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Shell Oil Products US

Mr. Jerry Wickham Alameda County Environmental Health 1131 Harbor Parkway, Suite 250 Alameda, CA 94502-6577 DS Soil & Groundwater Focus Delivery Group 20945 S. Wilmington Avenue Carson, CA 90810 Tel (714) 731 1050 Fax (714) 731 1038 Email Andrea.Wing@shell.com Internet http://www.shell.com

RE:

461 8th Street, Oakland, California

PlaNet Site ID USF04642 PlaNet Project ID 27481 ACEH Case No. RO0000343

Dear Mr. Wickham:

I am informed and believe that, based on a reasonably diligent inquiry undertaken by AECOM on behalf of Equilon Enterprises LLC dba Shell Oil Products US, the information and/or recommendations contained in the attached document is true, and on that ground I declare under penalty of perjury in accordance with Water Code section 13267 that this statement is true and correct.

As always, please feel free to contact me directly at (714) 731-1050 with any questions or concerns.

Sincerely,

Shell Oil Products US

Andrea A. Wing

Principal Program Manager



AECOM 1333 Broadway Suite 800 Oakland, CA 94612 www.aecom.com 510 893 3600 tel 510 874 3268 fax

January 7, 2016

Jerry Wickham Alameda County Environmental Health 1131 Harbor Bay Parkway,Suite 250 Alameda, CA 94502

Re: Groundwater Monitoring Report - Fourth Quarter 2015

Former Shell Service Station

461 8th Street in Oakland, California

Shell PlaNet Site ID: USF04642 / Project ID: 27481

ACEH No. RO0000343

Dear Mr. Wickham:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell), AECOM Technical Services, Inc. is pleased to submit this Groundwater Monitoring Report – Fourth Quarter 2015 for the Former Shell Service Station located at 461 8th Street in Oakland, California.

If you have any questions regarding this submission, please contact Aubrey Cool at (510) 874-1778 or Aubrey.Cool@aecom.com.

Sincerely,

AECOM

Helen Hild Geologist Aubrey Cool, P.G. Project Manager

Enclosures: Groundwater Monitoring Report

cc: Andrea Wing, Shell Oil Products US Leroy Griffin, Fire Prevention Bureau

Signature Land Advisors, Inc. (property owner)



Submitted to: Alameda County Environmental Health 1131 Harbor Bay Parkway Suite 250 Alameda, CA 94502 Submitted by: AECOM 1333 Broadway Suite 800 Oakland, CA 94612 January 7, 2016

Groundwater Monitoring Report Fourth Quarter 2015

Former Shell Service Station 461 8th Street Oakland, California

On Behalf of Shell Oil Products US

PlaNet Site ID USF04642
PlaNet Project ID 27481
Agency No. RO0000343

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AECOM Technical Services, Inc.

Shell Equilon Enterprises LLC dba Shell Oil Products US

the Site 461 8th Street, Oakland, CA Blaine Blaine Tech Services, Inc.

TPHg total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260

μg/L micrograms per liter

BTEX benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B

1.0 Introduction

AECOM Technical Services, Inc. (AECOM) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell).

1.1 Site Information

Former Shell Service Station
461 8th Street, Oakland, California (the Site)
Andrea Wing
AECOM/Aubrey Cool
Alameda County Environmental Health

1.2 Site Summary

Frequency of Groundwater Monitoring:	Quarterly
Wells Water Level Gauged:	3
Wells Sampled:	3
Is there any Free Product Present in On-Site Monitoring Wells:	No
Current Remediation Activity:	None

2.0 Site Activities

2.1 Site Activities

GHD Services, Inc. submitted a *Subsurface Investigation and Third Quarter 2015 Groundwater Monitoring Report* documenting the well destructions and installation of well S-26 on November 9, 2015.

On November 25, 2015, Blaine Tech Services, Inc. of San Jose, California (Blaine) gauged and sampled the wells according to the modified monitoring program for the Site.

AECOM prepared a vicinity map (Figure 1), a groundwater contour and chemical concentration map (Figure 2), and a groundwater data table (Table 1). Blaine's field notes are presented in Appendix A, and the laboratory reports are presented in Appendix B.

2.2 Current Quarter's Findings

Groundwater Elevation (feet above mean sea level [ft MSL]): _	8.07 to 10.24
Groundwater Gradient (direction):	Southwesterly
Groundwater Gradient (magnitude):	0.015

2.3 Proposed Activities

Blaine will gauge and sample wells according to the modified monitoring program for the Site. The Site is monitored quarterly, and AECOM will issue groundwater monitoring reports quarterly following the sampling events.

Proposed wells S-24 and S-25 will be installed in conjunction with the Site development. The latest estimate from the property owner is that development will begin in February 2016.

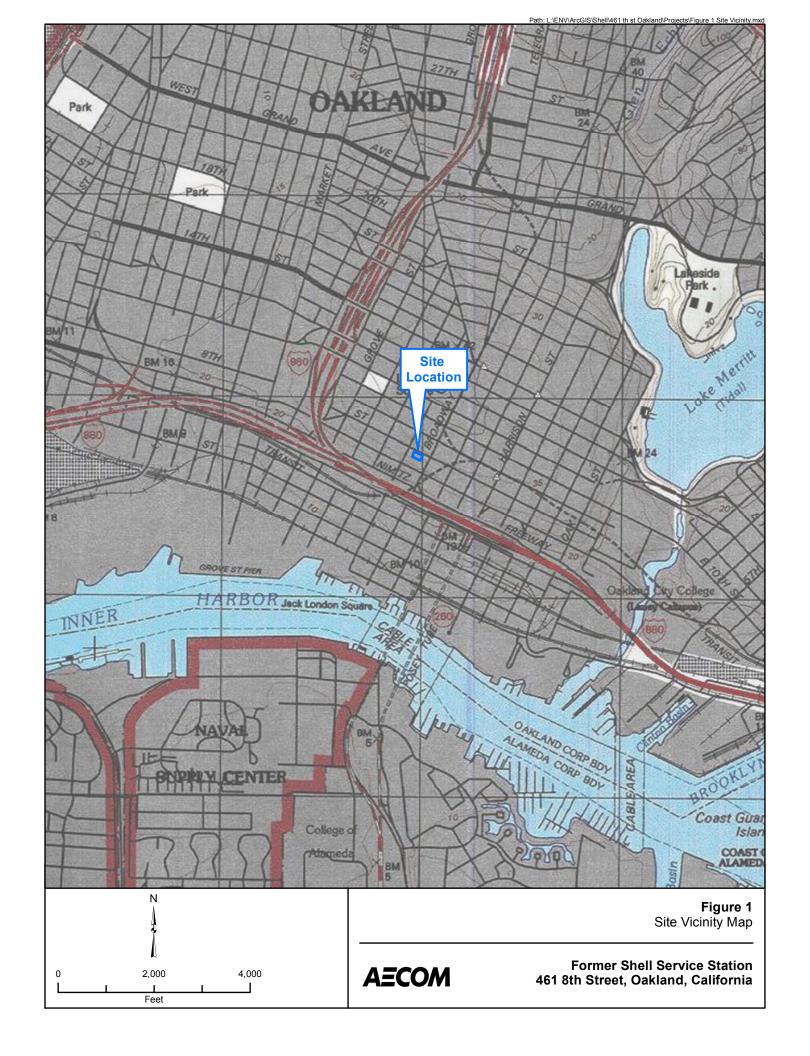
3.0 Conclusions and Recommendations

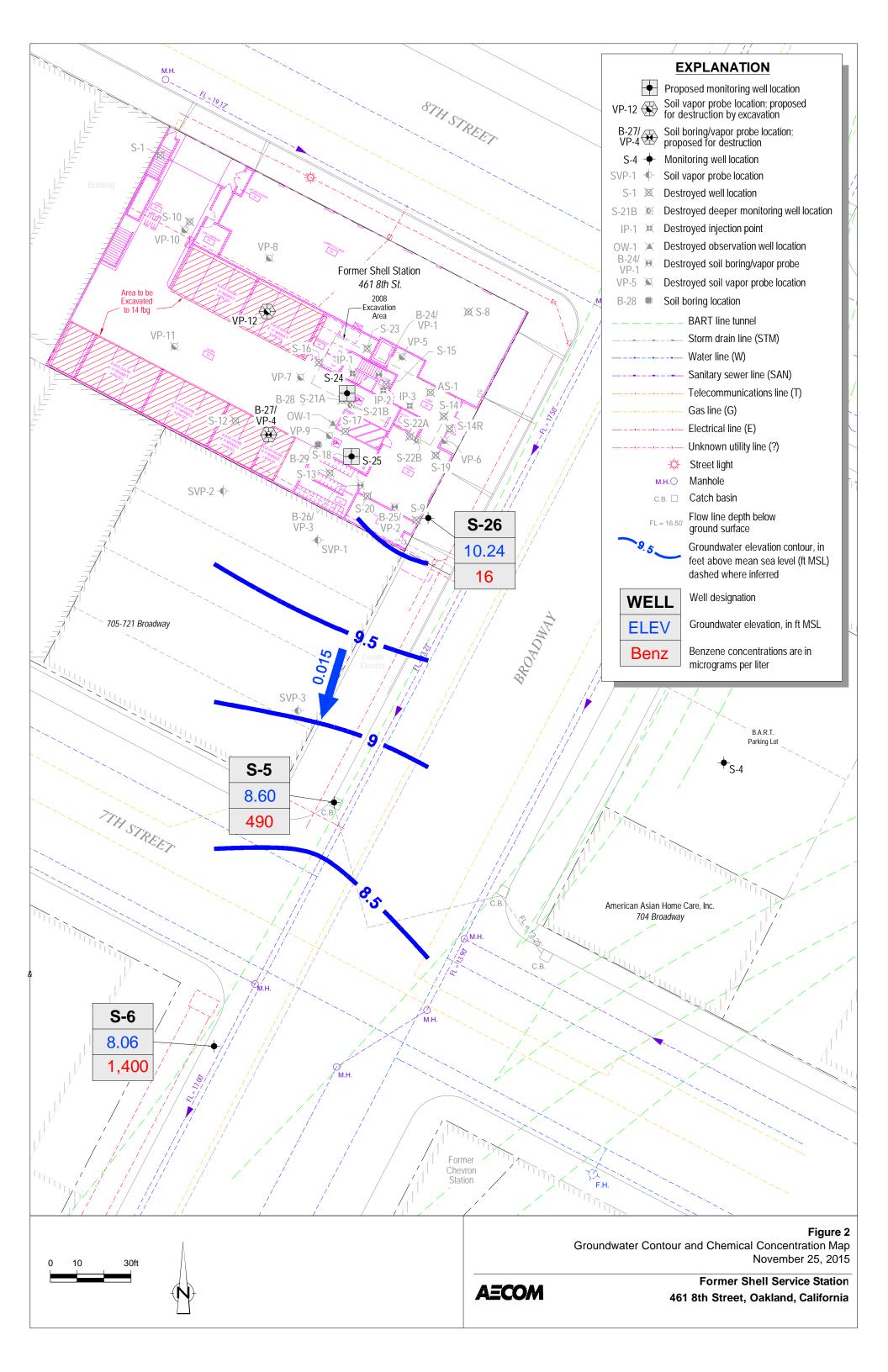
Total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and total xylenes (BTEX), analyzed by EPA Method 8260, were detected in all three wells sampled. TPHg was detected at a maximum of 36,000 micrograms per liter (μ g/L) in well S-5, at 13,000 μ g/L and 180 μ g/L in well S-26. Benzene was detected at a maximum concentration of 1,400 μ g/L in S-6, 490 μ g/L in S-5, and 16 μ g/L in S-26. Separate-phase hydrocarbons were not observed in any of the Site wells.

Groundwater Monitoring Report

AECOM recommends continuing with quarterly groundwater monitoring. As discussed above, proposed on-site wells S-24 and S-25, will be installed concurrent with the Site development.

Figures





Table

Table 1
Groundwater Data
Former Shell Service Station
461 8th Street, Oakland, California

	Data	TDU	Ъ	т.	-	v	MTBE	MTBE	TDA	DIDE	ETBE	TAME	FDC	EDD	TOC	Depth to	SPH	GW	DO	
Well ID	Date	TPHg (µg/L)	B (µg/L)	Τ (μg/L)	E (µg/L)	Χ (μg/L)	8020 (μg/L)	8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	(µg/L)	TAME (μg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Water (ft TOC)	Thickness (ft)	Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-4	10/26/1988	130	3.8	13	4.0	30									93.51					
S-4	02/14/1989	<50	0.50	<1.0	<1.0	3.0									93.51	12.82		80.69		
S-4	05/01/1989	Well dry													93.51	16.48		77.03		
S-4	07/27/1989	Well dry													93.51	15.84		77.67		
S-4	10/05/1989	Well dry													93.51	15.98		77.53		
S-4	01/09/1990	Well dry													93.51	15.86		77.65		
S-4	04/30/1990	<50	<0.50	< 0.50	< 0.50	<1.0									93.51	14.48		79.03		
S-4	07/31/1990	Well dry													93.51					
S-4	10/30/1990	Well dry													93.51					
S-4	05/06/1991	Well dry													93.51	15.23		78.28		
S-4	06/27/1991	<50	<0.50	< 0.50	< 0.50	<0.50									93.51	13.54		79.97		
S-4	09/24/1991	Well dry													93.51	15.85		77.66		
S-4	11/07/1991	Well dry													93.51	15.60		77.91		
S-4	02/13/1992	<50	<0.50	< 0.50	< 0.50	3.0									93.51	14.27		79.24		
S-4	05/11/1992	Well dry													93.51					
S-4	12/03/1992	Well inacces	ssible												93.51					
S-4	05/13/1993	Well inacces	ssible												93.51	14.81		78.70		
S-4	07/22/1993	Well inacces	ssible												93.51	14.42		79.09		
S-4	10/20/1993	Well inacces	ssible												93.51					
S-4	01/25/1994	Well inacces	ssible												93.51	14.60		78.91		
S-4	04/25/1994	Well inacces	ssible												93.51	14.39		79.12		
S-4	07/21/1994	<50	< 0.50	< 0.50	< 0.50	< 0.50									93.51	22.29		71.22		
S-4	10/24/1994	<500	< 0.50	< 0.50	< 0.50	< 0.50									93.51	22.72		70.79		
S-4	12/22/1994	<50	< 0.50	< 0.50	< 0.50	< 0.50									25.77	22.25		3.52		
S-4	04/20/1995	<50	< 0.50	< 0.50	< 0.50	< 0.50									25.77	21.16		4.61		
S-4	10/04/1995	<50	1.2	0.70	< 0.50	< 0.50									25.77	22.25		3.52		
S-4	01/03/1996	<50	0.60	< 0.50	< 0.50	1.7									25.77	23.28		2.49		
S-4	04/11/1996	<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5								25.77	21.58		4.19		
S-4	07/11/1996	<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5								25.77	21.60		4.17		
S-4	10/02/1996	<50	<0.50	< 0.50	< 0.50	< 0.50	2.6								25.77	22.46		3.31		
S-4	01/22/1997	<50	0.73	< 0.50	< 0.50	0.63	<2.5								25.77	20.06		5.71		
S-4	07/21/1997	<50	<0.50	< 0.50	< 0.50	< 0.50	<2.5								25.77	22.10		3.67		
S-4	01/22/1998	<50	<0.50	< 0.50	< 0.50	< 0.50	<2.5								25.77	20.50		5.27		
S-4	07/08/1998	<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5								25.77	20.86		4.91		
S-4	10/26/1998														25.77	21.41		4.36		
S-4	01/28/1999	<50	< 0.50	<0.50	< 0.50	< 0.50	<2.5								25.77	22.34		3.43		
S-4	04/23/1999														25.77	21.43		4.34		
S-4	07/29/1999	<50.0	<0.500	< 0.500	<0.500	< 0.500	<5.00								25.77	21.45		4.32		
S-4	11/01/1999														25.77	22.08		3.69		

Table 1
Groundwater Data
Former Shell Service Station
461 8th Street, Oakland, California

	Date	TPHg	В	т	E	х	MTBE 8020	MTBE 8260	ТВА	DIPE	ЕТВЕ	TAME	EDC	EDB	тос	Depth to Water	SPH Thickness	GW Elevation	DO	ORP
Well ID	Date	i PHg (μg/L)	μg/L)	ι (μg/L)	μg/L)	Λ (μg/L)	(μg/L)	6260 (μg/L)	ιβΑ (μg/L)	μg/L)	(µg/L)	μg/L)	μg/L)	(µg/L)	(ft MSL)	(ft TOC)	(ft)	(ft MSL)	(mg/L)	(mV)
S-4	01/07/2000	<50	<0.50	<0.50	< 0.50	<0.50	<2.5								25.77	22.29		3.48		
S-4	04/11/2000														25.77	21.11		4.66		
S-4	07/19/2000	<50.0	< 0.500	<0.500	<0.500	< 0.500	<2.50								25.77	21.19		4.58		
S-4	10/12/2000														25.77	22.22		3.55		
S-4	01/09/2001	<50.0	< 0.500	<0.500	< 0.500	< 0.500	<2.50								25.77	22.17		3.60		
S-4	04/06/2001														25.77	21.50		4.27		
S-4	07/25/2001	<50	2.0	0.52	< 0.50	1.0		<5.0							25.77	21.50		4.27		
S-4	11/01/2001														25.77	21.95		3.82		
S-4	01/17/2002	<50 d	<0.50 d	<0.50 d	<0.50 d	<0.50 d		<5.0 d							25.77	21.13		4.64		
S-4	05/08/2002														25.77	21.35		4.42		
S-4	07/18/2002	<50	< 0.50	< 0.50	< 0.50	< 0.50		<5.0							34.41	21.19		13.22		
S-4	10/15/2002														34.41	21.42		12.99		
S-4	01/02/2003	<50	<0.50	<0.50	< 0.50	< 0.50		<5.0							34.41	20.75		13.66		
S-4	04/15/2003														34.41	21.08		13.33		
S-4	07/14/2003														34.41	19.93		14.48		
S-4	10/20/2003														34.41	19.56		14.85		
S-4	01/22/2004	<50	<0.50	<0.50	<0.50	<1.0		<0.50							34.41	19.12		15.29		
S-4	04/19/2004														34.41	19.15		15.26		
S-4	07/13/2004														34.41	20.48		13.93		
S-4	10/28/2004														34.41	21.00		13.41		
S-4	01/17/2005	<50	<0.50	<0.50	<0.50	<1.0		<0.50							34.41	20.17		14.24		
S-4	04/14/2005														34.41	19.82		14.59		
S-4	07/28/2005														34.41	20.71		13.70		
S-4	10/05/2005														34.41	20.85		13.56		
S-4	02/09/2006	<50.0	<0.500	<0.500	<0.500	<0.500		<0.500							34.41	19.47		14.94		
S-4	05/15/2006														34.41	19.52		14.89		
S-4	08/23/2006														34.41	20.75		13.66		
S-4	11/15/2006														34.41	20.03		14.38		
S-4	01/30/2007	<50	<0.50	<0.50	<0.50	<1.0		<0.50							34.41	21.30		13.11		
S-4	05/29/2007														34.41	21.15		13.26		
S-4	08/15/2007														34.41	21.38		13.03		
S-4	11/28/2007														34.41	21.55		12.86		
S-4	02/08/2008	64 f	<0.50	<1.0	<1.0	<1.0		<1.0					<0.50	<1.0	34.41	22.75		11.66		
S-4	05/08/2008														34.41	22.18		12.23		
S-4	08/14/2008														34.41	21.77		12.64		
S-4	11/11/2008														34.41	20.68		13.73		
S-4	01/05/2009	250	1.8	<1.0	<1.0	<1.0		<1.0					<0.50	<1.0	34.41	20.92		13.49		
S-4	04/09/2009														34.41	21.10		13.31		
S-4	07/23/2009														34.41	21.76		12.65		

Table 1
Groundwater Data
Former Shell Service Station
461 8th Street, Oakland, California

