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

**Shell Oil Products US**
DS Soil & Groundwater Focus Delivery Group
20945 S. Wilmington Avenue
Carson, CA 90810
Tel (714) 731 1050
Fax (714) 731 1038
Email Andrea.Wing@shell.com
Internet http://www.shell.com

**RE: 4411 Foothill Boulevard, Oakland, California**
**PlaNet Site ID 10059562**
**PlaNet Project ID 31733**
**ACEH Case No. RO0000415**

Dear Ms. Jurek:

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 to the best of my knowledge, 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
Principle Program Manager

AECOM
1333 Broadway
Suite 800
Oakland, CA 94612
www.aecom.com

510 893 3600 tel
510 874 3268 fax

August 30, 2016

Anne Jurek
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

Re: First Semiannual 2016 Groundwater Monitoring Report
Former Shell Service Station
4411 Foothill Boulevard, Oakland, California
Shell PlaNet Site ID: 10059562
Shell PlaNet Project ID: 31733
Agency No. RO0000415

Dear Ms. Jurek:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US, AECOM Technical Services, Inc. is pleased to submit this first semiannual groundwater monitoring report performed during the second quarter of 2016 at the at the Former Shell Service Station at 4411 Foothill Boulevard in Oakland, California.

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

Sincerely,

Sara Heikkila
Project Manager

Christine Pilachowski, P.G.
Senior Geologist


Enclosures: Groundwater Monitoring Report

cc: Andrea Wing, Shell Oil Products US
Laura Wong, Phua Management (property owner representative, electronic copy)

AECOM

# First Semiannual 2016 Groundwater Monitoring Report

## Former Shell Service Station
## 4411 Foothill Boulevard
## Oakland, California

August 2016

AECOM

# First Semiannual 2016 Groundwater Monitoring Report

## Former Shell Service Station
## 4411 Foothill Boulevard
## Oakland, California

PlaNet Site ID 10059562
PlaNet Project ID 31733
Agency No. RO0000415

*Submitted to:*

Anne Jurek
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

*Submitted by:*

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

*On Behalf of*

Shell Oil Products US

August 30, 2016

# Table of Contents



## List of Figures



## List of Tables



## List of Appendices

# 1 Introduction

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

## 1.1 Site Information

| | |
|---|---|
| Site Name: | Former Shell Service Station |
| Site Address: | 4411 Foothill Boulevard, Oakland, California |
| Shell Environmental Services Program Manager: | Andrea Wing |
| Consulting Company / Contact Person: | AECOM / Sara Heikkila |
| Primary Agencies: | Alameda County Environmental Health |

## 1.2 Site Summary

| | |
|---|---|
| Frequency of Groundwater Monitoring: | Semiannually |
| Wells Water Level Gauged: | 9 |
| Wells Sampled: | 2 |
| Is there any Free Product Present in On-Site Monitoring Wells: | No |
| Current Remediation Activity: | None |

# 2 Site Activities

## 2.1 Current Activities

On June 3, 2016, Blaine Tech Services, Inc. (Blaine Tech) of San Jose, California gauged and sampled the wells according to the established monitoring program for this site. TestAmerica Laboratories, Inc. (TestAmerica) of Pleasanton, California, a certified California laboratory, completed the analyses of the groundwater samples.

AECOM prepared a Site Vicinity Map (Figure 1), a Groundwater Contour and Chemical Concentration Map (Figure 2), and a Groundwater Data table (Table 1). Blaine Tech's field notes are presented in Appendix A, and the laboratory report is presented in Appendix B.

## 2.2 Current Findings

| | |
|---|---|
| Groundwater Elevation: | 28.16 to 29.75 in feet above mean sea level |
| Groundwater Gradient (direction): | Southwest |
| Groundwater Gradient (magnitude): | 0.009 feet per foot |

## 2.3 Proposed Activities

Blaine Tech will gauge and sample wells according to the established monitoring program for this site. This site is monitored semiannually during the second and fourth quarters, and AECOM will issue groundwater monitoring reports semiannually following the sampling events.

# 3 Conclusions and Recommendations

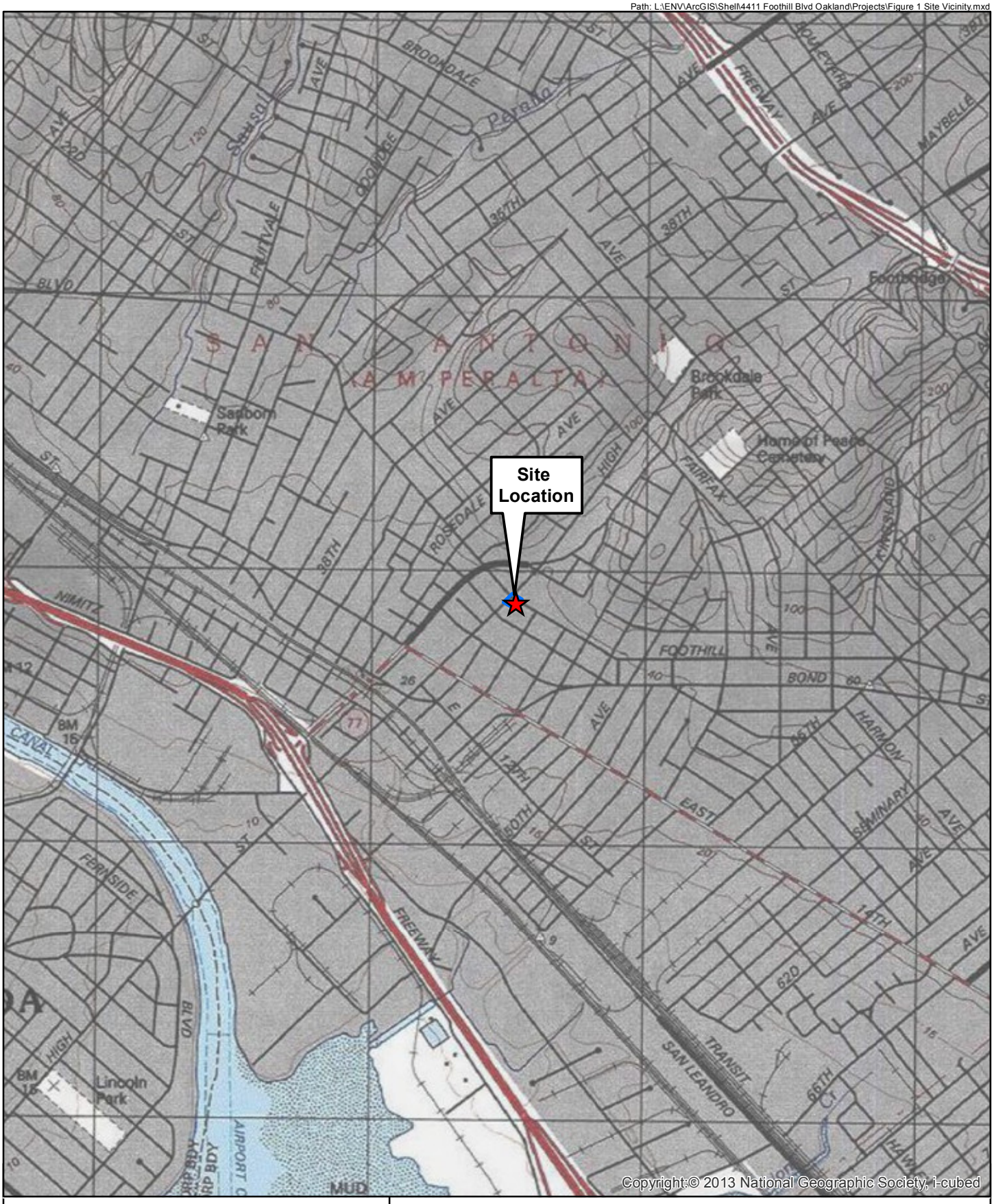
Two wells (S-13 and S-14) were analyzed for total petroleum hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene, total xylenes, methyl tertiary-butyl ether (MTBE), tertiary-butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), and tertiary-amyl methyl ether (TAME). The following petroleum constituents were detected:

- TPH-g was detected in both wells at concentrations of 670 micrograms per liter (µg/L) (S-14) and 21,000 µg/L (S-13).
- Benzene was detected in both wells at concentrations of 19 µg/L (S-14) and 200 µg/L (S-13).
- Toluene was detected in both wells at concentrations of 1.4 µg/L (S-14) and 370 µg/L (S-13).
- Ethylbenzene was detected in both wells at concentrations of 6.3 µg/L (S-14) and 1,300 µg/L (S-13).
- Total xylenes were detected in both wells at concentrations of 25 µg/L (S-14) and 3,300 µg/L (S-13).
- TBA was detected in only S-14 at a concentration of 10 µg/L.
- MTBE, DIPE, ETBE, and TAME were not detected above the laboratory reporting limit in any groundwater samples.

AECOM recommends continuing with the established groundwater monitoring program for this site.

# Figures

Path: L:\ENV\ArcGIS\Shell\4411 Foothill Blvd Oakland\Projects\Figure 1 Site Vicinity.mxd




N

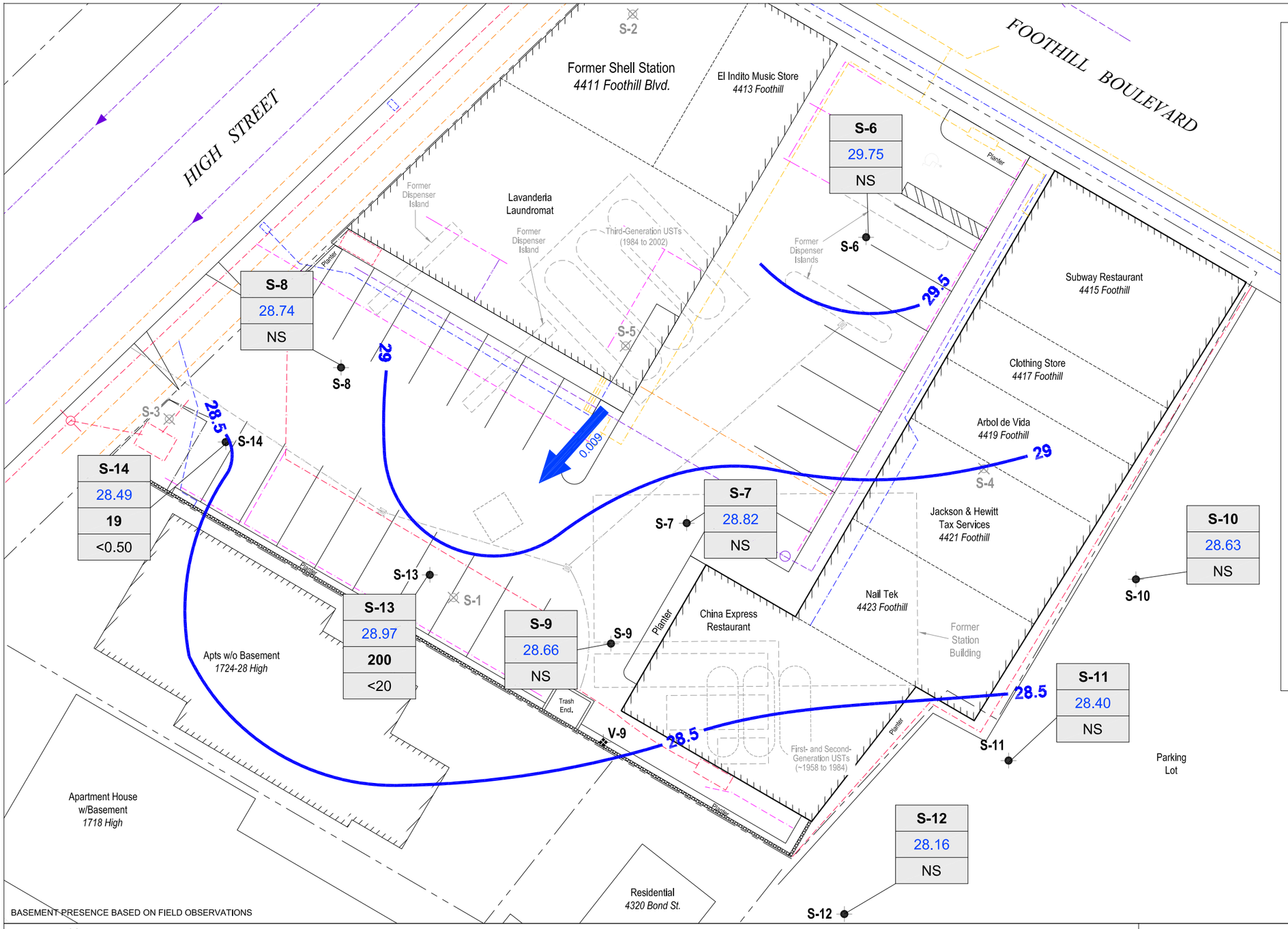
0 2,000 4,000

Feet

**Figure 1**
Site Vicinity Map

AECOM

**Former Shell Service Station**
**4411 Foothill Boulevard, Oakland, California**




## EXPLANATION

- S-6 — Monitoring well location
- S-1 — Destroyed monitoring well location
- Electrical line (E)
- Telecommunications line (T)
- Gas line (GAS)
- Water line (W)
- Sanitary Sewer line (SAN)
- Storm drain line (STM)
- Unknown utility line
- Fire hydrant
- Catch basin
- Manhole
- Power pole
- Flow direction
- 28 — Groundwater elevation contour, in feet above mean sea level (ft AMSL) dashed where inferred
- 0.009 — Groundwater flow direction and hydraulic gradient (feet per foot)

| | |
|---|---|
| WELL | Well designation |
| ELEV | Groundwater elevation, in ft AMSL |
| BENZ | Benzene and MTBE concentrations are in micrograms per liter |
| MTBE | |

**Notes:**
<X.XX = Not detected at or above laboratory reporting limit X.XX
NS = Not sampled

N

0 10 20
Feet

SOURCE: GHD BASEMAP

**Figure 2**
Groundwater Contour and Chemical Concentration Map
June 3, 2016

AECOM

**Former Shell Service Station**
**4411 Foothill Boulevard, Oakland, California**

# Tables

**Table 1**
**Groundwater Data**
**Former Shell Service Station, 4411 Foothill Boulevard, Oakland, California**

| Well ID | Date | TPHd (µg/L) | 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) | 1,2-DCA (µg/L) | EDB (µg/L) | TOC (ft MSL) | Depth to Water (ft TOC) | GW Elevation (ft MSL) | DO Reading (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-1 | 12/18/1992 | --- | 41,000 | 3,100 | 1,100 | 1,200 | 8,700 | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 9.06 | --- | --- |
| S-1 | 05/26/1993 | 6,000 | 39,000 | 1,300 | 4,700 | 1,500 | 7,800 | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | --- | --- | --- |
| S-1 | 05/28/1993 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 12.13 | 26.18 | --- |
| S-1 | 06/03/1993 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 8.89 | 29.42 | --- |
| S-1 | 06/08/1993 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 8.80 | 29.51 | --- |
| S-1 | 09/21/1993 | 5,900 | 34,000 | 480 | 5,000 | 3,800 | 18,000 | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 10.40 | 27.91 | --- |
| S-1 | 12/14/1993 | 13,000 | 25,000 | 1,100 | 5,000 | 2,200 | 11,000 | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 9.66 | 28.65 | --- |
| S-1 | 03/17/1994 | 1,600 | 57,000 | 1,300 | 5,400 | 2,100 | 11,000 | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 8.20 | 30.11 | --- |
| S-1 | 06/16/1994 | 3,000 | 57,000 | 1,600 | 6,000 | 2,000 | 13,000 | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 9.41 | 28.90 | --- |
| S-1 | 09/22/1994 | <250 | 39,000 | 1,300 | 2,100 | 1,500 | 7,100 | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 11.13 | 27.18 | --- |
| S-1 | 12/15/1994 | 3,100 g | 30,000 | 1,100 | 4,700 | 1,600 | 10,000 | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 7.15 | 31.16 | --- |
| S-1 | 03/30/1995 | 3,100 a,g | 30,000 a | 1,400 a | 4,000 a | 1,500 a | 11,000 a | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 6.09 | 32.22 | --- |
| S-1 | 06/20/1995 | 2,100 | 28,000 | 1,100 | 2,300 | 1,100 | 8,300 | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 7.30 | 31.01 | --- |
| S-1 | 09/20/1995 | 2,600 | 40,000 | 840 | 3,600 | 1,300 | 8,600 | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 10.02 | 28.29 | --- |
| S-1 | 12/06/1995 | 6,400 g | 38,000 | 920 | 3,200 | 1,500 | 9,400 | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 11.64 | 26.67 | --- |
| S-1 | 03/21/1996 | --- | 48,000 | 700 | 4,200 | 1,100 | 8,600 | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 6.87 | 31.44 | --- |
| S-1 | 09/06/1996 | 4,100 | 41,000 | 830 | 2,600 | 2,100 | 12,000 | <250 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 10.50 | 27.81 | --- |
| S-1 | 12/19/1996 | 2,500 | 40,000 | 540 | 3,100 | 1,900 | 9,800 | 920 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 8.24 | 30.07 | --- |
| S-1 | 03/17/1997 | 4,700 | 42,000 | 610 | 2,700 | 1,700 | 11,000 | 3,500 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 7.26 | 31.05 | --- |
| S-1 | 06/11/1997 | 4,000 | 28,000 | 540 | 960 | 1,300 | 5,300 | 220 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 10.69 | 27.62 | --- |
| S-1 (D) | 06/11/1997 | 3,900 | 30,000 | 580 | 1,000 | 1,400 | 5,400 | <125 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 10.69 | 27.62 | --- |
| S-1 | 09/17/1997 | 4,400 | 27,000 | 310 | 1,200 | 1,900 | 9,000 | 170 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 10.26 | 28.05 | --- |
| S-1 (D) | 09/17/1997 | 4,400 | 27,000 | 270 | 1,200 | 1,900 | 9,000 | 170 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 10.26 | 28.05 | --- |
| S-1 | 12/11/1997 | 3,400 | 21,000 | 350 | 820 | 1,500 | 6,500 | <125 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 6.96 | 31.35 | --- |
| S-1 | 03/16/1998 | 2,500 | 25,000 | 250 | 820 | 670 | 5,000 | <125 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 6.00 | 32.31 | --- |
| S-1 (D) | 03/16/1998 | --- | 26,000 | 250 | 840 | 720 | 5,100 | <125 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 6.00 | 32.31 | 5.3/3.7 |
| S-1 | 06/23/1998 | 230 | <1,000 | 280 | 14 | 23 | 15 | 6,100 | 7,800 | --- | --- | --- | --- | --- | --- | 38.31 | 6.31 | 32.00 | 3.8/2.4 |
| S-1 | 09/01/1998 | 2,300 | 26,000 | 370 | 620 | 1,300 | 33 | 1,400 | 120 | --- | --- | --- | --- | --- | --- | 38.31 | 9.17 | 29.14 | 1.4/2.6 |
| S-1 | 12/30/1998 | 1,970 | 29,900 | 174 | 732 | 1,680 | 5,740 | 182 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 8.99 | 29.32 | 1.6/2.0 |
| S-1 | 03/30/1999 | 1,150 | 14,200 | 1,360 | 260 | 1,070 | 3,580 | <500 | 90.0 | --- | --- | --- | --- | --- | --- | 38.31 | 6.10 | 32.21 | 1.2/1.8 |
| S-1 | 03/31/1999 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 7.84 | 30.47 | --- |
| S-1 | 06/14/1999 | 4,280 | 20,200 | 135 | 407 | 825 | 5,000 | 705 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 7.94 | 30.37 | 1.4/2.1 |
| S-1 | 09/30/1999 | 3,120 | 18,300 | 189 | 531 | 1,250 | 4,740 | 322 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 10.04 | 28.27 | 4.3/2.0 |

