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# TRANSMITTAL

DATE: February 13, 2015

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
By Alameda County Environmental Health at 11:13 am, Feb 17, 2015

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| QUANTITY | DESCRIPTION |
|---|---|
| 1 | Groundwater Monitoring Report – Fourth Quarter 2014 |
| | |
| | |

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

**COMMENTS:**
If you have any questions regarding the contents of this document, please call the CRA project manager Peter Schaefer at (510) 420-3319 or the Shell program manager Perry Pineda at (425) 413-1164.

Copy to: Perry Pineda, Shell Oil Products US (electronic copy)
Laura Wong, Phua Management (property owner representative) (electronic copy)

Completed by: Peter Schaefer Signed: Peter Schaefer

**Filing:** Correspondence File

**Shell Oil Products US**
Soil and Groundwater Focus Delivery Group
20945 S. Wilmington Avenue
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**Tel** (425) 413 1164
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**Internet** http://www.shell.com

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

Re: 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.

As always, please feel free to contact me directly at (425) 413-1164 with any questions or concerns.

Sincerely,
Shell Oil Products US

Perry Pineda
Senior Environmental Program Manager

# GROUNDWATER MONITORING REPORT – FOURTH QUARTER 2014

## 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 13, 2015**
**REF. NO. 240897 (29)**
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# 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 | Perry Pineda |
| 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 January 14, 2015 (electronic).

# 2.0 SITE ACTIVITIES, FINDINGS, AND DISCUSSION

## 2.1 CURRENT QUARTER'S ACTIVITIES

On September 10, 2014, CRA submitted a *Subsurface Investigation Work Plan*, which proposed a soil vapor investigation on the property located at 1724 to 1728 High Street, Oakland. Alameda County Environmental Health's (ACEH's) September 23, 2014 letter approved the work plan and ACEH's October 22, 2014 letter encouraged the property owner to cooperate with the investigation.

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 groundwater monitoring field notes are presented in Appendix A, and the laboratory report is presented in Appendix B.

## 2.2 CURRENT QUARTER'S FINDINGS

| | |
|---|---|
| Groundwater Flow Direction | Southerly to westerly |
| Hydraulic Gradient | 0.02 |
| Depth to Water | 6.40 to 8.98 feet below top of well casing |

## 2.3 PROPOSED ACTIVITIES

Assuming we receive access soon, as approved in ACEH's January 14, 2015 electronic correspondence, CRA will submit a soil vapor investigation report by June 6, 2015. CRA has been in communication with the property owner, and he has given us verbal permission to proceed and agreed to sign Shell's proposed access agreement; however, to date, we have not received a signed agreement.

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

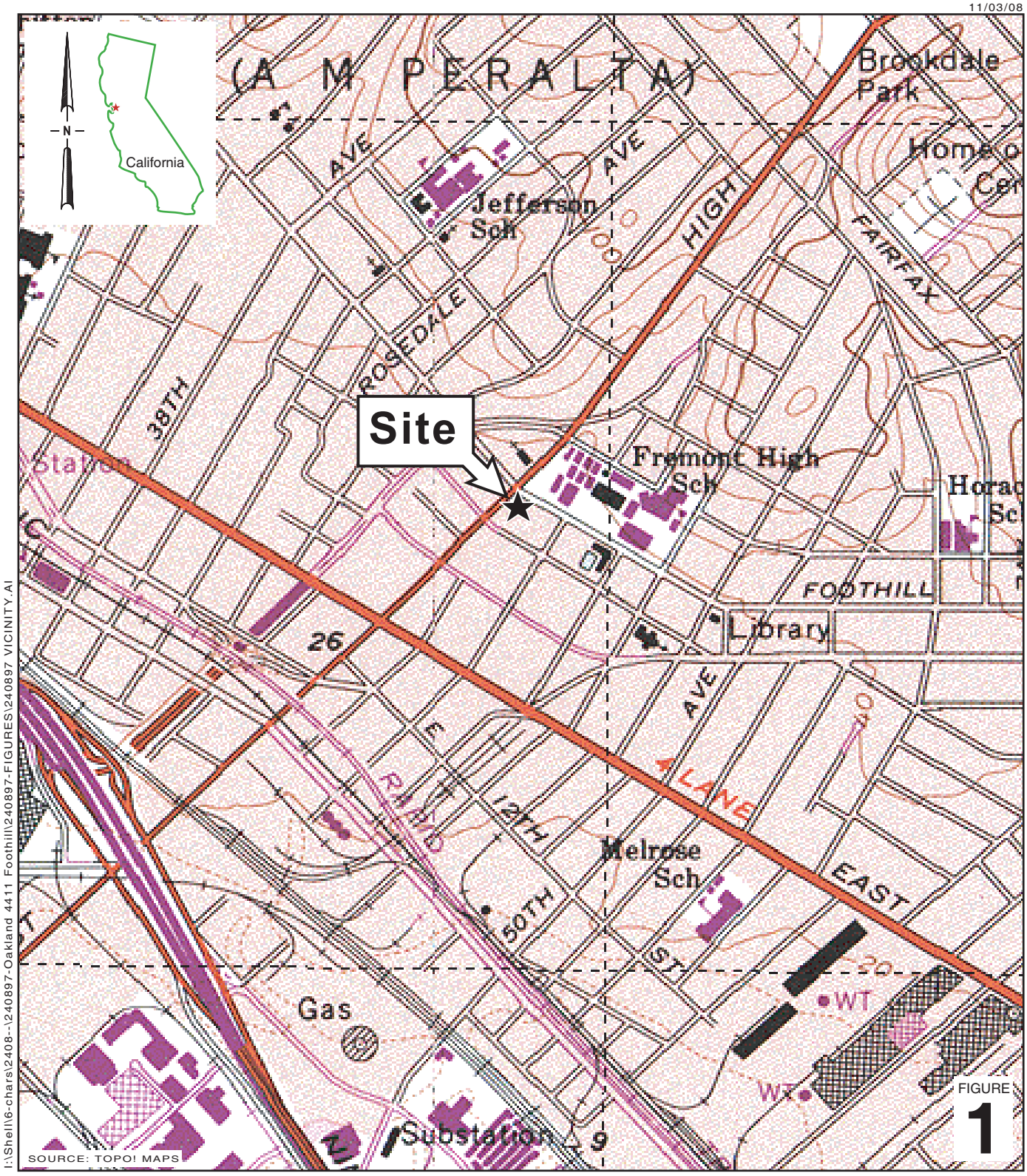
All of Which is Respectfully Submitted,
CONESTOGA-ROVERS & ASSOCIATES

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

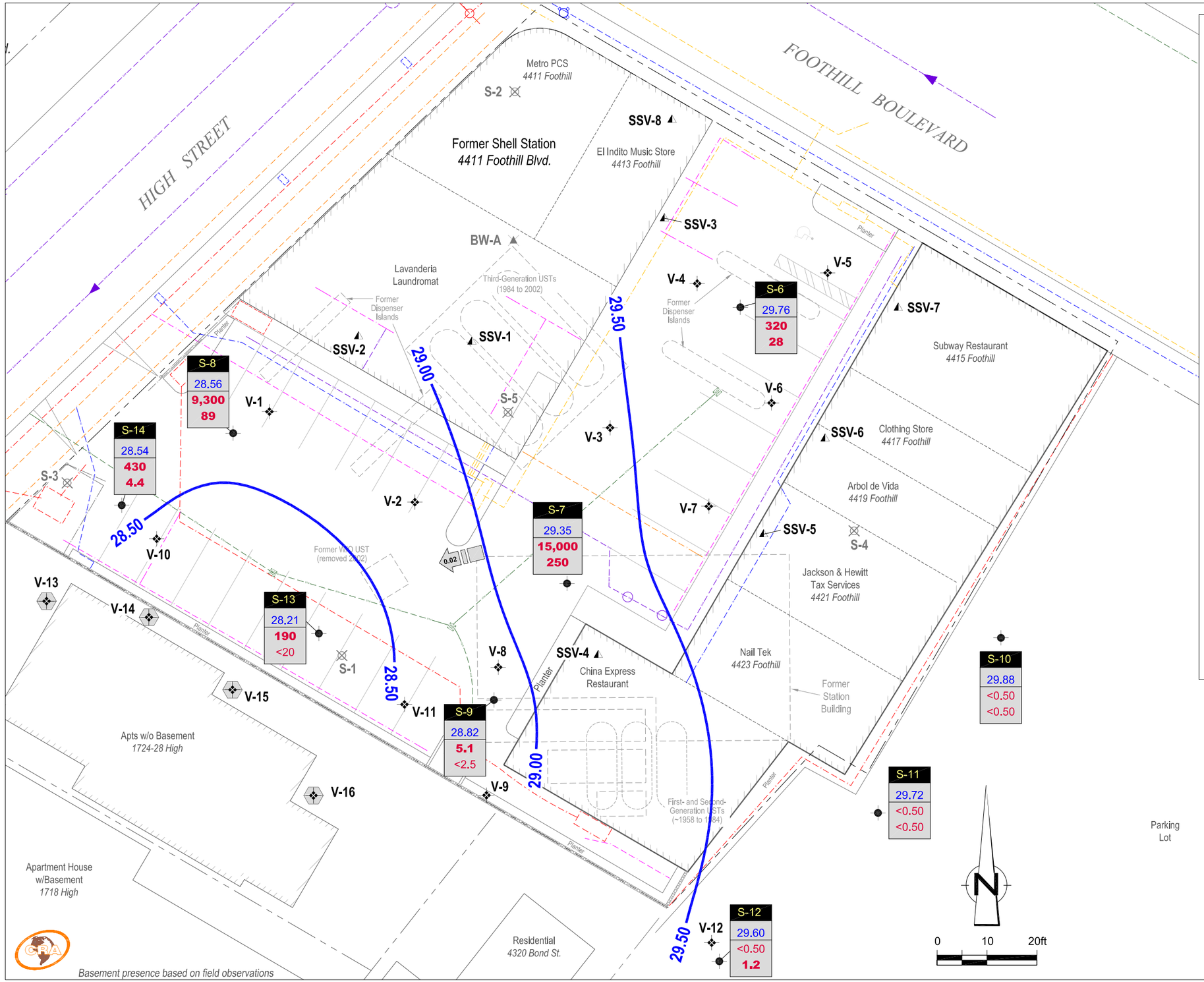
0 1/6 1/3 1/2 1

SCALE : 1" = 1/6 MILE

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

CONESTOGA-ROVERS & ASSOCIATES

**Vicinity Map**




## EXPLANATION

- V-13 — Proposed soil vapor probe location
- SSV-1 — Sub-slab soil vapor probe location
- S-6 — Monitoring well location
- V-1 — 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
- x.xx — Groundwater flow direction and gradient
- XX.XX — Groundwater elevation contour, in feet above mean sea level (ft MSL); dashed where inferred

| Well |
|---|
| ELEV. |
| Benz. |
| MTBE |

- Well designation
- Groundwater elevation, in ft MSL
- Benzene and MTBE concentrations are in parts per micrograms per liter

**Notes:**
**<X =** Not detected at reporting limit X

# Figure 2

## Groundwater Contour and Chemical Concentration Map December 8, 2014 Former Shell Service Station 4411 Foothill Boulevard Oakland, California

I:\Shell\6-chars\2408--\240897-Oakland 4411 Foothill\240897-REPORTS\240897-RPT29-4Q14\240897 4QM14-GW.DWG (01/02/2015)

