CONESTOGA-ROVERS & ASSOCIATES

5900 Hollis Street, Suite A
Emeryville, California 94608
Telephone: (510) 420-0700 Fax: (510) 420-9170
www.CRAworld.com

# TRANSMITTAL

**DATE:** February 9, 2012

**REFERENCE NO.:** 240897

**PROJECT NAME:** 4411 Foothill Boulevard, Oakland

**TO:** Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

**RECEIVED**
*4:06 pm, Feb 15, 2012*
Alameda County
Environmental Health

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| QUANTITY | DESCRIPTION |
|---|---|
| 1 | Groundwater Monitoring Report – Fourth Quarter 2011 |
| | |
| | |

- ☐ As Requested
- ☐ For Your Use
- ☒ For Review and Comment
- ☐
- ☐

**COMMENTS:**
If you have any questions regarding the contents of this document, please call Peter Schaefer at (510) 420-3319.

Copy to: Denis Brown, Shell Oil Products US (electronic copy)
Bill Phua (property owner), Foothill Blvd. LLC, P.O. Box 10664, Oakland, CA 94610

Completed by: Peter Schaefer Signed: Aubrey Cool

**Filing:** **Correspondence File**

**Denis L. Brown**
**Shell Oil Products US**
HSE – Environmental Services
20945 S. Wilmington Ave.
Carson, CA 90810-1039
Tel (707) 865 0251
Fax (707) 865 2542
Email denis.l.brown@shell.com

Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Former Shell Service Station
4411 Foothill Boulevard
Oakland, California
SAP Code 135686
Incident No. 98995746
ACEH Case No. RO0000415

Dear Mr. Wickham:

The attached document is provided for your review and comment. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

If you have any questions or concerns, please call me at (707) 865-0251.

Sincerely,

Denis L. Brown
Senior Program Manager

# GROUNDWATER MONITORING REPORT - FOURTH QUARTER 2011

## FORMER SHELL SERVICE STATION
## 4411 FOOTHILL BOULEVARD
## OAKLAND, CALIFORNIA

| | |
|---|---|
| SAP CODE | 135686 |
| INCIDENT NO. | 98995746 |
| AGENCY NO. | RO0000415 |

**Prepared by:**
**Conestoga-Rovers & Associates**

5900 Hollis Street, Suite A
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FEBRUARY 9, 2012
REF. NO. 240897 (17)
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## LIST OF APPENDICES

# 1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell).

## 1.1 SITE INFORMATION

| | |
|---|---|
| Site Address | 4411 Foothill Boulevard, Oakland |
| Site Use | Strip Mall |
| Shell Project Manager | Denis Brown |
| CRA Project Manager | Peter Schaefer |
| Lead Agency and Contact | ACEH, Jerry Wickham |
| Agency Case No. | RO0000415 |
| Shell SAP Code | 135686 |
| Shell Incident No. | 98995746 |

Date of most recent agency correspondence was April 4, 2011.

# 2.0 SITE ACTIVITIES, FINDINGS, AND DISCUSSION

## 2.1 CURRENT QUARTER'S ACTIVITIES

Blaine Tech Services, Inc. (Blaine) gauged and sampled the wells according to the established monitoring program for this site.

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

CRA's August 3, 2011 *Soil Vapor Sampling Report* provided analytical results from sampling soil vapor probes V-1 through V-9 and V-11 on May 9, 2011. Soil vapor detections in soil vapor samples collected during this event were within historical norms, and we concluded that no further soil vapor monitoring is warranted.

## 2.2 CURRENT QUARTER'S FINDINGS

| | |
|---|---|
| Groundwater Flow Direction | Variable |
| Hydraulic Gradient | Variable |
| Depth to Water | 7.01 to 8.77 feet below top of well casing |

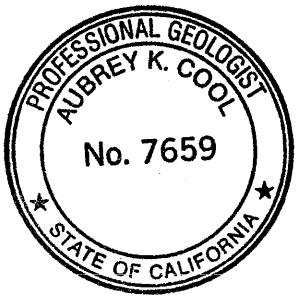
## 2.3 PROPOSED ACTIVITIES

After reviewing the data, CRA recommends discontinuing 1,2-dichloroethane and 1,2-dibromoethane analyses. Blaine will gauge and sample wells according to the modified monitoring program for this site. This site is monitored annually during the fourth quarter, and CRA will issue groundwater monitoring reports annually following the sampling events.

All of Which is Respectfully Submitted,
CONESTOGA-ROVERS & ASSOCIATES

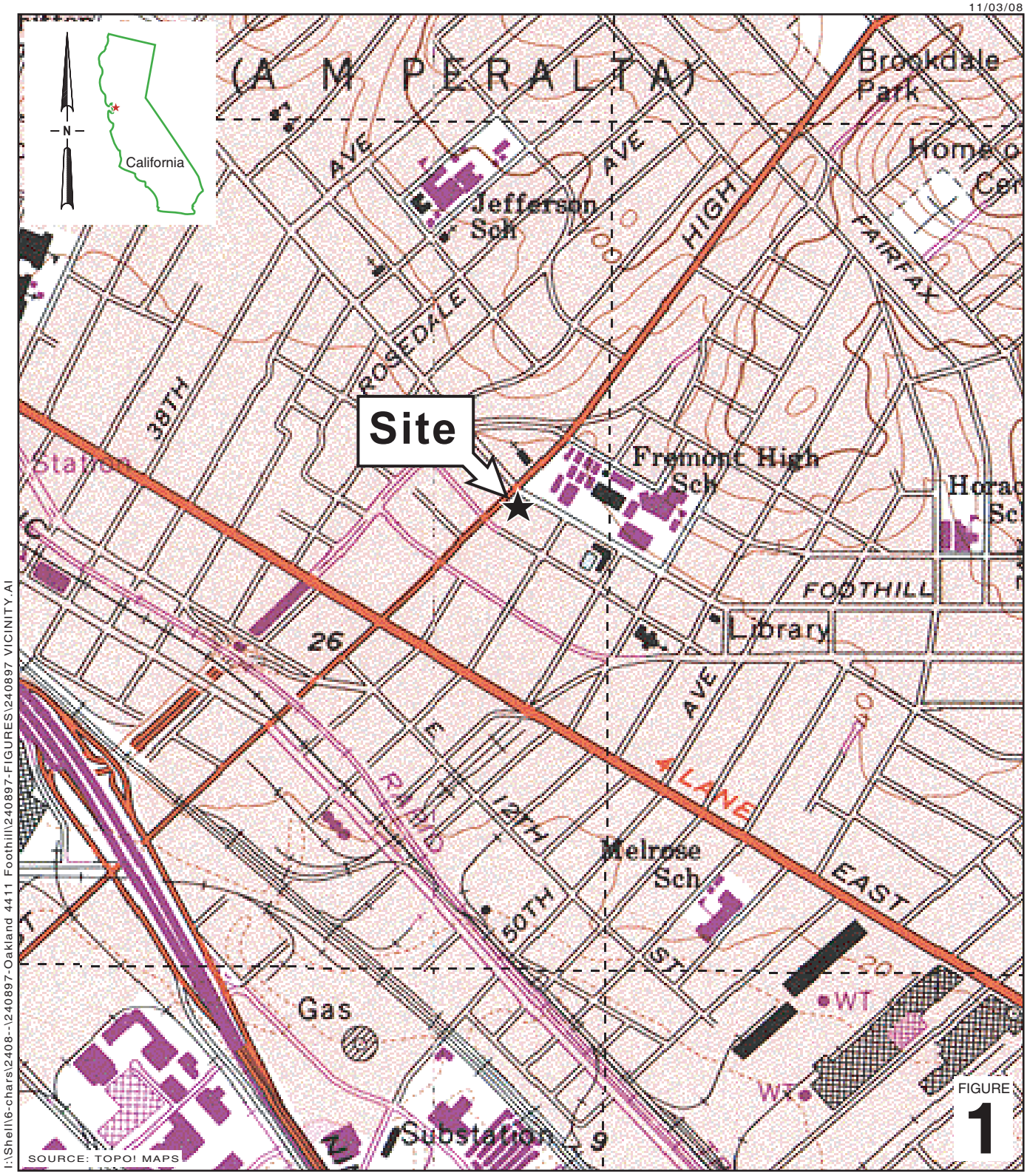
Peter Schaefer, CHG, CEG

Aubrey K. Cool, PG



# FIGURES

11/03/08




I:\Shell\6-chars\2408--\240897-Oakland 4411 Foothill\240897-FIGURES\240897 VICINITY.AI

FIGURE 1

0 1/6 1/3 1/2 1

SCALE : 1" = 1/6 MILE

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

CONESTOGA-ROVERS & ASSOCIATES

**Vicinity Map**

02/01/2012

# Groundwater Contour and Chemical Concentration Map

December 23, 2011

HIGH STREET

FOOTHILL BOULEVARD

4411 Foothill

Former Shell Station
*4411 Foothill*

BLDG. A

Wood Moulding & Doors
*4413 Foothill*

Laundromat

BW-A

S-2

SSV-2

SSV-1

S-5

V-1

V-2

V-3

V-4

V-5

V-6

V-7

V-10

V-11

V-12

S-1

S-3

S-4

S-6
29.52
760
61

S-8
28.28
9,500
NDa

S-7
29.55
11,000
NDa

S-9
29.04
6.7
NDa

S-10
29.23
ND
ND

S-11
29.16
ND
ND

S-12
28.99
ND
ND

29.45

29.05

28.65

4415 Foothill

4417 Foothill

BLDG. B

4419 Foothill

Jackson & Hewitt Tax Services
*4421 Foothill*

Nails & Spa
*4423 Foothill*

Former Building

Restaurant

Parking Lot

Parking Lot

Residential
*1724 High St.*

Residential
*4320 Bond St.*

*4340 Bond St.*

Trash Encl.