	Data	TDU	В	т	_	v	MTBE	MTBE 8260	ТВА	DIPE	ETRE	TAME	EDC	EDB	тос	Depth to		GW	DO	ORP
Well ID	Date	TPHg (μg/L)	B (µg/L)	ι (μg/L)	E (µg/L)	Χ (μg/L)	8020 (μg/L)	8260 (μg/L)	ιва (μg/L)	(µg/L)	ETBE (µg/L)	I AME (μg/L)	EDC (μg/L)	EDB (µg/L)	(ft MSL)	Water (ft TOC)	Thickness (ft)	Elevation (ft MSL)	DO (mg/L)	(mV)
S-4	10/01/2009														34.41	22.10		12.31		
S-4	01/28/2010	<50	< 0.50	<1.0	<1.0	<1.0									34.41	21.75		12.66		
S-4	05/20/2010														34.41	21.44		12.97		
S-4	08/31/2010														34.41	21.72		12.69		
S-4	12/29/2010														34.41	20.91		13.50		
S-4	02/01/2011	<50	< 0.50	< 0.50	< 0.50	1.1									34.41	21.19		13.22	1.84	157
S-4	04/25/2011														34.41	17.32		17.09		
S-4	07/28/2011														34.41	20.92		13.49		
S-4	10/28/2011														34.41	21.35		13.06		
S-4	05/07/2012	240	86	22	9.5	25									34.41	20.65		13.76	2.52	119
S-4	05/02/2013	55	< 0.50	< 0.50	< 0.50	<1.0									34.41	21.45		12.96		
S-4	04/21/2014	380	88	58	14	42									34.41	21.70		12.71		
S-4	07/17/2015	6,300	23	1.0	<1.0	15									34.41	18.49		15.92		
S-5	04/16/1987	130,000	15,000	16,000	а	14,000									99.36					
S-5	10/26/1988	110,000	20,000	25,000	2,300	10,000									99.36					
S-5	02/14/1989	94,000	16,000	21,000	1,800	10,000									99.36	19.87		79.49		
S-5	05/01/1989	120,000	29,000	35,000	3,100	15,000									99.36	21.23		78.13		
S-5	07/27/1989	110,000	20,000	29,000	2,400	14,000									99.36	20.41		78.95		
S-5	10/05/1989														99.36	20.43	0.01	78.94		
S-5	01/09/1990														99.36	21.16	0.01	78.21		
S-5	04/30/1990	100,000	13,000	22,000	2,100	11,000									99.36	20.96		78.40		
S-5	07/31/1990	53,000	8,300	14,000	1,200	7,400									99.36	20.88		78.48		
S-5	10/30/1990														99.36	21.96	0.03	77.42		
S-5	05/06/1991														99.36	23.00	0.13	76.46		
S-5	06/27/1991														99.36	20.53	0.03	78.85		
S-5	09/24/1991														99.36	21.40	0.06	78.01		
S-5	11/07/1991														99.36	21.33	0.25	78.23		
S-5	02/13/1992														99.36	22.52	0.31	77.09		
S-5	05/11/1992														99.36	22.46	0.58	77.36		
S-5	12/03/1992	Well inacces	ssible												99.36					
S-5	05/13/1993														99.36	22.22	0.27	77.36		
S-5	07/22/1993														99.36	21.68	0.25	77.88		
S-5	10/20/1993														99.36	20.51	0.23	79.03		
S-5	01/25/1994														99.36	21.93	0.18	77.57		
S-5	04/25/1994														99.36	21.97	0.35	77.67		
S-5	05/26/1994														99.36	20.84	0.35	78.80		
S-5	06/10/1994														99.36	21.01	0.32	78.61		
S-5	07/21/1994														99.36	22.18	0.47	77.56		
<u>J-J</u>	0112111004														55.50	22.10	0.71	77.00		

Table 1
Groundwater Data
Former Shell Service Station
461 8th Street, Oakland, California

S-5 08/ S-5 09/ S-5 10/ S-5 12/ S-5 04/ S-5 10/ S-5 01/	8/25/1994 9/22/1994 0/24/1994 2/22/1994 4/20/1995 0/04/1995 1/03/1996	TPHg (μg/L) 	Β (μg/L) 	Τ (μg/L) 	Ε (μg/L) 	X (μg/L)	8020 (μg/L)	8260 (µg/L)	TBA	DIPE	ETBE	TAME	EDC	EDB	TOC	Water	Thickness	Elevation	DO	ORP
S-5 09/ S-5 10/ S-5 12/ S-5 04/ S-5 10/ S-5 01/	9/22/1994 0/24/1994 2/22/1994 4/20/1995 0/04/1995	 						(Ma) =)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ft MSL)	(ft TOC)	(ft)	(ft MSL)	(mg/L)	(mV)
S-5 10/ S-5 12/ S-5 04/ S-5 10/ S-5 01/	0/24/1994 2/22/1994 4/20/1995 0/04/1995														99.36	22.01	0.44	77.70		
S-5 12/ S-5 04/ S-5 10/ S-5 01/	2/22/1994 4/20/1995 0/04/1995														99.36	22.00	0.15	77.48		
S-5 04/ S-5 10/ S-5 01/	4/20/1995 0/04/1995														99.36	22.28	0.56	77.53		
S-5 10/ S-5 01/	0/04/1995														22.94	22.88	0.99	0.85		
S-5 01/															22.94	21.66	0.33	1.54		
	1/03/1996														22.94	22.18		0.76		
C.E. CAL															22.94	22.80	0.83	0.80		
S-5 04/	4/11/1996														22.94	21.15	0.67	2.33		
S-5 07/	7/11/1996														22.94	22.62	0.90	1.04		
S-5 10/	0/02/1996														22.94	23.07	0.64	0.38		
S-5 01/	1/22/1997														22.94	20.83	0.16	2.24		
S-5 07/	7/21/1997														22.94	21.16	0.05	1.82		
S-5 01/	1/22/1998														22.94	20.04	0.04	2.93		
S-5 07/	7/08/1998	220	14	40	5.8	34	3.3								22.94	18.61		4.33		
S-5 10/	0/26/1998														22.94	17.31		5.63		
S-5 01/	1/28/1999	51,000	13,000	1,200	1,200	2,400	2,400								22.94	20.11		2.83		
S-5 04/	4/23/1999	65,600	2,540	7,300	1,790	9,840	<1,000								22.94	19.21		3.73		
S-5 07/	7/29/1999	61,400	3,320	6,980	1,520	7,700	<1,000								22.94	14.77		8.17		
S-5 11/	1/01/1999	48,200	2,700	5,740	1,290	7,850	<500	<40.0							22.94	15.56		7.38		
S-5 01/	1/07/2000	39,000	3,900	8,500	790	8,300	1,500								22.94	15.82		7.12		
	4/11/2000	29,300	1,680	5,060	1,130	6,220	<250								22.94	18.19		4.75		
S-5 07/	7/19/2000	6,420	2,110	207	252	681	355	253 b							22.94	19.01		3.93		
S-5 10/	0/12/2000	41,500	2,940	4,940	1,520	7,770	<250	<66.7							22.94	19.62		3.32		
S-5 01/	1/09/2001	142,000	7,030	9,550	2,340	12,600	779								22.94	19.94		3.00		
S-5 04/	4/06/2001	Well inaccess	sible												22.94					
S-5 04/	4/13/2001	59,800	4,810	10,800	1,950	10,100	842	<10.0							22.94	14.72		8.22		
S-5 07/	7/25/2001	71,000	2,900	6,800	1,700	9,100		<250							22.94	14.91		8.03		
S-5 08/	8/13/2001														22.94	19.43		3.51		
S-5 11/	1/01/2001	Unable to loc	ate												22.94					
	1/17/2002	58,000 d	460 d	3,300 d	1,900 d	8,400 d		<200 d							С	14.27				
	5/08/2002	60,000 d	d	2,700 d	1,800 d	8,800 d		<100 d							22.94	18.40		4.54		
	7/18/2002	53,000	240	1,200	1,500	6,400		<100							27.36	14.25		13.11		
		Well inaccess													27.36					
	0/17/2002	42,000	420	1,100	1,200	5,500		<10							27.36	14.90		12.46		
	1/02/2003	26,000	680	1,500	780	3,800		<5.0							27.36	14.72		12.64		
	4/15/2003	3,600	29	38	65	370		<5.0							е	14.45				
	7/14/2003	21,000	210	460	650	2,900		<10							e	14.10				
	0/20/2003	37,000	390	590	870	3,500		<13							e	14.63				
	1/22/2004	29,000	200	210	710	2,400		<13							e	14.08				

Table 1
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Former Shell Service Station
461 8th Street, Oakland, California

	Data	TDU	В	т	_	v	MTBE	MTBE	TDA	DIDE	ETDE	TAME	EDC	EDB	TOC	Depth to	SPH	GW	DO	
Well ID	Date	TPHg (µg/L)	B (µg/L)	Τ (μg/L)	E (µg/L)	Χ (μg/L)	8020 (μg/L)	8260 (μg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Water (ft TOC)	Thickness (ft)	Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-5	04/19/2004	25,000	490	460	750	2,400		19							е	13.43				
S-5	07/13/2004	28,000	300	280	690	2,400		<13							е	14.88				
S-5	08/14/2008	31,000	1,700	1,600	1,400	3,350		<10					<5.0	<10	е	16.65				
S-5	11/11/2008	37,000 i	2,500 i	1,300 i	2,000 i	3,490 i		<50 i					<25 i	<50 i	е	16.81				
S-5	11/11/2008	40,000 j	2,300 j	1,400 j	1,900 j	3,630 j		<50 j					<25 j	<50 j	е	16.81				
S-5	01/05/2009	57,000	2,300	1,400	1,500	2,900		<10					<5.0	<10	е	16.71				
S-5	04/09/2009	52,000	2,100	3,500	1,900	5,400		<20					<10	<20	е	16.31			0.3	163
S-5	07/23/2009	37,000	1,800	1,900	1,400	3,800									е	16.62			1.48	-84
S-5	10/01/2009	36,000	1,800	1,900	1,400	3,700									27.24	16.35		10.89	0.86	-52
S-5	01/28/2010	35,000	1,200	1,900	1,500	3,600									27.24	16.35		10.89		
S-5	05/20/2010	36,000	1,600	2,500	1,700	4,500									27.24	16.50		10.74	1.22	227
S-5	08/31/2010	32,000	1,300	1,100	1,600	3,400									27.24	16.95		10.29	0.58	-102
S-5	12/29/2010	26,000	970	1,500	1,500	3,200									27.24	16.25		10.99	1.18	233
S-5	02/01/2011	27,000	1,100	1,500	1,400	3,100									27.24	15.38		11.86	1.65	-83
S-5	04/25/2011	70,000	380	440	720	1,200									27.24	13.98		13.26	0.95	-109
S-5	07/28/2011	21,000	340	430	570	1,000									27.24	13.80		13.44	0.71	-95
S-5	10/28/2011	23,000	430	480	570	1,300									27.24	14.28		12.96	6.05	190
S-5	05/07/2012	16,000	150	200	350	760									27.24	13.82		13.42	3.61	120
S-5	08/31/2012	12,000	330	300	330	850									27.24	14.68		12.56	1.38	253
S-5	12/11/2012	14,000	420	700	550	1,500									27.24	16.00		11.24	1.07/1.29	162/63
S-5	01/24/2013	29,000	910	1,700	1,200	2,700									27.24	16.46		10.78		
S-5	05/02/2013	35,000	650	1,500	1,400	4,500									27.24	18.59		8.65		
S-5	08/09/2013	350,000	820	9,800	6,900	34,000									27.24	19.12		8.12		
S-5	11/07/2013														27.24	k	k	k		
S-5	01/31/2014														27.24	19.87	0.91	8.10		
S-5	03/14/2014														27.24	19.98	1.15	8.18		
S-5	04/21/2014														27.24	19.80	1.14	8.35		
S-5	07/31/2014														27.24	18.58	0.29	8.89		
S-5	09/22/2014														27.24	18.55	0.15	8.81		
S-5	10/03/2014														27.24	18.45		8.79		
S-5	10/10/2014														27.24	10.48		16.76		
S-5	10/17/2014														27.24	18.44		8.80		
S-5	10/24/2014														27.24	18.54		8.70		
S-5	11/21/2014	34,000	350	830	1,400	14,000									27.24	18.58		8.66		
S-5	12/23/2014														27.24	25.19		2.05		
S-5	01/22/2015	56,000 m	690	740	2,600	9,400									27.24	18.24		9.00		
S-5	07/17/2015	32,000	540	240	1,300	3,700									27.24	18.67		8.57		
S-5	09/29/2015	43,000	460	260	1,300	2,900									27.24	18.49		8.75		
S-5	11/25/2015	36,000	490	210	1,300	3,100									27.24	18.64		8.60		

Table 1
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	_						MTBE	MTBE								Depth to	SPH	GW		
Well	Date	TPHg (µg/L)	B (µg/L)	Τ (μg/L)	E (µg/L)	Χ (μg/L)	8020 (µg/L)	8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Water (ft TOC)	Thickness (ft)	Elevation (ft MSL)	DO (mg/L)	ORP (mV)
ID O	04/40/4007																			
S-6	04/16/1987 10/26/1988	81,000	16,000	9,000	a 2.500	6,400									100.58					
S-6 S-6		110,000	29,000	18,000	2,500	8,200									100.58	20.97		 79.71		
S-6	02/14/1989 05/01/1989	54,000 93,000	18,000 43,000	4,500 9,900	1,400 3,000	4,000 8,000									100.58 100.58	20.87 20.49		80.09		
S-6	05/01/1989	52,000	20,000	3,200	1,700	5,500									100.58	20.49		79.57		
S-6	10/05/1989	55,000	20,000	2,900	1,600	5,500									100.58	21.24		79.34		
S-6	01/09/1990	76,000	35,000	9,100	2,300	8,600									100.58	22.62	Sheen	73.9 4		
S-6	04/30/1990	39,000	13,000	2,300	900	2,800									100.58	22.10		78.48		
S-6	07/31/1990	48,000	20,000	4,600	1,500	4,900									100.58	22.00		78.58		
S-6	10/30/1990	27,000	7,400	900	600	1,400									100.58	22.14		78.44		
S-6	05/06/1991	35,000	3,900	2,700	2,300	3,500									100.58	22.40		78.18		
S-6	06/27/1991	51,000	19,000	5,600	1,700	6,300									100.58	21.21		79.37		
S-6	09/24/1991	42,000	14,000	4,300	1,200	4,000									100.58	22.26		78.32		
S-6	11/07/1991	39,000	11,000	2,000	800	2,300									100.58	22.35		78.23		
S-6	02/13/1992	64,000	21,000	6,200	1,600	5,100									100.58	22.28		78.30		
S-6	05/11/1992	57,000	22,000	7,600	2,200	7,700									100.58	22.10		78.48		
S-6	12/03/1992	110,000	26,000	9,400	2,100	8,700									100.58	22.14		78.44		
S-6	05/13/1993	58,000	21,000	6,800	2,500	9,800									100.58	22.16		78.42		
S-6	07/22/1993	70,000	31,000	14,000	3,000	13,000									100.58	21.64		78.94		
S-6	10/20/1993	48,000	28,000	9,800	3,200	12,000									100.58	21.62		78.96		
S-6	01/25/1994	70,000	23,000	7,500	2,500	8,000									100.58	21.80		78.78		
S-6	04/25/1994	61,000	16,000	4,000	1,800	5,100									100.58	21.68		78.90		
S-6	07/21/1994	44,000	8,200	3,600	1,400	3,900									100.58	21.78		78.80		
S-6 (D)	07/21/1994	32,000	7,800	3,400	1,300	3,700									100.58					
S-6	10/24/1994	2,936	1,184	440.6	163.4	648.4									100.58	22.06		78.52		
S-6 (D)	10/24/1994	2,968	770.8	325.3	144.1	622									22.08					
S-6	12/22/1994	32,000	7,000	2,900	790	2,400									22.08	21.91		0.17		
S-6 (D)	12/22/1994	32,000	8,000	3,800	1,100	3,400									22.08					
S-6	04/20/1995	56,000	15,000	3,800	1,900	4,900									22.08	21.38		0.70		
S-6 (D)	04/20/1995	49,000	13,000	3,500	1,800	4,700									22.08					
S-6	10/04/1995	49,000	8,400	4,700	1,800	4,800									22.08	21.80		0.28		
S-6 (D)	10/04/1995	41,000	8,400	4,100	1,400	4,400									22.08					
S-6	01/03/1996	52,000	9,100	7,100	1,800	5,800									22.08	21.70		0.38		
S-6	04/11/1996	59,000	11,000	7,100	2,100	6,400	<500								22.08	21.62		0.46		
S-6 (D)	04/11/1996	59,000	11,000	6,800	1,900	6,400	<500								22.08					
S-6	07/11/1996	72,000	18,000	6,600	2,500	8,400	<1,000								22.08	21.65		0.43		
S-6	10/02/1996	57,000	11,000	6,500	1,500	5,100	<500								22.08	21.80		0.28		
S-6	01/22/1997	67,000	15,000	5,000	1,800	5,400	<1,000								22.08	19.95		2.13		
S-6 (D)	01/22/1997	63,000	15,000	4,800	1,800	5,200	<1,000								22.08					

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	Dete	TDU	В	-	-	V	MTBE	MTBE	TDA	DIDE	ETDE	TANE	EDC	EDD	TOC	Depth to	SPH	GW	DO.	
Well ID	Date	TPHg (μg/L)	B (µg/L)	T (µg/L)	E (µg/L)	Χ (μg/L)	8020 (μg/L)	8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Water (ft TOC)	Thickness (ft)	Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-6	07/21/1997	61,000	15,000	2,100	1,100	3,500	1,900								22.08	20.61		1.47		
S-6	01/22/1998	46,000	14,000	3,200	1,300	3,400	<500								22.08	19.82		2.26		
S-6	07/08/1998	74,000	26,000	7,500	2,200	6,200	<1,000								22.08	18.20		3.88		
S-6	10/26/1998														22.08	18.81		3.27		
S-6	01/28/1999	120,000	9,000	14,000	2,700	14,000	3,700								22.08	19.73		2.35		
S-6	04/23/1999	58,500	15,900	1,360	1,640	3,030	<2500								22.08	17.58		4.50		
S-6	07/29/1999	36,200	10,300	760	930	1,360	<1,000								22.08	21.35		0.73		
S-6	11/01/1999	36,000	11,700	767	865	1,670	<1,250	<40.0							22.08	19.23		2.85		
S-6	01/07/2000	36,000	7,600	4,600	840	3,600	<1,000								22.08	19.53		2.55		
S-6	04/11/2000	14,600	7,540	205	306	609	621								22.08	18.16		3.92		
S-6	07/19/2000	2,590	629	63.9	99.6	267	124	72.7 b							22.08	18.40		3.68		
S-6	10/12/2000	32,900	14,200	966	1,060	1,790	<500	<100							22.08	19.52		2.56		
S-6	01/09/2001	27,600	11,200	675	666	1,580	1,430	<10.0 b							22.08	19.69		2.39		
S-6	02/05/2001														22.08	19.20		2.88		
S-6	04/06/2001	16,900	7,800	343	172	966	809	<20.0							22.08	18.25		3.83		
S-6	07/25/2001	29,000	9,800	1,700	1,000	1,800		<250							22.08	18.27		3.81		
S-6	11/01/2001	41,000	15,000	2,400	1,100	2,500		<500							22.08	19.30		2.78		
S-6	01/17/2002	38,000 d	11,000 d	1,700 d	990 d	2,200 d		<500 d							22.08	18.51		3.57		
S-6	05/08/2002	72,000	21,000	4,400	2,200	5,300		<1,000							22.08	18.30		3.78		
S-6	07/18/2002	71,000	17,000	4,300	1,700	4,800		<1,000							30.56	18.19		12.37		
S-6	10/15/2002	55,000	16,000	4,600	1,500	4,600		<100							30.56	18.77		11.79		
S-6	01/02/2003	75,000	21,000	5,000	2,400	6,400		<50							30.56	18.60		11.96		
S-6	04/15/2003	64,000	29,000	6,400	2,700	5,600		<1,000							30.56	18.27		12.29		
S-6	07/14/2003	47,000	19,000	4,300	1,500	4,300		<100							30.56	18.05		12.51		
S-6	10/20/2003	63,000	21,000	5,800	1,900	5,200		<130							30.56	18.55	Sheen	12.01		
S-6	01/22/2004	41,000	21,000	4,300	1,800	4,000		<130							30.56	18.18	Sheen	12.38		
S-6	04/19/2004	58,000	23,000	4,200	2,200	3,900		<130							30.56	17.32		13.24		
S-6	05/03/2004														30.56	17.30		13.26		
S-6	06/17/2004														30.56	17.70		12.86		
S-6	07/13/2004														30.56	17.85		12.71		
S-6	10/28/2004	45,000	21,000	3,600	1,700	3,300		<130							30.56	18.45		12.11		
S-6	01/17/2005	61,000	21,000	3,500	1,600	3,200		<130							30.56	17.52		13.04		
S-6	04/14/2005	36,000	12,000	6,200	850	4,800		<50							30.56	22.49		8.07		
S-6	07/28/2005	54,000	16,000	9,100	1,800	5,900		<130							30.56	19.38		11.18		
S-6	10/05/2005	59,000	14,000	7,500	1,400	5,000		<50							30.56	18.32		12.24		
S-6	02/09/2006	41,100	7,060	3,900	673	2,380		<0.500							30.56	17.11		13.45		
S-6	05/15/2006	188,000	24,800	20,700	2,540	12,400		<25.0							30.56	19.80		10.76		
S-6	08/23/2006	133,000	24,900	16,100	2,280	10,500		<0.500							30.56	20.45		10.11		
S-6	11/15/2006	66,000	19,000	8,400	1,900	7,400		<400							30.56	20.41		10.15		

