

Ms. Dilan Roe Alameda County Environmental Health 1131 Harbor Parkway, Suite 250 Alameda, CA 94502-6577

Shell Oil Products US

DS Soil & Groundwater Focus Delivery Group
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RE:

461 8th Street, Oakland, California PlaNet Site ID USF04642

PlaNet Project ID 27481 ACEH Case No. RO0000343

RECEIVED

By Alameda County Environmental Health 8:59 am, Jul 08, 2016

Dear Ms. Roe:

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

July 7, 2016

Dilan Roe Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502

Re: Second Quarter 2016 Groundwater Monitoring Report

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

Shell PlaNet Site ID: USF04642 / Project ID: 27481

Agency No. RO0000343

Dear Ms. Roe:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell), AECOM Technical Services Inc. is pleased to submit this report for groundwater monitoring performed during the second quarter of 2016 for the Former Shell Service Station located at 461 8th Street in Oakland, California.

If you have any questions regarding this submittal, please contact Sara Heikkila at (213) 996-2285 or Sara.Heikkila@aecom.com.

Sincerely,

Sara Heikkila

Project Manager

Aubrey Cool, P.G.

Portfolio Manager

Enclosures: Groundwater Monitoring Report

cc: Andrea Wing, Shell Oil Products US

Leroy Griffin, Fire Prevention Bureau

St. Regis Properties, Attn: Sam Remcho,

655 Redwood Highway, Suite 285, Mill Valley, California 94941 (property owner)



Second Quarter 2016 Groundwater Monitoring Report

Former Shell Service Station 461 8th Street Oakland, California

July 2016



Second Quarter 2016 Groundwater Monitoring Report

Former Shell Service Station 461 8th Street, Oakland California

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

Submitted to:

Dilan Roe Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502

Submitted by:

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

On Behalf of Shell Oil Products US

July 7, 2016

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1 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

Site Name:	Former Shell Service Station
Site Address:	461 8 th Street, Oakland, California
Shell Environmental Services	
Program Manager:	Andrea Wing
Consulting Company / Contact Person:	AECOM / Sara Heikkila
Primary Agency:	Alameda County Environmental Health
1.2 Site Summary	
Frequency of Groundwater Monitoring:	Quarterly
Wells Water Level Gauged:	4
Wells Sampled:	4
ls there any Free Product Present in On-Site Monitoring Wells:	No
Current Remediation Activity:	None



2 Site Activities

2.1 Current Activities

On May 31, 2016, Blaine Tech Services, Inc. (Blaine Tech) of San Jose, California gauged and sampled the wells according to the established monitoring program for this site. TestAmerica Laboratories, Inc. of Pleasanton, California, a certified California laboratory, completed the analyses of the groundwater samples.

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

2.2 Current Findings

Groundwater Elevation:	7.85 to 12.79 feet above mean sea level
Groundwater Gradient (direction):	Southwest
Groundwater Gradient (magnitude):	0.028 feet per foot

2.3 Proposed Activities

No free product has been observed in wells S-5 and S-6 since 2014, and well S-26 has been sampled for one year following its installation. AECOM proposes to reduce the frequency of the groundwater monitoring program from quarterly to semiannual during the second and fourth quarters.

Proposed wells S-24 and S-25 will be installed in conjunction with the site redevelopment, which is anticipated in January 2017. Soil boring and vapor probe locations B-27/VP-4 and VP-12 will be destroyed in conjunction with site redevelopment.



3 Conclusions and Recommendations

Wells S-4, S-5, S-6, and S-26 were gauged and sampled for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes. These constituents of concern were detected in all wells sampled as described below:

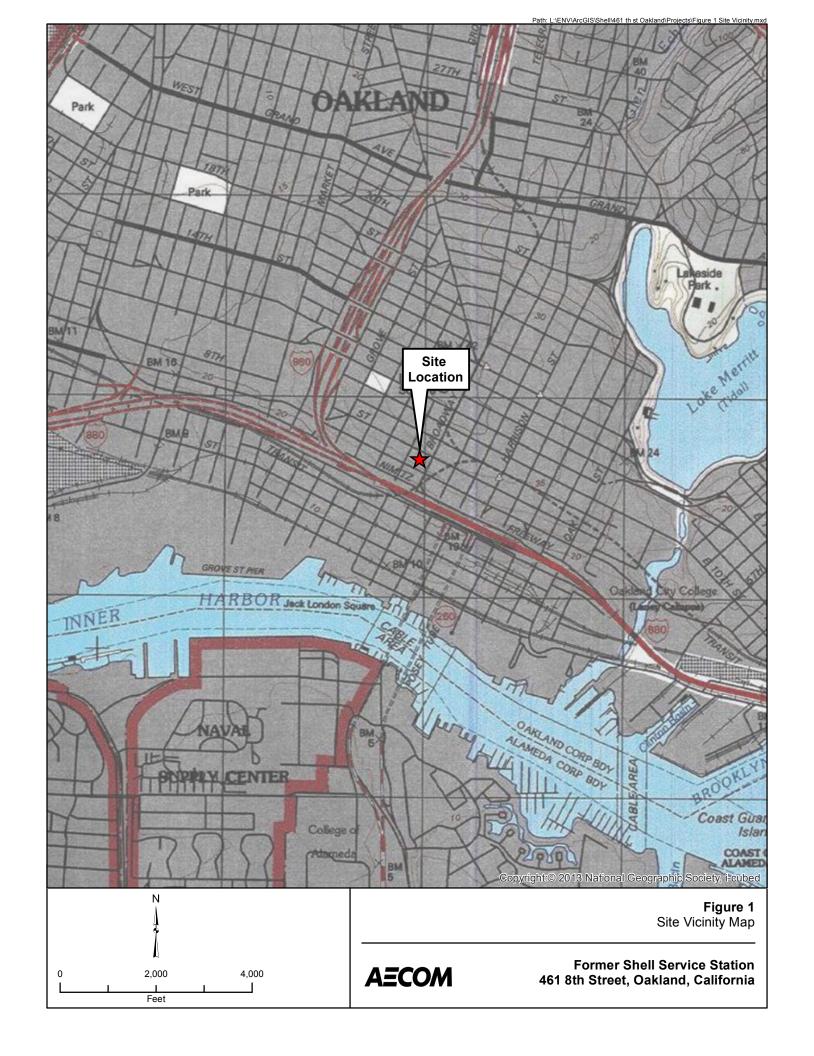
- TPHg concentrations ranged from 52 micrograms per liter (μg/L) (S-4) to 25,000 μg/L (S-5).
- Benzene concentrations ranged from 11 μg/L (S-4) to 4,300 μg/L (S-6).
- Toluene concentrations ranged from 2.0 μg/L (S-4) to 750 μg/L (S-6).
- Ethylbenzene concentrations ranged from 2.3 μg/L (S-4) to 830 μg/L (S-6).
- Total xylenes concentrations ranged from 3.9 μg/L (S-4) to 1,600 μg/L (S-6).

