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By Alameda County Environmental Health 11:51 am, Nov 16, 201

Mr. Robert Schultz
Alameda County Environmental Health
1131 Harbor Parkway, Suite 250
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Shell Oil Products US
DS Soil & Groundwater Focus Delivery Group
20945 S. Wilmington Avenue
Carson, CA 90810
Tel (714) 731 1050
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RE: 461 8th Street, Oakland, California
PlaNet Site ID USF04642
PlaNet Project ID 27481
ACEH Case No. RO0000343

Dear Mr. Schultz:

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

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

Sincerely,
Shell Oil Products US

Andrea A. Wing
Principal Program Manager

November 14, 2017

Robert Schultz
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Re: Second Semiannual 2017 Groundwater Monitoring Report
Former Shell Service Station
461 8th Street, Oakland, California
Shell PlaNet Site ID: USF04642 / Project ID: 27481
Agency No. RO0000343

Dear Mr. Schultz:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US, AECOM Technical Services Inc. is pleased to submit this report for groundwater monitoring performed during the second and third quarters of 2017 for the Former Shell Service Station located at 461 8th Street in Oakland, California.

If you have any questions regarding this submittal, please contact Shane Olton at (916) 414-5849 or Shane.Olton@aecom.com.

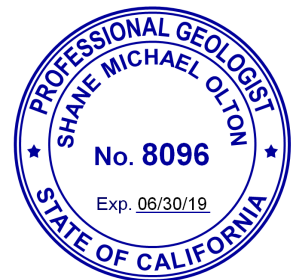
Sincerely,



Josh Fox, G.I.T.
Geologist



Shane Olton, P.G.
Project Manager



Enclosures: Second Semiannual 2017 Groundwater Monitoring Report

cc: Andrea Wing, Equilon Enterprises LLC dba Shell Oil Products US
Leroy Griffin, Fire Prevention Bureau
St. Regis Properties, Attn: Sam Remcho (property owner developer)
655 Redwood Highway, Suite 285, Mill Valley, California 94941

Second Semiannual 2017 Groundwater Monitoring Report

Former Shell Service Station
461 8th Street
Oakland, California

November 2017

Second Semiannual 2017 Groundwater Monitoring Report

Former Shell Service Station
461 8th Street, Oakland California

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

Submitted to:

Robert Schultz
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Submitted by:

AECOM Technical Services, Inc.
300 Lakeside Drive, Suite 400
Oakland, California 94612

On Behalf of

Equilon Enterprises, LLC dba Shell Oil Products US

November 14, 2017

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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 (Equilon).

1.1 Site Information

Site Name:	Former Shell Service Station
Site Address:	461 8 th Street, Oakland, California
Equilon Environmental Services Program Manager:	Andrea Wing
Consulting Company / Contact Person:	AECOM / Shane Olton
Primary Agency:	Alameda County Department of Environmental Health (ACDEH)

1.2 Site Summary

Frequency of Groundwater Monitoring:	Semiannually (S-4 Annually, S-24 and S-25 quarterly)
Wells Water Level Gauged:	5
Wells Sampled:	5
Is there any Separate Phase Hydrocarbons (SPH) Present in On-Site Monitoring Wells:	No (off-site well S-5, 0.01 foot)
Current Remediation Activity:	None

2 Site Activities

2.1 Current Activities

On May 19, 2017, Blaine Tech Services, Inc. (Blaine Tech) of San Jose, California gauged and sampled S-4 for its annual 2017 event, and S-24 and S-25 for their quarterly events, according to the established monitoring program for this site. TestAmerica Laboratories, Inc. (TestAmerica) of Pleasanton, California, a California certified laboratory, completed analyses of the groundwater samples.

On September 7, 2017, Blaine Tech gauged and sampled the wells according to the established monitoring program for this site. TestAmerica Laboratories, Inc. completed 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 (Third Quarter Only)

Groundwater Elevation:	<u>7.44 feet to 10.22 feet above mean sea level</u>
Groundwater Gradient (direction):	<u>South-Southwest</u>
Groundwater Gradient (magnitude):	<u>0.01 foot per foot</u>

2.3 Proposed Activities

Blaine Tech will gauge and sample wells according to the established monitoring program for this Site. Groundwater monitoring wells S-24 and S-25 will be monitored quarterly for one more quarter and well S-4 will continue to be monitored annually. AECOM will issue groundwater monitoring reports semiannually following the first and third quarter monitoring events.

AECOM will submit the Technical Report and the Work Plan, as requested in the ACDEH directive dated November 1, 2017, by the respective due dates of December 30, 2017, and March 15, 2018.

3 Conclusions and Recommendations

Second Quarter

On May 19, 2017, wells S-4, S-24, and S-25 were gauged and sampled for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX). The following constituents were detected:

- TPHg was detected in S-24 and S-25 at concentrations of 4,900 micrograms per liter ($\mu\text{g/L}$) and 1,400 $\mu\text{g/L}$, respectively.
- Benzene was detected in S-24 and S-25 at concentrations of 450 $\mu\text{g/L}$ and 280 $\mu\text{g/L}$, respectively.
- Toluene was detected in S-24 and S-25 at concentrations of 140 $\mu\text{g/L}$ and 42 $\mu\text{g/L}$, respectively.
- Ethylbenzene was detected in S-24 and S-25 at concentrations of 94 $\mu\text{g/L}$ and 47 $\mu\text{g/L}$, respectively.
- Total xylenes were detected in S-24 and S-25 at concentrations of 350 $\mu\text{g/L}$ and 120 $\mu\text{g/L}$, respectively.

No constituents were detected in well S-4 at or above the reporting limits.

SPH were not detected at measurable quantities in the wells gauged and sampled during the second quarter event.

Third Quarter

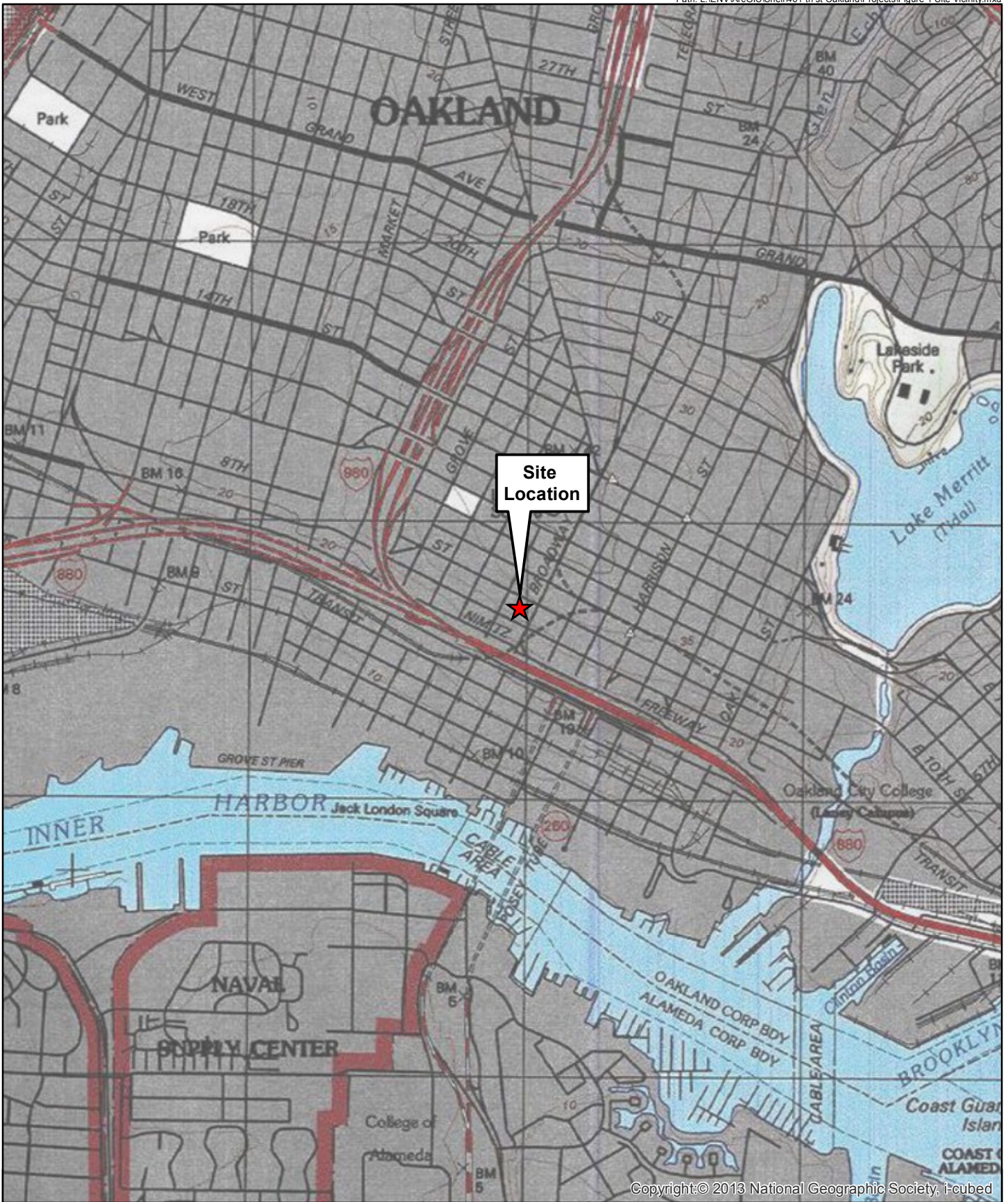
On September 7, 2017, wells S-5, S-6, S-24, S-25, and S-26 were gauged and sampled for TPHg and BTEX. The following constituents were detected:

- TPHg was detected in all five wells at concentrations ranging from 170 $\mu\text{g/L}$ (S-26) to 40,000 $\mu\text{g/L}$ (S-5).
- Benzene was detected in all five wells at concentrations ranging from 17 $\mu\text{g/L}$ (S-26) to 910 $\mu\text{g/L}$ (S-6).
- Toluene was detected in all five wells at concentrations ranging from 0.62 $\mu\text{g/L}$ (S-26) to 350 $\mu\text{g/L}$ (S-5).
- Ethylbenzene was detected in all five wells at concentrations ranging from 2.5 $\mu\text{g/L}$ (S-26) to 980 $\mu\text{g/L}$ (S-5).
- Total xylenes were detected in all five wells at concentrations ranging from 3.1 $\mu\text{g/L}$ (S-26) to 2,900 $\mu\text{g/L}$ (S-5).

SPH was detected in well S-5 at a thickness of 0.01 foot and a new absorbent sock was installed during the third quarter event.

AECOM recommends continuing gauging and sampling in accordance with the approved semiannual groundwater monitoring program established for the Site.

Figures



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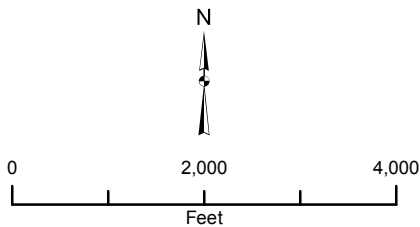


Figure 1
Site Vicinity Map

AECOM

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

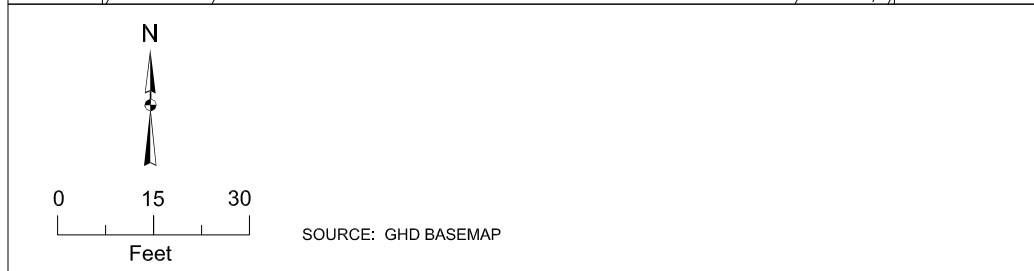
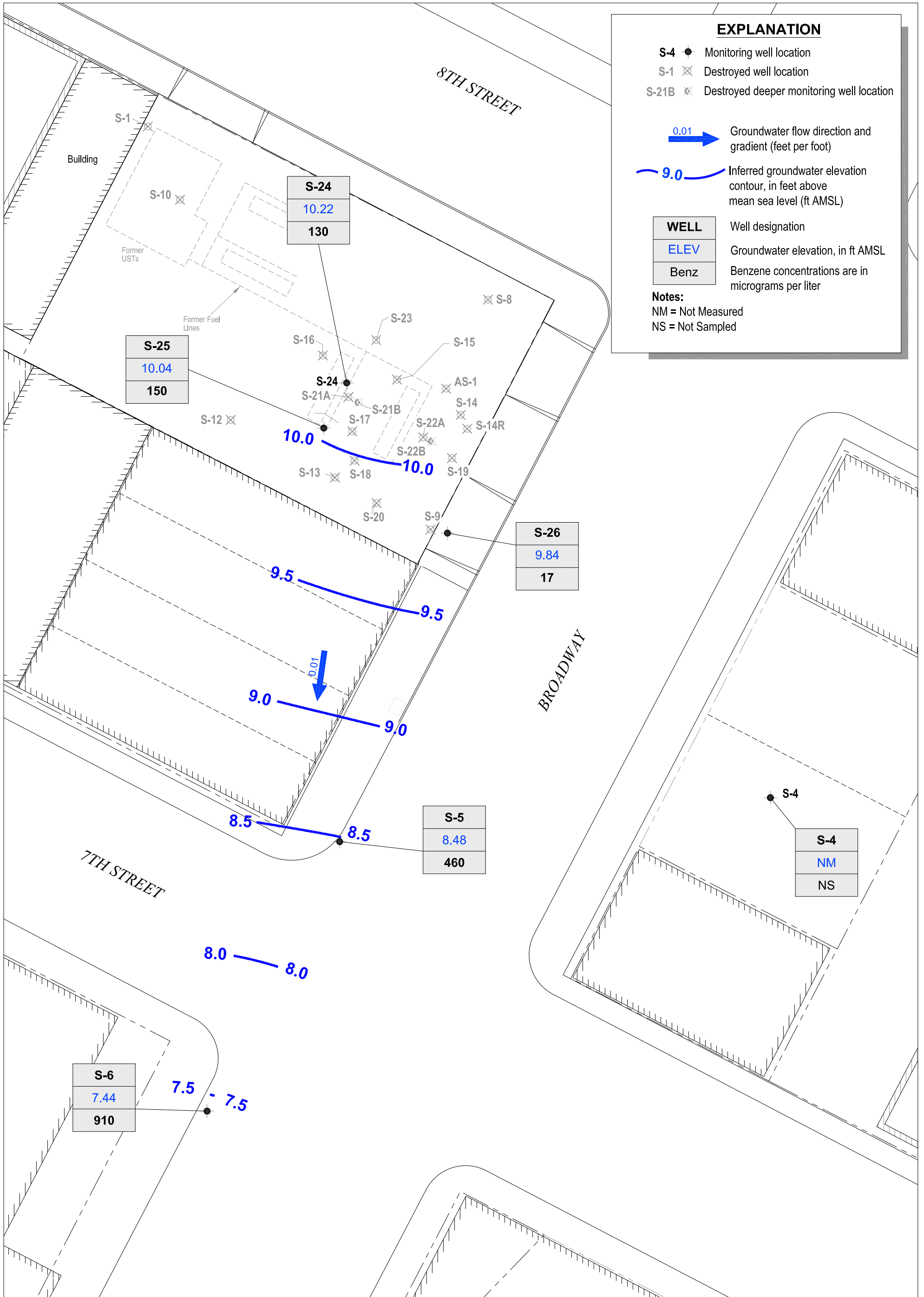


Figure 2
 Groundwater Contour and Chemical Concentration Map
 September 7, 2017
AECOM
 Former Shell Service Station
 461 8th Street, Oakland, California

Table

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-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 inaccessible	---	---	---	---	---	---	---	---	---	---	---	---	93.51	---	---	---	---	---
S-4	05/13/1993	Well inaccessible	---	---	---	---	---	---	---	---	---	---	---	---	93.51	14.81	---	78.70	---	---
S-4	07/22/1993	Well inaccessible	---	---	---	---	---	---	---	---	---	---	---	---	93.51	14.42	---	79.09	---	---
S-4	10/20/1993	Well inaccessible	---	---	---	---	---	---	---	---	---	---	---	---	93.51	---	---	---	---	---
S-4	01/25/1994	Well inaccessible	---	---	---	---	---	---	---	---	---	---	---	---	93.51	14.60	---	78.91	---	---
S-4	04/25/1994	Well inaccessible	---	---	---	---	---	---	---	---	---	---	---	---	93.51	14.39	---	79.12	---	---
S-4	07/21/1994	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	---	---	93.51	22.29	---	71.22	---	---
S-4	10/24/1994	<500	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	---	---	93.51	22.72	---	70.79	---	---
S-4	12/22/1994	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	---	---	25.77	22.25	---	3.52	---	---
S-4	04/20/1995	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	---	---	25.77	21.16	---	4.61	---	---
S-4	10/04/1995	<50	1.2	0.70	<0.50	<0.50	---	---	---	---	---	---	---	---	25.77	22.25	---	3.52	---	---
S-4	01/03/1996	<50	0.60	<0.50	<0.50	1.7	---	---	---	---	---	---	---	---	25.77	23.28	---	2.49	---	---
S-4	04/11/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	---	---	25.77	21.58	---	4.19	---	---
S-4	07/11/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	---	---	25.77	21.60	---	4.17	---	---
S-4	10/02/1996	<50	<0.50	<0.50	<0.50	<0.50	2.6	---	---	---	---	---	---	---	25.77	22.46	---	3.31	---	---
S-4	01/22/1997	<50	0.73	<0.50	<0.50	0.63	<2.5	---	---	---	---	---	---	---	25.77	20.06	---	5.71	---	---
S-4	07/21/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	---	---	25.77	22.10	---	3.67	---	---
S-4	01/22/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	---	---	25.77	20.50	---	5.27	---	---
S-4	07/08/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	---	---	25.77	20.86	---	4.91	---	---
S-4	10/26/1998	---	---	---	---	---	---	---	---	---	---	---	---	---	25.77	21.41	---	4.36	---	---

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-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	---	---
S-4	05/29/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	34.41	21.15	---	13.26	---	---
S-4	08/15/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	34.41	21.38	---	13.03	---	---

