEN	25.17	1,900	1.2	< 0.50	5.2	2.7	< 0.50	0.90	TAMC	6.89	
7/29/2010	NP	34.46	12.63		21.83	1,600	<2.5	<2.5	<2.5	<5.0	<2.5	0.48	TAMC	7.3	
MW-2															
4/5/1991		35.50	16.62		18.88	< 50	0.6	0.9	< 0.3	< 0.3			SUP		
4/1/1992		35.50	11.25		24.25										
4/2/1992		35.50				< 50	< 0.5	< 0.5	< 0.5	<0.5			APP		
7/6/1992		35.50	12.72		22.78	< 50	< 0.5	< 0.5	< 0.5	< 0.5			ANA		
10/7/1992		35.50	15.08		20.42	< 50	< 0.5	1.8	< 0.5	2.3			ANA		
1/14/1993		35.50	9.69		25.81	< 50	< 0.5	< 0.5	< 0.5	< 0.5			PACE		m
4/22/1993		35.50	10.46		25.04	< 50	< 0.5	< 0.5	< 0.5	<0.5	30		PACE		c
7/15/1993		35.50	12.02		23.48	<50	< 0.5	< 0.5	< 0.5	< 0.5	21.7		PACE		c, m
10/21/1993		35.50	13.12		22.38	< 50	0.7	0.9	< 0.5	0.9	14.9		PACE		m
1/27/1994		35.50	12.01		23.49	<50	0.6	< 0.5	< 0.5	< 0.5	11.5		PACE		m
4/21/1994		35.50	10.60		24.90	< 50	< 0.5	< 0.5	< 0.5	<0.5	11.4	1.1	PACE		m
9/9/1994		35.50	12.42		23.08	<50	< 0.5	< 0.5	< 0.5	0.6		2.2	PACE		m
12/21/1994		35.50	10.85		24.65	< 50	< 0.5	< 0.5	< 0.5	<0.5	<5.0	1.2	PACE		m
1/30/1995		35.50	8.38		27.12	< 50	< 0.50	< 0.50	< 0.50	<1.0		1.7	ATI		

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

		TOC	Depth to	Product	Water Level			Concentra	ations in (µ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
MW-2 Cont.															
4/10/1995		35.50	9.00		26.50	< 50	< 0.50	< 0.50	< 0.50	<1.0		7.8	ATI		
6/29/1995		35.50	9.91		25.59	< 50	< 0.50	< 0.50	< 0.50	<1.0		9.1	ATI		
9/18/1995		35.50	10.98		24.52										
9/19/1995		35.50				< 50	< 0.50	< 0.50	< 0.50	<1.0	< 5.0	7.2	ATI		
12/7/1995		35.50	12.30		23.20	<50	< 0.50	< 0.50	< 0.50	<1.0	< 5.0	2.4	ATI		
3/28/1996		35.50	8.57		26.93	< 50	< 0.5	<1	<1	<1	<10	3.2	SPL		
6/20/1996		35.50	9.77		25.73	<50	< 0.5	<1	<1	<1	<10	4.2	SPL		
10/11/1996		35.50	13.32		22.18	<50	< 0.5	<1.0	<1.0	<1.0	<10	6.3	SPL		
1/2/1997		35.50	9.60		25.90	<50	< 0.5	<1.0	<1.0	<1.0	<10	6.7	SPL		
4/14/1997		35.50	10.93		24.57	<50	< 0.5	<1.0	<1.0	<1.0	<10	5.7	SPL		
7/2/1997		35.50	12.57		22.93	<50	<0.5	<1.0	<1.0	<1.0	<10	5.9	SPL		
9/30/1997		35.50	12.91		22.59	< 50	< 0.5	<1.0	<1.0	<1.0	<10	6.3	SPL		
1/21/1998		35.50	10.12		25.38	160	< 0.5	<1.0	<1.0	<1.0	100	5.4	SPL		
4/9/1998		35.50	6.82		28.68										
4/10/1998		35.50				<50	1	<1.0	<1.0	<1.0	23	5.0	SPL		
6/19/1998		35.50	9.00		26.50	< 50	< 0.5	<1.0	<1.0	<1.0	<10	4.9	SPL		
11/30/1998		35.50	9.44		26.06										
1/21/1999		35.50	8.96		26.54	< 50	<1.0	<1.0	<1.0	<1.0	1.9		SPL		
4/30/1999		35.50	9.15		26.35										
7/9/1999		35.50	10.82		24.68										
11/3/1999		35.50	11.86		23.64										
1/12/2000		35.50	12.35		23.15	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		PACE		
4/13/2000		35.50	13.01		22.49										
7/26/2000		35.50	13.01		22.49										
10/24/2000		35.50	11.57		23.93										
1/19/2001		35.50	10.52		24.98										
7/24/2001		35.50	11.13		24.37										
1/18/2002		35.50	8.85		26.65										
8/1/2002		35.50	10.47		25.03										
1/14/2003		35.50	8.49		27.01										
7/7/2003		35.50	9.63		25.87										