Planter

E

SW

N

0 10 20 40

Scale (ft)

## EXPLANATION

- S-6 — Monitoring well location
- V-1 — Soil vapor probe location
- SSV-1 — Destroyed sub-slab soil vapor probe location
- S-1 — Destroyed monitoring well location
- BW-A — Destroyed tank backfill 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
- XX.XX — Groundwater elevation contour, in feet above mean sea level (msl)
- Well designation
- ELEV. — Groundwater elevation, in feet above msl
- Benzene / MTBE — Benzene and MTBE concentrations are in parts per micrograms per liter

**Notes:**
**ND =** Not detected
**NDa =** Elevated reporting limit; see laboratory report for details

FIGURE

**2**

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

CONESTOGA-ROVERS & ASSOCIATES

I:\Shell\6-chars\2408--\240897-Oakland 4411 Foothill\240897-REPORTS\240897-RPT17-4Q11\240897 4QM11-GW.DWG

TABLE

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 m | 30,000 | 1,100 | 4,700 | 1,600 | 10,000 | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 7.15 | 31.16 | --- |
| S-1 | 03/30/1995 | 3,100 c,m | 30,000 c | 1,400 c | 4,000 c | 1,500 c | 11,000 c | --- | --- | --- | --- | --- | --- | --- | --- | 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 m | 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 |
| S-1 | 12/22/1999 | 444 m | 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 m | 1,230 c | 21.2 c | 115 c | 116 c | 411 c | 45.1 c | --- | --- | --- | --- | --- | --- | --- | 38.30 | 6.21 | 32.09 | 2.0/2.9 |
| S-1 | 06/20/2000 | 352 m | 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 m | 2,980 | 43.5 | 117 | 168 | 871 | 192 | --- | --- | --- | --- | --- | --- | --- | 38.30 | 10.14 | 28.16 | 0.6/0.3 |
| S-1 | 12/04/2000 | 238 m | 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 | --- |

# 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 | 03/08/2001 | 1,390 m | 2,940 | 49.6 | 52.9 | 21.8 | 749 | 87.6 | --- | --- | --- | --- | --- | --- | --- | 38.30 | 5.84 | 32.46 | 2.7 e |
| 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 m | 1,700 | 7.7 | 44 | 190 | 340 | --- | 4.5 | --- | --- | --- | --- | --- | --- | 38.04 | 8.14 | 29.90 | 14.0 |
| S-1 | 09/09/2003 | 96 m | 3,200 | 11 | 110 | 350 | 1,100 | --- | 5.8 | --- | --- | --- | --- | --- | --- | 38.04 | 9.31 | 28.73 | 7.5 |
| S-1 | 12/09/2003 | 1,000 m | 6,000 | 20 | 170 | 530 | 1,700 | --- | 6.1 | --- | --- | --- | --- | --- | --- | 38.04 | 7.24 | 30.80 | 28.6 |
| S-1 | 03/09/2004 | 300 m | 390 | 5.8 | 30 | 67 | 160 | --- | 5.6 | --- | --- | --- | --- | --- | --- | 38.04 | 5.56 | 32.48 | 6.4 |
| S-1 | 06/08/2004 | 2,500 m | 5,600 | 11 | 140 | 660 | 1,900 | --- | 5.0 | --- | --- | --- | --- | --- | --- | 38.04 | 8.82 | 29.22 | 30.0 |
| S-1 | 09/07/2004 | 130 i | <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 i | 560 | 2.2 | 26 | 67 | 220 | --- | 1.4 | --- | --- | --- | --- | --- | --- | 38.04 | 5.39 | 32.65 | 31.7 |
| S-1 | 03/07/2005 | 460 i | 12,000 | 12 | 310 | 830 | 2,600 | --- | <5.0 | --- | --- | --- | --- | --- | --- | 38.04 | 5.77 | 32.27 | 16.1 |
| S-1 | 06/10/2005 | 1,200 i | 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 | --- |
| 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 c | 2,800 c | 190 c | 240 c | 700 c | --- | --- | --- | --- | --- | --- | --- | --- | 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 | --- |

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 | 03/17/1997 | --- | 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 m | 678 | 135 | 8.22 | 14.9 | 25.8 | 17,100 | 17,000 c | --- | --- | --- | --- | --- | --- | 38.79 | 10.58 | 28.21 | 5.1/4.8 |
| S-2 | 12/22/1999 | 142 m | 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 m | 2,670 | 1,190 c | 62.7 | 84.1 | 125 | 29,200 c | 31,400 c | --- | --- | --- | --- | --- | --- | 38.78 | 7.88 | 30.90 | 7.6/5.0 |
| S-2 | 06/20/2000 | 401 m | <5,000 | 348 | <50.0 | 50.4 | 127 | 35,800 | 33,900 c | --- | --- | --- | --- | --- | --- | 38.78 | 10.27 | 28.51 | 1.9/2.2 |
| S-2 | 09/05/2000 | 373 m | <5,000 | 106 | <50.0 | <50.0 | <50.0 | 25,800 | 37,100 c | --- | --- | --- | --- | --- | --- | 38.78 | 10.19 | 28.59 | 0.5/1.6 |
| S-2 | 12/04/2000 | 1,730 m | <250 | 4.37 | <2.50 | <2.50 | <2.50 | 4,500 | 5,130 c | --- | --- | --- | --- | --- | --- | 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 e |
| 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 |
| 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 m | 2,200 | 83 | <5.0 | 22 | 52 | --- | 970 | --- | --- | --- | --- | --- | --- | 38.47 | 9.20 | 29.27 | 5.0 |
| S-2 | 09/09/2003 | 270 m | 1,200 | 57 | <2.5 | 11 | 33 | --- | 740 | --- | --- | --- | --- | --- | --- | 38.47 | 9.70 | 28.77 | 3.7 |
| S-2 | 12/09/2003 | 1,900 m | 3,100 | 84 | <5.0 | 45 | 90 | --- | 660 | --- | --- | --- | --- | --- | --- | 38.47 | 9.31 | 29.16 | 24.21 |
| S-2 | 03/09/2004 | 990 m | 1,600 | 140 | <5.0 | 31 | 49 | --- | 610 | --- | --- | --- | --- | --- | --- | 38.47 | 8.24 | 30.23 | 2.6 |
| S-2 | 06/08/2004 | 400 m | 640 | 40 | <2.5 | 4.2 | 6.6 | --- | 460 | --- | --- | --- | --- | --- | --- | 38.47 | 9.40 | 29.07 | 8.2 |
| S-2 | 09/07/2004 | 240 i | <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 m | 260 | 26 | <1.0 | 2.0 | <2.0 | --- | 270 | --- | --- | --- | --- | --- | --- | 38.47 | 9.45 | 29.02 | 8.5 |
| S-2 | 03/07/2005 | 450 i | 2,300 | 100 | <5.0 | 11 | <10 | --- | 570 | --- | --- | --- | --- | --- | --- | 38.47 | 7.82 | 30.65 | 16.7 |
| S-2 | 06/10/2005 | 550 m | <2,500 | 200 | <25 | <25 | <50 | --- | 630 | --- | --- | --- | --- | --- | --- | 38.47 | 8.37 | 30.10 | 0.70 |
| S-2 | 07/14/2005 | Well destroyed | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

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 | 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 c | 360 c | 730 c | 700 c | 3,700 c | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | 7.06 | 30.27 | --- |
| S-3 (D) | 03/30/1995 | --- | 7,600 c | 330 c | 570 c | 600 c | 2,600 c | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | --- | --- | --- |
| 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 | --- |

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 | 06/14/1999 | --- | 1,250 | 37.4 | 17.4 | 110 | 109 | 118 | --- | --- | --- | --- | --- | --- | --- | 37.33 | 8.85 | 28.48 | --- |
| S-3 | 09/30/1999 | 2,020 m | 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 m | 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 m | 2,290 c | 84.5 c | 17.0 c | 104 c | 105 c | 29.3 c | --- | --- | --- | --- | --- | --- | --- | 37.30 | 6.25 | 31.05 | 1.0/1.4 |
| S-3 | 06/20/2000 | 2,900 m | 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 m | 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 m | 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 m | 19,400 | 465 | 772 | 1,230 | 3,830 | 160 | --- | --- | --- | --- | --- | --- | --- | 37.30 | 8.17 | 29.13 | 1.1 f |
| 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 m | 5,900 | 44 | 140 | 130 | 1,500 | --- | 4.4 | --- | --- | --- | --- | --- | --- | 36.85 | 8.99 | 27.86 | 2.2 |
| S-3 | 12/09/2003 | 1,500 m | 27,000 | 130 | 460 | 550 | 4,900 | --- | <20 | --- | --- | --- | --- | --- | --- | 36.85 | 7.67 | 29.18 | 1.6 |
| S-3 | 03/09/2004 | 1,700 m | 11,000 | 24 | 100 | 230 | 3,200 | --- | <5.0 | --- | --- | --- | --- | --- | --- | 36.85 | 6.35 | 30.50 | 2.1 |
| S-3 | 06/08/2004 | 1,100 m | 1,700 | 11 | 34 | 29 | 420 | --- | <2.5 | --- | --- | --- | --- | --- | --- | 36.85 | 8.25 | 28.60 | 0.1 |
| S-3 | 09/07/2004 | 310 i | 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 i | 620 | 1.9 | 7.8 | 10 | 180 | --- | <0.50 | --- | --- | --- | --- | --- | --- | 36.85 | 5.83 | 31.02 | 2.4 |
| S-3 | 03/07/2005 | 400 i | 4,500 | <0.50 | 7.7 | 30 | 350 | --- | <0.50 | --- | --- | --- | --- | --- | --- | 36.85 | 4.58 | 32.27 | 4.4 |
| S-3 | 06/10/2005 | 130 m | 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 m | 20,900 | 4,570 | 272 | 595 | 997 | 4,490 | 4,450 c | --- | --- | --- | --- | --- | --- | 39.06 | 8.92 | 30.14 | 1.8/1.2 |
| S-4 | 06/20/2000 | 244 m | 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 m | 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 m | 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 m | 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 |