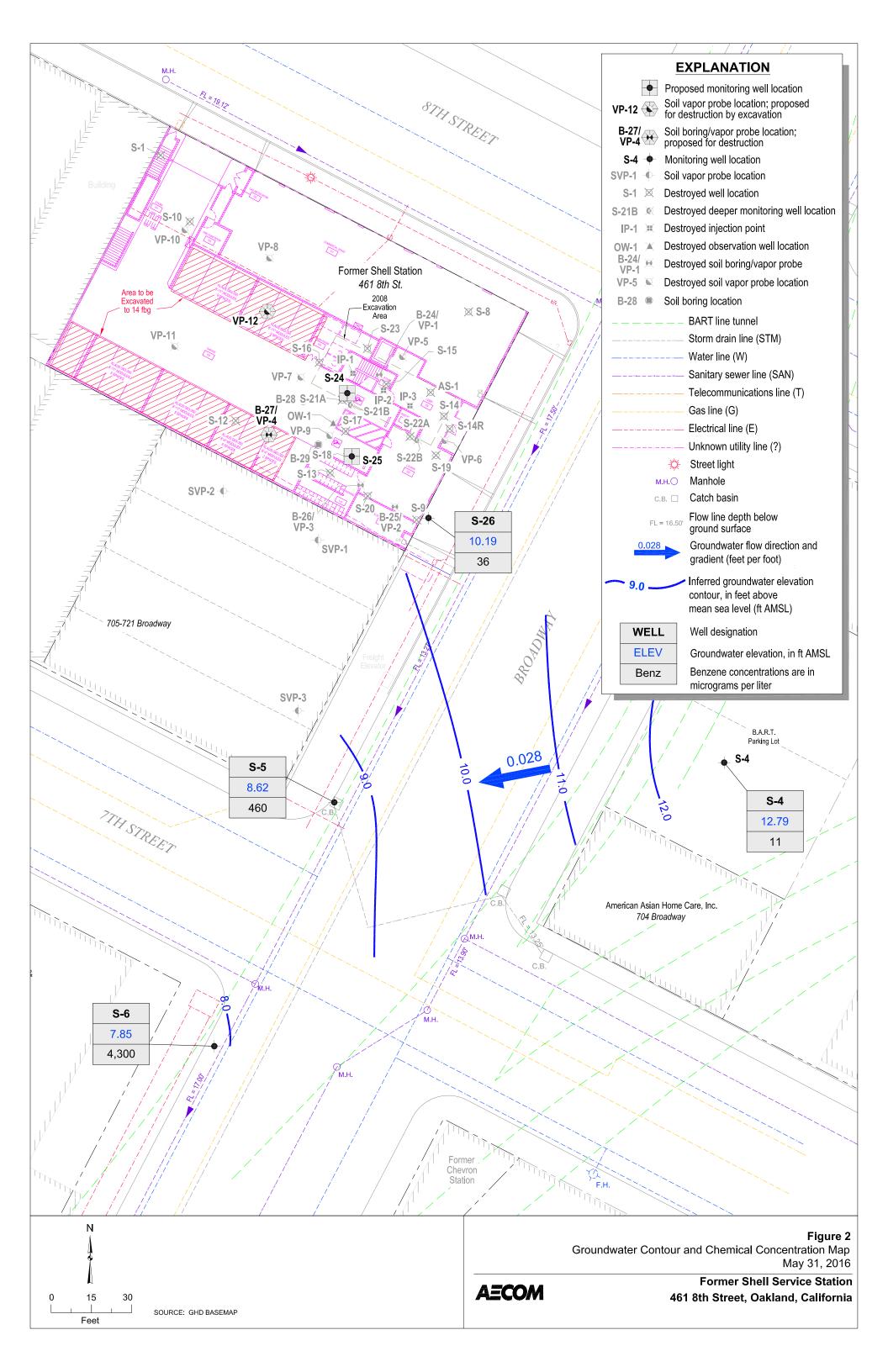
As stated above, AECOM recommends reducing the frequency of the groundwater monitoring program to semiannual beginning in the third quarter 2016.



Figures







Table



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

Well ID	Date	TPHg (μg/L)	B (µg/L)	Τ (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-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 inacc	essible												93.51					
S-4	05/13/1993	Well inacc	essible												93.51	14.81		78.70		
S-4	07/22/1993	Well inacc	essible												93.51	14.42		79.09		
S-4	10/20/1993	Well inacc	essible												93.51					
S-4	01/25/1994	Well inacc	essible												93.51	14.60		78.91		
S-4	04/25/1994	Well inacc	essible												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		

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

Well ID	Date	TPHg (μg/L)	B (µg/L)	Τ (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-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		
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		

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

Well	Date	TPHg (μg/L)	Β (μg/L)	Τ (μg/L)	Ε (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-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		
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-4	03/17/2016														34.41					
S-4	05/31/2016	52	11	2.0	2.3	3.9									34.41	21.62		12.79		
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		

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

Well	Date	TPHg	B (100/11)	T (:::://.)	E	X	MTBE 8020	MTBE 8260	TBA	DIPE	ETBE	TAME	EDC	EDB	TOC	Depth to Water	SPH Thickness	GW Elevation	DO (mar/l)	ORP
ID S-5	07/31/1990	(μg/L) 53,000	(µg/L) 8,300	(μg/L) 14,000	(μg/L) 1,200	(μg/L) 7,400	(μg/L) 	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ft MSL)	(ft TOC) 20.88	(ft)	(ft MSL) 78.48	(mg/L)	(mV)
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 inacc	essible												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		
S-5	08/25/1994														99.36	22.01	0.44	77.70		
S-5	09/22/1994														99.36	22.00	0.15	77.48		
S-5	10/24/1994														99.36	22.28	0.56	77.53		
S-5	12/22/1994														22.94	22.88	0.99	0.85		
S-5	04/20/1995														22.94	21.66	0.33	1.54		
S-5	10/04/1995														22.94	22.18		0.76		
S-5	01/03/1996														22.94	22.80	0.83	0.80		
S-5	04/11/1996														22.94	21.15	0.67	2.33		
S-5	07/11/1996														22.94	22.62	0.90	1.04		
S-5	10/02/1996														22.94	23.07	0.64	0.38		
S-5	01/22/1997														22.94	20.83	0.16	2.24		
S-5	07/21/1997														22.94	21.16	0.05	1.82		
S-5	01/22/1998														22.94	20.04	0.04	2.93		
S-5	07/08/1998	220	14	40	5.8	34	3.3								22.94	18.61		4.33		
S-5	10/26/1998														22.94	17.31		5.63		
S-5	01/28/1999	51,000	13,000	1,200	1,200	2,400	2,400								22.94	20.11		2.83		
S-5	04/23/1999	65,600	2,540	7,300	1,790	9,840	<1,000								22.94	19.21		3.73		

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	Τ (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-5	07/29/1999	61,400	3,320	6,980	1,520	7,700	<1,000								22.94	14.77		8.17		
S-5	11/01/1999	48,200	2,700	5,740	1,290	7,850	<500	<40.0							22.94	15.56		7.38		
S-5	01/07/2000	39,000	3,900	8,500	790	8,300	1,500								22.94	15.82		7.12		
S-5	04/11/2000	29,300	1,680	5,060	1,130	6,220	<250								22.94	18.19		4.75		
S-5	07/19/2000	6,420	2,110	207	252	681	355	253 b							22.94	19.01		3.93		
S-5	10/12/2000	41,500	2,940	4,940	1,520	7,770	<250	<66.7							22.94	19.62		3.32		
S-5	01/09/2001	142,000	7,030	9,550	2,340	12,600	779								22.94	19.94		3.00		
S-5	04/06/2001	Well inacc	essible												22.94					
S-5	04/13/2001	59,800	4,810	10,800	1,950	10,100	842	<10.0							22.94	14.72		8.22		
S-5	07/25/2001	71,000	2,900	6,800	1,700	9,100		<250							22.94	14.91		8.03		
S-5	08/13/2001														22.94	19.43		3.51		
S-5	11/01/2001	Unable to	locate												22.94					
S-5	01/17/2002	58,000 d	460 d	3,300 d	1,900 d	8,400 d		<200 d							С	14.27				
S-5	05/08/2002	60,000 d	d	2,700 d	1,800 d	8,800 d		<100 d							22.94	18.40		4.54		
S-5	07/18/2002	53,000	240	1,200	1,500	6,400		<100							27.36	14.25		13.11		
S-5	10/15/2002	Well inacc	essible												27.36					
S-5	10/17/2002	42,000	420	1,100	1,200	5,500		<10							27.36	14.90		12.46		
S-5	01/02/2003	26,000	680	1,500	780	3,800		<5.0							27.36	14.72		12.64		
S-5	04/15/2003	3,600	29	38	65	370		<5.0							е	14.45				
S-5	07/14/2003	21,000	210	460	650	2,900		<10							е	14.10				
S-5	10/20/2003	37,000	390	590	870	3,500		<13							е	14.63				
S-5	01/22/2004	29,000	200	210	710	2,400		<13							е	14.08				
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