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

		TOC	Depth to	Product	Water Level			Concentra	ntions in (μ	g/L)					
Well and Sample Date	P/NP	Elevation (feet)	Water (feet bgs)	Thickness (feet)	Elevation (feet)	GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE	DO (mg/L)	Lab	pН	Comments
	1/111	(icct)	(icci bgs)	(ict)	(icct)	Tring	Belizelle	Totache	Delizene	Ayienes	MIDE	(IIIg/L)	Lab	pii	Comments
MW-2 Cont.															
02/05/2004		35.50	8.40		27.10										
07/01/2004	NP	35.50	9.94		25.56										
03/16/2005	P	35.50	8.39		27.11	<50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.3	SEQM	7.1	
07/22/2005		35.50	8.80		26.70										
01/25/2006		35.50	7.85		27.65										
7/6/2006		35.50	8.33		27.17										
1/8/2007		35.50	9.35		26.15										
7/10/2007		35.50	10.45		25.05										
1/15/2008		35.50	18.83		16.67										
7/15/2008		35.50	11.07		24.43										
10/21/2008		35.50	11.30		24.20										
1/6/2009		35.50	11.00		24.50										
4/21/2009		35.50	10.00		25.50										
7/21/2009		35.50	11.10		24.40										
3/18/2010		35.50	7.93		27.57										
7/29/2010		35.50	10.31		25.19										
MW-3															
4/5/1991		36.53	17.84		18.69	< 50	< 0.3	< 0.3	< 0.3	< 0.3			SUP		
4/1/1992		36.53	15.64		20.89										
4/2/1992		36.53				< 50	1.4	<0.5	<0.5	< 0.5			APP		
7/6/1992		36.53	19.03		17.50	< 50	< 0.5	< 0.5	< 0.5	< 0.5			ANA		
10/7/1992		36.53	21.83		14.70	< 50	< 0.5	< 0.5	< 0.5	< 0.5			ANA		
1/14/1993		36.53	15.96		20.57	350	< 0.5	< 0.5	< 0.5	< 0.5	714		PACE		c, m
4/22/1993		36.53	16.20		20.33	2,800	< 0.5	< 0.5	< 0.5	< 0.5	3,600		PACE		c, m
7/15/1993		36.53	16.82		19.71	1,400	1.2	<0.5	2	3.5	2,204		PACE		c, m
10/21/1993		36.53	18.84		17.69	370	2.1	2.3	2.3	6	847		PACE		c, m
1/27/1994		36.53	18.00		18.53	1,300	6.3	<0.5	< 0.5	< 0.5	3,892		PACE		c, m
4/21/1994		36.53	16.62		19.91	2,000	<0.5	<0.5	<0.5	<0.5	3,864	1.4	PACE		c, m
9/9/1994		36.53	18.38		18.15	1,300	<0.5	<0.5	0.5	1.2		3.0	PACE		m
12/21/1994		36.53	15.28		21.25	420	16	0.7	3.5	5.9	800	1.9	PACE		m

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

		тос	Depth to	Product	Water Level			Concentra	ations in (µ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
MW-3 Cont.															
1/30/1995		36.53	12.62		23.91	< 50	< 0.50	< 0.50	< 0.50	<1.0		2.5	ATI		
4/10/1995		36.53	12.41		24.12	150	< 0.50	< 0.50	< 0.50	<1.0		6.9	ATI		
6/29/1995		36.53	14.95		21.58	100	< 0.50	< 0.50	< 0.50	<1.0		6.4	ATI		d (TPH-g)
9/18/1995		36.53	15.82		20.71										
9/19/1995		36.53				82	< 0.50	< 0.50	< 0.50	<1.0	260	7.0	ATI		
12/7/1995		36.53	17.09		19.44	<50	< 0.50	< 0.50	< 0.50	<1.0	91	4.5	ATI		
3/28/1996		36.53	11.90		24.63	<50	< 0.5	<1	<1	<1	230	4.2	SPL		
6/20/1996		36.53	12.66		23.87	260	< 0.5	<1	<1	<1	370	4.4	SPL		
10/11/1996		36.53	16.23		20.30	330	< 0.5	<1.0	<1.0	<1.0	440	5.8	SPL		
1/2/1997		36.53	12.17		24.36	< 50	< 0.5	<1.0	<1.0	<1.0	140	6.0	SPL		
4/14/1997		36.53	13.45		23.08										
4/15/1997		36.53				1,500	< 0.5	<1.0	<1.0	<1.0	1,800	5.6	SPL		
7/2/1997		36.53	15.60		20.93	880	< 0.5	<1.0	<1.0	<1.0	940	5.3	SPL		
9/30/1997		36.53	17.16		19.37	40,000	13,000	2,400	870	3,100	510	6.6	SPL		
1/21/1998		36.53	11.77		24.76	120	< 0.5	<1.0	<1.0	<1.0	98	4.7	SPL		
4/9/1998		36.53	9.42		27.11	950	< 0.5	<1.0	<1.0	<1.0	890	5.7	SPL		
6/19/1998		36.53	15.28		21.25	1,800	<0.5	<1.0	<1.0	<1.0	1,900	4.7	SPL		
6/19/1998		36.53	12.09		24.44	1,800	< 0.5	<1.0	<1.0	<1.0	1,900	4.7	SPL		
1/21/1999		36.53	14.67		21.86	1,100	<1.0	<1.0	<1.0	<1.0	1,200		SPL		
4/30/1999		36.53	16.00		20.53										
7/9/1999		36.53	14.64		21.89	470	<1.0	<1.0	<1.0	<1.0	460/470		SPL		g
11/3/1999		36.53	16.39		20.14										
1/12/2000		36.53	16.80		19.73	<50	<0.5	<0.5	<0.5	<0.5	34		PACE		
4/13/2000		36.53	16.43		20.10										
7/26/2000		36.53	16.93		19.60	<50	<0.5	<0.5	< 0.5	<0.5	< 0.5		PACE		
10/24/2000		36.53	15.69		20.84										
1/19/2001		36.53	14.84		21.69	<50	<0.5	<0.5	<0.5	1	25.9		PACE		
7/23/2001		36.53	15.11		21.42	62	< 0.5	< 0.5	< 0.5	<1.5	28.7		PACE		
1/18/2002		36.53	12.37		24.16	<50	<0.5	<0.5	< 0.5	<1.0	17.8		PACE		
8/1/2002		36.53	14.44		22.09	66	< 0.5	< 0.5	< 0.5	<1.0	< 0.5		PACE		
1/16/2003		36.53	12.07		24.46	<50	< 0.50	< 0.50	< 0.50	< 0.50	20		SEQ		p