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 | 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 g | 30.21 | 3.0/3.1 |
| S-4 | 06/19/2002 | <1,500 | 4,700 | 620 | 9.5 | 84 | 37 | --- | 490 | --- | --- | --- | --- | --- | --- | --- | 10.37 g | --- | --- |
| 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 m | 13,000 | 2,400 | 86 | 650 | 380 | --- | 1,100 | --- | --- | --- | --- | --- | --- | 38.69 | 9.77 | 28.92 | 0.8 |
| S-4 | 09/09/2003 | 1,700 m | 3,700 | 510 | 12 | 43 | 43 | --- | 650 | --- | --- | --- | --- | --- | --- | 38.69 | 10.78 | 27.91 | 0.9 |
| S-4 | 12/09/2003 | 390 m | 3,900 | 150 | 4.2 | 7.5 | 13 | --- | 510 | --- | --- | --- | --- | --- | --- | 38.69 | 10.20 | 28.49 | 0.1 |
| S-4 | 03/09/2004 | 3,100 m | 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 m | 6,100 | 870 | 30 | 120 | 150 | --- | 420 | --- | --- | --- | --- | --- | --- | 38.69 | 10.27 | 28.42 | 0.3 |
| S-4 | 09/07/2004 | 890 i | 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 i | 4,900 | 520 | 9.9 | 38 | 24 | --- | 290 | --- | --- | --- | --- | --- | --- | 38.69 | 10.03 | 28.66 | 0.2 |
| S-4 | 03/07/2005 | 2,900 i | 28,000 | 2,300 | 130 | 690 | 770 | --- | 770 | --- | --- | --- | --- | --- | --- | 38.69 | 6.20 | 32.49 | 0.2 |
| S-4 | 06/10/2005 | 2,700 i | 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 m | 2,400 | 11 | 7.2 | 56 | 38 | --- | 1,100 | --- | --- | --- | --- | --- | --- | 38.05 | 8.51 | 29.54 | 0.1 |
| S-5 | 09/09/2003 | 660 m | 3,700 | 23 | 14 | 44 | 150 | --- | 440 | --- | --- | --- | --- | --- | --- | 38.05 | 9.44 | 28.61 | 0.1 |
| S-5 | 12/09/2003 | 600 m | 12,000 | 200 | 80 | 41 | 320 | --- | 580 | --- | --- | --- | --- | --- | --- | 38.05 | 9.50 | 28.55 | 0.4 |
| S-5 | 03/09/2004 | 550 m | 2,300 | 130 | 3.5 | 6.9 | 13 | --- | 250 | --- | --- | --- | --- | --- | --- | 38.05 | 7.04 | 31.01 | 0.2 |
| S-5 | 06/08/2004 | 490 m | 2,900 | 11 | <2.5 | 8.9 | 18 | --- | 120 | --- | --- | --- | --- | --- | --- | 38.05 | 8.87 | 29.18 | 0.2 |
| S-5 | 09/07/2004 | 650 i | 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 i | 4,700 | 99 | 28 | 14 | 69 | --- | 180 | --- | --- | --- | --- | --- | --- | 38.05 | 8.75 | 29.30 | 0.1 |
| S-5 | 03/07/2005 | 360 i | 4,700 | 440 | <2.5 | <2.5 | <5.0 | --- | 200 | --- | --- | --- | --- | --- | --- | 38.05 | 7.28 | 30.77 | 0.1 |
| S-5 | 06/10/2005 | 240 i | 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 c | 630 c | 23 | 200 | 110 | --- | 140 | 280 | --- | --- | --- | 13 | <0.50 | 37.86 | 7.73 | 30.13 | --- |
| S-6 | 05/23/2007 | 2,600 | 5,600 l | 510 | 16 | 11 | 144 | --- | 72 | 66 | --- | --- | --- | <2.5 | <5.0 | 37.86 | 8.13 | 29.73 | --- |
| S-6 | 08/28/2007 | 6,100 m | 13,000 l | 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 m | 19,000 l | 760 | 47 | 500 | 602 | --- | 68 | 340 | --- | --- | --- | <5.0 | <10 | 37.86 | 8.78 | 29.08 | --- |
| S-6 | 02/08/2008 | 2,200 m | 6,800 l | 380 | 14 | 130 | 87.0 | --- | 75 | 200 | --- | --- | --- | <2.5 | <5.0 | 37.86 | 7.06 | 30.80 | --- |

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 | 05/20/2008 | 2,900 m | 12,000 l | 590 | 21 | 270 | 60 | --- | 54 | 240 | --- | --- | --- | <2.5 | <5.0 | 37.86 | 8.60 | 29.26 | --- |
| S-6 | 08/12/2008 | 7,100 m | 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 m | 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 m | 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 m | 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 m | 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 m | 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 m | 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-7 | 02/22/2007 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.58 | 7.39 | 30.19 | --- |
| S-7 | 03/02/2007 | 2,500 | 100,000 c | 32,000 c | 9,700 c | 2,900 c | 14,000 c | --- | 310 c | 480 | --- | --- | --- | 150 | <0.50 | 37.58 | 7.42 | 30.16 | --- |
| S-7 | 05/23/2007 | 3,700 | 82,000 l,m | 24,000 | 8,100 | 2,800 | 13,000 | --- | 190 | <200 | --- | --- | --- | <10 | <20 | 37.58 | 8.38 | 29.20 | --- |
| S-7 | 08/28/2007 | 4,500 m | 96,000 l | 23,000 | 7,000 | 2,900 | 12,200 | --- | 190 n | <2,000 | <400 | <400 | <400 | <100 | <200 | 37.58 | 9.32 | 28.26 | --- |
| S-7 | 11/13/2007 | 25,000 m | 100,000 l | 22,000 | 6,500 | 3,000 | 12,400 | --- | <200 | <2,000 | --- | --- | --- | <100 | <200 | 37.58 | 9.60 | 27.98 | --- |
| S-7 | 02/08/2008 | 4,000 m | 74,000 l | 29,000 | 9,300 | 3,100 | 13,700 | --- | 500 | <2,000 | --- | --- | --- | <100 | <200 | 37.58 | 6.57 | 31.01 | --- |
| S-7 | 05/20/2008 | 1,600 m | 69,000 l | 20,000 | 5,500 | 2,500 | 9,800 | --- | 260 | <2,000 | --- | --- | --- | <100 | <200 | 37.58 | 9.00 | 28.58 | --- |
| S-7 | 08/12/2008 | 4,900 m | 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 m | 120,000 | 24,000 | 8,400 | 3,600 | 15,000 | --- | 320 | <2,000 | --- | --- | --- | <100 | <200 | 37.58 | 9.91 | 27.67 | --- |
| S-7 | 02/05/2009 | 3,800 m | 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 m | 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 m | 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 m | 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 m | 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-8 | 02/22/2007 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.05 | 6.65 | 30.40 | --- |
| S-8 | 03/02/2007 | 2,300 | 72,000 c | 12,000 c | 5,600 c | 2,900 c | 15,000 c | --- | 120 | 230 | --- | --- | --- | 150 | <2.5 | 37.05 | 6.60 | 30.45 | --- |
| S-8 | 05/23/2007 | 5,800 | 69,000 l,m | 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 m | 69,000 l | 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 m | 84,000 l | 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 m | 54,000 l | 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 m | 67,000 l | 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 m | 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 m | 70,000 | 9,500 | 2,700 | 2,500 | 12,300 | --- | 290 | 1,200 | --- | --- | --- | <50 | <100 | 37.05 | 9.39 | 27.66 | --- |

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 | 02/05/2009 | 3,500 m | 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 m | 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 m | 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 m | 74,000 | 11,000 | 3,900 | 3,000 | 15,000 | --- | 160 | <1,000 | --- | --- | --- | <50 | <100 | 37.05 | 7.77 | 29.28 | --- |
| S-8 | 12/28/2010 | 4,900 m | 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-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 l | 13 | 38 | 2.5 n | 1,453 | --- | 5.2 n | <100 | --- | --- | --- | <5.0 | <10 | 37.52 | 8.43 | 29.09 | --- |
| S-9 | 08/28/2007 | 2,800 m | 9,500 l | 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 m | 12,000 l | 19 | 35 | 450 | 499 | --- | <10 | <100 | --- | --- | --- | <5.0 | <10 | 37.52 | 9.91 | 27.61 | --- |
| S-9 | 02/08/2008 | 1,900 m | 10,000 l | 18 | 67 | 1,100 | 1,451 | --- | <10 | <100 | --- | --- | --- | <5.0 | <10 | 37.52 | 6.40 | 31.12 | --- |
| S-9 | 05/20/2008 | 1,500 m | 11,000 l | 150 | 770 | 13,000 | 17,460 | --- | <100 | <1,000 | --- | --- | --- | <50 | <100 | 37.52 | 8.79 | 28.73 | --- |
| S-9 | 08/12/2008 | 2,000 m | 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 m | 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 m | 6,300 | 11 | 33 | 480 | 600 | --- | <10 | <100 | --- | --- | --- | <5.0 | <10 | 37.52 | 9.49 | 28.03 | --- |
| S-9 | 05/19/2009 | 1,500 m | 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 m | 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 m | 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 m | 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-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-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 | --- |

**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 | 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-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 m | 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 m | 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 m | 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** | **---** |
| 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 m | <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:
TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method 8015; after February 22, 2007, analyzed with silica gel cleanup.
TPHg = Total petroleum hydrocarbons as gasoline 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

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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

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

c = Sample analyzed outside the EPA recommended holding time
e = Post-purge DO reading.
f = Pre-purge DO reading.
g = Estimated depth to water.
i = Hydrocarbon reported is in the early diesel range and does not match the laboratory's standard.
l = Analyzed by EPA Method 8015B (M).
m = The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.
n = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.