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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		(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-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		
S-5	03/17/2016	32,000	450	230	790	1,800									27.24	18.52		8.72		
S-5	05/31/2016	25,000	460	230	710	1,300									27.24	18.62		8.62		
S-6	04/16/1987	81,000	16,000	9,000	а	6,400									100.58					
S-6	10/26/1988	110,000	29,000	18,000	2,500	8,200									100.58					
S-6	02/14/1989	54,000	18,000	4,500	1,400	4,000									100.58	20.87		79.71		
S-6	05/01/1989	93,000	43,000	9,900	3,000	8,000									100.58	20.49		80.09		

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

Well	Date	TPHg (µg/L)	B (µg/L)	Τ (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-6	07/27/1989	52,000	20,000	3,200	1,700	5,500									100.58	21.01		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	77.96		
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		

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

Well ID	Date	TPHg (µg/L)	Β (μg/L)	Τ (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-6 (D)	01/22/1997	63,000	15,000	4,800	1,800	5,200	<1,000								22.08					
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		

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

Well ID	Date	TPHg (µg/L)	Β (μg/L)	Τ (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-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		
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		

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

Well ID	Date	TPHg (μg/L)	Β (μg/L)	Τ (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-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 l	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		
S-6	03/17/2016	6,100 o	650	200	240	640									30.56	22.80		7.76		
S-6	05/31/2016	16,000	4,300	750	830	1,600		-							30.56	22.71		7.85		
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		

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

Well ID	Date	TPHg (μg/L)	B (µg/L)	Τ (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-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		
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		

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	Τ (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-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 destroye	ed																		
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	Well inacc	essible												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		

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

Well ID	Date	TPHg (µg/L)	Β (μg/L)	Τ (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-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 inacc	essible												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 inacc	essible												26.06					
S-9	08/13/2001	Well inacc	essible												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	21.35		13.35		
S-9	04/15/2003														34.70	21.14		13.56		
S-9	07/14/2003	<50	<0.50	<0.50	<0.50	<1.0		<0.50							34.70	20.80		13.90		
S-9	10/20/2003														34.70	21.33		13.37		
S-9	01/22/2004	<50	<0.50	<0.50	<0.50	<1.0		<0.50							34.70	20.77		13.93		
S-9	04/19/2004														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														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														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		
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		

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

Well	Date	TPHg (μg/L)	Β (μg/L)	Τ (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-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		

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	Τ (μg/L)	Ε (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-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 destroye	d																		
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		

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

Well ID	Date	TPHg (μg/L)	Β (μg/L)	Τ (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-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		
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

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

Well ID	Date	TPHg (μg/L)	B (µg/L)	Τ (μg/L)	E (µg/L)	X (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-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 destroye	d																		
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					1				36.44	27.08		9.36		

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	Τ (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	Well destroye	d																		
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		
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		

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

Well ID	Date	TPHg (μg/L)	B (µg/L)	Τ (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-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 inacc	essible												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 destroye	d																		
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 destroye	d																		
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

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

Well ID	Date	TPHg (μg/L)	B (µg/L)	Τ (μg/L)	E (µg/L)	X (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-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 destroye	d																		
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 destroye	d																		
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 destroye	d																		
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

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

Well ID	Date	TPHg (μg/L)	B (µg/L)	Τ (μg/L)	E (µg/L)	X (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-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 destroye	d																		
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	Insufficie	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
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

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

Well	Date	TPHg (μg/L)	B (µg/L)	Τ (μg/L)	Ε (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-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 destroye	d																		
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
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		

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

Well ID	Date	TPHg (μg/L)	B (µg/L)	Τ (μg/L)	Ε (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-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 destroye	d																		
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 destroye	d																		

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	Τ (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-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	Insufficien	t water												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	S-21A Well destroyed																			
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

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

Well	Date	TPHg (µg/L)	B (µg/L)	Τ (μg/L)	E (µg/L)	X (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-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		
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 destroye	d																	<u> </u>	
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

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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		(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-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
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 inacc	essible							-	-				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 inacc	essible												35.06					
S-22A	04/21/2014	Well inacc	essible												35.06					
S-22A	11/21/2014	Well inacc	essible												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

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	Τ (μg/L)	Ε (μg/L)	X (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-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 inacc	essible												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 inacc	essible												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		
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		

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	Τ (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-23	04/21/2014	1,700	110	47	8.4	95									35.75	25.67		10.08		
S-23	Well destroye	d																		
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		
S-26	03/17/2016	770	43	17	25	66									34.39	24.04		10.35		
S-26	05/31/2016	400	36	7.3	19	35									34.39	24.20		10.19		
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 destroye	d																		
OW-1	04/09/2009	Well dry																		
OW-1	05/18/2009	Well dry																		
OW-1	Well destroye	d																		

Notes: See following page.for Table 1 notes.

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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)

g = 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.

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

i = Pre-purge sample

j = 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.

o = Concentration reported is due to the presence of discrete peaks of benzene and 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.

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Appendix A

Field Notes

(Blaine Tech Services, Inc.)

WELL GAUGING DATA

Project # 16053/- MM1	Date <u>5-3/-16</u>	Client AECOM	
Site 461 8th 54	anth to a		

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Immiscibles Removed		Depth to well bottom (ft.)	Survey Point: TOB or	Notes
5-4	0800	4					21.62	L8.70		
S-5 S-6 S-26	0831	4	ODOC				21.62	26.75		SXX
5-6	0909	4	ODOR			······································	22,71	35,00	And the second s	
5-26	0822	2					24,20	35,00 34,44	J	
~~····································										
		***************************************					·			
							,			
								,		

	·····					*****	
BTS #: //	60531-N	<u>ami</u>		Site:	461 8	# st. oa	Kland CA
Sampler: 1					5-3/-		
Well I.D.:	5-4			ı	Diamete	· · · · · · · · · · · · · · · · · · ·) 6 8 <u> </u>
Total Well	Depth (TI	D): 28,	.70	Depth	to Wate	er (DTW): 2/.	62
Depth to Fi	ree Produc	t:		1		ree Product (fe	
Referenced	to:	PVC	Grade	D.O. 1	Meter (if	req'd):	YSI HACH
DTW with	80% Rech	arge [(I	leight of Water				
Purge Method:	Bailer Disposable E Middleburg Electric Subr	Bailer nersible	Extrac Other	Waterr Peristalticition Pump	a C	Sampling Method	Bailer Disposable Bailer Extraction Port Dedicated Tubing
Time	Temp (°F)	pН	Cond. (mS/cm or µS/cm)	}	bidity TUs)	Gals. Removed	Observations
0941	70.9	6.97	5/0	6	16.	4.6	eloudy
	WELL	DEW.	ATEROD AT	5 9	AL		/
1080	7/,3	6.64	638	G) 362x	GRAB	Turbidity:270
Did well der	water?	Yes	No	Gallon	s actually	y evacuated: 5	>
Sampling D	ate: 5 - 3/	-160	Sampling Time	: 105	C S	Depth to Water	r: 22,89
Sample I.D.	: 5-4			Labora	7.0.00	Test America	.# **
Analyzed fo	r: трн-G	BTEX	,МТВЕ ТРН-D	Other:	566 G	o C	
EB I.D. (if a	pplicable)	•	(a)			if applicable):	
Analyzed for	r: TPH-G	втех	MTBE TPH-D	Other:			
D.O. (if req'	d): Pr	e-purge:		mg/L	Po	ost-purge:	mg/ _L
O.R.P. (if re	q'd): Pr	e-purge:		mV	Po	ost-purge:	mV