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

		TOC	Depth to	Product	Water Level			Concentra	ntions in (µ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			i
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
MW-3 Cont.															
7/7/2003		36.53	13.90		22.63	< 50	< 0.50	< 0.50	< 0.50	< 0.50	8.8		SEQ		q
02/05/2004		36.53	12.60		23.93	< 50	< 0.50	< 0.50	< 0.50	< 0.50	4.6		SEQM	7.0	
07/01/2004		36.53	14.57		21.96	< 50	< 0.50	< 0.50	< 0.50	< 0.50	3.3		SEQM		
03/16/2005	P	36.53	11.03		25.50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	4.4	1.5	SEQM	6.8	
07/22/2005	P	36.53	12.68		23.85	<50	< 0.50	< 0.50	< 0.50	< 0.50	4.1		SEQM	6.8	
01/25/2006	P	36.53	11.35		25.18	81	< 0.50	< 0.50	< 0.50	< 0.50	3.0		SEQM	6.9	
7/6/2006	P	36.53	11.47		25.06	<50	< 0.50	< 0.50	< 0.50	< 0.50	3.0		TAMC	6.9	
1/8/2007	P	36.53	12.92		23.61	<50	< 0.50	< 0.50	< 0.50	< 0.50	3.2	2.87	TAMC	7.12	
7/10/2007	P	36.53	14.46		22.07	<50	< 0.50	< 0.50	< 0.50	< 0.50	2.8	2.87	TAMC	7.25	
1/15/2008	P	36.53	12.99		23.54	<50	< 0.50	< 0.50	< 0.50	< 0.50	0.88	1.04	TAMC	7.10	
7/15/2008	P	36.53	15.30		21.23	<50	< 0.50	< 0.50	< 0.50	< 0.50	1.3	1.60	CEL	7.06	
10/21/2008	P	36.53	16.30		20.23	<50	< 0.50	< 0.50	< 0.50	< 0.50	0.94	2.21	CEL	7.28	
1/6/2009	P	36.53	15.45		21.08	<50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.02	CEL	6.43	
4/21/2009	P	36.53	13.90		22.63	<50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.26	CEL	7.59	
7/21/2009	P	36.53	15.28		21.25	<50	< 0.50	< 0.50	< 0.50	< 0.50	0.60	15.16	CEL	7.43	у
3/18/2010	P	36.53	11.65		24.88	<50	< 0.50	< 0.50	< 0.50	<1.0	< 0.50	0.73	TAMC	7.05	
7/29/2010	NP	36.53	13.96		22.57	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.12	TAMC	7.8	
QC-2															
10/7/1992		37.73				<50	< 0.5	< 0.5	< 0.5	<0.5			ANA		i
1/14/1993		37.73				< 50	< 0.5	< 0.5	< 0.5	< 0.5			PACE		i, m
4/22/1993		37.73				<50	<0.5	<0.5	< 0.5	<0.5			PACE		i, m
7/15/1993		37.73				< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0		PACE		i, m
10/21/1993		37.73				<50	<0.5	<0.5	< 0.5	< 0.5			PACE		i
1/27/1994		37.73				< 50	< 0.5	< 0.5	< 0.5	< 0.5			PACE		i
4/21/1994		37.73				<50	<0.5	<0.5	< 0.5	<0.5			PACE		i
9/9/1994		37.73				< 50	< 0.5	< 0.5	< 0.5	< 0.5			PACE		i
12/21/1994		37.73				<50	<0.5	<0.5	< 0.5	<0.5			PACE		i
1/30/1995		37.73				< 50	< 0.50	< 0.50	< 0.50	<1.0			ATI		i
4/10/1995		37.73				<50	< 0.50	< 0.50	< 0.50	<1.0			ATI		i
6/27/1995		37.73				< 50	< 0.50	< 0.50	< 0.50	<1.0			ATI		i