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	Data	TDU	В				MTBE	MTBE	TDA	DIRE	ETRE	TAME	EDC	EDB	TOC	Depth to	SPH	GW	DO	
Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	Χ (μg/L)	8020 (μg/L)	8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Water (ft TOC)	Thickness (ft)	Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-6	01/30/2007	88,000	18,000	9,600	1,900	7,200		<100							30.56	20.47		10.09		
S-6	05/29/2007	56,000 f	17,000	6,700	1,700	5,400		<20							30.56	20.40		10.16		
S-6	08/15/2007	57,000 f,g	15,000	6,800	1,600	6,100		<100							30.56	20.49		10.07		
S-6	11/28/2007	42,000 f	13,000	5,000	1,300	5,000		<100							30.56	20.65		9.91		
S-6	02/08/2008	35,000 f	12,000	5,000	1,200	4,050		<100					<50	<100	30.56	20.31		10.25		
S-6	05/08/2008	45,000 f	15,000	6,100	1,400	5,000		<100					<50	<100	30.56	20.63		9.93		
S-6	08/14/2008	37,000	11,000	5,200	1,200	4,600		<100					<50	<100	30.56	20.65		9.91		
S-6	11/11/2008	37,000 i	15,000 i	6,200 i	1,200 i	3,390 i		<10 i					<5.0 i	<10 i	30.56	20.79		9.77		
S-6	11/11/2008	14,000 j	5,200 j	680 j	400 j	1,060 j		<50 j					<25 j	<50 j	30.56	20.79		9.77		
S-6	01/05/2009	53,000	9,400	3,600	890	3,100		<100					<50	<100	30.56	21.66		8.90		
S-6	04/09/2009	Unable to	sample												30.56					
S-6	04/21/2009	13,000	3,700	1,100	270	750		<100					<50	<100	30.56	20.20		10.36		
S-6	07/23/2009	15,000	4,400	1,100	360	1,000									30.56	20.66		9.90	1.13	-73
S-6	10/01/2009	21,000	5,100	1,300	420	1,200									30.56	20.86		9.70	0.58	16
S-6	01/28/2010	8,700	2,600	250	200	400									30.56	20.36		10.20		
S-6	05/20/2010	4,400	1,600	82	85	150									30.56	20.68		9.88	1.08	64
S-6	08/31/2010	19,000	4,700	1,300	560	1,600									30.56	20.78		9.78	1.55	-88
S-6	12/29/2010	15,000	3,900	1,500	520	1,800									30.56	19.92		10.64	2.35	123
S-6	02/01/2011	16,000	4,000	1,700	600	1,800									30.56	19.05		11.51	0.61	-143
S-6	04/25/2011	23,000	7,800	3,500	960	3,000									30.56	17.73		12.83	0.76	-112
S-6	07/28/2011	17,000	5,500	1,500	600	1,600									30.56	17.62		12.94	0.77	-26
S-6	10/28/2011	42,000	11,000	4,500	1,600	5,900									30.56	18.12		12.44	4.64	-9
S-6	05/07/2012	38,000	14,000	4,800	1,300	4,400									30.56	17.50		13.06	2.32	116
S-6	08/31/2012	96,000	6,700	2,500	1,900	6,200									30.56	18.42		12.14	0.62	146
S-6	12/11/2012	31,000	8,300	3,700	1,000	3,700									30.56	20.00		10.56	0.92/0.65	102/-16
S-6	01/24/2013	29,000	9,100	2,500	950	2,600									30.56	20.43		10.13		
S-6	05/02/2013	10,000	1,800	1,100	430	1,100									30.56	22.98		7.58		
S-6	08/09/2013	45,000	3,800	8,000	1,800	6,500									30.56	23.21		7.35		
S-6	11/07/2013	33,000	3,600	3,800	1,000	3,700									30.56	25.24		5.32		
S-6	01/31/2014	16,000	1,200	2,700	710	2,500									30.56	23.30		7.26		
S-6	04/21/2014	15,000	1,100	3,100	650	2,300									30.56	22.98		7.58		
S-6	07/31/2014	40,000 I	4,200	7,300	1,300	5,400									30.56	22.49		8.07		
S-6	11/21/2014	48,000	3,600	8,900	1,700	7,000									30.56	22.49		8.07		
S-6	01/22/2015	40,000 n	7,100	4,600	1,500	5,100									30.56	22.27		8.29		
S-6	07/17/2015	<50 b	<0.50 b	<0.50 b	<0.50 b	<1.0 b									30.56	22.70		7.86		
S-6	09/29/2015	13,000	730	1,700	550	2,000									30.56	22.67		7.89		
S-6	11/25/2015	13,000	1,400	1,200	610	1,900									30.56	22.50		8.06		

Table 1
Groundwater Data
Former Shell Service Station
461 8th Street, Oakland, California

		T D		_	_	.,	MTBE	MTBE								Depth to	SPH	GW		
Well ID	Date	TPHg (µg/L)	B (µg/L)	Τ (μg/L)	E (µg/L)	Χ (μg/L)	8020 (μg/L)	8260 (μg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (μg/L)	TAME (μg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Water (ft TOC)	Thickness (ft)	Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-8	12/22/1994	600	120	32	5.2	34									27.21	24.87		2.34		
S-8	04/20/1995	460	180	23	5.2	21									27.21	23.90		3.31		
S-8	10/04/1995	830	210	38	11	42									27.21	24.48		2.73		
S-8	01/03/1996	350	61	12	2.5	12									27.21	24.62		2.59		
S-8 (D)	01/03/1996	340	54	12	2.4	12									27.21					
S-8	04/11/1996	570	140	37	12	47	<6.2								27.21	24.32		2.89		
S-8	07/11/1996	980	98	32	9.1	160	<12								27.21	24.10		3.11		
S-8	10/02/1996	280	62	13	3.3	25	15								27.21	25.38		1.83		
S-8 (D)	10/02/1996	490	110	24	7.0	45	22	<2.0							27.21					
S-8	01/22/1997	400	90	13	4.9	25	12								27.21	23.91		3.30		
S-8	07/21/1997	2,900	380	110	26	260	85								27.21	23.62		3.59		
S-8 (D)	07/21/1997	3,200	420	120	32	300	130								27.21					
S-8	01/22/1998	3,800	790	140	42	330	160								27.21	23.52		3.69		
S-8 (D)	01/22/1998	3,500	780	120	33	300	160								27.21					
S-8	07/08/1998	3,600	1,800	<25	<25	<25	<125								27.21	21.52		5.69		
S-8 (D)	07/08/1998	4,000	1,800	<25	<25	31	<125								27.21					
S-8	10/26/1998														27.21	22.01		5.20		
S-8	01/28/1999	2,000	630	6.2	24	51	43								27.21	23.03		4.18		
S-8	04/23/1999	1,050	408	<5.00	<5.00	6.65	<50.0								27.21	22.15		5.06		
S-8	07/29/1999	955	344	<2.50	6.90	16.2	<25.0								27.21	21.95		5.26		
S-8	11/01/1999	1,800	550	6.45	15.0	40.4	<50.0								27.21	22.55		4.66		
S-8	01/07/2000	1,300	600	11	29	48	<13								27.21	22.87		4.34		
S-8	04/11/2000	342	101	4.42	4.24	14.7	21.4								27.21	21.86		5.35		
S-8	07/19/2000	579	228	6.37	6.45	25	<12.5								27.21	21.93		5.28		
S-8	10/12/2000	947	340	8.64	3.26	38.3	<12.5	<2.00							27.21	22.92		4.29		
S-8	01/09/2001	1,090	394	<10.0	<10.0	33.3	57.6								27.21	23.19		4.02		
S-8	04/06/2001	671	182	12.5	16.4	47.1	42.5								27.21	22.46		4.75		
S-8	07/25/2001	500	70	6.7	11	23		<5.0							27.21	22.50		4.71		
S-8	11/01/2001	1,900	250	28	39	180		<5.0							27.21	22.44		4.77		
S-8	01/17/2002	830 d	140 d	11 d	12 d	89 d		<5.0 d							27.21	21.82		5.39		
S-8	05/08/2002	210 d	34 d	1.7 d	4.1 d	15 d		<5.0 d							27.21	21.35		5.86		
S-8	07/18/2002	650	68	2.8	9.7	42		<5.0							35.85	21.53		14.32		
S-8	10/15/2002	1,000	160	4.2	7.7	74		< 0.50							35.85	21.97		13.88		
S-8	01/02/2003	440	55	1.8	2.9	31		< 0.50							35.85	21.95		13.90		
S-8	04/15/2003														35.85	21.73		14.12		
S-8	07/14/2003	60	6.8	< 0.50	0.98	4.9		<0.50							35.85	21.40		14.45		
S-8	10/20/2003														35.85	21.94		13.91		
S-8	01/22/2004	210	19	0.52	3.6	17		<0.50							35.85	21.40		14.45		
S-8	04/19/2004														35.85	20.83		15.02		

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							MTBE	MTBE								Depth to	SPH	GW		
Well	Date	TPHg	В	T	E	X	8020	8260	TBA	DIPE	ETBE	TAME	EDC	EDB	TOC	Water	Thickness	Elevation	DO	ORP
ID		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ft MSL)	(ft TOC)	(ft)	(ft MSL)	(mg/L)	(mV)
S-8	07/13/2004	420	77	0.82	14	31		< 0.50							35.85	21.05		14.80		
S-8	10/28/2004														35.85	21.77		14.08		
S-8	01/17/2005	490	85	0.89	13	28		< 0.50							35.85	20.92		14.93		
S-8	04/14/2005														35.85	21.57		14.28		
S-8	07/28/2005	64	12	< 0.50	1.5	1.6		< 0.50							35.85	21.62		14.23		
S-8	10/05/2005														35.85	21.11		14.74		
S-8	02/09/2006	<50.0	2.79	< 0.500	< 0.500	< 0.500		< 0.500							35.85	20.18		15.67		
S-8	05/15/2006														35.85	20.53		15.32		
S-8	08/23/2006	<50.0	< 0.500	< 0.500	< 0.500	< 0.500		<0.500							35.85	21.49		14.36		
S-8	11/15/2006														35.85	22.05		13.80		
S-8	01/30/2007	<50	< 0.50	< 0.50	< 0.50	<1.0		< 0.50							35.85	22.41		13.44		
S-8	05/29/2007														35.85	22.65		13.20		
S-8	08/15/2007	65 f,g	7.4	<1.0	<1.0	<1.0		<1.0							35.85	22.88		12.97		
S-8	11/28/2007														35.85	23.20		12.65		
S-8	02/08/2008	350 f	22	<1.0	4.8	2.6		1.2					< 0.50	<1.0	35.85	22.72		13.13		
S-8	05/08/2008														35.85	22.91		12.94		
S-8	08/14/2008	420	28	<1.0	6.3	1.4		<1.0					< 0.50	<1.0	35.85	23.12		12.73		
S-8	11/11/2008	330 i	37 i	<1.0 i	5.1 i	<1.0 i		<1.0 i					<0.50 i	<1.0 i	35.85	23.37		12.48	1.6	28
S-8	11/11/2008	480 j	29 j	<1.0 j	5.4 j	<1.0 j									35.85	23.37		12.48	2.2	103
S-8	12/18/2008	340	38	<1.0	5.4	<1.0									35.83	23.31		12.52		
S-8	01/05/2009	170	15	<1.0	1.2	<1.0									35.83	23.28		12.55		
S-8	01/15/2009	260	45	<1.0	3.2	<1.0									35.83	23.05		12.78		
S-8	02/12/2009	88	7.2	<1.0	<1.0	<1.0									35.83	23.34		12.49		
S-8	03/12/2009	12,000	1,700	2,100	200	2,400									35.83	22.90		12.93		
S-8	04/09/2009	170	< 0.50	<1.0	<1.0	<1.0									35.83	23.10		12.73		594
S-8	07/23/2009	140	0.55	<1.0	<1.0	<1.0									35.83	23.02		12.81	2.38	-54
S-8	10/01/2009	140	0.68	<1.0	<1.0	<1.0									35.83	23.31		12.52	4.34	359
S-8	01/28/2010	<50	<0.50	<1.0	<1.0	<1.0									35.83	22.80		13.03		
S-8	05/20/2010	<50	< 0.50	<1.0	<1.0	<1.0									35.83	23.55		12.28	0.64	42
S-8	08/31/2010	<50	< 0.50	<1.0	<1.0	<1.0									35.83	23.48		12.35	0.54	-72
S-8	12/29/2010	79	0.83	<1.0	<1.0	<1.0									35.83	23.18		12.65	0.74	133
S-8	02/01/2011	<50	< 0.50	< 0.50	< 0.50	<1.0									35.83	22.57		13.26	1.68	104
S-8	04/25/2011	<50	1.1	< 0.50	< 0.50	<1.0									35.83	21.26		14.57	1.78	12
S-8	07/28/2011	50	2.4	< 0.50	< 0.50	<1.0									35.83	20.94		14.89	0.89	186
S-8	10/28/2011	<50	0.61	< 0.50	< 0.50	<1.0									35.83	21.09		14.74	2.78	349
S-8	05/07/2012	<50	4.3	1.4	0.59	1.0									35.83	21.23		14.60	2.42	209
S-8	05/02/2013	53	<0.50	< 0.50	< 0.50	<1.0									35.83	24.65		11.18		
S-8	04/21/2014	<50	<0.50	< 0.50	<0.50	<1.0									35.83	25.28		10.55		
S-8	Well destroyed																			

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							MTBE	MTBE								Depth to	SPH	GW		
Well	Date	TPHg	В	Т	E	X	8020	8260	TBA	DIPE	ETBE	TAME	EDC	EDB	TOC	Water	Thickness		DO	ORP
ID		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ft MSL)	(ft TOC)	(ft)	(ft MSL)	(mg/L)	(mV)
S-9	12/22/1994	2,600	400	150	42	310									26.06	24.37		1.69		
S-9	04/20/1995	1,900	400	130	51	200									26.06	23.49		2.57		
S-9	10/04/1995	3,200	590	260	68	280									26.06	24.01		2.05		
S-9	01/03/1996	•	ssible												26.06					
S-9	04/11/1996	2,100	440	1,500	42	210	<25								26.06	23.61		2.45		
S-9	07/11/1996	5,200	940	450	120	520	<50								26.06	23.78		2.28		
S-9 (D)	07/11/1996	4,800	890	430	110	500	<50								26.06					
S-9	10/02/1996	3,000	680	220	56	270	<62								26.06	24.31		1.75		
S-9	01/22/1997	1,500	230	71	36	130	<12								26.06	23.08		2.98		
S-9	07/21/1997	3,400	590	57	19	210	96								26.06	22.83		3.23		
S-9	01/22/1998	2,600	300	46	<10	270	62								26.06	21.96		4.10		
S-9	07/08/1998	820	150	6.2	7.5	57	<10								26.06	20.85		5.21		
S-9	10/26/1998														26.06	21.39		4.67		
S-9	01/28/1999	<50	1.0	<0.50	<0.50	<0.50	<2.5								26.06	22.32		3.74		
S-9	04/23/1999														26.06	21.41		4.65		
S-9	07/29/1999	117	7.77	0.817	0.683	5.05	<5.00								26.06	21.25		4.81		
S-9	11/01/1999														26.06	21.92		4.14		
S-9	01/07/2000	<50	1.2	<0.50	<0.50	<0.50	<2.5								26.06	22.11		3.95		
S-9	04/11/2000														26.06	21.14		4.92		
S-9	07/19/2000	Well inacce	ssible												26.06					
S-9	10/12/2000														26.06	22.24		3.82		
S-9	01/09/2001	<50.0	1.45	<0.500	<0.500	<0.500	<2.50								26.06	22.52		3.54		
S-9	04/06/2001														26.06	23.61		2.45		
S-9	07/25/2001	Well inacce													26.06					
S-9	08/13/2001	Well inacce													26.06					
S-9	11/01/2001														26.06	21.78		4.28		
S-9	01/17/2002	<50 d	<0.50 d	<0.50 d	<0.50 d	<0.50 d		<5.0 d							26.06	21.15		4.91		
S-9	05/08/2002														26.06	20.56		5.50		
S-9	07/18/2002	<50	<0.50	<0.50	<0.50	<0.50		<5.0							34.70	20.88		13.82		
S-9	10/15/2002														34.70	21.41		13.29		
S-9	01/02/2003	<50	<0.50	<0.50	<0.50	<0.50		<5.0							34.70	21.41		13.35		
S-9	04/15/2003														34.70	21.14		13.56		
S-9 S-9	07/14/2003	<50	<0.50	<0.50	<0.50	<1.0		<0.50							34.70	20.80		13.90		
S-9 S-9	10/20/2003			<0.50											34.70	21.33		13.37		
S-9 S-9	01/22/2004	 <50	<0.50	<0.50	<0.50	<1.0		<0.50							34.70	20.77		13.93		
S-9 S-9	04/19/2004																			
		 -50	 -0.50	 -0.50	 -0.50	 -1.0		 -0.50							34.70	20.06		14.64		
S-9	07/13/2004	<50	<0.50	<0.50	<0.50	<1.0		<0.50							34.70	20.44		14.26		
S-9	10/28/2004	 -E0	 -0 50	 -0 E0	 -0.50			 -0.50							34.70	21.02		13.68		
S-9	01/17/2005	<50	<0.50	<0.50	<0.50	<1.0		<0.50							34.70	20.18		14.52		
S-9	04/14/2005	260	100	4.0	4 4	2.0			 -E O						34.70	21.85		12.85		
S-9	07/28/2005	360	190	1.8	1.1	3.9		<0.50	<5.0	<2.0	<2.0	<2.0			34.70	21.22		13.48		

Table 1
Groundwater Data
Former Shell Service Station
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					_		MTBE	MTBE								Depth to	SPH	GW		
Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (μg/L)	Χ (μg/L)	8020 (μg/L)	8260 (μg/L)	TBA (μg/L)	DIPE (μg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Water (ft TOC)	Thickness (ft)	Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-9	10/05/2005														34.70	20.63		14.07		
S-9	02/09/2006	<50.0	0.94	< 0.500	< 0.500	< 0.500		< 0.500							34.70	19.23		15.47		
S-9	05/15/2006														34.70	20.28		14.42		
S-9	08/23/2006	7,000	1,740	55.6	193	278		< 0.500	<10.0	< 0.500	< 0.500	<0.500			34.70	21.31		13.39		
S-9	11/15/2006														34.70	21.79		12.91		
S-9	01/30/2007	12,000	2,200	250	480	980		< 0.50							34.70	22.08		12.62		
S-9	05/29/2007														34.70	22.22		12.48		
S-9	08/15/2007	9,800 f,g	2,400	100	410	602		<10	<100	<20	<20	<20			34.70	22.43		12.27		
S-9	11/28/2007														34.70	22.75		11.95		
S-9	02/08/2008	69 f	2.2	<1.0	<1.0	<1.0		<1.0					< 0.50	<1.0	34.70	22.31		12.39		
S-9	05/08/2008														34.70	22.49		12.21		
S-9	08/14/2008	<50	< 0.50	<1.0	<1.0	<1.0		<1.0					< 0.50	<1.0	34.70	22.70		12.00		
S-9	11/11/2008	<50 i	2.4 i	<1.0 i	<1.0 i	<1.0 i		<1.0 i					<0.50 i	<1.0 i	34.70	22.90		11.80	1.1	92
S-9	11/11/2008	550 j	74 j	12 j	22 j	55.3 j									34.70	22.90		11.80	3.6	98
S-9	12/18/2008	1,500	280	43	71	182									34.34	22.81		11.53		
S-9	01/05/2009	1,000	230	24	45	64									34.34	22.75		11.59		
S-9	01/15/2009	2,100	560	75	100	245									34.34	22.37		11.97		
S-9	02/12/2009	500	120	19	26	50									34.34	22.61		11.73		
S-9	03/12/2009	810	200	30	50	110									34.34	22.22		12.12		
S-9	04/09/2009	2,300	450	60	110	260									34.34	22.12		12.22	0.65	79
S-9	05/18/2009	1,500	200	35	61	180									34.34	22.09		12.25	2.71	173
S-9	07/23/2009	1,700	430	49	110	190									34.34	22.48		11.86	0.21	346
S-9	10/01/2009	1,200	180	12	58	93									34.34	22.84		11.50	1.37	146
S-9	11/09/2009	1,400	260	21	67	81									34.34	22.63		11.71	0.42	
S-9	12/01/2009	1,100	110	11	26	59									34.34	22.44		11.90	1.09	133
S-9	01/28/2010	860	130	9.3	38	79									34.34	22.35		11.99	1.95	
S-9	05/20/2010	1,900	340	27	100	210									34.34	22.40		11.94	0.17	138
S-9	06/22/2010	1,400	240	30	65	130									34.34	22.64		11.70	2.16	577
S-9	08/31/2010	760	130	13	54	110		<1.0	<10	<2.0	<2.0	<2.0			34.34	22.92		11.42	1.53	415
S-9	12/29/2010	290	55	3.3	18	41									34.34	22.62		11.72	1.64	163
S-9	02/01/2011	640	99	7.8	38	72									34.34	21.88		12.46	1.34	0
S-9	04/25/2011	590	120	9.1	29	77									34.34	20.34		14.00	0.62	98
S-9	07/28/2011	1,700	280	47	88	230		<1.0	<10	<1.0	<1.0	<1.0			34.34	20.10		14.24	2.17	73
S-9	10/28/2011	1,900	370	32	110	260									34.34	20.54		13.80	2.18	122
S-9	05/07/2012	970	200	14	46	100		<2.5	<50	<2.5	<2.5	<2.5			34.34	20.49		13.85	0.91	78
S-9	12/11/2012	610	160	22	32	95									34.34	22.28		12.06	1.28/1.53	93/76
S-9	05/02/2013	1,400	230	53	65	160		<2.5	<50	<2.5	<2.5	<2.5			34.34	24.36		9.98		
S-9	11/07/2013	1,200	150	15	32	84									34.34	24.92		9.42		
S-9	04/21/2014	1,100	120	25	33	83		<1.3	<25	<1.3	<1.3	<1.3			34.34	24.90		9.44		
S-9	11/21/2014	1,600	250	15	64	89									34.34	24.55		9.79		
S-9	Well destroyed	i																		