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

# APPENDIX A

# BLAINE TECH SERVICES, INC. – FIELD NOTES

# WELL GAUGING DATA

Project # 111223-GR1 Date 12/23/2011 Client 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 | 0726 | 4 | | | | | 8.34 | 19.35 | | |
| S-7 | 0730 | 4 | | | | | 8.02 | 19.40 | | |
| S-8 | 0735 | 4 | | | | | 8.77 | 19.60 | | |
| S-9 | 0722 | 4 | | | | | 8.48 | 19.46 | | |
| S-10 | 0705 | 4 | | | | | 8.20 | 19.53 | | |
| S-11 | 0700 | 4 | | | | | 7.28 | 19.61 | | |
| S-12 | 0710 | 4 | | | | | 7.01 | 19.62 | | |
| | | | | | | | | | | |
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# SHELL WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 111223-GR1 | Site: 5411 Foothill Blvd.; Oakland, CA |
| Sampler: G.R | Date: 12/23/2011 |
| Well I.D.: S-6 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth (TD): 19.35 | Depth to Water (DTW): 8.34 |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Referenced to: (PVC) Grade | D.O. Meter (if req'd): YSI HACH |
| DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.54 | |

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; (Electric Submersible); Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: (Bailer); Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

| 7.5 (Gals.) X | 3 | = | 22.5 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 or (µS)) | Turbidity (NTUs) | Gals. Removed | Observations |
|---|---|---|---|---|---|---|
| 0952 | 62.8 | 6.83 | 1630 | 21 | 7.5 | odor |
| 0953 | | well | dewatered | | 10.5 | DTW - 16.09 |
| | | | | | | |
| 1037 | 58.7 | 6.96 | 1621 | 9 | Grab | |
| | | | | | | |

Did well dewater? (Yes) No Gallons actually evacuated: 10.5

Sampling Date: 12/23/2011 Sampling Time: 1037 Depth to Water: 8.37

Sample I.D.: S-6 Laboratory: (Test America) Other_____

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

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

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

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

# SHELL WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 111223-GR1 | Site: 5411 Foothill Blvd.; Oakland, CA |
| Sampler: G.R | Date: 12/23/2011 |
| Well I.D.: S-7 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth (TD): 19.40 | Depth to Water (DTW): 5.02 |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Referenced to: (PVC) Grade | D.O. Meter (if req'd): YSI HACH |
| DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.30 | |

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; (Electric Submersible); Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: (Bailer); Disposable Bailer; Extraction Port; Dedicated Tubing; Other:_____

7.5 (Gals.) X 3 = 22.5 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 or (µS)) | Turbidity (NTUs) | Gals. Removed | Observations |
|---|---|---|---|---|---|---|
| 1005 | 63.5 | 6.75 | 1887 | 16 | 7.5 | odor |
| 1006 | | well | dewatered | | 10.5 | DTW-15.68 |
| | | | | | | |
| 1207 | 62.9 | 6.75 | 1842 | 11 | Grab | |
| | | | | | | |

Did well dewater? (Yes) No Gallons actually evacuated: 10.5

Sampling Date: 12/23/2011 Sampling Time: 1207 Depth to Water: 10.81 (>2 hrs)

Sample I.D.: S-7 Laboratory: (Test America) Other_____

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

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

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

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

# SHELL WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 111223-GR1 | Site: 5411 Foothill Blvd. ; Oakland, CA |
| Sampler: G.R | Date: 12/23/2011 |
| Well I.D.: S-8 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth (TD): 19.60 | Depth to Water (DTW): 8.77 |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Referenced to: (PVC) Grade | D.O. Meter (if req'd): YSI HACH |
| DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.94 | |

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; (Electric Submersible); Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: (Bailer); Disposable Bailer; Extraction Port; Dedicated Tubing; Other:_____

| 7.0 (Gals.) X | 3 | = | 21.0 Gals. |
|---|---|---|---|
| 1 Case Volume | Specified Volumes | | Calculated Volume |

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

| Time | Temp (°F) | pH | Cond. (mS or (µS)) | Turbidity (NTUs) | Gals. Removed | Observations |
|---|---|---|---|---|---|---|
| 1017 | 65.0 | 6.81 | 1400 | 16 | 7.0 | odor |
| 1017 | | well | dewatered | | 9.5 | DTW-15.99 |
| | | | | | | |
| 1222 | 65.7 | 6.83 | 1367 | 8 | Grab | |
| | | | | | | |

Did well dewater? (Yes) No Gallons actually evacuated: 9.5

Sampling Date: 12/23/2011 Sampling Time: 1222 Depth to Water: 11.28 (72hrs)

Sample I.D.: S-8 Laboratory: (Test America) Other_____

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

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

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

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

# SHELL WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 111223-GR1 | Site: 5411 Foothill Blvd.; Oakland, CA |
| Sampler: GR | Date: 12/23/2011 |
| Well I.D.: S-9 | Well Diameter: 2 3 (4) 6 8 ____ |
| Total Well Depth (TD): 19.46 | Depth to Water (DTW): 5.48 |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Referenced to: (PVC) Grade | D.O. Meter (if req'd): YSI HACH |
| DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.68 | |

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; (Electric Submersible); Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: (Bailer); Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

7.5 (Gals.) X 3 = 22.5 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 or (µS)) | Turbidity (NTUs) | Gals. Removed | Observations |
|---|---|---|---|---|---|---|
| 0936 | 61.7 | 6.63 | 1034 | 6 | 7.5 | Odor |
| 0937 | | well | dewatered | | 13.0 | DTW - 16.18 |
| | | | | | | |
| 1138 | 61.2 | 6.86 | 1031 | 7 | Grab | |
| | | | | | | |

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

Sampling Date: 12/23/2011 Sampling Time: 1138 Depth to Water: 13.00 (24hrs)

Sample I.D.: S-9 Laboratory: (Test America) Other_____

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

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

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

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

# SHELL WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 111223-GR1 | Site: 5411 Foothill Blvd.; Oakland, CA |
| Sampler: G.R | Date: 12/23/2011 |
| Well I.D.: S-10 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth (TD): 19.53 | Depth to Water (DTW): 8.20 |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Referenced to: (PVC) Grade | D.O. Meter (if req'd): YSI HACH |
| DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.47 | |

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; (Electric Submersible); Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: (Bailer); Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

| 7.5 (Gals.) X | 3 | = | 22.5 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 or (µS)) | Turbidity (NTUs) | Gals. Removed | Observations |
|---|---|---|---|---|---|---|
| 0827 | 64.6 | 6.42 | 685.4 | 107 | 7.5 | |
| 0829 | 67.5 | 6.35 | 675.8 | 99 | 15.0 | |
| 0830 | | well | dewatered | | 16.5 | DTW - 14.65 |
| | | | | | | |
| 0837 | 63.2 | 6.56 | 723.2 | 93 | Grab | |

Did well dewater? (Yes) No Gallons actually evacuated: 16.5

Sampling Date: 12/23/2011 Sampling Time: 0837 Depth to Water: 10.45 (Short Wait)

Sample I.D.: S-10 Laboratory: (Test America) Other_____

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

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

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

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

# SHELL WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 111223-GR1 | Site: 5411 Foothill Blvd.; Oakland, CA |
| Sampler: G.R | Date: 12/23/2011 |
| Well I.D.: S-11 | Well Diameter: 2 3 (4) 6 8 ____ |
| Total Well Depth (TD): 19.61 | Depth to Water (DTW): 7.28 |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Referenced to: (PVC) Grade | D.O. Meter (if req'd): YSI HACH |
| DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.75 | |

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; (Electric Submersible); Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: (Bailer); Disposable Bailer; Extraction Port; Dedicated Tubing; Other:_____

| 8.0 (Gals.) X | 3 | = 24.0 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 or (µS)) | Turbidity (NTUs) | Gals. Removed | Observations |
|---|---|---|---|---|---|---|
| 0812 | 63.8 | 6.08 | 822.7 | 46 | 8.0 | |
| 0814 | 64.9 | 6.20 | 823.1 (GR) | 46 | 16.0 | |
| 0814 | | well | dewatered | | 16.5 | DTW - 15.58 |
| | | | | | ~~Grab~~ (GR) | |
| 0915 | 62.3 | 6.66 | 866.2 | 15 | Grab | |

Did well dewater? (Yes) No Gallons actually evacuated: 16.5

Sampling Date: 12/23/2011 Sampling Time: 0915 Depth to Water: 7.89

Sample I.D.: S-11 Laboratory: (Test America) Other_____

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

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

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

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

# SHELL WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 111223-GR1 | Site: 5411 Foothill Blvd.; Oakland, CA |
| Sampler: GR | Date: 12/23/2011 |
| Well I.D.: S-12 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth (TD): 19.62 | Depth to Water (DTW): 7.01 |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Referenced to: (PVC) Grade | D.O. Meter (if req'd): YSI HACH |
| DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.53 | |

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; (Electric Submersible); Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: (Bailer); Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

| 8.5 (Gals.) X | 3 | = | 25.5 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 or (µS)) | Turbidity (NTUs) | Gals. Removed | Observations |
|---|---|---|---|---|---|---|
| 0852 | 62.6 | 6.57 | 1011 | 109 | 8.5 | odor |
| 0854 | 65.2 | 6.62 | 1178 | 122 | 17.0 | |
| 0856 | 66.4 | 6.64 | 1189 | 245 | 25.5 | DTW - 10.19 |
| | | | | | | |
| | | | | | | |

Did well dewater? Yes (No) Gallons actually evacuated: 25.5

Sampling Date: 12/23/2011 Sampling Time: 0904 Depth to Water: 8.18 (Short wait)