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

		TOC	Depth to	Product	Water Level	Concentrations in (µg/L)									
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
QC-2 Cont.															
9/19/1995		37.73				<50	< 0.50	< 0.50	< 0.50	<1.0	< 5.0		ATI		i
12/7/1995		37.73				< 50	< 0.50	< 0.50	< 0.50	<1.0	< 5.0		ATI		i
3/28/1996		37.73				< 50	< 0.5	<1	<1	<1	<10		SPL		i
6/20/1996		37.73				< 50	< 0.5	<1	<1	<1	<10		SPL		i
RW-1															
4/5/1991		37.73													
4/1/1992		37.73	22.81		14.92										
7/6/1992		37.73	26.92		10.81										
10/7/1992		37.73	28.51		9.22										
1/14/1993		37.73	23.75		13.98										
4/22/1993		37.73	22.70		15.03										
7/15/1993		37.73	26.10		11.63										
10/21/1993		37.73	25.40		12.33										
1/27/1994		37.73	28.02		9.71										
4/21/1994		37.73	23.10		14.63										
9/9/1994		37.73	24.39		13.34										
12/21/1994		37.73													h
12/7/1995		37.73	25.71		12.02	150,000	34,000	35,000	4,300	21,000	2,700		ATI		
3/28/1996		37.73	16.75		20.98										
6/20/1996		37.73	25.10		12.63										h
10/11/1996		37.73	25.51		12.22	130,000	20,000	32,000	2,800	20,700	1400/1200	7.4	SPL		g
1/2/1997		37.73	24.49		13.24										
4/14/1997		37.73	23.99		13.74										
4/15/1997		37.73				1,800,000	38,000	190,000	48,000	281,000	<25000		SPL		
7/2/1997		37.73	16.40		21.33	140,000	19,000	55,000	4,400	32,400	<10000	5.7	SPL		
7/2/1997		37.73				130,000	19,000	54,000	4,700	33,400	<10000		SPL		e
9/30/1997		37.73				140,000	17,000	29,000	2,500	15,900	1,200		SPL		e
9/30/1997		37.73	27.97		9.76	110,000	13,000	22,000	2,000	12,500	1,100	7.0	SPL		
1/21/1998		37.73	14.14		23.59	270,000	21,000	48,000	3,500	25,000	1,100	4.8	SPL		
4/9/1998		37.73	25.01		12.72										

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

		тос	Depth to	Product	Water Level			Concentra	ntions in (μ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
RW-1 Cont.															
4/10/1998		37.73				220,000	26,000	46,000	4,400	24,500	<2500	5.1	SPL		
6/19/1998		37.73	11.43		26.30	180,000	19,000	32,000	3,000	17,400	<2500	4.6	SPL		
11/30/1998		37.73	7.87		29.86										
1/21/1999		37.73	18.90		18.83	260,000	24,000	46,000	5,100	30,000	1,700		SPL		
7/9/1999		37.73	18.58		19.15										
11/3/1999		37.73	20.85		16.88	160,000	19,000	37,000	3,800	25,000	1,500		PACE		
1/12/2000		37.73	21.20		16.53	240,000	18,000	46,000	5,800	26,000	2,100		PACE		
4/13/2000		37.73	21.71		16.02	120,000	2,100	33,000	2,800	28,000	1,500		PACE		
5/24/2000		37.73	21.89		15.84										
6/1/2000		37.73	16.30		21.43										
6/8/2000		37.73	17.88		19.85										
6/15/2000		37.73	16.72		21.01										
6/20/2000		37.73	21.04		16.69										
7/7/2000		37.73	17.21		20.52										
7/20/2000		37.73	21.87		15.86										
7/26/2000		37.73	21.45		16.28	67,000	160	5,300	2,100	18,000	1,100		PACE		
7/31/2000		37.73	22.11		15.62										
8/8/2000		37.73	17.80		19.93										
8/16/2000		37.73	17.92		19.81										
8/23/2000		37.73	18.11		19.62										
10/24/2000		37.73	18.93		18.80										
10/25/2000		37.73	19.04		18.69	360,000	18,000	78,000	34,000	180,000	2,100		PACE		k
1/19/2001		37.73	18.19		19.54	110,000	9,450	19,600	3,510	21,100	1,270		PACE		
7/24/2001		37.73	17.93		19.80										1
1/18/2002		37.73	14.87		22.86	63,000	2,060	4,370	1,770	13,900	491		PACE		
8/1/2002		37.73	16.84		20.89	60,000	1,210	2,200	1,520	10,600	390		PACE		
1/16/2003		37.73	14.42		23.31	34,000	2,500	2,700	780	5,300	680		SEQ		р
7/7/2003		37.73	16.11		21.62	50,000	640	280	1,600	10,000	<250		SEQ		q, u
07/01/2004	P	37.73	16.75		20.98	47,000	320	87	1,900	7,500	72		SEQM	6.7	
03/16/2005	P	37.73	12.48		25.25	17,000	28	23	350	590	53	1.0	SEQM	6.8	
07/22/2005	P	37.73	14.40		23.33	5,900	50	35	120	220	51		SEQM	6.7	u