**Table 1**
**Groundwater Data**
**Former Shell Service Station, 4411 Foothill Boulevard, Oakland, California**

| Well ID | Date | TPHd (µg/L) | 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) | 1,2-DCA (µg/L) | EDB (µg/L) | TOC (ft MSL) | Depth to Water (ft TOC) | GW Elevation (ft MSL) | DO Reading (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-1 | 12/22/1999 | 444 g | 2,450 | 50.2 | 97.5 | 139 | 458 | 133 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 9.42 | 28.89 | 1.8/2.3 |
| S-1 | 03/09/2000 | 1,200 g | 1,230 a | 21.2 a | 115 a | 116 a | 411 a | 45.1 a | --- | --- | --- | --- | --- | --- | --- | 38.30 | 6.21 | 32.09 | 2.0/2.9 |
| S-1 | 06/20/2000 | 352 g | 755 | 26.0 | 48.4 | 43.1 | 230 | 71.5 | --- | --- | --- | --- | --- | --- | --- | 38.30 | 9.18 | 29.12 | 2.0/2.4 |
| S-1 | 09/05/2000 | 783 g | 2,980 | 43.5 | 117 | 168 | 871 | 192 | --- | --- | --- | --- | --- | --- | --- | 38.30 | 10.14 | 28.16 | 0.6/0.3 |
| S-1 | 12/04/2000 | 238 g | 399 | 5.34 | 14.6 | 36.2 | 106 | 24.9 | --- | --- | --- | --- | --- | --- | --- | 38.30 | 10.10 | 28.20 | 8.6/9.8 |
| S-1 | 12/12/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 38.30 | 9.22 | 29.08 | --- |
| S-1 | 03/08/2001 | 1,390 g | 2,940 | 49.6 | 52.9 | 21.8 | 749 | 87.6 | --- | --- | --- | --- | --- | --- | --- | 38.30 | 5.84 | 32.46 | 2.7 b |
| S-1 | 06/07/2001 | 1,400 | 10,000 | 120 | 370 | 680 | 2,400 | 150 | --- | --- | --- | --- | --- | --- | --- | 38.30 | 8.80 | 29.50 | 6.2/2.2 |
| S-1 | 09/13/2001 | <200 | 240 | 1.8 | 8.9 | 16 | 53 | --- | 17 | --- | --- | --- | --- | --- | --- | 38.30 | 10.25 | 28.05 | 7.8/8.9 |
| S-1 | 11/19/2001 | <300 | 1,400 | 14 | 42 | 110 | 260 | --- | 27 | --- | --- | --- | --- | --- | --- | 38.30 | 9.87 | 28.43 | 7.7/7.3 |
| S-1 | 03/18/2002 | <300 | 7,500 | 40 | 370 | 560 | 2,000 | --- | 20 | --- | --- | --- | --- | --- | --- | 38.30 | 5.08 | 33.22 | 5.6/6.1 |
| S-1 | 06/19/2002 | 180 | 1,000 | 4.7 | 36 | 68 | 250 | --- | 14 | --- | --- | --- | --- | --- | --- | 38.30 | 9.26 | 29.04 | --- |
| S-1 | 09/11/2002 | <350 | 2,100 | 8.1 | 68 | 180 | 820 | --- | 7.1 | --- | --- | --- | --- | --- | --- | 38.30 | 10.54 | 27.76 | 6.5 |
| S-1 | 12/11/2002 | <500 | 4,100 | 16 | 93 | 310 | 900 | --- | <20 | --- | --- | --- | --- | --- | --- | 38.04 | 9.97 | 28.07 | 8.0 |
| S-1 | 03/11/2003 | <1,600 | 14,000 | 71 | 470 | 1,000 | 3,300 | --- | <50 | --- | --- | --- | --- | --- | --- | 38.04 | 7.31 | 30.73 | 5.2 |
| S-1 | 06/10/2003 | 110 g | 1,700 | 7.7 | 44 | 190 | 340 | --- | 4.5 | --- | --- | --- | --- | --- | --- | 38.04 | 8.14 | 29.90 | 14.0 |
| S-1 | 09/09/2003 | 96 g | 3,200 | 11 | 110 | 350 | 1,100 | --- | 5.8 | --- | --- | --- | --- | --- | --- | 38.04 | 9.31 | 28.73 | 7.5 |
| S-1 | 12/09/2003 | 1,000 g | 6,000 | 20 | 170 | 530 | 1,700 | --- | 6.1 | --- | --- | --- | --- | --- | --- | 38.04 | 7.24 | 30.80 | 28.6 |
| S-1 | 03/09/2004 | 300 g | 390 | 5.8 | 30 | 67 | 160 | --- | 5.6 | --- | --- | --- | --- | --- | --- | 38.04 | 5.56 | 32.48 | 6.4 |
| S-1 | 06/08/2004 | 2,500 g | 5,600 | 11 | 140 | 660 | 1,900 | --- | 5.0 | --- | --- | --- | --- | --- | --- | 38.04 | 8.82 | 29.22 | 30.0 |
| S-1 | 09/07/2004 | 130 e | <50 | <0.50 | <0.50 | <0.50 | <1.0 | --- | 0.75 | <5.0 | <2.0 | <2.0 | <2.0 | --- | --- | 38.04 | 9.84 | 28.20 | 14.4 |
| S-1 | 12/06/2004 | Unable to sample | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 38.04 | 9.20 | 28.84 | --- |
| S-1 | 12/15/2004 | 120 e | 560 | 2.2 | 26 | 67 | 220 | --- | 1.4 | --- | --- | --- | --- | --- | --- | 38.04 | 5.39 | 32.65 | 31.7 |
| S-1 | 03/07/2005 | 460 e | 12,000 | 12 | 310 | 830 | 2,600 | --- | <5.0 | --- | --- | --- | --- | --- | --- | 38.04 | 5.77 | 32.27 | 16.1 |
| S-1 | 06/10/2005 | 1,200 e | 13,000 | 25 | 310 | 1,200 | 3,300 | --- | <10 | --- | --- | --- | --- | --- | --- | 38.04 | 5.39 | 32.65 | 0.17 |
| S-1 | 07/14/2005 | Well destroyed | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | | | | | | | | | | | | | | | | | |
| S-2 | 05/28/1993 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.51 | 29.28 | --- |
| S-2 | 06/03/1993 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.51 | 29.28 | --- |
| S-2 | 06/08/1993 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.57 | 29.22 | --- |
| S-2 | 06/29/1993 | --- | 1,300 | 290 | 35 | 38 | 130 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | --- | --- | --- |
| S-2 | 09/21/1993 | --- | 3,300 | 870 | 24 | 190 | 120 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 10.54 | 28.25 | --- |
| S-2 | 12/14/1993 | --- | 1,300 | 400 | 16 | 36 | 27 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.76 | 29.03 | --- |

**Table 1**
**Groundwater Data**
**Former Shell Service Station, 4411 Foothill Boulevard, Oakland, California**

| Well ID | Date | TPHd (µg/L) | 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) | 1,2-DCA (µg/L) | EDB (µg/L) | TOC (ft MSL) | Depth to Water (ft TOC) | GW Elevation (ft MSL) | DO Reading (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-2 | 03/17/1994 | --- | 4,500 | 610 | 27 | 92 | 110 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.92 | 28.87 | --- |
| S-2 (D) | 03/17/1994 | --- | 4,000 | 610 | 26 | 93 | 120 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.92 | 28.87 | --- |
| S-2 | 06/16/1994 | --- | 2,800 | 690 | 45 | 97 | 140 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 10.11 | 28.68 | --- |
| S-2 | 09/22/1994 | --- | 4,000 | 630 | 94 | 64 | 230 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 10.51 | 28.28 | --- |
| S-2 | 12/15/1994 | --- | 1,600 | 450 | 300 | 67 | 130 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.12 | 29.67 | --- |
| S-2 | 03/30/1995 | --- | 8,200 a | 2,800 a | 190 a | 240 a | 700 a | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 7.86 | 30.93 | --- |
| S-2 | 06/20/1995 | --- | 9,600 | 2,600 | 160 | 170 | 500 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.51 | 29.28 | --- |
| S-2 | 09/20/1995 | --- | 4,200 | 920 | 45 | 98 | 140 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 10.06 | 28.73 | --- |
| S-2 | 12/06/1995 | --- | <5,000 | 790 | 67 | 64 | 130 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 10.52 | 28.27 | --- |
| S-2 | 03/21/1996 | --- | 3,700 | 850 | 45 | 96 | 170 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 8.60 | 30.19 | --- |
| S-2 | 09/06/1996 | --- | 2,400 | 500 | 33 | 39 | 84 | 490 | --- | --- | --- | --- | --- | --- | --- | 38.79 | 10.50 | 28.29 | --- |
| S-2 | 12/19/1996 | --- | 1,200 | 330 | 15 | 24 | 31 | 430 | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.40 | 29.39 | --- |
| S-2 | 03/17/1997 | --- | 4,100 | 780 | 42 | 110 | 120 | 2,200 | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.82 | 28.97 | --- |
| S-2 | 06/11/1997 | --- | 760 | 120 | <5.0 | 7.0 | 7.6 | 900 | --- | --- | --- | --- | --- | --- | --- | 38.79 | 10.18 | 28.61 | --- |
| S-2 | 09/17/1997 | --- | 1,500 | 230 | 8.6 | 40 | 27 | 480 | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.90 | 28.89 | --- |
| S-2 | 12/11/1997 | --- | 1,300 | 240 | 15 | 33 | 57 | 280 | --- | --- | --- | --- | --- | --- | --- | 38.79 | 8.27 | 30.52 | --- |
| S-2 | 03/16/1998 | --- | 1,100 | 830 | 48 | <10 | <10 | 4,700 | 4,800 | --- | --- | --- | --- | --- | --- | 38.79 | 7.97 | 30.82 | 7.0/4.3 |
| S-2 | 06/23/1998 | --- | 720 | 46 | 6.8 | 50 | 68 | 50 | 8.8 | --- | --- | --- | --- | --- | --- | 38.79 | 8.20 | 30.59 | 4.2/3.8 |
| S-2 (D) | 06/23/1998 | --- | 810 | 49 | 7.1 | 50 | 70 | 49 | 8.8 | --- | --- | --- | --- | --- | --- | 38.79 | 8.20 | 30.59 | 4.2/3.8 |
| S-2 | 09/01/1998 | --- | <2,000 | 170 | <20 | <20 | <20 | 9,300 | 12,000 | --- | --- | --- | --- | --- | --- | 38.79 | 9.85 | 28.94 | 1.9/1.6 |
| S-2 | 12/30/1998 | --- | <5,000 | 369 | <50 | <50 | <50 | 14,300 | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.84 | 28.95 | 2.0/1.8 |
| S-2 | 03/30/1999 | --- | <2,000 | 234 | <20.0 | 27.4 | 36.9 | 49,200 | 53,000 | --- | --- | --- | --- | --- | --- | 38.79 | 8.41 | 30.38 | 2.1/1.8 |
| S-2 | 03/31/1999 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 8.67 | 30.12 | --- |
| S-2 | 06/14/1999 | --- | <1,000 | 175 | <10.0 | <10.0 | 11.1 | 67,500 | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.80 | 28.99 | --- |
| S-2 | 09/30/1999 | 177 g | 678 | 135 | 8.22 | 14.9 | 25.8 | 17,100 | 17,000 a | --- | --- | --- | --- | --- | --- | 38.79 | 10.58 | 28.21 | 5.1/4.8 |
| S-2 | 12/22/1999 | 142 g | 316 | 55.8 | 10.1 | 5.26 | 10.4 | 9,410 | 8,810 | --- | --- | --- | --- | --- | --- | 38.79 | 10.13 | 28.66 | 9.6/5.2 |
| S-2 | 03/09/2000 | 630 g | 2,670 | 1,190 a | 62.7 | 84.1 | 125 | 29,200 a | 31,400 a | --- | --- | --- | --- | --- | --- | 38.78 | 7.88 | 30.90 | 7.6/5.0 |
| S-2 | 06/20/2000 | 401 g | <5,000 | 348 | <50.0 | 50.4 | 127 | 35,800 | 33,900 a | --- | --- | --- | --- | --- | --- | 38.78 | 10.27 | 28.51 | 1.9/2.2 |
| S-2 | 09/05/2000 | 373 g | <5,000 | 106 | <50.0 | <50.0 | <50.0 | 25,800 | 37,100 a | --- | --- | --- | --- | --- | --- | 38.78 | 10.19 | 28.59 | 0.5/1.6 |
| S-2 | 12/04/2000 | 1,730 g | <250 | 4.37 | <2.50 | <2.50 | <2.50 | 4,500 | 5,130 a | --- | --- | --- | --- | --- | --- | 38.78 | 10.30 | 28.48 | 10.6/9.4 |
| S-2 | 12/12/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 38.78 | 9.66 | 29.12 | --- |
| S-2 | 03/08/2001 | <51.3 | <2,500 | 318 | 45.7 | 53.5 | 88.5 | 15,500 | 17,500 | --- | --- | --- | --- | --- | --- | 38.78 | 8.57 | 30.21 | 2.7 b |
| S-2 | 06/07/2001 | 11,000 | 18,000 | 450 | 170 | 390 | 2,200 | 13,000 | 18,000 | --- | --- | --- | --- | --- | --- | 38.78 | 9.39 | 29.39 | 1.1/2.0 |