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-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	05/31/2016	52	11	2.0	2.3	3.9	---	---	---	---	---	---	---	---	34.41	21.62	---	12.79	---	---
S-4	12/16/2016	---	---	---	---	---	---	---	---	---	---	---	---	---	34.41	---	---	---	---	---
S-4	03/17/2017	---	---	---	---	---	---	---	---	---	---	---	---	---	34.41	---	---	---	---	---
S-4	05/19/2017	<50	<0.50	<0.50	<0.50	<1.0	---	---	---	---	---	---	---	---	34.41	20.74	---	13.67	---	---
S-5	04/16/1987	130,000	15,000	16,000	a	14,000	---	---	---	---	---	---	---	---	99.36	---	---	---	---	---
S-5	10/26/1988	110,000	20,000	25,000	2,300	10,000	---	---	---	---	---	---	---	---	99.36	---	---	---	---	---
S-5	02/14/1989	94,000	16,000	21,000	1,800	10,000	---	---	---	---	---	---	---	---	99.36	19.87	---	79.49	---	---
S-5	05/01/1989	120,000	29,000	35,000	3,100	15,000	---	---	---	---	---	---	---	---	99.36	21.23	---	78.13	---	---
S-5	07/27/1989	110,000	20,000	29,000	2,400	14,000	---	---	---	---	---	---	---	---	99.36	20.41	---	78.95	---	---
S-5	10/05/1989	---	---	---	---	---	---	---	---	---	---	---	---	---	99.36	20.43	0.01	78.94	---	---
S-5	01/09/1990	---	---	---	---	---	---	---	---	---	---	---	---	---	99.36	21.16	0.01	78.21	---	---
S-5	04/30/1990	100,000	13,000	22,000	2,100	11,000	---	---	---	---	---	---	---	---	99.36	20.96	---	78.40	---	---
S-5	07/31/1990	53,000	8,300	14,000	1,200	7,400	---	---	---	---	---	---	---	---	99.36	20.88	---	78.48	---	---

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-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 inaccessible		---	---	---	---	---	---	---	---	---	---	---	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	---	---
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	---	---

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-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 inaccessible		---	---	---	---	---	---	---	---	---	---	---	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	---	---	---	---	---	---	c	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 inaccessible		---	---	---	---	---	---	---	---	---	---	---	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	---	---	---	---	---	---	e	14.45	---	---	---	---
S-5	07/14/2003	21,000	210	460	650	2,900	---	<10	---	---	---	---	---	---	e	14.10	---	---	---	---
S-5	10/20/2003	37,000	390	590	870	3,500	---	<13	---	---	---	---	---	---	e	14.63	---	---	---	---
S-5	01/22/2004	29,000	200	210	710	2,400	---	<13	---	---	---	---	---	---	e	14.08	---	---	---	---
S-5	04/19/2004	25,000	490	460	750	2,400	---	19	---	---	---	---	---	---	e	13.43	---	---	---	---
S-5	07/13/2004	28,000	300	280	690	2,400	---	<13	---	---	---	---	---	---	e	14.88	---	---	---	---
S-5	08/14/2008	31,000	1,700	1,600	1,400	3,350	---	<10	---	---	---	---	<5.0	<10	e	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	e	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	e	16.81	---	---	---	---
S-5	01/05/2009	57,000	2,300	1,400	1,500	2,900	---	<10	---	---	---	---	<5.0	<10	e	16.71	---	---	---	---
S-5	04/09/2009	52,000	2,100	3,500	1,900	5,400	---	<20	---	---	---	---	<10	<20	e	16.31	---	---	0.3	163
S-5	07/23/2009	37,000	1,800	1,900	1,400	3,800	---	---	---	---	---	---	---	---	e	16.62	---	---	1.48	-84
S-5	10/01/2009	36,000	1,800	1,900	1,400	3,700	---	---	---	---	---	---	---	---	27.24	16.35	---	10.89	0.86	-52
S-5	01/28/2010	35,000	1,200	1,900	1,500	3,600	---	---	---	---	---	---	---	---	27.24	16.35	---	10.89	---	---
S-5	05/20/2010	36,000	1,600	2,500	1,700	4,500	---	---	---	---	---	---	---	---	27.24	16.50	---	10.74	1.22	227
S-5	08/31/2010	32,000	1,300	1,100	1,600	3,400	---	---	---	---	---	---	---	---	27.24	16.95	---	10.29	0.58	-102
S-5	12/29/2010	26,000	970	1,500	1,500	3,200	---	---	---	---	---	---	---	---	27.24	16.25	---	10.99	1.18	233
S-5	02/01/2011	27,000	1,100	1,500	1,400	3,100	---	---	---	---	---	---	---	---	27.24	15.38	---	11.86	1.65	-83
S-5	04/25/2011	70,000	380	440	720	1,200	---	---	---	---	---	---	---	---	27.24	13.98	---	13.26	0.95	-109

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-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-5	09/23/2016	35,000	530	510	1,400	3,200	---	---	---	---	---	---	---	---	27.24	18.94	---	8.30	---	---
S-5	12/16/2016	75,000	650	3,300	2,700	12,000	---	---	---	---	---	---	---	---	27.24	18.92	---	8.32	---	---
S-5	03/17/2017	34,000	550	1,700	1,200	3,400	---	---	---	---	---	---	---	---	27.24	18.16	---	9.08	---	---
S-5	09/07/2017	40,000	460	350	980	2,900	---	---	---	---	---	---	---	---	27.24	18.77	0.01	8.48	---	---
S-6	04/16/1987	81,000	16,000	9,000	a	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	---	---

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

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

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-6	07/21/1997	61,000	15,000	2,100	1,100	3,500	1,900	---	---	---	---	---	---	---	22.08	20.61	---	1.47	---	---
S-6	01/22/1998	46,000	14,000	3,200	1,300	3,400	<500	---	---	---	---	---	---	---	22.08	19.82	---	2.26	---	---
S-6	07/08/1998	74,000	26,000	7,500	2,200	6,200	<1,000	---	---	---	---	---	---	---	22.08	18.20	---	3.88	---	---
S-6	10/26/1998	---	---	---	---	---	---	---	---	---	---	---	---	---	22.08	18.81	---	3.27	---	---
S-6	01/28/1999	120,000	9,000	14,000	2,700	14,000	3,700	---	---	---	---	---	---	---	22.08	19.73	---	2.35	---	---
S-6	04/23/1999	58,500	15,900	1,360	1,640	3,030	<2500	---	---	---	---	---	---	---	22.08	17.58	---	4.50	---	---
S-6	07/29/1999	36,200	10,300	760	930	1,360	<1,000	---	---	---	---	---	---	---	22.08	21.35	---	0.73	---	---
S-6	11/01/1999	36,000	11,700	767	865	1,670	<1,250	<40.0	---	---	---	---	---	---	22.08	19.23	---	2.85	---	---
S-6	01/07/2000	36,000	7,600	4,600	840	3,600	<1,000	---	---	---	---	---	---	---	22.08	19.53	---	2.55	---	---
S-6	04/11/2000	14,600	7,540	205	306	609	621	---	---	---	---	---	---	---	22.08	18.16	---	3.92	---	---
S-6	07/19/2000	2,590	629	63.9	99.6	267	124	72.7 b	---	---	---	---	---	---	22.08	18.40	---	3.68	---	---
S-6	10/12/2000	32,900	14,200	966	1,060	1,790	<500	<100	---	---	---	---	---	---	22.08	19.52	---	2.56	---	---
S-6	01/09/2001	27,600	11,200	675	666	1,580	1,430	<10.0 b	---	---	---	---	---	---	22.08	19.69	---	2.39	---	---
S-6	02/05/2001	---	---	---	---	---	---	---	---	---	---	---	---	---	22.08	19.20	---	2.88	---	---
S-6	04/06/2001	16,900	7,800	343	172	966	809	<20.0	---	---	---	---	---	---	22.08	18.25	---	3.83	---	---
S-6	07/25/2001	29,000	9,800	1,700	1,000	1,800	---	<250	---	---	---	---	---	---	22.08	18.27	---	3.81	---	---
S-6	11/01/2001	41,000	15,000	2,400	1,100	2,500	---	<500	---	---	---	---	---	---	22.08	19.30	---	2.78	---	---
S-6	01/17/2002	38,000 d	11,000 d	1,700 d	990 d	2,200 d	---	<500 d	---	---	---	---	---	---	22.08	18.51	---	3.57	---	---
S-6	05/08/2002	72,000	21,000	4,400	2,200	5,300	---	<1,000	---	---	---	---	---	---	22.08	18.30	---	3.78	---	---
S-6	07/18/2002	71,000	17,000	4,300	1,700	4,800	---	<1,000	---	---	---	---	---	---	30.56	18.19	---	12.37	---	---
S-6	10/15/2002	55,000	16,000	4,600	1,500	4,600	---	<100	---	---	---	---	---	---	30.56	18.77	---	11.79	---	---
S-6	01/02/2003	75,000	21,000	5,000	2,400	6,400	---	<50	---	---	---	---	---	---	30.56	18.60	---	11.96	---	---
S-6	04/15/2003	64,000	29,000	6,400	2,700	5,600	---	<1,000	---	---	---	---	---	---	30.56	18.27	---	12.29	---	---
S-6	07/14/2003	47,000	19,000	4,300	1,500	4,300	---	<100	---	---	---	---	---	---	30.56	18.05	---	12.51	---	---
S-6	10/20/2003	63,000	21,000	5,800	1,900	5,200	---	<130	---	---	---	---	---	---	30.56	18.55	Sheen	12.01	---	---
S-6	01/22/2004	41,000	21,000	4,300	1,800	4,000	---	<130	---	---	---	---	---	---	30.56	18.18	Sheen	12.38	---	---
S-6	04/19/2004	58,000	23,000	4,200	2,200	3,900	---	<130	---	---	---	---	---	---	30.56	17.32	---	13.24	---	---
S-6	05/03/2004	---	---	---	---	---	---	---	---	---	---	---	---	---	30.56	17.30	---	13.26	---	---
S-6	06/17/2004	---	---	---	---	---	---	---	---	---	---	---	---	---	30.56	17.70	---	12.86	---	---
S-6	07/13/2004	---	---	---	---	---	---	---	---	---	---	---	---	---	30.56	17.85	---	12.71	---	---
S-6	10/28/2004	45,000	21,000	3,600	1,700	3,300	---	<130	---	---	---	---	---	---	30.56	18.45	---	12.11	---	---
S-6	01/17/2005	61,000	21,000	3,500	1,600	3,200	---	<130	---	---	---	---	---	---	30.56	17.52	---	13.04	---	---
S-6	04/14/2005	36,000	12,000	6,200	850	4,800	---	<50	---	---	---	---	---	---	30.56	22.49	---	8.07	---	---
S-6	07/28/2005	54,000	16,000	9,100	1,800	5,900	---	<130	---	---	---	---	---	---	30.56	19.38	---	11.18	---	---
S-6	10/05/2005	59,000	14,000	7,500	1,400	5,000	---	<50	---	---	---	---	---	---	30.56	18.32	---	12.24	---	---

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

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

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-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-6	09/23/2016	4500 p	1400 p	85 p	210 p	220 p	---	---	---	---	---	---	---	---	30.56	22.93	---	7.63	---	---	
S-6	12/16/2016	9,200	2,900	200	340	420	---	---	---	---	---	---	---	---	30.56	22.90	---	7.66	---	---	
S-6	03/17/2017	5,100	1,200	280	170	330	---	---	---	---	---	---	---	---	30.16	22.26	---	7.90	---	---	
S-6	09/07/2017	2,400	910	48	65	85	---	---	---	---	---	---	---	---	30.16	22.72	---	7.44	---	---	
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	---	---	

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

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

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-8	11/11/2008	480 j	29 j	<1.0 j	5.4 j	<1.0 j	---	---	---	---	---	---	---	---	35.85	23.37	---	12.48	2.2	103
S-8	12/18/2008	340	38	<1.0	5.4	<1.0	---	---	---	---	---	---	---	---	35.83	23.31	---	12.52	---	---
S-8	01/05/2009	170	15	<1.0	1.2	<1.0	---	---	---	---	---	---	---	---	35.83	23.28	---	12.55	---	---
S-8	01/15/2009	260	45	<1.0	3.2	<1.0	---	---	---	---	---	---	---	---	35.83	23.05	---	12.78	---	---
S-8	02/12/2009	88	7.2	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---	35.83	23.34	---	12.49	---	---
S-8	03/12/2009	12,000	1,700	2,100	200	2,400	---	---	---	---	---	---	---	---	35.83	22.90	---	12.93	---	---
S-8	04/09/2009	170	<0.50	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---	35.83	23.10	---	12.73	---	594
S-8	07/23/2009	140	0.55	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---	35.83	23.02	---	12.81	2.38	-54
S-8	10/01/2009	140	0.68	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---	35.83	23.31	---	12.52	4.34	359
S-8	01/28/2010	<50	<0.50	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---	35.83	22.80	---	13.03	---	---
S-8	05/20/2010	<50	<0.50	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---	35.83	23.55	---	12.28	0.64	42
S-8	08/31/2010	<50	<0.50	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---	35.83	23.48	---	12.35	0.54	-72
S-8	12/29/2010	79	0.83	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---	35.83	23.18	---	12.65	0.74	133
S-8	02/01/2011	<50	<0.50	<0.50	<0.50	<1.0	---	---	---	---	---	---	---	---	35.83	22.57	---	13.26	1.68	104
S-8	04/25/2011	<50	1.1	<0.50	<0.50	<1.0	---	---	---	---	---	---	---	---	35.83	21.26	---	14.57	1.78	12
S-8	07/28/2011	50	2.4	<0.50	<0.50	<1.0	---	---	---	---	---	---	---	---	35.83	20.94	---	14.89	0.89	186
S-8	10/28/2011	<50	0.61	<0.50	<0.50	<1.0	---	---	---	---	---	---	---	---	35.83	21.09	---	14.74	2.78	349
S-8	05/07/2012	<50	4.3	1.4	0.59	1.0	---	---	---	---	---	---	---	---	35.83	21.23	---	14.60	2.42	209
S-8	05/02/2013	53	<0.50	<0.50	<0.50	<1.0	---	---	---	---	---	---	---	---	35.83	24.65	---	11.18	---	---
S-8	04/21/2014	<50	<0.50	<0.50	<0.50	<1.0	---	---	---	---	---	---	---	---	35.83	25.28	---	10.55	---	---
S-8	Well destroyed																			
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 inaccessible		---	---	---	---	---	---	---	---	---	---	---	26.06	---	---	---	---	---
S-9	04/11/1996	2,100	440	1,500	42	210	<25	---	---	---	---	---	---	---	26.06	23.61	---	2.45	---	---
S-9	07/11/1996	5,200	940	450	120	520	<50	---	---	---	---	---	---	---	26.06	23.78	---	2.28	---	---
S-9 (D)	07/11/1996	4,800	890	430	110	500	<50	---	---	---	---	---	---	---	26.06	---	---	---	---	---
S-9	10/02/1996	3,000	680	220	56	270	<62	---	---	---	---	---	---	---	26.06	24.31	---	1.75	---	---
S-9	01/22/1997	1,500	230	71	36	130	<12	---	---	---	---	---	---	---	26.06	23.08	---	2.98	---	---
S-9	07/21/1997	3,400	590	57	19	210	96	---	---	---	---	---	---	---	26.06	22.83	---	3.23	---	---
S-9	01/22/1998	2,600	300	46	<10	270	62	---	---	---	---	---	---	---	26.06	21.96	---	4.10	---	---
S-9	07/08/1998	820	150	6.2	7.5	57	<10	---	---	---	---	---	---	---	26.06	20.85	---	5.21	---	---
S-9	10/26/1998	---	---	---	---	---	---	---	---	---	---	---	---	---	26.06	21.39	---	4.67	---	---

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-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 inaccessible		---	---	---	---	---	---	---	---	---	---	---	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 inaccessible		---	---	---	---	---	---	---	---	---	---	---	26.06	---	---	---	---	---
S-9	08/13/2001	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	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	---	---
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	---	---

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

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

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

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

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

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

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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	04/21/2014	180	<0.50	<0.50	0.71	<1.0	---	<0.50	<10	<0.50	<0.50	<0.50	---	---	36.35	26.20	---	10.15	---	---
S-10	Well destroyed																			
S-12	12/17/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	36.44	24.58	---	11.86	---	---
S-12	02/08/2008	55 f	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	<0.50	<1.0	36.44	24.32	---	12.12	---	---
S-12	05/08/2008	<50 f	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	<0.50	<1.0	36.44	24.51	---	11.93	---	---
S-12	08/14/2008	<50	1.0	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	<0.50	<1.0	36.44	24.63	---	11.81	---	---
S-12	11/11/2008	<50 i	0.95 i	<1.0 i	<1.0 i	<1.0 i	---	<1.0 i	---	---	---	---	<0.50 i	<1.0 i	36.44	24.85	---	11.59	0.2	37
S-12	11/11/2008	65 j	8.1 j	2.2 j	4.8 j	1.5 j	---	---	---	---	---	---	---	---	36.44	24.85	---	11.59	0.2	45
S-12	12/18/2008	<50	8.3	<1.0	1.8	<1.0	---	---	---	---	---	---	---	---	36.44	24.81	---	11.63	---	---
S-12	01/05/2009	95	16	<1.0	3.2	<1.0	---	---	---	---	---	---	---	---	36.44	24.75	---	11.69	---	---
S-12	01/15/2009	140	36	<1.0	12	<1.0	---	---	---	---	---	---	---	---	36.44	24.54	---	11.90	---	---
S-12	02/12/2009	<50	5.0	<1.0	1.6	<1.0	---	---	---	---	---	---	---	---	36.44	24.81	---	11.63	---	---
S-12	03/12/2009	<50	4.8	<1.0	1.5	<1.0	---	---	---	---	---	---	---	---	36.44	24.41	---	12.03	---	---
S-12	04/09/2009	59	6.0	<1.0	1.6	<1.0	---	---	---	---	---	---	---	---	36.44	24.23	---	12.21	0.50	-3
S-12	07/23/2009	130	29	<1.0	13	<1.0	---	---	---	---	---	---	---	---	36.44	24.50	---	11.94	0.07	142
S-12	10/01/2009	130	25	<1.0	15	<1.0	---	---	---	---	---	---	---	---	36.44	24.76	---	11.68	0.74	135
S-12	01/28/2010	110	14	<1.0	19	<1.0	---	---	---	---	---	---	---	---	36.44	24.28	---	12.16	---	---
S-12	05/20/2010	75	8.5	<1.0	7.0	<1.0	---	---	---	---	---	---	---	---	36.44	24.71	---	11.73	0.14	740
S-12	08/31/2010	<50	0.56	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---	36.44	25.08	---	11.36	1.18	180
S-12	12/29/2010	<50	0.98	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---	36.44	24.60	---	11.84	1.27	121
S-12	02/01/2011	<50	1.8	<0.50	2.8	<1.0	---	---	---	---	---	---	---	---	36.44	23.94	---	12.50	2.06	-2
S-12	04/25/2011	<50	0.82	<0.50	1.7	<1.0	---	---	---	---	---	---	---	---	36.44	22.53	---	13.91	0.28	196
S-12	07/28/2011	<50	0.96	<0.50	2.8	<1.0	---	---	---	---	---	---	---	---	36.44	22.05	---	14.39	3.01	163
S-12	10/28/2011	99	15	<0.50	14	<1.0	---	---	---	---	---	---	---	---	36.44	22.50	---	13.94	3.67	91
S-12	05/07/2012	180	25	<0.50	19	1.0	---	---	---	---	---	---	---	---	36.44	22.50	---	13.94	0.88	66
S-12	05/02/2013	190	1.2	0.64	0.71	3.8	---	---	---	---	---	---	---	---	36.44	26.48	---	9.96	---	---
S-12	04/21/2014	1,100	5.0	3.3	9.5	38	---	---	---	---	---	---	---	---	36.44	27.08	---	9.36	---	---
S-12	Well destroyed																			
S-13	12/17/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	35.16	23.33	---	11.83	---	---
S-13	02/08/2008	14,000 f	1,900	1,300	280	3,000	---	<10	---	---	---	---	<5.0	<10	35.16	23.01	---	12.15	---	---
S-13	05/08/2008	18,000 f	2,800	3,400	550	3,500	---	<10	---	---	---	---	<5.0	<10	35.16	23.31	---	11.85	---	---
S-13	08/14/2008	16,000	2,400	3,100	580	3,100	---	<20	---	---	---	---	<10	<20	35.16	23.31	---	11.85	---	---
S-13	11/11/2008	16,000 i	2,400 i	2,800 i	270 i	2,500 i	---	<50 i	---	---	---	---	<25 i	<50 i	35.16	23.60	---	11.56	0.8	-48