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

		TOC	Depth to	Product	Water Level			Concentra	tions in (μ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/	_		Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
RW-1 Cont.															
01/25/2006	P	37.73	12.00		25.73	7,000	22	5.9	190		34		SEQM	7.1	
7/6/2006	P	37.73	13.01		24.72	16,000	37	14	470	230	64		TAMC	6.8	
1/8/2007	P	37.73	14.75		22.98	2400	16	10	56	54	22	3.61	TAMC	6.86	
7/10/2007	P	37.73	16.21		21.52	3,800	4.4	2.8	72	22	21	2.65	TAMC	6.98	
1/15/2008	P	37.73	14.63		23.10	1,700	21	1.6	45	10	14	1.31	TAMC	6.82	
7/15/2008	P	37.73	17.04		20.69	1,600	< 0.50	0.66	4.4	3.0	12	1.32	CEL	6.95	
10/21/2008	P	37.73	18.44		19.29	3,600	< 0.50	1.3	19	10	12	0.79	CEL	7.17	
1/6/2009	P	37.73	17.50		20.23	1,300	< 0.50	< 0.50	1.6	2.7	7.0	1.02	CEL	6.43	
4/21/2009	P	37.73	15.37		22.36	2,000	27	1.9	30	16	6.0	0.86	CEL	7.38	X
7/21/2009	P	37.73	17.20		20.53	870	< 0.50	< 0.50	< 0.50	0.57	7.0	13.31	CEL	7.35	y
3/18/2010	P	37.73	12.87	SHEEN	24.86	2,500	<2.5	<2.5	2.7	<5.0	<2.5	0.74	TAMC	6.73	
7/29/2010	NP	37.73	15.90	-	21.83	450	< 0.50	< 0.50	< 0.50	1.4	3.5		TAMC	7.1	
VEW-4															
07/22/2005	P		14.04			680	41	24	20	67	< 0.50		SEQM	6.8	
1/15/2008	P		15.05			350	19	1.1	5.0	3.3	< 0.50	0.54	TAMC	6.99	
7/15/2008	P		17.24			53	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.59	CEL	6.95	
10/21/2008															V
1/6/2009			18.00												
4/21/2009	P		15.81			610	5.9	0.64	4.0	1.9	< 0.50	1.99	CEL	7.41	
7/21/2009	P		17.60			< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.99	CEL	7.24	у
3/18/2010			12.91												
7/29/2010			15.82												
VEW-5															
07/22/2005															V
1/15/2008															V
7/15/2008															V
10/21/2008															V
1/6/2009															V
4/21/2009															V

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

		TOC	Depth to	Product	Water Level			Concentra	ntions in (µ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
VEW-5 Cont.															
7/21/2009															V
3/18/2010															V
7/29/2010															v
VEW-6															
1/15/2008			11.83												
7/15/2008			14.81												
10/21/2008			16.02												
1/6/2009			14.70												
4/21/2009			13.34												
7/21/2009			14.90												
3/18/2010			10.39												
7/29/2010			14.65												
VEW-7															
1/15/2008			13.24												
7/15/2008			15.91												
10/21/2008			16.89												
1/6/2009			16.00												
4/21/2009			14.30												
7/21/2009			15.98												
3/18/2010			11.16												
7/29/2010			14.67												
VEW-8															
07/22/2005	P		14.24			< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		SEQM	6.8	
1/15/2008															v
7/15/2008															v
10/21/2008															v
1/6/2009															v
4/21/2009			16.53												
7/21/2009															v

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

		тос	Depth to	Product	Water Level			Concentra	ntions in (µ	g/L)					
Well and		Elevation	Water	Thickness	Elevation	GRO/			Ethyl-	Total		DO			
Sample Date	P/NP	(feet)	(feet bgs)	(feet)	(feet)	TPHg	Benzene	Toluene	Benzene	Xylenes	MTBE	(mg/L)	Lab	pН	Comments
VEW-8 Cont.															
3/18/2010			14.05												
7/29/2010			16.24												
VEW-9															
1/15/2008			5.31												
7/15/2008															v
10/21/2008															V
1/6/2009															f
4/21/2009			6.18												
7/21/2009															v
3/18/2010			5.32												
7/29/2010			7.03												a
VW-1															
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			9.80												
7/29/2010															v
VW-2															
1/15/2008			0.25												
7/15/2008			0.65												
10/21/2008			0.68												
1/6/2009			0.45												
4/21/2009			0.45												
7/21/2009			0.52												
3/18/2010			0.50												
7/29/2010															b