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 g | 30,000 | 1,100 | 4,700 | 1,600 | 10,000 | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 7.15 | 31.16 | --- |
| S-1 | 03/30/1995 | 3,100 a,g | 30,000 a | 1,400 a | 4,000 a | 1,500 a | 11,000 a | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 6.09 | 32.22 | --- |
| S-1 | 06/20/1995 | 2,100 | 28,000 | 1,100 | 2,300 | 1,100 | 8,300 | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 7.30 | 31.01 | --- |
| S-1 | 09/20/1995 | 2,600 | 40,000 | 840 | 3,600 | 1,300 | 8,600 | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 10.02 | 28.29 | --- |
| S-1 | 12/06/1995 | 6,400 g | 38,000 | 920 | 3,200 | 1,500 | 9,400 | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 11.64 | 26.67 | --- |
| S-1 | 03/21/1996 | --- | 48,000 | 700 | 4,200 | 1,100 | 8,600 | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 6.87 | 31.44 | --- |
| S-1 | 09/06/1996 | 4,100 | 41,000 | 830 | 2,600 | 2,100 | 12,000 | <250 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 10.50 | 27.81 | --- |
| S-1 | 12/19/1996 | 2,500 | 40,000 | 540 | 3,100 | 1,900 | 9,800 | 920 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 8.24 | 30.07 | --- |
| S-1 | 03/17/1997 | 4,700 | 42,000 | 610 | 2,700 | 1,700 | 11,000 | 3,500 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 7.26 | 31.05 | --- |
| S-1 | 06/11/1997 | 4,000 | 28,000 | 540 | 960 | 1,300 | 5,300 | 220 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 10.69 | 27.62 | --- |
| S-1 (D) | 06/11/1997 | 3,900 | 30,000 | 580 | 1,000 | 1,400 | 5,400 | <125 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 10.69 | 27.62 | --- |
| S-1 | 09/17/1997 | 4,400 | 27,000 | 310 | 1,200 | 1,900 | 9,000 | 170 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 10.26 | 28.05 | --- |
| S-1 (D) | 09/17/1997 | 4,400 | 27,000 | 270 | 1,200 | 1,900 | 9,000 | 170 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 10.26 | 28.05 | --- |
| S-1 | 12/11/1997 | 3,400 | 21,000 | 350 | 820 | 1,500 | 6,500 | <125 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 6.96 | 31.35 | --- |
| S-1 | 03/16/1998 | 2,500 | 25,000 | 250 | 820 | 670 | 5,000 | <125 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 6.00 | 32.31 | --- |
| S-1 (D) | 03/16/1998 | --- | 26,000 | 250 | 840 | 720 | 5,100 | <125 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 6.00 | 32.31 | 5.3/3.7 |
| S-1 | 06/23/1998 | 230 | <1,000 | 280 | 14 | 23 | 15 | 6,100 | 7,800 | --- | --- | --- | --- | --- | --- | 38.31 | 6.31 | 32.00 | 3.8/2.4 |
| S-1 | 09/01/1998 | 2,300 | 26,000 | 370 | 620 | 1,300 | 33 | 1,400 | 120 | --- | --- | --- | --- | --- | --- | 38.31 | 9.17 | 29.14 | 1.4/2.6 |
| S-1 | 12/30/1998 | 1,970 | 29,900 | 174 | 732 | 1,680 | 5,740 | 182 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 8.99 | 29.32 | 1.6/2.0 |
| S-1 | 03/30/1999 | 1,150 | 14,200 | 1,360 | 260 | 1,070 | 3,580 | <500 | 90.0 | --- | --- | --- | --- | --- | --- | 38.31 | 6.10 | 32.21 | 1.2/1.8 |
| S-1 | 03/31/1999 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 38.31 | 7.84 | 30.47 | --- |
| S-1 | 06/14/1999 | 4,280 | 20,200 | 135 | 407 | 825 | 5,000 | 705 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 7.94 | 30.37 | 1.4/2.1 |
| S-1 | 09/30/1999 | 3,120 | 18,300 | 189 | 531 | 1,250 | 4,740 | 322 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 10.04 | 28.27 | 4.3/2.0 |
| S-1 | 12/22/1999 | 444 g | 2,450 | 50.2 | 97.5 | 139 | 458 | 133 | --- | --- | --- | --- | --- | --- | --- | 38.31 | 9.42 | 28.89 | 1.8/2.3 |
| S-1 | 03/09/2000 | 1,200 g | 1,230 a | 21.2 a | 115 a | 116 a | 411 a | 45.1 a | --- | --- | --- | --- | --- | --- | --- | 38.30 | 6.21 | 32.09 | 2.0/2.9 |
| S-1 | 06/20/2000 | 352 g | 755 | 26.0 | 48.4 | 43.1 | 230 | 71.5 | --- | --- | --- | --- | --- | --- | --- | 38.30 | 9.18 | 29.12 | 2.0/2.4 |
| S-1 | 09/05/2000 | 783 g | 2,980 | 43.5 | 117 | 168 | 871 | 192 | --- | --- | --- | --- | --- | --- | --- | 38.30 | 10.14 | 28.16 | 0.6/0.3 |
| S-1 | 12/04/2000 | 238 g | 399 | 5.34 | 14.6 | 36.2 | 106 | 24.9 | --- | --- | --- | --- | --- | --- | --- | 38.30 | 10.10 | 28.20 | 8.6/9.8 |
| S-1 | 12/12/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 38.30 | 9.22 | 29.08 | --- |

**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 g | 2,940 | 49.6 | 52.9 | 21.8 | 749 | 87.6 | --- | --- | --- | --- | --- | --- | --- | 38.30 | 5.84 | 32.46 | 2.7 b |
| S-1 | 06/07/2001 | 1,400 | 10,000 | 120 | 370 | 680 | 2,400 | 150 | --- | --- | --- | --- | --- | --- | --- | 38.30 | 8.80 | 29.50 | 6.2/2.2 |
| S-1 | 09/13/2001 | <200 | 240 | 1.8 | 8.9 | 16 | 53 | --- | 17 | --- | --- | --- | --- | --- | --- | 38.30 | 10.25 | 28.05 | 7.8/8.9 |
| S-1 | 11/19/2001 | <300 | 1,400 | 14 | 42 | 110 | 260 | --- | 27 | --- | --- | --- | --- | --- | --- | 38.30 | 9.87 | 28.43 | 7.7/7.3 |
| S-1 | 03/18/2002 | <300 | 7,500 | 40 | 370 | 560 | 2,000 | --- | 20 | --- | --- | --- | --- | --- | --- | 38.30 | 5.08 | 33.22 | 5.6/6.1 |
| S-1 | 06/19/2002 | 180 | 1,000 | 4.7 | 36 | 68 | 250 | --- | 14 | --- | --- | --- | --- | --- | --- | 38.30 | 9.26 | 29.04 | --- |
| S-1 | 09/11/2002 | <350 | 2,100 | 8.1 | 68 | 180 | 820 | --- | 7.1 | --- | --- | --- | --- | --- | --- | 38.30 | 10.54 | 27.76 | 6.5 |
| S-1 | 12/11/2002 | <500 | 4,100 | 16 | 93 | 310 | 900 | --- | <20 | --- | --- | --- | --- | --- | --- | 38.04 | 9.97 | 28.07 | 8.0 |
| S-1 | 03/11/2003 | <1,600 | 14,000 | 71 | 470 | 1,000 | 3,300 | --- | <50 | --- | --- | --- | --- | --- | --- | 38.04 | 7.31 | 30.73 | 5.2 |
| S-1 | 06/10/2003 | 110 g | 1,700 | 7.7 | 44 | 190 | 340 | --- | 4.5 | --- | --- | --- | --- | --- | --- | 38.04 | 8.14 | 29.90 | 14.0 |
| S-1 | 09/09/2003 | 96 g | 3,200 | 11 | 110 | 350 | 1,100 | --- | 5.8 | --- | --- | --- | --- | --- | --- | 38.04 | 9.31 | 28.73 | 7.5 |
| S-1 | 12/09/2003 | 1,000 g | 6,000 | 20 | 170 | 530 | 1,700 | --- | 6.1 | --- | --- | --- | --- | --- | --- | 38.04 | 7.24 | 30.80 | 28.6 |
| S-1 | 03/09/2004 | 300 g | 390 | 5.8 | 30 | 67 | 160 | --- | 5.6 | --- | --- | --- | --- | --- | --- | 38.04 | 5.56 | 32.48 | 6.4 |
| S-1 | 06/08/2004 | 2,500 g | 5,600 | 11 | 140 | 660 | 1,900 | --- | 5.0 | --- | --- | --- | --- | --- | --- | 38.04 | 8.82 | 29.22 | 30.0 |
| S-1 | 09/07/2004 | 130 e | <50 | <0.50 | <0.50 | <0.50 | <1.0 | --- | 0.75 | <5.0 | <2.0 | <2.0 | <2.0 | --- | --- | 38.04 | 9.84 | 28.20 | 14.4 |
| S-1 | 12/06/2004 | Unable to sample | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 38.04 | 9.20 | 28.84 | --- |
| S-1 | 12/15/2004 | 120 e | 560 | 2.2 | 26 | 67 | 220 | --- | 1.4 | --- | --- | --- | --- | --- | --- | 38.04 | 5.39 | 32.65 | 31.7 |
| S-1 | 03/07/2005 | 460 e | 12,000 | 12 | 310 | 830 | 2,600 | --- | <5.0 | --- | --- | --- | --- | --- | --- | 38.04 | 5.77 | 32.27 | 16.1 |
| S-1 | 06/10/2005 | 1,200 e | 13,000 | 25 | 310 | 1,200 | 3,300 | --- | <10 | --- | --- | --- | --- | --- | --- | 38.04 | 5.39 | 32.65 | 0.17 |
| S-1 | 07/14/2005 | Well destroyed | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S-2 | 05/28/1993 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.51 | 29.28 | --- |
| S-2 | 06/03/1993 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.51 | 29.28 | --- |
| S-2 | 06/08/1993 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.57 | 29.22 | --- |
| S-2 | 06/29/1993 | --- | 1,300 | 290 | 35 | 38 | 130 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | --- | --- | --- |
| S-2 | 09/21/1993 | --- | 3,300 | 870 | 24 | 190 | 120 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 10.54 | 28.25 | --- |
| S-2 | 12/14/1993 | --- | 1,300 | 400 | 16 | 36 | 27 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.76 | 29.03 | --- |
| S-2 | 03/17/1994 | --- | 4,500 | 610 | 27 | 92 | 110 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.92 | 28.87 | --- |
| S-2 (D) | 03/17/1994 | --- | 4,000 | 610 | 26 | 93 | 120 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.92 | 28.87 | --- |
| S-2 | 06/16/1994 | --- | 2,800 | 690 | 45 | 97 | 140 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 10.11 | 28.68 | --- |
| S-2 | 09/22/1994 | --- | 4,000 | 630 | 94 | 64 | 230 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 10.51 | 28.28 | --- |
| S-2 | 12/15/1994 | --- | 1,600 | 450 | 300 | 67 | 130 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.12 | 29.67 | --- |
| S-2 | 03/30/1995 | --- | 8,200 a | 2,800 a | 190 a | 240 a | 700 a | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 7.86 | 30.93 | --- |
| S-2 | 06/20/1995 | --- | 9,600 | 2,600 | 160 | 170 | 500 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.51 | 29.28 | --- |
| S-2 | 09/20/1995 | --- | 4,200 | 920 | 45 | 98 | 140 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 10.06 | 28.73 | --- |
| S-2 | 12/06/1995 | --- | <5,000 | 790 | 67 | 64 | 130 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 10.52 | 28.27 | --- |
| S-2 | 03/21/1996 | --- | 3,700 | 850 | 45 | 96 | 170 | --- | --- | --- | --- | --- | --- | --- | --- | 38.79 | 8.60 | 30.19 | --- |
| S-2 | 09/06/1996 | --- | 2,400 | 500 | 33 | 39 | 84 | 490 | --- | --- | --- | --- | --- | --- | --- | 38.79 | 10.50 | 28.29 | --- |
| S-2 | 12/19/1996 | --- | 1,200 | 330 | 15 | 24 | 31 | 430 | --- | --- | --- | --- | --- | --- | --- | 38.79 | 9.40 | 29.39 | --- |

**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 g | 678 | 135 | 8.22 | 14.9 | 25.8 | 17,100 | 17,000 a | --- | --- | --- | --- | --- | --- | 38.79 | 10.58 | 28.21 | 5.1/4.8 |
| S-2 | 12/22/1999 | 142 g | 316 | 55.8 | 10.1 | 5.26 | 10.4 | 9,410 | 8,810 | --- | --- | --- | --- | --- | --- | 38.79 | 10.13 | 28.66 | 9.6/5.2 |
| S-2 | 03/09/2000 | 630 g | 2,670 | 1,190 a | 62.7 | 84.1 | 125 | 29,200 a | 31,400 a | --- | --- | --- | --- | --- | --- | 38.78 | 7.88 | 30.90 | 7.6/5.0 |
| S-2 | 06/20/2000 | 401 g | <5,000 | 348 | <50.0 | 50.4 | 127 | 35,800 | 33,900 a | --- | --- | --- | --- | --- | --- | 38.78 | 10.27 | 28.51 | 1.9/2.2 |
| S-2 | 09/05/2000 | 373 g | <5,000 | 106 | <50.0 | <50.0 | <50.0 | 25,800 | 37,100 a | --- | --- | --- | --- | --- | --- | 38.78 | 10.19 | 28.59 | 0.5/1.6 |
| S-2 | 12/04/2000 | 1,730 g | <250 | 4.37 | <2.50 | <2.50 | <2.50 | 4,500 | 5,130 a | --- | --- | --- | --- | --- | --- | 38.78 | 10.30 | 28.48 | 10.6/9.4 |
| S-2 | 12/12/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 38.78 | 9.66 | 29.12 | --- |
| S-2 | 03/08/2001 | <51.3 | <2,500 | 318 | 45.7 | 53.5 | 88.5 | 15,500 | 17,500 | --- | --- | --- | --- | --- | --- | 38.78 | 8.57 | 30.21 | 2.7 b |
| S-2 | 06/07/2001 | 11,000 | 18,000 | 450 | 170 | 390 | 2,200 | 13,000 | 18,000 | --- | --- | --- | --- | --- | --- | 38.78 | 9.39 | 29.39 | 1.1/2.0 |
| S-2 | 09/13/2001 | <5,000 | 13,000 | 140 | 110 | 350 | 1,400 | --- | 9,200 | --- | --- | --- | --- | --- | --- | 38.78 | 10.34 | 28.44 | 11.0/4.5 |
| S-2 | 11/19/2001 | 8,700 | 15,000 | 71 | 27 | 86 | 330 | --- | 7,500 | --- | --- | --- | --- | --- | --- | 38.78 | 9.90 | 28.88 | 5.0/3.1 |
| S-2 | 03/18/2002 | 14,000 | 3,700 | 93 | <20 | 35 | 100 | --- | 7,500 | --- | --- | --- | --- | --- | --- | 38.78 | 9.91 | 28.87 | 0.9/4.2 |
| S-2 | 06/19/2002 | <2,000 | 2,100 | 92 | <10 | 24 | 50 | --- | 4,700 | --- | --- | --- | --- | --- | --- | 38.78 | 9.98 | 28.80 | --- |
| S-2 | 09/11/2002 | <450 | 2,100 | 54 | <5.0 | 19 | 55 | --- | 1,900 | --- | --- | --- | --- | --- | --- | 38.78 | 10.25 | 28.53 | 3.5 |
| S-2 | 12/11/2002 | 1,900 | 570 | 9.4 | <2.5 | 7.2 | 14 | --- | 1,100 | --- | --- | --- | --- | --- | --- | 38.47 | 9.99 | 28.48 | 2.0 |
| S-2 | 03/11/2003 | <1,800 | 2,900 | 150 | 5.5 | 54 | 84 | --- | 870 | --- | --- | --- | --- | --- | --- | 38.47 | 9.25 | 29.22 | 2.4 |
| S-2 | 06/10/2003 | 840 g | 2,200 | 83 | <5.0 | 22 | 52 | --- | 970 | --- | --- | --- | --- | --- | --- | 38.47 | 9.20 | 29.27 | 5.0 |
| S-2 | 09/09/2003 | 270 g | 1,200 | 57 | <2.5 | 11 | 33 | --- | 740 | --- | --- | --- | --- | --- | --- | 38.47 | 9.70 | 28.77 | 3.7 |
| S-2 | 12/09/2003 | 1,900 g | 3,100 | 84 | <5.0 | 45 | 90 | --- | 660 | --- | --- | --- | --- | --- | --- | 38.47 | 9.31 | 29.16 | 24.21 |
| S-2 | 03/09/2004 | 990 g | 1,600 | 140 | <5.0 | 31 | 49 | --- | 610 | --- | --- | --- | --- | --- | --- | 38.47 | 8.24 | 30.23 | 2.6 |
| S-2 | 06/08/2004 | 400 g | 640 | 40 | <2.5 | 4.2 | 6.6 | --- | 460 | --- | --- | --- | --- | --- | --- | 38.47 | 9.40 | 29.07 | 8.2 |
| S-2 | 09/07/2004 | 240 e | <100 | 6.6 | <1.0 | 1.3 | 2.3 | --- | 140 | 450 | <4.0 | <4.0 | <4.0 | --- | --- | 38.47 | 9.78 | 28.69 | 2.4 |
| S-2 | 12/06/2004 | 140 g | 260 | 26 | <1.0 | 2.0 | <2.0 | --- | 270 | --- | --- | --- | --- | --- | --- | 38.47 | 9.45 | 29.02 | 8.5 |
| S-2 | 03/07/2005 | 450 e | 2,300 | 100 | <5.0 | 11 | <10 | --- | 570 | --- | --- | --- | --- | --- | --- | 38.47 | 7.82 | 30.65 | 16.7 |
| S-2 | 06/10/2005 | 550 g | <2,500 | 200 | <25 | <25 | <50 | --- | 630 | --- | --- | --- | --- | --- | --- | 38.47 | 8.37 | 30.10 | 0.70 |
| S-2 | 07/14/2005 | Well destroyed | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