**Table 1**
**Groundwater Data**
**Former Shell Service Station, 4411 Foothill Boulevard, Oakland, California**

| Well ID | Date | TPHd (µg/L) | 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) | 1,2-DCA (µg/L) | EDB (µg/L) | TOC (ft MSL) | Depth to Water (ft TOC) | GW Elevation (ft MSL) | DO Reading (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-2 | 09/13/2001 | <5,000 | 13,000 | 140 | 110 | 350 | 1,400 | --- | 9,200 | --- | --- | --- | --- | --- | --- | 38.78 | 10.34 | 28.44 | 11.0/4.5 |
| S-2 | 11/19/2001 | 8,700 | 15,000 | 71 | 27 | 86 | 330 | --- | 7,500 | --- | --- | --- | --- | --- | --- | 38.78 | 9.90 | 28.88 | 5.0/3.1 |
| S-2 | 03/18/2002 | 14,000 | 3,700 | 93 | <20 | 35 | 100 | --- | 7,500 | --- | --- | --- | --- | --- | --- | 38.78 | 9.91 | 28.87 | 0.9/4.2 |
| S-2 | 06/19/2002 | <2,000 | 2,100 | 92 | <10 | 24 | 50 | --- | 4,700 | --- | --- | --- | --- | --- | --- | 38.78 | 9.98 | 28.80 | --- |
| S-2 | 09/11/2002 | <450 | 2,100 | 54 | <5.0 | 19 | 55 | --- | 1,900 | --- | --- | --- | --- | --- | --- | 38.78 | 10.25 | 28.53 | 3.5 |
| S-2 | 12/11/2002 | 1,900 | 570 | 9.4 | <2.5 | 7.2 | 14 | --- | 1,100 | --- | --- | --- | --- | --- | --- | 38.47 | 9.99 | 28.48 | 2.0 |
| S-2 | 03/11/2003 | <1,800 | 2,900 | 150 | 5.5 | 54 | 84 | --- | 870 | --- | --- | --- | --- | --- | --- | 38.47 | 9.25 | 29.22 | 2.4 |
| S-2 | 06/10/2003 | 840 g | 2,200 | 83 | <5.0 | 22 | 52 | --- | 970 | --- | --- | --- | --- | --- | --- | 38.47 | 9.20 | 29.27 | 5.0 |
| S-2 | 09/09/2003 | 270 g | 1,200 | 57 | <2.5 | 11 | 33 | --- | 740 | --- | --- | --- | --- | --- | --- | 38.47 | 9.70 | 28.77 | 3.7 |
| S-2 | 12/09/2003 | 1,900 g | 3,100 | 84 | <5.0 | 45 | 90 | --- | 660 | --- | --- | --- | --- | --- | --- | 38.47 | 9.31 | 29.16 | 24.21 |
| S-2 | 03/09/2004 | 990 g | 1,600 | 140 | <5.0 | 31 | 49 | --- | 610 | --- | --- | --- | --- | --- | --- | 38.47 | 8.24 | 30.23 | 2.6 |
| S-2 | 06/08/2004 | 400 g | 640 | 40 | <2.5 | 4.2 | 6.6 | --- | 460 | --- | --- | --- | --- | --- | --- | 38.47 | 9.40 | 29.07 | 8.2 |
| S-2 | 09/07/2004 | 240 e | <100 | 6.6 | <1.0 | 1.3 | 2.3 | --- | 140 | 450 | <4.0 | <4.0 | <4.0 | --- | --- | 38.47 | 9.78 | 28.69 | 2.4 |
| S-2 | 12/06/2004 | 140 g | 260 | 26 | <1.0 | 2.0 | <2.0 | --- | 270 | --- | --- | --- | --- | --- | --- | 38.47 | 9.45 | 29.02 | 8.5 |
| S-2 | 03/07/2005 | 450 e | 2,300 | 100 | <5.0 | 11 | <10 | --- | 570 | --- | --- | --- | --- | --- | --- | 38.47 | 7.82 | 30.65 | 16.7 |
| S-2 | 06/10/2005 | 550 g | <2,500 | 200 | <25 | <25 | <50 | --- | 630 | --- | --- | --- | --- | --- | --- | 38.47 | 8.37 | 30.10 | 0.70 |
| S-2 | 07/14/2005 | Well destroyed | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | | | | | | | | | | | | | | | | | |
| S-3 | 05/28/1993 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | 8.45 | 28.88 | --- |
| S-3 | 06/03/1993 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | 8.36 | 28.97 | --- |
| S-3 | 01/19/1900 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | 8.41 | 28.92 | --- |
| S-3 | 06/29/1993 | --- | 29,000 | 1,500 | 1,800 | 950 | 6,200 | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | --- | --- | --- |
| S-3 | 09/21/1993 | --- | 15,000 | 900 | 2,200 | 2,600 | 11,000 | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | 10.08 | 27.25 | --- |
| S-3 | 12/14/1993 | --- | 20,000 | 1,100 | 2,400 | 1,800 | 8,500 | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | 8.80 | 28.53 | --- |
| S-3 | 03/17/1994 | --- | 14,000 | 580 | 190 | 750 | 1,700 | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | 8.34 | 28.99 | --- |
| S-3 | 06/16/1994 | --- | 20,000 | 700 | 690 | 1,400 | 4,100 | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | 9.12 | 28.21 | --- |
| S-3 (D) | 06/16/1994 | --- | 19,000 | 680 | 560 | 1,300 | 3,700 | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | --- | --- | --- |
| S-3 | 09/22/1994 | --- | 24,000 | 630 | 1,100 | 1,400 | 5,700 | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | 10.27 | 27.06 | --- |
| S-3 (D) | 09/22/1994 | --- | 25,000 | 720 | 1,100 | 1,500 | 6,100 | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | --- | --- | --- |
| S-3 | 12/15/1994 | --- | 18,000 | 520 | 800 | 1,100 | 4,200 | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | 7.81 | 29.52 | --- |
| S-3 (D) | 12/15/1994 | --- | 23,000 | 1,000 | 1,900 | 2,000 | 8,600 | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | --- | --- | --- |
| S-3 | 03/30/1995 | --- | 8,800 a | 360 a | 730 a | 700 a | 3,700 a | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | 7.06 | 30.27 | --- |
| S-3 (D) | 03/30/1995 | --- | 7,600 a | 330 a | 570 a | 600 a | 2,600 a | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | --- | --- | --- |

**Table 1**
**Groundwater Data**
**Former Shell Service Station, 4411 Foothill Boulevard, Oakland, California**

| Well ID | Date | TPHd (µg/L) | 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) | 1,2-DCA (µg/L) | EDB (µg/L) | TOC (ft MSL) | Depth to Water (ft TOC) | GW Elevation (ft MSL) | DO Reading (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-3 | 06/20/1995 | --- | 9,600 | 510 | 170 | 960 | 1,700 | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | 8.15 | 29.18 | --- |
| S-3 (D) | 06/20/1995 | --- | 9,800 | 500 | 170 | 950 | 1,700 | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | --- | --- | --- |
| S-3 | 09/20/1995 | --- | 21,000 | 400 | 560 | 1,300 | 4,600 | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | 9.32 | 28.01 | --- |
| S-3 | 12/06/1995 | --- | 24,000 | 630 | 1,400 | 1,400 | 6,000 | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | 10.53 | 26.80 | --- |
| S-3 (D) | 12/06/1995 | --- | 22,000 | 630 | 1,200 | 1,400 | 5,500 | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | --- | --- | --- |
| S-3 | 03/21/1996 | --- | 9,100 | 290 | 110 | 490 | 1,600 | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | 7.32 | 30.01 | --- |
| S-3 (D) | 03/21/1996 | --- | 11,000 | 310 | 250 | 540 | 2,100 | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | --- | --- | --- |
| S-3 | 09/06/1996 | --- | 15,000 | 440 | 300 | 1,100 | 3,000 | 500 | --- | --- | --- | --- | --- | --- | --- | 37.33 | 10.10 | 27.23 | --- |
| S-3 (D) | 09/06/1996 | --- | 11,000 | 490 | 170 | 820 | 1,500 | 700 | --- | --- | --- | --- | --- | --- | --- | 37.33 | --- | --- | --- |
| S-3 | 12/19/1996 | --- | 12,000 | 600 | 380 | 850 | 2,500 | 380 | --- | --- | --- | --- | --- | --- | --- | 37.33 | 8.36 | 28.97 | --- |
| S-3 (D) | 12/19/1996 | --- | 12,000 | 590 | 380 | 830 | 2,500 | 540 | --- | --- | --- | --- | --- | --- | --- | 37.33 | 8.36 | 28.97 | --- |
| S-3 | 03/17/1997 | --- | 12,000 | 520 | 140 | 740 | 1,400 | 320 | --- | --- | --- | --- | --- | --- | --- | 37.33 | 8.57 | 28.76 | --- |
| S-3 (D) | 03/17/1997 | --- | 9,600 | 500 | 100 | 680 | 1,100 | <250 | --- | --- | --- | --- | --- | --- | --- | 37.33 | 8.57 | 28.76 | --- |
| S-3 | 06/11/1997 | --- | 9,600 | 510 | 94 | 740 | 1,100 | 410 | --- | --- | --- | --- | --- | --- | --- | 37.33 | 9.26 | 28.07 | --- |
| S-3 | 09/17/1997 | --- | 21,000 | 140 | 560 | 1,800 | 7,200 | 130 | --- | --- | --- | --- | --- | --- | --- | 37.33 | 9.62 | 27.71 | --- |
| S-3 | 12/11/1997 | --- | 24,000 | 530 | 970 | 1,600 | 6,900 | 950 | --- | --- | --- | --- | --- | --- | --- | 37.33 | 7.34 | 29.99 | --- |
| S-3 (D) | 12/11/1997 | --- | 29,000 | 520 | 1,000 | 1,600 | 7,300 | 970 | --- | --- | --- | --- | --- | --- | --- | 37.33 | 7.34 | 29.99 | --- |
| S-3 | 03/16/1998 | --- | 29,000 | 840 | 810 | 1,700 | 6,000 | <250 | --- | --- | --- | --- | --- | --- | --- | 37.33 | 5.75 | 31.58 | 3.0/3.4 |
| S-3 | 06/23/1998 | --- | 3,800 | 90 | 220 | 240 | 1,400 | <50 | --- | --- | --- | --- | --- | --- | --- | 37.33 | 5.98 | 31.35 | 4.2/2.0 |
| S-3 | 09/01/1998 | --- | 9,600 | 480 | 120 | 870 | 1,800 | 490 | <50 | --- | --- | --- | --- | --- | --- | 37.33 | 8.98 | 28.35 | 1.9/2.8 |
| S-3 (D) | 09/01/1998 | --- | 9,200 | 420 | 110 | 800 | 1,700 | 110 | <50 | --- | --- | --- | --- | --- | --- | 37.33 | 8.98 | 28.35 | 1.9/2.8 |
| S-3 | 12/30/1998 | --- | 7,660 | 240 | 103 | 410 | 834 | 64.9 | --- | --- | --- | --- | --- | --- | --- | 37.33 | 9.11 | 28.22 | 1.8/1.6 |
| S-3 | 03/30/1999 | --- | 2,070 | 195 | 10.0 | <5.00 | 48.6 | 354 | 64.6 | --- | --- | --- | --- | --- | --- | 37.33 | 6.95 | 30.38 | 1.3/1.5 |
| S-3 | 03/31/1999 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | 7.48 | 29.85 | --- |
| S-3 | 06/14/1999 | --- | 1,250 | 37.4 | 17.4 | 110 | 109 | 118 | --- | --- | --- | --- | --- | --- | --- | 37.33 | 8.85 | 28.48 | --- |
| S-3 | 09/30/1999 | 2,020 g | 8,270 | 226 | 113 | 686 | 1,440 | 184 | --- | --- | --- | --- | --- | --- | --- | 37.33 | 9.66 | 27.67 | 3.5/2.8 |
| S-3 | 12/22/1999 | 2,270 g | 9,530 | 207 | 132 | 603 | 1,450 | 616 | --- | --- | --- | --- | --- | --- | --- | 37.33 | 9.50 | 27.83 | 0.98/0.8 |
| S-3 | 03/09/2000 | 1,600 g | 2,290 a | 84.5 a | 17.0 a | 104 a | 105 a | 29.3 a | --- | --- | --- | --- | --- | --- | --- | 37.30 | 6.25 | 31.05 | 1.0/1.4 |
| S-3 | 06/20/2000 | 2,900 g | 5,570 | 117 | 41.6 | 395 | 393 | 354 | --- | --- | --- | --- | --- | --- | --- | 37.30 | 9.67 | 27.63 | 1.8/2.0 |
| S-3 | 09/05/2000 | 1,600 g | 6,930 | 127 | 85.5 | 354 | 535 | 509 | --- | --- | --- | --- | --- | --- | --- | 37.30 | 9.49 | 27.81 | 1.1/1.9 |
| S-3 | 12/04/2000 | 1,460 g | 8,390 | 217 | 82.4 | 471 | 952 | 436 | --- | --- | --- | --- | --- | --- | --- | 37.30 | 9.23 | 28.07 | 1.1/1.5 |
| S-3 | 12/12/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.30 | 9.23 | 28.07 | --- |
| S-3 | 03/08/2001 | 1,720 g | 19,400 | 465 | 772 | 1,230 | 3,830 | 160 | --- | --- | --- | --- | --- | --- | --- | 37.30 | 8.17 | 29.13 | 1.1 c |

**Table 1**
**Groundwater Data**
**Former Shell Service Station, 4411 Foothill Boulevard, Oakland, California**

| Well ID | Date | TPHd (µg/L) | 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) | 1,2-DCA (µg/L) | EDB (µg/L) | TOC (ft MSL) | Depth to Water (ft TOC) | GW Elevation (ft MSL) | DO Reading (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-3 | 06/07/2001 | 1,400 | 12,000 | 230 | 110 | 900 | 1,100 | 120 | --- | --- | --- | --- | --- | --- | --- | 37.30 | 8.78 | 28.52 | 0.8/0.9 |
| S-3 | 09/13/2001 | <2,000 | 32,000 | 400 | 880 | 2,000 | 7,000 | --- | <100 | --- | --- | --- | --- | --- | --- | 37.30 | 9.93 | 27.37 | 3.7/2.9 |
| S-3 | 11/19/2001 | <2,000 | 26,000 | 160 | 210 | 990 | 4,100 | --- | <50 | --- | --- | --- | --- | --- | --- | 37.30 | 9.33 | 27.97 | 2.9/1.9 |
| S-3 | 03/18/2002 | 810 | 3,800 | 61 | 120 | 130 | 620 | --- | 5.0 | --- | --- | --- | --- | --- | --- | 37.30 | 7.03 | 30.27 | 1.1/4.7 |
| S-3 | 06/19/2002 | <500 | 3,200 | 48 | 81 | 160 | 360 | --- | 9.4 | --- | --- | --- | --- | --- | --- | 37.30 | 8.92 | 28.38 | --- |
| S-3 | 09/11/2002 | <1,100 | 16,000 | 230 | 570 | 980 | 3,900 | --- | <50 | --- | --- | --- | --- | --- | --- | 37.30 | 9.54 | 27.76 | 3.0 |
| S-3 | 12/11/2002 | <1,500 | 16,000 | 130 | 270 | 770 | 3,000 | --- | <50 | --- | --- | --- | --- | --- | --- | 36.85 | 9.23 | 27.62 | 1.6 |
| S-3 | 03/11/2003 | <1,500 | 8,100 | 29 | 110 | 190 | 1,700 | --- | <20 | --- | --- | --- | --- | --- | --- | 36.85 | 7.32 | 29.53 | 3.9 |
| S-3 | 06/10/2003 | Well inaccessible | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.85 | --- | --- | --- |
| S-3 | 09/09/2003 | 640 g | 5,900 | 44 | 140 | 130 | 1,500 | --- | 4.4 | --- | --- | --- | --- | --- | --- | 36.85 | 8.99 | 27.86 | 2.2 |
| S-3 | 12/09/2003 | 1,500 g | 27,000 | 130 | 460 | 550 | 4,900 | --- | <20 | --- | --- | --- | --- | --- | --- | 36.85 | 7.67 | 29.18 | 1.6 |
| S-3 | 03/09/2004 | 1,700 g | 11,000 | 24 | 100 | 230 | 3,200 | --- | <5.0 | --- | --- | --- | --- | --- | --- | 36.85 | 6.35 | 30.50 | 2.1 |
| S-3 | 06/08/2004 | 1,100 g | 1,700 | 11 | 34 | 29 | 420 | --- | <2.5 | --- | --- | --- | --- | --- | --- | 36.85 | 8.25 | 28.60 | 0.1 |
| S-3 | 09/07/2004 | 310 e | 850 | 13 | 0.99 | 23 | 17 | --- | 7.0 | <5.0 | <2.0 | <2.0 | <2.0 | --- | --- | 36.85 | 9.05 | 27.80 | 0.1 |
| S-3 | 12/06/2004 | Unable to sample | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.85 | 7.70 | 29.15 | --- |
| S-3 | 12/15/2004 | 270 e | 620 | 1.9 | 7.8 | 10 | 180 | --- | <0.50 | --- | --- | --- | --- | --- | --- | 36.85 | 5.83 | 31.02 | 2.4 |
| S-3 | 03/07/2005 | 400 e | 4,500 | <0.50 | 7.7 | 30 | 350 | --- | <0.50 | --- | --- | --- | --- | --- | --- | 36.85 | 4.58 | 32.27 | 4.4 |
| S-3 | 06/10/2005 | 130 g | 850 | <0.50 | 1.3 | 7.4 | 53 | --- | <0.50 | --- | --- | --- | --- | --- | --- | 36.85 | 5.40 | 31.45 | 0.17 |
| S-3 | 07/14/2005 | Well destroyed | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | | | | | | | | | | | | | | | | | |
| S-4 | 03/29/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 39.06 | 8.37 | 30.69 | --- |
| S-4 | 03/31/2000 | 5,780 g | 20,900 | 4,570 | 272 | 595 | 997 | 4,490 | 4,450 a | --- | --- | --- | --- | --- | --- | 39.06 | 8.92 | 30.14 | 1.8/1.2 |
| S-4 | 06/20/2000 | 244 g | 19,500 | 4,590 | 309 | 723 | 1,290 | 3,740 | --- | --- | --- | --- | --- | --- | --- | 39.06 | 8.77 | 30.29 | 2.7/2.9 |
| S-4 | 09/05/2000 | 1,670 g | 5,760 | 841 | 54.2 | 162 | 115 | 1,040 | --- | --- | --- | --- | --- | --- | --- | 39.06 | 10.57 | 28.49 | 1.3/0.3 |
| S-4 | 12/04/2000 | 1,050 g | 3,990 | 949 | <10.0 | 118 | 48.3 | 1,120 | --- | --- | --- | --- | --- | --- | --- | 39.06 | 10.67 | 28.39 | 1.1/1.0 |
| S-4 | 12/12/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 39.06 | 10.64 | 28.42 | --- |
| S-4 | 03/08/2001 | 5,840 g | 20,100 | 5,210 | 105 | 381 | 281 | 2,520 | --- | --- | --- | --- | --- | --- | --- | 39.06 | 8.44 | 30.62 | 1.0/0.9 |
| S-4 | 06/07/2001 | 3,500 | 11,000 | 2,500 | 86 | 370 | 170 | 2,000 | --- | --- | --- | --- | --- | --- | --- | 39.06 | 10.57 | 28.49 | 0.7/0.6 |
| S-4 | 09/13/2001 | <800 | 4,200 | 790 | 14 | 110 | 48 | --- | 690 | --- | --- | --- | --- | --- | --- | 39.06 | 11.27 | 27.79 | 3.8/3.9 |
| S-4 | 11/19/2001 | <600 | 2,300 | 230 | 4.1 | 21 | 22 | --- | 590 | --- | --- | --- | --- | --- | --- | 39.06 | 10.83 | 28.23 | 3.6/1.6 |
| S-4 | 03/18/2002 | Unable to sample | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 39.06 | 8.75 | 30.31 | --- |
| S-4 | 03/29/2002 | --- | 14,000 | 1,700 | 30 | 280 | 250 | --- | 960 | --- | --- | --- | --- | --- | --- | 39.06 | 8.85 d | 30.21 | 3.0/3.1 |
| S-4 | 06/19/2002 | <1,500 | 4,700 | 620 | 9.5 | 84 | 37 | --- | 490 | --- | --- | --- | --- | --- | --- | --- | 10.37 d | --- | --- |