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-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	---	---
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 inaccessible			---	---	---	---	---	---	---	---	---	---	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	---	---

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-13	01/22/2015	---	---	---	---	---	---	---	---	---	---	---	---	---	35.05	25.01	---	10.04	---	---
S-13	Well destroyed																			
S-14	12/17/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	34.94	22.68	---	12.26	---	---
S-14	02/08/2008	5,300 f	380	300	34	970	---	<10	---	---	---	---	<5.0	<10	34.94	22.82	---	12.12	---	---
S-14	05/08/2008	4,300 f	750	270	30	520	---	<10	---	---	---	---	<5.0	<10	34.94	22.41	---	12.53	---	---
S-14	Well destroyed																			
S-14R	11/07/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	35.19	22.91	---	12.28	---	---
S-14R	11/11/2008	8,500 i	680 i	270 i	<25 i	1,110 i	---	---	---	---	---	---	---	---	35.19	23.13	---	12.06	0.60	115
S-14R	11/11/2008	4,300 j	270 j	190 j	43 j	470 j	---	---	---	---	---	---	---	---	35.19	23.13	---	12.06	1.5	116
S-14R	12/18/2008	7,800	530	640	79	1,010	---	---	---	---	---	---	---	---	34.95	22.80	---	12.15	---	---
S-14R	01/05/2009	2,100	89	86	19	140	---	---	---	---	---	---	---	---	34.95	22.80	---	12.15	---	---
S-14R	01/15/2009	4,800	430	540	83	730	---	---	---	---	---	---	---	---	34.95	22.57	---	12.38	---	---
S-14R	02/12/2009	1,000	40	29	7.3	55	---	---	---	---	---	---	---	---	34.95	22.89	---	12.06	---	---
S-14R	03/12/2009	350	22	18	3.3	29	---	---	---	---	---	---	---	---	34.95	22.39	---	12.56	---	---
S-14R	04/09/2009	2,300	230	240	47	250	---	---	---	---	---	---	---	---	34.95	22.35	---	12.60	0.30	430
S-14R	05/18/2009	750	51	48	17	67	---	---	---	---	---	---	---	---	34.95	22.20	---	12.75	5.63	93
S-14R	07/23/2009	600	81	57	19	47	---	---	---	---	---	---	---	---	34.95	22.56	---	12.39	0.05	246
S-14R	10/01/2009	230	12	10	5.3	23	---	---	---	---	---	---	---	---	34.95	22.90	---	12.05	2.22	201
S-14R	11/09/2009	330	47	21	11	39	---	---	---	---	---	---	---	---	34.95	22.68	---	12.27	0.75	---
S-14R	12/01/2009	420	38	27	12	39	---	---	---	---	---	---	---	---	34.95	22.62	---	12.33	0.45	110
S-14R	01/28/2010	270	45	27	11	32	---	---	---	---	---	---	---	---	34.95	22.38	---	12.57	3.75	---
S-14R	05/20/2010	330	17	10	2.7	13	---	---	---	---	---	---	---	---	34.95	22.72	---	12.23	0.96	102
S-14R	08/31/2010	130	5.8	3.5	1.4	6.1	---	---	---	---	---	---	---	---	34.95	23.12	---	11.83	1.55	-13
S-14R	12/29/2010	480	56	30	13	52	---	---	---	---	---	---	---	---	34.95	22.75	---	12.20	0.48	375
S-14R	02/01/2011	570	56	32	20	59	---	---	---	---	---	---	---	---	34.95	22.10	---	12.85	0.58	143
S-14R	04/25/2011	860	100	59	41	97	---	---	---	---	---	---	---	---	34.95	20.80	---	14.15	0.81	-37
S-14R	07/28/2011	970	100	80	51	110	---	---	---	---	---	---	---	---	34.95	20.36	---	14.59	0.56	151
S-14R	10/28/2011	420	47	38	25	67	---	---	---	---	---	---	---	---	34.95	20.68	---	14.27	3.97	321
S-14R	05/07/2012	630	68	62	40	120	---	---	---	---	---	---	---	---	34.95	20.77	---	14.18	2.47	238
S-14R	05/02/2013	3,200	200	130	95	200	---	---	---	---	---	---	---	---	34.95	24.49	---	10.46	---	---
S-14R	04/21/2014	3,700	190	160	99	290	---	---	---	---	---	---	---	---	34.95	24.99	---	9.96	---	---
S-14R	Well destroyed																			

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-15	12/17/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	35.34	23.00	---	12.34	---	---
S-15	02/08/2008	55,000 f	6,700	13,000	1,100	9,800	---	<10	---	---	---	---	<5.0	<10	35.34	22.71	---	12.63	---	---
S-15	05/08/2008	53,000 f	6,300	13,000	1,500	7,500	---	<200	---	---	---	---	<100	<200	35.34	22.91	---	12.43	---	---
S-15	Well destroyed																			
S-16	12/17/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	36.08	23.88	---	12.20	---	---
S-16	02/08/2008	6,000 f	670	730	88	1,290	---	<5.0	---	---	---	---	<2.5	<5.0	36.08	23.52	---	12.56	---	---
S-16	05/08/2008	3,200 f	670	320	18	580	---	<10	---	---	---	---	<5.0	<10	36.08	23.69	---	12.39	---	---
S-16	Well destroyed																			
S-17	06/19/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	35.49	23.30	---	12.19	---	---
S-17	06/25/2008	21,000	1,300	1,300	160	2,850	---	<5.0	---	---	---	---	<2.5	<5.0	35.49	23.33	---	12.16	---	---
S-17	08/14/2008	14,000	1,700	1,700	310	2,250	---	<10	---	---	---	---	<5.0	<10	35.49	23.50	---	11.99	---	---
S-17	11/11/2008	7,200 i	1,600 i	820 i	140 i	760 i	---	<5.0 i	---	---	---	---	<2.5 i	<5.0 i	35.49	23.70	---	11.79	---	---
S-17	11/11/2008	32,000 j	2,500 j	3,100 j	820 j	4,000 j	---	<25 j	---	---	---	---	<12 j	<25 j	35.49	23.70	---	11.79	---	---
S-17	01/05/2009	15,000	790	700	150	1,200	---	<10	---	---	---	---	<5.0	<10	35.50	23.66	---	11.84	---	---
S-17	01/15/2009	2,300	220	170	19	300	---	---	---	---	---	---	---	---	35.50	23.37	---	12.13	---	---
S-17	02/12/2009	4,700	750	200	37	23	---	---	---	---	---	---	---	---	35.50	23.66	---	11.84	---	---
S-17	03/12/2009	3,300	640	370	81	290	---	---	---	---	---	---	---	---	35.50	23.24	---	12.26	---	---
S-17	04/09/2009	1,300	200	110	37	100	---	---	---	---	---	---	---	---	35.50	23.20	---	12.30	0.69	429
S-17	05/18/2009	630	97	44	17	25	---	---	---	---	---	---	---	---	35.50	23.21	---	12.29	5.93	442
S-17	07/23/2009	3,900	480	410	160	480	---	---	---	---	---	---	---	---	35.50	23.70	---	11.80	0.15	34
S-17	10/01/2009	1,300	32	24	3.1	72	---	---	---	---	---	---	---	---	35.50	23.64	---	11.86	1.30	204
S-17	11/09/2009	5,300	260	330	56	500	---	---	---	---	---	---	---	---	35.50	23.52	---	11.98	0.18	---
S-17	12/01/2009	3,300	190	210	52	240	---	---	---	---	---	---	---	---	35.50	23.41	---	12.09	0.95	450
S-17	01/28/2010	3,500	260	250	85	310	---	---	---	---	---	---	---	---	35.50	23.21	---	12.29	1.93	---
S-17	05/20/2010	370	18	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---	35.50	23.65	---	11.85	1.31	544
S-17	08/31/2010	1,900	120	110	52	260	---	---	---	---	---	---	---	---	35.50	23.92	---	11.58	1.32	370
S-17	12/29/2010	2,600	200	150	91	280	---	---	---	---	---	---	---	---	35.50	23.60	---	11.90	1.37	131
S-17	02/01/2011	950	100	72	47	130	---	---	---	---	---	---	---	---	35.50	22.91	---	12.59	1.40	136
S-17	04/25/2011	2,000	150	71	77	210	---	---	---	---	---	---	---	---	35.50	21.44	---	14.06	0.23	82
S-17	07/28/2011	3,400	270	98	170	370	---	---	---	---	---	---	---	---	35.50	21.06	---	14.44	1.45	70
S-17	10/28/2011	270	58	5.3	23	28	---	---	---	---	---	---	---	---	35.50	21.51	---	13.99	1.19	221
S-17	05/07/2012	980	110	3.6	66	100	---	---	---	---	---	---	---	---	35.50	21.50	---	14.00	0.62	84
S-17	05/02/2013	570	62	20	19	49	---	---	---	---	---	---	---	---	35.50	25.49	---	10.01	---	---

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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	04/21/2014	2,500	140	120	98	310	---	---	---	---	---	---	---	---	35.50	25.91	---	9.59	---	---
S-17	Well destroyed																			
S-18	06/19/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	35.04	22.94	---	12.10	---	---
S-18	06/25/2008	58,000	2,200	5,600	880	10,200	---	<10	---	---	---	---	<5.0	<10	35.04	22.92	---	12.12	---	---
S-18	08/14/2008	25,000	2,500	4,500	860	5,800	---	<50	---	---	---	---	<25	<50	35.04	23.08	---	11.96	---	---
S-18	11/11/2008	24,000 i	2,400 i	3,300 i	820 i	3,800 i	---	<25 i	---	---	---	---	<12 i	<25 i	35.04	23.30	---	11.74	---	---
S-18	11/11/2008	43,000 j	3,900 j	5,500 j	1,300 j	6,500 j	---	<50 j	---	---	---	---	<25 j	<50 j	35.04	23.30	---	11.74	---	---
S-18	01/05/2009	20,000	830	1,000	290	1,400	---	<50	---	---	---	---	<25	<50	35.03	23.16	---	11.87	---	---
S-18	01/15/2009	8,200	690	790	150	1,230	---	---	---	---	---	---	---	---	35.03	22.97	---	12.06	---	---
S-18	02/12/2009	13,000	1,200	1,400	330	940	---	---	---	---	---	---	---	---	35.03	23.29	---	11.74	---	---
S-18	03/12/2009	52,000	5,300	9,000	1,600	10,000	---	---	---	---	---	---	---	---	35.03	22.85	---	12.18	---	---
S-18	04/09/2009	Insufficient 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
S-18	04/25/2011	13,000	2,100	2,000	470	2,300	---	---	---	---	---	---	---	---	35.03	21.00	---	14.03	0.52	85
S-18	07/28/2011	8,200	1,200	1,000	290	1,200	---	---	---	---	---	---	---	---	35.03	20.56	---	14.47	1.57	27
S-18	10/28/2011	9,000	1,200	480	430	1,900	---	---	---	---	---	---	---	---	35.03	21.11	---	13.92	1.45	147
S-18	05/07/2012	4,700	710	310	310	870	---	---	---	---	---	---	---	---	35.03	21.20	---	13.83	0.55	-68
S-18	05/02/2013	5,000	720	280	220	480	---	---	---	---	---	---	---	---	35.03	24.95	---	10.08	---	---
S-18	04/21/2014	1,400	240	190	70	230	---	---	---	---	---	---	---	---	35.03	25.61	---	9.42	---	---
S-18	Well destroyed																			
S-19	11/07/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	34.78	22.73	---	12.05	---	---
S-19	11/11/2008	7,100 i	500 i	600 i	25 i	1,010 i	---	---	---	---	---	---	---	---	34.78	22.87	---	11.91	1.0	62
S-19	11/11/2008	2,300 j	110 j	160 j	43 j	280 j	---	---	---	---	---	---	---	---	34.78	22.87	---	11.91	1.3	71

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-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	---	---
S-19	04/21/2014	32,000	580	1,400	940	4,300	---	---	---	---	---	---	---	---	34.57	24.95	---	9.62	---	---
S-19	07/31/2014	---	---	---	---	---	---	---	---	---	---	---	---	---	34.57	24.22	0.20	10.51	---	---
S-19	11/21/2014	25,000	420	880	550	2,500	---	---	---	---	---	---	---	---	34.57	24.40	---	10.17	---	---
S-19	Well destroyed																			
S-20	11/07/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	34.50	22.80	---	11.70	---	---
S-20	11/11/2008	13,000 i	1,300 i	1,600 i	80 i	1,920 i	---	---	---	---	---	---	---	---	34.50	22.90	---	11.60	0.8	-39
S-20	11/11/2008	16,000 j	1,100 j	1,800 j	220 j	1,930 j	---	---	---	---	---	---	---	---	34.50	22.90	---	11.60	2.6	-64
S-20	01/05/2009	17,000	1,500	1,700	320	1,900	---	---	---	---	---	---	---	---	34.50	22.78	---	11.72	---	---
S-20	02/12/2009	11,000	1,300	1,400	230	1,600	---	---	---	---	---	---	---	---	34.50	22.80	---	11.70	2.6	-64
S-20	03/12/2009	19,000	2,700	3,200	390	3,100	---	---	---	---	---	---	---	---	34.50	22.40	---	12.10	---	---
S-20	04/09/2009	8,200	80	480	220	490	---	---	---	---	---	---	---	---	34.50	22.90	---	11.60	13.80	578

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-20	05/18/2009	21,000	970	1,500	630	4,800	---	---	---	---	---	---	---	---	34.50	22.42	---	12.08	4.58	197
S-20	07/23/2009	41,000	4,900	2,900	990	7,300	---	---	---	---	---	---	---	---	34.50	22.73	---	11.77	0.27	419
S-20	10/01/2009	1,800	140	39	33	39	---	---	---	---	---	---	---	---	34.50	23.00	---	11.50	0.85	533
S-20	11/09/2009	21,000	1,600	740	300	2,500	---	---	---	---	---	---	---	---	34.50	22.72	---	11.78	1.67	---
S-20	12/01/2009	12,000	1,100	450	160	1,200	---	---	---	---	---	---	---	---	34.50	22.61	---	11.89	1.38	347
S-20	01/28/2010	20,000	2,000	1,600	260	2,000	---	---	---	---	---	---	---	---	34.50	22.51	---	11.99	4.40	---
S-20	05/20/2010	4,300	1,100	110	26	61	---	---	---	---	---	---	---	---	34.50	22.90	---	11.60	8.96	555
S-20	06/22/2010	7,100	1,300	550	120	550	---	---	---	---	---	---	---	---	34.50	23.19	---	11.31	11.64	637
S-20	08/31/2010	9,600	1,800	1,400	230	580	---	---	---	---	---	---	---	---	34.50	23.13	---	11.37	0.94	529
S-20	12/29/2010	19,000	2,000	3,100	860	3,200	---	---	---	---	---	---	---	---	34.50	22.72	---	11.78	0.92	193
S-20	02/01/2011	26,000	3,900	7,100	1,300	5,800	---	---	---	---	---	---	---	---	34.50	22.04	---	12.46	1.03	390
S-20	04/25/2011	41,000	6,600	11,000	2,000	9,800	---	---	---	---	---	---	---	---	34.50	20.60	---	13.90	0.43	156
S-20	07/28/2011	34,000	4,200	5,300	1,400	6,300	---	---	---	---	---	---	---	---	34.50	20.30	---	14.20	1.25	-15
S-20	10/28/2011	17,000	1,500	1,900	1,000	3,400	---	---	---	---	---	---	---	---	34.50	20.78	---	13.72	1.28	431
S-20	05/07/2012	9,900	760	1,200	790	2,000	---	---	---	---	---	---	---	---	34.50	20.54	---	13.96	1.92	-106
S-20	12/11/2012	9,700	630	1,000	720	1,500	---	---	---	---	---	---	---	---	34.50	22.29	---	12.21	0.82/1.67	-11/-43
S-20	05/02/2013	4,500	380	220	240	300	---	---	---	---	---	---	---	---	34.50	24.50	---	10.00	---	---
S-20	11/07/2013	4,000	420	290	60	330	---	---	---	---	---	---	---	---	34.50	25.24	---	9.26	---	---
S-20	04/21/2014	3,800	480	350	50	350	---	---	---	---	---	---	---	---	34.50	25.15	---	9.35	---	---
S-20	11/21/2014	4,800	560	340	98	430	---	---	---	---	---	---	---	---	34.50	24.54	---	9.96	---	---
S-20	Well destroyed																			
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	---