**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 a | 360 a | 730 a | 700 a | 3,700 a | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | 7.06 | 30.27 | --- |
| S-3 (D) | 03/30/1995 | --- | 7,600 a | 330 a | 570 a | 600 a | 2,600 a | --- | --- | --- | --- | --- | --- | --- | --- | 37.33 | --- | --- | --- |
| 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 g | 8,270 | 226 | 113 | 686 | 1,440 | 184 | --- | --- | --- | --- | --- | --- | --- | 37.33 | 9.66 | 27.67 | 3.5/2.8 |
| S-3 | 12/22/1999 | 2,270 g | 9,530 | 207 | 132 | 603 | 1,450 | 616 | --- | --- | --- | --- | --- | --- | --- | 37.33 | 9.50 | 27.83 | 0.98/0.8 |
| S-3 | 03/09/2000 | 1,600 g | 2,290 a | 84.5 a | 17.0 a | 104 a | 105 a | 29.3 a | --- | --- | --- | --- | --- | --- | --- | 37.30 | 6.25 | 31.05 | 1.0/1.4 |
| S-3 | 06/20/2000 | 2,900 g | 5,570 | 117 | 41.6 | 395 | 393 | 354 | --- | --- | --- | --- | --- | --- | --- | 37.30 | 9.67 | 27.63 | 1.8/2.0 |
| S-3 | 09/05/2000 | 1,600 g | 6,930 | 127 | 85.5 | 354 | 535 | 509 | --- | --- | --- | --- | --- | --- | --- | 37.30 | 9.49 | 27.81 | 1.1/1.9 |
| S-3 | 12/04/2000 | 1,460 g | 8,390 | 217 | 82.4 | 471 | 952 | 436 | --- | --- | --- | --- | --- | --- | --- | 37.30 | 9.23 | 28.07 | 1.1/1.5 |
| S-3 | 12/12/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.30 | 9.23 | 28.07 | --- |
| S-3 | 03/08/2001 | 1,720 g | 19,400 | 465 | 772 | 1,230 | 3,830 | 160 | --- | --- | --- | --- | --- | --- | --- | 37.30 | 8.17 | 29.13 | 1.1 c |
| S-3 | 06/07/2001 | 1,400 | 12,000 | 230 | 110 | 900 | 1,100 | 120 | --- | --- | --- | --- | --- | --- | --- | 37.30 | 8.78 | 28.52 | 0.8/0.9 |
| S-3 | 09/13/2001 | <2,000 | 32,000 | 400 | 880 | 2,000 | 7,000 | --- | <100 | --- | --- | --- | --- | --- | --- | 37.30 | 9.93 | 27.37 | 3.7/2.9 |
| S-3 | 11/19/2001 | <2,000 | 26,000 | 160 | 210 | 990 | 4,100 | --- | <50 | --- | --- | --- | --- | --- | --- | 37.30 | 9.33 | 27.97 | 2.9/1.9 |
| S-3 | 03/18/2002 | 810 | 3,800 | 61 | 120 | 130 | 620 | --- | 5.0 | --- | --- | --- | --- | --- | --- | 37.30 | 7.03 | 30.27 | 1.1/4.7 |
| S-3 | 06/19/2002 | <500 | 3,200 | 48 | 81 | 160 | 360 | --- | 9.4 | --- | --- | --- | --- | --- | --- | 37.30 | 8.92 | 28.38 | --- |
| S-3 | 09/11/2002 | <1,100 | 16,000 | 230 | 570 | 980 | 3,900 | --- | <50 | --- | --- | --- | --- | --- | --- | 37.30 | 9.54 | 27.76 | 3.0 |
| S-3 | 12/11/2002 | <1,500 | 16,000 | 130 | 270 | 770 | 3,000 | --- | <50 | --- | --- | --- | --- | --- | --- | 36.85 | 9.23 | 27.62 | 1.6 |
| S-3 | 03/11/2003 | <1,500 | 8,100 | 29 | 110 | 190 | 1,700 | --- | <20 | --- | --- | --- | --- | --- | --- | 36.85 | 7.32 | 29.53 | 3.9 |
| S-3 | 06/10/2003 | Well inaccessible | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.85 | --- | --- | --- |
| S-3 | 09/09/2003 | 640 g | 5,900 | 44 | 140 | 130 | 1,500 | --- | 4.4 | --- | --- | --- | --- | --- | --- | 36.85 | 8.99 | 27.86 | 2.2 |
| S-3 | 12/09/2003 | 1,500 g | 27,000 | 130 | 460 | 550 | 4,900 | --- | <20 | --- | --- | --- | --- | --- | --- | 36.85 | 7.67 | 29.18 | 1.6 |
| S-3 | 03/09/2004 | 1,700 g | 11,000 | 24 | 100 | 230 | 3,200 | --- | <5.0 | --- | --- | --- | --- | --- | --- | 36.85 | 6.35 | 30.50 | 2.1 |
| S-3 | 06/08/2004 | 1,100 g | 1,700 | 11 | 34 | 29 | 420 | --- | <2.5 | --- | --- | --- | --- | --- | --- | 36.85 | 8.25 | 28.60 | 0.1 |
| S-3 | 09/07/2004 | 310 e | 850 | 13 | 0.99 | 23 | 17 | --- | 7.0 | <5.0 | <2.0 | <2.0 | <2.0 | --- | --- | 36.85 | 9.05 | 27.80 | 0.1 |
| S-3 | 12/06/2004 | Unable to sample | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.85 | 7.70 | 29.15 | --- |
| S-3 | 12/15/2004 | 270 e | 620 | 1.9 | 7.8 | 10 | 180 | --- | <0.50 | --- | --- | --- | --- | --- | --- | 36.85 | 5.83 | 31.02 | 2.4 |
| S-3 | 03/07/2005 | 400 e | 4,500 | <0.50 | 7.7 | 30 | 350 | --- | <0.50 | --- | --- | --- | --- | --- | --- | 36.85 | 4.58 | 32.27 | 4.4 |
| S-3 | 06/10/2005 | 130 g | 850 | <0.50 | 1.3 | 7.4 | 53 | --- | <0.50 | --- | --- | --- | --- | --- | --- | 36.85 | 5.40 | 31.45 | 0.17 |
| S-3 | 07/14/2005 | Well destroyed | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S-4 | 03/29/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 39.06 | 8.37 | 30.69 | --- |
| S-4 | 03/31/2000 | 5,780 g | 20,900 | 4,570 | 272 | 595 | 997 | 4,490 | 4,450 a | --- | --- | --- | --- | --- | --- | 39.06 | 8.92 | 30.14 | 1.8/1.2 |
| S-4 | 06/20/2000 | 244 g | 19,500 | 4,590 | 309 | 723 | 1,290 | 3,740 | --- | --- | --- | --- | --- | --- | --- | 39.06 | 8.77 | 30.29 | 2.7/2.9 |
| S-4 | 09/05/2000 | 1,670 g | 5,760 | 841 | 54.2 | 162 | 115 | 1,040 | --- | --- | --- | --- | --- | --- | --- | 39.06 | 10.57 | 28.49 | 1.3/0.3 |
| S-4 | 12/04/2000 | 1,050 g | 3,990 | 949 | <10.0 | 118 | 48.3 | 1,120 | --- | --- | --- | --- | --- | --- | --- | 39.06 | 10.67 | 28.39 | 1.1/1.0 |
| S-4 | 12/12/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 39.06 | 10.64 | 28.42 | --- |
| S-4 | 03/08/2001 | 5,840 g | 20,100 | 5,210 | 105 | 381 | 281 | 2,520 | --- | --- | --- | --- | --- | --- | --- | 39.06 | 8.44 | 30.62 | 1.0/0.9 |
| S-4 | 06/07/2001 | 3,500 | 11,000 | 2,500 | 86 | 370 | 170 | 2,000 | --- | --- | --- | --- | --- | --- | --- | 39.06 | 10.57 | 28.49 | 0.7/0.6 |
| S-4 | 09/13/2001 | <800 | 4,200 | 790 | 14 | 110 | 48 | --- | 690 | --- | --- | --- | --- | --- | --- | 39.06 | 11.27 | 27.79 | 3.8/3.9 |
| S-4 | 11/19/2001 | <600 | 2,300 | 230 | 4.1 | 21 | 22 | --- | 590 | --- | --- | --- | --- | --- | --- | 39.06 | 10.83 | 28.23 | 3.6/1.6 |