**Table 1**
**Groundwater Data**
**Former Shell Service Station, 4411 Foothill Boulevard, Oakland, California**

| Well ID | Date | TPHd (µg/L) | 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) | 1,2-DCA (µg/L) | EDB (µg/L) | TOC (ft MSL) | Depth to Water (ft TOC) | GW Elevation (ft MSL) | DO Reading (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-4 | 09/11/2002 | 280 | 2,700 | 280 | 4.6 | 23 | 13 | --- | 410 | --- | --- | --- | --- | --- | --- | --- | 11.14 | --- | 0.6 |
| S-4 | 12/11/2002 | <900 | 3,300 | 320 | 5.7 | 24 | 15 | --- | 420 | --- | --- | --- | --- | --- | --- | 38.69 | 10.78 | 27.91 | 2.2 |
| S-4 | 03/11/2003 | <5,600 | 12,000 | 1,900 | 63 | 360 | 280 | --- | 930 | --- | --- | --- | --- | --- | --- | 38.69 | 9.31 | 29.38 | 1.5 |
| S-4 | 06/10/2003 | 3,100 g | 13,000 | 2,400 | 86 | 650 | 380 | --- | 1,100 | --- | --- | --- | --- | --- | --- | 38.69 | 9.77 | 28.92 | 0.8 |
| S-4 | 09/09/2003 | 1,700 g | 3,700 | 510 | 12 | 43 | 43 | --- | 650 | --- | --- | --- | --- | --- | --- | 38.69 | 10.78 | 27.91 | 0.9 |
| S-4 | 12/09/2003 | 390 g | 3,900 | 150 | 4.2 | 7.5 | 13 | --- | 510 | --- | --- | --- | --- | --- | --- | 38.69 | 10.20 | 28.49 | 0.1 |
| S-4 | 03/09/2004 | 3,100 g | 13,000 | 2,500 | 110 | 810 | 1,100 | --- | 1,100 | --- | --- | --- | --- | --- | --- | 38.69 | 7.67 | 31.02 | 0.7 |
| S-4 | 06/08/2004 | 1,400 g | 6,100 | 870 | 30 | 120 | 150 | --- | 420 | --- | --- | --- | --- | --- | --- | 38.69 | 10.27 | 28.42 | 0.3 |
| S-4 | 09/07/2004 | 890 e | 3,100 | 290 | 6.4 | 18 | 14 | --- | 250 | 140 | <10 | <10 | <10 | --- | --- | 38.69 | 10.91 | 27.78 | 0.1 |
| S-4 | 12/06/2004 | 670 e | 4,900 | 520 | 9.9 | 38 | 24 | --- | 290 | --- | --- | --- | --- | --- | --- | 38.69 | 10.03 | 28.66 | 0.2 |
| S-4 | 03/07/2005 | 2,900 e | 28,000 | 2,300 | 130 | 690 | 770 | --- | 770 | --- | --- | --- | --- | --- | --- | 38.69 | 6.20 | 32.49 | 0.2 |
| S-4 | 06/10/2005 | 2,700 e | 13,000 | 1,900 | 81 | 380 | 460 | --- | 890 | --- | --- | --- | --- | --- | --- | 38.69 | 8.90 | 29.79 | 0.15 |
| S-4 | 07/14/2005 | Well destroyed | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | | | | | | | | | | | | | | | | | |
| S-5 | 05/31/2002 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.54 | --- | --- |
| S-5 | 06/19/2002 | <2,000 | 16,000 | 2,600 | 320 | 180 | 1,600 | --- | 5,300 | --- | --- | --- | --- | --- | --- | --- | 9.87 | --- | --- |
| S-5 | 09/11/2002 | <1,200 | 8,800 | 1,500 | 64 | 89 | 120 | --- | 5,600 | --- | --- | --- | --- | --- | --- | --- | 10.28 | --- | 0.9 |
| S-5 | 12/11/2002 | <1,000 | 4,400 | 280 | 61 | 130 | 130 | --- | 4,000 | --- | --- | --- | --- | --- | --- | --- | 9.87 | --- | 2.9 |
| S-5 | 03/11/2003 | <900 | 2,300 | 28 | 5.6 | 59 | 15 | --- | 2,400 | --- | --- | --- | --- | --- | --- | 38.05 | 8.26 | 29.79 | 1.6 |
| S-5 | 06/10/2003 | 620 g | 2,400 | 11 | 7.2 | 56 | 38 | --- | 1,100 | --- | --- | --- | --- | --- | --- | 38.05 | 8.51 | 29.54 | 0.1 |
| S-5 | 09/09/2003 | 660 g | 3,700 | 23 | 14 | 44 | 150 | --- | 440 | --- | --- | --- | --- | --- | --- | 38.05 | 9.44 | 28.61 | 0.1 |
| S-5 | 12/09/2003 | 600 g | 12,000 | 200 | 80 | 41 | 320 | --- | 580 | --- | --- | --- | --- | --- | --- | 38.05 | 9.50 | 28.55 | 0.4 |
| S-5 | 03/09/2004 | 550 g | 2,300 | 130 | 3.5 | 6.9 | 13 | --- | 250 | --- | --- | --- | --- | --- | --- | 38.05 | 7.04 | 31.01 | 0.2 |
| S-5 | 06/08/2004 | 490 g | 2,900 | 11 | <2.5 | 8.9 | 18 | --- | 120 | --- | --- | --- | --- | --- | --- | 38.05 | 8.87 | 29.18 | 0.2 |
| S-5 | 09/07/2004 | 650 e | 3,600 | 17 | 11 | 12 | 30 | --- | 120 | 3,700 | <10 | <10 | <10 | --- | --- | 38.05 | 9.45 | 28.60 | 0.1 |
| S-5 | 12/06/2004 | 460 e | 4,700 | 99 | 28 | 14 | 69 | --- | 180 | --- | --- | --- | --- | --- | --- | 38.05 | 8.75 | 29.30 | 0.1 |
| S-5 | 03/07/2005 | 360 e | 4,700 | 440 | <2.5 | <2.5 | <5.0 | --- | 200 | --- | --- | --- | --- | --- | --- | 38.05 | 7.28 | 30.77 | 0.1 |
| S-5 | 06/10/2005 | 240 e | 1,200 | 1.3 | <0.50 | <0.50 | 1.2 | --- | 80 | --- | --- | --- | --- | --- | --- | 38.05 | 7.26 | 30.79 | 0.25 |
| S-5 | 07/14/2005 | Well destroyed | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | | | | | | | | | | | | | | | | | |
| S-6 | 02/22/2007 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.86 | 8.18 | 29.68 | --- |
| S-6 | 03/02/2007 | 1,700 | 5,100 a | 630 a | 23 | 200 | 110 | --- | 140 | 280 | --- | --- | --- | 13 | <0.50 | 37.86 | 7.73 | 30.13 | --- |
| S-6 | 05/23/2007 | 2,600 | 5,600 f | 510 | 16 | 11 | 144 | --- | 72 | 66 | --- | --- | --- | <2.5 | <5.0 | 37.86 | 8.13 | 29.73 | --- |

**Table 1**
**Groundwater Data**
**Former Shell Service Station, 4411 Foothill Boulevard, Oakland, California**

| Well ID | Date | TPHd (µg/L) | 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) | 1,2-DCA (µg/L) | EDB (µg/L) | TOC (ft MSL) | Depth to Water (ft TOC) | GW Elevation (ft MSL) | DO Reading (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-6 | 08/28/2007 | 6,100 g | 13,000 f | 650 | 32 | 480 | 242 | --- | 78 | 320 | 6.1 | <10 | <10 | <2.5 | <5.0 | 37.86 | 8.44 | 29.42 | --- |
| S-6 | 11/13/2007 | 6,400 g | 19,000 f | 760 | 47 | 500 | 602 | --- | 68 | 340 | --- | --- | --- | <5.0 | <10 | 37.86 | 8.78 | 29.08 | --- |
| S-6 | 02/08/2008 | 2,200 g | 6,800 f | 380 | 14 | 130 | 87.0 | --- | 75 | 200 | --- | --- | --- | <2.5 | <5.0 | 37.86 | 7.06 | 30.80 | --- |
| S-6 | 05/20/2008 | 2,900 g | 12,000 f | 590 | 21 | 270 | 60 | --- | 54 | 240 | --- | --- | --- | <2.5 | <5.0 | 37.86 | 8.60 | 29.26 | --- |
| S-6 | 08/12/2008 | 7,100 g | 22,000 | 890 | 75 | 450 | 1,170 | --- | 71 | 200 | <20 | <20 | <20 | <5.0 | <10 | 37.86 | 9.21 | 28.65 | --- |
| S-6 | 12/02/2008 | 4,600 g | 26,000 | 1,500 | 170 | 670 | 1,500 | --- | 87 | 260 | --- | --- | --- | <5.0 | <10 | 37.86 | 8.72 | 29.14 | --- |
| S-6 | 02/05/2009 | 5,200 g | 29,000 | 1,200 | 210 | 910 | 3,400 | --- | 78 | 230 | --- | --- | --- | <5.0 | <10 | 37.86 | 9.19 | 28.67 | --- |
| S-6 | 05/19/2009 | 1,900 g | 8,600 | 660 | 22 | 120 | 110 | --- | 94 | 460 | --- | --- | --- | <5.0 | <10 | 37.86 | 8.26 | 29.60 | --- |
| S-6 | 09/29/2009 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.86 | 6.70 | 31.16 | --- |
| S-6 | 12/23/2009 | 1,800 g | 4,800 | 550 | 12 | 38 | 16 | --- | 170 | 290 | <20 | <20 | <20 | <5.0 | <10 | 37.86 | 6.01 | 31.85 | --- |
| S-6 | 03/16/2010 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.86 | 5.65 | 32.21 | --- |
| S-6 | 06/21/2010 | 2,700 g | 8,300 | 360 | 11 | 67 | 56 | --- | 130 | 250 | --- | --- | --- | <2.5 | <5.0 | 37.86 | 8.89 | 28.97 | --- |
| S-6 | 12/28/2010 | 2,200 g | 6,100 | 290 | 11 | 60 | 41 | --- | 49 | 210 | 5.5 | <4.0 | <4.0 | <1.0 | <2.0 | 37.86 | 7.63 | 30.23 | --- |
| S-6 | 12/23/2011 | 2,400 | 12,000 | 760 | 24 | 76 | 49 | --- | 61 | 320 | <10 | <10 | <10 | <5.0 | <5.0 | 37.86 | 8.34 | 29.52 | --- |
| S-6 | 12/28/2012 | 1,400 | 6,500 | 350 | 12 | 14 | <10 | --- | 68 | 200 | <5.0 | <5.0 | <5.0 | --- | --- | 37.86 | 6.50 | 31.36 | --- |
| S-6 | 09/19/2013 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.86 | 8.53 | 29.33 | --- |
| S-6 | 12/23/2013 | 2,600 | 16,000 | 970 | 43 | 340 | 260 | --- | 45 | 200 | 7.0 | <5.0 | <5.0 | --- | --- | 37.86 | 8.77 | 29.09 | --- |
| S-6 | 03/05/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.86 | 8.57 | 29.29 | --- |
| S-6 | 06/06/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.86 | 8.44 | 29.42 | --- |
| S-6 | 12/08/2014 | 2,400 | 12,000 | 320 | 15 | 73 | 50 | --- | 28 | 110 | <5.0 | <5.0 | <5.0 | --- | --- | 37.86 | 8.10 | 29.76 | --- |
| S-6 | 06/03/2015 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.86 | 8.53 | 29.33 | --- |
| S-6 | 12/17/2015 | 1,100 | 15,000 | 740 | 29 | 230 | 58 | --- | 34 | <200 | <10 | <10 | <10 | --- | --- | 37.86 | 9.12 | 28.74 | --- |
| **S-6** | **06/03/2016** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **37.86** | **8.11** | **29.75** | **---** |
| | | | | | | | | | | | | | | --- | | | | | --- |
| S-7 | 02/22/2007 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.58 | 7.39 | 30.19 | --- |
| S-7 | 03/02/2007 | 2,500 | 100,000 a | 32,000 a | 9,700 a | 2,900 a | 14,000 a | --- | 310 a | 480 | --- | --- | --- | --- | <0.50 | 37.58 | 7.42 | 30.16 | --- |
| S-7 | 05/23/2007 | 3,700 | 82,000 f,g | 24,000 | 8,100 | 2,800 | 13,000 | --- | 190 | <200 | --- | --- | --- | --- | <20 | 37.58 | 8.38 | 29.20 | --- |
| S-7 | 08/28/2007 | 4,500 g | 96,000 f | 23,000 | 7,000 | 2,900 | 12,200 | --- | 190 h | <2,000 | <400 | <400 | <400 | --- | <200 | 37.58 | 9.32 | 28.26 | --- |
| S-7 | 11/13/2007 | 25,000 g | 100,000 f | 22,000 | 6,500 | 3,000 | 12,400 | --- | <200 | <2,000 | --- | --- | --- | --- | <200 | 37.58 | 9.60 | 27.98 | --- |
| S-7 | 02/08/2008 | 4,000 g | 74,000 f | 29,000 | 9,300 | 3,100 | 13,700 | --- | 500 | <2,000 | --- | --- | --- | --- | <200 | 37.58 | 6.57 | 31.01 | --- |
| S-7 | 05/20/2008 | 1,600 g | 69,000 f | 20,000 | 5,500 | 2,500 | 9,800 | --- | 260 | <2,000 | --- | --- | --- | --- | <200 | 37.58 | 9.00 | 28.58 | --- |
| S-7 | 08/12/2008 | 4,900 g | 120,000 | 25,000 | 8,400 | 2,800 | 11,700 | --- | <200 | <2,000 | <400 | <400 | <400 | <100 | <200 | 37.58 | 9.81 | 27.77 | --- |
| S-7 | 12/02/2008 | 4,300 g | 120,000 | 24,000 | 8,400 | 3,600 | 15,000 | --- | 320 | <2,000 | --- | --- | --- | <100 | <200 | 37.58 | 9.91 | 27.67 | --- |