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-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	Insufficient 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	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
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

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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	02/01/2011	270	<0.50	2.0	4.0	16	---	---	---	---	---	---	---	---	35.76	23.08	---	12.68	0.51	10
S-21B	04/25/2011	250	<0.50	1.9	4.6	16	---	---	---	---	---	---	---	---	35.76	21.86	---	13.90	1.43	72
S-21B	07/28/2011	270	<0.50	0.84	3.0	11	---	---	---	---	---	---	---	---	35.76	21.32	---	14.44	2.86	127
S-21B	10/28/2011	220	<0.50	0.53	2.3	9.2	---	---	---	---	---	---	---	---	35.76	21.52	---	14.24	0.96	153
S-21B	05/07/2012	170	<0.50	0.62	1.5	7.6	---	---	---	---	---	---	---	---	35.76	22.04	---	13.72	0.75	100
S-21B	05/02/2013	<50	<0.50	<0.50	<0.50	<1.0	---	---	---	---	---	---	---	---	35.76	25.59	---	10.17	---	---
S-21B	04/21/2014	52	1.7	2.4	0.80	4.7	---	---	---	---	---	---	---	---	35.76	26.14	---	9.62	---	---
S-21B	Well destroyed																			
S-22A	11/07/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	35.08	22.91	---	12.17	---	---
S-22A	11/11/2008	84,000 i	8,500 i	11,000 i	2,200 i	13,900 i	---	---	---	---	---	---	---	---	35.08	23.15	---	11.93	1.0	117
S-22A	11/11/2008	85,000 j	7,600 j	10,000 j	2,500 j	12,400 j	---	---	---	---	---	---	---	---	35.08	23.15	---	11.93	1.6	100
S-22A	12/18/2008	42,000	6,300	6,600	1,200	4,400	---	---	---	---	---	---	---	---	35.06	23.03	---	12.03	---	---
S-22A	01/05/2009	56,000	4,500	5,300	1,200	6,400	---	---	---	---	---	---	---	---	35.06	23.03	---	12.03	---	---
S-22A	01/15/2009	25,000	5,900	4,400	740	1,570	---	---	---	---	---	---	---	---	35.06	22.84	---	12.22	---	---
S-22A	02/12/2009	43,000	6,700	6,600	1,200	5,000	---	---	---	---	---	---	---	---	35.06	23.15	---	11.91	---	---
S-22A	03/12/2009	35,000	4,600	4,600	980	4,600	---	---	---	---	---	---	---	---	35.06	22.65	---	12.41	---	---
S-22A	04/09/2009	22,000	120	1,900	680	3,400	---	---	---	---	---	---	---	---	35.06	22.88	---	12.18	8.41	556
S-22A	05/18/2009	25,000	4,700	1,300	590	3,700	---	---	---	---	---	---	---	---	35.06	22.83	---	12.23	2.46	539
S-22A	07/23/2009	40,000	5,100	4,800	700	4,900	---	---	---	---	---	---	---	---	35.06	23.01	---	12.05	0.18	167
S-22A	10/01/2009	12,000	1,400	600	88	500	---	---	---	---	---	---	---	---	35.06	23.06	---	12.00	4.08	523
S-22A	11/09/2009	18,000	2,700	2,000	190	1,300	---	---	---	---	---	---	---	---	35.06	23.14	---	11.92	1.74	---
S-22A	12/01/2009	24,000	2,300	2,300	270	2,000	---	---	---	---	---	---	---	---	35.06	23.10	---	11.96	1.06	393
S-22A	01/28/2010	44,000	3,600	5,000	620	4,300	---	---	---	---	---	---	---	---	35.06	22.92	---	12.14	1.40	---
S-22A	05/20/2010	3,100	38	<10	<10	<10	---	---	---	---	---	---	---	---	35.06	23.22	---	11.84	0.48	423
S-22A	06/22/2010	2,400	110	15	4.3	6.6	---	---	---	---	---	---	---	---	35.06	23.51	---	11.55	6.10	542
S-22A	08/31/2010	5,000	690	600	78	350	---	---	---	---	---	---	---	---	35.06	23.52	---	11.54	1.03	553
S-22A	12/29/2010	13,000	1,300	1,800	490	2,100	---	---	---	---	---	---	---	---	35.06	23.17	---	11.89	0.70	476
S-22A	02/01/2011	13,000	1,800	3,100	640	2,800	---	---	---	---	---	---	---	---	35.06	22.45	---	12.61	0.89	453
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 inaccessible																		
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	---	---

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-22A	11/07/2013	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	35.06	---	---	---	---	---
S-22A	04/21/2014	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	35.06	---	---	---	---	---
S-22A	11/21/2014	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	35.06	---	---	---	---	---
S-22A	Well destroyed																			
S-22B	11/07/2008	---	---	---	---	---	---	---	---	---	---	---	---	---	35.15	23.06	---	12.09	---	---
S-22B	11/11/2008	<50 i	<0.50 i	<1.0 i	<1.0 i	1.2 i	---	---	---	---	---	---	---	---	35.15	23.20	---	11.95	0.9	92
S-22B	11/11/2008	360 j	3.3 j	12 j	5.8 j	38 j	---	---	---	---	---	---	---	---	35.15	23.20	---	11.95	1.6	90
S-22B	12/18/2008	150	2.9	6.1	2.9	17.5	---	---	---	---	---	---	---	---	35.24	23.26	---	11.98	---	---
S-22B	01/05/2009	110	1.9	5.0	2.6	11	---	---	---	---	---	---	---	---	35.24	28.12	---	7.12	---	---
S-22B	01/15/2009	59	1.3	1.9	1.6	<1.0	---	---	---	---	---	---	---	---	35.24	22.90	---	12.34	---	---
S-22B	02/12/2009	290	11	6.8	7.9	19	---	---	---	---	---	---	---	---	35.24	23.02	---	12.22	---	---
S-22B	03/12/2009	390	4.4	4.6	3.8	12	---	---	---	---	---	---	---	---	35.24	22.86	---	12.38	---	---
S-22B	04/09/2009	280	5.3	2.5	4.0	6.8	---	---	---	---	---	---	---	---	35.24	22.62	---	12.62	2.24	164
S-22B	05/18/2009	170	3.7	2.9	2.4	8.6	---	---	---	---	---	---	---	---	35.24	22.62	---	12.62	1.42	-171
S-22B	07/23/2009	160	8.9	5.7	3.8	12	---	---	---	---	---	---	---	---	35.24	22.65	---	12.59	0.15	28
S-22B	10/01/2009	300	2.4	1.0	1.2	<1.0	---	---	---	---	---	---	---	---	35.24	23.18	---	12.06	2.62	173
S-22B	01/28/2010	<50	<0.50	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---	35.24	22.73	---	12.51	---	---
S-22B	05/20/2010	230	<0.50	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---	35.24	22.88	---	12.36	6.14	584
S-22B	08/31/2010	<50	0.57	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---	35.24	23.51	---	11.73	0.92	377
S-22B	12/29/2010	<50	<0.50	<1.0	<1.0	<1.0	---	---	---	---	---	---	---	---	35.24	23.04	---	12.20	1.07	391
S-22B	02/01/2011	<50	0.55	<0.50	<0.50	<1.0	---	---	---	---	---	---	---	---	35.24	22.70	---	12.54	1.07	-3
S-22B	04/25/2011	<50	<0.50	0.62	<0.50	1.1	---	---	---	---	---	---	---	---	35.24	21.38	---	13.86	1.37	416
S-22B	07/28/2011	Well inaccessible		---	---	---	---	---	---	---	---	---	---	---	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 inaccessible		---	---	---	---	---	---	---	---	---	---	---	35.24	---	---	---	---	---
S-22B	Well destroyed																			
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	---	---

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-23	03/12/2009	4,600	210	460	71	610	---	---	---	---	---	---	---	---	35.75	23.03	---	12.72	---	---
S-23	04/09/2009	2,700	180	95	33	<5.0	---	---	---	---	---	---	---	---	35.75	22.98	---	12.77	1.24	567
S-23	05/18/2009	3,000	350	440	79	300	---	---	---	---	---	---	---	---	35.75	23.18	---	12.57	19.77	503
S-23	07/23/2009	2,900	180	400	67	340	---	---	---	---	---	---	---	---	35.75	23.48	---	12.27	0.21	133
S-23	10/01/2009	790	40	24	5.4	<1.0	---	---	---	---	---	---	---	---	35.75	23.82	---	11.93	8.64	428
S-23	11/09/2009	3,200	84	330	90	400	---	---	---	---	---	---	---	---	35.75	23.51	---	12.24	0.28	---
S-23	12/01/2009	1,800	47	180	50	190	---	---	---	---	---	---	---	---	35.75	23.31	---	12.44	2.49	472
S-23	01/28/2010	3,000	100	450	110	650	---	---	---	---	---	---	---	---	35.75	23.25	---	12.50	1.74	---
S-23	05/20/2010	900	8.2	<5.0	<5.0	<5.0	---	---	---	---	---	---	---	---	35.75	23.80	---	11.95	3.76	607
S-23	06/22/2010	640	11	22	9.0	11	---	---	---	---	---	---	---	---	35.75	24.40	---	11.35	12.96	572
S-23	08/31/2010	710	14	45	34	110	---	---	---	---	---	---	---	---	35.75	23.95	---	11.80	1.25	322
S-23	12/29/2010	1,300	45	82	56	240	---	---	---	---	---	---	---	---	35.75	23.61	---	12.14	1.39	313
S-23	02/01/2011	1,300	51	110	72	270	---	---	---	---	---	---	---	---	35.75	22.92	---	12.83	1.30	107
S-23	04/25/2011	1,300	53	110	81	400	---	---	---	---	---	---	---	---	35.75	21.62	---	14.13	0.96	321
S-23	07/28/2011	1,400	43	79	74	320	---	---	---	---	---	---	---	---	35.75	21.28	---	14.47	0.92	209
S-23	10/28/2011	1,600	43	83	92	370	---	---	---	---	---	---	---	---	35.75	21.50	---	14.25	1.82	161
S-23	05/07/2012	870	50	40	66	220	---	---	---	---	---	---	---	---	35.75	21.59	---	14.16	2.20	254
S-23	05/02/2013	540	24	15	5.6	25	---	---	---	---	---	---	---	---	35.75	25.04	---	10.71	---	---
S-23	04/21/2014	1,700	110	47	8.4	95	---	---	---	---	---	---	---	---	35.75	25.67	---	10.08	---	---
S-23	Well destroyed																			
S-24	03/17/2017	11,000	670	760	260	1,000	---	---	---	---	---	---	---	---	34.99	24.02	---	10.97	---	---
S-24	05/19/2017	4,900	450	140	94	350	---	---	---	---	---	---	---	---	34.99	23.86	---	11.13	---	---
S-24	09/07/2017	1,700	130	53	61	89	---	---	---	---	---	---	---	---	34.99	24.77	---	10.22	---	---
S-25	03/17/2017	6,300	430	400	160	870	---	---	---	---	---	---	---	---	35.10	24.35	---	10.75	---	---
S-25	05/19/2017	1,400	280	42	47	120	---	---	---	---	---	---	---	---	35.10	24.34	---	10.76	---	---
S-25	09/07/2017	1,200	150	32	36	64	---	---	---	---	---	---	---	---	35.10	25.06	---	10.04	---	---
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	---	---
S-26	09/23/2016	Well Inaccessible		---	---	---	---	---	---	---	---	---	---	---	34.39	24.20	---	---	---	---

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

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (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-26	12/16/2016	Well Inaccessible		---	---	---	---	---	---	---	---	---	---	---	34.39	24.20	---	---	---	---
S-26	03/17/2017	1,600	99	46	93	260	---	---	---	---	---	---	---	---	34.39	23.75	---	10.64	---	---
S-26	09/07/2017	170	17	0.62	2.5	3.1	---	---	---	---	---	---	---	---	34.39	24.55	---	9.84	---	---
AS-1	12/17/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	35.33	22.91	---	12.42	---	---
AS-1	02/08/2008	130 f	1.1	3.4	<1.0	5.4	---	<1.0	---	---	---	---	<0.50	<1.0	35.33	22.62	---	12.71	---	---
AS-1	05/08/2008	<50 f	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	<0.50	<1.0	35.33	27.78	---	7.55	---	---
AS-1	Well destroyed																			
OW-1	04/09/2009	Well dry	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OW-1	05/18/2009	Well dry	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OW-1	Well destroyed																			

Notes: See following page for Table 1 notes.

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

Notes:

- TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B; prior to July 25, 2001, analyzed by EPA Method 8015 unless otherwise noted.
- BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B; prior to July 25, 2001, analyzed by EPA Method 8020.
- MTBE = Methyl tertiary-butyl ether analyzed by method noted
- TBA = Tertiary-butyl alcohol analyzed by EPA Method 8260E
- 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.xx = Not detected at or above reporting limit x.xx
- = 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
- l = 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.

Appendix A

Field Notes

(Blaine Tech Services, Inc.)

Equilon Enterprises LLC dba Shell Oil Products US (Equilon) Field Data Sheet

BTS #: 170519-ww1	Site: 461 34th ST, OAKLAND, CA
Sampler: WW/MM	Date: 5-19-17
Well I.D.: S-4	Well Diameter: 2 3 4 6 8
Total Well Depth (TD): 28.63	Depth to Water (DTW): 20.74
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 22.32	

Purge Methods: **Bailer** Disposable Bailer Positive Air Displacement **Electric Submersible**

Waterra Peristaltic Extraction Pump Other _____

Sampling Method: **Bailer** Disposable Bailer Extraction Port Dedicated Tubing

Other: _____

5.1	(Gals.) X	3	=	15.3	Gals.
1 Case Volume		Specified Volumes		Calculated Volume	

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
0914	65.4	7.61	170	>1000	5.1	
WELL DEWATERED @ 5.1 GALS						
0955	68.0	7.73	179	>1000	—	

Did well dewater? **Yes** No Gallons actually evacuated: 5.1

Sampling Date: 5-19-17 Sampling Time: 0955 Depth to Water: 22.32

Sample I.D.: S-4 Laboratory: **Test America** Other _____

Analyzed for: **TPH-G BTEX** MTBE TPH-D Oxygenates (5) Other:

EB I.D. (if applicable): @ _____ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

Equilon Enterprises LLC dba Shell Oil Products US (Equilon) Field Data Sheet

BTS #: 170519-ww1	Site: 461 8th ST, OAKLAND, CA
Sampler: ww	Date: 5-19-17
Well I.D.: S-24	Well Diameter: (2) 3 4 6 8
Total Well Depth (TD): 33.27	Depth to Water (DTW): 23.86
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 25.74	

Purge Method: (Bailer) Waterra Sampling Method: (Bailer)

Disposable Bailer Peristaltic Disposable Bailer
 Positive Air Displacement Extraction Pump Extraction Port
 Electric Submersible Other _____ Dedicated Tubing

Other: _____

1.5 (Gals.) X 3	= 4.5	
1 Case Volume	Specified Volumes	Calculated Volume
	= 3.9	Gals.

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
0829	68.2	6.67	1387	>1000	1.5	odor
0833	68.1	6.64	1531	>1000	3	"
0834	68.2	6.68	1379	>1000	4.5	

Did well dewater? Yes No Gallons actually evacuated: 4.5

Sampling Date: 5-19-17 Sampling Time: 0840 Depth to Water: 24.08

Sample I.D.: S-24 Laboratory: (Test America) Other _____

Analyzed for: (TPH-G BTEX) MTBE TPH-D Oxygenates (5) Other: _____

EB I.D. (if applicable): _____ @ _____ Time Duplicate I.D. (if applicable): _____

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

Equilon Enterprises LLC dba Shell Oil Products US (Equilon) Field Data Sheet

BTS #: 170519-WW1	Site: 461 8th St. Oakland, CA
Sampler: MM	Date: 5-19-17
Well I.D.: S-25	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): 32.86	Depth to Water (DTW): 24.34
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 26.04	

Purge Method: <u>Bailer</u> Disposable Bailer Positive Air Displacement Electric Submersible	Waterra Peristaltic Extraction Pump Other _____	Sampling Method: <u>Bailer</u> Disposable Bailer Extraction Port Dedicated Tubing Other: _____
--	--	--

1.4 (Gals.) X	3	= 4.2 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
0827	67.1	7.37	956	>1000	1.4	odor
0830	67.8	6.78	958	~1000	2.8	"
0833	68.2	6.68	864	>1000	4.2	"

Did well dewater? Yes No Gallons actually evacuated: 4.5

Sampling Date: 5-19-17 Sampling Time: 0835 Depth to Water: 24.45

Sample I.D.: S-25 Laboratory: Test America Other _____

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: see cot

EB I.D. (if applicable): @ _____ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

COPY

AECOM

Equilon Enterprises LLC dba Shell Oil Products US Chain Of Custody Record



LAB (LOCATION)

- ACUTEST ()
- CALSCIENCE ()
- ESTAMERICA ()
- Other ()

Lab Vendor # 1364589 (165America)

- Please Check Appropriate Box:
- GWP PDG
 - PIPELINE
 - RETAIL
 - CHEMICALS
 - CONSULTANT
 - LUBES
 - TRANSPORTATION
 - OTHER

PRINT/BILL TO CONTACT NAME: Shane Oilton 27481
 PO # GSAP Project ID
 85688 USPC/00226 USRT/01259
 SITE ADDRESS: Street and city 461 8th St., Oakland
 STATE: CA
 PHONE NO.: 510-893-3600
 E-MAIL: joshua.fox@aecom.com

PROJECT CONTRACT (Industry or PDP Report) 1680 Rogers Ave., San Jose, CA, 95112
 PROJECT NO.: BTSS
 TURNAROUND TIME (CALENDAR DAYS): 310-885-4455 Ext. 103
 STANDARD (14 DAY) F DAYS B DAYS DAYS 4 HOURS RESULTS NEEDED ON WEEKEND

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

DELIVERABLES: LEVEL 1 LEVEL 2 LEVEL 3 LEVEL 4 OTHER (SPECIFY) _____
 TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
 SHELL CONTRACT RATE APPLIES
 STATE REIMBURSEMENT RATE APPLIES
 LEDD NOT NEEDED
 RECEIPT VERIFICATION REQUESTED
 PROVIDE LEDD DISK

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
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LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
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LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
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LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
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LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

LAB USE SUBJECT: S-4 S-24 S-25
 FIELD SAMPLE IDENTIFICATION: S-4 S-24 S-25
 DATE: 5-19-17 0835
 TIME: 0840
 0835

SHIPPED VIA FED-EX

Version: 10Oct15



AECOM Equilon SGW (US)
Daily Tailgate Meeting & Job Clearance Form

Issue: 1/2/2011
Revision 11: October 2016
Do NOT pre-populate any field.