**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 d | 30.21 | 3.0/3.1 |
| S-4 | 06/19/2002 | <1,500 | 4,700 | 620 | 9.5 | 84 | 37 | --- | 490 | --- | --- | --- | --- | --- | --- | --- | 10.37 d | --- | --- |
| S-4 | 09/11/2002 | 280 | 2,700 | 280 | 4.6 | 23 | 13 | --- | 410 | --- | --- | --- | --- | --- | --- | --- | 11.14 | --- | 0.6 |
| S-4 | 12/11/2002 | <900 | 3,300 | 320 | 5.7 | 24 | 15 | --- | 420 | --- | --- | --- | --- | --- | --- | 38.69 | 10.78 | 27.91 | 2.2 |
| S-4 | 03/11/2003 | <5,600 | 12,000 | 1,900 | 63 | 360 | 280 | --- | 930 | --- | --- | --- | --- | --- | --- | 38.69 | 9.31 | 29.38 | 1.5 |
| S-4 | 06/10/2003 | 3,100 g | 13,000 | 2,400 | 86 | 650 | 380 | --- | 1,100 | --- | --- | --- | --- | --- | --- | 38.69 | 9.77 | 28.92 | 0.8 |
| S-4 | 09/09/2003 | 1,700 g | 3,700 | 510 | 12 | 43 | 43 | --- | 650 | --- | --- | --- | --- | --- | --- | 38.69 | 10.78 | 27.91 | 0.9 |
| S-4 | 12/09/2003 | 390 g | 3,900 | 150 | 4.2 | 7.5 | 13 | --- | 510 | --- | --- | --- | --- | --- | --- | 38.69 | 10.20 | 28.49 | 0.1 |
| S-4 | 03/09/2004 | 3,100 g | 13,000 | 2,500 | 110 | 810 | 1,100 | --- | 1,100 | --- | --- | --- | --- | --- | --- | 38.69 | 7.67 | 31.02 | 0.7 |
| S-4 | 06/08/2004 | 1,400 g | 6,100 | 870 | 30 | 120 | 150 | --- | 420 | --- | --- | --- | --- | --- | --- | 38.69 | 10.27 | 28.42 | 0.3 |
| S-4 | 09/07/2004 | 890 e | 3,100 | 290 | 6.4 | 18 | 14 | --- | 250 | 140 | <10 | <10 | <10 | --- | --- | 38.69 | 10.91 | 27.78 | 0.1 |
| S-4 | 12/06/2004 | 670 e | 4,900 | 520 | 9.9 | 38 | 24 | --- | 290 | --- | --- | --- | --- | --- | --- | 38.69 | 10.03 | 28.66 | 0.2 |
| S-4 | 03/07/2005 | 2,900 e | 28,000 | 2,300 | 130 | 690 | 770 | --- | 770 | --- | --- | --- | --- | --- | --- | 38.69 | 6.20 | 32.49 | 0.2 |
| S-4 | 06/10/2005 | 2,700 e | 13,000 | 1,900 | 81 | 380 | 460 | --- | 890 | --- | --- | --- | --- | --- | --- | 38.69 | 8.90 | 29.79 | 0.15 |
| S-4 | 07/14/2005 | Well destroyed | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S-5 | 05/31/2002 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.54 | --- | --- |
| S-5 | 06/19/2002 | <2,000 | 16,000 | 2,600 | 320 | 180 | 1,600 | --- | 5,300 | --- | --- | --- | --- | --- | --- | --- | 9.87 | --- | --- |
| S-5 | 09/11/2002 | <1,200 | 8,800 | 1,500 | 64 | 89 | 120 | --- | 5,600 | --- | --- | --- | --- | --- | --- | --- | 10.28 | --- | 0.9 |
| S-5 | 12/11/2002 | <1,000 | 4,400 | 280 | 61 | 130 | 130 | --- | 4,000 | --- | --- | --- | --- | --- | --- | --- | 9.87 | --- | 2.9 |
| S-5 | 03/11/2003 | <900 | 2,300 | 28 | 5.6 | 59 | 15 | --- | 2,400 | --- | --- | --- | --- | --- | --- | 38.05 | 8.26 | 29.79 | 1.6 |
| S-5 | 06/10/2003 | 620 g | 2,400 | 11 | 7.2 | 56 | 38 | --- | 1,100 | --- | --- | --- | --- | --- | --- | 38.05 | 8.51 | 29.54 | 0.1 |
| S-5 | 09/09/2003 | 660 g | 3,700 | 23 | 14 | 44 | 150 | --- | 440 | --- | --- | --- | --- | --- | --- | 38.05 | 9.44 | 28.61 | 0.1 |
| S-5 | 12/09/2003 | 600 g | 12,000 | 200 | 80 | 41 | 320 | --- | 580 | --- | --- | --- | --- | --- | --- | 38.05 | 9.50 | 28.55 | 0.4 |
| S-5 | 03/09/2004 | 550 g | 2,300 | 130 | 3.5 | 6.9 | 13 | --- | 250 | --- | --- | --- | --- | --- | --- | 38.05 | 7.04 | 31.01 | 0.2 |
| S-5 | 06/08/2004 | 490 g | 2,900 | 11 | <2.5 | 8.9 | 18 | --- | 120 | --- | --- | --- | --- | --- | --- | 38.05 | 8.87 | 29.18 | 0.2 |
| S-5 | 09/07/2004 | 650 e | 3,600 | 17 | 11 | 12 | 30 | --- | 120 | 3,700 | <10 | <10 | <10 | --- | --- | 38.05 | 9.45 | 28.60 | 0.1 |
| S-5 | 12/06/2004 | 460 e | 4,700 | 99 | 28 | 14 | 69 | --- | 180 | --- | --- | --- | --- | --- | --- | 38.05 | 8.75 | 29.30 | 0.1 |
| S-5 | 03/07/2005 | 360 e | 4,700 | 440 | <2.5 | <2.5 | <5.0 | --- | 200 | --- | --- | --- | --- | --- | --- | 38.05 | 7.28 | 30.77 | 0.1 |
| S-5 | 06/10/2005 | 240 e | 1,200 | 1.3 | <0.50 | <0.50 | 1.2 | --- | 80 | --- | --- | --- | --- | --- | --- | 38.05 | 7.26 | 30.79 | 0.25 |
| S-5 | 07/14/2005 | Well destroyed | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S-6 | 02/22/2007 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.86 | 8.18 | 29.68 | --- |
| S-6 | 03/02/2007 | 1,700 | 5,100 a | 630 a | 23 | 200 | 110 | --- | 140 | 280 | --- | --- | --- | 13 | <0.50 | 37.86 | 7.73 | 30.13 | --- |
| S-6 | 05/23/2007 | 2,600 | 5,600 f | 510 | 16 | 11 | 144 | --- | 72 | 66 | --- | --- | --- | <2.5 | <5.0 | 37.86 | 8.13 | 29.73 | --- |
| S-6 | 08/28/2007 | 6,100 g | 13,000 f | 650 | 32 | 480 | 242 | --- | 78 | 320 | 6.1 | <10 | <10 | <2.5 | <5.0 | 37.86 | 8.44 | 29.42 | --- |
| S-6 | 11/13/2007 | 6,400 g | 19,000 f | 760 | 47 | 500 | 602 | --- | 68 | 340 | --- | --- | --- | <5.0 | <10 | 37.86 | 8.78 | 29.08 | --- |
| S-6 | 02/08/2008 | 2,200 g | 6,800 f | 380 | 14 | 130 | 87.0 | --- | 75 | 200 | --- | --- | --- | <2.5 | <5.0 | 37.86 | 7.06 | 30.80 | --- |

**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 g | 12,000 f | 590 | 21 | 270 | 60 | --- | 54 | 240 | --- | --- | --- | <2.5 | <5.0 | 37.86 | 8.60 | 29.26 | --- |
| S-6 | 08/12/2008 | 7,100 g | 22,000 | 890 | 75 | 450 | 1,170 | --- | 71 | 200 | <20 | <20 | <20 | <5.0 | <10 | 37.86 | 9.21 | 28.65 | --- |
| S-6 | 12/02/2008 | 4,600 g | 26,000 | 1,500 | 170 | 670 | 1,500 | --- | 87 | 260 | --- | --- | --- | <5.0 | <10 | 37.86 | 8.72 | 29.14 | --- |
| S-6 | 02/05/2009 | 5,200 g | 29,000 | 1,200 | 210 | 910 | 3,400 | --- | 78 | 230 | --- | --- | --- | <5.0 | <10 | 37.86 | 9.19 | 28.67 | --- |
| S-6 | 05/19/2009 | 1,900 g | 8,600 | 660 | 22 | 120 | 110 | --- | 94 | 460 | --- | --- | --- | <5.0 | <10 | 37.86 | 8.26 | 29.60 | --- |
| S-6 | 09/29/2009 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.86 | 6.70 | 31.16 | --- |
| S-6 | 12/23/2009 | 1,800 g | 4,800 | 550 | 12 | 38 | 16 | --- | 170 | 290 | <20 | <20 | <20 | <5.0 | <10 | 37.86 | 6.01 | 31.85 | --- |
| S-6 | 03/16/2010 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.86 | 5.65 | 32.21 | --- |
| S-6 | 06/21/2010 | 2,700 g | 8,300 | 360 | 11 | 67 | 56 | --- | 130 | 250 | --- | --- | --- | <2.5 | <5.0 | 37.86 | 8.89 | 28.97 | --- |
| S-6 | 12/28/2010 | 2,200 g | 6,100 | 290 | 11 | 60 | 41 | --- | 49 | 210 | 5.5 | <4.0 | <4.0 | <1.0 | <2.0 | 37.86 | 7.63 | 30.23 | --- |
| S-6 | 12/23/2011 | 2,400 | 12,000 | 760 | 24 | 76 | 49 | --- | 61 | 320 | <10 | <10 | <10 | <5.0 | <5.0 | 37.86 | 8.34 | 29.52 | --- |
| S-6 | 12/28/2012 | 1,400 | 6,500 | 350 | 12 | 14 | <10 | --- | 68 | 200 | <5.0 | <5.0 | <5.0 | --- | --- | 37.86 | 6.50 | 31.36 | --- |
| S-6 | 09/19/2013 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.86 | 8.53 | 29.33 | --- |
| S-6 | 12/23/2013 | 2,600 | 16,000 | 970 | 43 | 340 | 260 | --- | 45 | 200 | 7.0 | <5.0 | <5.0 | --- | --- | 37.86 | 8.77 | 29.09 | --- |
| S-6 | 03/05/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.86 | 8.57 | 29.29 | --- |
| S-6 | 06/06/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.86 | 8.44 | 29.42 | --- |
| **S-6** | **12/08/2014** | **2,400** | **12,000** | **320** | **15** | **73** | **50** | **---** | **28** | **110** | **<5.0** | **<5.0** | **<5.0** | **---** | **---** | **37.86** | **8.10** | **29.76** | **---** |
| S-7 | 02/22/2007 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.58 | 7.39 | 30.19 | --- |
| S-7 | 03/02/2007 | 2,500 | 100,000 a | 32,000 a | 9,700 a | 2,900 a | 14,000 a | --- | 310 a | 480 | --- | --- | --- | 150 | <0.50 | 37.58 | 7.42 | 30.16 | --- |
| S-7 | 05/23/2007 | 3,700 | 82,000 f,g | 24,000 | 8,100 | 2,800 | 13,000 | --- | 190 | <200 | --- | --- | --- | <10 | <20 | 37.58 | 8.38 | 29.20 | --- |
| S-7 | 08/28/2007 | 4,500 g | 96,000 f | 23,000 | 7,000 | 2,900 | 12,200 | --- | 190 h | <2,000 | <400 | <400 | <400 | <100 | <200 | 37.58 | 9.32 | 28.26 | --- |
| S-7 | 11/13/2007 | 25,000 g | 100,000 f | 22,000 | 6,500 | 3,000 | 12,400 | --- | <200 | <2,000 | --- | --- | --- | <100 | <200 | 37.58 | 9.60 | 27.98 | --- |
| S-7 | 02/08/2008 | 4,000 g | 74,000 f | 29,000 | 9,300 | 3,100 | 13,700 | --- | 500 | <2,000 | --- | --- | --- | <100 | <200 | 37.58 | 6.57 | 31.01 | --- |
| S-7 | 05/20/2008 | 1,600 g | 69,000 f | 20,000 | 5,500 | 2,500 | 9,800 | --- | 260 | <2,000 | --- | --- | --- | <100 | <200 | 37.58 | 9.00 | 28.58 | --- |
| S-7 | 08/12/2008 | 4,900 g | 120,000 | 25,000 | 8,400 | 2,800 | 11,700 | --- | <200 | <2,000 | <400 | <400 | <400 | <100 | <200 | 37.58 | 9.81 | 27.77 | --- |
| S-7 | 12/02/2008 | 4,300 g | 120,000 | 24,000 | 8,400 | 3,600 | 15,000 | --- | 320 | <2,000 | --- | --- | --- | <100 | <200 | 37.58 | 9.91 | 27.67 | --- |
| S-7 | 02/05/2009 | 3,800 g | 99,000 | 25,000 | 7,600 | 2,500 | 12,000 | --- | 370 | <2,000 | --- | --- | --- | <100 | <200 | 37.58 | 9.30 | 28.28 | --- |
| S-7 | 05/19/2009 | 3,300 g | 64,000 | 16,000 | 4,400 | 2,100 | 7,100 | --- | 250 | <2,000 | --- | --- | --- | <100 | <200 | 37.58 | 8.30 | 29.28 | --- |
| S-7 | 09/29/2009 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.57 | 6.13 | 31.44 | --- |
| S-7 | 12/23/2009 | 3,900 g | 98,000 | 25,000 | 7,100 | 2,100 | 9,000 | --- | 400 | <2000 | <400 | <400 | <400 | <100 | <200 | 37.57 | 5.32 | 32.25 | --- |
| S-7 | 03/16/2010 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.57 | 4.82 | 32.75 | --- |
| S-7 | 06/21/2010 | 2,400 g | 42,000 | 11,000 | 2,300 | 1,300 | 4,600 | --- | 180 | <1,000 | --- | --- | --- | <50 | <100 | 37.57 | 8.19 | 29.38 | --- |
| S-7 | 12/28/2010 | 3,500 g | 48,000 | 13,000 | 3,700 | 1,800 | 7,200 | --- | 160 | <1,000 | <200 | <200 | <200 | <50 | <100 | 37.57 | 7.05 | 30.52 | --- |
| S-7 | 12/23/2011 | 3,200 | 40,000 | 11,000 | 3,300 | 1,400 | 6,600 | --- | <200 | <2,000 | <200 | <200 | <200 | <100 | <100 | 37.57 | 8.02 | 29.55 | --- |
| S-7 | 12/28/2012 | 2,200 | 26,000 | 6,200 | 2,000 | 1,000 | 5,000 | --- | <100 | <2,000 | <100 | <100 | <100 | --- | --- | 37.57 | 5.88 | 31.69 | --- |
| S-7 | 09/19/2013 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.57 | 9.08 | 28.49 | --- |
| S-7 | 12/23/2013 | 1,600 | 28,000 | 9,900 | 1,200 | 750 | 3,300 | --- | <100 | <2,000 | <100 | <100 | <100 | --- | --- | 37.57 | 9.63 | 27.94 | --- |
| S-7 | 03/05/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.57 | 8.73 | 28.84 | --- |