BTS #: /6	0531-1	MM1		Site:	461	8 th st.	Oakland en
Sampler:					5-31-		
Well I.D.:	5-5				Diamete		O 6 8
Total Well	Depth (TI	D): 26.	75	Depth	ı to Wate	er (DTW): 18.	67
Depth to Fr			-	1		ree Product (fe	
Referenced	to:	PVC	Grade	D.O.	Meter (if	req'd):	, YSI HACH
DTW with	80% Rech	arge [(I	Height of Water	Colum	ın x 0.20) + DTW]: _{この}	.24
Purge Method:	Bailer Disposable B Middleburg Electric Subr	sailer	·	Waterr Peristalti etion Pum	a c	Sampling Method	: Bailer Disposable Bailer Extraction Port Dedicated Tubing
5.3 (0 I Case Volume	Gals.) X Speci	ろ fied Volun	$\frac{1}{1} = \frac{15.9}{\text{Calculated Vo}}$	_Gals. lume	2" 3"	0.04 4" 0.16 6" 0.37 Othe	0.65 1.47 r ratius ² * 0.163
Time 0843	Temp (°F) 68.0 well de	pH 6.59 Wafe	1	1		Gals. Removed	Observations ador, cloudy
0855	67.7	6.14	7.25	190	7		ON = 18.85
Did well dev			No	Gallon	s actually	y evacuated:	5.3
Sampling Da	ate: <u></u>	16	Sampling Time	: 0853		Depth to Water	r: 18.85
Sample I.D.:	5.5			Labora	tory:	Test America	
Analyzed fo	r: трн-G	BTEX	МТВЕ ТРН-D	Other: <	ee co	C	
EB I.D. (if a		: BTEX	@ Time			if applicable):	
D.O. (if req'		e-purge:	MIDE ITHE	mg/L	D.	ost-purge:	mg _/ L
O.R.P. (if re		e-purge:		mV		ost-purge:	mV

BTS #: /C	053/-MM	7 /		Site: 4/6	18	16 st, 00	Kland, CA
Sampler:				Date: 5.			
Well I.D.:	5-6			Well Dia			> 6 8
Total Well	Depth (TI	D):35,	00	Depth to	Wate	r (DTW): 22	.71
Depth to Fi	ee Produc	t:				ree Product (fe	
Referenced	to:	PVC	Grade	D.O. Me	ter (if	req'd):	YSI HACH
DTW with	80% Rech	arge [(I	Ieight of Water	Column x	x 0.20) + DTW]: ረና	16
Purge Method:	Bailer Disposable B Middleburg Electric Subn		Extrac Other	Waterra Peristaltic ction Pump	ell Diamete	Sampling Method Other	Disposable Bailer Extraction Port Dedicated Tubing
1 Case Volume	Gals.) X Speci	ろ fied Volum	nes Calculated Vo	_ Gals. olume	1" 2" 3"	0.04 4" 0.16 6" 0.37 Othe	0.65 1.47 r mlius ² * 0.163
Time	Temp (°F)	pН	Cond. (mS/cm of µS/cm)	Turbid (NTU:		Gals. Removed	Observations
09/3	68,2	6,90	380	72		8	odor
09/6	48,2	6,55	386	63		16	,
0919	68,3	6.60	39/	65		24	4
Did well de	water?	Yes /	No	Gallons a	ctually	y evacuated: Z	4
Sampling D	ate:5-3/-/	16	Sampling Time	o923		Depth to Water	r: 24.24
Sample I.D.	:5-6			Laborator		Test America	
Analyzed fo	г: трн-б	BTEX	MTBE TPH-D	Other: 50	e co) C	.1
EB I.D. (if a	pplicable)	:	a			if applicable):	The time of the control of the contr
Analyzed fo	r: TPH-G	BTEX	MTBE TPH-D	Other:			
D.O. (if req'	d): Pr	e-purge:		mg/L	Po	ost-purge:	mg/L
O.R.P. (if re	q'd): Pr	e-purge:		mV	Po	ost-purge:	mV

BTS #: /6	0531-N	1M/		Site:	1618	that, our	Kland, CA
Sampler: ^					5-3/-,		
Well I.D.:	5-76						6 8
Total Well	Depth (TI	D):3 <i>4,</i>	44	Depth	to Wate	er (DTW): 74	70
Depth to Fi	ree Produc	:t:		1		ree Product (fe	
Referenced	to:	PVC) Grade	D.O. 1	Meter (if	req'd):	YSI HACH
DTW with	80% Rech	arge [(F	leight of Water	Colum	ın x 0.20) + DTW]: 24	6,24
Purge Method:	- Aller Control of the Control of th	Bailer nersible		Waterra Peristaltic stion Pump	Well Diamete	Sampling Method Other Multiplier Well 0.04 4" 0.16 6"	: Bailer Disposable Bailer Extraction Port Dedicated Tubing : Diameter Multiplier 0.65 1.67
1 Case Volume		ified Volun			3"	0.37 Othe	r radius² * 0,163
Time	Temp (°F)	pН	Cond. (mS/cm or µS/cm)	ł	bidity TUs)	Gals. Removed	Observations
0959	69,4	7,25	278	97	75 .	1.6	cloudy
1003	69,7	6.76	290	>/0	00	3,2	
1007	69,9	6,67	283	3/0	00	4,8	4
Did well dev	water?	Yes (No	Gallon	s actually	y evacuated: 5	
Sampling D	ate: 5 - 3/-	16	Sampling Time	:/0/5		Depth to Water	r: 24,96
Sample I.D.	5-26			Labora		Test America	
Analyzed fo	r: TPH-G	втех	MTBE TPH-D	Other:	see c	a C	
EB I.D. (if a	pplicable)	•	(a)			if applicable):	
Analyzed fo	r: TPH-G	BTEX	MTBE TPH-D	Other:			
D.O. (if req'	d): Pr	e-purge:		mg/ _L	Po	ost-purge:	^{mg} / _L
O.R.P. (if re	q'd): Pr	e-purge:		mV	Po	ost-purge:	mV

LAB (LOCATION)			Shell Oi	il Pro	ducts L	JS Chair	Of Cu	stody F	Record	ı		A≣COM
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Dither ()	☐:HEMICALS	[ZCONSULTANT	LUBES	Figure 1		Pilachowski D #			27481		DAT	re: <u>5-3/-/6</u>
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Lab Vendor # 1364589 (TestAmerica)	LI TONSI ONIA (1011	ILDINEK						USPC/00	226,USRT/01	259] ~~	»E 01
<u> </u>				1	SS: Street and City			State	200000	::::AEÇOM	Project/	Tapk Number:
Blaine Tech Services, Inc.		BTSS		461 8th	St., Oaklan	d Organization	PHONE NO:	CA		ing of the section of		
1680 Rogers Ave., San Jose, CA, 95112 PROJECT CONTACT (PHINERRY OF POP REPORTS)					or to tue this challent's	Once Lacasian	PHONENU:		E-HAL:			AECOH ORNE ED
Bart Gebbie				Casey Hu	Iff, AECOM, O	akland, CA	510-893-3	600	casey,huff	@aecom.com		USF04642
TELEPHONE FAX:	EN TO COMME S-MAN		Seedichistan's correct			100/100	/			1.4	IB USE O	NLY
310-885-4455 Ext. 103 310-637-5802	Secretary S	hristine pllachowski@ae	com.com	"	101/ IA	1-colloca	i					
TURNAROUND TIME (CALENDAR DAYS): ØFTANDARD (14 DAY) D DAYS D DAYS	CD DAYS	□24 HOURS	ESULTS NEEDED			RE	QUESTED AN			1988	1011010111	
DIA - RWOCB REPORT FORMAT MUST AGENCY:	ON WEEKEND UNIT COST NON-LINIT COST			ST								
DELIVERABLES: \(\overline{	DEVEL4 FOTH											FIELD NOTES:
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TEMPERATURE ON RECEIPT C* Cooler#1	Cooler#2	Cooler #3				1 1						C.
SPECIAL INSTRUCTIONS OR NOTES:		BHELL CONTRACT RATE AP	W 7.0-	Purgeable								
		ESTATE REIMBURSEMENT RA	ATE APPLIES	Parg	ĝ						 -	
		EDD NOT NEEDED RECEIPT VERIFICATION RE		ĝ,	928)							
Email invoice to USAPImaging@aecom.com		PROVIDE LEDD DISK	4000. NO	TPH-GRO,	BTEX (8260B)	1 1 1 1						Container PID Readings
	SAMPLING	PRESENT		 -		┼╌┼╌┼					+	or Laboratory Notes
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Field Sample Identification	DATE TIME	HCL HNOS HOSO	NONE OTHER								\prod	
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Page / of /

INCIDENT#	9	70	93	399
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DATE: 5-3/-/6

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CITY & STATE

Oakland

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Well ID	Manwa	y Cover,	Type, C	ondition	& Size	Pai	abeled / nted perly*	(Gri	Cap oper) dition	Well I	ock Co	ndition	Sur	Pad / face lition	Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed	Photos of Well Condition		Repair Date and PM Initials
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Fenced Cor Traile	npound			-	المنات		·	*****	J				14	NA		Y	N	
Number of Drums On-site	Does the I Source o	abel Rev			led Correctl /riting Legib		Drs	ım Condii	lon		Drums ed to imental		s Located less Interfe		Detailed Explanation of Any Issues Resolved	Dr	os of um dition	Date Drums Removed from Site and PM initials

G ≠ Good (Acceptable)

All environmental wells and the remediation compound were in good condition, locked, and secured upon my departure (unless otherwise noted above).