Sample I.D.: S-12 Laboratory: (Test America) Other_____

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

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

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

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

INCIDENT # 98995746

DATE: 12/23/204

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) | |
| | 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 | |
| | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (N/A) | | | | | | | | | | | | | | | | | |
| Building | | G | P | (N/A) | G | P | (N/A) | G | P | (N/A) | Y | N | (N/A) | | Y | N | |
| 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).***

Gregory Roberts, BTS

Print or type Name of Field Personnel & Consultant Company

APPENDIX B

TEST AMERICA –
LABORATORY REPORT

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

# LABORATORY REPORT

Prepared For: Blaine Tech San Jose/CRA Shell
1680 Rogers Avenue
San Jose, CA 95112-1105
Attention: Lorin King

Project: 4411 Foothill Blvd., Oakland, CA

Sampled: 12/23/11
Received: 12/24/11
Issued: 01/12/12 17:33

NELAP #01108CA California ELAP#2706 CSDLAC #10256 AZ #AZ0671 NV #CA01531



## SAMPLE CROSS REFERENCE

| LABORATORY ID | CLIENT ID | MATRIX |
|---|---|---|
| IUL2715-01 | S-6 | Water |
| IUL2715-02 | S-7 | Water |
| IUL2715-03 | S-8 | Water |
| IUL2715-04 | S-9 | Water |
| IUL2715-05 | S-10 | Water |
| IUL2715-06 | S-11 | Water |
| IUL2715-07 | S-12 | Water |

Reviewed By:

Philip Sanelle

**TestAmerica Irvine**

Philip Sanelle
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
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Blaine Tech San Jose/CRA Shell
1680 Rogers Avenue
San Jose, CA 95112-1105
Attention: Lorin King

Project ID: 4411 Foothill Blvd., Oakland, CA

Report Number: IUL2715

Sampled: 12/23/11
Received: 12/24/11

## EXTRACTABLE FUEL HYDROCARBONS (EPA 8015B w/ Silica Gel Clean-up)

| Analyte | Method | Batch | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Sample ID: IUL2715-01 (S-6 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| **DRO (C10-C28)** | EPA 8015B | 11L4051 | 240 | **2400** | 4.72 | 12/30/2011 | 1/4/2012 | |
| *Surrogate: n-Octacosane (45-120%)* | | | | *87 %* | | | | *Z3* |
| **Sample ID: IUL2715-02 (S-7 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| **DRO (C10-C28)** | EPA 8015B | 11L4051 | 470 | **3200** | 9.43 | 12/30/2011 | 1/4/2012 | |
| *Surrogate: n-Octacosane (45-120%)* | | | | *84 %* | | | | *Z3* |
| **Sample ID: IUL2715-03 (S-8 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| **DRO (C10-C28)** | EPA 8015B | 11L4051 | 470 | **4300** | 9.43 | 12/30/2011 | 1/4/2012 | |
| *Surrogate: n-Octacosane (45-120%)* | | | | *77 %* | | | | *Z3* |
| **Sample ID: IUL2715-04 (S-9 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| **DRO (C10-C28)** | EPA 8015B | 11L4051 | 47 | **1300** | 0.943 | 12/30/2011 | 12/31/2011 | |
| *Surrogate: n-Octacosane (45-120%)* | | | | *96 %* | | | | |
| **Sample ID: IUL2715-05 (S-10 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| DRO (C10-C28) | EPA 8015B | 11L4051 | 47 | ND | 0.943 | 12/30/2011 | 12/31/2011 | |
| *Surrogate: n-Octacosane (45-120%)* | | | | *84 %* | | | | |
| **Sample ID: IUL2715-06 (S-11 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| DRO (C10-C28) | EPA 8015B | 11L4051 | 47 | ND | 0.943 | 12/30/2011 | 12/31/2011 | |
| *Surrogate: n-Octacosane (45-120%)* | | | | *88 %* | | | | |
| **Sample ID: IUL2715-07 (S-12 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| **DRO (C10-C28)** | EPA 8015B | 11L4051 | 47 | **140** | 0.943 | 12/30/2011 | 12/31/2011 | |
| *Surrogate: n-Octacosane (45-120%)* | | | | *91 %* | | | | |

**TestAmerica Irvine**

Philip Sanelle
Project Manager

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Blaine Tech San Jose/CRA Shell
1680 Rogers Avenue
San Jose, CA 95112-1105
Attention: Lorin King

Project ID: 4411 Foothill Blvd., Oakland, CA

Report Number: IUL2715

Sampled: 12/23/11
Received: 12/24/11

# VOLATILE FUEL HYDROCARBONS BY GC/MS (CA LUFT)

| Analyte | Method | Batch | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Sample ID: IUL2715-01 (S-6 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| **Volatile Fuel Hydrocarbons (C4-C12)** | TPH by GC/MS | 12A0009 | 500 | **12000** | 10 | 1/2/2012 | 1/2/2012 | |
| *Surrogate: Dibromofluoromethane (80-120%)* | | | | *86 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | *105 %* | | | | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | *97 %* | | | | |
| **Sample ID: IUL2715-02 (S-7 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| **Volatile Fuel Hydrocarbons (C4-C12)** | TPH by GC/MS | 12A0009 | 10000 | **40000** | 200 | 1/2/2012 | 1/2/2012 | |
| *Surrogate: Dibromofluoromethane (80-120%)* | | | | *88 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | *97 %* | | | | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | *95 %* | | | | |
| **Sample ID: IUL2715-03 (S-8 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| **Volatile Fuel Hydrocarbons (C4-C12)** | TPH by GC/MS | 12A0009 | 10000 | **55000** | 200 | 1/2/2012 | 1/2/2012 | |
| *Surrogate: Dibromofluoromethane (80-120%)* | | | | *88 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | *100 %* | | | | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | *94 %* | | | | |
| **Sample ID: IUL2715-04 (S-9 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| **Volatile Fuel Hydrocarbons (C4-C12)** | TPH by GC/MS | 12A0009 | 200 | **6500** | 4 | 1/2/2012 | 1/2/2012 | |
| *Surrogate: Dibromofluoromethane (80-120%)* | | | | *87 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | *103 %* | | | | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | *102 %* | | | | |
| **Sample ID: IUL2715-05 (S-10 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| **Volatile Fuel Hydrocarbons (C4-C12)** | TPH by GC/MS | 12A0009 | 50 | **130** | 1 | 1/2/2012 | 1/3/2012 | |
| *Surrogate: Dibromofluoromethane (80-120%)* | | | | *87 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | *105 %* | | | | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | *92 %* | | | | |
| **Sample ID: IUL2715-06 (S-11 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| Volatile Fuel Hydrocarbons (C4-C12) | TPH by GC/MS | 12A0009 | 50 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| *Surrogate: Dibromofluoromethane (80-120%)* | | | | *94 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | *104 %* | | | | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | *89 %* | | | | |

**TestAmerica Irvine**

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Blaine Tech San Jose/CRA Shell
1680 Rogers Avenue
San Jose, CA 95112-1105
Attention: Lorin King

Project ID: 4411 Foothill Blvd., Oakland, CA

Report Number: IUL2715

Sampled: 12/23/11
Received: 12/24/11

# VOLATILE FUEL HYDROCARBONS BY GC/MS (CA LUFT)

| Analyte | Method | Batch | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Sample ID: IUL2715-07 (S-12 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| **Volatile Fuel Hydrocarbons (C4-C12)** | TPH by GC/MS | 12A0009 | 50 | **490** | 1 | 1/2/2012 | 1/3/2012 | |
| *Surrogate: Dibromofluoromethane (80-120%)* | | | | *92 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | *106 %* | | | | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | *94 %* | | | | |

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Report Number: IUL2715

Sampled: 12/23/11
Received: 12/24/11

## VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

| Analyte | Method | Batch | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Sample ID: IUL2715-01 (S-6 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| **Benzene** | EPA 8260B | 12A0009 | 5.0 | **760** | 10 | 1/2/2012 | 1/2/2012 | |
| 1,2-Dibromoethane (EDB) | EPA 8260B | 12A0009 | 5.0 | ND | 10 | 1/2/2012 | 1/2/2012 | |
| 1,2-Dichloroethane | EPA 8260B | 12A0009 | 5.0 | ND | 10 | 1/2/2012 | 1/2/2012 | |
| **Ethylbenzene** | EPA 8260B | 12A0009 | 5.0 | **76** | 10 | 1/2/2012 | 1/2/2012 | |
| **Toluene** | EPA 8260B | 12A0009 | 5.0 | **24** | 10 | 1/2/2012 | 1/2/2012 | |
| **Xylenes, Total** | EPA 8260B | 12A0009 | 10 | **49** | 10 | 1/2/2012 | 1/2/2012 | |
| Di-isopropyl Ether (DIPE) | EPA 8260B | 12A0009 | 10 | ND | 10 | 1/2/2012 | 1/2/2012 | |
| Ethyl tert-Butyl Ether (ETBE) | EPA 8260B | 12A0009 | 10 | ND | 10 | 1/2/2012 | 1/2/2012 | |
| **Methyl-tert-butyl Ether (MTBE)** | EPA 8260B | 12A0009 | 10 | **61** | 10 | 1/2/2012 | 1/2/2012 | |
| tert-Amyl Methyl Ether (TAME) | EPA 8260B | 12A0009 | 10 | ND | 10 | 1/2/2012 | 1/2/2012 | |
| **tert-Butanol (TBA)** | EPA 8260B | 12A0009 | 100 | **320** | 10 | 1/2/2012 | 1/2/2012 | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | *97 %* | | | | |
| *Surrogate: Dibromofluoromethane (80-120%)* | | | | *86 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | *105 %* | | | | |
| **Sample ID: IUL2715-02 (S-7 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| **Benzene** | EPA 8260B | 12A0009 | 100 | **11000** | 200 | 1/2/2012 | 1/2/2012 | |
| 1,2-Dibromoethane (EDB) | EPA 8260B | 12A0009 | 100 | ND | 200 | 1/2/2012 | 1/2/2012 | |
| 1,2-Dichloroethane | EPA 8260B | 12A0009 | 100 | ND | 200 | 1/2/2012 | 1/2/2012 | |
| **Ethylbenzene** | EPA 8260B | 12A0009 | 100 | **1400** | 200 | 1/2/2012 | 1/2/2012 | |
| **Toluene** | EPA 8260B | 12A0009 | 100 | **3300** | 200 | 1/2/2012 | 1/2/2012 | |
| **Xylenes, Total** | EPA 8260B | 12A0009 | 200 | **6600** | 200 | 1/2/2012 | 1/2/2012 | |
| Di-isopropyl Ether (DIPE) | EPA 8260B | 12A0009 | 200 | ND | 200 | 1/2/2012 | 1/2/2012 | |
| Ethyl tert-Butyl Ether (ETBE) | EPA 8260B | 12A0009 | 200 | ND | 200 | 1/2/2012 | 1/2/2012 | |
| Methyl-tert-butyl Ether (MTBE) | EPA 8260B | 12A0009 | 200 | ND | 200 | 1/2/2012 | 1/2/2012 | |
| tert-Amyl Methyl Ether (TAME) | EPA 8260B | 12A0009 | 200 | ND | 200 | 1/2/2012 | 1/2/2012 | |
| tert-Butanol (TBA) | EPA 8260B | 12A0009 | 2000 | ND | 200 | 1/2/2012 | 1/2/2012 | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | *95 %* | | | | |
| *Surrogate: Dibromofluoromethane (80-120%)* | | | | *88 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | *97 %* | | | | |