**TABLE 1**

**GROUNDWATER DATA**
**FORMER SHELL SERVICE STATION**
**4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA**

| *Well ID* | *Date* | *TPHd (µg/L)* | *TPHg (µg/L)* | *B (µg/L)* | *T (µg/L)* | *E (µg/L)* | *X (µg/L)* | *MTBE 8020 (µg/L)* | *MTBE 8260 (µg/L)* | *TBA (µg/L)* | *DIPE (µg/L)* | *ETBE (µg/L)* | *TAME (µg/L)* | *1,2-DCA (µg/L)* | *EDB (µg/L)* | *TOC (ft MSL)* | *Depth to Water (ft TOC)* | *GW Elevation (ft MSL)* | *DO Reading (mg/L)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-7 | 06/06/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.57 | 8.96 | 28.61 | --- |
| **S-7** | **12/08/2014** | **2,500** | **48,000 j** | **15,000** | **2,800** | **1,400** | **6,200** | **---** | **250** | **<2,000** | **<100** | **<100** | **<100** | **---** | **---** | **37.57** | **8.22** | **29.35** | **---** |
| S-8 | 02/22/2007 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.05 | 6.65 | 30.40 | --- |
| S-8 | 03/02/2007 | 2,300 | 72,000 a | 12,000 a | 5,600 a | 2,900 a | 15,000 a | --- | 120 | 230 | --- | --- | --- | 150 | <2.5 | 37.05 | 6.60 | 30.45 | --- |
| S-8 | 05/23/2007 | 5,800 | 69,000 f,g | 12,000 | 6,700 | 3,100 | 19,500 | --- | 160 | 280 | --- | --- | --- | <10 | <20 | 37.05 | 7.91 | 29.14 | --- |
| S-8 | 08/28/2007 | 6,700 g | 69,000 f | 11,000 | 4,800 | 3,100 | 16,800 | --- | 170 | <1,000 | <200 | <200 | <200 | <50 | <100 | 37.05 | 8.79 | 28.26 | --- |
| S-8 | 11/13/2007 | 21,000 g | 84,000 f | 10,000 | 5,000 | 3,300 | 18,300 | --- | 290 | <1,000 | --- | --- | --- | <50 | <100 | 37.05 | 8.93 | 28.12 | --- |
| S-8 | 02/08/2008 | 4,500 g | 54,000 f | 11,000 | 5,500 | 3,500 | 18,200 | --- | 200 | <1,000 | --- | --- | --- | <50 | <100 | 37.05 | 6.26 | 30.79 | --- |
| S-8 | 05/20/2008 | 2,200 g | 67,000 f | 10,000 | 5,400 | 3,900 | 19,600 | --- | 160 | <1,000 | --- | --- | --- | <50 | <100 | 37.05 | 7.40 | 29.65 | --- |
| S-8 | 08/12/2008 | 5,200 g | 77,000 | 9,300 | 3,200 | 2,500 | 14,300 | --- | 210 | <1,000 | <200 | <200 | <200 | <50 | <100 | 37.05 | 9.10 | 27.95 | --- |
| S-8 | 12/02/2008 | 3,600 g | 70,000 | 9,500 | 2,700 | 2,500 | 12,300 | --- | 290 | 1,200 | --- | --- | --- | <50 | <100 | 37.05 | 9.39 | 27.66 | --- |
| S-8 | 02/05/2009 | 3,500 g | 74,000 | 10,000 | 3,500 | 2,600 | 15,000 | --- | 240 | <1,000 | --- | --- | --- | <50 | <100 | 37.05 | 8.75 | 28.30 | --- |
| S-8 | 05/19/2009 | 340 g | 69,000 | 8,200 | 3,700 | 2,900 | 14,000 | --- | <100 | <1,000 | --- | --- | --- | <50 | <100 | 37.05 | 7.56 | 29.49 | --- |
| S-8 | 09/29/2009 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.05 | 5.82 | 31.23 | --- |
| S-8 | 12/23/2009 | 4,400 g | 58,000 | 7,800 | 2,000 | 2,100 | 11,000 | --- | 170 | <1000 | <200 | <200 | <200 | <50 | <100 | 37.05 | 7.02 | 30.03 | --- |
| S-8 | 03/16/2010 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.05 | 4.26 | 32.79 | --- |
| S-8 | 06/21/2010 | 3,900 g | 74,000 | 11,000 | 3,900 | 3,000 | 15,000 | --- | 160 | <1,000 | --- | --- | --- | <50 | <100 | 37.05 | 7.77 | 29.28 | --- |
| S-8 | 12/28/2010 | 4,900 g | 57,000 | 8,700 | 2,700 | 2,900 | 14,000 | --- | 200 | <1,000 | <200 | <200 | <200 | <50 | <100 | 37.05 | 6.93 | 30.12 | --- |
| S-8 | 12/23/2011 | 4,300 | 55,000 | 9,500 | 3,000 | 3,700 | 15,000 | --- | <200 | <2,000 | <200 | <200 | <200 | <100 | <100 | 37.05 | 8.77 | 28.28 | --- |
| S-8 | 12/28/2012 | 3,500 | 55,000 | 8,300 | 2,600 | 3,600 | 15,000 | --- | 180 | <1,000 | <50 | <50 | <50 | --- | --- | 37.05 | 5.92 | 31.13 | --- |
| S-8 | 09/19/2013 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.05 | 9.08 | 27.97 | --- |
| S-8 | 12/23/2013 | 2,800 | 55,000 | 11,000 | 2,400 | 3,400 | 12,000 | --- | 210 | <1,000 | <50 | <50 | <50 | --- | --- | 37.05 | 9.49 | 27.56 | --- |
| S-8 | 03/05/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.05 | 8.65 | 28.40 | --- |
| S-8 | 06/06/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.05 | 8.68 | 28.37 | --- |
| **S-8** | **12/08/2014** | **3,000** | **49,000 i,j** | **9,300** | **1,800** | **2,500** | **8,900** | **---** | **89** | **<1,000** | **<50** | **<50** | **<50** | **---** | **---** | **37.05** | **8.49** | **28.56** | **---** |
| S-9 | 02/22/2007 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.52 | 7.59 | 29.93 | --- |
| S-9 | 03/02/2007 | 1,400 | 12,000 | 150 | 200 | 1,200 | 2,500 | --- | 5.8 | <50 | --- | --- | --- | <5.0 | <5.0 | 37.52 | 7.30 | 30.22 | --- |
| S-9 | 05/23/2007 | 2,300 | 8,200 f | 13 | 38 | 2.5 h | 1,453 | --- | 5.2 h | <100 | --- | --- | --- | <5.0 | <10 | 37.52 | 8.43 | 29.09 | --- |
| S-9 | 08/28/2007 | 2,800 g | 9,500 f | 21 | 49 | 540 | 789 | --- | <10 | <100 | <20 | <20 | <20 | <5.0 | <10 | 37.52 | 9.59 | 27.93 | --- |
| S-9 | 11/13/2007 | 2,100 g | 12,000 f | 19 | 35 | 450 | 499 | --- | <10 | <100 | --- | --- | --- | <5.0 | <10 | 37.52 | 9.91 | 27.61 | --- |
| S-9 | 02/08/2008 | 1,900 g | 10,000 f | 18 | 67 | 1,100 | 1,451 | --- | <10 | <100 | --- | --- | --- | <5.0 | <10 | 37.52 | 6.40 | 31.12 | --- |
| S-9 | 05/20/2008 | 1,500 g | 11,000 f | 150 | 770 | 13,000 | 17,460 | --- | <100 | <1,000 | --- | --- | --- | <50 | <100 | 37.52 | 8.79 | 28.73 | --- |
| S-9 | 08/12/2008 | 2,000 g | 9,400 | 16 | 59 | 700 | 834 | --- | <10 | <100 | <20 | <20 | <20 | <5.0 | <10 | 37.52 | 10.00 | 27.52 | --- |
| S-9 | 12/02/2008 | 1,300 g | 14,000 | 10 | 62 | 980 | 1,139 | --- | <10 | <100 | --- | --- | --- | <5.0 | <10 | 37.52 | 10.22 | 27.30 | --- |
| S-9 | 02/05/2009 | 1,400 g | 6,300 | 11 | 33 | 480 | 600 | --- | <10 | <100 | --- | --- | --- | <5.0 | <10 | 37.52 | 9.49 | 28.03 | --- |
| S-9 | 05/19/2009 | 1,500 g | 12,000 | 11 | 64 | 940 | 880 | --- | <5.0 | <50 | --- | --- | --- | <2.5 | <5.0 | 37.52 | 8.20 | 29.32 | --- |
| S-9 | 09/29/2009 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.52 | 5.51 | 32.01 | --- |

**TABLE 1**

**GROUNDWATER DATA**
**FORMER SHELL SERVICE STATION**
**4411 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA**

| *Well ID* | *Date* | *TPHd (µg/L)* | *TPHg (µg/L)* | *B (µg/L)* | *T (µg/L)* | *E (µg/L)* | *X (µg/L)* | *MTBE 8020 (µg/L)* | *MTBE 8260 (µg/L)* | *TBA (µg/L)* | *DIPE (µg/L)* | *ETBE (µg/L)* | *TAME (µg/L)* | *1,2-DCA (µg/L)* | *EDB (µg/L)* | *TOC (ft MSL)* | *Depth to Water (ft TOC)* | *GW Elevation (ft MSL)* | *DO Reading (mg/L)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-9 | 12/23/2009 | 200 g | 890 | 1.4 | <1.0 | 16 | 14 | --- | <1.0 | <10 | <2.0 | <2.0 | <2.0 | <0.50 | <1.0 | 37.52 | 4.61 | 32.91 | --- |
| S-9 | 03/16/2010 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.52 | 5.95 | 31.57 | --- |
| S-9 | 06/21/2010 | 520 g | 1,300 | 2.4 | 4.2 | 180 | 26 | --- | <1.0 | <10 | --- | --- | --- | <0.50 | <1.0 | 37.52 | 8.29 | 29.23 | --- |
| S-9 | 12/28/2010 | 1,100 g | 7,200 | 3.8 | 12 | 650 | 510 | --- | <5.0 | <50 | <10 | <10 | <10 | <2.5 | <5.0 | 37.52 | 7.04 | 30.48 | --- |
| S-9 | 12/23/2011 | 1,300 | 6,500 | 6.7 | 16 | 240 | 200 | --- | <4.0 | <40 | <4.0 | <4.0 | <4.0 | <2.0 | <2.0 | 37.52 | 8.48 | 29.04 | --- |
| S-9 | 12/28/2012 | 490 | 2,600 | 3.4 | 5.6 | 91 | 87 | --- | <1.3 | <25 | <1.3 | <1.3 | <1.3 | --- | --- | 37.52 | 5.90 | 31.62 | --- |
| S-9 | 09/19/2013 | Well inaccessible | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.52 | --- | --- | --- |
| S-9 | 12/23/2013 | 660 | 4,600 | 4.1 | 15 | 15 | 130 | --- | <0.50 | <10 | <0.50 | <0.50 | <0.50 | --- | --- | 37.52 | 9.88 | 27.64 | --- |
| S-9 | 03/05/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.52 | 9.11 | 28.41 | --- |
| S-9 | 06/06/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.52 | 9.19 | 28.33 | --- |
| **S-9** | **12/08/2014** | **810** | **3,900** | **5.1** | **8.5** | **11** | **92** | **---** | **<2.5** | **<50** | **<2.5** | **<2.5** | **<2.5** | **---** | **---** | **37.52** | **8.70** | **28.82** | **---** |
| S-10 | 09/22/2009 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.43 | 4.98 | 32.45 | --- |
| S-10 | 09/29/2009 | <50 | 320 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | --- | --- | --- | <0.50 | <1.0 | 37.43 | 5.07 | 32.36 | --- |
| S-10 | 12/23/2009 | <50 | <50 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | <2.0 | <2.0 | <2.0 | <0.50 | <1.0 | 37.43 | 4.48 | 32.95 | --- |
| S-10 | 03/16/2010 | <50 | 140 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | --- | --- | --- | <0.50 | <1.0 | 37.43 | 4.47 | 32.96 | --- |
| S-10 | 06/21/2010 | <50 | 130 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | --- | --- | --- | <0.50 | <1.0 | 37.43 | 8.28 | 29.15 | --- |
| S-10 | 12/28/2010 | <50 | 140 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | <2.0 | <2.0 | <2.0 | <0.50 | <1.0 | 37.43 | 7.09 | 30.34 | --- |
| S-10 | 12/23/2011 | <47 | 130 | <0.50 | <0.50 | <0.50 | <1.0 | --- | <1.0 | <10 | <1.0 | <1.0 | <1.0 | <0.50 | <0.50 | 37.43 | 8.20 | 29.23 | --- |
| S-10 | 12/28/2012 | <48 | 180 | <0.50 | <0.50 | <0.50 | <1.0 | --- | <0.50 | <10 | <0.50 | <0.50 | <0.50 | --- | --- | 37.43 | 6.10 | 31.33 | --- |
| S-10 | 09/19/2013 | Well not monitored | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.43 | --- | --- | --- |
| S-10 | 12/23/2013 | <48 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | --- | <0.50 | <10 | <0.50 | <0.50 | <0.50 | --- | --- | 37.43 | 9.15 | 28.28 | --- |
| S-10 | 06/06/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.43 | 8.91 | 28.52 | --- |
| **S-10** | **12/08/2014** | **160 k** | **73** | **<0.50** | **<0.50** | **<0.50** | **<1.0** | **---** | **<0.50** | **<10** | **<0.50** | **<0.50** | **<0.50** | **---** | **---** | **37.43** | **7.55** | **29.88** | **---** |
| S-11 | 09/22/2009 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.44 | 4.50 | 31.94 | --- |
| S-11 | 09/29/2009 | <50 | <50 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | --- | --- | --- | <0.50 | <1.0 | 36.44 | 3.88 | 32.56 | --- |
| S-11 | 12/23/2009 | <50 | <50 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | <2.0 | <2.0 | <2.0 | <0.50 | <1.0 | 36.44 | 3.71 | 32.73 | --- |
| S-11 | 03/16/2010 | <50 | <50 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | --- | --- | --- | <0.50 | <1.0 | 36.44 | 3.30 | 33.14 | --- |
| S-11 | 06/21/2010 | <50 | <50 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | --- | --- | --- | <0.50 | <1.0 | 36.44 | 7.49 | 28.95 | --- |
| S-11 | 12/28/2010 | <50 | <50 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | <2.0 | <2.0 | <2.0 | <0.50 | <1.0 | 36.44 | 5.96 | 30.48 | --- |
| S-11 | 12/23/2011 | <47 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | --- | <1.0 | <10 | <1.0 | <1.0 | <1.0 | <0.50 | <0.50 | 36.44 | 7.28 | 29.16 | --- |
| S-11 | 12/28/2012 | <48 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | --- | <0.50 | <10 | <0.50 | <0.50 | <0.50 | --- | --- | 36.44 | 5.00 | 31.44 | --- |
| S-11 | 09/19/2013 | Well not monitored | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.44 | --- | --- | --- |
| S-11 | 12/23/2013 | <48 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | --- | 0.55 | <10 | <0.50 | <0.50 | <0.50 | --- | --- | 36.44 | 9.82 | 26.62 | --- |
| S-11 | 06/06/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.44 | 8.16 | 28.28 | --- |
| **S-11** | **12/08/2014** | **77 k** | **<50** | **<0.50** | **<0.50** | **<0.50** | **<1.0** | **---** | **<0.50** | **<10** | **<0.50** | **<0.50** | **<0.50** | **---** | **---** | **36.44** | **6.72** | **29.72** | **---** |
| S-12 | 09/22/2009 | Unable to access | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.00 | --- | --- | --- |