**Table 1**
**Groundwater Data**
**Former Shell Service Station, 4411 Foothill Boulevard, Oakland, California**

| Well ID | Date | TPHd (µg/L) | 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) | 1,2-DCA (µg/L) | EDB (µg/L) | TOC (ft MSL) | Depth to Water (ft TOC) | GW Elevation (ft MSL) | DO Reading (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-7 | 02/05/2009 | 3,800 g | 99,000 | 25,000 | 7,600 | 2,500 | 12,000 | --- | 370 | <2,000 | --- | --- | --- | <100 | <200 | 37.58 | 9.30 | 28.28 | --- |
| S-7 | 05/19/2009 | 3,300 g | 64,000 | 16,000 | 4,400 | 2,100 | 7,100 | --- | 250 | <2,000 | --- | --- | --- | <100 | <200 | 37.58 | 8.30 | 29.28 | --- |
| S-7 | 09/29/2009 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.57 | 6.13 | 31.44 | --- |
| S-7 | 12/23/2009 | 3,900 g | 98,000 | 25,000 | 7,100 | 2,100 | 9,000 | --- | 400 | <2000 | <400 | <400 | <400 | <100 | <200 | 37.57 | 5.32 | 32.25 | --- |
| S-7 | 03/16/2010 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.57 | 4.82 | 32.75 | --- |
| S-7 | 06/21/2010 | 2,400 g | 42,000 | 11,000 | 2,300 | 1,300 | 4,600 | --- | 180 | <1,000 | --- | --- | --- | <50 | <100 | 37.57 | 8.19 | 29.38 | --- |
| S-7 | 12/28/2010 | 3,500 g | 48,000 | 13,000 | 3,700 | 1,800 | 7,200 | --- | 160 | <1,000 | <200 | <200 | <200 | <50 | <100 | 37.57 | 7.05 | 30.52 | --- |
| S-7 | 12/23/2011 | 3,200 | 40,000 | 11,000 | 3,300 | 1,400 | 6,600 | --- | <200 | <2,000 | <200 | <200 | <200 | <100 | <100 | 37.57 | 8.02 | 29.55 | --- |
| S-7 | 12/28/2012 | 2,200 | 26,000 | 6,200 | 2,000 | 1,000 | 5,000 | --- | <100 | <2,000 | <100 | <100 | <100 | --- | --- | 37.57 | 5.88 | 31.69 | --- |
| S-7 | 09/19/2013 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.57 | 9.08 | 28.49 | --- |
| S-7 | 12/23/2013 | 1,600 | 28,000 | 9,900 | 1,200 | 750 | 3,300 | --- | <100 | <2,000 | <100 | <100 | <100 | --- | --- | 37.57 | 9.63 | 27.94 | --- |
| S-7 | 03/05/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.57 | 8.73 | 28.84 | --- |
| S-7 | 06/06/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.57 | 8.96 | 28.61 | --- |
| S-7 | 12/08/2014 | 2,500 | 48,000 j | 15,000 | 2,800 | 1,400 | 6,200 | --- | 250 | <2,000 | <100 | <100 | <100 | --- | --- | 37.57 | 8.22 | 29.35 | --- |
| S-7 | 06/03/2015 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.57 | 9.17 | 28.40 | --- |
| S-7 | 12/17/2015 | 860 | 38,000 | 13,000 | 1,300 | 850 | 3,000 | --- | <200 | <4,000 | <200 | <200 | <200 | --- | --- | 37.57 | 9.95 | 27.62 | --- |
| **S-7** | **06/03/2016** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **37.57** | **8.75** | **28.82** | **---** |
| | | | | | | | | | | | | | | | | | | | |
| S-8 | 02/22/2007 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.05 | 6.65 | 30.40 | --- |
| S-8 | 03/02/2007 | 2,300 | 72,000 a | 12,000 a | 5,600 a | 2,900 a | 15,000 a | --- | 120 | 230 | --- | --- | --- | 150 | <2.5 | 37.05 | 6.60 | 30.45 | --- |
| S-8 | 05/23/2007 | 5,800 | 69,000 f,g | 12,000 | 6,700 | 3,100 | 19,500 | --- | 160 | 280 | --- | --- | --- | <10 | <20 | 37.05 | 7.91 | 29.14 | --- |
| S-8 | 08/28/2007 | 6,700 g | 69,000 f | 11,000 | 4,800 | 3,100 | 16,800 | --- | 170 | <1,000 | <200 | <200 | <200 | <50 | <100 | 37.05 | 8.79 | 28.26 | --- |
| S-8 | 11/13/2007 | 21,000 g | 84,000 f | 10,000 | 5,000 | 3,300 | 18,300 | --- | 290 | <1,000 | --- | --- | --- | <50 | <100 | 37.05 | 8.93 | 28.12 | --- |
| S-8 | 02/08/2008 | 4,500 g | 54,000 f | 11,000 | 5,500 | 3,500 | 18,200 | --- | 200 | <1,000 | --- | --- | --- | <50 | <100 | 37.05 | 6.26 | 30.79 | --- |
| S-8 | 05/20/2008 | 2,200 g | 67,000 f | 10,000 | 5,400 | 3,900 | 19,600 | --- | 160 | <1,000 | --- | --- | --- | <50 | <100 | 37.05 | 7.40 | 29.65 | --- |
| S-8 | 08/12/2008 | 5,200 g | 77,000 | 9,300 | 3,200 | 2,500 | 14,300 | --- | 210 | <1,000 | <200 | <200 | <200 | <50 | <100 | 37.05 | 9.10 | 27.95 | --- |
| S-8 | 12/02/2008 | 3,600 g | 70,000 | 9,500 | 2,700 | 2,500 | 12,300 | --- | 290 | 1,200 | --- | --- | --- | <50 | <100 | 37.05 | 9.39 | 27.66 | --- |
| S-8 | 02/05/2009 | 3,500 g | 74,000 | 10,000 | 3,500 | 2,600 | 15,000 | --- | 240 | <1,000 | --- | --- | --- | <50 | <100 | 37.05 | 8.75 | 28.30 | --- |
| S-8 | 05/19/2009 | 340 g | 69,000 | 8,200 | 3,700 | 2,900 | 14,000 | --- | <100 | <1,000 | --- | --- | --- | <50 | <100 | 37.05 | 7.56 | 29.49 | --- |
| S-8 | 09/29/2009 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.05 | 5.82 | 31.23 | --- |
| S-8 | 12/23/2009 | 4,400 g | 58,000 | 7,800 | 2,000 | 2,100 | 11,000 | --- | 170 | <1000 | <200 | <200 | <200 | <50 | <100 | 37.05 | 7.02 | 30.03 | --- |
| S-8 | 03/16/2010 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.05 | 4.26 | 32.79 | --- |
| S-8 | 06/21/2010 | 3,900 g | 74,000 | 11,000 | 3,900 | 3,000 | 15,000 | --- | 160 | <1,000 | --- | --- | --- | <50 | <100 | 37.05 | 7.77 | 29.28 | --- |

**Table 1**
**Groundwater Data**
**Former Shell Service Station, 4411 Foothill Boulevard, Oakland, California**

| Well ID | Date | TPHd (µg/L) | 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) | 1,2-DCA (µg/L) | EDB (µg/L) | TOC (ft MSL) | Depth to Water (ft TOC) | GW Elevation (ft MSL) | DO Reading (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-8 | 12/28/2010 | 4,900 g | 57,000 | 8,700 | 2,700 | 2,900 | 14,000 | --- | 200 | <1,000 | <200 | <200 | <200 | <50 | <100 | 37.05 | 6.93 | 30.12 | --- |
| S-8 | 12/23/2011 | 4,300 | 55,000 | 9,500 | 3,000 | 3,700 | 15,000 | --- | <200 | <2,000 | <200 | <200 | <200 | <100 | <100 | 37.05 | 8.77 | 28.28 | --- |
| S-8 | 12/28/2012 | 3,500 | 55,000 | 8,300 | 2,600 | 3,600 | 15,000 | --- | 180 | <1,000 | <50 | <50 | <50 | --- | --- | 37.05 | 5.92 | 31.13 | --- |
| S-8 | 09/19/2013 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.05 | 9.08 | 27.97 | --- |
| S-8 | 12/23/2013 | 2,800 | 55,000 | 11,000 | 2,400 | 3,400 | 12,000 | --- | 210 | <1,000 | <50 | <50 | <50 | --- | --- | 37.05 | 9.49 | 27.56 | --- |
| S-8 | 03/05/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.05 | 8.65 | 28.40 | --- |
| S-8 | 06/06/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.05 | 8.68 | 28.37 | --- |
| S-8 | 12/08/2014 | 3,000 | 49,000 i,j | 9,300 | 1,800 | 2,500 | 8,900 | --- | 89 | <1,000 | <50 | <50 | <50 | --- | --- | 37.05 | 8.49 | 28.56 | --- |
| S-8 | 06/03/2015 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.05 | 8.90 | 28.15 | --- |
| S-8 | 12/17/2015 | 1,500 | 46,000 | 11,000 | 1,700 | 2,600 | 8,100 | --- | <130 | <2,500 | <130 | <130 | <130 | --- | --- | 37.05 | 9.53 | 27.52 | --- |
| **S-8** | **06/03/2016** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **37.05** | **8.31** | **28.74** | **---** |
| | | | | | | | | | | | | | | | | | | | |
| S-9 | 02/22/2007 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.52 | 7.59 | 29.93 | --- |
| S-9 | 03/02/2007 | 1,400 | 12,000 | 150 | 200 | 1,200 | 2,500 | --- | 5.8 | <50 | --- | --- | --- | <5.0 | <5.0 | 37.52 | 7.30 | 30.22 | --- |
| S-9 | 05/23/2007 | 2,300 | 8,200 f | 13 | 38 | 2.5 h | 1,453 | --- | 5.2 h | <100 | --- | --- | --- | <5.0 | <10 | 37.52 | 8.43 | 29.09 | --- |
| S-9 | 08/28/2007 | 2,800 g | 9,500 f | 21 | 49 | 540 | 789 | --- | <10 | <100 | <20 | <20 | <20 | <5.0 | <10 | 37.52 | 9.59 | 27.93 | --- |
| S-9 | 11/13/2007 | 2,100 g | 12,000 f | 19 | 35 | 450 | 499 | --- | <10 | <100 | --- | --- | --- | <5.0 | <10 | 37.52 | 9.91 | 27.61 | --- |
| S-9 | 02/08/2008 | 1,900 g | 10,000 f | 18 | 67 | 1,100 | 1,451 | --- | <10 | <100 | --- | --- | --- | <5.0 | <10 | 37.52 | 6.40 | 31.12 | --- |
| S-9 | 05/20/2008 | 1,500 g | 11,000 f | 150 | 770 | 13,000 | 17,460 | --- | <100 | <1,000 | --- | --- | --- | <50 | <100 | 37.52 | 8.79 | 28.73 | --- |
| S-9 | 08/12/2008 | 2,000 g | 9,400 | 16 | 59 | 700 | 834 | --- | <10 | <100 | <20 | <20 | <20 | <5.0 | <10 | 37.52 | 10.00 | 27.52 | --- |
| S-9 | 12/02/2008 | 1,300 g | 14,000 | 10 | 62 | 980 | 1,139 | --- | <10 | <100 | --- | --- | --- | <5.0 | <10 | 37.52 | 10.22 | 27.30 | --- |
| S-9 | 02/05/2009 | 1,400 g | 6,300 | 11 | 33 | 480 | 600 | --- | <10 | <100 | --- | --- | --- | <5.0 | <10 | 37.52 | 9.49 | 28.03 | --- |
| S-9 | 05/19/2009 | 1,500 g | 12,000 | 11 | 64 | 940 | 880 | --- | <5.0 | <50 | --- | --- | --- | <2.5 | <5.0 | 37.52 | 8.20 | 29.32 | --- |
| S-9 | 09/29/2009 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.52 | 5.51 | 32.01 | --- |
| S-9 | 12/23/2009 | 200 g | 890 | 1.4 | <1.0 | 16 | 14 | --- | <1.0 | <10 | <2.0 | <2.0 | <2.0 | <0.50 | <1.0 | 37.52 | 4.61 | 32.91 | --- |
| S-9 | 03/16/2010 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.52 | 5.95 | 31.57 | --- |
| S-9 | 06/21/2010 | 520 g | 1,300 | 2.4 | 4.2 | 180 | 26 | --- | <1.0 | <10 | --- | --- | --- | <0.50 | <1.0 | 37.52 | 8.29 | 29.23 | --- |
| S-9 | 12/28/2010 | 1,100 g | 7,200 | 3.8 | 12 | 650 | 510 | --- | <5.0 | <50 | <10 | <10 | <10 | <2.5 | <5.0 | 37.52 | 7.04 | 30.48 | --- |
| S-9 | 12/23/2011 | 1,300 | 6,500 | 6.7 | 16 | 240 | 200 | --- | <4.0 | <40 | <4.0 | <4.0 | <4.0 | <2.0 | <2.0 | 37.52 | 8.48 | 29.04 | --- |
| S-9 | 12/28/2012 | 490 | 2,600 | 3.4 | 5.6 | 91 | 87 | --- | <1.3 | <25 | <1.3 | <1.3 | <1.3 | --- | --- | 37.52 | 5.90 | 31.62 | --- |
| S-9 | 09/19/2013 | Well inaccessible | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.52 | --- | --- | --- |
| S-9 | 12/23/2013 | 660 | 4,600 | 4.1 | 15 | 15 | 130 | --- | <0.50 | <10 | <0.50 | <0.50 | <0.50 | --- | --- | 37.52 | 9.88 | 27.64 | --- |
| S-9 | 03/05/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.52 | 9.11 | 28.41 | --- |

**Table 1**
**Groundwater Data**
**Former Shell Service Station, 4411 Foothill Boulevard, Oakland, California**

| Well ID | Date | TPHd (µg/L) | 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) | 1,2-DCA (µg/L) | EDB (µg/L) | TOC (ft MSL) | Depth to Water (ft TOC) | GW Elevation (ft MSL) | DO Reading (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-9 | 06/06/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.52 | 9.19 | 28.33 | --- |
| S-9 | 12/08/2014 | 810 | 3,900 | 5.1 | 8.5 | 11 | 92 | --- | <2.5 | <50 | <2.5 | <2.5 | <2.5 | --- | --- | 37.52 | 8.70 | 28.82 | --- |
| S-9 | 06/03/2015 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.52 | 9.41 | 28.11 | --- |
| S-9 | 12/17/2015 | 450 | 3,900 | 12 | 12 | 8.2 | 67 | --- | <0.50 | <10 | <0.50 | <0.50 | <0.50 | --- | --- | 37.52 | 10.61 | 26.91 | --- |
| **S-9** | **06/03/2016** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **37.52** | **8.86** | **28.66** | **---** |
| | | | | | | | | | | | | | | | | | | | |
| S-10 | 09/22/2009 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.43 | 4.98 | 32.45 | --- |
| S-10 | 09/29/2009 | <50 | 320 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | --- | --- | --- | <0.50 | <1.0 | 37.43 | 5.07 | 32.36 | --- |
| S-10 | 12/23/2009 | <50 | <50 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | <2.0 | <2.0 | <2.0 | <0.50 | <1.0 | 37.43 | 4.48 | 32.95 | --- |
| S-10 | 03/16/2010 | <50 | 140 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | --- | --- | --- | <0.50 | <1.0 | 37.43 | 4.47 | 32.96 | --- |
| S-10 | 06/21/2010 | <50 | 130 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | --- | --- | --- | <0.50 | <1.0 | 37.43 | 8.28 | 29.15 | --- |
| S-10 | 12/28/2010 | <50 | 140 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | <2.0 | <2.0 | <2.0 | <0.50 | <1.0 | 37.43 | 7.09 | 30.34 | --- |
| S-10 | 12/23/2011 | <47 | 130 | <0.50 | <0.50 | <0.50 | <1.0 | --- | <1.0 | <10 | <1.0 | <1.0 | <1.0 | <0.50 | <0.50 | 37.43 | 8.20 | 29.23 | --- |
| S-10 | 12/28/2012 | <48 | 180 | <0.50 | <0.50 | <0.50 | <1.0 | --- | <0.50 | <10 | <0.50 | <0.50 | <0.50 | --- | --- | 37.43 | 6.10 | 31.33 | --- |
| S-10 | 09/19/2013 | Well not monitored | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.43 | --- | --- | --- |
| S-10 | 12/23/2013 | <48 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | --- | <0.50 | <10 | <0.50 | <0.50 | <0.50 | --- | --- | 37.43 | 9.15 | 28.28 | --- |
| S-10 | 06/06/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.43 | 8.91 | 28.52 | --- |
| S-10 | 12/08/2014 | 160 k | 73 | <0.50 | <0.50 | <0.50 | <1.0 | --- | <0.50 | <10 | <0.50 | <0.50 | <0.50 | --- | --- | 37.43 | 7.55 | 29.88 | --- |
| S-10 | 06/03/2015 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.43 | 9.01 | 28.42 | --- |
| S-10 | 12/17/2015 | 81 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | --- | <0.50 | <10 | <0.50 | <0.50 | <0.50 | --- | --- | 37.43 | 9.44 | 27.99 | --- |
| **S-10** | **06/03/2016** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **37.43** | **8.80** | **28.63** | **---** |
| | | | | | | | | | | | | | | | | | | | |
| S-11 | 09/22/2009 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.44 | 4.50 | 31.94 | --- |
| S-11 | 09/29/2009 | <50 | <50 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | --- | --- | --- | <0.50 | <1.0 | 36.44 | 3.88 | 32.56 | --- |
| S-11 | 12/23/2009 | <50 | <50 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | <2.0 | <2.0 | <2.0 | <0.50 | <1.0 | 36.44 | 3.71 | 32.73 | --- |
| S-11 | 03/16/2010 | <50 | <50 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | --- | --- | --- | <0.50 | <1.0 | 36.44 | 3.30 | 33.14 | --- |
| S-11 | 06/21/2010 | <50 | <50 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | --- | --- | --- | <0.50 | <1.0 | 36.44 | 7.49 | 28.95 | --- |
| S-11 | 12/28/2010 | <50 | <50 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | <2.0 | <2.0 | <2.0 | <0.50 | <1.0 | 36.44 | 5.96 | 30.48 | --- |
| S-11 | 12/23/2011 | <47 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | --- | <1.0 | <10 | <1.0 | <1.0 | <1.0 | <0.50 | <0.50 | 36.44 | 7.28 | 29.16 | --- |
| S-11 | 12/28/2012 | <48 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | --- | <0.50 | <10 | <0.50 | <0.50 | <0.50 | --- | --- | 36.44 | 5.00 | 31.44 | --- |
| S-11 | 09/19/2013 | Well not monitored | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.44 | --- | --- | --- |
| S-11 | 12/23/2013 | <48 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | --- | 0.55 | <10 | <0.50 | <0.50 | <0.50 | --- | --- | 36.44 | 9.82 | 26.62 | --- |
| S-11 | 06/06/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.44 | 8.16 | 28.28 | --- |