**TestAmerica Irvine**

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Attention: Lorin King

Project ID: 4411 Foothill Blvd., Oakland, CA

Report Number: IUL2715

Sampled: 12/23/11
Received: 12/24/11

## VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

| Analyte | Method | Batch | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Sample ID: IUL2715-03 (S-8 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| **Benzene** | EPA 8260B | 12A0009 | 100 | **9500** | 200 | 1/2/2012 | 1/2/2012 | |
| 1,2-Dibromoethane (EDB) | EPA 8260B | 12A0009 | 100 | ND | 200 | 1/2/2012 | 1/2/2012 | |
| 1,2-Dichloroethane | EPA 8260B | 12A0009 | 100 | ND | 200 | 1/2/2012 | 1/2/2012 | |
| **Ethylbenzene** | EPA 8260B | 12A0009 | 100 | **3700** | 200 | 1/2/2012 | 1/2/2012 | |
| **Toluene** | EPA 8260B | 12A0009 | 100 | **3000** | 200 | 1/2/2012 | 1/2/2012 | |
| **Xylenes, Total** | EPA 8260B | 12A0009 | 200 | **15000** | 200 | 1/2/2012 | 1/2/2012 | |
| Di-isopropyl Ether (DIPE) | EPA 8260B | 12A0009 | 200 | ND | 200 | 1/2/2012 | 1/2/2012 | |
| Ethyl tert-Butyl Ether (ETBE) | EPA 8260B | 12A0009 | 200 | ND | 200 | 1/2/2012 | 1/2/2012 | |
| Methyl-tert-butyl Ether (MTBE) | EPA 8260B | 12A0009 | 200 | ND | 200 | 1/2/2012 | 1/2/2012 | |
| tert-Amyl Methyl Ether (TAME) | EPA 8260B | 12A0009 | 200 | ND | 200 | 1/2/2012 | 1/2/2012 | |
| tert-Butanol (TBA) | EPA 8260B | 12A0009 | 2000 | ND | 200 | 1/2/2012 | 1/2/2012 | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | *94 %* | | | | |
| *Surrogate: Dibromofluoromethane (80-120%)* | | | | *88 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | *100 %* | | | | |
| **Sample ID: IUL2715-04 (S-9 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| **Benzene** | EPA 8260B | 12A0009 | 2.0 | **6.7** | 4 | 1/2/2012 | 1/2/2012 | |
| 1,2-Dibromoethane (EDB) | EPA 8260B | 12A0009 | 2.0 | ND | 4 | 1/2/2012 | 1/2/2012 | |
| 1,2-Dichloroethane | EPA 8260B | 12A0009 | 2.0 | ND | 4 | 1/2/2012 | 1/2/2012 | |
| **Ethylbenzene** | EPA 8260B | 12A0009 | 2.0 | **240** | 4 | 1/2/2012 | 1/2/2012 | |
| **Toluene** | EPA 8260B | 12A0009 | 2.0 | **16** | 4 | 1/2/2012 | 1/2/2012 | |
| **Xylenes, Total** | EPA 8260B | 12A0009 | 4.0 | **200** | 4 | 1/2/2012 | 1/2/2012 | |
| Di-isopropyl Ether (DIPE) | EPA 8260B | 12A0009 | 4.0 | ND | 4 | 1/2/2012 | 1/2/2012 | |
| Ethyl tert-Butyl Ether (ETBE) | EPA 8260B | 12A0009 | 4.0 | ND | 4 | 1/2/2012 | 1/2/2012 | |
| Methyl-tert-butyl Ether (MTBE) | EPA 8260B | 12A0009 | 4.0 | ND | 4 | 1/2/2012 | 1/2/2012 | |
| tert-Amyl Methyl Ether (TAME) | EPA 8260B | 12A0009 | 4.0 | ND | 4 | 1/2/2012 | 1/2/2012 | |
| tert-Butanol (TBA) | EPA 8260B | 12A0009 | 40 | ND | 4 | 1/2/2012 | 1/2/2012 | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | *102 %* | | | | |
| *Surrogate: Dibromofluoromethane (80-120%)* | | | | *87 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | *103 %* | | | | |

**TestAmerica Irvine**

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Attention: Lorin King

Project ID: 4411 Foothill Blvd., Oakland, CA

Report Number: IUL2715

Sampled: 12/23/11
Received: 12/24/11

## VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

| Analyte | Method | Batch | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Sample ID: IUL2715-05 (S-10 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| Benzene | EPA 8260B | 12A0009 | 0.50 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| 1,2-Dibromoethane (EDB) | EPA 8260B | 12A0009 | 0.50 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| 1,2-Dichloroethane | EPA 8260B | 12A0009 | 0.50 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| Ethylbenzene | EPA 8260B | 12A0009 | 0.50 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| Toluene | EPA 8260B | 12A0009 | 0.50 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| Xylenes, Total | EPA 8260B | 12A0009 | 1.0 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| Di-isopropyl Ether (DIPE) | EPA 8260B | 12A0009 | 1.0 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| Ethyl tert-Butyl Ether (ETBE) | EPA 8260B | 12A0009 | 1.0 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| Methyl-tert-butyl Ether (MTBE) | EPA 8260B | 12A0009 | 1.0 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| tert-Amyl Methyl Ether (TAME) | EPA 8260B | 12A0009 | 1.0 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| tert-Butanol (TBA) | EPA 8260B | 12A0009 | 10 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | *92 %* | | | | |
| *Surrogate: Dibromofluoromethane (80-120%)* | | | | *87 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | *105 %* | | | | |
| **Sample ID: IUL2715-06 (S-11 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| Benzene | EPA 8260B | 12A0009 | 0.50 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| 1,2-Dibromoethane (EDB) | EPA 8260B | 12A0009 | 0.50 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| 1,2-Dichloroethane | EPA 8260B | 12A0009 | 0.50 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| Ethylbenzene | EPA 8260B | 12A0009 | 0.50 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| Toluene | EPA 8260B | 12A0009 | 0.50 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| Xylenes, Total | EPA 8260B | 12A0009 | 1.0 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| Di-isopropyl Ether (DIPE) | EPA 8260B | 12A0009 | 1.0 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| Ethyl tert-Butyl Ether (ETBE) | EPA 8260B | 12A0009 | 1.0 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| Methyl-tert-butyl Ether (MTBE) | EPA 8260B | 12A0009 | 1.0 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| tert-Amyl Methyl Ether (TAME) | EPA 8260B | 12A0009 | 1.0 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| tert-Butanol (TBA) | EPA 8260B | 12A0009 | 10 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | *89 %* | | | | |
| *Surrogate: Dibromofluoromethane (80-120%)* | | | | *94 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | *104 %* | | | | |

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Attention: Lorin King

Project ID: 4411 Foothill Blvd., Oakland, CA

Report Number: IUL2715

Sampled: 12/23/11
Received: 12/24/11

## VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

| Analyte | Method | Batch | Reporting Limit | Sample Result | Dilution Factor | Date Extracted | Date Analyzed | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|
| **Sample ID: IUL2715-07 (S-12 - Water)** | | | | | | | | |
| **Reporting Units: ug/l** | | | | | | | | |
| Benzene | EPA 8260B | 12A0009 | 0.50 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| 1,2-Dibromoethane (EDB) | EPA 8260B | 12A0009 | 0.50 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| 1,2-Dichloroethane | EPA 8260B | 12A0009 | 0.50 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| Ethylbenzene | EPA 8260B | 12A0009 | 0.50 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| Toluene | EPA 8260B | 12A0009 | 0.50 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| Xylenes, Total | EPA 8260B | 12A0009 | 1.0 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| **Di-isopropyl Ether (DIPE)** | EPA 8260B | 12A0009 | 1.0 | **1.4** | 1 | 1/2/2012 | 1/3/2012 | |
| Ethyl tert-Butyl Ether (ETBE) | EPA 8260B | 12A0009 | 1.0 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| Methyl-tert-butyl Ether (MTBE) | EPA 8260B | 12A0009 | 1.0 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| tert-Amyl Methyl Ether (TAME) | EPA 8260B | 12A0009 | 1.0 | ND | 1 | 1/2/2012 | 1/3/2012 | |
| **tert-Butanol (TBA)** | EPA 8260B | 12A0009 | 10 | **14** | 1 | 1/2/2012 | 1/3/2012 | |
| *Surrogate: 4-Bromofluorobenzene (80-120%)* | | | | *94 %* | | | | |
| *Surrogate: Dibromofluoromethane (80-120%)* | | | | *92 %* | | | | |
| *Surrogate: Toluene-d8 (80-120%)* | | | | *106 %* | | | | |