Table 1
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Well	Date	TPHg	В	т	E	х	MTBE 8020	MTBE 8260	ТВА	DIPE	ETBE	TAME	EDC	EDB	тос	Depth to Water	SPH Thickness	GW Elevation	DO	ORP
<u>ID</u>		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ft MSL)	(ft TOC)	(ft)	(ft MSL)	(mg/L)	(mV)
S-10	12/22/1994	420	27	8.0	18	45									28.04	25.84		2.20		
S-10	04/20/1995	820	49	3.7	97	52									28.04	24.92		3.12		
S-10	10/04/1995	240	6.5	1.1	16	12									28.04	25.47		2.57		
S-10	01/03/1996	1,100	27	4.9	110	70									28.04	25.60		2.44		
S-10	04/11/1996	530	19	1.6	82	52	<5.0								28.04	25.27		2.77		
S-10	07/11/1996	570	16	3.2	53	53	<2.5								28.04	25.46		2.58		
S-10	10/02/1996	270	8.2	0.77	24	23	3.3								28.04	25.81		2.23		
S-10	01/22/1997	160	4.8	0.73	16	11	<2.5								28.04	24.74		3.30		
S-10	07/21/1997	530	5.7	0.70	29	69	<2.5								28.04	24.50		3.54		
S-10	01/22/1998	1,500	15	<5.0	88	130	<25								28.04	24.44		3.60		
S-10	07/08/1998	530	4.8	1.1	47	51	<2.5								28.04	22.36		5.68		
S-10	10/26/1998														28.04	22.81		5.23		
S-10	01/28/1999	630	4.6	0.98	< 0.50	59	<2.5								28.04	23.82		4.22		
S-10	04/23/1999														28.04	22.96		5.08		
S-10	07/29/1999	728	3.4	<1.00	41.8	38.0	<10.0								28.04	22.63		5.41		
S-10	11/01/1999														28.04	23.02		5.02		
S-10	01/07/2000	870	8.5	1.3	110	110	<2.5								28.04	23.33		4.71		
S-10	04/11/2000														28.04	22.64		5.40		
S-10	07/19/2000	612	3.75	<0.500	41.6	43.6	<2.50								28.04	23.04		5.00		
S-10	10/12/2000														28.04	23.92		4.12		
S-10	01/09/2001	647	7.62	1.01	66.2	42.4	<2.50								28.04	24.13		3.91		
S-10	04/06/2001														28.04	25.37		2.67		
S-10	07/25/2001	340	1.5	< 0.50	42	19		<5.0							28.04	25.35		2.69		
S-10	11/01/2001														28.04	23.22		4.82		
S-10	01/17/2002	1,100 d	3.5 d	<0.50 d	55 d	46 d		<5.0 d							28.04	22.72		5.32		
S-10	05/08/2002														28.04	22.35		5.69		
S-10	07/18/2002	750	1.8	< 0.50	42	26		<5.0							36.35	22.05		14.30		
S-10	10/15/2002														36.35	22.51		13.84		
S-10	01/02/2003	440	1.8	< 0.50	14	24		<5.0							36.35	22.50		13.85		
S-10	04/15/2003														36.35	22.32		14.03		
S-10	07/14/2003	210	0.86	< 0.50	13	12		< 0.50							36.35	21.99		14.36		
S-10	10/20/2003														36.35	22.53		13.82		
S-10	01/22/2004	280	0.88	< 0.50	10	11		<0.50							36.35	22.02		14.33		
S-10	04/19/2004														36.35	21.43		14.92		
S-10	07/13/2004	770	1.5	< 0.50	70	42		< 0.50							36.35	21.68		14.67		
S-10	10/28/2004														36.35	22.37		13.98		

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Well	Date	TPHg	В	т	E	Х	MTBE 8020	MTBE 8260	ТВА	DIPE	ETBE	TAME	EDC	EDB	тос	Depth to Water	SPH Thickness	GW Elevation	DO	ORP
ID		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ft MSL)	(ft TOC)	(ft)	(ft MSL)	(mg/L)	(mV)
S-10	01/17/2005	1,100	1.5	<0.50	73	51		<0.50							36.35	21.45		14.90		
S-10	04/14/2005														36.35	22.18		14.17		
S-10	07/28/2005	260	<0.50	< 0.50	19	9.7		< 0.50	<5.0	<2.0	<2.0	<2.0			36.35	22.25		14.10		
S-10	10/05/2005														36.35	21.70		14.65		
S-10	02/09/2006	630	<0.500	<0.500	13.8	13.8		<0.500							36.35	20.37		15.98		
S-10	05/15/2006														36.35	21.31		15.04		
S-10	08/23/2006	<50.0	<0.500	<0.500	14.5	3.4		<0.500	<10.0	<0.500	<0.500	<0.500			36.35	22.12		14.23		
S-10	11/15/2006														36.35	22.68		13.67		
S-10	01/30/2007	120	<0.50	< 0.50	7.0	3.3		< 0.50							36.35	23.09		13.26		
S-10	05/29/2007														36.35	23.20		13.15		
S-10	08/15/2007	64 f,g	0.15 h	<1.0	1.4	0.72 h		<1.0	<10	<2.0	<2.0	<2.0			36.35	23.48		12.87		
S-10	11/28/2007														36.35	23.82		12.53		
S-10	02/08/2008	61 f	<0.50	<1.0	<1.0	<1.0		<1.0					<0.50	<1.0	36.35	23.31		13.04		
S-10	05/08/2008														36.35	23.55		12.80		
S-10	08/14/2008	58	<0.50	<1.0	2.7	<1.0		<1.0					<0.50	<1.0	36.35	23.75		12.60		
S-10	11/11/2008														36.35	23.08		13.27		
S-10	12/18/2008	<50	<0.50	<1.0	<1.0	<1.0									36.35	24.00		12.35		
S-10	01/05/2009	<50	<0.50	<1.0	<1.0	<1.0									36.35	23.87		12.48		
S-10	01/15/2009	<50	<0.50	<1.0	1.1	<1.0									36.35	23.66		12.69		
S-10	02/12/2009	56	<0.50	<1.0	3.4	<1.0									36.35	23.96		12.39		
S-10	03/12/2009	53	<0.50	<1.0	4.9	<1.0									36.35	23.44		12.91		
S-10	04/09/2009														36.35	23.26		13.09		
S-10	07/23/2009	66	<0.50	<1.0	5.7	<1.0									36.35	23.56		12.79	0.06	112
S-10	10/01/2009	76	<0.50	<1.0	4.6	<1.0									36.35	23.80		12.55	1.26	206
S-10	01/28/2010	100	< 0.50	<1.0	3.6	<1.0									36.35	23.30		13.05		
S-10	05/20/2010	52	<0.50	<1.0	1.9	<1.0									36.35	24.04		12.31	0.68	59
S-10	08/31/2010	<50	0.69	<1.0	1.4	<1.0		<1.0	<10	<2.0	<2.0	<2.0			36.35	24.24		12.11	0.51	-3
S-10	12/29/2010	95	< 0.50	<1.0	3.4	1.4									36.35	23.89		12.46	0.43	87
S-10	02/01/2011	69	<0.50	< 0.50	2.2	<1.0									36.35	23.25		13.10	2.08	117
S-10	04/25/2011	55	0.51	< 0.50	2.9	<1.0									36.35	21.87		14.48	1.32	21
S-10	07/28/2011	<50	<0.50	<1.0	0.92	<1.0		<1.0	<10	<1.0	<1.0	<1.0			36.35	21.39		14.96	0.32	227
S-10	10/28/2011	52	<0.50	<0.50	2.7	<1.0									36.35	21.68		14.67	2.68	327
S-10	05/07/2012	50	0.84	<0.50	1.5	<1.0		<0.50	<10	<0.50	<0.50	<0.50			36.35	22.00		14.35	2.51	220
S-10	05/02/2013	100	<0.50	<0.50	0.77	<1.0		<0.50	<10	<0.50	<0.50	<0.50			36.35	25.53		10.82		
S-10	04/21/2014	180	<0.50	<0.50	0.71	<1.0		<0.50	<10	<0.50	<0.50	<0.50			36.35	26.20		10.15		
S-10	Well destroyed																			

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Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	Χ (μg/L)	MTBE 8020 (µg/L)	MTBE 8260 (μg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	SPH Thickness (ft)	GW Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-12	12/17/2007														36.44	24.58		11.86		
S-12	02/08/2008	55 f	<0.50	<1.0	<1.0	<1.0		<1.0					<0.50	<1.0	36.44	24.32		12.12		
S-12	05/08/2008	<50 f	<0.50	<1.0	<1.0	<1.0		<1.0					<0.50	<1.0	36.44	24.51		11.93		
S-12	08/14/2008	<50	1.0	<1.0	<1.0	<1.0		<1.0					<0.50	<1.0	36.44	24.63		11.81		
S-12	11/11/2008	<50 i	0.95 i	<1.0 i	<1.0 i	<1.0 i		<1.0 i					<0.50 i	<1.0 i	36.44	24.85		11.59	0.2	37
S-12	11/11/2008	65 j	8.1 j	2.2 j	4.8 j	1.5 j									36.44	24.85		11.59	0.2	45
S-12	12/18/2008	<50	8.3	<1.0	1.8	<1.0									36.44	24.81		11.63		
S-12	01/05/2009	95	16	<1.0	3.2	<1.0									36.44	24.75		11.69		
S-12	01/15/2009	140	36	<1.0	12	<1.0									36.44	24.54		11.90		
S-12	02/12/2009	<50	5.0	<1.0	1.6	<1.0									36.44	24.81		11.63		
S-12	03/12/2009	<50	4.8	<1.0	1.5	<1.0									36.44	24.41		12.03		
S-12	04/09/2009	59	6.0	<1.0	1.6	<1.0									36.44	24.23		12.21	0.50	-3
S-12	07/23/2009	130	29	<1.0	13	<1.0									36.44	24.50		11.94	0.07	142
S-12	10/01/2009	130	25	<1.0	15	<1.0									36.44	24.76		11.68	0.74	135
S-12	01/28/2010	110	14	<1.0	19	<1.0									36.44	24.28		12.16		
S-12	05/20/2010	75	8.5	<1.0	7.0	<1.0									36.44	24.71		11.73	0.14	740
S-12	08/31/2010	<50	0.56	<1.0	<1.0	<1.0									36.44	25.08		11.36	1.18	180
S-12	12/29/2010	<50	0.98	<1.0	<1.0	<1.0									36.44	24.60		11.84	1.27	121
S-12	02/01/2011	<50	1.8	<0.50	2.8	<1.0									36.44	23.94		12.50	2.06	-2
S-12	04/25/2011	<50	0.82	<0.50	1.7	<1.0									36.44	22.53		13.91	0.28	196
S-12	07/28/2011	<50	0.96	< 0.50	2.8	<1.0									36.44	22.05		14.39	3.01	163
S-12	10/28/2011	99	15	< 0.50	14	<1.0									36.44	22.50		13.94	3.67	91
S-12	05/07/2012	180	25	<0.50	19	1.0									36.44	22.50		13.94	0.88	66
S-12	05/02/2013	190	1.2	0.64	0.71	3.8									36.44	26.48		9.96		
S-12	04/21/2014	1,100	5.0	3.3	9.5	38									36.44	27.08		9.36		
S-12	Well destroyed																			
S-13	12/17/2007														35.16	23.33		11.83		
S-13	02/08/2008	14,000 f	1,900	1,300	280	3,000		<10					<5.0	<10	35.16	23.01		12.15		
S-13	05/08/2008	18,000 f	2,800	3,400	550	3,500		<10					<5.0	<10	35.16	23.31		11.85		
S-13	08/14/2008	16,000	2,400	3,100	580	3,100		<20					<10	<20	35.16	23.31		11.85		
S-13	11/11/2008	16,000 i	2,400 i	2,800 i	270 i	2,500 i		<50 i					<25 i	<50 i	35.16	23.60		11.56	8.0	-48
S-13	11/11/2008	4,400 j	560 j	630 j	88 j	530 j									35.16	23.60		11.56	1.2	-60
S-13	12/18/2008	3,900	530	560	76	510									35.05	23.61		11.44		
S-13	01/05/2009	8,200	700	670	67	1,000									35.05	23.54		11.51		
S-13	01/15/2009	5,400	610	610	48	950									35.05	23.10		11.95		
S-13	02/12/2009	6,300	800	1,000	110	870									35.05	22.36		12.69		

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	Data	TDU	В	-	F	V	MTBE	MTBE	TDA	DIDE	ETDE	TAME	FDC	EDB	TOC	Depth to	SPH	GW	DO	
Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	Χ (μg/L)	8020 (μg/L)	8260 (μg/L)	TBA (µg/L)	DIPE (μg/L)	ETBE (µg/L)	TAME (μg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Water (ft TOC)	Thickness (ft)	Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-13	03/12/2009	14,000	1,700	2,300	190	2,400									35.05	23.20		11.85		
S-13	04/09/2009	35,000	510	7,800	1,000	4,300									35.05	23.02		12.03	25.9	433
S-13	05/18/2009	35,000	820	7,000	1,100	6,600									35.05	23.07		11.98	5.21	83
S-13	07/23/2009	18,000	1,800	3,000	480	2,500									35.05	23.51		11.54	1.23	148
S-13	10/01/2009	2,000	330	87	33	5.2									35.05	23.61		11.44	1.23	413
S-13	11/09/2009	15,000	1,100	1,500	300	1,800									35.05	23.41		11.64	0.71	
S-13	12/01/2009	1,600	210	190	34	36									35.05	23.15		11.90	16.3	231
S-13	01/28/2010	5,900	370	930	100	680									35.05	22.94		12.11	2.18	
S-13	05/20/2010	400	35	120	9.5	52									35.05	23.36		11.69	0.31	211
S-13	06/22/2010	16,000	570	3,000	260	2,000									35.05	23.20		11.85	1.10	412
S-13	08/31/2010	3,000	140	490	83	540									35.05	24.00		11.05	0.90	400
S-13	12/29/2010	8,700	600	1,700	260	1,700									35.05	23.48		11.57	0.69	231
S-13	02/01/2011	2,100	170	390	75	410									35.05	22.71		12.34	1.10	248
S-13	04/25/2011	6,000	600	1,800	270	1,300									35.05	21.15		13.90	0.19	69
S-13	07/28/2011	3,700	320	430	160	790									35.05	20.64		14.41	2.65	44
S-13	10/28/2011	8,100	600	830	380	1,700									35.05	21.47		13.58	3.67	1
S-13	05/07/2012	5,100	540	670	320	1,100									35.05	21.35		13.70	0.60	-176
S-13	12/11/2012	5,900	420	580	260	950									35.05	22.91		12.14	1.07/0.80	-70/-63
S-13	05/02/2013	1,300	130	95	49	85									35.05	25.24		9.81		
S-13	11/07/2013														35.05	k	k	k		
S-13	03/14/2014														35.05	26.22	0.25	9.03		
S-13	04/21/2014														35.05	26.09	0.39	9.27		
S-13	07/31/2014														35.05	25.25		9.80		
S-13	09/22/2014														35.05	25.31		9.74		
S-13	10/03/2014														35.05	25.35		9.70		
S-13	10/10/2014														35.05	25.33		9.72		
S-13	10/17/2014														35.05	25.31		9.74		
S-13	10/24/2014	Well inacces	ssible												35.05					
S-13	11/21/2014	7,000	330	270	120	590									35.05	25.35		9.70		
S-13	11/21/2014	7,000	330	270	120	590									35.05	18.33		16.72		
S-13	01/22/2015														35.05	25.01		10.04		
S-13	Well destroyed																			
S-14	12/17/2007														34.94	22.68		12.26		
S-14	02/08/2008	5,300 f	380	300	34	970		<10					<5.0	<10	34.94	22.82		12.12		
S-14	05/08/2008	4,300 f	750	270	30	520		<10					<5.0	<10	34.94	22.41		12.53		
S-14	Well destroyed																			

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Well	Date	TPHg	В	Т	E	х	MTBE 8020	MTBE 8260	ТВА	DIPE	ETBE	TAME	EDC	EDB	тос	Depth to Water	SPH Thickness	GW Elevation	DO	ORP
ID		(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ft MSL)	(ft TOC)	(ft)	(ft MSL)	(mg/L)	(mV)
S-14R	11/07/2008														35.19	22.91		12.28		
S-14R	11/11/2008	8,500 i	680 i	270 i	<25 i	1,110 i									35.19	23.13		12.06	0.60	115
S-14R	11/11/2008	4,300 j	270 j	190 j	43 j	470 j									35.19	23.13		12.06	1.5	116
S-14R	12/18/2008	7,800	530	640	79	1,010									34.95	22.80		12.15		
S-14R	01/05/2009	2,100	89	86	19	140									34.95	22.80		12.15		
S-14R	01/15/2009	4,800	430	540	83	730									34.95	22.57		12.38		
S-14R	02/12/2009	1,000	40	29	7.3	55									34.95	22.89		12.06		
S-14R	03/12/2009	350	22	18	3.3	29									34.95	22.39		12.56		
S-14R	04/09/2009	2,300	230	240	47	250									34.95	22.35		12.60	0.30	430
S-14R	05/18/2009	750	51	48	17	67									34.95	22.20		12.75	5.63	93
S-14R	07/23/2009	600	81	57	19	47									34.95	22.56		12.39	0.05	246
S-14R	10/01/2009	230	12	10	5.3	23									34.95	22.90		12.05	2.22	201
S-14R	11/09/2009	330	47	21	11	39									34.95	22.68		12.27	0.75	
S-14R	12/01/2009	420	38	27	12	39									34.95	22.62		12.33	0.45	110
S-14R	01/28/2010	270	45	27	11	32									34.95	22.38		12.57	3.75	
S-14R	05/20/2010	330	17	10	2.7	13									34.95	22.72		12.23	0.96	102
S-14R	08/31/2010	130	5.8	3.5	1.4	6.1									34.95	23.12		11.83	1.55	-13
S-14R	12/29/2010	480	56	30	13	52									34.95	22.75		12.20	0.48	375
S-14R	02/01/2011	570	56	32	20	59									34.95	22.10		12.85	0.58	143
S-14R	04/25/2011	860	100	59	41	97									34.95	20.80		14.15	0.81	-37
S-14R	07/28/2011	970	100	80	51	110									34.95	20.36		14.59	0.56	151
S-14R	10/28/2011	420	47	38	25	67									34.95	20.68		14.27	3.97	321
S-14R	05/07/2012	630	68	62	40	120									34.95	20.77		14.18	2.47	238
S-14R	05/02/2013	3,200	200	130	95	200									34.95	24.49		10.46		
S-14R	04/21/2014	3,700	190	160	99	290									34.95	24.99		9.96		
S-14R	Well destroyed																			
S-15	12/17/2007														35.34	23.00		12.34		
S-15	02/08/2008	55,000 f	6,700	13,000	1,100	9,800		<10					<5.0	<10	35.34	22.71		12.63		
S-15	05/08/2008	53,000 f	6,300	13,000	1,500	7,500		<200					<100	<200	35.34	22.91		12.43		
S-15	Well destroyed																			
S-16	12/17/2007														36.08	23.88		12.20		
S-16	02/08/2008	6,000 f	670	730	88	1,290		< 5.0					<2.5	<5.0	36.08	23.52		12.56		
S-16	05/08/2008	3,200 f	670	320	18	580		<10					<5.0	<10	36.08	23.69		12.39		
S-16	Well destroyed																			