Mark McColloch Bland Tech Services
Print or type Name of Field Personnel & Consultant Company

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.

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

NO. 721618

BESI#

NON-HAZARDOUS WASTE DATA FORM

 					
	Generator's Name and Mailing Address		Generator's Site Address (if o	lifferent than mailing address)	
	SHELL OIL PRODUCTS US		SHELL OIL USFO	4842	
	C/O AECOM		461 8TH STREET		
	1333 BROADWAY, SUITE 800 OAKLAND, CA 94512		OAKLAND, CA		
	and at the state of the state o		man a seek to a seek with I for		
		1			
	Generator's Phone: 510-874-3255 Container type removed from site:		Container tune transe		
	outland type fornoved non-site.		Container type transp	orted to receiving facility:	
	Drums Vacuum Truck D Roll-off Truck	Dump Truck	🗖 Drums 🔲 Vacua	um Truck 🔲 Roll-off Truck	Dump Truck
					•
	☐ Other		Other		
H.	Quantity 45 GAC		Quantity	Volume	
GENERATOR	, , ,				
M	MOST DECEMBER AND DECEMBER				
叫	WASTE DESCRIPTION NON-HAZARDOUS V		GENERATING PROCESS	WELL PURGING / DE	CON WATER
血	COMPONENTS OF WASTE P	PM %	COMPONE	NTS OF WASTE	PPM %
اھ	1. WATER	99-100%	2		
		***************************************	J		***************************************
		~404			
	2TPH		4		
	Waste Profile	PROPERTIES: pH 7	7-40 D SOLID XXI LIQU	ID SLUPGE SLUPRY (OTHER
	HANDLING INSTRUCTIONS: WEAR ALL APPROPRI	ATE PERSONA	L PROTECTIVE CL	OTHING.	
i					
	Generator Printed/Typed Name	Signature			Month Day Vo
	./ .	Signature			Month Day Year
	Max McG/lock				Month Day Year
	Mak McG/loch The Generator certifies that the waste as described is 100% non-hazardous				-
	Mark McColloch The Generator certifies that the waste as described is 100% non-hazardous Transporter 1 Company Name			Phone#	-
æ	Mak McC/loch The Generator certifies that the waste as described is 100% non-hazardous Transporter 1 Company Name BLAINE TECH SERVICES, INC.			Phone# 408-573-0555	-
Щ	The Generator certifies that the waste as described is 100% non-hazardous Transporter 1 Company Name BLAINE TECH SERVICES, INC. Transporter 1 Printed/Typed Name				-
Щ	Mak McC/loch The Generator certifies that the waste as described is 100% non-hazardous Transporter 1 Company Name BLAINE TECH SERVICES, INC.				Month Day Year
Щ	The Generator certifies that the waste as described is 100% non-hazardous Transporter 1 Company Name BLAINE TECH SERVICES, INC. Transporter 1 Printed/Typed Name Mark M Gallo G Transporter Acknowledgment of Receipt of Materials				Month Day Year
Щ	Mark McG/loch The Generator certifies that the waste as described is 100% non-hazardous Transporter 1 Company Name BLAINE TECH SERVICES, INC. Transporter 1 Printed/Typed Name Mark McG/loch				Month Day Year
Щ	The Generator certifies that the waste as described is 100% non-hazardous Transporter 1 Company Name BLAINE TECH SERVICES, INC. Transporter 1 Printed/Typed Name Mak M Callo A Transporter Acknowledgment of Receipt of Materials Transporter 2 Company Name	Signature		408-573-0555	5 3 / 6 Month Day Year 5 3 / 6
	The Generator certifies that the waste as described is 100% non-hazardous Transporter 1 Company Name BLAINE TECH SERVICES, INC. Transporter 1 Printed/Typed Name Mark M Gallo G Transporter Acknowledgment of Receipt of Materials			408-573-0555	Month Day Year
TRANSPORTE	The Generator certifies that the waste as described is 100% non-hazardous Transporter 1 Company Name BLAINE TECH SERVICES, INC. Transporter 1 Printed/Typed Name Mark M Claid Transporter Acknowledgment of Receipt of Materials Transporter 2 Company Name Transporter 2 Printed/Typed Name	Signature		408-573-0555	5 3 / 6 Month Day Year 5 3 / 6
TRANSPORTE	The Generator certifies that the waste as described is 100% non-hazardous Transporter 1 Company Name BLAINE TECH SERVICES, INC. Transporter 1 Printed/Typed Name Mark Mark Market Materials Transporter Acknowledgment of Receipt of Materials Transporter 2 Printed/Typed Name Transporter 2 Printed/Typed Name	Signature		408-573-0555	5 3 / 6 Month Day Year 5 3 / 6
TRANSPORTE	The Generator certifies that the waste as described is 100% non-hazardous Transporter 1 Company Name BLAINE TECH SERVICES, INC. Transporter 1 Printed/Typed Name Mark Mark Mark Transporter Acknowledgment of Receipt of Materials Transporter 2 Company Name Transporter 2 Printed/Typed Name Transporter 2 Printed/Typed Name Transporter Acknowledgment of Receipt of Materials Designated Facility Name and Site Address	Signature		408-573-0555 Phone#	5 3 / 6 Month Day Year 5 3 / 6
TRANSPORTE	The Generator certifies that the waste as described is 100% non-hazardous Transporter 1 Company Name BLAINE TECH SERVICES, INC. Transporter 1 Printed/Typed Name Mark Mark Mark Transporter Acknowledgment of Receipt of Materials Transporter 2 Company Name Transporter 2 Printed/Typed Name Transporter Acknowledgment of Receipt of Materials Designated Facility Name and Site Address DEMENNO KERDOON	Signature		408-573-0555 Phone#	5 3 / 6 Month Day Year 5 3 / 6
TRANSPORTE	The Generator certifies that the waste as described is 100% non-hazardous Transporter 1 Company Name BLAINE TECH SERVICES, INC. Transporter 1 Printed/Typed Name Mark M Callo A Transporter Acknowledgment of Receipt of Materials Transporter 2 Company Name Transporter 2 Printed/Typed Name Transporter Acknowledgment of Receipt of Materials Designated Facility Name and Site Address DEMENNO KERDOON 2000 N. ALAMEDA ST.	Signature		408-573-0555 Phone#	5 3 / 6 Month Day Year 5 3 / 6
FACILITY TRANSPORTE	The Generator certifies that the waste as described is 100% non-hazardous Transporter 1 Company Name BLAINE TECH SERVICES, INC. Transporter 1 Printed/Typed Name Mark Mark Mark Transporter Acknowledgment of Receipt of Materials Transporter 2 Company Name Transporter 2 Printed/Typed Name Transporter Acknowledgment of Receipt of Materials Designated Facility Name and Site Address DEMENNO KERDOON	Signature		408-573-0555 Phone#	5 3 / 6 Month Day Year 5 3 / 6
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FACILITY TRANSPORTE	The Generator certifies that the waste as described is 100% non-hazardous Transporter 1 Company Name BLAINE TECH SERVICES, INC. Transporter 1 Printed/Typed Name Mark Malana Transporter 2 Company Name Transporter 2 Company Name Transporter 2 Printed/Typed Name Transporter Acknowledgment of Receipt of Materials Designated Facility Name and Site Address DEMENNO KERDOON 2000 N. ALAMEDA ST. COMPTON, CA 90222	Signature		408-573-0555 Phone#	Month Day Year Month Day Year
FACILITY TRANSPORTE	The Generator certifies that the waste as described is 100% non-hazardous Transporter 1 Company Name BLAINE TECH SERVICES, INC. Transporter 1 Printed/Typed Name Mark M Callo A Transporter Acknowledgment of Receipt of Materials Transporter 2 Company Name Transporter 2 Printed/Typed Name Transporter Acknowledgment of Receipt of Materials Designated Facility Name and Site Address DEMENNO KERDOON 2000 N. ALAMEDA ST.	Signature		408-573-0555 Phone#	5 3 / 6 Month Day Year 5 3 / 6
RECEIVING FACILITY TRANSPORTE	The Generator certifies that the waste as described is 100% non-hazardous Transporter 1 Company Name BLAINE TECH SERVICES, INC. Transporter 1 Printed/Typed Name Mark Malana Transporter 2 Company Name Transporter 2 Company Name Transporter 2 Printed/Typed Name Transporter Acknowledgment of Receipt of Materials Designated Facility Name and Site Address DEMENNO KERDOON 2000 N. ALAMEDA ST. COMPTON, CA 90222	Signature Signature		408-573-0555 Phone#	Month Day Year Month Day Year

Appendix B

Analytical Report

(TestAmerica Laboratories, Inc.)



THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pleasanton 1220 Quarry Lane Pleasanton, CA 94566 Tel: (925)484-1919

TestAmerica Job ID: 720-72561-1

Client Project/Site: Shell- 461 8th St., Oakland

For:

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

Attn: Christine Pilachowski

2 G. Tyn

Authorized for release by: 6/9/2016 2:57:27 PM

Laura Turpen, Project Manager I (916)374-4414

laura.turpen@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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Surrogate Summary	10
QC Sample Results	11
QC Association Summary	14
Lab Chronicle	15
Certification Summary	16
Method Summary	17
Sample Summary	18
Chain of Custody	19
Receipt Checklists	20

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Definitions/Glossary

Client: AECOM Technical Services Inc. Project/Site: Shell- 461 8th St., Oakland TestAmerica Job ID: 720-72561-1

Glossary

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)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

Decision level concentration MDA Minimum detectable activity EDL **Estimated Detection Limit** MDC Minimum detectable concentration

Dilution Factor

MDL Method Detection Limit

MLMinimum Level (Dioxin) NC Not Calculated

Dil Fac

ND Not detected at the reporting limit (or MDL or EDL if shown)

PQL Practical Quantitation Limit

QC **Quality Control RER** Relative error ratio

RLReporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

Toxicity Equivalent Factor (Dioxin) TEF **TEQ** Toxicity Equivalent Quotient (Dioxin)

TestAmerica Pleasanton

3

Case Narrative

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

TestAmerica Job ID: 720-72561-1

Job ID: 720-72561-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative 720-72561-1

Comments

No additional comments.

Receipt

The samples were received on 6/1/2016 11:24 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4° C.

GC/MS VOA

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

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

TestAmerica Job ID: 720-72561-1

3

Client Sample ID: S-4

Lab Sample	ID: 720-72561-1

Analyte	Result Qualifier	RL	MDL Unit	Dil Fac D	Method	Prep Type
Benzene	11	0.50	ug/L		8260B	Total/NA
Ethylbenzene	2.3	0.50	ug/L	1	8260B	Total/NA
Toluene	2.0	0.50	ug/L	1	8260B	Total/NA
Xylenes, Total	3.9	1.0	ug/L	1	8260B	Total/NA
Volatile Fuel Hydrocarbons (C4-C12)	52	50	ug/L	1	8260B	Total/NA

5

Client Sample ID: S-5

Analyte Benzene	Result 460	Qualifier	RL 5.0	MDL	Unit ug/L	Dil Fac 10	D	Method 8260B	Prep Type Total/NA
Ethylbenzene	710		5.0		ug/L	10		8260B	Total/NA
Toluene	230		5.0		ug/L	10		8260B	Total/NA
Xylenes, Total	1300		10		ug/L	10		8260B	Total/NA
Volatile Fuel Hydrocarbons (C4-C12)	25000		500		ug/L	10		8260B	Total/NA

9

Client Sample ID: S-6

Lab Sample ID: 720-72561-3

Analyte	Result Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	4300	50		ug/L	100	_	8260B	Total/NA
Ethylbenzene	830	5.0		ug/L	10		8260B	Total/NA
Toluene	750	5.0		ug/L	10		8260B	Total/NA
Xylenes, Total	1600	10		ug/L	10		8260B	Total/NA
Volatile Fuel Hydrocarbons (C4-C12)	16000	5000		ug/L	100		8260B	Total/NA

13

Client Sample ID: S-26

Lab Sample ID: 720-72561-4

Analyte	Result Qualifier	RL	MDL Uni	t Dil Fac	D	Method	Prep Type
Benzene	36	0.50	ug/	1	_	8260B	Total/NA
Ethylbenzene	19	0.50	ug/	_ 1		8260B	Total/NA
Toluene	7.3	0.50	ug/	_ 1		8260B	Total/NA
Xylenes, Total	35	1.0	ug/	L 1		8260B	Total/NA
Volatile Fuel Hydrocarbons (C4-C12)	400	50	ug/	_ 1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM Technical Services Inc. Project/Site: Shell- 461 8th St., Oakland TestAmerica Job ID: 720-72561-1

Client Sample ID: S-4

Lab Sample ID: 720-72561-1

Matrix: Water

Date Collected:	05/31/16 10:50
Date Received:	06/01/16 11:24

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene			0.50		ug/L			06/07/16 01:36	1
Ethylbenzene	2.3		0.50		ug/L			06/07/16 01:36	1
Toluene	2.0		0.50		ug/L			06/07/16 01:36	1
Xylenes, Total	3.9		1.0		ug/L			06/07/16 01:36	1
Volatile Fuel Hydrocarbons (C4-C12)	52		50		ug/L			06/07/16 01:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		67 - 130					06/07/16 01:36	1
1,2-Dichloroethane-d4 (Surr)	112		72 - 130					06/07/16 01:36	1
Toluene-d8 (Surr)	100		70 - 130					06/07/16 01:36	1

Client: AECOM Technical Services Inc. Project/Site: Shell- 461 8th St., Oakland TestAmerica Job ID: 720-72561-1

Client Sample ID: S-5

Lab Sample ID: 720-72561-2 Date Collected: 05/31/16 08:55

Matrix: Water

Date Received: 06/01/16 11:24

Method: 8260B - Volatile Or	ganic Compo	unds (GC/	MS)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	460		5.0		ug/L			06/07/16 02:05	10
Ethylbenzene	710		5.0		ug/L			06/07/16 02:05	10
Toluene	230		5.0		ug/L			06/07/16 02:05	10
Xylenes, Total	1300		10		ug/L			06/07/16 02:05	10
Volatile Fuel Hydrocarbons (C4-C12)	25000		500		ug/L			06/07/16 02:05	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	104		67 - 130					06/07/16 02:05	10
1,2-Dichloroethane-d4 (Surr)	112		72 - 130					06/07/16 02:05	10
Toluene-d8 (Surr)	102		70 - 130					06/07/16 02:05	10

Client: AECOM Technical Services Inc. Project/Site: Shell- 461 8th St., Oakland TestAmerica Job ID: 720-72561-1

Lab Sample ID: 720-72561-3

Matrix: Water

Client Sample ID: S-6 Date Collected: 05/31/16 09:23

Date Received: 06/01/16 11:24

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4300		50		ug/L			06/08/16 17:28	100
Ethylbenzene	830		5.0		ug/L			06/07/16 02:35	10
Toluene	750		5.0		ug/L			06/07/16 02:35	10
Xylenes, Total	1600		10		ug/L			06/07/16 02:35	10
Volatile Fuel Hydrocarbons (C4-C12)	16000		5000		ug/L			06/08/16 17:28	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene			67 - 130					06/07/16 02:35	10
4-Bromofluorobenzene	96		67 - 130					06/08/16 17:28	100
1,2-Dichloroethane-d4 (Surr)	112		72 - 130					06/07/16 02:35	10
1,2-Dichloroethane-d4 (Surr)	97		72 - 130					06/08/16 17:28	100
Toluene-d8 (Surr)	102		70 - 130					06/07/16 02:35	10
Toluene-uo (Sult)	–								