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Received: 12/24/11

## METHOD BLANK/QC DATA

## EXTRACTABLE FUEL HYDROCARBONS (EPA 8015B w/ Silica Gel Clean-up)

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 11L4051 Extracted: 12/30/11** | | | | | | | | | | |
| **Blank Analyzed: 12/31/2011 (11L4051-BLK1)** | | | | | | | | | | |
| DRO (C10-C28) | ND | 50 | ug/l | | | | | | | |
| *Surrogate: n-Octacosane* | *179* | | *ug/l* | *200* | | *90* | *45-120* | | | |
| **LCS Analyzed: 12/31/2011 (11L4051-BS1)** | | | | | | | | | | **MNR1** |
| DRO (C10-C28) | 848 | 50 | ug/l | 1000 | | 85 | 40-115 | | | |
| *Surrogate: n-Octacosane* | *187* | | *ug/l* | *200* | | *93* | *45-120* | | | |
| **LCS Dup Analyzed: 12/31/2011 (11L4051-BSD1)** | | | | | | | | | | |
| DRO (C10-C28) | 744 | 50 | ug/l | 1000 | | 74 | 40-115 | 13 | 25 | |
| *Surrogate: n-Octacosane* | *170* | | *ug/l* | *200* | | *85* | *45-120* | | | |

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Sampled: 12/23/11
Received: 12/24/11

## METHOD BLANK/QC DATA

# VOLATILE FUEL HYDROCARBONS BY GC/MS (CA LUFT)

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 12A0009 Extracted: 01/02/12** | | | | | | | | | | |
| **Blank Analyzed: 01/02/2012 (12A0009-BLK1)** | | | | | | | | | | |
| Volatile Fuel Hydrocarbons (C4-C12) | ND | 50 | ug/l | | | | | | | |
| *Surrogate: Dibromofluoromethane* | *23.2* | | *ug/l* | *25.0* | | *93* | *80-120* | | | |
| *Surrogate: Toluene-d8* | *25.9* | | *ug/l* | *25.0* | | *104* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *22.9* | | *ug/l* | *25.0* | | *92* | *80-120* | | | |
| **LCS Analyzed: 01/02/2012 (12A0009-BS2)** | | | | | | | | | | |
| Volatile Fuel Hydrocarbons (C4-C12) | 469 | 50 | ug/l | 500 | | 94 | 55-130 | | | |
| *Surrogate: Dibromofluoromethane* | *22.2* | | *ug/l* | *25.0* | | *89* | *80-120* | | | |
| *Surrogate: Toluene-d8* | *26.2* | | *ug/l* | *25.0* | | *105* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *23.8* | | *ug/l* | *25.0* | | *95* | *80-120* | | | |
| **Matrix Spike Analyzed: 01/02/2012 (12A0009-MS1)** | | | | | **Source: IUL3009-12** | | | | | |
| Volatile Fuel Hydrocarbons (C4-C12) | 1880 | 50 | ug/l | 1720 | ND | 109 | 50-145 | | | |
| *Surrogate: Dibromofluoromethane* | *22.7* | | *ug/l* | *25.0* | | *91* | *80-120* | | | |
| *Surrogate: Toluene-d8* | *25.2* | | *ug/l* | *25.0* | | *101* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *27.3* | | *ug/l* | *25.0* | | *109* | *80-120* | | | |
| **Matrix Spike Dup Analyzed: 01/02/2012 (12A0009-MSD1)** | | | | | **Source: IUL3009-12** | | | | | |
| Volatile Fuel Hydrocarbons (C4-C12) | 1920 | 50 | ug/l | 1720 | ND | 111 | 50-145 | 2 | 20 | |
| *Surrogate: Dibromofluoromethane* | *22.9* | | *ug/l* | *25.0* | | *92* | *80-120* | | | |
| *Surrogate: Toluene-d8* | *25.7* | | *ug/l* | *25.0* | | *103* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *27.0* | | *ug/l* | *25.0* | | *108* | *80-120* | | | |

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## METHOD BLANK/QC DATA

## VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 12A0009 Extracted: 01/02/12** | | | | | | | | | | |
| **Blank Analyzed: 01/02/2012 (12A0009-BLK1)** | | | | | | | | | | |
| Benzene | ND | 0.50 | ug/l | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | ug/l | | | | | | | |
| 1,2-Dichloroethane | ND | 0.50 | ug/l | | | | | | | |
| Ethylbenzene | ND | 0.50 | ug/l | | | | | | | |
| Toluene | ND | 0.50 | ug/l | | | | | | | |
| m,p-Xylenes | ND | 1.0 | ug/l | | | | | | | |
| o-Xylene | ND | 0.50 | ug/l | | | | | | | |
| Xylenes, Total | ND | 1.0 | ug/l | | | | | | | |
| Di-isopropyl Ether (DIPE) | ND | 1.0 | ug/l | | | | | | | |
| Ethyl tert-Butyl Ether (ETBE) | ND | 1.0 | ug/l | | | | | | | |
| Methyl-tert-butyl Ether (MTBE) | ND | 1.0 | ug/l | | | | | | | |
| tert-Amyl Methyl Ether (TAME) | ND | 1.0 | ug/l | | | | | | | |
| tert-Butanol (TBA) | ND | 10 | ug/l | | | | | | | |
| *Surrogate: 4-Bromofluorobenzene* | *22.9* | | *ug/l* | *25.0* | | *92* | *80-120* | | | |
| *Surrogate: Dibromofluoromethane* | *23.2* | | *ug/l* | *25.0* | | *93* | *80-120* | | | |
| *Surrogate: Toluene-d8* | *25.9* | | *ug/l* | *25.0* | | *104* | *80-120* | | | |
| **LCS Analyzed: 01/02/2012 (12A0009-BS1)** | | | | | | | | | | |
| Benzene | 24.4 | 0.50 | ug/l | 25.0 | | 98 | 70-120 | | | |
| 1,2-Dibromoethane (EDB) | 26.7 | 0.50 | ug/l | 25.0 | | 107 | 75-125 | | | |
| 1,2-Dichloroethane | 25.1 | 0.50 | ug/l | 25.0 | | 100 | 60-140 | | | |
| Ethylbenzene | 27.4 | 0.50 | ug/l | 25.0 | | 110 | 75-125 | | | |
| Toluene | 25.8 | 0.50 | ug/l | 25.0 | | 103 | 70-120 | | | |
| m,p-Xylenes | 58.2 | 1.0 | ug/l | 50.0 | | 116 | 75-125 | | | |
| o-Xylene | 28.7 | 0.50 | ug/l | 25.0 | | 115 | 75-125 | | | |
| Xylenes, Total | 87.0 | 1.0 | ug/l | 75.0 | | 116 | 70-125 | | | |
| Di-isopropyl Ether (DIPE) | 27.5 | 1.0 | ug/l | 25.0 | | 110 | 60-135 | | | |
| Ethyl tert-Butyl Ether (ETBE) | 26.1 | 1.0 | ug/l | 25.0 | | 104 | 65-135 | | | |
| Methyl-tert-butyl Ether (MTBE) | 25.2 | 1.0 | ug/l | 25.0 | | 101 | 60-135 | | | |
| tert-Amyl Methyl Ether (TAME) | 27.6 | 1.0 | ug/l | 25.0 | | 110 | 60-135 | | | |
| tert-Butanol (TBA) | 150 | 10 | ug/l | 125 | | 120 | 70-135 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *27.0* | | *ug/l* | *25.0* | | *108* | *80-120* | | | |
| *Surrogate: Dibromofluoromethane* | *23.6* | | *ug/l* | *25.0* | | *94* | *80-120* | | | |
| *Surrogate: Toluene-d8* | *25.0* | | *ug/l* | *25.0* | | *100* | *80-120* | | | |