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

X.		TOC	Depth to	Product	Water Level			Concentra	itions in (µ	g/L)					
Well and Sample Date	P/NP	Elevation (feet)	Water (feet bgs)	Thickness (feet)	Elevation (feet)	GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	МТВЕ	DO (mg/L)	Lab	pН	Comments
VW-3															
1/15/2008		#454	2.08	# # ##	(2.7 7)	7.5	15577	7.5	1850	a Contract	5.07	1,545	155/1	37 6	
7/15/2008		100	4.10	A425		20		1242.1	()	202	00	(1 <u>111</u>)	(==)	20	
10/21/2008		0 +	4.95	:++() (++)== (**) = = :) == (
1/6/2009	mn .	pas.	5.40	155		550	(577 6)	RA.	(275)	55	MA	(==1	(277 6)		
4/21/2009			4.57	148		-	15-4		1		**	1881	i -i		
7/21/2009		122	5.22		(22)		(22)	22	(44)	2020		(1-1-1)	(22)		
3/18/2010		H.H.	5.42	(##)		**	(==)		1885		**	(n.a.)	(##)	:	
7/29/2010	555	500	5.60	8 75 78	653		(SE)	572	1992	767	VAN	9545	100 N	550	
IW-3															
11/12/2010			-4			1,000	5.8	2.9	8.3	8.5	2.5	15.51		-57	15.5 5

ABBREVIATIONS & SYMBOLS:

- -- = Not analyzed/applicable/measured/available
- < = Not detected at or above specified laboratory reporting limit

DO = Dissolved oxygen

DTW = Depth to water in ft bgs

ft bgs = Feet below ground surface

ft MSL = Feet above mean sea level

GRO = Gasoline range organics

GWE = Groundwater elevation in ft MSL

mg/L = Milligrams per liter

MTBE = Methyl tert-butyl ether

NP = Well not purged prior to sampling

P = Well purged prior to sampling

TOC = Top of casing in ft MSL

TPH-g = Total petroleum hydrocarbons as gasoline

 μ g/L = Micrograms per liter

ANA = Anametrix. Inc.

PACE = Pace, Inc.

ATI = Analytical Technologies, Inc.

CEI = Ceimic Corporation

SPL = Southern Petroleum Laboratories

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

CEL = CalScience Environmental Laboratories, Inc.

FOOTNOTES:

- 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.
- i = 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.

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

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

Well and				Concentration	ons in (µg/L)				
Sample Date	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	Comments
AW-1									
7/7/2003	<5,000	<1,000	1,100	<25	<25	190			
02/05/2004	<10,000	<2,000	930	< 50	<50	160	<50	<50	
07/01/2004	<5,000	<1,000	1,100	<25	<25	170	<25	<25	
03/16/2005	<5,000	<1,000	720	<25	<25	130	<25	<25	
07/22/2005	<1,000	<200	510	<5.0	<5.0	93	31	<5.0	
01/25/2006	<6,000	<400	490	<10	<10	94	21	<10	
7/6/2006	<6,000	<400	270	<10	<10	49	<10	<10	
1/8/2007	<3000	240	380	<5.0	<5.0	64	<5.0		
7/10/2007	<6,000	<400	220	<10	<10	36	<10	<10	
1/15/2008	<6,000	<400	230	<10	<10	45	<10	<10	
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	
AW-2									
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	

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

Well and				Concentration	ons in (μg/L)				
Sample Date	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	Comments
AW-3									
03/16/2005	<100	<20	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
AW-4									
	4 000	• • • •		- 0	- 0	- 0			
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	
AW-5									
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	3.2	<5.0	<5.0	
1/8/2007	<1500	240	220	<2.5	<2.5	51	<2.5		
7/10/2007	<1,500	110	360	<2.5	<2.5	92	<2.5	<2.5	
//10/200/	<1,300	110	300	<2.5	~2.3	92	~2.3	<2.3	

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

Well and				Concentration					
Sample Date	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	Comments
AW-5 Cont.									
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	
AW-6									
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	
AW-7									
AW-8									
03/16/2005	<100	<20	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	a

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

Well and				Concentration					
Sample Date	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	Comments
MW-1									
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	
MW-2									
03/16/2005	<100	<20	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
MW-3									
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	

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

Well and				Concentration	ons in (µg/L)				
Sample Date	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	Comments
MW-3 Cont.									
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	
RW-1									
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		
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	
VEW-4									
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	

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

Well and				Concentration	ons in (μg/L)				
Sample Date	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	Comments
VEW-4 Cont.									
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	
VEW-8									
07/22/2005	<100	<20	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	

ABBREVIATIONS & SYMBOLS:

- -- = Not analyzed/applicable/measured/available
- < = Not detected at or above specified laboratory reporting limit
- 1,2-DCA = 1,2-Dichloroethane

DIPE = Di-isopropyl ether

EDB = 1,2-Dibromoethane

ETBE = Ethyl tert-butyl ether

MTBE = Methyl tert-butyl ether

TAME = tert-Amyl methyl ether

TBA = tert-Butyl alcohol

 μ g/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.