**Table 1**
**Groundwater Data**
**Former Shell Service Station, 4411 Foothill Boulevard, Oakland, California**

| Well ID | Date | TPHd (µg/L) | 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) | 1,2-DCA (µg/L) | EDB (µg/L) | TOC (ft MSL) | Depth to Water (ft TOC) | GW Elevation (ft MSL) | DO Reading (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-11 | 12/08/2014 | 77 k | <50 | <0.50 | <0.50 | <0.50 | <1.0 | --- | <0.50 | <10 | <0.50 | <0.50 | <0.50 | --- | --- | 36.44 | 6.72 | 29.72 | --- |
| S-11 | 06/03/2015 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.44 | 8.28 | 28.16 | --- |
| S-11 | 12/17/2015 | 110 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | --- | 0.52 | <10 | <0.50 | <0.50 | <0.50 | --- | --- | 36.44 | 8.90 | 27.54 | --- |
| **S-11** | **06/03/2016** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **36.44** | **8.04** | **28.40** | **---** |
| | | | | | | | | | | | | | | | | | | | |
| S-12 | 09/22/2009 | Unable to access | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.00 | --- | --- | --- |
| S-12 | 09/25/2009 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.00 | 5.10 | 30.90 | --- |
| S-12 | 09/29/2009 | 91 g | 280 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | --- | --- | --- | <0.50 | <1.0 | 36.00 | 3.62 | 32.38 | --- |
| S-12 | 12/23/2009 | 120 g | 340 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | 15 | <2.0 | <2.0 | <2.0 | <0.50 | <1.0 | 36.00 | 2.91 | 33.09 | --- |
| S-12 | 03/16/2010 | <50 | 78 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | --- | --- | --- | <0.50 | <1.0 | 36.00 | 2.78 | 33.22 | --- |
| S-12 | 06/21/2010 | 210 g | 380 | 7.6 | <1.0 | <1.0 | <1.0 | --- | 4.8 | 50 | --- | --- | --- | <0.50 | <1.0 | 36.00 | 8.48 | 27.52 | --- |
| S-12 | 12/28/2010 | 81 | 410 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | 30 | 2.4 | <2.0 | <2.0 | <0.50 | <1.0 | 36.00 | 5.60 | 30.40 | --- |
| S-12 | 12/23/2011 | 140 | 490 | <0.50 | <0.50 | <0.50 | <1.0 | --- | <1.0 | 14 | 1.4 | <1.0 | <1.0 | <0.50 | <0.50 | 36.00 | 7.01 | 28.99 | --- |
| S-12 | 12/28/2012 | Well inaccessible | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.00 | --- | --- | --- |
| S-12 | 09/19/2013 | Well not monitored | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.00 | --- | --- | --- |
| S-12 | 12/23/2013 | 80 | 180 | <0.50 | <0.50 | <0.50 | <1.0 | --- | 1.7 | 51 | 3.7 | <0.50 | <0.50 | --- | --- | 36.00 | 8.35 | 27.65 | --- |
| S-12 | 06/06/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.00 | 7.99 | 28.01 | --- |
| S-12 | 12/08/2014 | 110 | 400 | <0.50 | <0.50 | <0.50 | <1.0 | --- | 1.2 | 29 | 2.5 | <0.50 | <0.50 | --- | --- | 36.00 | 6.40 | 29.60 | --- |
| S-12 | 06/03/2015 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.00 | 8.16 | 27.84 | --- |
| S-12 | 12/17/2015 | 130 | 110 | <0.50 | <0.50 | <0.50 | <1.0 | --- | 1.3 | 26 | 2.9 | <0.50 | <0.50 | --- | --- | 36.00 | 8.88 | 27.12 | --- |
| **S-12** | **06/03/2016** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **---** | **36.00** | **7.84** | **28.16** | **---** |
| | | | | | | | | | | | | | | | | | | | |
| S-13 | 09/06/2013 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.19 | 9.34 | 27.85 | --- |
| S-13 | 09/19/2013 | --- | 25,000 | 210 | 420 | 520 | 7,600 | --- | <20 | <400 | <20 | <20 | <20 | --- | --- | 37.19 | 9.33 | 27.86 | --- |
| S-13 | 12/23/2013 | --- | 32,000 | 280 | 750 | 1,900 | 9,000 | --- | <10 | <200 | <10 | <10 | <10 | --- | --- | 37.19 | 9.82 | 27.37 | --- |
| S-13 | 03/05/2014 | --- | 24,000 | 220 | 660 | 1,300 | 6,700 | --- | <20 | <400 | <20 | <20 | <20 | --- | --- | 37.19 | 8.85 | 28.34 | --- |
| S-13 | 06/06/2014 | --- | 45,000 i | 300 | 990 | 2,500 | 11,000 | --- | <20 | <400 | <20 | <20 | <20 | --- | --- | 37.19 | 8.81 | 28.38 | --- |
| S-13 | 12/08/2014 | --- | 19,000 | 190 | 380 | 950 | 4,000 | --- | <20 | <400 | <20 | <20 | <20 | --- | --- | 37.19 | 8.98 | 28.21 | --- |
| S-13 | 06/03/2015 | --- | 30,000 | 210 | 730 | 2,200 | 7,400 | --- | <50 | <1,000 | <50 | <50 | <50 | --- | --- | 37.19 | 9.92 | 27.27 | --- |
| S-13 | 12/17/2015 | 1,200 | 34,000 | 240 | 750 | 2,600 | 8,100 | --- | <50 | <1,000 | <50 | <50 | <50 | --- | --- | 37.19 | 10.41 | 26.78 | --- |
| **S-13** | **06/03/2016** | **---** | **21,000** | **200** | **370** | **1,300 l** | **3,300** | **---** | **<20** | **<400** | **<20** | **<20** | **<20** | **---** | **---** | **37.19** | **8.22** | **28.97** | **---** |
| | | | | | | | | | | | | | | | | | | | |
| S-14 | 09/06/2013 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.14 | 9.28 | 27.86 | --- |

**Table 1**
**Groundwater Data**
**Former Shell Service Station, 4411 Foothill Boulevard, Oakland, California**

| Well ID | Date | TPHd (µg/L) | 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) | 1,2-DCA (µg/L) | EDB (µg/L) | TOC (ft MSL) | Depth to Water (ft TOC) | GW Elevation (ft MSL) | DO Reading (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-14 | 09/19/2013 | --- | 7,600 | 360 | 48 | 140 | 490 | --- | 8.8 | <50 | <2.5 | <2.5 | <2.5 | --- | --- | 37.14 | 9.41 | 27.73 | --- |
| S-14 | 12/23/2013 | --- | 10,000 | 620 | 77 | 610 | 670 | --- | <5.0 | <100 | <5.0 | <5.0 | <5.0 | --- | --- | 37.14 | 9.71 | 27.43 | --- |
| S-14 | 03/05/2014 | --- | 8,000 | 470 | 79 | 450 | 630 | --- | <2.5 | <50 | <2.5 | <2.5 | <2.5 | --- | --- | 37.14 | 8.63 | 28.51 | --- |
| S-14 | 06/06/2014 | --- | 6,400 i | 270 | 39 | 240 | 370 | --- | 2.9 | <50 | <2.5 | <2.5 | <2.5 | --- | --- | 37.14 | 9.08 | 28.06 | --- |
| S-14 | 12/08/2014 | --- | 8,800 | 430 | 58 | 520 | 570 | --- | 4.4 | <50 | <2.5 | <2.5 | <2.5 | --- | --- | 37.14 | 8.60 | 28.54 | --- |
| S-14 | 06/03/2015 | --- | 9,500 | 160 | 28 | 350 | 700 | --- | <5.0 | <100 | <5.0 | <5.0 | <5.0 | --- | --- | 37.14 | 9.02 | 28.12 | --- |
| S-14 | 12/17/2015 | 890 | 13,000 | 490 | 58 | 460 | 1,000 | --- | <5.0 | <100 | <5.0 | <5.0 | <5.0 | --- | --- | 37.14 | 9.87 | 27.27 | --- |
| **S-14** | **06/03/2016** | **---** | **670** | **19** | **1.4** | **6.3** | **25** | **---** | **<0.50** | **10** | **<0.50** | **<0.50** | **<0.50** | **---** | **---** | **37.14** | **8.65** | **28.49** | **---** |
| | | | | | | | | | | | | | | | | | | | |
| BW-A | 09/30/1999 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.55 | --- | 2.3 |
| BW-A | 12/22/1999 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.52 | --- | 2.2 |
| BW-A | 03/09/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 3.99 | --- | 1.5 |
| BW-A | 06/20/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.69 | --- | 2.4 |
| BW-A | 09/05/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.43 | --- | 1.0 |
| BW-A | 12/04/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 8.96 | --- | 1.3 |
| BW-A | 12/12/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 8.71 | --- | --- |
| BW-A | 03/08/2001 | 1,370 g | <2,500 | 46.6 | <25.0 | <25.0 | <25.0 | 10,600 | 11,700 | --- | --- | --- | --- | --- | --- | --- | 6.38 | --- | 0.9/1.4 |
| BW-A | 06/07/2001 | 960 | 1,100 | <10 | <10 | <10 | 17 | 7,200 | --- | --- | --- | --- | --- | --- | --- | --- | 9.82 | --- | 3.6/0.8 |
| BW-A | 09/13/2001 | 460 | <2,000 | <20 | <20 | <20 | <50 | --- | 13,000 | --- | --- | --- | --- | --- | --- | --- | 10.49 | --- | 3.3/1.7 |
| BW-A | 11/19/2001 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.89 | --- | --- |

Notes: *See following page*

**Table 1**
**Groundwater Data**
**Former Shell Service Station, 4411 Foothill Boulevard, Oakland, California**

**Notes:**

| | | |
|---|---|---|
| TPHd | = | Total petroleum hydrocarbons as diesel (C10-C28) by modified EPA Method 8015; after February 22, 2007, analyzed with silica gel cleanup |
| TPHg | = | Total petroleum hydrocarbons as gasoline (C4-C12) by EPA Method 8260B; prior to September 13, 2001, analyzed by EPA Method 8015 unless otherwise noted |
| BTEX | = | Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B; prior to September 13, 2001, analyzed by EPA Method 8020 |
| MTBE | = | Methyl tertiary-butyl ether analyzed by method noted |
| TBA | = | Tertiary-butyl alcohol analyzed by EPA Method 8260B |
| DIPE | = | Di-isopropyl ether analyzed by EPA Method 8260B |
| ETBE | = | Ethyl tertiary-butyl ether analyzed by EPA Method 8260B |
| TAME | = | Tertiary-amyl methyl ether analyzed by EPA Method 8260B |
| 1,2-DCA | = | 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 |
| GW | = | Groundwater |
| DO | = | Dissolved oxygen |
| µg/L | = | Micrograms per liter |
| ft | = | Feet |
| MSL | = | Mean sea level |
| mg/L | = | Milligrams per liter |
| <x | = | Not detected at reporting limit x |
| --- | = | Not analyzed or not available |
| x/x | = | Pre-purge/post-purge DO reading |
| a | = | Sample analyzed outside the EPA recommended holding time. |
| b | = | Post-purge DO reading. |
| c | = | Pre-purge DO reading. |
| d | = | Estimated depth to water. |
| e | = | Hydrocarbon reported is in the early diesel range and does not match the laboratory's standard. |
| 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 | = | Concentration reported is due to the presence of discrete peaks of xylenes. |
| j | = | Concentration reported is due to the presence of discrete peak of benzene. |
| k | = | Hydrocarbon result partly due to individual peak in quantitation range. |
| l | = | MS and/or MSD Recovery is outside acceptance limits. |

Prior to December 12, 2002, depth to water referenced to top of well box elevation.
Wells S-1 through S-4 surveyed February 3, 2000 by Virgil Chavez Land Surveying.
Wells S-1 through S-4 surveyed March 5, 2002 by Virgil Chavez Land Surveying.
Well S-5 surveyed May 29, 2003 by Virgil Chavez Land Surveying.
Wells S-6 through S-9 surveyed February 21, 2007 by Virgil Chavez Land Surveying.
Wells S-6 through S-12 surveyed October 26, 2009 by Virgil Chavez Land Surveying.
Wells S-13 and S-14 surveyed on September 14, 2013 by Virgil Chavez Land Surveying.

# Appendix A

## Field Notes
(Blaine Tech Services, Inc.)

# WELL GAUGING DATA

Project # 160603-RH1 Date 6/3/16 Client AECOM / Shell

Site 4411 Foothill Blvd, 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-6 | 0846 | 4 | | | | | 8.11 | 19.36 | | |
| S-7 | 0843 | 4 | | | | | 8.75 | 19.34 | | |
| S-8 | 0845 | 4 | | | | | 8.31 | 19.57 | | |
| S-9 | 0850 | 4 | | | | | 8.86 | 19.45 | | |
| S-10 | 0900 | 4 | | | | | 8.80 | 19.57 | | |
| S-11 | 0904 | 4 | | | | | 8.04 | 19.60 | | |
| S-12 | 0907 | 4 | | | | | 7.84 | 19.61 | | |
| 2 S-13 | 0915 | 4 | odor | | | | 8.22 | 19.26 | | |
| 2 S-14 | 0912 | 4 | odor | | | | 8.65 | 19.24 | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

# SHELL WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 160603-RH1 | Site: 95995746 |
| Sampler: RH | Date: 6/3/16 |
| Well I.D.: S-13 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth (TD): 19.26 | Depth to Water (DTW): 8.22 |
| 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 (11.04) x 0.20) + DTW]: 16.42 | |

Purge Method: Bailer, Disposable Bailer, Middleburg, Electric Submersible (circled), Waterra, Peristaltic, Extraction Pump, Other ____

Sampling Method: (Bailer) (circled), Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ____

7.1 (Gals.) X 3 = 21.3 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 | radius² * 0.163 |

| Time | Temp (°F) | pH | Cond. (mS/cm or µS/cm) | Turbidity (NTUs) | Gals. Removed | Observations |
|---|---|---|---|---|---|---|
| 0935 | 67.0 | 7.12 | 986 | 7 | 7.5 | Clear/odor |
| Well Dewatered @ 12 gallons | | | | | | DTW: 16.95 |
| | | | | | | |
| | | | | | | |
| 1145 1149 | 69.4 | 6.83 | 1003 | 178 | Grab | cloudy/odor |

Did well dewater? (Yes) No Gallons actually evacuated: 12

Sampling Date: 6/3/16 Sampling Time: 1145 Depth to Water: 14.27 (2hrs)

Sample I.D.: S-13 Laboratory: (Test America) circled

Analyzed for: TPH-G BTEX MTBE TPH-D (Other:) See COC

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

Analyzed for: TPH-G BTEX MTBE TPH-D 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 |

# SHELL WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 160603-RH1 | Site: 95 995746 |
| Sampler: RH | Date: 6/3/16 |
| Well I.D.: S-14 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth (TD): 19.24 | Depth to Water (DTW): 8.65 |
| 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 10.59 x 0.20) + DTW]: 10.76 | |

Purge Method: Bailer, Disposable Bailer, Middleburg, (Electric Submersible), Waterra, Peristaltic, Extraction Pump, Other ____

Sampling Method: (Bailer), Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ____

6.8 (Gals.) X 3 = 20.4 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 | radius² * 0.163 |

| Time | Temp (°F) | pH | Cond. (mS/cm or (µS/cm)) | Turbidity (NTUs) | Gals. Removed | Observations |
|---|---|---|---|---|---|---|
| 0919 | 69.2 | 8.85 | 553 | 8 | 7 | clear |
| 0921 | 67.9 | 8.80 | 567 | 6 | 14 | clear |
| | Well Dewatered @ | | 14 gallons | | | DTW: 16.25' |
| | | | | | | |
| 1138 | 71.2 | 7.95 | 582 | 13 | Grab | clear |