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Report Number: IUL2715

Sampled: 12/23/11
Received: 12/24/11

## METHOD BLANK/QC DATA

## VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Data Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch: 12A0009 Extracted: 01/02/12** | | | | | | | | | | |
| **Matrix Spike Analyzed: 01/02/2012 (12A0009-MS1)** | | | | | **Source: IUL3009-12** | | | | | |
| Benzene | 24.8 | 0.50 | ug/l | 25.0 | ND | 99 | 65-125 | | | |
| 1,2-Dibromoethane (EDB) | 27.4 | 0.50 | ug/l | 25.0 | ND | 109 | 70-130 | | | |
| 1,2-Dichloroethane | 33.3 | 0.50 | ug/l | 25.0 | 7.39 | 104 | 60-140 | | | |
| Ethylbenzene | 28.0 | 0.50 | ug/l | 25.0 | ND | 112 | 65-130 | | | |
| Toluene | 26.5 | 0.50 | ug/l | 25.0 | ND | 106 | 70-125 | | | |
| m,p-Xylenes | 59.8 | 1.0 | ug/l | 50.0 | ND | 120 | 65-130 | | | |
| o-Xylene | 28.9 | 0.50 | ug/l | 25.0 | ND | 116 | 65-125 | | | |
| Xylenes, Total | 88.7 | 1.0 | ug/l | 75.0 | ND | 118 | 60-130 | | | |
| Di-isopropyl Ether (DIPE) | 27.8 | 1.0 | ug/l | 25.0 | ND | 111 | 60-140 | | | |
| Ethyl tert-Butyl Ether (ETBE) | 25.7 | 1.0 | ug/l | 25.0 | ND | 103 | 60-135 | | | |
| Methyl-tert-butyl Ether (MTBE) | 29.8 | 1.0 | ug/l | 25.0 | 4.20 | 103 | 55-145 | | | |
| tert-Amyl Methyl Ether (TAME) | 27.4 | 1.0 | ug/l | 25.0 | ND | 110 | 60-140 | | | |
| tert-Butanol (TBA) | 145 | 10 | ug/l | 125 | ND | 116 | 65-140 | | | |
| *Surrogate: 4-Bromofluorobenzene* | *27.3* | | *ug/l* | *25.0* | | *109* | *80-120* | | | |
| *Surrogate: Dibromofluoromethane* | *22.7* | | *ug/l* | *25.0* | | *91* | *80-120* | | | |
| *Surrogate: Toluene-d8* | *25.2* | | *ug/l* | *25.0* | | *101* | *80-120* | | | |
| **Matrix Spike Dup Analyzed: 01/02/2012 (12A0009-MSD1)** | | | | | **Source: IUL3009-12** | | | | | |
| Benzene | 25.8 | 0.50 | ug/l | 25.0 | ND | 103 | 65-125 | 4 | 20 | |
| 1,2-Dibromoethane (EDB) | 27.8 | 0.50 | ug/l | 25.0 | ND | 111 | 70-130 | 2 | 25 | |
| 1,2-Dichloroethane | 33.2 | 0.50 | ug/l | 25.0 | 7.39 | 103 | 60-140 | 0.2 | 20 | |
| Ethylbenzene | 29.0 | 0.50 | ug/l | 25.0 | ND | 116 | 65-130 | 4 | 20 | |
| Toluene | 27.6 | 0.50 | ug/l | 25.0 | ND | 110 | 70-125 | 4 | 20 | |
| m,p-Xylenes | 60.4 | 1.0 | ug/l | 50.0 | ND | 121 | 65-130 | 1 | 25 | |
| o-Xylene | 29.3 | 0.50 | ug/l | 25.0 | ND | 117 | 65-125 | 1 | 20 | |
| Xylenes, Total | 89.7 | 1.0 | ug/l | 75.0 | ND | 120 | 60-130 | 1 | 20 | |
| Di-isopropyl Ether (DIPE) | 28.1 | 1.0 | ug/l | 25.0 | ND | 112 | 60-140 | 1 | 25 | |
| Ethyl tert-Butyl Ether (ETBE) | 26.9 | 1.0 | ug/l | 25.0 | ND | 108 | 60-135 | 5 | 25 | |
| Methyl-tert-butyl Ether (MTBE) | 30.4 | 1.0 | ug/l | 25.0 | 4.20 | 105 | 55-145 | 2 | 25 | |
| tert-Amyl Methyl Ether (TAME) | 28.2 | 1.0 | ug/l | 25.0 | ND | 113 | 60-140 | 3 | 30 | |
| tert-Butanol (TBA) | 162 | 10 | ug/l | 125 | ND | 130 | 65-140 | 11 | 25 | |
| *Surrogate: 4-Bromofluorobenzene* | *27.0* | | *ug/l* | *25.0* | | *108* | *80-120* | | | |
| *Surrogate: Dibromofluoromethane* | *22.9* | | *ug/l* | *25.0* | | *92* | *80-120* | | | |
| *Surrogate: Toluene-d8* | *25.7* | | *ug/l* | *25.0* | | *103* | *80-120* | | | |

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Received: 12/24/11

## DATA QUALIFIERS AND DEFINITIONS

**MNR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.

**Z3** The sample required a dilution due to the nature of the sample matrix. Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

**ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

**RPD** Relative Percent Difference

## ADDITIONAL COMMENTS

**For 8260 analyses:**

Due to the high water solubility of alcohols and ketones, the calibration criteria for these compounds is <30% RSD. The average % RSD of all compounds in the calibration is 15%, in accordance with EPA methods.

**For Volatile Fuel Hydrocarbons (C4-C12):**

Volatile Fuel Hydrocarbons (C4-C12) are quantitated against a gasoline standard. Quantitation begins immediately before TBA-d9.

**For Extractable Fuel Hydrocarbons (EFH, DRO, ORO) :**

Unless otherwise noted, Extractable Fuel Hydrocarbons (EFH, DRO, ORO) are quantitated against a Diesel Fuel Standard.

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## Certification Summary

**TestAmerica Irvine**

| Method | Matrix | Nelac | California |
|---|---|---|---|
| EPA 8015B | Water | X | X |
| EPA 8260B | Water | X | X |
| TPH by GC/MS | Water | X | X |

*Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com*

**TestAmerica Irvine**

Philip Sanelle
Project Manager

# Shell Oil Products Chain Of Custody Record

**LAB (LOCATION)**
- ☐ CALSCIENCE (_____)
- ☐ SPL Houston (_____)
- ☐ XENCO (_____)
- ☑ TEST AMERICA (IRVINE)
- ☐ OTHER (_____)

**Please Check Appropriate Box:**
☐ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SD&CM ☑ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER _____

Print Bill To Contact Name: 240897 Peter Schaefer
INCIDENT # (ENV SERVICES): 9 8 9 9 5 7 4 6 ☐ CHECK IF NO INCIDENT # APPLIES
DATE: 12/23/2011
PO #:
SAP #: 1 3 5 6 8 6
PAGE: 1 of 1

SAMPLING COMPANY: Blaine Tech Services
LOG CODE: BTSS
SITE ADDRESS: Street and City: 4411 Foothill Boulevard, Oakland
State: CA
GLOBAL ID NO.: T0600101065
ADDRESS: 1680 Rogers Avenue, San Jose, CA
EDF DELIVERABLE TO (Name, Company, Office Location): Brenda Carter, CRA, Emeryville, CA
PHONE NO.: 510-420-3343
E-MAIL: ShellEDF@CRAWorld.com; Shell-US-LabDataManagement@CRAworld.com
CONSULTANT PROJECT NO.: 240897-95-11.01
PROJECT CONTACT (Hardcopy or PDF Report to): Lorin King
TELEPHONE: (310) 886-4455 x 108
FAX: (310) 637-5802
E-MAIL: lking@blainetech.com
SAMPLER NAME(S) (Print): Gregory Roberts
LAB USE ONLY: FUL7715

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:

**SPECIAL INSTRUCTIONS OR NOTES:**
1) Please upload the "CRA EQuIS 4-file EDD" to the CRA Website (http://cralabedduplod.craworld.com/equis/default.aspx) and/or send it to the Shell-US-LabDataManagement@CRAworld.com email folder. 2) Please indicate that you have uploaded the EDD by including "EDD Uploaded to CRA website" in the body of the email used to deliver the final PDF report to the Shell-US-LabDataManagement@CRAworld.com email folder.

Copy final report to Shell.Lab.Billing@craworld.com, ShellEDF@craworld.com, Shell-US-LabDataManagement@CRAworld.com, and pschaefer@CRAWorld.com
Email invoice to Shell.Lab.Billing@craworld.com
Run TPH-D with Silica Gel Clean Up

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

Matrix Codes - WG (groundwater), WS (surface water), WP (drinking water source), W (Trip or Temp Blank)

REQUESTED ANALYSIS

| LAB USE ONLY | SAMPLE ID | PROJECT NUMBER | DATE (MMDDYY) | SAMPLER INITIALS | WELL ID | TIME | MATRIX | PRESERVATIVE: HCL | HNO3 | H2SO4 | NONE | OTHER | NO. OF CONT. | TPH-GRO, Purgeable (8260B) | TPH-DRO, Extractable (8015M) | BTEX (8260B) | BTEX + MTBE (8260B) | BTEX + MTBE + TBA (8260B) | BTEX + 5 OXYs (MTBE, TBA, DIPE, TAME, ETBE) 8260B | VOCs Full list (8260B) | Single Compound: _____ (8260B) | 1,2 DCA (8260B) | EDB (8260B) | Ethanol (8260B) | Methanol (8015B) | Container PID Readings or Laboratory Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | WG- | 111223-GR1 | 12/23/11 | GR | S-6 | 1037 | WG | X | | | X | | 5 | X | X | | | | X | | | X | X | | | |
| | WG- | 111223-GR1 | 12/23/11 | GR | S-7 | 1207 | WG | X | | | X | | 5 | X | X | | | | X | | | X | X | | | |
| | WG- | 111223-GR1 | 12/23/11 | GR | S-8 | 1222 | WG | X | | | X | | 6 | X | X | | | | X | | | X | X | | | |
| | WG- | 111223-GR1 | 12/23/11 | GR | S-9 | 1138 | WG | X | | | X | | 5 | X | X | | | | X | | | X | X | | | |
| | WG- | 111223-GR1 | 12/23/11 | GR | S-10 | 0837 | WG | X | | | X | | 5 | X | X | | | | X | | | X | X | | | |
| | WG- | 111223-GR1 | 12/23/11 | GR | S-11 | 0915 | WG | X | | | X | | 5 | X | X | | | | X | | | X | X | | | |
| | WG- | 111223-GR1 | 12/23/11 | GR | S-12 | 0904 | WG | X | | | X | | 5 | X | X | | | | X | | | X | X | | | |
| | - | | | | | | | | | | | | | | | | | | | | | | | | | |
| | - | | | | | | | | | | | | | | | | | | | | | | | | | |
| | - | | | | | | | | | | | | | | | | | | | | | | | | | |

TEMPERATURE ON RECEIPT: 2.8°

TN 12/24/11 1240

| Relinquished by: (Signature) | | Time | Received by: (Signature) | | Date | Time |
|---|---|---|---|---|---|---|
| | | 1405 | | (Sample Custodian) | 12/23/11 | 1405 |
| | (Sample Custodian) | | | | 12/23/11 | 1600 |
| | 12-23-11 19:00 | | | | 12/24/11 | 10:10 |