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

Table 3. Bio-Degradation Parameters
Former BP Station #11133, 2220 98th Ave., Oakland, CA

Well and Sample Date		ORP	Total Alkalinity	DO	Nitrate NO3	Sulfate SO4	Soluble Sulfide	CO2	Methane	Manganese	Ferrous Iron	
	pН	(mV)	(μg/L)	(mg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(μg/L)	(mg/L)	Comments
AW-1												
3/16/2005	6.7	-10	420,000	0.8	< 500	580	<1,000	81,400	3,290	6,500	3.4	
1/15/2008	6.91	-58	410,000	0.92	< 500	1,900	<1,000	190,000	3,200	6,400	3.2	a, b
7/15/2008	6.79	-96.5	488,000	6.0	<100	<1,000	<1,000	400,000	2,090	7,200	6.0	
10/21/2008	7.01	-130.1	498,000	2.40	<100	2,500	<50	178,000	381	8,080	2.0	b, c
1/6/2009	6.09	-128	446,000	1.39	<100	1,400	<50	190,000	593	7,810	3.0	
4/21/2009	7.28	-126.7	456,000	2.29	<100	1,800	< 50	189,000	1,650	7,070	3.6	
7/21/2009	7.23	-137.6	480,000	17.46	<100	1,800	<50	278,000	1,920	7,640	2.9	a, e
3/18/2010	6.57	-38		0.68								
AW-2												
1/15/2008	6.79	-88	190,000	0.83	4,400	21,000	<1,000	52,000	210	1,100	< 0.5	a
7/15/2008	7.05	-190.1	168,000	2.14	440	38,000	< 50	100,000	7.42	1,570	0.5	
10/21/2008	7.33	-47.2	176,000	1.65	890	36,000	< 50	24,200	111	1,130	0.5	c, d
1/6/2009	6.94	129	168,000	0.84	390	22,000	< 50	28,100	50.4	996	0.6	
4/21/2009	7.42	53.3	162,000	1.89	860	22,000	<50	37,600	209	1,240	0.39	
7/21/2009	7.32	97.3	144,000	9.29	160	29,000	<50	38,200	174	630	0.1	a, e
AW-4												
3/16/2005	6.5	10	310,000	0.6	< 500	71,000	<1,000	54,200	585	5,600	1.4	
1/15/2008	6.75	-91	390,000	1.30	< 500	82,000	<1,000	120,000	610	5,000	1.5	a, b
7/15/2008	6.91	-90.0	598,000	2.64	<100	47,000	<50	354,000	777	7,110	6.0	
10/21/2008	7.25	-123.3	510,000	1.54	<100	61,000	<50	101,000	75.3	8,440	3.0	c, d
1/6/2009	6.31	-29	400,000	0.70	<100	78,000	<50	76,400	148	6,330	0.5	
4/21/2009	7.48	-102.9	328,000	3.51	<100	83,000	< 50	77,500	330	4,880	3.4	
7/21/2009	7.04	-159.9	414,000	6.14	<100	68,000	<50	75,300	638	7,340	2.5	a, e
3/18/2010	6.71	-57		0.79								
AW-5												
1/15/2008	6.82	-101	230,000	0.90	<500	12,000	<1,000	79,000	120	2,300	1.4	a
7/15/2008	6.85	-97.9	238,000	2.13	<100	12,000	<50	161,000	9.29	2,560	0.5	
10/21/2008	7.10	-84.9	216,000	1.01	<100	14,000	<50	57,800	59.8	1,680	0.5	c, d
1/6/2009	6.22	-79	224,000	0.70	<100	13,000	<50	52,400	106	2,920	0.5	