Job Location:	461 8th ST, OAKLAND, CA	Date:	5-19-17
AECOM Site Supervisor:		AECOM PM:	

List activities to be performed today:	purge & sample 3 groundwater wells
Permitted Activities (specific permit to be competed):	<input type="checkbox"/> Not Applicable <input type="checkbox"/> Confined Space Entry <input type="checkbox"/> Excavation/Trenching <input type="checkbox"/> Hot Work <input type="checkbox"/> Hoisting/Rigging (any lifting with equipment, excluding drill rigs) <input type="checkbox"/> Natural Gas System Maintenance
The above Permit-required activities require onsite AECOM supervision unless approved by Regional Operations.	

Muster Point:	STARBUCKS	Spill Kit Location:	TRUCK CAB
First Aid Kit Location:	TRUCK CAB	Fire Extinguisher Location:	TRUCK - RIGHT SIDE
Emergency cut-off switches:	NA	Designated cell phone use area(s):	OFFSITE

Has the Site Manager/Owner been notified of the work activities and/or participated in a pre-work site walk?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Is a fuel delivery scheduled for today? If yes, plan to Stop Work during fuel delivery.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Has a site walk been performed to identify additional hazards?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No*
Have all personnel reviewed and understand the site specific HASP?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No*
Does each activity have a Job Safety Analysis (JSA)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No*
Does each subcontractor have JSAs for their activities?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A
Have JSAs been reviewed by the work team and newly identified hazards been added to the JSA?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No*
Per our lone worker procedure, is each employee either accompanied by or in communications with another?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A
Has a Safe Lift Plan been completed and reviewed/approved by an AECOM Subject Matter Expert?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input checked="" type="checkbox"/> N/A
Have all members of the work team confirmed understanding of the work, hazards, and controls/ mitigation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No*
Has each person on the work team discussed all hazards and mitigation measures associated with any task which will require their feet to leave the ground?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A
Have work areas been properly cordoned-off to protect workers, site staff, and the public?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A
Have equipment checks been completed, documented, and reviewed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A
Have there been any equipment modifications made by subcontractor(s)? If yes, discuss modifications.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Do all members of the work team have API Safety Keys (AECOM excluded)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A
Do all members of the work team have a Equilon "Life Saving Rules" Training card?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No*
Do all site workers understand injury/ intervention reporting requirements including immediately notifying the AECOM Site Supervisor of any injury, near miss, unsafe condition, hazard observation, or release?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No*
If permits are required, have they been reviewed and permit conditions understood by the Team?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No* <input checked="" type="checkbox"/> N/A
If drilling, did driller physically point out all pinch points to entire team (AECOM and all subs)?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input checked="" type="checkbox"/> N/A
If drilling, has the driller & crew agreed the audible and visible signals for "all clear" prior to engaging controls?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input checked="" type="checkbox"/> N/A

* If No, then work cannot be performed until corrective action is completed and documented.

Title of AECOM JSAs reviewed today:		Title of Subcontractor's JSAs reviewed today:	groundwater monitoring
-------------------------------------	--	---	------------------------

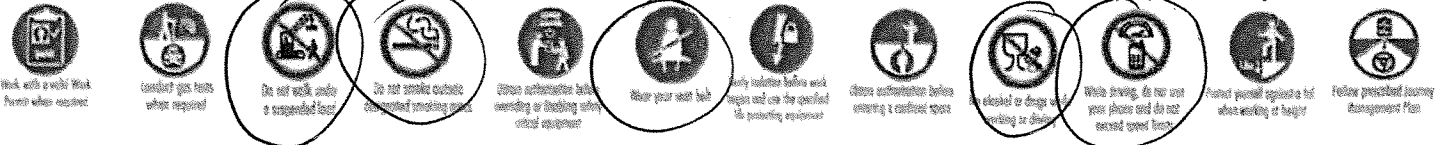
All personnel are wearing (regardless of activity):	<input checked="" type="checkbox"/> Hard Hat <input checked="" type="checkbox"/> Safety Glasses <input checked="" type="checkbox"/> Safety Vest <input checked="" type="checkbox"/> Steel-Toed Boots <input checked="" type="checkbox"/> Gloves (appropriate for task) See JSA for additional task specific PPE requirements.
---	--

Stop Work Authority & Obligation

- * All employees will stop the job any time anyone is concerned or uncertain about safety.
- * All employees will stop the job if anyone identifies a hazard or additional mitigation not recorded on the JSA.
- * All employees will be alerted to any changes in personnel or conditions at the worksite.
- * All employees will stop the job and reassess a task, hazards, and mitigations, and then amend the JSA as needed.

Other Items Discussed Today:

Circle the Life Saving Rule Icons that are applicable to the work/activities that will take place today:





AECOM Equilon SGW (US)
Daily Tailgate Meeting & Job Clearance Form

Issue: January 2, 2011
Revision 11: October 2016
Do NOT pre-populate any field.

SITE WORKERS (including AECOM Contractors and Subcontractors): By signing here, you are stating the following:

- * You understand that compliance with Equilon's Life Saving Rules is mandatory and that failing to follow to them may result in termination.
- * You have been involved in reviewing the JSAs and understand the hazards and control measures associated with each task you are about to perform.
- * You understand the permit to work requirements applicable to the work you are about to perform (if it includes permitted activities).
- * You understand the Equilon Life Saving Rules and are aware that tasks or work that is not risk-assessed shall not be performed.
- * You are aware of your authority and obligation to 'Stop Work'.

I arrived and departed fit for duty:

- * You are physically and mentally fit for duty.
- * You are not under the influence of any type of medication, drugs, or alcohol that could affect your ability to work safely.
- * You are aware of your responsibility to immediately report any illness, injury (regardless of where or when it occurred), or fatigue issue you may have to the AECOM Site Supervisor.
- * You will sign-out uninjured unless you have otherwise informed the AECOM Site Supervisor.

Print Name & Company	Signature	Initials & Sign In Time	Initials & Sign Out Time
William Wong	<i>[Signature]</i>	0735 In & Fit <i>ww</i>	Out & Fit <i>ww</i>
Mark McCollough	<i>[Signature]</i>	0735 In & Fit <i>mm</i>	Out & Fit <i>mm</i>
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit

(Attach additional Site Worker sign-in/out sheets if needed)

PERSONAL SAFETY COMMITMENT (Attach additional Personal Safety Commitment sheets, if needed)

Print Name	"I will personally commit to do the following to positively improve site safety today":
William Wong	CHECK AROUND FOR HAZARDS TO MYSELF AND OTHERS

SITE VISITORS (attach additional Site Visitor sign-in/out sheets if needed)

Print Name	Company Name	Arrival Time	Departure Time	Signature

SITE REPRESENTATIVE Sign In/Out (operating sites only, and signature must be requested. If the operator refuses to sign, note this on the Form)

Sign In: I have discussed this Job Clearance Form with the contractor		Sign Out: I have discussed this Job Clearance Form with the contractor	
Site Representative Name	Site Representative Signature	Site Representative Name	Site Representative Signature
BUSY		BUSY	

TWILIGHT TOOL BOX TALK (Complete the following once field activities for the day have been concluded):

Were there any Incidents, Near Misses, Potential Incidents, or Positive Interventions today?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, provide details:
Were there any 'Stop Work' interventions?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, provide details: <i>ONSITE CONSTRUCTION</i>
Were there any areas for improvement noted?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, provide details:
Is the Site Manager/Owner happy with the way you left the site (including the location of waste drums and/or equipment)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If no, provide details:
I certify that the above information is true and the job site is being left in a safe condition	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	AECOM Site Supervisor Signature:

WELL GAUGING DATA

Project # 170907-UW1 Date 9/7/17 Client AECOM

Site 461 8th St., Oakland, CA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
S-5	0733	4	sheen odor	18.76	0.01		18.77	23.27	↓	spt sock
S-6	1020	4	N			22.72	34.86			
S-24	0840	2	N			24.77	33.03			
S-25	0845	2	N			25.06	32.83			
S-26	0913	2	N			24.55	34.39			

AECOM

SORBENT SOCK EVALUATION FORM

Name: WW, CR	Date: 9-7-17	Project Number: 170907-WW1
Site Address: 461 3th St DALLAND, CA	Well ID: S-5	Weather: CLOUDY

- 1) Time absorbent sock removed from well for inspection: 0715
- 2) Condition of sock:
- a. Length of sock showing product saturation: 24" x 4"
 - b. Length of sock showing dryness: 0"
 - c. Color of sock showing product saturation: DARK GRAY
 - d. Weight of the removed sock: 2.0 lbs / 0.91 kg
 - e. Weight of a new/clean/dry sock: 0.31 lbs / 0.16 kg
 - f. Difference in weight (2d-2e) to 0.01 lb/kg: 1.69 lbs / 0.75 kg
- 3) Picture of sock removed from well taken:
- 4) Sock removed from well deposited in waste drum:
- Is drum labeled? Y N How full is the drum? 1-sock
- 5) After at least 15 minutes of removing the sock from the well, measure to 0.01 feet from the top of the well casing:
- a. Depth of product: 18.76
 - b. Depth to water: 18.77
 - c. Thickness of product (5b-5a): 0.01
- 6) Size and type of sock installed: 1-(2" x 24")
- 7) Comments: New sock was installed in well.

Equilon Enterprises LLC dba Shell Oil Products US (Equilon) Field Data Sheet

BTS #: 170907-ww1	Site: 461 8th St, OAKLAND, CA
Sampler: ww	Date: 9-7-17
Well I.D.: 5-6	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 34.86	Depth to Water (DTW): 22.72
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 25.15	

Purge Method: Bailer	Waterra	Sampling Method: <u>Bailer</u>
Disposable Bailer	Peristaltic	Disposable Bailer
Positive Air Displacement	Extraction Pump	Extraction Port
<u>Electric Submersible</u>	Other _____	Dedicated Tubing
Other: _____		

7.9 (Gals.) X 3 = 23.7 Gals.
 1 Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
1031	67.9	6.27	489	233	7.9	Odor
1033	67.7	6.43	458	56	15.8	"
1035	67.6	6.45	441	75	23.7	"

Did well dewater? Yes No Gallons actually evacuated: 23.7

Sampling Date: 9-7-17 Sampling Time: 1040 Depth to Water: 24.06

Sample I.D.: 5-6 Laboratory: Test America Other _____

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: _____

EB I.D. (if applicable): _____ @ _____ Time Duplicate I.D. (if applicable): _____

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

Equilon Enterprises LLC dba Shell Oil Products US (Equilon) Field Data Sheet

BTS #: 170907-WW1	Site: 461 BTH ST, OAKLAND, CA
Sampler: WW	Date: 9-7-17
Well I.D.: S-24	Well Diameter: (2) 3 4 6 8
Total Well Depth (TD): 33.03	Depth to Water (DTW): 24.77
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 26.42	

Purge Method: Bailer Waterra Sampling Method: Bailer
 Disposable Bailer Peristaltic Disposable Bailer
 Positive Air Displacement Extraction Pump Extraction Port
 Electric Submersible Other _____ Dedicated Tubing
 Other: _____

$\frac{1.3 \text{ (Gals.)} \times 3.0}{1 \text{ Case Volume}} = \frac{3.9 \text{ Gals.}}{\text{Specified Volumes}} = \text{Calculated Volume}$	<table border="1" style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	Gals. Removed	Observations
0852	67.8	6.30	2150	>1000	1.3	dark gray
0855	67.6	6.04	1256	>1000	2.6	"
0858	67.3	6.08	1380	>1000	3.9	"

Did well dewater? Yes No Gallons actually evacuated: 3.9

Sampling Date: 9-7-17 Sampling Time: 0905 Depth to Water: 24.96

Sample I.D.: S-24 Laboratory: Test America Other _____

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: _____

EB I.D. (if applicable): _____ @ _____ Time Duplicate I.D. (if applicable): _____

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

Equilon Enterprises LLC dba Shell Oil Products US (Equilon) Field Data Sheet

BTS #: 170907-ww1	Site: 461 8th ST. OAKLAND, CA
Sampler: ww	Date: 9-7-17
Well I.D.: 5-25	Well Diameter: <input checked="" type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8
Total Well Depth (TD): 32.83	Depth to Water (DTW): 25.06
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="radio"/> PVC <input type="radio"/> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 26.61	

Purge Method: <input checked="" type="radio"/> Bailer <input type="radio"/> Disposable Bailer <input type="radio"/> Positive Air Displacement <input type="radio"/> Electric Submersible	<input type="radio"/> Waterra <input type="radio"/> Peristaltic <input type="radio"/> Extraction Pump <input type="radio"/> Other _____	Sampling Method: <input checked="" type="radio"/> Bailer <input type="radio"/> Disposable Bailer <input type="radio"/> Extraction Port <input type="radio"/> Dedicated Tubing Other: _____
---	--	--

$1.2 \text{ (Gals.)} \times 3 = 3.6 \text{ Gals.}$ I Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	Gals. Removed	Observations
0936	67.0	5.76	1762	>1000	1.2	Brown BROWN
0940	67.3	5.39	1811	>1000	2.4	"
0942	67.2	5.35	1723	>1000	3.6	"

Did well dewater? Yes <input checked="" type="radio"/> No	Gallons actually evacuated: 3.6
Sampling Date: 9-7-17 Sampling Time: 0950	Depth to Water: 25.16
Sample I.D.: 5-25	Laboratory: <input checked="" type="radio"/> Test America Other _____
Analyzed for: <input checked="" type="radio"/> TPH-G <input checked="" type="radio"/> BTEX MTBE TPH-D Oxygenates (5) Other:	
EB I.D. (if applicable): @ _____ Time	Duplicate I.D. (if applicable):
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:	
D.O. (if req'd): Pre-purge: _____ mg/L	Post-purge: _____ mg/L
O.R.P. (if req'd): Pre-purge: _____ mV	Post-purge: _____ mV

Equilon Enterprises LLC dba Shell Oil Products US (Equilon) Field Data Sheet

BTS #: 170907-ww1	Site: 461 8th St, OAKLAND, CA
Sampler: ww	Date: 9-7-17
Well I.D.: S-26	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): 34.39	Depth to Water (DTW): 24.55
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 26.52	

Purge Method: Bailer Waterra Sampling Method: Bailer
 Disposable Bailer Peristaltic Disposable Bailer
 Positive Air Displacement Extraction Pump Extraction Port
 Electric Submersible Other _____ Dedicated Tubing

Other: _____

1.6 (Gals.) X 3 = 4.8 Gals.
 I Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
0917	67.0	6.72	328	>1000	1.6	brown
0920	67.0	6.57	340	>1000	3.2	"
0924	67.1	6.59	306	>1000	4.8	"

Did well dewater? Yes No Gallons actually evacuated: 4.8

Sampling Date: 9-7-17 Sampling Time: 0930 Depth to Water: 24.94

Sample I.D.: S-26 Laboratory: Test America Other _____

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

EB I.D. (if applicable): @ _____ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

NON-HAZARDOUS WASTE DATA FORM

BESI # _____

Generator's Name and Mailing Address
 EQUILON ENTERPRISES, LLC
 C/O AECOM
 300 S. GRAND AVE., 8TH FLOOR
 LOS ANGELES, CA 90071

Generator's Site Address (if different than mailing address)
 EQUILON ENTERPRISES LLC USF04642
 461 8TH STREET
 OAKLAND, CA 94607

Generator's Phone: 213-693-8100

Container type removed from site:
 Drums Vacuum Truck Roll-off Truck Dump Truck
 Other 1-TT

Quantity 40 gals

Container type transported to receiving facility:
 Drums Vacuum Truck Roll-off Truck Dump Truck
 Other _____


Quantity _____ **Volume** _____

WASTE DESCRIPTION NON-HAZARDOUS WATER **GENERATING PROCESS** WELL PURGING / DECON WATER

COMPONENTS OF WASTE			PPM	%	COMPONENTS OF WASTE			PPM	%
1.	<u>WATER</u>			<u>99-100%</u>	3.				
2.	<u>TPH</u>			<u><1%</u>	4.				


Waste Profile _____ **PROPERTIES:** pH 7-10 SOLID LIQUID SLUDGE SLURRY OTHER _____

HANDLING INSTRUCTIONS: _____

Generator Printed/Typed Name William Wong **Signature**  **Month Day Year** 9 | 7 | 17

The Generator certifies that the waste as described is 100% non-hazardous

Transporter 1 Company Name BLAINE TECH SERVICES, INC. **Phone#** 408-573-0555

Transporter 1 Printed/Typed Name William Wong **Signature**  **Month Day Year** 9 | 7 | 17

Transporter Acknowledgment of Receipt of Materials

Transporter 2 Company Name NIETO & SONS TRUCKING, INC. **Phone#** 714-990-8855

Transporter 2 Printed/Typed Name _____ **Signature** _____ **Month Day Year** _____

Transporter Acknowledgment of Receipt of Materials

Designated Facility Name and Site Address
 CROSBY & OVERTON
 1830 W. 17TH STREET
 LONG BEACH, CA 90813

Phone# 562-432-5445

Printed/Typed Name _____ **Signature** _____ **Month Day Year** _____

Designated Facility Owner or Operator: Certification of receipt of materials covered by this data form.

GENERATOR

TRANSPORTER

RECEIVING FACILITY

PRCS ENTRY PERMIT

Permit # 20170907

OSHA 29 CFR 1910.146 – This section contains requirements for practices and procedures to protect employees in general industry from the hazards of entry into permit-required confined spaces. "Acceptable entry conditions" means the conditions that must exist in a permit space to allow entry and to ensure that employees involved with a permit-required confined space entry can safely enter into and work within the space.