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

TestAmerica Job ID: 720-72561-1

Lab Sample ID: 720-72561-4

Matrix: Water

Client Sample ID: S-26 Date Collected: 05/31/16 10:15

Date Received: 06/01/16 11:24

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	36		0.50		ug/L			06/08/16 16:42	1
Ethylbenzene	19		0.50		ug/L			06/07/16 03:04	1
Toluene	7.3		0.50		ug/L			06/07/16 03:04	1
Xylenes, Total	35		1.0		ug/L			06/07/16 03:04	1
Volatile Fuel Hydrocarbons (C4-C12)	400		50		ug/L			06/07/16 03:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	102		67 - 130					06/07/16 03:04	1
4-Bromofluorobenzene	99		67 - 130					06/08/16 16:42	1
1,2-Dichloroethane-d4 (Surr)	109		72 - 130					06/07/16 03:04	1
1,2-Dichloroethane-d4 (Surr)	98		72 - 130					06/08/16 16:42	1
Toluene-d8 (Surr)	101		70 - 130					06/07/16 03:04	1
	96		70 - 130					06/08/16 16:42	1

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

4

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

Matrix: Water Prep Type: Total/NA

		BFB	12DCE	ercent Surr TOL
Lab Sample ID	Client Sample ID	(67-130)	(72-130)	(70-130)
720-72547-A-16 MS	Matrix Spike	101	110	103
720-72547-A-16 MSD	Matrix Spike Duplicate	100	110	103
720-72561-1	S-4	100	112	100
720-72561-2	S-5	104	112	102
720-72561-3	S-6	100	112	102
720-72561-3	S-6	96	97	95
720-72561-4	S-26	102	109	101
720-72561-4	S-26	99	98	96
720-72626-B-3 MS	Matrix Spike	99	94	97
720-72626-B-3 MSD	Matrix Spike Duplicate	96	94	97
LCS 720-203676/5	Lab Control Sample	102	109	103
LCS 720-203676/7	Lab Control Sample	102	108	102
LCS 720-203807/5	Lab Control Sample	96	94	95
LCS 720-203807/7	Lab Control Sample	98	99	96
LCSD 720-203676/6	Lab Control Sample Dup	101	108	103
LCSD 720-203676/8	Lab Control Sample Dup	101	112	102
LCSD 720-203807/6	Lab Control Sample Dup	96	95	96
LCSD 720-203807/8	Lab Control Sample Dup	95	96	97
MB 720-203676/4	Method Blank	98	112	101
MB 720-203807/4	Method Blank	94	98	96

Surrogate Legend

BFB = 4-Bromofluorobenzene

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

TestAmerica Pleasanton

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

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

Lab Sample ID: MB 720-203676/4

Matrix: Water

Analysis Batch: 203676

Client Sample ID: Method Blank

Prep Type: Total/NA

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			06/06/16 19:14	1
Ethylbenzene	ND		0.50		ug/L			06/06/16 19:14	1
Toluene	ND		0.50		ug/L			06/06/16 19:14	1
Xylenes, Total	ND		1.0		ug/L			06/06/16 19:14	1
Volatile Fuel Hydrocarbons (C4-C12)	ND		50		ug/L			06/06/16 19:14	1

	IVIB	IVIB					
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		67 - 130	_		06/06/16 19:14	1
1,2-Dichloroethane-d4 (Surr)	112		72 - 130			06/06/16 19:14	1
Toluene-d8 (Surr)	101		70 - 130			06/06/16 19:14	1

Lab Sample ID: LCS 720-203676/5

Matrix: Water

Analysis Batch: 203676

Client Sample ID: Lab Control Sample

70 - 142

70 - 130

103

103

Prep Type: Total/NA

Spike LCS LCS %Rec. Added Analyte Result Qualifier Unit D %Rec Limits Benzene 25.0 25.5 79 - 130 ug/L 102 Ethylbenzene 25.0 25.7 80 - 120 ug/L 103 Toluene 25.0 25.2 ug/L 101 78 - 120

25.7

25.8

ug/L

ug/L

25.0

25.0

m-Xylene & p-Xylene o-Xylene

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene	102	67 - 130
1,2-Dichloroethane-d4 (Surr)	109	72 - 130
Toluene-d8 (Surr)	103	70 - 130

Lab Sample ID: LCS 720-203676/7

Matrix: Water

Analysis Batch: 203676

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

Client Sample ID: Lab Control Sample Dup

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Volatile Fuel Hydrocarbons	 500	522		ug/L		104	70 - 130	
(C4-C12)								

LCS LCS

Surrogate	%Recovery Qualifie	r Limits
4-Bromofluorobenzene	102	67 - 130
1,2-Dichloroethane-d4 (Surr)	108	72 - 130
Toluene-d8 (Surr)	102	70 - 130

Lab Sample ID: LCSD 720-203676/6

Matrix: Water

Analysis Batch: 203676

	Spi	te LCSD	LCSD				%Rec.		RPD
Analyte	Add	ed Result	Qualifier	Unit	D %R	ec	Limits	RPD	Limit
Benzene		.0 25.6		ug/L	1	03	79 - 130	0	20
Ethylbenzene	25	.0 25.7		ug/L	1	03	80 - 120	0	20

TestAmerica Pleasanton

Prep Type: Total/NA

Page 11 of 20

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

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

Lab Sample ID: LCSD 720-203676/6

Matrix: Water

Analysis Batch: 203676

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

_	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	25.0	25.2		ug/L		101	78 - 120	0	20
m-Xylene & p-Xylene	25.0	25.7		ug/L		103	70 - 142	0	20
o-Xylene	25.0	25.6		ug/L		103	70 - 130	1	20

LCSD LCSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene 101 67 - 130 108 72 - 130 1,2-Dichloroethane-d4 (Surr) Toluene-d8 (Surr) 103 70 - 130

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Matrix: Water

Analysis Batch: 203676

Lab Sample ID: LCSD 720-203676/8

Spike LCSD LCSD %Rec. **RPD** Added Result Qualifier Limits RPD Limit Analyte Unit %Rec 500 532 ug/L 106 70 - 130 Volatile Fuel Hydrocarbons

(C4-C12)

LCSD LCSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene 101 67 - 130 1,2-Dichloroethane-d4 (Surr) 72 - 130 112 Toluene-d8 (Surr) 102 70 - 130

Lab Sample ID: MB 720-203807/4 **Client Sample ID: Method Blank Prep Type: Total/NA Matrix: Water**

Analysis Batch: 203807

	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.50		ug/L			06/08/16 09:58	1	
Volatile Fuel Hydrocarbons (C4-C12)	ND		50		ug/L			06/08/16 09:58	1	

	MB	MB						
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene	94		67 - 130	_		06/08/16 09:58	1	
1,2-Dichloroethane-d4 (Surr)	98		72 - 130			06/08/16 09:58	1	
Toluene-d8 (Surr)	96		70 - 130			06/08/16 09:58	1	

Lab Sample ID: LCS 720-203807/5

Matrix: Water

Analysis Batch: 203807

7 , 0.0	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Renzene	25.0	24.8		ua/l		99	79 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	96		67 - 130
1,2-Dichloroethane-d4 (Surr)	94		72 - 130
Toluene-d8 (Surr)	95		70 - 130

TestAmerica Pleasanton

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

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

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

Lab Sample ID: LCS 720-203807/7	Client Sample ID: Lab Control Sample
Matrix: Water	Prep Type: Total/NA

Analysis Batch: 203807

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Volatile Fuel Hydrocarbons	500	445		ug/L		89	70 - 130	
(C4 C12)								

(C4-C12)

ı		LCS L	LS
	Surrogate	%Recovery Q	ualifier Limits
	4-Bromofluorobenzene	98	67 - 130
	1,2-Dichloroethane-d4 (Surr)	99	72 - 130
	Toluene-d8 (Surr)	96	70 - 130

Lab Sample ID: LCSD 720-203807/6 **Client Sample ID: Lab Control Sample Dup Matrix: Water** Prep Type: Total/NA