**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-12 | 09/25/2009 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.00 | 5.10 | 30.90 | --- |
| S-12 | 09/29/2009 | 91 g | 280 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | --- | --- | --- | <0.50 | <1.0 | 36.00 | 3.62 | 32.38 | --- |
| S-12 | 12/23/2009 | 120 g | 340 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | 15 | <2.0 | <2.0 | <2.0 | <0.50 | <1.0 | 36.00 | 2.91 | 33.09 | --- |
| S-12 | 03/16/2010 | <50 | 78 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | <10 | --- | --- | --- | <0.50 | <1.0 | 36.00 | 2.78 | 33.22 | --- |
| S-12 | 06/21/2010 | 210 g | 380 | 7.6 | <1.0 | <1.0 | <1.0 | --- | 4.8 | 50 | --- | --- | --- | <0.50 | <1.0 | 36.00 | 8.48 | 27.52 | --- |
| S-12 | 12/28/2010 | 81 | 410 | <0.50 | <1.0 | <1.0 | <1.0 | --- | <1.0 | 30 | 2.4 | <2.0 | <2.0 | <0.50 | <1.0 | 36.00 | 5.60 | 30.40 | --- |
| S-12 | 12/23/2011 | 140 | 490 | <0.50 | <0.50 | <0.50 | <1.0 | --- | <1.0 | 14 | 1.4 | <1.0 | <1.0 | <0.50 | <0.50 | 36.00 | 7.01 | 28.99 | --- |
| S-12 | 12/28/2012 | Well inaccessible | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.00 | --- | --- | --- |
| S-12 | 09/19/2013 | Well not monitored | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.00 | --- | --- | --- |
| S-12 | 12/23/2013 | 80 | 180 | <0.50 | <0.50 | <0.50 | <1.0 | --- | 1.7 | 51 | 3.7 | <0.50 | <0.50 | --- | --- | 36.00 | 8.35 | 27.65 | --- |
| S-12 | 06/06/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 36.00 | 7.99 | 28.01 | --- |
| **S-12** | **12/08/2014** | **110** | **400** | **<0.50** | **<0.50** | **<0.50** | **<1.0** | **---** | **1.2** | **29** | **2.5** | **<0.50** | **<0.50** | **---** | **---** | **36.00** | **6.40** | **29.60** | **---** |
| S-13 | 09/06/2013 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.19 | 9.34 | 27.85 | --- |
| S-13 | 09/19/2013 | --- | 25,000 | 210 | 420 | 520 | 7,600 | --- | <20 | <400 | <20 | <20 | <20 | --- | --- | 37.19 | 9.33 | 27.86 | --- |
| S-13 | 12/23/2013 | --- | 32,000 | 280 | 750 | 1,900 | 9,000 | --- | <10 | <200 | <10 | <10 | <10 | --- | --- | 37.19 | 9.82 | 27.37 | --- |
| S-13 | 03/05/2014 | --- | 24,000 | 220 | 660 | 1,300 | 6,700 | --- | <20 | <400 | <20 | <20 | <20 | --- | --- | 37.19 | 8.85 | 28.34 | --- |
| S-13 | 06/06/2014 | --- | 45,000 i | 300 | 990 | 2,500 | 11,000 | --- | <20 | <400 | <20 | <20 | <20 | --- | --- | 37.19 | 8.81 | 28.38 | --- |
| **S-13** | **12/08/2014** | **---** | **19,000** | **190** | **380** | **950** | **4,000** | **---** | **<20** | **<400** | **<20** | **<20** | **<20** | **---** | **---** | **37.19** | **8.98** | **28.21** | **---** |
| S-14 | 09/06/2013 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 37.14 | 9.28 | 27.86 | --- |
| S-14 | 09/19/2013 | --- | 7,600 | 360 | 48 | 140 | 490 | --- | 8.8 | <50 | <2.5 | <2.5 | <2.5 | --- | --- | 37.14 | 9.41 | 27.73 | --- |
| S-14 | 12/23/2013 | --- | 10,000 | 620 | 77 | 610 | 670 | --- | <5.0 | <100 | <5.0 | <5.0 | <5.0 | --- | --- | 37.14 | 9.71 | 27.43 | --- |
| S-14 | 03/05/2014 | --- | 8,000 | 470 | 79 | 450 | 630 | --- | <2.5 | <50 | <2.5 | <2.5 | <2.5 | --- | --- | 37.14 | 8.63 | 28.51 | --- |
| S-14 | 06/06/2014 | --- | 6,400 i | 270 | 39 | 240 | 370 | --- | 2.9 | <50 | <2.5 | <2.5 | <2.5 | --- | --- | 37.14 | 9.08 | 28.06 | --- |
| **S-14** | **12/08/2014** | **---** | **8,800** | **430** | **58** | **520** | **570** | **---** | **4.4** | **<50** | **<2.5** | **<2.5** | **<2.5** | **---** | **---** | **37.14** | **8.60** | **28.54** | **---** |
| BW-A | 09/30/1999 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.55 | --- | 2.3 |
| BW-A | 12/22/1999 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.52 | --- | 2.2 |
| BW-A | 03/09/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 3.99 | --- | 1.5 |
| BW-A | 06/20/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.69 | --- | 2.4 |
| BW-A | 09/05/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.43 | --- | 1.0 |
| BW-A | 12/04/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 8.96 | --- | 1.3 |
| BW-A | 12/12/2000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 8.71 | --- | --- |
| BW-A | 03/08/2001 | 1,370 g | <2,500 | 46.6 | <25.0 | <25.0 | <25.0 | 10,600 | 11,700 | --- | --- | --- | --- | --- | --- | --- | 6.38 | --- | 0.9/1.4 |
| BW-A | 06/07/2001 | 960 | 1,100 | <10 | <10 | <10 | 17 | 7,200 | --- | --- | --- | --- | --- | --- | --- | --- | 9.82 | --- | 3.6/0.8 |
| BW-A | 09/13/2001 | 460 | <2,000 | <20 | <20 | <20 | <50 | --- | 13,000 | --- | --- | --- | --- | --- | --- | --- | 10.49 | --- | 3.3/1.7 |
| BW-A | 11/19/2001 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.89 | --- | --- |

**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)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

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
µg/L = Micrograms per liter
ft = Feet
MSL = Mean sea level
mg/L = Milligrams per liter
<x = Not detected at reporting limit x
--- = Not analyzed or not available
x/x = Pre-purge/post-purge DO reading

a = Sample analyzed outside the EPA recommended holding time.
b = Post-purge DO reading.
c = Pre-purge DO reading.
d = Estimated depth to water.
e = Hydrocarbon reported is in the early diesel range and does not match the laboratory's standard.
f = Analyzed by EPA Method 8015B (M).
g = The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.
h = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
i = Concentration reported is due to the presence of discrete peaks of xylenes.
j = Concentration reported is due to the presence of discrete peak of benzene.
k= Hydrocarbon result partly due to individual peak in quantitation range.

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

**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)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

Wells S-6 through S-9 surveyed February 21, 2007 by Virgil Chavez Land Surveying
Wells S-6 through S-12 surveyed October 26, 2009 by Virgil Chavez Land Surveying
Wells S-13 and S-14 surveyed on September 14, 2013 by Virgil Chavez Land Surveying

APPENDIX A

BLAINE TECH SERVICES, INC. –
FIELD NOTES

# WELL GAUGING DATA

Project # 141208-ND1 Date 12/8/14 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 | 0800 | 4 | | | | | 8.10 | 19.39 | | |
| S-7 | 0810 | 4 | | | | | 8.22 | 19.39 | | |
| S-8 | 0813 | 4 | | | | | 8.49 | 19.65 | | |
| S-9 | 0754 | 4 | odor | | | | 8.70 | 16.48 | | |
| S-10 | 0745 | 4 | | | | | 7.55 | 19.56 | | |
| S-11 | 0742 | 4 | | | | | 6.72 | 19.60 | | |
| S-12 | 0748 | 4 | | | | | 6.40 | 19.60 | | |
| S-13 | 0807 | 4 | | | | | 8.98 | 19.25 | | |
| S-14 | 0804 | 4 | odor | | | | 8.60 | 19.24 | ↓ | |
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# SHELL WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 141208-ND1 | Site: 9899 5746 |
| Sampler: ND | Date: 12/8/14 |
| Well I.D.: S-6 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth (TD): 19.39 | Depth to Water (DTW): 8.10 |
| 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]: 10.35 | |

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: _____

| 7.4 (Gals.) X | 3 | = | 22.2 Gals. |
|---|---|---|---|
| 1 Case Volume | Specified Volumes | | Calculated Volume |

| Well Diameter | Multiplier | Well Diameter | Multiplier |
|---|---|---|---|
| 1" | 0.04 | 4" | 0.65 |
| 2" | 0.16 | 6" | 1.47 |
| 3" | 0.37 | Other | radius² * 0.163 |

| Time | Temp (°F) | pH | Cond. (mS or (µS)) | Turbidity (NTUs) | Gals. Removed | Observations |
|---|---|---|---|---|---|---|
| 0942 | 67.5 | 6.89 | 1541 | 22 | 7.4 | odor |
| 0945 | 68.2 | 6.94 | 1573 | 5 | 14.8 | ↓ |
| 0948 | Well | dewatered @ | | | 19 | ↓ |
| | | | | | | |
| 1202 | 68.0 | 6.92 | 1579 | 7 | GRAB | |

Did well dewater? (Yes) No Gallons actually evacuated: 19.0

Sampling Date: 12/8/14 Sampling Time: 1205 Depth to Water: 8.21

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 #: 141208-ND1 | Site: 98995746 |
| Sampler: ND | Date: 12/8/14 |
| Well I.D.: S-7 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth (TD): 19.39 | Depth to Water (DTW): 8.22 |
| Depth to Free Product: — | Thickness of Free Product (feet): — |
| Referenced to: (PVC) Grade | D.O. Meter (if req'd): YSI HACH |
| DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.45 | |

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: _____

| 7.3 (Gals.) X | 3 | = 21.9 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 |
|---|---|---|---|---|---|---|
| 1032 | 66.8 | 6.93 | 1593 | 4 | 7.3 | |
| 1035 | 67.0 | 6.99 | 1420 | 6 | 14.6 | odor |
| 1035 | well | dewatered | @ | @ | 15.0 | cloudy, very reactive |
| | | | | | | |
| 1227 | 67.0 | 6.94 | 1408 | 7 | GRAB | |

Did well dewater? (Yes) No Gallons actually evacuated: 15.0

Sampling Date: 12/8/14 Sampling Time: 1230 Depth to Water: 10.20

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 #: 141208-ND1 | Site: 980995746 |
| Sampler: ND | Date: 12/8/14 |
| Well I.D.: S-8 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth (TD): 19.65 | Depth to Water (DTW): 8.49 |
| 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]: 10.72 | |

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: _____

| | | | | |
|---|---|---|---|---|
| 7.3 (Gals.) X | 3 | = | 21.9 | 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 |
|---|---|---|---|---|---|---|
| 1042 | 67.2 | 6.79 | 1230 | 7 | 7.3 | odor |
| 1044 | 67.1 | 6.84 | 1198 | 14 | 14.6 | |
| | well | dewatered | @ | | 16.0 | |
| | | | | | | |
| 1242 | 67.0 | 6.86 | 1220 | 10 | GRAB | |

Did well dewater? (Yes) No Gallons actually evacuated: 16.0

Sampling Date: 12/8/14 Sampling Time: 1245 Depth to Water: 10.72

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 #: 141208-ND1 | Site: 98995746 |
| Sampler: ND | Date: 12/8/14 |
| Well I.D.: S-9 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth (TD): 16.48 | Depth to Water (DTW): 8.70 |
| 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]: 10.25 | |

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: _____

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

| Well Diameter | Multiplier | Well Diameter | Multiplier |
|---|---|---|---|
| 1" | 0.04 | 4" | 0.65 |
| 2" | 0.16 | 6" | 1.47 |
| 3" | 0.37 | Other | radius² * 0.163 |

| Time | Temp (°F) | pH | Cond. (mS or µS) | Turbidity (NTUs) | Gals. Removed | Observations |
|---|---|---|---|---|---|---|
| 0928 | 66.7 | 7.80 | 1094 | 72 | 5.1 | odor |
| 0930 | 67.5 | 7.82 | 1016 | 4 | 10.2 | ↓ |
| 0932 | 67.2 | 7.81 | 1023 | 3 | 15.3 | ↓ |
| | | | | | | |
| 1147 | 67.1 | 7.82 | 1029 | 7 | GRAB | |