- Site Address** 461 8th St, Oakland, CA **Cost Center** _____
- Contractor Company** Blaine Tech Services **Work Order/PO #** 85688001
- Name of authorized Entry Supervisor** William Wong **Phone:** 408-590-0693
- Record the name, time of each entry and egress for the authorized entrant.**

NAME	TIME IN	TIME OUT	NAME	TIME IN	TIME OUT	NAME	TIME IN	TIME OUT
<u>Colin Rowland</u>	<u>0708</u>	<u>0801</u>						

- Name of trained Attendant(s)** William Wong
(Provide at least one attendant outside the permit space into which entry is authorized for the duration of entry operations)
- Identify the permit space to be entered** S-5 Well Vault
- Identify the purpose of the entry** Groundwater Monitor and Sample S-5
- List the communication method used to maintain contact during the entry** Visual / Verbal
- List the hazards of the permit space to be entered** (such as electrical, atmospheric, tripping, chemical, flammable, mechanical, radiation, design defects, omission of protective features, extreme temperature, extreme noise, high pressures, structure strength, falling items, other)
atmosphere, pedestrian traffic, falling items, tripping
- List the measures used to isolate the permit space and to eliminate, or control hazards before entry**
take atmospheric readings in the vault prior to entry, erect exclusion zone, erect usual barrier with "one" exclusion
(Such as lockout/tag out/verification of energy sources, purging of product lines, disconnecting/capping product lines and equipment, inerting, ventilating/flushing, area security, barricades, hot work permit, intrinsically safe tools, other) (No! # 510 number not connecting, call 911)
- Rescue Procedures** Self rescue. If entrant is unable to exit, worker down, partner will for emergency rescue, Oakland FD (510) 444-3322
- The availability of pre-arranged emergency services has been confirmed** YES NO _____
- Rescue services phone number** Prior to entry, call Oakland FD @ 510-444-3322. If emergency rescue required call (510) 444-3322
- The on site means to contact emergency services are operable** YES NO _____
- List additional Safety Equipment to be provided** (such as alarm systems, PPE, breathing apparatus, respirators, rescue equipment, life lines, harness, tripod, other): None
- Electric equipment in use rated as Class I, Div I, Group D and Non-sparking** YES NO _____
- Record any other information necessary, in order to ensure employee safety** Minimize Time In Vault.

The acceptable entry conditions:

(Test conditions in the permit space to determine if acceptable entry conditions exist before entry is authorized to begin. Entry conditions shall be continuously monitored in the areas where authorized entrants are working. Record at least every 30 minutes):

Initial Readings:

<u>20.9</u>	<u>0</u>	<u>0/0</u>
Oxygen (19.5% - 23.5%)	Combustible Gas (<10% LEL)	Toxic Gas - Type and Levels (CO-35PPM:H2S-10PPM/Other)

Authorized Tester Signature [Signature]

Date 9-7-17 **Time** 0708

Continuous (alarmed) atmosphere Monitoring: (Record at least every 30 minutes)	Test	Initials	Time: 0730	Time:	Time:	Time:	Time:
	Oxygen	<u>[Signature]</u>	Value: <u>20.9</u>	Value:	Value:	Value:	Value:
	LEL	<u>[Signature]</u>	Value: <u>0</u>	Value:	Value:	Value:	Value:
	CO	<u>[Signature]</u>	Value: <u>0</u>	Value:	Value:	Value:	Value:
	H2S	<u>[Signature]</u>	Value: <u>0</u>	Value:	Value:	Value:	Value:
	Other <u>CO2</u>	<u>[Signature]</u>	Value: <u>0.1</u>	Value:	Value:	Value:	Value:

Gas Tester Make/Model: MULTIRKE Plus Instrument Serial Number: 025-108506 Calibration Date: 9-7-17

PERMIT VALIDATION

This Permit is valid from 630 am/pm TO 1130 am/pm on 9/7/17 (Note: Permit must not exceed 1 day)

I ensure this permit has been filled out completely and in accordance with all applicable OSHA requirements to provide a safe workplace. I will take action to control hazardous conditions associated with this work.

Permit Acceptance (print name): William Wong Permit Authorization (Print Name): Carmen Goodell
 Permit Holder Signature: [Signature] Permit Issuer Signature: [Signature]
 Date: 9-7-17 Time: 0640 Date: 9/7/17 Time: 0640

PERMIT CLOSE OUT

All work has been completed in accordance with this Permit and the site has been left in a safe and satisfactory condition.

Permit Holder Signature: William Wong Permit Issuer Signature: [Signature]
 Date: 9-7-17 Time: 0801 Date: 9/7/17 Time: 0801



AECOM Shell SGW (US)
Daily Tailgate Meeting & Job Clearance Form

Issue: 1/2/2011
 Revision 11: October 2016
 Do NOT pre-populate any field.

Job Location:	468 8th St, OAKLAND, CA	Date:	9-7-17
AECOM Site Supervisor:		AECOM PM:	

List activities to be performed today:	groundwater monitoring		
Permitted Activities (specific permit to be competed):	<input type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Confined Space Entry	<input type="checkbox"/> Excavation/Trenching
	<input type="checkbox"/> Hoisting/Rigging	<input type="checkbox"/> (any lifting with equipment, excluding drill rigs)	<input type="checkbox"/> Natural Gas System Maintenance

The above Permit-required activities require onsite AECOM supervision unless approved by Regional Operations.

Muster Point:	STARBUCKS / OPO	Spill Kit Location:	TRUCK
First Aid Kit Location:	TRUCK	Fire Extinguisher Location:	TRUCK
Emergency cut-off switches:	NA	Designated cell phone use area(s):	OFFSITE

Has the Site Manager/Owner been notified of the work activities and/or participated in a pre-work sitewalk?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Is a fuel delivery scheduled for today? If yes, plan to Stop Work during fuel delivery.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Has a site walk been performed to identify additional hazards?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No*	
Have all personnel reviewed and understand the site specific HASP?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No*	
Does each activity have a Job Safety Analysis (JSA)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No*	
Does each subcontractor have JSAs for their activities?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No*	<input type="checkbox"/> N/A
Have JSAs been reviewed by the work team and newly identified hazards been added to the JSA?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No*	
Per our lone worker procedure, is each employee either accompanied by or in communications with another?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No*	<input type="checkbox"/> N/A
Has a Safe Lift Plan been completed and reviewed/approved by an AECOM Subject Matter Expert?	<input type="checkbox"/> Yes	<input type="checkbox"/> No*	<input checked="" type="checkbox"/> N/A
Have all members of the work team confirmed understanding of the work, hazards, and controls/ mitigation?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No*	
Has each person on the work team discussed all hazards and mitigation measures associated with any task which will require their feet to leave the ground?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No*	<input type="checkbox"/> N/A
Have work areas been properly cordoned-off to protect workers, site staff, and the public?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No*	<input type="checkbox"/> N/A
Have equipment checks been completed, documented, and reviewed?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No*	<input type="checkbox"/> N/A
Have there been any equipment modifications made by subcontractor(s)? If yes, discuss modifications.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Do all members of the work team have API Safety Keys (AECOM excluded)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No*	<input type="checkbox"/> N/A
Do all members of the work team have a Shell "Life Saving Rules" Training card?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No*	
Do all site workers understand injury/ intervention reporting requirements including immediately notifying the AECOM Site Supervisor of any injury, near miss, unsafe condition, hazard observation, or release?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No*	
If permits are required, have they been reviewed and permit conditions understood by the Team?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No*	<input type="checkbox"/> N/A
If drilling, did driller physically point out all pinch points to entire team (AECOM and all subs)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No*	<input checked="" type="checkbox"/> N/A
If drilling, has the driller & crew agreed the audible and visible signals for "all clear" prior to engaging controls?	<input type="checkbox"/> Yes	<input type="checkbox"/> No*	<input checked="" type="checkbox"/> N/A

* If No, then work cannot be performed until corrective action is completed and documented.

Title of AECOM JSAs reviewed today:		Title of Subcontractor's JSAs reviewed today:	GROUND WATER MONITORING / CONFINED SPACE
-------------------------------------	--	---	--

All personnel are wearing (regardless of activity):	<input checked="" type="checkbox"/> Hard Hat	<input type="checkbox"/> Safety Glasses	<input checked="" type="checkbox"/> Safety Vest	<input checked="" type="checkbox"/> Steel-Toed Boots	<input checked="" type="checkbox"/> Gloves (appropriate for task)
---	--	---	---	--	---

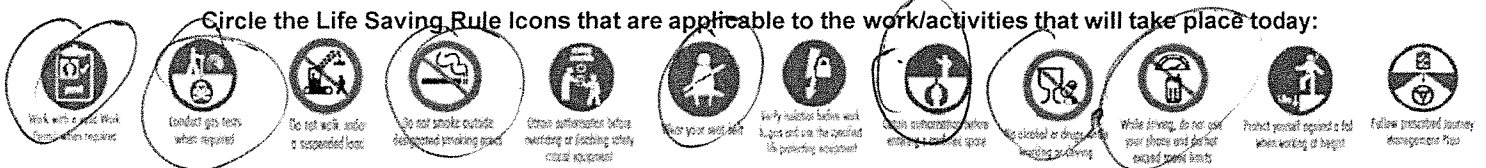
See JSA for additional task specific PPE requirements.

Stop Work Authority & Obligation

- * All employees will stop the job any time anyone is concerned or uncertain about safety.
- * All employees will stop the job if anyone identifies a hazard or additional mitigation not recorded on the JSA.
- * All employees will be alerted to any changes in personnel or conditions at the worksite.
- * All employees will stop the job and reassess a task, hazards, and mitigations, and then amend the JSA as needed.

Other Items Discussed Today:

Circle the Life Saving Rule Icons that are applicable to the work/activities that will take place today:





AECOM Shell SGW (US)
Daily Tailgate Meeting & Job Clearance Form

Issue: January 2, 2011
Revision 11: October 2016
Do NOT pre-populate any field.

SITE WORKERS (including AECOM Contractors and Subcontractors): By signing here, you are stating the following:

- * You understand that compliance with Shell's Life Saving Rules is mandatory and that failing to follow to them may result in termination.
- * You have been involved in reviewing the JSAs and understand the hazards and control measures associated with each task you are about to perform.
- * You understand the permit to work requirements applicable to the work you are about to perform (if it includes permitted activities)
- * You understand the Shell Life Saving Rules and are aware that tasks or work that is not risk-assessed shall not be performed.
- * You are aware of your authority and obligation to 'Stop Work'.

I arrived and departed fit for duty:

- * You are physically and mentally fit for duty.
- * You are not under the influence of any type of medication, drugs, or alcohol that could affect your ability to work safely.
- * You are aware of your responsibility to immediately report any illness, injury (regardless of where or when it occurred), or fatigue issue you may have to the AECOM Site Supervisor.
- * You will sign-out uninjured unless you have otherwise informed the AECOM Site Supervisor.

Print Name & Company	Signature	Initials & Sign In Time	Initials & Sign Out Time
Colin Rowland BTS	<i>Colin Rowland</i>	CR In & Fit 0640	Out & Fit
William Worb / BTS	<i>William Worb</i>	WW In & Fit 0640	Out & Fit
Frank Torres / Belshire	<i>Frank Torres</i>	FT In & Fit	Out & Fit
Carmen Goodell	<i>Carmen Goodell</i>	CG In & Fit	Out & Fit
		In & Fit	Out & Fit

(Attach additional Site Worker sign-in/out sheets if needed)

PERSONAL SAFETY COMMITMENT (Attach additional Personal Safety Commitment sheets, if needed)

Print Name	"I will personally commit to do the following to positively improve site safety today":
Colin Rowland	Always wear proper PPE
William Worb	SETUP CONES AND FLASHERS
Frank Torres	watch traffic
Carmen Goodell	Watch for pedestrian traffic

SITE VISITORS (attach additional Site Visitor sign-in/out sheets if needed)

Print Name	Company Name	Arrival Time	Departure Time	Signature
Carmen Goodell	AECOM	6:25		<i>Carmen Goodell</i>

SITE REPRESENTATIVE Sign In/Out (operating sites only, and signature must be requested. If the operator refuses to sign, note this on the Form)

Sign In: I have discussed this Job Clearance Form with the contractor		Sign Out: I have discussed this Job Clearance Form with the contractor	
Site Representative Name	Site Representative Signature	Site Representative Name	Site Representative Signature

TWILIGHT TOOL BOX TALK (Complete the following once field activities for the day have been concluded):

Were there any Incidents, Near Misses, Potential Incidents, or Positive Interventions today?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, provide details:
Were there any 'Stop Work' interventions?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, provide details:
Were there any areas for improvement noted?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, provide details:
Is the Site Manager/Owner happy with the way you left the site (including the location of waste drums and/or equipment)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If no, provide details:
I certify that the above information is true and the job site is being left in a safe condition	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	AECOM Site Supervisor Signature:

Appendix B

Analytical Report (TestAmerica Laboratories, Inc.)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-184879-1

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

For:

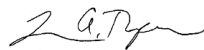
AECOM Technical Services Inc.

300 Lakeside Drive

Suite 400

Oakland, California 94612

Attn: Shane Olton



Authorized for release by:

5/24/2017 9:55:36 AM

Laura Turpen, Project Manager I

(916)374-4414

laura.turpen@testamericainc.com

LINKS

Review your project
results through

TotalAccess

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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Sample Summary

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

TestAmerica Job ID: 440-184879-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-184879-1	S-4	Ground Water	05/19/17 09:35	05/20/17 10:40
440-184879-2	S-24	Water	05/19/17 08:40	05/20/17 10:40
440-184879-3	S-25	Water	05/19/17 08:35	05/20/17 10:40

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Case Narrative

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

TestAmerica Job ID: 440-184879-1

Job ID: 440-184879-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-184879-1

Comments

No additional comments.

Receipt

The samples were received on 5/20/2017 10:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.2° C.

GC/MS VOA

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

VOA Prep

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

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Client Sample Results

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

TestAmerica Job ID: 440-184879-1

Client Sample ID: S-4

Date Collected: 05/19/17 09:35

Date Received: 05/20/17 10:40

Lab Sample ID: 440-184879-1

Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	ND		50		ug/L			05/23/17 14:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	107		76 - 132					05/23/17 14:55	1
4-Bromofluorobenzene (Surr)	104		80 - 120					05/23/17 14:55	1
Toluene-d8 (Surr)	111		80 - 128					05/23/17 14:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			05/23/17 14:55	1
Ethylbenzene	ND		0.50		ug/L			05/23/17 14:55	1
m,p-Xylene	ND		1.0		ug/L			05/23/17 14:55	1
o-Xylene	ND		0.50		ug/L			05/23/17 14:55	1
Toluene	ND		0.50		ug/L			05/23/17 14:55	1
Xylenes, Total	ND		1.0		ug/L			05/23/17 14:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		80 - 120					05/23/17 14:55	1
Dibromofluoromethane (Surr)	107		76 - 132					05/23/17 14:55	1
Toluene-d8 (Surr)	111		80 - 128					05/23/17 14:55	1

Client Sample ID: S-24

Date Collected: 05/19/17 08:40

Date Received: 05/20/17 10:40

Lab Sample ID: 440-184879-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	4900		500		ug/L			05/23/17 14:00	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	106		76 - 132					05/23/17 14:00	10
4-Bromofluorobenzene (Surr)	103		80 - 120					05/23/17 14:00	10
Toluene-d8 (Surr)	111		80 - 128					05/23/17 14:00	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	450		5.0		ug/L			05/23/17 14:00	10
Ethylbenzene	94		5.0		ug/L			05/23/17 14:00	10
m,p-Xylene	280		10		ug/L			05/23/17 14:00	10
o-Xylene	68		5.0		ug/L			05/23/17 14:00	10
Toluene	140		5.0		ug/L			05/23/17 14:00	10
Xylenes, Total	350		10		ug/L			05/23/17 14:00	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		80 - 120					05/23/17 14:00	10
Dibromofluoromethane (Surr)	106		76 - 132					05/23/17 14:00	10
Toluene-d8 (Surr)	111		80 - 128					05/23/17 14:00	10

TestAmerica Irvine

Client Sample Results

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

TestAmerica Job ID: 440-184879-1

Client Sample ID: S-25

Lab Sample ID: 440-184879-3

Date Collected: 05/19/17 08:35

Matrix: Water

Date Received: 05/20/17 10:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	1400		500		ug/L			05/23/17 14:28	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Dibromofluoromethane (Surr)</i>	108		76 - 132					05/23/17 14:28	10
<i>4-Bromofluorobenzene (Surr)</i>	103		80 - 120					05/23/17 14:28	10
<i>Toluene-d8 (Surr)</i>	111		80 - 128					05/23/17 14:28	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	280		5.0		ug/L			05/23/17 14:28	10
Ethylbenzene	47		5.0		ug/L			05/23/17 14:28	10
m,p-Xylene	100		10		ug/L			05/23/17 14:28	10
o-Xylene	22		5.0		ug/L			05/23/17 14:28	10
Toluene	42		5.0		ug/L			05/23/17 14:28	10
Xylenes, Total	120		10		ug/L			05/23/17 14:28	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>4-Bromofluorobenzene (Surr)</i>	103		80 - 120					05/23/17 14:28	10
<i>Dibromofluoromethane (Surr)</i>	108		76 - 132					05/23/17 14:28	10
<i>Toluene-d8 (Surr)</i>	111		80 - 128					05/23/17 14:28	10

Method Summary

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

TestAmerica Job ID: 440-184879-1

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

Protocol References:

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

Laboratory References:

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



Lab Chronicle

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

TestAmerica Job ID: 440-184879-1

Client Sample ID: S-4

Date Collected: 05/19/17 09:35

Date Received: 05/20/17 10:40

Lab Sample ID: 440-184879-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	407661	05/23/17 14:55	TCN	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTV S		1	10 mL	10 mL	407662	05/23/17 14:55	TCN	TAL IRV

Client Sample ID: S-24

Date Collected: 05/19/17 08:40

Date Received: 05/20/17 10:40

Lab Sample ID: 440-184879-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	10 mL	10 mL	407661	05/23/17 14:00	TCN	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTV S		10	10 mL	10 mL	407662	05/23/17 14:00	TCN	TAL IRV

Client Sample ID: S-25

Date Collected: 05/19/17 08:35

Date Received: 05/20/17 10:40

Lab Sample ID: 440-184879-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	10 mL	10 mL	407661	05/23/17 14:28	TCN	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTV S		10	10 mL	10 mL	407662	05/23/17 14:28	TCN	TAL IRV

Laboratory References:

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

QC Sample Results

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

TestAmerica Job ID: 440-184879-1

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

Lab Sample ID: MB 440-407661/4

Matrix: Water

Analysis Batch: 407661

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			05/23/17 08:11	1
Ethylbenzene	ND		0.50		ug/L			05/23/17 08:11	1
m,p-Xylene	ND		1.0		ug/L			05/23/17 08:11	1
o-Xylene	ND		0.50		ug/L			05/23/17 08:11	1
Toluene	ND		0.50		ug/L			05/23/17 08:11	1
Xylenes, Total	ND		1.0		ug/L			05/23/17 08:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		80 - 120		05/23/17 08:11	1
Dibromofluoromethane (Surr)	105		76 - 132		05/23/17 08:11	1
Toluene-d8 (Surr)	113		80 - 128		05/23/17 08:11	1