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	Date	TPHg	В	т	E	х	MTBE 8020	MTBE 8260	ТВА	DIPE	ETBE	TAME	EDC	EDB	тос	Depth to Water	SPH Thickness	GW Elevation	DO	ORP
Well ID	Date	ιτης (μg/L)	μg/L)	ι (μg/L)	μg/L)	Λ (μg/L)	(μg/L)	6200 (μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ft MSL)	(ft TOC)	(ft)	(ft MSL)	(mg/L)	(mV)
S-17	06/19/2008														35.49	23.30		12.19		
S-17	06/25/2008	21,000	1,300	1,300	160	2,850		<5.0					<2.5	< 5.0	35.49	23.33		12.16		
S-17	08/14/2008	14,000	1,700	1,700	310	2,250		<10					<5.0	<10	35.49	23.50		11.99		
S-17	11/11/2008	7,200 i	1,600 i	820 i	140 i	760 i		<5.0 i					<2.5 i	<5.0 i	35.49	23.70		11.79		
S-17	11/11/2008	32,000 j	2,500 j	3,100 j	820 j	4,000 j		<25 j					<12 j	<25 j	35.49	23.70		11.79		
S-17	01/05/2009	15,000	790	700	150	1,200		<10					<5.0	<10	35.50	23.66		11.84		
S-17	01/15/2009	2,300	220	170	19	300									35.50	23.37		12.13		
S-17	02/12/2009	4,700	750	200	37	23									35.50	23.66		11.84		
S-17	03/12/2009	3,300	640	370	81	290									35.50	23.24		12.26		
S-17	04/09/2009	1,300	200	110	37	100									35.50	23.20		12.30	0.69	429
S-17	05/18/2009	630	97	44	17	25									35.50	23.21		12.29	5.93	442
S-17	07/23/2009	3,900	480	410	160	480									35.50	23.70		11.80	0.15	34
S-17	10/01/2009	1,300	32	24	3.1	72									35.50	23.64		11.86	1.30	204
S-17	11/09/2009	5,300	260	330	56	500									35.50	23.52		11.98	0.18	
S-17	12/01/2009	3,300	190	210	52	240									35.50	23.41		12.09	0.95	450
S-17	01/28/2010	3,500	260	250	85	310									35.50	23.21		12.29	1.93	
S-17	05/20/2010	370	18	<1.0	<1.0	<1.0									35.50	23.65		11.85	1.31	544
S-17	08/31/2010	1,900	120	110	52	260									35.50	23.92		11.58	1.32	370
S-17	12/29/2010	2,600	200	150	91	280									35.50	23.60		11.90	1.37	131
S-17	02/01/2011	950	100	72	47	130									35.50	22.91		12.59	1.40	136
S-17	04/25/2011	2,000	150	71	77	210									35.50	21.44		14.06	0.23	82
S-17	07/28/2011	3,400	270	98	170	370									35.50	21.06		14.44	1.45	70
S-17	10/28/2011	270	58	5.3	23	28									35.50	21.51		13.99	1.19	221
S-17	05/07/2012	980	110	3.6	66	100									35.50	21.50		14.00	0.62	84
S-17	05/02/2013	570	62	20	19	49									35.50	25.49		10.01		
S-17	04/21/2014	2,500	140	120	98	310									35.50	25.91		9.59		
S-17	Well destroyed																			
S-18	06/19/2008														35.04	22.94		12.10		
S-18	06/25/2008	58,000	2,200	5,600	880	10,200		<10					<5.0	<10	35.04	22.92		12.12		
S-18	08/14/2008	25,000	2,500	4,500	860	5,800		<50					<25	<50	35.04	23.08		11.96		
S-18	11/11/2008	24,000 i	2,400 i	3,300 i	820 i	3,800 i		<25 i					<12 i	<25 i	35.04	23.30		11.74		
S-18	11/11/2008	43,000 j	3,900 j	5,500 j	1,300 j	6,500 j		<50 j					<25 j	<50 j	35.04	23.30		11.74		
S-18	01/05/2009	20,000	830	1,000	290	1,400		<50					<25	<50	35.03	23.16		11.87		
S-18	01/15/2009	8,200	690	790	150	1,230									35.03	22.97		12.06		
S-18	02/12/2009	13,000	1,200	1,400	330	940									35.03	23.29		11.74		
S-18	03/12/2009	52,000	5,300	9,000	1,600	10,000									35.03	22.85		12.18		
S-18	04/09/2009	Insufficien	nt water												35.03	22.79		12.24		
S-18	05/18/2009	6,700	320	1,100	200	1,000									35.03	22.81		12.22	6.51	377

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	Dete	TDU	Ъ	т.	-	v	MTBE	MTBE	TDA	DIDE	FTDE	TAME	FDC	EDD	TOC	Depth to	SPH	GW	DO	
Well ID	Date	TPHg (µg/L)	B (µg/L)	Τ (μg/L)	E (µg/L)	Χ (μg/L)	8020 (μg/L)	8260 (μg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (μg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Water (ft TOC)	Thickness (ft)	Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-18	07/23/2009	8,900	500	890	290	1,600									35.03	22.91		12.12	0.20	
S-18	10/01/2009	1,800	49	5.5	5.3	<5.0									35.03	23.65		11.38	6.25	557
S-18	11/09/2009	1,100	79	8.9	5.3	1.1									35.03	23.19		11.84	0.26	
S-18	12/01/2009	570	50	7.5	2.7	1.2									35.03	23.12		11.91	4.07	460
S-18	01/28/2010	1,200	170	91	18	68									35.03	22.86		12.17	1.90	
S-18	05/20/2010	3,900	500	690	79	240									35.03	23.12		11.91	1.77	169
S-18	06/22/2010	13,000	1,700	2,800	200	1,000									35.03	23.10		11.93	0.58	499
S-18	08/31/2010	6,600	970	1,100	230	1,000									35.03	23.55		11.48	1.23	258
S-18	12/29/2010	8,500	1,000	750	410	1,800									35.03	23.23		11.80	0.79	70
S-18	02/01/2011	2,100	210	190	87	180									35.03	22.52		12.51	1.13	220
S-18	04/25/2011	13,000	2,100	2,000	470	2,300									35.03	21.00		14.03	0.52	85
S-18	07/28/2011	8,200	1,200	1,000	290	1,200									35.03	20.56		14.47	1.57	27
S-18	10/28/2011	9,000	1,200	480	430	1,900									35.03	21.11		13.92	1.45	147
S-18	05/07/2012	4,700	710	310	310	870									35.03	21.20		13.83	0.55	-68
S-18	05/02/2013	5,000	720	280	220	480									35.03	24.95		10.08		
S-18	04/21/2014	1,400	240	190	70	230									35.03	25.61		9.42		
S-18	Well destroyed																			
S-19	11/07/2008														34.78	22.73		12.05		
S-19	11/11/2008	7,100 i	500 i	600 i	25 i	1,010 i									34.78	22.87		11.91	1.0	62
S-19	11/11/2008	2,300 j	110 j	160 j	43 j	280 j									34.78	22.87		11.91	1.3	71
S-19	12/18/2008	2,900	190	300	41	420									34.57	22.60		11.97		
S-19	01/05/2009	3,400	230	250	50	380									34.57	22.56		12.01		
S-19	01/15/2009	3,100	340	540	70	440									34.57	22.31		12.26		
S-19	02/12/2009	1,300	130	180	37	190									34.57	22.58		11.99		
S-19	03/12/2009	880	110	150	30	160									34.57	22.44		12.13		
S-19	04/09/2009	1,300	140	190	32	190									34.57	22.02		12.55	0.57	106
S-19	05/18/2009	780	69	87	17	100									34.57	22.04		12.53	6.47	75
S-19	07/23/2009	400	77	59	15	38									34.57	22.40		12.17	0.06	31
S-19	10/01/2009	1,500	160	170	33	120									34.57	22.66		11.91	0.52	301
S-19	11/09/2009	1,600	140	160	41	160									34.57	22.44		12.13	0.26	
S-19	12/01/2009	1,600	150	180	45	170									34.57	22.62		11.95	0.79	161
S-19	01/28/2010	2,600	230	280	71	300									34.57	22.29		12.28	1.71	
S-19	05/20/2010	850	110	55	11	4.6									34.57	22.49		12.08	1.77	118
S-19	08/31/2010	580	79	92	22	50									34.57	22.86		11.71	1.02	297
S-19	12/29/2010	920	120	120	54	150									34.57	22.48		12.09	1.12	150
S-19	02/01/2011	1,800	210	270	100	320									34.57	21.78		12.79	1.08	21
S-19	04/25/2011	2,100	290	360	140	470									34.57	20.42		14.15	0.25	115
S-19	07/28/2011	2,400	240	380	140	450									34.57	20.16		14.41	1.17	80

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Well	Date	TPHg	В	т	E	Х	MTBE 8020	MTBE 8260	ТВА	DIPE	ETBE	TAME	EDC	EDB	тос	Depth to Water	SPH Thickness	GW Elevation	DO	ORP
ID	2 4.00	(µg/L)	(µg/L)	(μg/L)	_ (μg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(ft MSL)	(ft TOC)	(ft)	(ft MSL)	(mg/L)	(mV)
S-19	10/28/2011	3,600	210	420	190	750									34.57	20.41		14.16	1.73	160
S-19	05/07/2012	3,400	220	480	210	880									34.57	20.51		14.06	2.54	244
S-19	12/11/2012	1,700	110	240	100	440									34.57	22.05		12.52	0.89/2.21	81/52
S-19	05/02/2013	1,500	88	89	55	160									34.57	24.15		10.42		
S-19	11/07/2013	170,000	1,200	7,300	3,800	22,000									34.57	k	k	k		
S-19	04/21/2014	32,000	580	1,400	940	4,300									34.57	24.95		9.62		
S-19	07/31/2014														34.57	24.22	0.20	10.51		
S-19	11/21/2014	25,000	420	880	550	2,500									34.57	24.40		10.17		
S-19	Well destroyed																			
S-20	11/07/2008														34.50	22.80		11.70		
S-20	11/11/2008	13,000 i	1,300 i	1,600 i	80 i	1,920 i									34.50	22.90		11.60	0.8	-39
S-20	11/11/2008	16,000 j	1,100 j	1,800 j	220 j	1,930 j									34.50	22.90		11.60	2.6	-64
S-20	01/05/2009	17,000	1,500	1,700	320	1,900									34.50	22.78		11.72		
S-20	02/12/2009	11,000	1,300	1,400	230	1,600									34.50	22.80		11.70	2.6	-64
S-20	03/12/2009	19,000	2,700	3,200	390	3,100									34.50	22.40		12.10		
S-20	04/09/2009	8,200	80	480	220	490									34.50	22.90		11.60	13.80	578
S-20	05/18/2009	21,000	970	1,500	630	4,800									34.50	22.42		12.08	4.58	197
S-20	07/23/2009	41,000	4,900	2,900	990	7,300									34.50	22.73		11.77	0.27	419
S-20	10/01/2009	1,800	140	39	33	39									34.50	23.00		11.50	0.85	533
S-20	11/09/2009	21,000	1,600	740	300	2,500									34.50	22.72		11.78	1.67	
S-20	12/01/2009	12,000	1,100	450	160	1,200									34.50	22.61		11.89	1.38	347
S-20	01/28/2010	20,000	2,000	1,600	260	2,000									34.50	22.51		11.99	4.40	
S-20	05/20/2010	4,300	1,100	110	26	61									34.50	22.90		11.60	8.96	555
S-20	06/22/2010	7,100	1,300	550	120	550									34.50	23.19		11.31	11.64	637
S-20	08/31/2010	9,600	1,800	1,400	230	580									34.50	23.13		11.37	0.94	529
S-20	12/29/2010	19,000	2,000	3,100	860	3,200									34.50	22.72		11.78	0.92	193
S-20	02/01/2011	26,000	3,900	7,100	1,300	5,800									34.50	22.04		12.46	1.03	390
S-20	04/25/2011	41,000	6,600	11,000	2,000	9,800									34.50	20.60		13.90	0.43	156
S-20	07/28/2011	34,000	4,200	5,300	1,400	6,300									34.50	20.30		14.20	1.25	-15
S-20	10/28/2011	17,000	1,500	1,900	1,000	3,400									34.50	20.78		13.72	1.28	431
S-20	05/07/2012	9,900	760	1,200	790	2,000									34.50	20.54		13.96	1.92	-106
S-20	12/11/2012	9,700	630	1,000	720	1,500									34.50	22.29		12.21	0.82/1.67	-11/-43
S-20	05/02/2013	4,500	380	220	240	300									34.50	24.50		10.00		
S-20	11/07/2013	4,000	420	290	60	330									34.50	25.24		9.26		
S-20	04/21/2014	3,800	480	350	50	350									34.50	25.15		9.35		
S-20	11/21/2014	4,800	560	340	98	430									34.50	24.54		9.96		
S-20	Well destroyed																			

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	Data	TDUa	В	т			MTBE	MTBE	TDA	DIPE	ETBE	TAME	EDC	EDB	тос	Depth to	SPH	GW	DO	
Well ID	Date	TPHg (μg/L)	B (µg/L)	ι (μg/L)	E (µg/L)	Χ (μg/L)	8020 (µg/L)	8260 (µg/L)	TBA (µg/L)	DIFΕ (μg/L)	(µg/L)	TAME (µg/L)	(µg/L)	(µg/L)	(ft MSL)	Water (ft TOC)	Thickness (ft)	Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-21A	11/07/2008														35.81	23.73		12.08		
S-21A	11/11/2008	96,000 i	6,100 i	11,000 i	1,700 i	10,500 i									35.81	23.86		11.95	1.6	-42
S-21A	11/11/2008	87,000 j	6,300 j	13,000 j	1,700 j	10,300 j									35.81	23.86		11.95	1.8	-51
S-21A	12/18/2008	17,000	3,700	1,200	170	47									35.80	23.91		11.89		
S-21A	01/05/2009	28,000	3,100	2,900	450	1,100									35.80	23.78		12.02		
S-21A	01/15/2009	9,700	2,100	290	45	<25									35.80	23.53		12.27		
S-21A	02/12/2009	19,000	3,100	2,500	330	500									35.80	23.83		11.97		
S-21A	03/12/2009	31,000	2,600	3,800	810	3,700									35.80	23.35		12.45		
S-21A	04/09/2009	7,800	700	750	130	<25									35.80	24.00		11.80	0.91	304
S-21A	05/18/2009	15,000	1,800	2,200	390	1,900									35.80	23.46		12.34	2.37	529
S-21A	07/23/2009	51,000	4,800	7,100	1,100	7,000									35.80	23.85		11.95	0.14	-3
S-21A	10/01/2009	18,000	2,300	2,200	310	2,400									35.80	24.06		11.74	7.92	575
S-21A	11/09/2009	41,000	3,500	5,800	600	4,800									35.80	23.73		12.07	0.34	
S-21A	12/01/2009	43,000	3,100	6,700	640	4,900									35.80	23.60		12.20	2.55	350
S-21A	01/28/2010	65,000	3,900	9,900	970	6,600									35.80	23.54		12.26	1.43	
S-21A	05/20/2010	6,000	670	760	110	150									35.80	23.92		11.88	1.37	541
S-21A	06/22/2010	16,000	690	2,000	370	2,300									35.80	23.87		11.93	2.33	439
S-21A	08/31/2010	5,000	230	420	190	990									35.80	24.13		11.67	0.73	392
S-21A	12/29/2010	5,100	500	430	230	810									35.80	23.84		11.96	0.95	464
S-21A	02/01/2011	9,200	840	750	370	1,300									35.80	23.18		12.62	0.84	110
S-21A	04/25/2011	22,000	3,800	4,000	960	4,800									35.80	21.71		14.09	0.36	336
S-21A	07/28/2011	27,000	3,400	3,600	1,000	4,300									35.80	21.48		14.32	1.02	223
S-21A	10/28/2011	20,000	2,400	3,000	840	3,600									35.80	21.65		14.15	2.06	213
S-21A	05/07/2012	12,000	2,200	1,900	510	2,100									35.80	21.90		13.90	1.01	107
S-21A	12/11/2012	13,000	3,300	2,200	610	1,300									35.80	22.60		13.20	1.35/1.49	82/80
S-21A	05/02/2013	6,800	1,000	470	270	480									35.80	25.48		10.32		
S-21A	11/07/2013	32,000	4,100	3,000	940	2,900									35.80	26.28		9.52		
S-21A	04/21/2014														35.80	26.29		9.51		
S-21A	11/21/2014	37,000	6,000	3,900	1,100	3,500									35.80	25.81		9.99		
S-21A	Well destroyed	t																		
S-21B	11/07/2008														35.79	23.68		12.11		
S-21B	11/11/2008	3,200 i	49 i	300 i	93 i	510 i									35.79	23.80		11.99	0.4	-108
S-21B	11/11/2008	7,500 j	67 j	470 j	150 j	960 j									35.79	23.80		11.99	5.6	-135
S-21B	12/18/2008	5,300	36	310	120	770									35.76	23.72		12.04		
S-21B	01/05/2009	5,400	35	200	93	600									35.76	23.70		12.06		
S-21B	01/15/2009	3,300	30	150	78	470									35.76	23.43		12.33		
S-21B	02/12/2009	2,800	12	100	69	450									35.76	23.81		11.95		
S-21B	03/12/2009	2,300	9.4	72	50	320									35.76	23.32		12.44		

Table 1
Groundwater Data
Former Shell Service Station
461 8th Street, Oakland, California

	_			_	_		MTBE	MTBE								Depth to	SPH	GW		
Well ID	Date	TPHg (μg/L)	B (µg/L)	T (μg/L)	E (μg/L)	Χ (μg/L)	8020 (μg/L)	8260 (μg/L)	TBA (μg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDC (µg/L)	EDB (µg/L)	TOC (ft MSL)	Water (ft TOC)	Thickness (ft)	Elevation (ft MSL)	DO (mg/L)	ORP (mV)
S-21B	04/09/2009	890	14	55	19	140									35.76	23.20		12.56	0.56	453
S-21B	05/18/2009	390	6.8	14	12	27									35.76	23.24		12.52	1.62	458
S-21B	06/17/2009														35.76	23.40		12.36		
S-21B	07/23/2009	920	5.0	17	28	120									35.76	23.52		12.24	0.26	37
S-21B	10/01/2009	820	2.6	10	17	89									35.76	23.95		11.81	0.96	353
S-21B	01/28/2010	810	11	6.2	10	51									35.76	23.30		12.46		
S-21B	05/20/2010	120	1.4	2.6	2.0	2.7									35.76	23.46		12.30	1.63	206
S-21B	08/31/2010	500	0.81	3.4	6.9	32									35.76	24.04		11.72	0.72	45
S-21B	12/29/2010	310	<0.50	1.9	4.5	21									35.76	23.59		12.17	0.40	191
S-21B	02/01/2011	270	< 0.50	2.0	4.0	16									35.76	23.08		12.68	0.51	10
S-21B	04/25/2011	250	< 0.50	1.9	4.6	16									35.76	21.86		13.90	1.43	72
S-21B	07/28/2011	270	< 0.50	0.84	3.0	11									35.76	21.32		14.44	2.86	127
S-21B	10/28/2011	220	< 0.50	0.53	2.3	9.2									35.76	21.52		14.24	0.96	153
S-21B	05/07/2012	170	< 0.50	0.62	1.5	7.6									35.76	22.04		13.72	0.75	100
S-21B	05/02/2013	<50	< 0.50	< 0.50	< 0.50	<1.0									35.76	25.59		10.17		
S-21B	04/21/2014	52	1.7	2.4	0.80	4.7									35.76	26.14		9.62		
S-21B	Well destroyed																			
S-22A	11/07/2008														35.08	22.91		12.17		
S-22A	11/11/2008	84,000 i	8,500 i	11,000 i	2,200 i	13,900 i									35.08	23.15		11.93	1.0	117
S-22A	11/11/2008	85,000 j	7,600 j	10,000 j	2,500 j	12,400 j									35.08	23.15		11.93	1.6	100
S-22A	12/18/2008	42,000	6,300	6,600	1,200	4,400									35.06	23.03		12.03		
S-22A	01/05/2009	56,000	4,500	5,300	1,200	6,400									35.06	23.03		12.03		
S-22A	01/15/2009	25,000	5,900	4,400	740	1,570									35.06	22.84		12.22		
S-22A	02/12/2009	43,000	6,700	6,600	1,200	5,000									35.06	23.15		11.91		
S-22A	03/12/2009	35,000	4,600	4,600	980	4,600									35.06	22.65		12.41		
S-22A	04/09/2009	22,000	120	1,900	680	3,400									35.06	22.88		12.18	8.41	556
S-22A	05/18/2009	25,000	4,700	1,300	590	3,700									35.06	22.83		12.23	2.46	539
S-22A	07/23/2009	40,000	5,100	4,800	700	4,900									35.06	23.01		12.05	0.18	167
S-22A	10/01/2009	12,000	1,400	600	88	500									35.06	23.06		12.00	4.08	523
S-22A	11/09/2009	18,000	2,700	2,000	190	1,300									35.06	23.14		11.92	1.74	
S-22A	12/01/2009	24,000	2,300	2,300	270	2,000									35.06	23.10		11.96	1.06	393
S-22A	01/28/2010	44,000	3,600	5,000	620	4,300									35.06	22.92		12.14	1.40	
S-22A	05/20/2010	3,100	38	<10	<10	<10									35.06	23.22		11.84	0.48	423
S-22A	06/22/2010	2,400	110	15	4.3	6.6									35.06	23.51		11.55	6.10	542
S-22A	08/31/2010	5,000	690	600	78	350									35.06	23.52		11.54	1.03	553
S-22A	12/29/2010	13,000	1,300	1,800	490	2,100									35.06	23.17		11.89	0.70	476
S-22A	02/01/2011	13,000	1,800	3,100	640	2,800									35.06	22.45		12.61	0.89	453