Did well dewater? Yes (No) Gallons actually evacuated: 15.3

Sampling Date: 12/8/14 Sampling Time: 1150 Depth to Water: 9.67

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 #: 141208-ND1 | Site: 98995746 |
| Sampler: ND | Date: 12/8/14 |
| Well I.D.: S-10 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth (TD): 19.56 | Depth to Water (DTW): 7.55 |
| 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]: 9.95 | |

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: _____

7.8 (Gals.) X 3 = 23.4 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

| Well Diameter | Multiplier | Well Diameter | Multiplier |
|---|---|---|---|
| 1" | 0.04 | 4" | 0.65 |
| 2" | 0.16 | 6" | 1.47 |
| 3" | 0.37 | Other | radius² * 0.163 |

| Time | Temp (°F) | pH | Cond. (mS or (uS)) | Turbidity (NTUs) | Gals. Removed | Observations |
|---|---|---|---|---|---|---|
| 0853 | 69.7 | 6.69 | 751 | >1000 | 7.8 | |
| 0856 | 71.3 | 6.74 | 780 | 98 | 15.6 | |
| 0859 | 71.0 | 6.76 | 792 | 22 | 23.4 | |
| | | | | | | |
| 1122 | 71.0 | 6.77 | 792 | 31 | GRAB | |

Did well dewater? Yes (No) Gallons actually evacuated: 23.4

Sampling Date: 12/8/14 Sampling Time: 1125 Depth to Water: 8.10

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 #: 141208-ND1 | Site: 98995746 |
| Sampler: ND | Date: 12/8/14 |
| Well I.D.: S-11 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth (TD): 19.60 | Depth to Water (DTW): 6.72 |
| 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]: 9.29 | |

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: _____

8.4 (Gals.) X 3 = 25.2 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

| Well Diameter | Multiplier | Well Diameter | Multiplier |
|---|---|---|---|
| 1" | 0.04 | 4" | 0.65 |
| 2" | 0.16 | 6" | 1.47 |
| 3" | 0.37 | Other | radius² * 0.163 |

| Time | Temp (°F) | pH | Cond. (mS or (µS)) | Turbidity (NTUs) | Gals. Removed | Observations |
|---|---|---|---|---|---|---|
| 0825 | 69.2 | 6.92 | 689 | 11 | 8.4 | odor |
| 0828 | 69.2 | 6.80 | 720 | 10 | 16.8 | ↓ |
| 0831 | 69.1 | 6.81 | 731 | 10 | 25.2 | ↓ |
| | | | | | | |
| 1102 | 69.2 | 6.81 | 734 | 12 | GRAB | |

Did well dewater? Yes (No) Gallons actually evacuated: 25.2

Sampling Date: 12/8/14 Sampling Time: 1105 Depth to Water: 9.14 (2hr.)

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 #: 141208-ND1 | Site: 98995746 |
| Sampler: ND | Date: 12/8/14 |
| Well I.D.: S-12 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth (TD): 19.60 | Depth to Water (DTW): 6.40 |
| 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]: 9.04 | |

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: _____

| 8.6 (Gals.) X | 3 | = | 25.8 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 |
|---|---|---|---|---|---|---|
| 0914 | 68.6 | 6.83 | 1201 | >1000 | 8.6 | odor |
| 0917 | 69.6 | 6.87 | 1178 | 281 | 17.2 | Slight yellow hue |
| 0920 | 69.5 | 6.90 | 1162 | 41 | 25.8 | ↓ |
| | | | | | | |
| 1132 | 69.6 | 6.88 | 1170 | 58 | GRAB | |

Did well dewater? Yes (No) Gallons actually evacuated: 25.8

Sampling Date: 12/8/14 Sampling Time: 1135 Depth to Water: 7.62

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 |

# SHELL WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 141208-ND1 | Site: 989957 46 |
| Sampler: ND | Date: 12/18/14 |
| Well I.D.: S-13 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth (TD): 19.25 | Depth to Water (DTW): 8.98 |
| 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]: 11.03 | |

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: _____

| 6.7 (Gals.) X | 3 | = | 20.1 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 |
|---|---|---|---|---|---|---|
| 1010 | 65.3 | 6.83 | 966 | 7 | 6.7 | |
| 1013 | 66.2 | 6.80 | 979 | 9 | 13.4 | |
| 1016 | we | 11 | dewatered | @ | 18.0 | |
| | | | | | | |
| 1217 | 66.0 | 6.84 | 1012 | 7 | GRAB | |

Did well dewater? (Yes) No Gallons actually evacuated: 18.0

Sampling Date: 12/18/14 Sampling Time: 1220 Depth to Water: 9.06

Sample I.D.: S-13 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 #: 14128-ND1 | Site: 98995746 |
| Sampler: ND | Date: 12/8/14 |
| Well I.D.: S-14 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth (TD): 19.24 | Depth to Water (DTW): 8.60 |
| 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]: 10.72 | |

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 | radius² * 0.163 |

| Time | Temp (°F) | pH | Cond. (mS or (µS)) | Turbidity (NTUs) | Gals. Removed | Observations |
|---|---|---|---|---|---|---|
| 1000 | 66.3 | 6.78 | 982 | 7 | 7.0 | odor |
| 1004 | 66.9 | 6.82 | 1001 | 9 | 14.0 | ↓ |
| ~~1005~~ 1005 (N1) | well | dewatered | @ | | 15.0 | ↓ |
| | | | | | | |
| 1207 | 66.8 | 6.80 | 992 | 8 | GRAB | |

Did well dewater? (Yes) No Gallons actually evacuated: 15.0

Sampling Date: 12/8/14 Sampling Time: 1210 Depth to Water: 8.69

Sample I.D.: S-14 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 |

# ENVIRONMENTAL WELL, REMEDIATION COMPOUND, AND SITE INSPECTION FORM



INCIDENT # 98995746

ADDRESS 4411 Foothill Blvd. - Oakland, CA

DATE: 12/8/14

CITY & STATE Oakland, CA

| Well ID | Observations Upon Arrival: Manway Cover, Type, Condition & Size | | | | | Well Labeled / Painted Properly* | | Well Cap (Gripper) Condition | | Well Lock Condition | | | Well Pad / Surface Condition | | Note Repairs Made Detailed Explanation of Maintenance Recommended and Performed | Photos of Well Condition | | Repair Date and PM Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-6 | Standpipe | Flush | G | P | Size (inch) 12 | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| S-7 | Standpipe | Flush | G | P | Size (inch) 12 | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| S-8 | Standpipe | Flush | G | P | Size (inch) 12 | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| S-9 | Standpipe | Flush | G | P | Size (inch) 12 | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| S-10 | Standpipe | Flush | G | P | Size (inch) 12 | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| S-11 | Standpipe | Flush | G | P | Size (inch) 12 | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| S-12 | Standpipe | Flush | G | P | Size (inch) 12 | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| S-13 | Standpipe | Flush | G | P | Size (inch) 12 | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| S-14 | Standpipe | Flush | G | P | Size (inch) 12 | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| | Standpipe | Flush | G | P | Size (inch) | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| | Standpipe | Flush | G | P | Size (inch) | Y | N | G | R | G | R | NL | G | P | | Y | N | |
| TOTAL # CAPS REPLACED = 0 | | | | | | | | | | | TOTAL # OF LOCKS REPLACED = 0 | | | | | | | |

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

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

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

G = Good (Acceptable) R = Replaced

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

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

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

Version 2.4, March 2008

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

Nicholas Drachenberg / Blaine Tech Services

Print or type Name of Field Personnel & Consultant Company

APPENDIX B

TESTAMERICA LABORATORIES, INC. –
ANALYTICAL REPORT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

TestAmerica Job ID: 440-96181-1
Client Project/Site: 4411 Foothill Blvd., Oakland

For:
Conestoga-Rovers & Associates, Inc.
5900 Hollis Street
Suite A
Emeryville, California 94608

Attn: Peter Schaefer

Heather Clark

*Authorized for release by:*
*12/23/2014 9:59:10 AM*

Heather Clark, Project Manager I
(949)261-1022
heather.clark@testamericainc.com

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# Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-96181-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 440-96181-1 | S-6 | Ground Water | 12/08/14 12:05 | 12/10/14 09:55 |
| 440-96181-2 | S-7 | Ground Water | 12/08/14 12:30 | 12/10/14 09:55 |
| 440-96181-3 | S-8 | Ground Water | 12/08/14 12:45 | 12/10/14 09:55 |
| 440-96181-4 | S-9 | Ground Water | 12/08/14 11:50 | 12/10/14 09:55 |
| 440-96181-5 | S-10 | Ground Water | 12/08/14 11:25 | 12/10/14 09:55 |
| 440-96181-6 | S-11 | Ground Water | 12/08/14 11:05 | 12/10/14 09:55 |
| 440-96181-7 | S-12 | Ground Water | 12/08/14 11:35 | 12/10/14 09:55 |
| 440-96181-8 | S-13 | Water | 12/08/14 12:20 | 12/10/14 09:55 |
| 440-96181-9 | S-14 | Water | 12/08/14 12:10 | 12/10/14 09:55 |

## Job ID: 440-96181-1

**Laboratory: TestAmerica Irvine**

**Narrative**

**Job Narrative**
**440-96181-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 12/10/2014 9:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.5º C and 3.6º C.

**GC/MS VOA**
Method(s) 8260B/CA_LUFTMS: The Gasoline Range Organics (GRO) concentration reported for the following sample(s) is due to the presence of discrete peaks: S-7 (440-96181-2). Benzene

Method(s) 8260B/CA_LUFTMS: The Gasoline Range Organics (GRO) concentration reported for the following sample(s) is due to the presence of discrete peaks: S-8 (440-96181-3). Benzene and m-Xylene & p-Xylene

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

**GC Semi VOA**
Method(s) 8015B: Hydrocarbon result partly due to individual peak in quantitation range. S-10 (440-96181-5), S-11 (440-96181-6)

Method(s) 8015B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 224006. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch. (LCS 440-224006/2-A)

Method(s) 8015B: The following sample(s) required dilutions due to the nature of the sample matrix: S-7 (440-96181-2). Because of these dilutions, the surrogate spike concentration in the samples were reduced to a level where the recovery calculation does not provide useful information.

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

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

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

## Client Sample ID: S-6

**Date Collected: 12/08/14 12:05**
**Date Received: 12/10/14 09:55**

## Lab Sample ID: 440-96181-1

**Matrix: Ground Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Volatile Fuel Hydrocarbons (C4-C12) | 12000 | | 500 | | ug/L | | | 12/11/14 13:41 | 10 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *97* | | *76 - 132* | | *12/11/14 13:41* | *10* |
| *4-Bromofluorobenzene (Surr)* | *91* | | *80 - 120* | | *12/11/14 13:41* | *10* |
| *Toluene-d8 (Surr)* | *97* | | *80 - 128* | | *12/11/14 13:41* | *10* |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 320 | | 5.0 | | ug/L | | | 12/11/14 13:41 | 10 |
| Toluene | 15 | | 5.0 | | ug/L | | | 12/11/14 13:41 | 10 |
| Ethylbenzene | 73 | | 5.0 | | ug/L | | | 12/11/14 13:41 | 10 |
| Xylenes, Total | 50 | | 10 | | ug/L | | | 12/11/14 13:41 | 10 |
| Methyl-t-Butyl Ether (MTBE) | 28 | | 5.0 | | ug/L | | | 12/11/14 13:41 | 10 |
| tert-Butyl alcohol (TBA) | 110 | ID | 100 | | ug/L | | | 12/11/14 13:41 | 10 |
| Isopropyl Ether (DIPE) | ND | | 5.0 | | ug/L | | | 12/11/14 13:41 | 10 |
| Ethyl-t-butyl ether (ETBE) | ND | | 5.0 | | ug/L | | | 12/11/14 13:41 | 10 |
| Tert-amyl-methyl ether (TAME) | ND | | 5.0 | | ug/L | | | 12/11/14 13:41 | 10 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *91* | | *80 - 120* | | *12/11/14 13:41* | *10* |
| *Dibromofluoromethane (Surr)* | *97* | | *76 - 132* | | *12/11/14 13:41* | *10* |
| *Toluene-d8 (Surr)* | *97* | | *80 - 128* | | *12/11/14 13:41* | *10* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| C10-C28 | 2400 | | 46 | | ug/L | | 12/11/14 09:22 | 12/11/14 19:24 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *n-Octacosane* | *65* | | *45 - 120* | *12/11/14 09:22* | *12/11/14 19:24* | *1* |

## Client Sample ID: S-7

**Date Collected: 12/08/14 12:30**
**Date Received: 12/10/14 09:55**

## Lab Sample ID: 440-96181-2

**Matrix: Ground Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Volatile Fuel Hydrocarbons (C4-C12) | 48000 | | 10000 | | ug/L | | | 12/11/14 14:11 | 200 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *93* | | *76 - 132* | | *12/11/14 14:11* | *200* |
| *4-Bromofluorobenzene (Surr)* | *89* | | *80 - 120* | | *12/11/14 14:11* | *200* |
| *Toluene-d8 (Surr)* | *99* | | *80 - 128* | | *12/11/14 14:11* | *200* |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 15000 | | 100 | | ug/L | | | 12/11/14 14:11 | 200 |
| Toluene | 2800 | | 100 | | ug/L | | | 12/11/14 14:11 | 200 |
| Ethylbenzene | 1400 | | 100 | | ug/L | | | 12/11/14 14:11 | 200 |
| Xylenes, Total | 6200 | | 200 | | ug/L | | | 12/11/14 14:11 | 200 |