Analysis Batch: 203807

•	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	25.0	24.7		ug/L		99	79 - 130	0	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	96		67 - 130
1,2-Dichloroethane-d4 (Surr)	95		72 - 130
Toluene-d8 (Surr)	96		70 - 130

Lab Sample ID: LCSD 720-203807/8 **Client Sample ID: Lab Control Sample Dup Matrix: Water** Prep Type: Total/NA

Analysis Batch: 203807

, - <u></u>	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Volatile Fuel Hydrocarbons	500	443		ug/L		89	70 - 130	1	20

(C4-C12)

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	95		67 - 130
1,2-Dichloroethane-d4 (Surr)	96		72 - 130
Toluene-d8 (Surr)	97		70 - 130

TestAmerica Pleasanton

QC Association Summary

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

TestAmerica Job ID: 720-72561-1

GC/MS VOA

Analysis Batch: 203676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-72561-1	S-4	Total/NA	Water	8260B	
720-72561-2	S-5	Total/NA	Water	8260B	
720-72561-3	S-6	Total/NA	Water	8260B	
720-72561-4	S-26	Total/NA	Water	8260B	
LCS 720-203676/5	Lab Control Sample	Total/NA	Water	8260B	
LCS 720-203676/7	Lab Control Sample	Total/NA	Water	8260B	
LCSD 720-203676/6	Lab Control Sample Dup	Total/NA	Water	8260B	
LCSD 720-203676/8	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 720-203676/4	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 203807

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-72561-3	S-6	Total/NA	Water	8260B	
720-72561-4	S-26	Total/NA	Water	8260B	
LCS 720-203807/5	Lab Control Sample	Total/NA	Water	8260B	
LCS 720-203807/7	Lab Control Sample	Total/NA	Water	8260B	
LCSD 720-203807/6	Lab Control Sample Dup	Total/NA	Water	8260B	
LCSD 720-203807/8	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 720-203807/4	Method Blank	Total/NA	Water	8260B	

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Lab Chronicle

Client: AECOM Technical Services Inc. Project/Site: Shell- 461 8th St., Oakland TestAmerica Job ID: 720-72561-1

10

Client Sample ID: S-4

Lab Sample ID: 720-72561-1 Date Collected: 05/31/16 10:50

Matrix: Water

Date Received: 06/01/16 11:24

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	203676	06/07/16 01:36	LPL	TAL PLS

Client Sample ID: S-5 Lab Sample ID: 720-72561-2

Matrix: Water

Date Collected: 05/31/16 08:55 Date Received: 06/01/16 11:24

Batch Batch Dilution **Batch** Prepared **Prep Type** Туре Method Run **Factor** Number or Analyzed Analyst Lab TAL PLS Total/NA 8260B 203676 06/07/16 02:05 LPL Analysis 10

Client Sample ID: S-6 Lab Sample ID: 720-72561-3

Date Collected: 05/31/16 09:23 **Matrix: Water**

Date Received: 06/01/16 11:24

Batch Batch Dilution Batch Prepared Method or Analyzed **Prep Type** Type Run **Factor** Number Analyst Total/NA Analysis 8260B 100 203807 06/08/16 17:28 TAL PLS Total/NA Analysis 8260B 10 203676 06/07/16 02:35 LPL TAL PLS

Lab Sample ID: 720-72561-4 Client Sample ID: S-26

Date Collected: 05/31/16 10:15 **Matrix: Water**

Date Received: 06/01/16 11:24

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	203807	06/08/16 16:42	LPL	TAL PLS
Total/NA	Analysis	8260B		1	203676	06/07/16 03:04	LPL	TAL PLS

Laboratory References:

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

Certification Summary

Client: AECOM Technical Services Inc. Project/Site: Shell- 461 8th St., Oakland TestAmerica Job ID: 720-72561-1

Laboratory: TestAmerica Pleasanton

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

Α	uthority	Program	EPA Region	Certification ID	Expiration Date
C	alifornia	State Program	9	2496	01-31-18

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	01-31-17 *
California	State Program	9	CA ELAP 2706	06-30-16
Guam	State Program	9	Cert. No. 12.002r	01-23-17
Hawaii	State Program	9	N/A	01-29-17
Kansas	NELAP Secondary AB	7	E-10420	07-31-16
Nevada	State Program	9	CA015312016-2	07-31-16
New Mexico	State Program	6	N/A	01-29-17
Northern Mariana Islands	State Program	9	MP0002	01-29-17
Oregon	NELAP	10	4028	01-29-17
USDA	Federal		P330-09-00080	07-08-18
Washington	State Program	10	C900	09-03-16

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

TestAmerica Pleasanton

Method Summary

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

TestAmerica Job ID: 720-72561-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PLS

Protocol References:

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

Laboratory References:

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

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Sample Summary

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

TestAmerica Job ID: 720-72561-1

Lab Sample ID	Client Sample ID	Matrix	Collected Received	1
720-72561-1	S-4	Water	05/31/16 10:50 06/01/16 11	:24
720-72561-2	S-5	Water	05/31/16 08:55 06/01/16 11	:24
720-72561-3	S-6	Water	05/31/16 09:23 06/01/16 11	:24
720-72561-4	S-26	Water	05/31/16 10:15 06/01/16 11	:24

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LAB (LOCATION)		Shell	Shell Oil Products US Chain	Of Custody Record	A.E.COM
DALSCIENCE (Pjęase	propriate l	Print Bill To Confact Name:	PlaNet Site of Project ID	CHECK IF NO INCIDENT # APPLIES
LATESTAMERICA (LBGW FDG	LPIPELINE LIRETAIL	©hristine Pilachowski	,	DATE: 5-31-16
Ditter (□ HEMICALS	ZONSULTANT QUBES		GSAP Project ID	
Lab Vendor # 1364589 (Test/smerica)	TRANSPORTATION	DTHER	1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1		FAUSE CO
Blaine Tech Services, Inc.		BTSS	461 8th St., Oakland	CA ASTURE POJECT (1856 NURBER)	* PJOJeca 1458 Nuntee(
1680 Rogers Ave., San Jose, CA, 95112			CLE ACLIVED POLICE TO [Maille, waithout, value (Chadia))	TOURIE IN.	PS COM VAIRE II
Bart Gebbie			Casey Huff, AECOM, Oakland, CA		LABUSEQUEX COTO4642
310-885-4455 Ext 103 802-637-5802	Bit to Consort MAI:	christine pilachbwski@aecomcom	Mark Mccollock		
TURNAROUND TIME (CALENDAR DAYS): STANDARD (14 DAY) DB DAYS DAYS	D2 DAYS I	TRESULTS NEEDED	IIIIT COST	REQUESTED ANALYSIS	
]ust Ac					FIELD NOTES:
DELIVERABLES: DEVELI DEVEL2 DEVEL3	□evel 4 □ome	DITHER (SPECIFY)	(SOB)		TEMPERATURE ON RECEIPT
TEMPERATURE ON RECEIPT C Cooler #1	Cooler#2	Cooler#3	le (82		ů
SPECIAL INSTRUCTIONS OR NOTES:		SHELL CONTRACT RATE APPLIES			
		LIPIA E REMBURSEMENT KALEAPPLES LEDD NOT NEEDED LEGERT VERHECATION REQUESTED	I-GRO, P		Container PID Readings
	SAMPLING	PRESERVATIVE	7		of Laboratory Notes
	DATE TIME	HCL HNO3 H25Q4 NONE OTHER	CONT.		
5-4	5-3/6/1050	ا ا ا ا	× ×		
5-5	2885	*	3 ×		
l L	0913	>>	\(\times\)		
5-26	10/5	X	<i>α</i> × ×		
720-72561 Chain of Custody					
Reliteristing by (September 1)					
Companies of Springer	1000	vacance of Schause)	sample Custodian	S-3/-/6	17/5
(Sample lusted can)	Real	Received by: (Reference)			1 me:
Relinquished by (Signature)	Pace	Received by: (Signature)		1	Tane: 17, 2 rd
		160			

Client: AECOM Technical Services Inc.

Job Number: 720-72561-1

List Source: TestAmerica Pleasanton

Login Number: 72561

List Number: 1

Creator: Arauz, Dennis

Creator: Arauz, Dennis		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is 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 (excluding tests with immediate HTs)	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	