Table 1
Groundwater Data
Former Shell Service Station
461 8th Street, Oakland, California

	Date	TPHg	В	т	E	Х	MTBE 8020	MTBE 8260	ТВА	DIPE	ETBE	TAME	EDC	EDB	тос	Depth to Water	SPH Thickness	GW Elevation	DO	ORP
Well ID	Date	rrng (μg/L)	μg/L)	(μg/L)	(µg/L)	Λ (μg/L)	(μg/L)	(µg/L)	μg/L)	μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ft MSL)	(ft TOC)	(ft)	(ft MSL)	(mg/L)	(mV)
S-22A	04/25/2011	23,000	2,600	5,500	1,200	6,200									35.06	21.37		13.69	0.40	506
S-22A	07/28/2011	Well inacce	ssible												35.06					
S-22A	10/28/2011	31,000	1,800	4,700	1,600	8,100									35.06	20.98		14.08	1.33	342
S-22A	05/07/2012	40,000	2,000	7,200	2,000	12,000									35.06	20.96		14.10	2.50	230
S-22A	12/11/2012	54,000	1,800	8,900	2,400	14,000									35.06	23.42		11.64	0.99/1.96	-14/-21
S-22A	05/02/2013	53,000	1,800	6,800	2,200	11,000									35.06	24.71		10.35		
S-22A	11/07/2013	Well inacce	ssible												35.06					
S-22A	04/21/2014	Well inacce	ssible												35.06					
S-22A	11/21/2014	Well inacce	ssible												35.06					
S-22A	Well destroye	ed																		
S-22B	11/07/2008														35.15	23.06		12.09		
S-22B	11/11/2008	<50 i	<0.50 i	<1.0 i	<1.0 i	1.2 i									35.15	23.20		11.95	0.9	92
S-22B	11/11/2008	360 j	3.3 j	12 j	5.8 j	38 j									35.15	23.20		11.95	1.6	90
S-22B	12/18/2008	150	2.9	6.1	2.9	17.5									35.24	23.26		11.98		
S-22B	01/05/2009	110	1.9	5.0	2.6	11									35.24	28.12		7.12		
S-22B	01/15/2009	59	1.3	1.9	1.6	<1.0									35.24	22.90		12.34		
S-22B	02/12/2009	290	11	6.8	7.9	19									35.24	23.02		12.22		
S-22B	03/12/2009	390	4.4	4.6	3.8	12									35.24	22.86		12.38		
S-22B	04/09/2009	280	5.3	2.5	4.0	6.8									35.24	22.62		12.62	2.24	164
S-22B	05/18/2009	170	3.7	2.9	2.4	8.6									35.24	22.62		12.62	1.42	-171
S-22B	07/23/2009	160	8.9	5.7	3.8	12									35.24	22.65		12.59	0.15	28
S-22B	10/01/2009	300	2.4	1.0	1.2	<1.0									35.24	23.18		12.06	2.62	173
S-22B	01/28/2010	<50	< 0.50	<1.0	<1.0	<1.0									35.24	22.73		12.51		
S-22B	05/20/2010	230	<0.50	<1.0	<1.0	<1.0									35.24	22.88		12.36	6.14	584
S-22B	08/31/2010	<50	0.57	<1.0	<1.0	<1.0									35.24	23.51		11.73	0.92	377
S-22B	12/29/2010	<50	< 0.50	<1.0	<1.0	<1.0									35.24	23.04		12.20	1.07	391
S-22B	02/01/2011	<50	0.55	<0.50	< 0.50	<1.0									35.24	22.70		12.54	1.07	-3
S-22B	04/25/2011	<50	< 0.50	0.62	< 0.50	1.1									35.24	21.38		13.86	1.37	416
S-22B	07/28/2011	Well inacce	ssible												35.24					
S-22B	10/28/2011	<50	< 0.50	<1.0	<1.0	<1.0									35.24	20.62		14.62	4.83	-12
S-22B	05/07/2012	<50	1.4	< 0.50	< 0.50	<1.0									35.24	21.08		14.16	2.84	127
S-22B	05/02/2013	<50	< 0.50	< 0.50	< 0.50	<1.0									35.24	24.68		10.56		
S-22B	04/21/2014	Well inacce	ssible												35.24					
S-22B	Well destroye	ed																		
S-23	11/07/2008														35.77	23.28		12.49		
S-23	11/11/2008	8,800 i	640 i	610 i	82 i	1,260 i									35.77	23.58		12.19		

Table 1
Groundwater Data
Former Shell Service Station
461 8th Street, Oakland, California

Well	Date	TPHg	В	Т	E	Х	MTBE 8020	MTBE 8260	ТВА	DIPE	ETBE	TAME	EDC	EDB	тос	Depth to Water	SPH Thickness	GW Elevation	DO	ORP
ID	2	(μg/L)	(µg/L)	μg/L)	_ (μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ft MSL)	(ft TOC)	(ft)	(ft MSL)	(mg/L)	(mV)
S-23	11/11/2008	6,400 j	520 j	640 j	34 j	760 j									35.77	23.58		12.19		
S-23	01/05/2009	830	63	98	14	58									35.75	23.51		12.24		
S-23	02/12/2009	3,400	160	320	55	430									35.75	23.62		12.13		
S-23	03/12/2009	4,600	210	460	71	610									35.75	23.03		12.72		
S-23	04/09/2009	2,700	180	95	33	<5.0									35.75	22.98		12.77	1.24	567
S-23	05/18/2009	3,000	350	440	79	300									35.75	23.18		12.57	19.77	503
S-23	07/23/2009	2,900	180	400	67	340									35.75	23.48		12.27	0.21	133
S-23	10/01/2009	790	40	24	5.4	<1.0									35.75	23.82		11.93	8.64	428
S-23	11/09/2009	3,200	84	330	90	400									35.75	23.51		12.24	0.28	
S-23	12/01/2009	1,800	47	180	50	190									35.75	23.31		12.44	2.49	472
S-23	01/28/2010	3,000	100	450	110	650									35.75	23.25		12.50	1.74	
S-23	05/20/2010	900	8.2	<5.0	<5.0	<5.0									35.75	23.80		11.95	3.76	607
S-23	06/22/2010	640	11	22	9.0	11									35.75	24.40		11.35	12.96	572
S-23	08/31/2010	710	14	45	34	110									35.75	23.95		11.80	1.25	322
S-23	12/29/2010	1,300	45	82	56	240									35.75	23.61		12.14	1.39	313
S-23	02/01/2011	1,300	51	110	72	270									35.75	22.92		12.83	1.30	107
S-23	04/25/2011	1,300	53	110	81	400									35.75	21.62		14.13	0.96	321
S-23	07/28/2011	1,400	43	79	74	320									35.75	21.28		14.47	0.92	209
S-23	10/28/2011	1,600	43	83	92	370									35.75	21.50		14.25	1.82	161
S-23	05/07/2012	870	50	40	66	220									35.75	21.59		14.16	2.20	254
S-23	05/02/2013	540	24	15	5.6	25									35.75	25.04		10.71		
S-23	04/21/2014	1,700	110	47	8.4	95									35.75	25.67		10.08		
S-23	Well destroyed																			
S-26	09/20/2015														34.39	23.94		10.45		
S-26	09/29/2015	<50	3.0	1.4	1.7	5.0									34.39	24.00		10.39		
S-26	11/25/2015	180	16	8.2	8.7	30									34.39	24.15		10.24		
AS-1	12/17/2007														35.33	22.91		12.42		
AS-1	02/08/2008	130 f	1.1	3.4	<1.0	5.4		<1.0					< 0.50	<1.0	35.33	22.62		12.71		
AS-1	05/08/2008	<50 f	< 0.50	<1.0	<1.0	<1.0		<1.0					< 0.50	<1.0	35.33	27.78		7.55		
AS-1	Well destroyed																			
OW-1	04/09/2009	Well dry																		
OW-1	05/18/2009	Well dry																		
OW-1	Well destroyed																			

Notes: See following page.for Table 1 notes.

Table 1 Groundwater Data Former Shell Service Station 461 8th Street, Oakland, California

Notes:

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B; prior to July 25, 2001, analyzed by EPA Method 8015 unless otherwise noted.

BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B; prior to July 25, 2001, analyzed by EPA Method 8020.

MTBE = Methyl tertiary-butyl ether analyzed by method noted

TBA = Tertiary-butyl alcohol analyzed by EPA Method 8260B

DIPE = Di-isopropyl ether analyzed by EPA Method 8260B

ETBE = Ethyl tertiary-butyl ether analyzed by EPA Method 8260B

TAME = Tertiary-amyl methyl ether analyzed by EPA Method 8260B

EDC = 1,2-Dichloroethane analyzed by EPA Method 8260B.

EDB = 1,2-Dibromoethane analyzed by EPA Method 8260B.

TOC = Top of casing elevation, in feet relative to mean sea level

SPH = Separate-phase hydrocarbon

GW = Groundwater

DO = Dissolved oxygen (pre-purge/post purge reading)
ORP = Oxygen redox potential (pre-purge/post purge reading)

μg/L = Micrograms per liter

ft = Feet

MSL = Mean sea level mg/L = Milligrams per liter

mV = Millivolts

<x = Not detected at reporting limit x
--- = Not analyzed or available

(D) = Duplicate sample

a = Included in xylenes analysis

b = Analyzed outside of EPA recommended holding time
 c = Depth to water measured from TOC; elevation unknown.

d = Grab sampled

e = Casing broken; TOC unknown. f = Analyzed by EPA Method 8015B (M)

The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.

= Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.

i = Pre-purge samplej = Post-purge sample

k = SPH present; well purged prior to gauging with interface probe

Concentration reported is partially due to the presence of discrete peak of toluene.

m = Concentration reported is partially due to the presence of discrete peak of m,p-xylenes.

n = Concentration reported is partially due to the presence of discrete peaks of benzene, toluene, m,p-xylenes.

When SPHs are present, groundwater elevation is adjusted using the relation: Corrected groundwater elevation = TOC - Depth to Water + (0.8 x Hydrocarbon Thickness).

Beginning July 18, 2002, well elevations measured from TOC.

Site wells surveyed March 5, 2002 by Virgil Chavez Land Surveying.

Site wells surveyed December 18, 2007 by Virgil Chavez Land Surveying.

Wells S-14R and S-19 through S-23 surveyed on November 11, 2008 by Virgil Chavez Land Surveying.

Well S-5 surveyed on November 11, 2008 by Virgil Chavez Land Surveying.

Well S-5 surveyed on October 8, 2009 by Virgil Chavez Land Surveying.

GHD destroyed wells S-8, S-9, S-10, S-12, S-13, S-14R, S-17 through S-20, S-21A, S-21B, S-22A, S-22B, S-23, IP-1, IP-2, IP-3, and OW-1.

Appendix A

Blaine Tech Services Field Notes

WELL GAUGING DATA

Proje	ct#	151	125-	MMI	Date 11-25-15 Client Shell	
Site	46	1	864	Street (Dakland CA	

Well ID	Time	Well Size (in.)	Sheen / Odor		Thickness of Immiscible Liquid (ft.)		Depth to water	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
5-5	0925@ 1023	4	edor				18.64	26.65		SOCIC
5-6 5-9	1018	4					22,50	35,00		
5-9	0640	4					1,25	1,67		Possille Obstruction
	0655	4					0.00	3,60		
5-19	0895	4					1,60	1.74		
5-20	0855	4		-			1.04	1,59		
S-21A S-22A S-26	0700	4					DRY	1.60		
5-22A	0910	4					3.84	3, 85		
5-26	0850	2				Mark 1984 - Ma	24.15	34.42		

				Arran Caracana						

BTS #: /5/	1/25-MM	1/		Site: 46/ 8	в # sf. 0	akland, ca
Sampler:				Date: //-25		
Well I.D.: 、	f			Well Diamete	· Marie	6 8
Total Well	Depth (TI)): 2 f. c	ζ ς	Depth to Wate	er (DTW): /8.	ζΥ
Depth to Fr	ree Produc	t:		```	Free Product (fe	
Referenced	to:	PVC	Grade	D.O. Meter (it	f req'd):	YSI HACH
DTW with	80% Rech	arge [(F	leight of Water))+DTW]: 20	
Purge Method:	Bailer Disposable B Positive Air I Electric Subn	ailer Displaceme		Waterra Peristaltic ction Pump	Sampling Method	: Bailer Disposable Bailer Extraction Port Dedicated Tubing
5, 2 (0 1 Case Volume	Gals.) XSpeci	3 fied Volun	= 15.6 Calculated Vo	_ Gals. 1"	0.04 4" 0.16 6" 0.37 Othe	0.65 1.47
Time	Temp (°F)	рН	(mS or (LS)	Turbidity (NTUs)	Gals. Removed	Observations
1257 0734	62.9	6,91	806.5	62	5, 2	strong clordy
***************************************	Well o	tena te	rel @ 5,5,	callins		
0950	6/.0	7.Q7	l 'I	92	GRAB	
Did well dev	water?	Yes	No	Gallons actual	ly evacuated:	5, 5
Sampling D	ate: 11-25	-15	Sampling Time	:0950	Depth to Wate	r: 18.93
Sample I.D.	: <i>5-5</i>			Laboratory:	Test America	Other
Analyzed fo	г: (трн.в	ВТЕХ	MTBE TPH-D	Oxygenates (5)	Other: See	1C
EB I.D. (if a	pplicable)	* Stage and the	@ Time	Duplicate I.D.	(if applicable):	
Analyzed fo	r: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other:	
D.O. (if req'	d): Pr	e-purge:		mg/Ll F	Post-purge:	mg/L
O.R.P. (if re	q'd): Pr	e-purge:		mV F	ost-purge:	mV

BTS #: / 5	51125	- MM	1	Site:	461 8	TH ST O	AKUANO, CA
Sampler:	40			í		25/15	
Well I.D.:	5-6			Well I	Diameter	:: 2 3 4	6 8
Total Well	Depth (TI	D): 3	5.00	1		r (DTW): Z	
Depth to F	ree Produc	t:		Thick	ness of F	ree Product (fe	et):
Referenced	to:	/PVC/	Grade	D.O. N	Aeter (if	req'd):	YSI HACH
DTW with	80% Rech	arge [(I	Ieight of Water	Colum	n x 0.20)+DTW]: 2	5.00
Purge Method:	Bailer Disposable B Middleburg Electric Subr	sailer		Waterra Peristattic tion Pump	Well Diamete	Sampling Method Other Multiplier Well 0.04 4"	Bailer Disposable Bailer Extraction Port Dedicated Tubing Diameter Multiplier 0.65
I Case Volume	Gals.) X Speci	fied Volum		Gals. lume	2" 3"	0.16 6" 0.37 Othe	1.97
io iq Time	Temp (°F)	pН	Cond. (mS/cm or (µS/cm)	}	oidity (TUs)	Gals. Removed	Observations
1021	63.5	6.83	376	37	7	S. i	
1023	64.9	6 521	399	40		16.2	
1024	65 5	6.51	417	163	,	24/3	
Did well de	water?	Yes /	No)	Gallon	s actuall	y evacuated: ⊋	4.3
Sampling D	ate: 11/2	5/15	Sampling Time	: 105	O .	Depth to Wate	r: 24.32
Sample I.D.	: 5 - E	, >	8.	Labora	tory:	Test America	
Analyzed fo	or: TPH-G	ВТЕХ	MTBE TPH-D	Other:	SE	E CCC	
EB I.D. (if a	applicable)	:	@ Time	Duplic	ate I.D. ((if applicable):	
Analyzed fo	or: TPH-G	BTEX	***************************************	Other:		, , , , , , , , , , , , , , , , , , ,	»`. ⇒`.
D.O. (if req	'd): Pr	e-purge:		mg/L	P	ost-purge:	mg/L
O.R.P. (if re	eq'd): Pr	e-purge:		mV	P	ost-purge:	mV

Site: 461 8th St. Oakland, ca						
·						
Well Diameter: 2 3 <u>4</u> 6 8						
Depth to Water (DTW): / 25						
,						
D.O. Meter (if req'd): YSI HACH						
Column x 0.20) + DTW]:						
Waterra Sampling Method: Bailer Peristaltic Disposable Ba Extraction Po Dedicated Tub Other: Other: Well Diameter Multiplier Well Diameter Multiplier I" 0.04 4" 0.65 2" 0.16 6" 1.47 Gals. 3" 0.37 Other radius² * 0.16	rt ing					
Turbidity (NTUs) Gals. Removed Observation	ıs					
byed						
Gallons actually evacuated:						
Depth to Water:	$ \nearrow $					
Laboratory: Test America Other						
Oxygenates (5) Other:						
Oxygenates (5) Other:						
Post-purge:	mg/L					
mV Post-purge:	mV					
	Depth to Water (DTW): / Z5 Thickness of Free Product (feet): D.O. Meter (if req'd): YSI HACH Column x 0.20) + DTW]: Waterra Sampling Method: Bailer Peristate Disposable Ba Extraction Po Dedicated Tub Other: Well Diameter Multiplier Well Diameter Multiplier 1" 0.04 4" 0.65 2" 0.16 6" 1.47 3" 0.37 Other radius² * 0.16 Turbidity (NTUs) Gals. Removed Observation SYED Gallons actually evacuated: E: Depth to Water: Laboratory: Test America Other Oxygenates (5) Other: Duplicate I.D. (if applicable): Oxygenates (5) Other: Post-purge:					

BTS #: 15	1125-MK	1/		Site:	461	84h st.	
Sampler:	MM.			Date:	11-25	-/5	
Well I.D.:			,	1	Diamete		6 8
Total Well	Depth (TI)):3.6	O	Depth	to Wate	er (DTW): _{C, O}	<i>P</i> 3
Depth to Fi		*		1		Free Product (fe	* * * * * * * * * * * * * * * * * * * *
Referenced	to:	PVC PVC	Grade		Meter (if		YSI HACH
DTW with	80% Rech	arge [(F	Height of Water	Colum	n x 0.20)) + DTW1: -	· ·
Purge Method:	eailer nersible / fied Volun	Extrac Other	Waterra Peristaltion ction Pump Gals.	a 3	Sampling Method Other	Disposable Bailer Extraction Port Dedicated Tubing : Diameter Multiplier 0.55 1.47	
Time	Temp (°F) WELL BA	i '		(1)	bidity TUs)	Gals. Removed	Observations
Did well de	***************************************	Yes	No Sampling Time	···	s actuall	y evacuated:	
Sample I.D.	<u> </u>		Sampanie i my			Depth to Water	r: \
Analyzed fo	\	£.2.45.45.45.	A Color by Color of the Color o	Labora	tory:	Test America	
EB I.D. (if a		BTEX:	MTBE TPH-D @ Time	Other: Duplic	ate I D	(if applicable):	
Analyzed fo		BTEX		Other:	\	(ii appiicabie).	
D.O. (if req'		e-purge:		mg/ _L	P	ost-purge:	mg/[
O.R.P. (if re	q'd): Pr	ბ _{<} purge:		mV		ost-purge:	mV