Did well dewater? (Yes) No Gallons actually evacuated: 14

Sampling Date: 6/3/16 Sampling Time: 1135 Depth to Water: 14.78 (2hrs)

Sample I.D.: S-14 Laboratory: (Test America)

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

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

Analyzed for: TPH-G BTEX MTBE TPH-D 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 |

LAB (LOCATION)

☐ ACCUTEST (_____)
☐ CALSCIENCE (_____)
☑ TESTAMERICA (_____)
☐ Other (_____)

Lab Vendor # 1364589 (TestAmerica)

# Shell Oil Products US Chain Of Custody Record

AECOM

| Please Check Appropriate Box: | | |
|---|---|---|
| ☐ GW FDG | ☐ PIPELINE | ☐ RETAIL |
| ☐ CHEMICALS | ☑ CONSULTANT | ☐ LUBES |
| ☐ TRANSPORTATION | ☐ OTHER _____ | |

| Print Bill To Contact Name: | PlaNet Site or Project ID: | ☐ CHECK IF NO INCIDENT # APPLIES |
|---|---|---|
| Sara Heikkila | 31733 | DATE: 6/3/16 |
| PO #: | GSAP Project ID: | PAGE: 1 of 1 |
| | USPC/00250,USRT/00885 | |

SAMPLING COMPANY: Blaine Tech Services, Inc.
LOG CODE: BTSS
ADDRESS: 1680 Rogers Ave., San Jose, CA, 95112
PROJECT CONTACT (Hardcopy or PDF Report to): Bart Gebbie
TELEPHONE: 310-885-4455 Ext. 103
FAX: 310-637-5802
Bill To Contact E-MAIL: sara.heikkila@aecom.com

SITE ADDRESS: Street and City: 4411 Foothill Blvd., Oakland
State: CA
AECOM Project / Task Number: 60482424
EDF DELIVERABLE TO (Name, Company, Office Location): Casey Huff, AECOM, Oakland, CA
PHONE NO.: 510-893-3600
E-MAIL: casey.huff@aecom.com
AECOM Other ID: 10059562
SAMPLER NAME(S) (Print): Rodolfo Huerta
LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

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 :**

Run TPH-D w/ Silica Gel Clean Up

Email invoice to USAPimaging@aecom.com

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE EDD DISK

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | PRESERVATIVE HNO3 | PRESERVATIVE H2SO4 | PRESERVATIVE NONE | PRESERVATIVE OTHER | NO. OF CONT. | UNIT COST: TPH-GRO, Purgeable (8260B) | UNIT COST: TPH-DRO, Extractable (8015M) | UNIT COST: BTEX | UNIT COST: 5 OXY's (8260B) | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S-13 | 6/3/16 | 1145 | W | X | | | | | 3 | X | | X | X | |
| | S-14 | 6/3/16 | 1135 | W | X | | | | | 3 | X | | X | X | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
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FIELD NOTES:

TEMPERATURE ON RECEIPT C°

| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
|---|---|---|---|
| Rodolfo 6/3/16 | | 6-3-16 | 1400 |
| | (Sample Custodian) | 6-3-16 | 1730 |
| | | | |

Version: 14Dec15

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM



INCIDENT # 95995746

DATE: 6/3/16

ADDRESS 4411 Foothill Blvd.

CITY & STATE Oakland CA

| Well ID | Observations Upon Arrival: Manway Cover, Type, Condition & Size | | | | | Well Labeled / Painted Properly* | | Well Cap (Gripper) Condition | | Well Lock Condition | | | Well Pad / Surface Condition | | Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed | Photos of Well Condition | | Repair Date and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-6 | Standpipe | Flush | G | P | Size (inch) 12 | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| S-7 | Standpipe | Flush | G | P | Size (inch) 12 | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| S-8 | Standpipe | Flush | G | P | Size (inch) 12 | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| S-9 | Standpipe | Flush | G | P | Size (inch) 12 | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| S-10 | Standpipe | Flush | G | P | Size (inch) 12 | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| S-11 | Standpipe | Flush | G | P | Size (inch) 12 | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| S-12 | Standpipe | Flush | G | P | Size (inch) 12 | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| S-13 | Standpipe | Flush | G | P | Size (inch) 12 | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| S-14 | Standpipe | Flush | G | P | Size (inch) 12 | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| | Standpipe | Flush | G | P | Size (inch) | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| | Standpipe | Flush | G | P | Size (inch) | Y | N | G | R | G | R | NL | G | P | | Y | N | |

TOTAL # CAPS REPLACED = 0 ; 0 = TOTAL # OF LOCKS REPLACED

| Condition of Soil Boring Patches or Abandoned Monitoring Wells: | G | P | N/A | If POOR, Borings/Well IDs or Location Description: | Y | N | |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

| Remediation Compound Type (Check boxes that apply) | | Condition of Enclosure | | | Condition of Area Inside Enclosure | | | Compound Security | | | Emergency Contact Info Visible | | | Cleaning / Repairs Recommended and Conducted | Photos of Condition | | Repair Date and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NA | | G | P | N/A | G | P | N/A | G | P | N/A | Y | N | N/A | | Y | N | |
| Building | | | | | | | | | | | | | | | | | |
| Building w/ Fence Comp. | | | | | | | | | | | | | | | | | |
| Fenced Compound | | | | | | | | | | | | | | | | | |
| Trailer | | | | | | | | | | | | | | | | | |

| Number of Drums On-site | Does the Label Reveal the Source of the Contents | | | Labeled Correctly and Writing Legible | | Drum Condition | | | Confirm Drums Related to Environmental | | Drums Located to Min Business Interference | | | Detailed Explanation of Any Issues Resolved | Photos of Drum Condition | | Date Drums Removed from Site and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Y | N | N/A | Y | N | N/A | G | P | N/A | Y | N | Y | N | N/A | | Y | N | |

G = Good (Acceptable) R = Replaced

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

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

* = Groundwater monitoring well covers must be painted and labeled in accordance with applicable regulations.

Version 2.4, March 2008

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

Rodolfo Huerta / Blaine Tech

Print or type Name of Field Personnel & Consultant Company

NO. 721609

# N-HAZARDOUS WASTE DATA FORM

BES! #

Generator's Name and Mailing Address

SHELL OIL PRODUCTS US
C/O AECOM
1333 BROADWAY, SUITE 800
OAKLAND, CA 94612

Generator's Site Address (if different than mailing address)

SHELL OIL 10059562
4411 FOOTHILL BOULEVARD
OAKLAND, CA 94601

Generator's Phone: 510-874-3255

Container type removed from site:

☐ Drums ☐ Vacuum Truck ☐ Roll-off Truck ☐ Dump Truck

☒ Other Tank on truck

Quantity 27 gallons

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. WATER | | 99-100% | 3. | | |
| 2. TPH | | <1% | 4. | | |

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

HANDLING INSTRUCTIONS: WEAR ALL APPROPRIATE PERSONAL PROTECTIVE CLOTHING

| Generator Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Rodolfo Huerta | RodolfoB | 6 | 3 | 16 |

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

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

| Transporter 1 Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Rodolfo Huerta | RodolfoB | 6 | 3 | 16 |

Transporter Acknowledgment of Receipt of Materials

| Transporter 2 Company Name | Phone# |
|---|---|
| | |

| Transporter 2 Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| | | | | |

Transporter Acknowledgment of Receipt of Materials

Designated Facility Name and Site Address

DEMENNO KERDOON
2000 N. ALAMEDA ST.
COMPTON, CA 90222

Phone#
310-537-7100

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| | | | | |

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

# Appendix B

## Analytical Report
(TestAmerica Laboratories, Inc.)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

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

TestAmerica Job ID: 720-72688-1
Client Project/Site: Shell- 4411 Foothill Blvd., Oakland

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

Attn: Sara Heikkila

Beth Riley

*Authorized for release by:*
*6/13/2016 10:18:43 AM*

Beth Riley, Project Manager II
(714)258-8610
beth.riley@testamericainc.com

# Table of Contents

# Definitions/Glossary

Client: AECOM Technical Services Inc.
Project/Site: Shell- 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 720-72688-1

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| F1 | MS and/or MSD Recovery is outside acceptance limits. |

## Glossary

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

## Job ID: 720-72688-1

### Laboratory: TestAmerica Pleasanton

**Narrative**

**Job Narrative**
**720-72688-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 6/6/2016 5:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.1° 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.

# Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: Shell- 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 720-72688-1

## Client Sample ID: S-13 — Lab Sample ID: 720-72688-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Volatile Fuel Hydrocarbons (C4-C12) | 21000 | | 2000 | | ug/L | 40 | | 8260B/CA_LUFT MS | Total/NA |
| Benzene | 200 | | 20 | | ug/L | 40 | | 8260B | Total/NA |
| Ethylbenzene | 1300 | F1 | 20 | | ug/L | 40 | | 8260B | Total/NA |
| m,p-Xylene | 3000 | | 40 | | ug/L | 40 | | 8260B | Total/NA |
| o-Xylene | 340 | | 20 | | ug/L | 40 | | 8260B | Total/NA |
| Toluene | 370 | | 20 | | ug/L | 40 | | 8260B | Total/NA |
| Xylenes, Total | 3300 | | 40 | | ug/L | 40 | | 8260B | Total/NA |

## Client Sample ID: S-14 — Lab Sample ID: 720-72688-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Volatile Fuel Hydrocarbons (C4-C12) | 670 | | 50 | | ug/L | 1 | | 8260B/CA_LUFT MS | Total/NA |
| Benzene | 19 | | 0.50 | | ug/L | 1 | | 8260B | Total/NA |
| Ethylbenzene | 6.3 | | 0.50 | | ug/L | 1 | | 8260B | Total/NA |
| m,p-Xylene | 23 | | 1.0 | | ug/L | 1 | | 8260B | Total/NA |
| o-Xylene | 1.6 | | 0.50 | | ug/L | 1 | | 8260B | Total/NA |
| Toluene | 1.4 | | 0.50 | | ug/L | 1 | | 8260B | Total/NA |
| Xylenes, Total | 25 | | 1.0 | | ug/L | 1 | | 8260B | Total/NA |
| tert-Butyl alcohol (TBA) | 10 | | 10 | | ug/L | 1 | | 8260B | Total/NA |

This Detection Summary does not include radiochemical test results.

**Client Sample ID: S-13**
**Date Collected: 06/03/16 11:45**
**Date Received: 06/06/16 17:30**

**Lab Sample ID: 720-72688-1**
**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)** | **21000** | | 2000 | | ug/L | | | 06/10/16 21:58 | 40 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *105* | | *76 - 132* | | *06/10/16 21:58* | *40* |
| *4-Bromofluorobenzene (Surr)* | *94* | | *80 - 120* | | *06/10/16 21:58* | *40* |
| *Toluene-d8 (Surr)* | *103* | | *80 - 128* | | *06/10/16 21:58* | *40* |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzene** | **200** | | 20 | | ug/L | | | 06/10/16 21:58 | 40 |
| **Ethylbenzene** | **1300** | **F1** | 20 | | ug/L | | | 06/10/16 21:58 | 40 |
| **m,p-Xylene** | **3000** | | 40 | | ug/L | | | 06/10/16 21:58 | 40 |
| **o-Xylene** | **340** | | 20 | | ug/L | | | 06/10/16 21:58 | 40 |
| **Toluene** | **370** | | 20 | | ug/L | | | 06/10/16 21:58 | 40 |
| **Xylenes, Total** | **3300** | | 40 | | ug/L | | | 06/10/16 21:58 | 40 |
| tert-Butyl alcohol (TBA) | ND | | 400 | | ug/L | | | 06/10/16 21:58 | 40 |
| Methyl-t-Butyl Ether (MTBE) | ND | | 20 | | ug/L | | | 06/10/16 21:58 | 40 |
| Ethyl-t-butyl ether (ETBE) | ND | | 20 | | ug/L | | | 06/10/16 21:58 | 40 |
| Isopropyl Ether (DIPE) | ND | | 20 | | ug/L | | | 06/10/16 21:58 | 40 |
| Ethanol | ND | | 6000 | | ug/L | | | 06/10/16 21:58 | 40 |
| Tert-amyl-methyl ether (TAME) | ND | | 20 | | ug/L | | | 06/10/16 21:58 | 40 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *105* | | *76 - 132* | | *06/10/16 21:58* | *40* |
| *4-Bromofluorobenzene (Surr)* | *94* | | *80 - 120* | | *06/10/16 21:58* | *40* |
| *Toluene-d8 (Surr)* | *103* | | *80 - 128* | | *06/10/16 21:58* | *40* |

**Client Sample ID: S-14**
**Date Collected: 06/03/16 11:35**
**Date Received: 06/06/16 17:30**

**Lab Sample ID: 720-72688-2**
**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) | 670 | | 50 | | ug/L | | | 06/11/16 00:45 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *104* | | *76 - 132* | | *06/11/16 00:45* | *1* |
| *4-Bromofluorobenzene (Surr)* | *93* | | *80 - 120* | | *06/11/16 00:45* | *1* |
| *Toluene-d8 (Surr)* | *102* | | *80 - 128* | | *06/11/16 00:45* | *1* |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 19 | | 0.50 | | ug/L | | | 06/11/16 00:45 | 1 |
| Ethylbenzene | 6.3 | | 0.50 | | ug/L | | | 06/11/16 00:45 | 1 |
| m,p-Xylene | 23 | | 1.0 | | ug/L | | | 06/11/16 00:45 | 1 |
| o-Xylene | 1.6 | | 0.50 | | ug/L | | | 06/11/16 00:45 | 1 |
| Toluene | 1.4 | | 0.50 | | ug/L | | | 06/11/16 00:45 | 1 |
| Xylenes, Total | 25 | | 1.0 | | ug/L | | | 06/11/16 00:45 | 1 |
| tert-Butyl alcohol (TBA) | 10 | | 10 | | ug/L | | | 06/11/16 00:45 | 1 |
| Methyl-t-Butyl Ether (MTBE) | ND | | 0.50 | | ug/L | | | 06/11/16 00:45 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 0.50 | | ug/L | | | 06/11/16 00:45 | 1 |
| Isopropyl Ether (DIPE) | ND | | 0.50 | | ug/L | | | 06/11/16 00:45 | 1 |
| Ethanol | ND | | 150 | | ug/L | | | 06/11/16 00:45 | 1 |
| Tert-amyl-methyl ether (TAME) | ND | | 0.50 | | ug/L | | | 06/11/16 00:45 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *104* | | *76 - 132* | | *06/11/16 00:45* | *1* |
| *4-Bromofluorobenzene (Surr)* | *93* | | *80 - 120* | | *06/11/16 00:45* | *1* |
| *Toluene-d8 (Surr)* | *102* | | *80 - 128* | | *06/11/16 00:45* | *1* |

# Surrogate Summary

Client: AECOM Technical Services Inc.
Project/Site: Shell- 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 720-72688-1

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

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | |
|---|---|---|---|---|
| | | DBFM | BFB | TOL |
| Lab Sample ID | Client Sample ID | (76-132) | (80-120) | (80-128) |
| 720-72688-1 | S-13 | 105 | 94 | 103 |
| 720-72688-1 MS | S-13 | 108 | 91 | 99 |
| 720-72688-1 MSD | S-13 | 107 | 94 | 101 |
| 720-72688-2 | S-14 | 104 | 93 | 102 |
| LCS 440-335871/5 | Lab Control Sample | 101 | 93 | 106 |
| MB 440-335871/8 | Method Blank | 104 | 93 | 105 |

**Surrogate Legend**

DBFM = Dibromofluoromethane (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)

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

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | |
|---|---|---|---|---|
| | | DBFM | BFB | TOL |
| Lab Sample ID | Client Sample ID | (76-132) | (80-120) | (80-128) |
| 720-72688-1 | S-13 | 105 | 94 | 103 |
| 720-72688-1 MS | S-13 | 108 | 91 | 99 |
| 720-72688-1 MSD | S-13 | 107 | 94 | 101 |
| 720-72688-2 | S-14 | 104 | 93 | 102 |
| LCS 440-335872/6 | Lab Control Sample | 99 | 93 | 105 |
| MB 440-335872/8 | Method Blank | 104 | 93 | 105 |

**Surrogate Legend**

DBFM = Dibromofluoromethane (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)