Table 3. Bio-Degradation Parameters

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

Well and		0.7.7	Total		Nitrate	Sulfate	Soluble	~~*			Ferrous	
Sample Date	pН	ORP (mV)	Alkalinity (μg/L)	DO (mg/L)	NO3 (μg/L)	SO4 (μg/L)	Sulfide (µg/L)	CO2 (μg/L)	Methane (μg/L)	Manganese (μg/L)	Iron (mg/L)	Comments
AW-5 Cont.	-						, ,			40,		
4/21/2009	7.35	-43.8	216,000	2.09	<100	10,000	<50	57,700	142	2,710	1.5	
7/21/2009	7.14	-139.1	226,000	6.50	<100	9,300	<50	63,700	91.3	2,430	1.1	a, e
3/18/2010	6.64			0.74								
AW-6												
1/15/2008	6.80	-94	150,000	0.58	< 500	21,000	<1,000	41,000	50	1,200	< 0.1	a
7/15/2008	6.87	-40.8	160,000	2.12	<100	23,000	<50	163,000	1.27	1,370	0.0	
10/21/2008	7.19	-33.9	152,000	1.01	<100	20,000	<50	39,400	104	1,290	0.5	c, d
1/6/2009	6.23	-25	156,000	0.94	<100	21,000	<50	37,500	69.1	1,360	0.5	
4/21/2009	7.38	35.0	166,000	4.29	<100	17,000	<50	46,600	1.12	167	< 0.1	
7/21/2009	7.09	-39.9	168,000	10.79	<100	16,000	<50	39,100	127	2,050	< 0.1	a, e
3/18/2010	6.75	-32		0.68								
MW-1												
3/16/2005	6.9	-175	310,000	0.9	< 500	13,000	<1,000	49,900	4,550	7,700	2.7	
1/15/2008	7.13	-150	320,000	0.94	< 500	51,000	<1,000	67,000	2,900	8,100	1.3	a
7/15/2008	7.06	-174.7	326,000	1.20	<100	50,000	<50	29,200	1,090	8,390	0.5	
10/21/2008	7.30	-200.0	360,000	1.99	<100	27,000	<50	18,700	303	8,050	4.0	С
1/6/2009	6.90	225	368,000	0.69	<100	59,000	<50	21,300	277	10,100	1.6	
4/21/2009	7.54	-196.9	326,000	1.99	<100	90,000	<50	59,300	839	8,540	1.7	
7/21/2009	7.43	-208.3	320,000	6.20	<100	120,000	<50	67,200	1,120	9,250	0.46	a, e
3/18/2010	6.89	-70		0.90								
MW-2												
3/16/2005	7.1	30	85,000	1.3	5,300	38,000	<1,000	7,370	<1.0	2,200	0.7	
MW-3												
1/15/2008	7.10	-128	130,000	1.04	2,500	44,000	<1,000	29,000	<1.0	120	< 0.1	a
7/15/2008	7.06	-47.6	112,000	1.60	820	78,000	<50	29,000	<1.0	61.8	0.5	
10/21/2008	7.28	-120.6	92,000	2.21	640	52,000	<50	15,400	<1.0	19.3	0.5	с
1/6/2009	6.43	-22	94,000	1.02	420	38,000	<50	14,000	<1.0	25.5	0.0	
4/21/2009	7.59	-119.9	108,000	2.26	360	44,000	<50	22,400	<1.0	46.9	<0.1	

Table 3. Bio-Degradation Parameters

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

Well and Sample Date	pН	ORP (mV)	Total Alkalinity (µg/L)	DO (mg/L)	Nitrate NO3 (μg/L)	Sulfate SO4 (µg/L)	Soluble Sulfide (µg/L)	CO2 (µg/L)	Methane (μg/L)	Manganese (μg/L)	Ferrous Iron (mg/L)	Comments
MW-3 Cont.												
7/21/2009	7.43	-35.5	116,000	15.16	970	48,000	< 50	20,900	<1.0	153	< 0.1	a, e
3/18/2010	7.05	-50		0.73								
RW-1												
1/15/2008	6.82	-143	350,000	1.31	< 500	5,000	<1,000	110,000	1,100	6,100	1.8	a
7/15/2008	6.95	-239.9	358,000	1.32	<100	21,000	< 50	212,000	212	7,030	0.5	
10/21/2008	7.17	-188.4	352,000	0.79	<100	10,000	<50	73,500	1,350	6,840	1.0	b, c
1/6/2009	6.43	-279	322,000	0.30	<100	13,000	< 50	64,700	279	6,410	1.0	
4/21/2009	7.38	-159.1	370,000	0.86	<100	5,200	100	77,400	1,270	6,790	0.67	
7/21/2009	7.35	-252.5	356,000	13.21	<100	30,000	< 50	62,800	479	7,380	0.13	a, e
3/18/2010	6.73	-102		0.74								
VEW-4												
1/15/2008	6.99	-36	210,000	0.54	3,000	31,000	<1,000	50,000	840	880	< 0.5	a
7/15/2008	6.95	-29	254,000	0.59	<100	22,000	< 50	90,900	174	2,150	2.0	
4/21/2009	7.41	-110.1	254,000	1.99	<100	13,000	< 50	44,700	365	2,800	0.2	
7/21/2009	7.24	-40.3	254,000	8.99	<100	24,000	< 50	41,100	2.07	891	< 0.1	a, e

ABBREVIATIONS AND SYMBOLS:

< = Not detected at or above specified laboratory reporting limit ORP = Oxygen reduction potential DO = Dissolved oxygen CO2 = Carbon dioxidemV = Millivolts μ g/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

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



