	· · · · · · · · · · · · · · · · · · ·										
BTS #:/S/	1/25-MM/			Site: 461 8th 5/ Oakland, CA							
Well I.D.:	S-19.			ı			4	6 8			
Total Well	Depth (TI	D): 17	4	Depth	to Wate	r (DTW):	1.60	<i>5</i> .			
Depth to Fi	ree Produc	t:									
Referenced	to:	PVC	Grade	D.O. N	Aeter (if	req'd):	 	YSI HACH			
DTW with	80% Rech	arge [(I	leight of Water	· Colum	n x 0.20) + DTW]	<i>6</i> 2-				
Purge Method:	Positive Air I Electric Subn	Displacementsible	ent Extrac Other	Peristaltic			Other:	Disposable Bailer Extraction Port Dedicated\Tubing Diameter Multiplier 0.65 1.47			
1 Case Volume		fied Volun	nes Calculated Vo		3"	0.37	Other	r radius ² + 0.163			
Time	Temp (°F)	рН	Cond. (mS or μS)	ŧ	•	Gals. Ren	oved	Observations			
	WELL B	ACK FIL	(E) / DESTR	<u> </u>							
	NO SA	MPLE	TAKEN		······································			and the second s			
	th to Free Product: Thickness of Free Product (feet): That I had a definite (feet): Thickness of Free Product (feet):										
		, \			-						
								•			
Did well der	water?	Yes	No	Gallon	s actuall	y evacuate	ed:	3			
Sampling D	ate:		Sampling Time	e:	/ .	Depth to	Water	: /			
Sample I.D.	:/			Labora	tory:	Test Americ	a (Other			
Analyzed fó	MTBE TPH-D	Øxygena	ates (5)	Other:							
EB I.D. (if a	pplicable)	•	g	Duplic	ate I.D. ((if applica	ble);/				
Analyzed fo	r: TPH-G	BTEX	мтве труі-d	Oxygena	ates (5)	Other:	$\overline{}$				
D.O. (if req'	d): Pr	e-purge:		^{mg} /∟	P	ost-purge:	/		mg/L		
O.R.P. (if re	q'd): Pr	e-purge:	/	mV	P	ost-purge:		· .	mV		

			,			<u> </u>			
BTS #: 15	1125-Mr	<u> </u>		Site: 46/	eth st. Ca	Klend, CA			
Sampler: A				Date: 1/-25-15					
Well I.D.:	,			Well Diamet	_	6 8			
Total Well)): / <u> </u>	59	Depth to Wa	nter (DTW): / 6	· · · · · · · · · · · · · · · · · · ·			
Depth to Fr				Thickness of	f Free Product (fe	et):			
Referenced	to:	PVC	Grade	D.O. Meter ((if req'd):	YSI HACH			
DTW with	80% Rech	arge [(F	Height of Water			Photographic distribution (Control of the Control o			
Purge Method:	Bailer Disposable B Positive Air I Electric Subn	lailer Displaceme		Waterra Peristaltic	Sampling Method Other	Disposable Bailer Extraction Port Dedicated Tubing			
		i #		Well Dian		Diameter Multiplier			
((Gals.) X Speci	fied Volum	nes Calculated Vo	Gals. 1"	0.04 4" 0.16 6" 0.37 Othe	0.65 1.47			
Time	Temp (°F)	pН	Cond. (mS or μS)	Turbidity (NTUs)	Gals. Removed	Observations			
	WELL B	MLDU	VICA PRESE	ROYED					
1				<u> </u>					
	NO SAM	46 7,	PKEN						
					wastern and the same of the sa				
	-								
Did well der	water?	Yes	No	Gallons ạctua	ally evacuated:	1			
Sampling D	ate:		Sampling Time	e: /	Depth to Wate	r: /			
Sample I.D.	*			Laboratory:	Test America	Other			
Analyzed fo	or: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other:				
EB/I.D. (if a	pplicable)	* * * * * * * * * * * * * * * * * * *	@ Time	Duplicate I.D). (if applicable):				
Analyzed fo	r: TPH-G	BTEX		Oxygenates (5)		/			
D.O. (if req'	d): Pr	e-purge:		mg/L	Post-purge:	mg/L			
O.R.P. (if re	q'd): Pr	e-purge:	**************************************	mV	Post-purge:	mV			

								•
BTS #: /	S/125-M1	MI.		Site:	161 8	3K 54.	Oa	Kland. CA
	rell I.D.: S-Z/A cell I.D.: S-Z/A cepth to Free Product: ceferenced to: PVC Grad TW with 80% Recharge [(Height of Year Disposable Bailer Positive Air Displacement Electric Submersible Other Time Temp (°F) pH Conc (mS or INCLE BACK FILE) d well dewater? Yes No mpling Date: Sampling mple I.D.: alyzed for: TPH-G BTEX MTBE THE I.D. (if applicable): Time alyzed for: TPH-G BTEX MTBE THE III.D. (if applicable): Time alyzed for: TPH-G BTEX MTBE THE III.D. (if applicable): Time alyzed for: TPH-G BTEX MTBE THE III.D. (if applicable): Time alyzed for: TPH-G BTEX MTBE THE III.D. (if applicable): Time IIII.D. (if applicable): Time III.D. (if applicable): Time IIII.D. (if ap						ı	(
Well I.D.:	rempler: MM Vell I.D.: S-Z/A cotal Well Depth (TD): V. Cotal repth to Free Product: referenced to: PVC Grad TW with 80% Recharge [(Height of V) rege Method: Bailer Disposable Bailer Positive Air Displacement Electric Submersible Oth Cond Time Temp (°F) pH (mS or ph) Cond Time Temp (°F) pH (mS or ph) AND SAMPLE THEM d well dewater? Yes No repling Date: Sampling reple I.D.: alyzed for: TPH-G BTEX MTBE TP I.D. (if applicable): Time alyzed for: TPH-G BTEX MTBE TP					, , , , , , , , , , , , , , , , , , , ,	4	6 8
1)): /	1.60	Depth	to Wate	er (DTW): 👔	- <u>-</u>	/
Depth to Fr	ree Produc	t:		•				
Referenced	to:	PVC	Grade	D.O. N	Aeter (if	req'd):		YSI HACH
DTW with	80% Rech	arge [(I	Height of Water	Colum	n x 0.20) + DTW]:	***************************************	. •
Date: 25 - 5 Well I.D.: S - Z A								
1 Case Volume	Speci	fied Volum	nes Calculated Vo	lume	T 3"	0,37	Other	radius* * 0.163
Time	Temp (°F)	pН	1	£	-	Gals. Remo	ved	Observations
		l		ROYEL				
Did well dev	ll water?	Yes ^f	No.	Gallon	s actuall	v evacuated	l -	
		7				/	* * * * * * * * * * * * * * * * * * * *	: /
Sample I.D.	: /			Labora	tory:			
Date:								
Date: 25 / 5 Well Diameter: 2 3								
······································			MTBE TPH-D /	7				
D.O. (if req'	d): Pr	e-purge:		mg/ _L	F	ost-purge:	1	mg/L
O.R.P. (if re	q'd): Pr	e-purge:	***************************************	mV	F	ost-purge:	t	mV

BTS #: /5/	1/25-MM	11		Site: 4	161 8	345t,	(A)	klend GA
Sampler: S	-25A	MM		Date:	11-25.	-/5		
Well I.D.:	5-22A			Well I	Diamete	r: 2 3	4	6 8
Total Well	Depth (TD)): 3, ₈	35	Depth	to Wate	er (DTW): 3	5.8	4
Depth to Fr	ee Product	t :	,	1				
Referenced	to:	PVC	Grade	D.O. N	Aeter (if	req'd):		YSI HACH
DTW with	80% Rech	arge [(I	leight of Water	Colum	n x 0.20)) + DTW]:	Korroleavi	Aggregate and all the object of the object o
Purge Method:	Positive Air I) jsplaceme	ent Extrac	Peristaltic	:			Bailer Disposable Bailer Extraction Port Dedicated Tubing
		fied Volun	e Calculated Vo	_ Gals. lume	Well Diamet 1" 2" 3"	0.04 0.16 0.37	Well D 4" 6" Other	0.65 1.47 radius ² * 0.163
Time	Temp (°F)	pН	Cond. (mS or µS)	Į	-	Gals. Remo	ved	Observations
-	WELL B	ACKF,	(CED/DES	7.RoX	<u> </u>			
· · · · · · · · · · · · · · · · · · ·	NO 150	IMPL6	TAKEN					
The state of the s					· · · · · · · · · · · · · · · · · · ·			***************************************
		46						
***************************************					***************************************			
Did well dev	water?	Yes	No	Gallon	s actuall	y evacuated	l:	
Sampling Da	ate:		Sampling Time	:: /		Depth to W	ater	: /
Well I.D.: \$\insert z \ 2 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		ther						
Sampler: S. 22 A Well Date: //-25 //S Well I.D.: S. 22 A Well Diameter: 2 3 4 6 8 Total Well Depth (TD): 3, 8 S Depth to Water (DTW): 3, 8 // Depth to Free Product: Thickness of Free Product (feet): Referenced to: PVC Grade D.O. Meter (if req'd): vsi HACH DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: Purge Method: Bailer Disposable Bailer Positive Air Disposable Bailer Positive								
Sampler: S. 22 A Well Date: //- 25 -/ 5 Well I.D.: S. 22 A Well Diameter: 2 3 4 6 8 Total Well Depth (TD): 3, 8 S Depth to Water (DTW): 3, 8 4 Depth to Free Product: Thickness of Free Product (feet): Referenced to: PvC Grade D.O. Meter (if req'd): vsi HACH DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: Purge Method: Bailer Positive Air Displacement Electric Submersible Potential Po								
Sampler: S. 22 A Well I.D.: S. 22 A Well Diameter: 2 3 4 6 8 Total Well Depth (TD): 3, 8 S Depth to Water (DTW): 3, 8 S Depth to Free Product: Thickness of Free Product (feet): Referenced to: PVC Grade D.O. Meter (if req'd): YSI HACH DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: Purge Method: Bailer Peristatic Positive Air Disposable Bailer Peristatic Extraction Fump Other. Disposable Bailer Peristatic Positive Air Disposable Bailer Peristatic Extraction Fump Other. Disposable Bailer Peristatic Positive Air Disposable Bailer Peristatic Extraction Fump Other. Disposable Bailer Peristatic Positive Air Disposable Bailer Peristatic Positive Air Disposable Bailer Peristatic Extraction Fump Other. Disposable Bailer Peristatic Peristatic Peristatic Positive Air Disposable Bailer Peristatic P								
D.O. (if req'o	i): Pre	e-purge:		$^{ m mg}/_{ m L}$	P	ost-purge:	ĺ	mg/L
O.R.P. (if red	q'd): Pro	e-purge:		mV	P	ost-purge:		mV

		·				~.					
BTS #: 15	1125 - 1	4/11		Site: 461 8th St. Oakland CA							
Sampler:	MM/S/	Έ		Date: 11-25							
Well I.D.:	5-26	S		Well Diameter	: /2) 3 4	6 8					
Total Well	Depth (TI)): 3Y.	42	Depth to Wate	r (DTW): 2 %.	15					
Depth to Fr	ree Produc	t: 🖇		Thickness of F	ree Product (fe	et):					
Referenced	to:	(PVC)	Grade	D.O. Meter (if	req'd):	YSI HACH					
DTW with	80% Rech	arge [(H	eight of Water	Column x 0.20	***************************************						
Purge Method:		Bailer Displaceme		Waterra Peristaltic ction Pump	Sampling Method Other	Bailer Disposable Bailer Extraction Port Dedicated Tubing					
1.6 (1) Case Volume	Gals.) XSpeci	3 ified Volum	= $\frac{4.8}{\text{Calculated Vo}}$	Gals. Dlume Well Diameter 1" 2" 3"	0.04 4" 0.16 6" 0.37 Othe	Diameter Multiplier 0.65 1.47 radius ² * 0.163					
Time	Temp (°F)	pН	Cond. (mS or (LS)	Turbidity (NTUs)	Gals. Removed	Observations					
1030	62.8	7.60	409	>/000	1,6	Brown					
1635	66.2	7.03	349	>/000	3,2	1					
1039	67.0	6.90	335	>1000	4,8	1					
Did well de	water?	Yes <	No)	Gallons actuall	y evacuated: 5°	. 0					
Sampling D	ate: _{//-25}	- 15	Sampling Tim	e: _{/045}	Depth to Wate	r: 24.30					
Sample ſ.D.	: 5-26			Laboratory: (Test America	Other					
Analyzed fo	or: TPH-G	BTEX	МТВЕ ТРН-D	Oxygenates (5)	Other: See C	es la					
EB I.D. (if a	ipplicable)) .	@ Time	Duplicate I.D. (
Analyzed fo	r: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other:						
D.O. (if req'	d): Pr	e-purge:		mg/ _L P	ost-purge:	mg/ _L					
O.R.P. (if re	q'd): Pr	e-purge:		mV P	ost-purge:	mV					

INCIDENT#97093399

·*7 +073 397

11-25-15

ADDRESS 461845f.

ITY & STATE BOK/and, CA

						Obser	vations l			***		de esta		Light single of 10 c				
Well ID	Manwa	West As	Type, C	Jana 19	& Size	Well L Pai	abeled / nted perly*	Wel (Gri	l Cap pper) dition	Well	Lock Co	ndition	Sui	Pad / face dition	Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed	V	itos of Vell idition	Repair Date and PM Initials
5.5	Standpipé	Flush	(3)	P	Size linch) Sterm	Y	(N)	<u>(Ĝ</u>)	R	<i>©</i>	R	NL	(9)	P		Υ	(N)	
5-6	Standpipe	Flush	(G)	Р	Size (Inch)	Œ	N	(G)	R	(6)	R	NL.	©	р		Y	(N)	
5-9	Standpipę	Flush	G	Р	Size (inch)	Ŷ	N	@	R	(G)	R	NL	(g)	Р	4/2 boths misury	Y	(Z)	
5-/3	Standpipe	Flush	0	Р	Size (inch)	\$	N	<u>(</u> G)	R	G	R		(g)	P		Y	S	
5-19	Standpipe	Flush	(G)	P	Size (inch)	Y	N	G	, R	(G)	R	NL.	(G)	Р	cap does not fit on casing	Υ	0	
5-20	Standpipe	(Flush	(G)	Р	Size (inch)	0	N	©	R	(G)	R	NL	<u>G</u>	Р	<u> </u>	Y	@	
	Standpipe	Flush	(g)	Р	Size (inch)	(D)	N	(G)	R	G	R	(NL)	(G)	р		Υ	(F)	
S-22A	Standpipe	Flush	(G)	Р	Size (inch)	(Y)	N	©	R	G	R	(NL)	(G)	р		Y	(A)	:
S-Z/A S-ZZA S-ZG	Standpipe	Flush	(9)	Р	Size (Inch)	γ	Gy.	(3)	R	G	R	NL	(G)	P	NO METAL ID TAG	Y	9	
	Standpipe	Flush	G	þ	Size (inch)	Y	N	G	R	G	R	NL	G	Р		Υ	N	
2720	Standpipe	Flush	G	Р	Size (inch)	γ	N	G	R	G	R	NL	G	P		Y	N	
120,000					TOTA	L#CAP	S REPL	ACED =	\bigcirc		0	= TOTA	L#OFL	OCKS R	EPLACED	<u> </u>	1 1	
Condition of S Abando	Soil Boring P ned Monitori			Р	N/A	lf P	OOR, Bor	ings/Well	IDs or Lo	cation De	scription:					Υ	N	
Remediation (Check bo	Compound exes that app		Condi	tion of Er	ıclosure		on of Are Enclosure	and the second second	Com	pound Se	carity	Emerg	ency Cont Visible	act Info	Cleaning / Repairs Recommended and Conducted		tos of dition	Repair Date and PM Initials
NA Buildir Building w/ Fer Fenced Con Traile	nce Comp. npound		G	Þ	(N/A)	G	P	(N/A	G	P	(N/A)	Y	N	(NA		600,0000	(P)	
Number of Drums On-site			led Correcti riting Legib				まさず いんしゃはめい かげてん	Drums ed to imental		Located ess interfe		Detailed Explanation of Any Issues Resolved	Di	tos of um dition	Date Drums Removed from Site and P돼 Initials			
0	Υ	N	(N/A)	Y	N	N/A	G	РҀ	NÃ	Y	N	Y	N (N/A		Y	М)

G = Good (Acceptable)

R = Replaced

P = Poor (needs attention) NL = No Lock Required

Note: All repairs other than locks and grippers require Shell PM approval prior to repair.

lapproval prior to repair.

* # Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.
 Version 2.4, March 2008

Print or type Name of Field Personnel & Consultant Company

All environmental wells and the remediation compound were in good condition,

Appendix B

TestAmerica Laboratories, Inc Analytical Report



THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine 17461 Derian Ave Suite 100

Irvine, CA 92614-5817 Tel: (949)261-1022

TestAmerica Job ID: 440-129415-1 Client Project/Site: 461 8th St., Oakland

For:

AECOM Technical Services Inc. 1333 Broadway Suite 800 Oakland, California 94612

Attn: Christine Pilachowski

Leather Clark

Authorized for release by: 12/16/2015 4:09:22 PM

Heather Clark, Project Manager I (949)261-1022

heather.clark@testamericainc.com

·····LINKS ·······

Review your project results through

Total Access

Have a Question?



Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Method Summary	7
Lab Chronicle	8
QC Sample Results	9
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Certification Summary	16
Chain of Custody	17
Racaint Chacklists	18

6

8

9

10

12

Sample Summary

Water

Client: AECOM Technical Services Inc. Project/Site: 461 8th St., Oakland

Client Sample ID

S-5

S-6

S-26

Lab Sample ID

440-129415-1

440-129415-2

440-129415-3

TestAmerica Job ID: 440-129415-1

11/25/15 10:45 12/02/15 10:20

Matrix	Collected	Received
Ground Water	11/25/15 09:50	12/02/15 10:20
Ground Water	11/25/15 10:50	12/02/15 10:20

Case Narrative

Client: AECOM Technical Services Inc. Project/Site: 461 8th St., Oakland

TestAmerica Job ID: 440-129415-1

Job ID: 440-129415-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative 440-129415-1

Comments

No additional comments.

Receipt

The samples were received on 12/2/2015 10:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0° C.

Receipt Exceptions

The container label for the following sample(s) did not match the information listed on the Chain-of-Custody (COC SAMPLE S-6 HAS TIME AT 10:50 COC. SAMPLE ON THE CONTAINER HAS MARK TIME AT 10:30. THE SAMPLES ERE LOGGED IN AT 10:50, SAME AS COC. THEY WILL BE LABLED AND PUT AWAY.