Lab Sample ID: LCS 440-407661/5

Matrix: Water

Analysis Batch: 407661

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	25.6		ug/L		103	68 - 130
Ethylbenzene	25.0	26.4		ug/L		106	70 - 130
m,p-Xylene	25.0	27.2		ug/L		109	70 - 130
o-Xylene	25.0	27.5		ug/L		110	70 - 130
Toluene	25.0	26.0		ug/L		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	106		76 - 132
Toluene-d8 (Surr)	107		80 - 128

Lab Sample ID: 440-184853-C-10 MS

Matrix: Water

Analysis Batch: 407661

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		25.0	27.2		ug/L		109	66 - 130
Ethylbenzene	ND		25.0	28.0		ug/L		112	70 - 130
m,p-Xylene	ND		25.0	28.9		ug/L		115	70 - 133
o-Xylene	ND		25.0	28.7		ug/L		115	70 - 133
Toluene	ND		25.0	27.6		ug/L		110	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	105		76 - 132
Toluene-d8 (Surr)	106		80 - 128

TestAmerica Irvine

QC Sample Results

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

TestAmerica Job ID: 440-184879-1

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

Lab Sample ID: 440-184853-C-10 MSD
Matrix: Water
Analysis Batch: 407661

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		25.0	25.0		ug/L		100	66 - 130	8	20
Ethylbenzene	ND		25.0	25.9		ug/L		104	70 - 130	8	20
m,p-Xylene	ND		25.0	26.6		ug/L		106	70 - 133	8	25
o-Xylene	ND		25.0	26.6		ug/L		106	70 - 133	8	20
Toluene	ND		25.0	25.4		ug/L		102	70 - 130	8	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	105		76 - 132
Toluene-d8 (Surr)	107		80 - 128

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

Lab Sample ID: MB 440-407662/4
Matrix: Water
Analysis Batch: 407662

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	ND		50		ug/L			05/23/17 08:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	105		76 - 132		05/23/17 08:11	1
4-Bromofluorobenzene (Surr)	103		80 - 120		05/23/17 08:11	1
Toluene-d8 (Surr)	113		80 - 128		05/23/17 08:11	1

Lab Sample ID: LCS 440-407662/6
Matrix: Water
Analysis Batch: 407662

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Volatile Fuel Hydrocarbons (C4-C12)	500	468		ug/L		94	55 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	104		76 - 132
4-Bromofluorobenzene (Surr)	105		80 - 120
Toluene-d8 (Surr)	113		80 - 128

Lab Sample ID: 440-184853-C-10 MS
Matrix: Water
Analysis Batch: 407662

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Volatile Fuel Hydrocarbons (C4-C12)	ND		1730	1600		ug/L		93	50 - 145

TestAmerica Irvine

QC Sample Results

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

TestAmerica Job ID: 440-184879-1

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

Lab Sample ID: 440-184853-C-10 MS
Matrix: Water
Analysis Batch: 407662

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

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	105		76 - 132
4-Bromofluorobenzene (Surr)	104		80 - 120
Toluene-d8 (Surr)	106		80 - 128

Lab Sample ID: 440-184853-C-10 MSD
Matrix: Water
Analysis Batch: 407662

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
				Result	Qualifier				Limits		Limit
Volatile Fuel Hydrocarbons (C4-C12)	ND		1730	1450		ug/L		84	50 - 145	10	20

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	105		76 - 132
4-Bromofluorobenzene (Surr)	104		80 - 120
Toluene-d8 (Surr)	107		80 - 128

QC Association Summary

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

TestAmerica Job ID: 440-184879-1

GC/MS VOA

Analysis Batch: 407661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-184879-1	S-4	Total/NA	Ground Water	8260B	
440-184879-2	S-24	Total/NA	Water	8260B	
440-184879-3	S-25	Total/NA	Water	8260B	
MB 440-407661/4	Method Blank	Total/NA	Water	8260B	
LCS 440-407661/5	Lab Control Sample	Total/NA	Water	8260B	
440-184853-C-10 MS	Matrix Spike	Total/NA	Water	8260B	
440-184853-C-10 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 407662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-184879-1	S-4	Total/NA	Ground Water	8260B/CA_LUFT MS	
440-184879-2	S-24	Total/NA	Water	8260B/CA_LUFT MS	
440-184879-3	S-25	Total/NA	Water	8260B/CA_LUFT MS	
MB 440-407662/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	
LCS 440-407662/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
440-184853-C-10 MS	Matrix Spike	Total/NA	Water	8260B/CA_LUFT MS	
440-184853-C-10 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B/CA_LUFT MS	

Definitions/Glossary

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

TestAmerica Job ID: 440-184879-1

Glossary

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

Accreditation/Certification Summary

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

TestAmerica Job ID: 440-184879-1

Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-17
Arizona	State Program	9	AZ0671	10-14-17
California	LA Cty Sanitation Districts	9	10256	06-30-18
California	State Program	9	CA ELAP 2706	06-30-18
Guam	State Program	9	Cert. No. 17-003R	01-23-18
Hawaii	State Program	9	N/A	01-29-18
Kansas	NELAP Secondary AB	7	E-10420	07-31-17
Nevada	State Program	9	CA015312017-1	07-31-17
New Mexico	State Program	6	N/A	01-29-17 *
Northern Mariana Islands	State Program	9	MP0002	01-29-17 *
Oregon	NELAP	10	4028	01-29-18
USDA	Federal		P330-15-00184	07-08-18
Washington	State Program	10	C900	09-03-17

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Irvine



LAB (LOCATION)

ACCUTEST ()
 ALS SCIENCE ()
 ESTAMERICA ()
 Other ()

Please Check Appropriate Box:
 BGM FDG
 CHEMICALS
 TRANSPORTATION
 PIPELINE
 CONSULTANT
 OTHER

Print Bill To Contact Name: Shane Oilton
 PO # 27481
 GSAP Project ID
 85688
 USPC/00226 USR701259

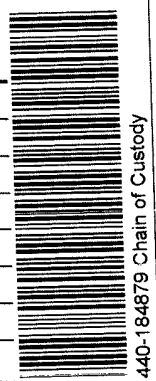
PlanNet Site of Project ID
 DATE: 5-19-17
 PAGE: 1 of 1

SAMPLING COMPANY: Blaine Tech Services, Inc.
 ADDRESS: 1680 Rogers Ave., San Jose, CA, 95112
 PROJECT CONTACT (Handcopy or PDF Reports): Bart Gebbie
 TELEPHONE: 310-985-4455 Ext. 103 FAX: 310-637-5802
 BTSS
 shane.oilton@aecom.com
 BTSS
 461 8th St., Oakland
 REP. DELIVERABLE TO (Name, Company, Office Location)
 Joshua Fox, AECOM, Oakland, CA
 PHONE NO: 510-893-3600
 EMAIL: joshua.fox@aecom.com
 AECOM Project / Task Number: 60528873
 AECOM Other ID: USF04642

TURNAROUND TIME (CALENDAR DAYS):
 STANDARD (14 DAY) 3 DAYS 4 HOURS RESULTS NEEDED ON WEEKEND
 LA - RWQCB REPORT FORMAT JUST AGENCY:
 LEVEL 1 LEVEL 2 LEVEL 3 LEVEL 4 OTHER (SPECIFY) _____
 DELIVERABLES: COOLER #1 COOLER #2 COOLER #3
 TEMPERATURE ON RECEIPT: C°

SPECIAL INSTRUCTIONS OR NOTES:
 SHELL CONTRACT RATE APPLIES
 STATE REIMBURSEMENT RATE APPLIES
 EDD NOT NEEDED
 RECEIPT VERIFICATION REQUESTED
 PROVIDE LEDD DISK
 Email invoice to: USAPImaging@aecom.com

LAB USE ONLY	Field Sample Identification		MATRIX	PRESERVATIVE				NO. OF CONT.
	DATE	TIME		ACL	H2O3	H2SO4	NONE	
S-4	5-19-17	09:55	W	X				3
S-24	↓	08:00	↓	X				3
S-25	↓	08:55	↓	X				3



Received by (Signature)	Date:	Time:
	5-19-17	1800
	5/20/17	1040

SHIPPED VIA FED-EX

3.9 | 4.2 - 85

779190242750

Vs 5/20

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- 11
- 12
- 13

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 440-184879-1

Login Number: 184879

List Number: 1

Creator: Garcia, Veronica G

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-191828-1

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

For:

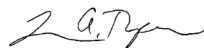
AECOM Technical Services Inc.

300 Lakeside Drive

Suite 400

Oakland, California 94612

Attn: Shane Olton



Authorized for release by:

9/20/2017 1:37:31 PM

Laura Turpen, Project Manager I

(916)374-4414

laura.turpen@testamericainc.com

LINKS

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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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Sample Summary

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

TestAmerica Job ID: 440-191828-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-191828-1	S-5	Ground Water	09/07/17 07:55	09/09/17 10:30
440-191828-2	S-6	Ground Water	09/07/17 10:40	09/09/17 10:30
440-191828-3	S-24	Water	09/07/17 09:05	09/09/17 10:30
440-191828-4	S-25	Water	09/07/17 09:50	09/09/17 10:30
440-191828-5	S-26	Water	09/07/17 09:30	09/09/17 10:30

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Case Narrative

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

TestAmerica Job ID: 440-191828-1

Job ID: 440-191828-1

Laboratory: TestAmerica Irvine

Narrative

**Job Narrative
440-191828-1**

Comments

No additional comments.

Receipt

The samples were received on 9/9/2017 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.1° C.

GC/MS VOA

Method(s) 8260B: The following samples were diluted due to the abundance of non-target analytes: S-24 (440-191828-3) and S-25 (440-191828-4). Elevated reporting limits (RLs) are provided.

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

VOA Prep

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



Client Sample Results

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

TestAmerica Job ID: 440-191828-1

Client Sample ID: S-5

Date Collected: 09/07/17 07:55

Date Received: 09/09/17 10:30

Lab Sample ID: 440-191828-1

Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	40000		2500		ug/L			09/13/17 17:01	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	109		76 - 132					09/13/17 17:01	50
4-Bromofluorobenzene (Surr)	88		80 - 120					09/13/17 17:01	50
Toluene-d8 (Surr)	102		80 - 128					09/13/17 17:01	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	460		25		ug/L			09/13/17 17:01	50
Ethylbenzene	980		25		ug/L			09/13/17 17:01	50
m,p-Xylene	2300		50		ug/L			09/13/17 17:01	50
o-Xylene	630		25		ug/L			09/13/17 17:01	50
Toluene	350		25		ug/L			09/13/17 17:01	50
Xylenes, Total	2900		50		ug/L			09/13/17 17:01	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		80 - 120					09/13/17 17:01	50
Dibromofluoromethane (Surr)	109		76 - 132					09/13/17 17:01	50
Toluene-d8 (Surr)	102		80 - 128					09/13/17 17:01	50

Client Sample ID: S-6

Date Collected: 09/07/17 10:40

Date Received: 09/09/17 10:30

Lab Sample ID: 440-191828-2

Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	2400		1300		ug/L			09/13/17 17:29	25
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	110		76 - 132					09/13/17 17:29	25
4-Bromofluorobenzene (Surr)	95		80 - 120					09/13/17 17:29	25
Toluene-d8 (Surr)	100		80 - 128					09/13/17 17:29	25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	910		13		ug/L			09/13/17 17:29	25
Ethylbenzene	65		13		ug/L			09/13/17 17:29	25
m,p-Xylene	85		25		ug/L			09/13/17 17:29	25
o-Xylene	ND		13		ug/L			09/13/17 17:29	25
Toluene	48		13		ug/L			09/13/17 17:29	25
Xylenes, Total	85		25		ug/L			09/13/17 17:29	25
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		80 - 120					09/13/17 17:29	25
Dibromofluoromethane (Surr)	110		76 - 132					09/13/17 17:29	25
Toluene-d8 (Surr)	100		80 - 128					09/13/17 17:29	25

TestAmerica Irvine

Client Sample Results

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

TestAmerica Job ID: 440-191828-1

Client Sample ID: S-24

Lab Sample ID: 440-191828-3

Date Collected: 09/07/17 09:05

Matrix: Water

Date Received: 09/09/17 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	1700		500		ug/L			09/13/17 22:23	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	110		76 - 132					09/13/17 22:23	10
4-Bromofluorobenzene (Surr)	97		80 - 120					09/13/17 22:23	10
Toluene-d8 (Surr)	100		80 - 128					09/13/17 22:23	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	130		5.0		ug/L			09/13/17 22:23	10
Ethylbenzene	61		5.0		ug/L			09/13/17 22:23	10
m,p-Xylene	72		10		ug/L			09/13/17 22:23	10
o-Xylene	17		5.0		ug/L			09/13/17 22:23	10
Toluene	53		5.0		ug/L			09/13/17 22:23	10
Xylenes, Total	89		10		ug/L			09/13/17 22:23	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		80 - 120					09/13/17 22:23	10
Dibromofluoromethane (Surr)	110		76 - 132					09/13/17 22:23	10
Toluene-d8 (Surr)	100		80 - 128					09/13/17 22:23	10

Client Sample ID: S-25

Lab Sample ID: 440-191828-4

Date Collected: 09/07/17 09:50

Matrix: Water

Date Received: 09/09/17 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	1200		500		ug/L			09/13/17 22:52	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	112		76 - 132					09/13/17 22:52	10
4-Bromofluorobenzene (Surr)	97		80 - 120					09/13/17 22:52	10
Toluene-d8 (Surr)	101		80 - 128					09/13/17 22:52	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	150		5.0		ug/L			09/13/17 22:52	10
Ethylbenzene	36		5.0		ug/L			09/13/17 22:52	10
m,p-Xylene	51		10		ug/L			09/13/17 22:52	10
o-Xylene	13		5.0		ug/L			09/13/17 22:52	10
Toluene	32		5.0		ug/L			09/13/17 22:52	10
Xylenes, Total	64		10		ug/L			09/13/17 22:52	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		80 - 120					09/13/17 22:52	10
Dibromofluoromethane (Surr)	112		76 - 132					09/13/17 22:52	10
Toluene-d8 (Surr)	101		80 - 128					09/13/17 22:52	10

TestAmerica Irvine

Client Sample Results

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

TestAmerica Job ID: 440-191828-1

Client Sample ID: S-26

Lab Sample ID: 440-191828-5

Date Collected: 09/07/17 09:30

Matrix: Water

Date Received: 09/09/17 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	170		50		ug/L			09/14/17 09:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Dibromofluoromethane (Surr)</i>	102		76 - 132					09/14/17 09:49	1
<i>4-Bromofluorobenzene (Surr)</i>	94		80 - 120					09/14/17 09:49	1
<i>Toluene-d8 (Surr)</i>	101		80 - 128					09/14/17 09:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	17		0.50		ug/L			09/14/17 09:49	1
Ethylbenzene	2.5		0.50		ug/L			09/14/17 09:49	1
m,p-Xylene	3.1		1.0		ug/L			09/14/17 09:49	1
<i>o-Xylene</i>	ND		0.50		ug/L			09/14/17 09:49	1
Toluene	0.62		0.50		ug/L			09/14/17 09:49	1
Xylenes, Total	3.1		1.0		ug/L			09/14/17 09:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>4-Bromofluorobenzene (Surr)</i>	94		80 - 120					09/14/17 09:49	1
<i>Dibromofluoromethane (Surr)</i>	102		76 - 132					09/14/17 09:49	1
<i>Toluene-d8 (Surr)</i>	101		80 - 128					09/14/17 09:49	1

Method Summary

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

TestAmerica Job ID: 440-191828-1

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

Protocol References:

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

Laboratory References:

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



Lab Chronicle

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

TestAmerica Job ID: 440-191828-1

Client Sample ID: S-5

Date Collected: 09/07/17 07:55

Date Received: 09/09/17 10:30

Lab Sample ID: 440-191828-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		50	10 mL	10 mL	428598	09/13/17 17:01	L1B	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTV S		50	10 mL	10 mL	428599	09/13/17 17:01	L1B	TAL IRV

Client Sample ID: S-6

Date Collected: 09/07/17 10:40

Date Received: 09/09/17 10:30

Lab Sample ID: 440-191828-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		25	10 mL	10 mL	428598	09/13/17 17:29	L1B	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTV S		25	10 mL	10 mL	428599	09/13/17 17:29	L1B	TAL IRV

Client Sample ID: S-24

Date Collected: 09/07/17 09:05

Date Received: 09/09/17 10:30

Lab Sample ID: 440-191828-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	10 mL	10 mL	428774	09/13/17 22:23	OH1	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTV S		10	10 mL	10 mL	428775	09/13/17 22:23	OH1	TAL IRV

Client Sample ID: S-25

Date Collected: 09/07/17 09:50

Date Received: 09/09/17 10:30

Lab Sample ID: 440-191828-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	10 mL	10 mL	428774	09/13/17 22:52	OH1	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTV S		10	10 mL	10 mL	428775	09/13/17 22:52	OH1	TAL IRV

Client Sample ID: S-26

Date Collected: 09/07/17 09:30

Date Received: 09/09/17 10:30

Lab Sample ID: 440-191828-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	428847	09/14/17 09:49	AA	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTV S		1	10 mL	10 mL	428848	09/14/17 09:49	TCN	TAL IRV

Laboratory References:

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

TestAmerica Irvine

QC Sample Results

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

TestAmerica Job ID: 440-191828-1

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

Lab Sample ID: MB 440-428598/4
Matrix: Water
Analysis Batch: 428598

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/13/17 08:31	1
Ethylbenzene	ND		0.50		ug/L			09/13/17 08:31	1
m,p-Xylene	ND		1.0		ug/L			09/13/17 08:31	1
o-Xylene	ND		0.50		ug/L			09/13/17 08:31	1
Toluene	ND		0.50		ug/L			09/13/17 08:31	1
Xylenes, Total	ND		1.0		ug/L			09/13/17 08:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		80 - 120		09/13/17 08:31	1
Dibromofluoromethane (Surr)	109		76 - 132		09/13/17 08:31	1
Toluene-d8 (Surr)	99		80 - 128		09/13/17 08:31	1

Lab Sample ID: LCS 440-428598/5
Matrix: Water
Analysis Batch: 428598

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	23.8		ug/L		95	68 - 130
Ethylbenzene	25.0	23.2		ug/L		93	70 - 130
m,p-Xylene	25.0	24.1		ug/L		96	70 - 130
o-Xylene	25.0	24.8		ug/L		99	70 - 130
Toluene	25.0	23.3		ug/L		93	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	88		80 - 120
Dibromofluoromethane (Surr)	104		76 - 132
Toluene-d8 (Surr)	95		80 - 128