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

**Lab Sample ID: MB 440-335871/8**
**Matrix: Water**
**Analysis Batch: 335871**

**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 | | | 06/10/16 21:30 | 1 |
| Ethylbenzene | ND | | 0.50 | | ug/L | | | 06/10/16 21:30 | 1 |
| m,p-Xylene | ND | | 1.0 | | ug/L | | | 06/10/16 21:30 | 1 |
| o-Xylene | ND | | 0.50 | | ug/L | | | 06/10/16 21:30 | 1 |
| Toluene | ND | | 0.50 | | ug/L | | | 06/10/16 21:30 | 1 |
| Xylenes, Total | ND | | 1.0 | | ug/L | | | 06/10/16 21:30 | 1 |
| tert-Butyl alcohol (TBA) | ND | | 10 | | ug/L | | | 06/10/16 21:30 | 1 |
| Methyl-t-Butyl Ether (MTBE) | ND | | 0.50 | | ug/L | | | 06/10/16 21:30 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 0.50 | | ug/L | | | 06/10/16 21:30 | 1 |
| Isopropyl Ether (DIPE) | ND | | 0.50 | | ug/L | | | 06/10/16 21:30 | 1 |
| Ethanol | ND | | 150 | | ug/L | | | 06/10/16 21:30 | 1 |
| Tert-amyl-methyl ether (TAME) | ND | | 0.50 | | ug/L | | | 06/10/16 21:30 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *104* | | *76 - 132* | | *06/10/16 21:30* | *1* |
| *4-Bromofluorobenzene (Surr)* | *93* | | *80 - 120* | | *06/10/16 21:30* | *1* |
| *Toluene-d8 (Surr)* | *105* | | *80 - 128* | | *06/10/16 21:30* | *1* |

**Lab Sample ID: LCS 440-335871/5**
**Matrix: Water**
**Analysis Batch: 335871**

**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 | 24.8 | | ug/L | | 99 | 68 - 130 |
| Ethylbenzene | 25.0 | 23.4 | | ug/L | | 94 | 70 - 130 |
| m,p-Xylene | 25.0 | 26.2 | | ug/L | | 105 | 70 - 130 |
| o-Xylene | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| Toluene | 25.0 | 24.9 | | ug/L | | 100 | 70 - 130 |
| tert-Butyl alcohol (TBA) | 250 | 232 | | ug/L | | 93 | 70 - 130 |
| Methyl-t-Butyl Ether (MTBE) | 25.0 | 21.2 | | ug/L | | 85 | 63 - 131 |
| Ethyl-t-butyl ether (ETBE) | 25.0 | 21.2 | | ug/L | | 85 | 60 - 136 |
| Isopropyl Ether (DIPE) | 25.0 | 26.6 | | ug/L | | 106 | 58 - 139 |
| Ethanol | 1000 | 945 | | ug/L | | 95 | 50 - 149 |
| Tert-amyl-methyl ether (TAME) | 25.0 | 22.6 | | ug/L | | 90 | 57 - 139 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *101* | | *76 - 132* |
| *4-Bromofluorobenzene (Surr)* | *93* | | *80 - 120* |
| *Toluene-d8 (Surr)* | *106* | | *80 - 128* |

**Lab Sample ID: 720-72688-1 MS**
**Matrix: Water**
**Analysis Batch: 335871**

**Client Sample ID: S-13**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 200 | | 1000 | 1180 | | ug/L | | 97 | 66 - 130 |
| Ethylbenzene | 1300 | F1 | 1000 | 1940 | F1 | ug/L | | 69 | 70 - 130 |

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

**Lab Sample ID: 720-72688-1 MS**
**Matrix: Water**
**Analysis Batch: 335871**

**Client Sample ID: S-13**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| m,p-Xylene | 3000 | | 1000 | 3880 | | ug/L | | 83 | 70 - 133 |
| o-Xylene | 340 | | 1000 | 1280 | | ug/L | | 94 | 70 - 133 |
| Toluene | 370 | | 1000 | 1230 | | ug/L | | 86 | 70 - 130 |
| tert-Butyl alcohol (TBA) | ND | | 10000 | 10300 | | ug/L | | 103 | 70 - 130 |
| Methyl-t-Butyl Ether (MTBE) | ND | | 1000 | 905 | | ug/L | | 90 | 70 - 130 |
| Ethyl-t-butyl ether (ETBE) | ND | | 1000 | 878 | | ug/L | | 88 | 70 - 130 |
| Isopropyl Ether (DIPE) | ND | | 1000 | 1130 | | ug/L | | 113 | 64 - 138 |
| Ethanol | ND | | 40000 | 37700 | | ug/L | | 94 | 54 - 150 |
| Tert-amyl-methyl ether (TAME) | ND | | 1000 | 937 | | ug/L | | 94 | 68 - 133 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *108* | | *76 - 132* |
| *4-Bromofluorobenzene (Surr)* | *91* | | *80 - 120* |
| *Toluene-d8 (Surr)* | *99* | | *80 - 128* |

**Lab Sample ID: 720-72688-1 MSD**
**Matrix: Water**
**Analysis Batch: 335871**

**Client Sample ID: S-13**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 200 | | 1000 | 1200 | | ug/L | | 100 | 66 - 130 | 2 | 20 |
| Ethylbenzene | 1300 | F1 | 1000 | 1970 | | ug/L | | 72 | 70 - 130 | 2 | 20 |
| m,p-Xylene | 3000 | | 1000 | 3920 | | ug/L | | 87 | 70 - 133 | 1 | 25 |
| o-Xylene | 340 | | 1000 | 1330 | | ug/L | | 99 | 70 - 133 | 4 | 20 |
| Toluene | 370 | | 1000 | 1280 | | ug/L | | 91 | 70 - 130 | 4 | 20 |
| tert-Butyl alcohol (TBA) | ND | | 10000 | 9980 | | ug/L | | 100 | 70 - 130 | 3 | 25 |
| Methyl-t-Butyl Ether (MTBE) | ND | | 1000 | 942 | | ug/L | | 94 | 70 - 130 | 4 | 25 |
| Ethyl-t-butyl ether (ETBE) | ND | | 1000 | 931 | | ug/L | | 93 | 70 - 130 | 6 | 25 |
| Isopropyl Ether (DIPE) | ND | | 1000 | 1130 | | ug/L | | 113 | 64 - 138 | 1 | 25 |
| Ethanol | ND | | 40000 | 40600 | | ug/L | | 101 | 54 - 150 | 7 | 30 |
| Tert-amyl-methyl ether (TAME) | ND | | 1000 | 992 | | ug/L | | 99 | 68 - 133 | 6 | 30 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *107* | | *76 - 132* |
| *4-Bromofluorobenzene (Surr)* | *94* | | *80 - 120* |
| *Toluene-d8 (Surr)* | *101* | | *80 - 128* |

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

**Lab Sample ID: MB 440-335872/8**
**Matrix: Water**
**Analysis Batch: 335872**

**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 | | | 06/10/16 21:30 | 1 |

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

**Lab Sample ID: MB 440-335872/8**
**Matrix: Water**
**Analysis Batch: 335872**

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

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Dibromofluoromethane (Surr) | 104 | | 76 - 132 | | 06/10/16 21:30 | 1 |
| 4-Bromofluorobenzene (Surr) | 93 | | 80 - 120 | | 06/10/16 21:30 | 1 |
| Toluene-d8 (Surr) | 105 | | 80 - 128 | | 06/10/16 21:30 | 1 |

**Lab Sample ID: LCS 440-335872/6**
**Matrix: Water**
**Analysis Batch: 335872**

**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 | 457 | | ug/L | | 91 | 55 - 130 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| Dibromofluoromethane (Surr) | 99 | | 76 - 132 |
| 4-Bromofluorobenzene (Surr) | 93 | | 80 - 120 |
| Toluene-d8 (Surr) | 105 | | 80 - 128 |

**Lab Sample ID: 720-72688-1 MS**
**Matrix: Water**
**Analysis Batch: 335872**

**Client Sample ID: S-13**
**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) | 21000 | | 69000 | 99500 | | ug/L | | 114 | 50 - 145 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| Dibromofluoromethane (Surr) | 108 | | 76 - 132 |
| 4-Bromofluorobenzene (Surr) | 91 | | 80 - 120 |
| Toluene-d8 (Surr) | 99 | | 80 - 128 |

**Lab Sample ID: 720-72688-1 MSD**
**Matrix: Water**
**Analysis Batch: 335872**

**Client Sample ID: S-13**
**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) | 21000 | | 69000 | 102000 | | ug/L | | 118 | 50 - 145 | 3 | 20 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| Dibromofluoromethane (Surr) | 107 | | 76 - 132 |
| 4-Bromofluorobenzene (Surr) | 94 | | 80 - 120 |
| Toluene-d8 (Surr) | 101 | | 80 - 128 |

# QC Association Summary

Client: AECOM Technical Services Inc.
Project/Site: Shell- 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 720-72688-1

## GC/MS VOA

### Analysis Batch: 335871

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-72688-1 | S-13 | Total/NA | Water | 8260B | |
| 720-72688-1 MS | S-13 | Total/NA | Water | 8260B | |
| 720-72688-1 MSD | S-13 | Total/NA | Water | 8260B | |
| 720-72688-2 | S-14 | Total/NA | Water | 8260B | |
| LCS 440-335871/5 | Lab Control Sample | Total/NA | Water | 8260B | |
| MB 440-335871/8 | Method Blank | Total/NA | Water | 8260B | |

### Analysis Batch: 335872

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 720-72688-1 | S-13 | Total/NA | Water | 8260B/CA_LUFT MS | |
| 720-72688-1 MS | S-13 | Total/NA | Water | 8260B/CA_LUFT MS | |
| 720-72688-1 MSD | S-13 | Total/NA | Water | 8260B/CA_LUFT MS | |
| 720-72688-2 | S-14 | Total/NA | Water | 8260B/CA_LUFT MS | |
| LCS 440-335872/6 | Lab Control Sample | Total/NA | Water | 8260B/CA_LUFT MS | |
| MB 440-335872/8 | Method Blank | Total/NA | Water | 8260B/CA_LUFT MS | |

# Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: Shell- 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 720-72688-1

## Client Sample ID: S-13

**Lab Sample ID: 720-72688-1**

**Date Collected: 06/03/16 11:45**

**Matrix: Water**

**Date Received: 06/06/16 17:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 40 | 335871 | 06/10/16 21:58 | AA | TAL IRV |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 40 | 335872 | 06/10/16 21:58 | AA | TAL IRV |

## Client Sample ID: S-14

**Lab Sample ID: 720-72688-2**

**Date Collected: 06/03/16 11:35**

**Matrix: Water**

**Date Received: 06/06/16 17:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 335871 | 06/11/16 00:45 | AA | TAL IRV |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 335872 | 06/11/16 00:45 | AA | TAL IRV |

**Laboratory References:**

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

# Certification Summary

Client: AECOM Technical Services Inc.
Project/Site: Shell- 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 720-72688-1

## Laboratory: TestAmerica Pleasanton

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

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| California | State Program | 9 | 2496 | 01-31-18 |

## Laboratory: TestAmerica Irvine

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

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Alaska | State Program | 10 | CA01531 | 06-30-16 |
| Arizona | State Program | 9 | AZ0671 | 10-13-16 |
| California | LA Cty Sanitation Districts | 9 | 10256 | 01-31-17 * |
| California | State Program | 9 | CA ELAP 2706 | 06-30-16 |
| Guam | State Program | 9 | Cert. No. 12.002r | 01-23-17 |
| Hawaii | State Program | 9 | N/A | 01-29-17 |
| Kansas | NELAP Secondary AB | 7 | E-10420 | 07-31-16 |
| Nevada | State Program | 9 | CA015312016-2 | 07-31-16 |
| New Mexico | State Program | 6 | N/A | 01-29-17 |
| Northern Mariana Islands | State Program | 9 | MP0002 | 01-29-17 |
| Oregon | NELAP | 10 | 4028 | 01-29-17 |
| USDA | Federal | | P330-09-00080 | 07-08-18 |
| Washington | State Program | 10 | C900 | 09-03-16 |

* Certification renewal pending - certification considered valid.

# Method Summary

Client: AECOM Technical Services Inc.
Project/Site: Shell- 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 720-72688-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260B | Volatile Organic Compounds (GC/MS) | SW846 | TAL IRV |
| 8260B/CA_LUFTMS | 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

# Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: Shell- 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 720-72688-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 720-72688-1 | S-13 | Water | 06/03/16 11:45 | 06/06/16 17:30 |
| 720-72688-2 | S-14 | Water | 06/03/16 11:35 | 06/06/16 17:30 |

720-72688

# Shell Oil Products US Chain Of Custody Record

AECOM

6/13/2016

LAB (LOCATION)
- ☐ ACCUTEST (_____)
- ☐ CALSCIENCE (_____)
- ☑ TESTAMERICA (_____)
- ☐ Other (_____)

Lab Vendor # 1364589 (TestAmerica)

Please Check Appropriate Box:
- ☐ SGW FDG
- ☐ PIPELINE
- ☐ RETAIL
- ☐ CHEMICALS
- ☑ CONSULTANT
- ☐ LUBES
- ☐ TRANSPORTATION
- ☐ OTHER

Print Bill To Contact Name: Sara Heikkila

PO #

PlaNet Site or Project ID: 31733

GSAP Project ID: USPG/00259,USRT/00385

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 6/3/16

PAGE: 1 of 1

SAMPLING COMPANY: Blaine Tech Services, Inc.

LOG CODE: BTSS

SITE ADDRESS: Street and City: 4411 Foothill Blvd., Oakland

State: CA

AECOM Project / Task Number: 60482424

ADDRESS: 1680 Rogers Ave., San Jose, CA, 95112

EDF DELIVERABLE TO (Name, Company, Office Location): Casey Huff, AECOM, Oakland, CA

PHONE NO: 510-893-3600

E-MAIL: casey.huff@aecom.com

AECOM Other ID: 10059562

PROJECT CONTACT (Hardcopy or PDF Report to): Bart Gebbie

TELEPHONE: 310-885-4455 Ext. 103

FAX: 310-637-5802

Sal Tech Contact E-MAIL: sara.heikkila@aecom.com

SAMPLER NAME(S) (Print): Rodolfo Huerta

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
- ☑ STANDARD (14 DAY)
- ☐ 5 DAYS
- ☐ 3 DAYS
- ☐ 2 DAYS
- ☐ 24 HOURS
- ☐ RESULTS NEEDED ON WEEKEND

- ☐ LA - RWQCB REPORT FORMAT
- ☐ UST AGENCY

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 :**

Run TPH-D w/ Silica Gel Clean Up

Email invoice to USAPimaging@aecom.com

- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
- ☑ RECEIPT VERIFICATION REQUESTED
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

UNIT COST: TPH-GRO, Purgeable (8260B) | TPH-DRO, Extractable (8015M) | BTEX | 5 OXYS (8260B)

NON-UNIT COST

FIELD NOTES:

TEMPERATURE ON RECEIPT: 4.1 °C

Container PID Readings or Laboratory Notes

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | PRESERVATIVE HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | TPH-GRO | TPH-DRO | BTEX | 5 OXYS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S-13 | 6/3/16 | 1145 | W | X | | | | | 3 | X | | X | X |
| | S-14 | 6/3/16 | 1135 | W | X | | | | | 3 | X | | X | X |

720-72688 Chain of Custody

| Relinquished by: (Signature) | Received by: (Signature) | Date | Time |
|---|---|---|---|
| Rodolfo 6/3/16 | | 6-3-16 | 1400 |
| | (Sample Custodian) | 6-3-16 | 1730 |
| BBS (SC) | | 6/6/16 | 1330 |
| TR | 92 | 6/6/16 | 1730 |

Version: 14Dec15

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**TestAmerica Pleasanton**
1220 Quarry Lane
Pleasanton, CA 94566
Phone (925) 484-1919 Fax (925) 600-3002

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Riley, Beth | Carrier Tracking No(s): | COC No: 720-29240.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: beth.riley@testamericainc.com | | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc | | | | Job #: 720-72688-1 |

| Address: 17461 Derian Ave, Suite 100, | Due Date Requested: 6/16/2016 |
|---|---|
| City: Irvine | TAT Requested (days): |
| State, Zip: CA, 92614-5817 | |
| Phone: 949-261-1022(Tel) 949-260-3297(Fax) | PO #: |
| Email: | WO #: |
| Project Name: Shell- 4411 Foothill Blvd., Oakland | Project #: 44015020 |
| Site: | SSOW#: |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - ph 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 8260B/CA_LUFTMS/5030B C4-C12 Volatile Fuel Hydrocarbons | 8260B_LL/5030B (MOD) BTEX/ 1,2 DCA and 1,2 EDB | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | |
| S-13 (720-72688-1) | 6/3/16 | 11:45 Pacific | | Water | | | X | X | 3 | |
| S-14 (720-72688-2) | 6/3/16 | 11:35 Pacific | | Water | | | X | X | 3 | |

***Possible Hazard Identification***
*Unconfirmed*

***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)***
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: Fed: 6219 8463 7754 |
|---|---|---|---|

| Relinquished by: | Date/Time: 6-7-16 1600 | Company Pleas | Received by: VanBaak | Date/Time: 6/8/16 9:45 | Company TAI |
|---|---|---|---|---|---|
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: CS 3.8/3.5 IR-74 |
|---|---|---|



6/13/2016

# Login Sample Receipt Checklist

Client: AECOM Technical Services Inc. Job Number: 720-72688-1

**Login Number: 72688** **List Source: TestAmerica Pleasanton**
**List Number: 1**
**Creator: Arauz, Dennis**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | N/A | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 720-72688-1

**Login Number: 72688**
**List Number: 2**
**Creator: Salas, Margarita**

**List Source: TestAmerica Irvine**
**List Creation: 06/08/16 12:29 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= 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. | True | |
| 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? | N/A | Received project as a subcontract. |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | True | |