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Prepared

Client: AECOM Technical Services Inc. Project/Site: 461 8th St., Oakland

Client Sample ID: S-5 Lab Sample ID: 440-129415-1

Date Collected: 11/25/15 09:50 **Matrix: Ground Water**

Date Received: 12/02/15 10:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons	36000		500		ug/L			12/08/15 04:24	10
(C4-C12)									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	107		76 - 132			·=		12/08/15 04:24	10
4-Bromofluorobenzene (Surr)	102		80 - 120					12/08/15 04:24	10
Toluene-d8 (Surr)	104		80 - 128					12/08/15 04:24	10
- Method: 8260B - Volatile O	rganic Compo	unds (GC/	MS)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	490		5.0		ug/L			12/08/15 04:24	
Benzene	490		5.0		ug/L			12/00/10 04.24	10
Ethylbenzene Ethylbenzene	1300		5.0		ug/L			12/08/15 04:24	10 10
					•				

Client Sample ID: S-6 Lab Sample ID: 440-129415-2 Date Collected: 11/25/15 10:50 **Matrix: Ground Water**

Limits

80 - 120

76 - 132

80 - 128

%Recovery Qualifier

102

107

104

103

Date Received: 12/02/15 10:20

4-Bromofluorobenzene (Surr)

Dibromofluoromethane (Surr)

Surrogate

Toluene-d8 (Surr)

Toluene-d8 (Surr)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	13000		1300		ug/L			12/07/15 13:22	25
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)			76 - 132					12/07/15 13:22	25
4-Bromofluorobenzene (Surr)	95		80 - 120					12/07/15 13:22	25
Toluene-d8 (Surr)	103		80 - 128					12/07/15 13:22	25
Method: 8260B - Volatile O	rganic Compo	unds (GC/	MS)						
Method: 8260B - Volatile O Analyte	•	unds (GC/ Qualifier	MS)	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	•	•	•	MDL	Unit ug/L	D	Prepared	Analyzed 12/07/15 13:22	Dil Fac
Analyte	Result	•	RL	MDL		<u>D</u>	Prepared	. <u> </u>	
Analyte Benzene	Result 1400	•	RL 13	MDL	ug/L	<u> </u>	Prepared	12/07/15 13:22	25 25
Analyte Benzene Ethylbenzene	Result 1400 610	•	13 13	MDL	ug/L ug/L	D	Prepared	12/07/15 13:22 12/07/15 13:22	25
Analyte Benzene Ethylbenzene Toluene	Result 1400 610 1200	Qualifier	RL 13 13 13	MDL	ug/L ug/L ug/L	<u>D</u>	Prepared Prepared	12/07/15 13:22 12/07/15 13:22 12/07/15 13:22	25 25 25
Analyte Benzene Ethylbenzene Toluene Xylenes, Total	Result 1400 610 1200 1900	Qualifier	RL 13 13 13 25	MDL	ug/L ug/L ug/L	<u>D</u>		12/07/15 13:22 12/07/15 13:22 12/07/15 13:22 12/07/15 13:22	25 25 25 25 25

80 - 128

12/07/15 13:22

Dil Fac

10

10

10

Analyzed

12/08/15 04:24

12/08/15 04:24

12/08/15 04:24

Client Sample Results

Client: AECOM Technical Services Inc. Project/Site: 461 8th St., Oakland

TestAmerica Job ID: 440-129415-1

Lab Sample ID: 440-129415-3

Date Collected: 11/25/15 10:45 Date Received: 12/02/15 10:20

Client Sample ID: S-26

Matrix: Water

Method: 8260B/CA_LUFTMS Analyte Volatile Fuel Hydrocarbons (C4-C12)	- Volatile Organic Cor Result Qualifier 180	mpounds by (RL 50	MDL	Unit ug/L	<u>D</u>	Prepared	Analyzed 12/07/15 13:52	Dil Fac
Surrogate	%Recovery Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	102	76 - 132			•		12/07/15 13:52	1
4-Bromofluorobenzene (Surr)	94	80 - 120					12/07/15 13:52	1
Toluene-d8 (Surr)	102	80 - 128					12/07/15 13:52	1

Method: 8260B - Vola	tile Organic Compounds (GC/	MS)					
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Benzene	16	0.50	ug/L			12/07/15 13:52	1
Ethylbenzene	8.7	0.50	ug/L			12/07/15 13:52	1
Toluene	8.2	0.50	ug/L			12/07/15 13:52	1
Xylenes, Total	30	1.0	ug/L			12/07/15 13:52	1
Surrogate	%Recovery Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94	80 - 120		12/07/15 13:52	1
Dibromofluoromethane (Surr)	102	76 - 132		12/07/15 13:52	1
Toluene-d8 (Surr)	102	80 - 128		12/07/15 13:52	1

12/16/2015

Method Summary

Client: AECOM Technical Services Inc. Project/Site: 461 8th St., Oakland

TestAmerica Job ID: 440-129415-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8260B/CA_LUFTM	Volatile Organic Compounds by GC/MS	SW846	TAL IRV
S			

Protocol References:

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 Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

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Lab Chronicle

Client: AECOM Technical Services Inc. Project/Site: 461 8th St., Oakland

TestAmerica Job ID: 440-129415-1

3

Client Sample ID: S-5

Lab Sample ID: 440-129415-1

Matrix: Ground Water

Date Collected: 11/25/15 09:50 Date Received: 12/02/15 10:20

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	10 mL	10 mL	298791	12/08/15 04:24	MP	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTN		10	10 mL	10 mL	298792	12/08/15 04:24	MP	TAL IRV

Initial

Amount

10 mL

10 mL

Final

Amount

10 mL

10 mL

Batch

Number

298608

298609

Dil

25

25

Factor

Run

RV 6

Client Sample ID: S-6

Prep Type

Total/NA

Total/NA

Lab Sample ID: 440-129415-2

Matrix: Ground Water

Date Collected: 11/25/15 10:50 Date Received: 12/02/15 10:20

Batch

Type

Analysis

Analysis

Batch

Method

8260B

8260B/CA_LUFTN

Prepared		
or Analyzed	Analyst	Lab
12/07/15 13:22	SS	TAL IRV
12/07/15 13:22	SS	TAL IRV

Client Sample ID: S-26

Lab Sample ID: 440-129415-3

Matrix: Water

Date Collected: 11/25/15 10:45 Date Received: 12/02/15 10:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	298608	12/07/15 13:52	SS	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTN		1	10 mL	10 mL	298609	12/07/15 13:52	SS	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Client: AECOM Technical Services Inc. Project/Site: 461 8th St., Oakland

2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-298608/4

Matrix: Water

Analyte
Benzene
Ethylbenzene
Toluene
Xylenes, Total

Analysis Batch: 298608

Client Sample ID: Method Blank Prep Type: Total/NA

MB	MB							
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ND		0.50		ug/L			12/07/15 07:49	1
ND		0.50		ug/L			12/07/15 07:49	1
ND		0.50		ug/L			12/07/15 07:49	1
ND		1.0		ug/L			12/07/15 07:49	1

	MB	MB					
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		80 - 120	_		12/07/15 07:49	1
Dibromofluoromethane (Surr)	102		76 - 132			12/07/15 07:49	1
Toluene-d8 (Surr)	101		80 - 128			12/07/15 07:49	1

Lab Sample ID: LCS 440-298608/5

Matrix: Water

Analysis Batch: 298608

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Analysis Datch. 20000								
•	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	25.0	23.8		ug/L		95	68 - 130	
Ethylbenzene	25.0	24.7		ug/L		99	70 - 130	
m,p-Xylene	25.0	26.1		ug/L		104	70 - 130	
o-Xylene	25.0	25.1		ug/L		100	70 - 130	
Toluene	25.0	24.8		ug/L		99	70 - 130	

 Surrogate
 %Recovery
 Qualifier
 Limits

 4-Bromofluorobenzene (Surr)
 95
 80 - 120

 Dibromofluoromethane (Surr)
 102
 76 - 132

 Toluene-d8 (Surr)
 101
 80 - 128

Lab Sample ID: 440-129489-B-3 MS

Matrix: Water

Analysis Batch: 298608

npie id: 440-129489-B-3 MS	Client Sample ID: Matrix Spike
Water	Prep Type: Total/NA
s Batch: 298608	

Sample Sample	Spike	MS	MS			%Rec.	
Result Qualifier	Added	Result	Qualifier Un	it D	%Rec	Limits	
3.5	25.0	27.6	ug/	L –	96	66 - 130	
2.2	25.0	28.1	ug/	L	104	70 - 130	
ND	25.0	27.1	ug/	L	108	70 - 133	
ND	25.0	25.7	ug/	Ĺ	103	70 - 133	
ND	25.0	26.0	ug/	L	104	70 - 130	
	Result Qualifier 3.5 2.2 ND ND	Result Qualifier Added 3.5 25.0 2.2 25.0 ND 25.0 ND 25.0	Result Qualifier Added Result 3.5 25.0 27.6 2.2 25.0 28.1 ND 25.0 27.1 ND 25.0 25.7	Result Qualifier Added Result Qualifier Un 3.5 25.0 27.6 ug/ 2.2 25.0 28.1 ug/ ND 25.0 27.1 ug/ ND 25.0 25.7 ug/	Result Qualifier Added Result Qualifier Unit D 3.5 25.0 27.6 ug/L ug/L 2.2 25.0 28.1 ug/L ND 25.0 27.1 ug/L ND 25.0 25.7 ug/L	Result Qualifier Added Result Qualifier Unit D %Rec 3.5 25.0 27.6 ug/L 96 2.2 25.0 28.1 ug/L 104 ND 25.0 27.1 ug/L 108 ND 25.0 25.7 ug/L 103	Result Qualifier Added Result Qualifier Unit D %Rec Limits 3.5 25.0 27.6 ug/L 96 66 - 130 2.2 25.0 28.1 ug/L 104 70 - 130 ND 25.0 27.1 ug/L 108 70 - 133 ND 25.0 25.7 ug/L 103 70 - 133

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		80 - 120
Dibromofluoromethane (Surr)	104		76 - 132
Toluene-d8 (Surr)	102		80 - 128

Client: AECOM Technical Services Inc. Project/Site: 461 8th St., Oakland

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-129489-C-3 MSD

Matrix: Water

Analysis Batch: 298608

Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	3.5		25.0	28.5		ug/L		100	66 - 130	3	20	
Ethylbenzene	2.2		25.0	28.4		ug/L		105	70 - 130	1	20	
m,p-Xylene	ND		25.0	27.1		ug/L		108	70 - 133	0	25	
o-Xylene	ND		25.0	25.8		ug/L		103	70 - 133	1	20	
Toluene	ND		25.0	25.7		ug/L		103	70 - 130	1	20	

MSD MSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 92 80 - 120 Dibromofluoromethane (Surr) 112 76 - 132 Toluene-d8 (Surr) 99 80 - 128

Lab Sample ID: MB 440-298791/4

Matrix: Water

Analysis Batch: 298791

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

70 - 130

107

Prep Type: Total/NA

Prep Type: Total/NA

MB MB Analyte Result Qualifier RL **MDL** Unit D Prepared Analyzed Dil Fac ND 0.50 Benzene ug/L 12/07/15 19:51 Ethylbenzene ND 0.50 12/07/15 19:51 ug/L Toluene ND 0.50 ug/L 12/07/15 19:51 ND 1.0 Xylenes, Total ug/L 12/07/15 19:51

MB MB Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 4-Bromofluorobenzene (Surr) 106 80 - 120 12/07/15 19:51 Dibromofluoromethane (Surr) 98 76 - 132 12/07/15 19:51 Toluene-d8 (Surr) 111 80 - 128 12/07/15 19:51

Lab Sample ID: LCS 440-298791/5

Matrix: Water

Toluene

Analysis Batch: 298791

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit %Rec Limits Benzene 25.0 24.7 99 68 - 130 ug/L Ethylbenzene 25.0 27.2 ug/L 109 70 - 130 m,p-Xylene 25.0 27.6 ug/L 111 70 - 130 o-Xylene 70 - 130 25.0 27.0 ug/L 108

26.7

ug/L

25.0

LCS LCS %Recovery Qualifier Limits Surrogate 4-Bromofluorobenzene (Surr) 104 80 - 120 Dibromofluoromethane (Surr) 103 76 - 132 Toluene-d8 (Surr) 109 80 - 128

Client: AECOM Technical Services Inc. Project/Site: 461 8th St., Oakland

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-129637-A-1 MS

Matrix: Water

Analysis Batch: 298791

Client Sample ID: Matrix Spike Prep Type: Total/NA

Sample Sample Spike MS MS %Rec. Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits ND 25.0 25.3 66 - 130 Benzene ug/L 100 ND 25.0 26.4 Ethylbenzene ug/L 104 70 - 130 25.0 28.2 m,p-Xylene 1.1 ug/L 108 70 - 133 o-Xylene ND 25.0 27.1 107 70 - 133 ug/L Toluene ND 25.0 25.5 ug/L 102 70 - 130

MS MS Surrogate %Recovery Qualifier Limits 103 80 - 120 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) 106 76 - 132 Toluene-d8 (Surr) 104 80 - 128

Lab Sample ID: 440-129637-A-1 MSD

Matrix: Water

Analysis Batch: 298791

Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA

MSD MSD **RPD** Sample Sample Spike %Rec. Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Benzene ND 25.0 24.7 ug/L 98 66 - 130 20 Ethylbenzene ND 25.0 26.4 70 - 130 ug/L 104 0 20 m,p-Xylene 28.3 109 70 - 133 25 1.1 25.0 ug/L 0 ND 20 o-Xylene 25.0 27.1 ug/L 107 70 - 133 0 Toluene ND 25.0 25.6 ug/L 103 70 - 130 20

MSD MSD Surrogate Qualifier Limits %Recovery 4-Bromofluorobenzene (Surr) 103 80 - 120 Dibromofluoromethane (Surr) 105 76 - 132 80 - 128 Toluene-d8 (Surr) 105

Method: 8260B/CA LUFTMS - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 440-298609/4 **Client Sample ID: Method Blank Matrix: Water Prep Type: Total/NA**

Analysis Batch: 298609

•	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	ND		50		ug/L			12/07/15 07:49	1

	МВ	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	102		76 - 132		12/07/15 07:49	1
4-Bromofluorobenzene (Surr)	95		80 - 120		12/07/15 07:49	1
Toluene-d8 (Surr)	101		80 - 128		12/07/15 07:49	1
	Dibromofluoromethane (Surr) 4-Bromofluorobenzene (Surr)	Surrogate %Recovery Dibromofluoromethane (Surr) 102 4-Bromofluorobenzene (Surr) 95	Dibromofluoromethane (Surr) 102 4-Bromofluorobenzene (Surr) 95	Surrogate%RecoveryQualifierLimitsDibromofluoromethane (Surr)10276 - 1324-Bromofluorobenzene (Surr)9580 - 120	Surrogate%RecoveryQualifierLimitsPreparedDibromofluoromethane (Surr)10276 - 1324-Bromofluorobenzene (Surr)9580 - 120	Surrogate %Recovery Dibromofluoromethane (Surr) Qualifier Limits Prepared Analyzed 4-Bromofluorobenzene (Surr) 95 80 - 120 12/07/15 07:49

Client: AECOM Technical Services Inc. Project/Site: 461 8th St., Oakland

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 440-298609/6 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 298609

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit D %Rec Limits 500 425 ug/L 85 55 - 130 Volatile Fuel Hydrocarbons

(C4-C12)

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surr)	102		76 - 132
4-Bromofluorobenzene (Surr)	98		80 - 120
Toluene-d8 (Surr)	102		80 - 128

Lab Sample ID: 440-129489-B-3 MS **Client Sample ID: Matrix Spike Matrix: Water** Prep Type: Total/NA

Analysis Batch: 298609

, , , , , , , , , , , , , , , , , , , ,	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Volatile Fuel Hydrocarbons	310		1730	2110		ug/L		104	50 - 145	
(C4-C12)										

MS MS %Recovery Qualifier Limits Surrogate 76 - 132 Dibromofluoromethane (Surr) 104 4-Bromofluorobenzene (Surr) 94 80 - 120 Toluene-d8 (Surr) 80 - 128 102

Lab Sample ID: 440-129489-C-3 MSD **Client Sample ID: Matrix Spike Duplicate** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 298609

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Volatile Fuel Hydrocarbons	310		1730	2200		ug/L		110	50 - 145	4	20
(C4-C12)											

MSD MSD Surrogate %Recovery Qualifier Limits 76 - 132 Dibromofluoromethane (Surr) 112 80 - 120 4-Bromofluorobenzene (Surr) 92 99 80 - 128 Toluene-d8 (Surr)

Lab Sample ID: MB 440-298792/4 Client Sample ID: Method Blank Prep Type: Total/NA

Matrix: Water

Analysis Batch: 298792

	MB	MR							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	ND		50		ug/L			12/07/15 19:51	1

	IVIB	IVIB					
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac	
Dibromofluoromethane (Surr)	98		76 - 132		12/07/15 19:51	1	
4-Bromofluorobenzene (Surr)	106		80 - 120		12/07/15 19:51	1	
Toluene-d8 (Surr)	111		80 - 128		12/07/15 19:51	1	

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Client: AECOM Technical Services Inc. Project/Site: 461 8th St., Oakland

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 440-298792/6 Matrix: Water Analysis Batch: 298792			Client Sample ID: Lab Control Sample Prep Type: Total/NA
Analysis Daton. 230/32	Spike	LCS LCS	%Rec.

Analyte		Added	Result	Qualifier	Unit	%Re	Limits	
Volatile Fuel Hydrocarbons		500	454		ug/L	9	55 - 130	
(C4-C12)								

LCS LCS %Recovery Qualifier Limits Surrogate Dibromofluoromethane (Surr) 76 - 132 106 4-Bromofluorobenzene (Surr) 104 80 - 120 Toluene-d8 (Surr) 106 80 - 128

Lab Sample ID: 440-129637-A-1 MS **Client Sample ID: Matrix Spike Prep Type: Total/NA Matrix: Water**

Analysis Batch: 298792

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Volatile Fuel Hydrocarbons	ND		1730	1970		ug/L		112	50 - 145	
(C4-C12)										

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surr)	106		76 - 132
4-Bromofluorobenzene (Surr)	103		80 - 120
Toluene-d8 (Surr)	104		80 - 128

Lab Sample ID: 440-129637-A-1 MSD

Matrix: Water

(C4-C12)

Analysis Ratch: 298792

Analysis Balcii. 230732	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Volatile Fuel Hydrocarbons	ND		1730	1920		ug/L		109	50 - 145	3	20	

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surr)	105		76 - 132
4-Bromofluorobenzene (Surr)	103		80 - 120
Toluene-d8 (Surr)	105		80 - 128

QC Association Summary

Client: AECOM Technical Services Inc. Project/Site: 461 8th St., Oakland

TestAmerica Job ID: 440-129415-1

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GC/MS VOA

Analysis Batch: 298608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-129415-2	S-6	Total/NA	Ground Water	8260B	
440-129415-3	S-26	Total/NA	Water	8260B	
440-129489-B-3 MS	Matrix Spike	Total/NA	Water	8260B	
440-129489-C-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 440-298608/5	Lab Control Sample	Total/NA	Water	8260B	
MB 440-298608/4	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 298609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-129415-2	S-6	Total/NA	Ground Water	8260B/CA_LUFT MS	
440-129415-3	S-26	Total/NA	Water	8260B/CA_LUFT MS	
440-129489-B-3 MS	Matrix Spike	Total/NA	Water	8260B/CA_LUFT MS	
440-129489-C-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B/CA_LUFT MS	
LCS 440-298609/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
MB 440-298609/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

Analysis Batch: 298791

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-129415-1	S-5	Total/NA	Ground Water	8260B	
440-129637-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-129637-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 440-298791/5	Lab Control Sample	Total/NA	Water	8260B	
MB 440-298791/4	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 298792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-129415-1	S-5	Total/NA	Ground Water	8260B/CA_LUFT MS	-
440-129637-A-1 MS	Matrix Spike	Total/NA	Water	8260B/CA_LUFT MS	
440-129637-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B/CA_LUFT MS	
LCS 440-298792/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
MB 440-298792/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

Definitions/Glossary

Client: AECOM Technical Services Inc. Project/Site: 461 8th St., Oakland

Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin)

TestAmerica Job ID: 440-129415-1

Glossary

TEF

TEQ

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points

Certification Summary

Client: AECOM Technical Services Inc. Project/Site: 461 8th St., Oakland

TestAmerica Job ID: 440-129415-1

Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-16
Arizona	State Program	9	AZ0671	10-13-16
California	LA Cty Sanitation Districts	9	10256	01-31-16 *
California	State Program	9	2706	06-30-16
Guam	State Program	9	Cert. No. 12.002r	01-23-16
Hawaii	State Program	9	N/A	01-29-16
Kansas	NELAP Secondary AB	7	E-10420	07-31-16
Nevada	State Program	9	CA015312007A	07-31-16 *
New Mexico	State Program	6	N/A	01-29-16
Northern Mariana Islands	State Program	9	MP0002	01-29-16
Oregon	NELAP	10	4005	01-29-16
USDA	Federal		P330-09-00080	07-08-18

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^{*} Certification renewal pending - certification considered valid.

TestAmerica Irvine

_	LAB (LOCATIO	N)					Q		9	Shel	l Oil	Pr	odı	uct	ts (Cha	in	Of	Cu	sto	dy	R	eco	rd									
CALSCIENCE)			Please	Check:	Approp	riate Bo	ox:∷:			Pri	int Bil	II To	Çon	tact N	ame					IN	CIDE	NT.#	(EN	√V:S	ERVI	CES)	□н	ECK IF NO IN	NCIDENT #	APPLIES	
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ADDRESS. 1680 Rogers	Avenue, San Jos	se, CA									-	EDF	DELIVERAE	BLE TO ((Name, C	OM, Oa	ice Loca			213-	NO. -996-2	2238		E-MAIL:								JLTANT PROJECT	
PROJECT CONTACT	(Hardcopy or PDF Report to)		-										MPLERNAL				Maii	u, OA						laura	.radk	e@a	ecom.c		AB USE	OKH	15	1/25-1	1111
TELEPHONE:	5-4455 x 103	FAX: (310) 637-5	802	E-MAIL:		bgeb	bie@blai	netech.co	<u>m</u>			7	$75n_i$	14	X	ubel	2	M	î.c.k	M	CG	10	ch	. 4/	, ~								
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SPECIAL	INSTRUCTIONS	OR NOTES:					□ TA	IL CONTRAC TE REIMBUR NOT NEEDI EIPT VERIFI	RSEMENT ED	rate app)le (8260B)	Extractable (8015M)		(80)	+ MTBE + TBA (8260B) + 5 OXYS (MTBE, TBA, DIPE, TAME,		(82608)								-	-					00 RECEIPT	
Email invoice U	to USAPimaging@ae	ecom.com						/G (ground ater sourc			face water)	Purgeabl	tracta		(8260B)	: + TE		(826)			6	5B)											
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DE SERVICE DE SE CONTRA DE LA CO

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 440-129415-1

Login Number: 129415 List Source: TestAmerica Irvine

List Number: 1

Creator: Garcia, Veronica G

oreator. Garcia, veronica o		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or ampered 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.	True	
s the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received 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	
Containers requiring zero headspace have no headspace or bubble is 6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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