Lab Sample ID: 440-191745-A-3 MS
Matrix: Water
Analysis Batch: 428598

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		25.0	23.4		ug/L		94	66 - 130
Ethylbenzene	ND		25.0	22.7		ug/L		91	70 - 130
m,p-Xylene	ND		25.0	23.5		ug/L		94	70 - 133
o-Xylene	ND		25.0	24.9		ug/L		100	70 - 133
Toluene	ND		25.0	22.6		ug/L		90	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	87		80 - 120
Dibromofluoromethane (Surr)	106		76 - 132
Toluene-d8 (Surr)	95		80 - 128

QC Sample Results

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

TestAmerica Job ID: 440-191828-1

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

Lab Sample ID: 440-191745-A-3 MSD

Matrix: Water

Analysis Batch: 428598

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		25.0	24.6		ug/L		99	66 - 130	5	20
Ethylbenzene	ND		25.0	23.7		ug/L		95	70 - 130	4	20
m,p-Xylene	ND		25.0	24.8		ug/L		99	70 - 133	6	25
o-Xylene	ND		25.0	25.3		ug/L		101	70 - 133	2	20
Toluene	ND		25.0	23.5		ug/L		94	70 - 130	4	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	91		80 - 120
Dibromofluoromethane (Surr)	107		76 - 132
Toluene-d8 (Surr)	94		80 - 128

Lab Sample ID: MB 440-428774/4

Matrix: Water

Analysis Batch: 428774

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/13/17 19:33	1
Ethylbenzene	ND		0.50		ug/L			09/13/17 19:33	1
m,p-Xylene	ND		1.0		ug/L			09/13/17 19:33	1
o-Xylene	ND		0.50		ug/L			09/13/17 19:33	1
Toluene	ND		0.50		ug/L			09/13/17 19:33	1
Xylenes, Total	ND		1.0		ug/L			09/13/17 19:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		80 - 120		09/13/17 19:33	1
Dibromofluoromethane (Surr)	103		76 - 132		09/13/17 19:33	1
Toluene-d8 (Surr)	101		80 - 128		09/13/17 19:33	1

Lab Sample ID: LCS 440-428774/5

Matrix: Water

Analysis Batch: 428774

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	23.8		ug/L		95	68 - 130
Ethylbenzene	25.0	22.9		ug/L		92	70 - 130
m,p-Xylene	25.0	24.1		ug/L		96	70 - 130
o-Xylene	25.0	24.0		ug/L		96	70 - 130
Toluene	25.0	23.2		ug/L		93	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		80 - 120
Dibromofluoromethane (Surr)	103		76 - 132
Toluene-d8 (Surr)	93		80 - 128

TestAmerica Irvine

QC Sample Results

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

TestAmerica Job ID: 440-191828-1

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

Lab Sample ID: 440-191723-A-1 MS
Matrix: Water
Analysis Batch: 428774

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		25.0	25.8		ug/L		103	66 - 130
Ethylbenzene	ND		25.0	26.3		ug/L		105	70 - 130
m,p-Xylene	ND		25.0	26.9		ug/L		108	70 - 133
o-Xylene	ND		25.0	27.8		ug/L		111	70 - 133
Toluene	ND		25.0	26.1		ug/L		104	70 - 130

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	92		80 - 120
Dibromofluoromethane (Surr)	105		76 - 132
Toluene-d8 (Surr)	94		80 - 128

Lab Sample ID: 440-191723-A-1 MSD
Matrix: Water
Analysis Batch: 428774

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		25.0	26.1		ug/L		104	66 - 130	1	20
Ethylbenzene	ND		25.0	25.4		ug/L		101	70 - 130	4	20
m,p-Xylene	ND		25.0	25.6		ug/L		102	70 - 133	5	25
o-Xylene	ND		25.0	26.7		ug/L		107	70 - 133	4	20
Toluene	ND		25.0	25.3		ug/L		101	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	93		80 - 120
Dibromofluoromethane (Surr)	106		76 - 132
Toluene-d8 (Surr)	95		80 - 128

Lab Sample ID: MB 440-428847/4
Matrix: Water
Analysis Batch: 428847

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			09/14/17 08:23	1
Ethylbenzene	ND		0.50		ug/L			09/14/17 08:23	1
m,p-Xylene	ND		1.0		ug/L			09/14/17 08:23	1
o-Xylene	ND		0.50		ug/L			09/14/17 08:23	1
Toluene	ND		0.50		ug/L			09/14/17 08:23	1
Xylenes, Total	ND		1.0		ug/L			09/14/17 08:23	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		80 - 120		09/14/17 08:23	1
Dibromofluoromethane (Surr)	106		76 - 132		09/14/17 08:23	1
Toluene-d8 (Surr)	101		80 - 128		09/14/17 08:23	1

TestAmerica Irvine

QC Sample Results

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

TestAmerica Job ID: 440-191828-1

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

Lab Sample ID: LCS 440-428847/5
Matrix: Water
Analysis Batch: 428847

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	23.7		ug/L		95	68 - 130
Ethylbenzene	25.0	22.6		ug/L		91	70 - 130
m,p-Xylene	25.0	23.1		ug/L		92	70 - 130
o-Xylene	25.0	23.9		ug/L		96	70 - 130
Toluene	25.0	22.8		ug/L		91	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	102		76 - 132
Toluene-d8 (Surr)	93		80 - 128

Lab Sample ID: 440-191828-5 MS
Matrix: Water
Analysis Batch: 428847

Client Sample ID: S-26
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	17		25.0	39.1		ug/L		89	66 - 130
Ethylbenzene	2.5		25.0	23.9		ug/L		86	70 - 130
m,p-Xylene	3.1		25.0	24.6		ug/L		86	70 - 133
o-Xylene	ND		25.0	22.6		ug/L		89	70 - 133
Toluene	0.62		25.0	21.6		ug/L		84	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		80 - 120
Dibromofluoromethane (Surr)	102		76 - 132
Toluene-d8 (Surr)	92		80 - 128

Lab Sample ID: 440-191828-5 MSD
Matrix: Water
Analysis Batch: 428847

Client Sample ID: S-26
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	17		25.0	40.7		ug/L		96	66 - 130	4	20
Ethylbenzene	2.5		25.0	24.7		ug/L		89	70 - 130	4	20
m,p-Xylene	3.1		25.0	25.9		ug/L		91	70 - 133	5	25
o-Xylene	ND		25.0	24.4		ug/L		97	70 - 133	8	20
Toluene	0.62		25.0	23.2		ug/L		90	70 - 130	7	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		80 - 120
Dibromofluoromethane (Surr)	106		76 - 132
Toluene-d8 (Surr)	95		80 - 128

QC Sample Results

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

TestAmerica Job ID: 440-191828-1

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

Lab Sample ID: MB 440-428599/4

Matrix: Water

Analysis Batch: 428599

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	ND		50		ug/L			09/13/17 08:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	109		76 - 132		09/13/17 08:31	1
4-Bromofluorobenzene (Surr)	90		80 - 120		09/13/17 08:31	1
Toluene-d8 (Surr)	99		80 - 128		09/13/17 08:31	1

Lab Sample ID: LCS 440-428599/6

Matrix: Water

Analysis Batch: 428599

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Volatile Fuel Hydrocarbons (C4-C12)	500	398		ug/L		80	55 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	105		76 - 132
4-Bromofluorobenzene (Surr)	89		80 - 120
Toluene-d8 (Surr)	103		80 - 128

Lab Sample ID: 440-191745-A-3 MS

Matrix: Water

Analysis Batch: 428599

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Volatile Fuel Hydrocarbons (C4-C12)	ND		1730	1960		ug/L		114	50 - 145

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	106		76 - 132
4-Bromofluorobenzene (Surr)	87		80 - 120
Toluene-d8 (Surr)	95		80 - 128

Lab Sample ID: 440-191745-A-3 MSD

Matrix: Water

Analysis Batch: 428599

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Volatile Fuel Hydrocarbons (C4-C12)	ND		1730	2050		ug/L		119	50 - 145	5	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Dibromofluoromethane (Surr)	107		76 - 132
4-Bromofluorobenzene (Surr)	91		80 - 120
Toluene-d8 (Surr)	94		80 - 128

TestAmerica Irvine

QC Sample Results

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

TestAmerica Job ID: 440-191828-1

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

Lab Sample ID: MB 440-428775/4
Matrix: Water
Analysis Batch: 428775

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	ND		50		ug/L			09/13/17 19:33	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	103		76 - 132					09/13/17 19:33	1
4-Bromofluorobenzene (Surr)	95		80 - 120					09/13/17 19:33	1
Toluene-d8 (Surr)	101		80 - 128					09/13/17 19:33	1

Lab Sample ID: LCS 440-428775/6
Matrix: Water
Analysis Batch: 428775

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Volatile Fuel Hydrocarbons (C4-C12)	500	375		ug/L		75	55 - 130
Surrogate	%Recovery	LCS Qualifier	Limits				
Dibromofluoromethane (Surr)	106		76 - 132				
4-Bromofluorobenzene (Surr)	92		80 - 120				
Toluene-d8 (Surr)	103		80 - 128				

Lab Sample ID: 440-191723-A-1 MS
Matrix: Water
Analysis Batch: 428775

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Volatile Fuel Hydrocarbons (C4-C12)	ND		1730	2060		ug/L		120	50 - 145
Surrogate	%Recovery	MS Qualifier	Limits						
Dibromofluoromethane (Surr)	105		76 - 132						
4-Bromofluorobenzene (Surr)	92		80 - 120						
Toluene-d8 (Surr)	94		80 - 128						

Lab Sample ID: 440-191723-A-1 MSD
Matrix: Water
Analysis Batch: 428775

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Volatile Fuel Hydrocarbons (C4-C12)	ND		1730	2110		ug/L		122	50 - 145	2	20
Surrogate	%Recovery	MSD Qualifier	Limits								
Dibromofluoromethane (Surr)	106		76 - 132								
4-Bromofluorobenzene (Surr)	93		80 - 120								
Toluene-d8 (Surr)	95		80 - 128								

TestAmerica Irvine

QC Sample Results

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

TestAmerica Job ID: 440-191828-1

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

Lab Sample ID: MB 440-428848/4

Matrix: Water

Analysis Batch: 428848

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	ND		50		ug/L			09/14/17 08:23	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	106		76 - 132					09/14/17 08:23	1
4-Bromofluorobenzene (Surr)	93		80 - 120					09/14/17 08:23	1
Toluene-d8 (Surr)	101		80 - 128					09/14/17 08:23	1

Lab Sample ID: LCS 440-428848/6

Matrix: Water

Analysis Batch: 428848

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Volatile Fuel Hydrocarbons (C4-C12)	500	385		ug/L		77	55 - 130
Surrogate	%Recovery	LCS Qualifier	Limits				
Dibromofluoromethane (Surr)	100		76 - 132				
4-Bromofluorobenzene (Surr)	94		80 - 120				
Toluene-d8 (Surr)	103		80 - 128				

Lab Sample ID: 440-191828-5 MS

Matrix: Water

Analysis Batch: 428848

Client Sample ID: S-26

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Volatile Fuel Hydrocarbons (C4-C12)	170		1730	1870		ug/L		99	50 - 145
Surrogate	%Recovery	MS Qualifier	Limits						
Dibromofluoromethane (Surr)	102		76 - 132						
4-Bromofluorobenzene (Surr)	93		80 - 120						
Toluene-d8 (Surr)	92		80 - 128						

Lab Sample ID: 440-191828-5 MSD

Matrix: Water

Analysis Batch: 428848

Client Sample ID: S-26

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Volatile Fuel Hydrocarbons (C4-C12)	170		1730	1950		ug/L		103	50 - 145	4	20
Surrogate	%Recovery	MSD Qualifier	Limits								
Dibromofluoromethane (Surr)	106		76 - 132								
4-Bromofluorobenzene (Surr)	93		80 - 120								
Toluene-d8 (Surr)	95		80 - 128								

TestAmerica Irvine

QC Association Summary

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

TestAmerica Job ID: 440-191828-1

GC/MS VOA

Analysis Batch: 428598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-191828-1	S-5	Total/NA	Ground Water	8260B	
440-191828-2	S-6	Total/NA	Ground Water	8260B	
MB 440-428598/4	Method Blank	Total/NA	Water	8260B	
LCS 440-428598/5	Lab Control Sample	Total/NA	Water	8260B	
440-191745-A-3 MS	Matrix Spike	Total/NA	Water	8260B	
440-191745-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 428599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-191828-1	S-5	Total/NA	Ground Water	8260B/CA_LUFT MS	
440-191828-2	S-6	Total/NA	Ground Water	8260B/CA_LUFT MS	
MB 440-428599/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	
LCS 440-428599/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
440-191745-A-3 MS	Matrix Spike	Total/NA	Water	8260B/CA_LUFT MS	
440-191745-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B/CA_LUFT MS	

Analysis Batch: 428774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-191828-3	S-24	Total/NA	Water	8260B	
440-191828-4	S-25	Total/NA	Water	8260B	
MB 440-428774/4	Method Blank	Total/NA	Water	8260B	
LCS 440-428774/5	Lab Control Sample	Total/NA	Water	8260B	
440-191723-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-191723-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 428775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-191828-3	S-24	Total/NA	Water	8260B/CA_LUFT MS	
440-191828-4	S-25	Total/NA	Water	8260B/CA_LUFT MS	
MB 440-428775/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	
LCS 440-428775/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
440-191723-A-1 MS	Matrix Spike	Total/NA	Water	8260B/CA_LUFT MS	
440-191723-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B/CA_LUFT MS	

Analysis Batch: 428847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-191828-5	S-26	Total/NA	Water	8260B	
MB 440-428847/4	Method Blank	Total/NA	Water	8260B	
LCS 440-428847/5	Lab Control Sample	Total/NA	Water	8260B	
440-191828-5 MS	S-26	Total/NA	Water	8260B	
440-191828-5 MSD	S-26	Total/NA	Water	8260B	

TestAmerica Irvine

QC Association Summary

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

TestAmerica Job ID: 440-191828-1

GC/MS VOA (Continued)

Analysis Batch: 428848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-191828-5	S-26	Total/NA	Water	8260B/CA_LUFT MS	
MB 440-428848/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	
LCS 440-428848/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
440-191828-5 MS	S-26	Total/NA	Water	8260B/CA_LUFT MS	
440-191828-5 MSD	S-26	Total/NA	Water	8260B/CA_LUFT MS	

Definitions/Glossary

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

TestAmerica Job ID: 440-191828-1

Glossary

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

Accreditation/Certification Summary

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

TestAmerica Job ID: 440-191828-1

Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-18
Arizona	State Program	9	AZ0671	10-14-17
California	LA Cty Sanitation Districts	9	10256	06-30-18
California	State Program	9	CA ELAP 2706	06-30-18
Guam	State Program	9	Cert. No. 17-003R	01-23-18
Hawaii	State Program	9	N/A	01-29-18
Kansas	NELAP Secondary AB	7	E-10420	07-31-17 *
Nevada	State Program	9	CA015312018-1	07-31-18
New Mexico	State Program	6	N/A	01-29-18 *
Northern Mariana Islands	State Program	9	MP0002	01-29-17 *
Oregon	NELAP	10	4028	01-29-18
USDA	Federal		P330-15-00184	07-08-18
Washington	State Program	10	C900	09-03-18

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Irvine

LAB (LOCATION)

ACUTEST ()
 ALSCEINCE ()
 ESTAMERICA ()
 Other ()

Lab Vendor # 1364589 (TestAmerica)



Equilon Enterprises LLC dba Shell Oil Products US Chain Of Custody Record



Please Check Appropriate Box:
 EGV FDG
 CHEMICALS
 TRANSPORTATION
 RETAIL
 CONSULTANT
 OTHER

Print Bill To Contact Name: Shane Oltan
 P.O. #
 Project ID: GSAP Project ID

PlanNet Site or Project ID: 27481
 DATE: 9-7-17
 PAGE: () of ()

SAMPLING COMPANY: Blaine Tech Services, Inc.
 ADDRESS: 1680 Rogers Ave., San Jose, CA, 95112
 PROJECT CONTACT (Paraphrase of PDF Report ID): Bart Gebbie
 TELEPHONE: 310-585-4455 Ext. 103 FAX: 310-637-5802
 BILL TO CONTACT E-MAIL: shane.oltan@aecom.com

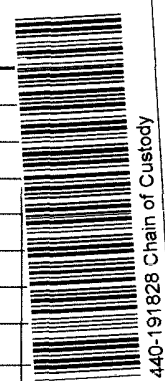
STATE: CA
 CITY: Oakland
 STREET ADDRESS: 481 8th St., Oakland
 PHONE NO: 510-893-3600
 E-MAIL: anni.kremi@aecom.com
 AECOM Other ID: USF04642

LAB USE ONLY: STANDARD (14 DAY) DAYS DAYS DAYS DAYS
 LA - RWQCB REPORT FORMAT JUST AGENCY: LEVEL 1 LEVEL 2 LEVEL 3 LEVEL 4 OTHER (SPECIFY) _____
 DELIVERABLES: TEMPERATURE ON RECEIPT C° Cooler #1: Cooler #2: Cooler #3:
 TURNOURD TIME (CALENDAR DAYS): RESULTS NEEDED ON WEEKEND

UNIT COST
 REQUESTED ANALYSIS
 NON-UNIT COST

SPECIAL INSTRUCTIONS OR NOTES :
 SHELL CONTRACT RATE APPLIES
 STATE REIMBURSEMENT RATE APPLIES
 EDD NOT NEEDED
 RECEIPT VERIFICATION REQUESTED
 PROVIDE LEDD DISK
 Email invoice to USAPImaging@aecom.com

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE			NO. OF CONT.	FIELD NOTES:
		DATE	TIME		HCL	HN03	H2SO4		
	S-5	9-7-17	0755	W	3			3	
	S-6		1040		3			3	
	S-24		0905		3			3	
	S-25		0950		3			3	
	S-26		0930		3			3	



TEMPERATURE ON RECEIPT C°
 CONTAINER PID Readings or Laboratory Notes

Requested by (Signature): [Signature]
 Date: 9-7-17 Time: 1520
 Received by (Signature): [Signature]
 Date: 9/8/17 Time: 10:15
 Received by (Signature): [Signature]
 Date: 9/8/17 Time: 1400

John Muller 9/19/17 10:30
 # 7410 7983 301A
 1.0oz 0.8/24 1R84

LB 9/17

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 440-191828-1

Login Number: 191828

List Number: 1

Creator: Bonta, Lucia F

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