## Client Sample ID: S-7

**Lab Sample ID: 440-96181-2**

**Date Collected: 12/08/14 12:30**
**Matrix: Ground Water**
**Date Received: 12/10/14 09:55**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Methyl-t-Butyl Ether (MTBE)** | **250** | | 100 | | ug/L | | | 12/11/14 14:11 | 200 |
| tert-Butyl alcohol (TBA) | ND | | 2000 | | ug/L | | | 12/11/14 14:11 | 200 |
| Isopropyl Ether (DIPE) | ND | | 100 | | ug/L | | | 12/11/14 14:11 | 200 |
| Ethyl-t-butyl ether (ETBE) | ND | | 100 | | ug/L | | | 12/11/14 14:11 | 200 |
| Tert-amyl-methyl ether (TAME) | ND | | 100 | | ug/L | | | 12/11/14 14:11 | 200 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *89* | | *80 - 120* | | *12/11/14 14:11* | *200* |
| *Dibromofluoromethane (Surr)* | *93* | | *76 - 132* | | *12/11/14 14:11* | *200* |
| *Toluene-d8 (Surr)* | *99* | | *80 - 128* | | *12/11/14 14:11* | *200* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **C10-C28** | **2500** | | 230 | | ug/L | | 12/11/14 09:22 | 12/15/14 19:32 | 5 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *n-Octacosane* | *69* | | *45 - 120* | *12/11/14 09:22* | *12/15/14 19:32* | *5* |

## Client Sample ID: S-8

**Lab Sample ID: 440-96181-3**

**Date Collected: 12/08/14 12:45**
**Matrix: Ground Water**
**Date Received: 12/10/14 09:55**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Fuel Hydrocarbons (C4-C12)** | **49000** | | 5000 | | ug/L | | | 12/11/14 14:42 | 100 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *96* | | *76 - 132* | | *12/11/14 14:42* | *100* |
| *4-Bromofluorobenzene (Surr)* | *88* | | *80 - 120* | | *12/11/14 14:42* | *100* |
| *Toluene-d8 (Surr)* | *99* | | *80 - 128* | | *12/11/14 14:42* | *100* |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzene** | **9300** | | 50 | | ug/L | | | 12/11/14 14:42 | 100 |
| **Toluene** | **1800** | | 50 | | ug/L | | | 12/11/14 14:42 | 100 |
| **Ethylbenzene** | **2500** | | 50 | | ug/L | | | 12/11/14 14:42 | 100 |
| **Xylenes, Total** | **8900** | | 100 | | ug/L | | | 12/11/14 14:42 | 100 |
| **Methyl-t-Butyl Ether (MTBE)** | **89** | | 50 | | ug/L | | | 12/11/14 14:42 | 100 |
| tert-Butyl alcohol (TBA) | ND | | 1000 | | ug/L | | | 12/11/14 14:42 | 100 |
| Isopropyl Ether (DIPE) | ND | | 50 | | ug/L | | | 12/11/14 14:42 | 100 |
| Ethyl-t-butyl ether (ETBE) | ND | | 50 | | ug/L | | | 12/11/14 14:42 | 100 |
| Tert-amyl-methyl ether (TAME) | ND | | 50 | | ug/L | | | 12/11/14 14:42 | 100 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *88* | | *80 - 120* | | *12/11/14 14:42* | *100* |
| *Dibromofluoromethane (Surr)* | *96* | | *76 - 132* | | *12/11/14 14:42* | *100* |
| *Toluene-d8 (Surr)* | *99* | | *80 - 128* | | *12/11/14 14:42* | *100* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **C10-C28** | **3000** | | 47 | | ug/L | | 12/11/14 09:22 | 12/11/14 20:29 | 1 |

## Client Sample ID: S-8

**Lab Sample ID: 440-96181-3**

**Date Collected: 12/08/14 12:45**

**Matrix: Ground Water**

**Date Received: 12/10/14 09:55**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *n-Octacosane* | *63* | | *45 - 120* | *12/11/14 09:22* | *12/11/14 20:29* | *1* |

## Client Sample ID: S-9

**Lab Sample ID: 440-96181-4**

**Date Collected: 12/08/14 11:50**

**Matrix: Ground Water**

**Date Received: 12/10/14 09:55**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Fuel Hydrocarbons (C4-C12)** | **3900** | | 250 | | ug/L | | | 12/11/14 15:12 | 5 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *97* | | *76 - 132* | | *12/11/14 15:12* | *5* |
| *4-Bromofluorobenzene (Surr)* | *91* | | *80 - 120* | | *12/11/14 15:12* | *5* |
| *Toluene-d8 (Surr)* | *97* | | *80 - 128* | | *12/11/14 15:12* | *5* |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzene** | **5.1** | | 2.5 | | ug/L | | | 12/11/14 15:12 | 5 |
| **Toluene** | **8.5** | | 2.5 | | ug/L | | | 12/11/14 15:12 | 5 |
| **Ethylbenzene** | **11** | | 2.5 | | ug/L | | | 12/11/14 15:12 | 5 |
| **Xylenes, Total** | **92** | | 5.0 | | ug/L | | | 12/11/14 15:12 | 5 |
| Methyl-t-Butyl Ether (MTBE) | ND | | 2.5 | | ug/L | | | 12/11/14 15:12 | 5 |
| tert-Butyl alcohol (TBA) | ND | | 50 | | ug/L | | | 12/11/14 15:12 | 5 |
| Isopropyl Ether (DIPE) | ND | | 2.5 | | ug/L | | | 12/11/14 15:12 | 5 |
| Ethyl-t-butyl ether (ETBE) | ND | | 2.5 | | ug/L | | | 12/11/14 15:12 | 5 |
| Tert-amyl-methyl ether (TAME) | ND | | 2.5 | | ug/L | | | 12/11/14 15:12 | 5 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *91* | | *80 - 120* | | *12/11/14 15:12* | *5* |
| *Dibromofluoromethane (Surr)* | *97* | | *76 - 132* | | *12/11/14 15:12* | *5* |
| *Toluene-d8 (Surr)* | *97* | | *80 - 128* | | *12/11/14 15:12* | *5* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **C10-C28** | **810** | | 47 | | ug/L | | 12/11/14 09:22 | 12/11/14 20:07 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *n-Octacosane* | *53* | | *45 - 120* | *12/11/14 09:22* | *12/11/14 20:07* | *1* |

## Client Sample ID: S-10

**Lab Sample ID: 440-96181-5**

**Date Collected: 12/08/14 11:25**

**Matrix: Ground Water**

**Date Received: 12/10/14 09:55**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Fuel Hydrocarbons (C4-C12)** | **73** | | 50 | | ug/L | | | 12/11/14 15:43 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *92* | | *76 - 132* | | *12/11/14 15:43* | *1* |
| *4-Bromofluorobenzene (Surr)* | *86* | | *80 - 120* | | *12/11/14 15:43* | *1* |

## Client Sample ID: S-10

**Lab Sample ID: 440-96181-5**

**Date Collected: 12/08/14 11:25**

**Matrix: Ground Water**

**Date Received: 12/10/14 09:55**

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

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *80 - 128* | | *12/11/14 15:43* | *1* |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 0.50 | | ug/L | | | 12/11/14 15:43 | 1 |
| Toluene | ND | | 0.50 | | ug/L | | | 12/11/14 15:43 | 1 |
| Ethylbenzene | ND | | 0.50 | | ug/L | | | 12/11/14 15:43 | 1 |
| Xylenes, Total | ND | | 1.0 | | ug/L | | | 12/11/14 15:43 | 1 |
| Methyl-t-Butyl Ether (MTBE) | ND | | 0.50 | | ug/L | | | 12/11/14 15:43 | 1 |
| tert-Butyl alcohol (TBA) | ND | | 10 | | ug/L | | | 12/11/14 15:43 | 1 |
| Isopropyl Ether (DIPE) | ND | | 0.50 | | ug/L | | | 12/11/14 15:43 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 0.50 | | ug/L | | | 12/11/14 15:43 | 1 |
| Tert-amyl-methyl ether (TAME) | ND | | 0.50 | | ug/L | | | 12/11/14 15:43 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *86* | | *80 - 120* | | *12/11/14 15:43* | *1* |
| *Dibromofluoromethane (Surr)* | *92* | | *76 - 132* | | *12/11/14 15:43* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *80 - 128* | | *12/11/14 15:43* | *1* |

### Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **C10-C28** | **160** | | 46 | | ug/L | | 12/11/14 09:22 | 12/11/14 20:51 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *n-Octacosane* | *75* | | *45 - 120* | *12/11/14 09:22* | *12/11/14 20:51* | *1* |

## Client Sample ID: S-11

**Lab Sample ID: 440-96181-6**

**Date Collected: 12/08/14 11:05**

**Matrix: Ground Water**

**Date Received: 12/10/14 09:55**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Volatile Fuel Hydrocarbons (C4-C12) | ND | | 50 | | ug/L | | | 12/11/14 16:13 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *97* | | *76 - 132* | | *12/11/14 16:13* | *1* |
| *4-Bromofluorobenzene (Surr)* | *88* | | *80 - 120* | | *12/11/14 16:13* | *1* |
| *Toluene-d8 (Surr)* | *100* | | *80 - 128* | | *12/11/14 16:13* | *1* |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 0.50 | | ug/L | | | 12/11/14 16:13 | 1 |
| Toluene | ND | | 0.50 | | ug/L | | | 12/11/14 16:13 | 1 |
| Ethylbenzene | ND | | 0.50 | | ug/L | | | 12/11/14 16:13 | 1 |
| Xylenes, Total | ND | | 1.0 | | ug/L | | | 12/11/14 16:13 | 1 |
| Methyl-t-Butyl Ether (MTBE) | ND | | 0.50 | | ug/L | | | 12/11/14 16:13 | 1 |
| tert-Butyl alcohol (TBA) | ND | | 10 | | ug/L | | | 12/11/14 16:13 | 1 |
| Isopropyl Ether (DIPE) | ND | | 0.50 | | ug/L | | | 12/11/14 16:13 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 0.50 | | ug/L | | | 12/11/14 16:13 | 1 |
| Tert-amyl-methyl ether (TAME) | ND | | 0.50 | | ug/L | | | 12/11/14 16:13 | 1 |

## Client Sample ID: S-11

**Lab Sample ID: 440-96181-6**

**Date Collected: 12/08/14 11:05**

**Matrix: Ground Water**

**Date Received: 12/10/14 09:55**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 88 | | 80 - 120 | | 12/11/14 16:13 | 1 |
| Dibromofluoromethane (Surr) | 97 | | 76 - 132 | | 12/11/14 16:13 | 1 |
| Toluene-d8 (Surr) | 100 | | 80 - 128 | | 12/11/14 16:13 | 1 |

### Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| C10-C28 | 77 | | 49 | | ug/L | | 12/11/14 09:22 | 12/11/14 21:13 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| n-Octacosane | 67 | | 45 - 120 | 12/11/14 09:22 | 12/11/14 21:13 | 1 |

## Client Sample ID: S-12

**Lab Sample ID: 440-96181-7**

**Date Collected: 12/08/14 11:35**

**Matrix: Ground Water**

**Date Received: 12/10/14 09:55**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Volatile Fuel Hydrocarbons (C4-C12) | 400 | | 50 | | ug/L | | | 12/11/14 16:43 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Dibromofluoromethane (Surr) | 98 | | 76 - 132 | | 12/11/14 16:43 | 1 |
| 4-Bromofluorobenzene (Surr) | 92 | | 80 - 120 | | 12/11/14 16:43 | 1 |
| Toluene-d8 (Surr) | 93 | | 80 - 128 | | 12/11/14 16:43 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 0.50 | | ug/L | | | 12/11/14 16:43 | 1 |
| Toluene | ND | | 0.50 | | ug/L | | | 12/11/14 16:43 | 1 |
| Ethylbenzene | ND | | 0.50 | | ug/L | | | 12/11/14 16:43 | 1 |
| Xylenes, Total | ND | | 1.0 | | ug/L | | | 12/11/14 16:43 | 1 |
| Methyl-t-Butyl Ether (MTBE) | 1.2 | | 0.50 | | ug/L | | | 12/11/14 16:43 | 1 |
| tert-Butyl alcohol (TBA) | 29 | | 10 | | ug/L | | | 12/11/14 16:43 | 1 |
| Isopropyl Ether (DIPE) | 2.5 | | 0.50 | | ug/L | | | 12/11/14 16:43 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 0.50 | | ug/L | | | 12/11/14 16:43 | 1 |
| Tert-amyl-methyl ether (TAME) | ND | | 0.50 | | ug/L | | | 12/11/14 16:43 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene (Surr) | 92 | | 80 - 120 | | 12/11/14 16:43 | 1 |
| Dibromofluoromethane (Surr) | 98 | | 76 - 132 | | 12/11/14 16:43 | 1 |
| Toluene-d8 (Surr) | 93 | | 80 - 128 | | 12/11/14 16:43 | 1 |

### Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level - Silica Gel Cleanup

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| C10-C28 | 110 | | 46 | | ug/L | | 12/11/14 09:22 | 12/11/14 21:34 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| n-Octacosane | 71 | | 45 - 120 | 12/11/14 09:22 | 12/11/14 21:34 | 1 |

## Client Sample ID: S-13

**Lab Sample ID: 440-96181-8**

**Date Collected: 12/08/14 12:20**

**Matrix: Water**

**Date Received: 12/10/14 09:55**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Fuel Hydrocarbons (C4-C12)** | **19000** | | 2000 | | ug/L | | | 12/11/14 17:13 | 40 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *97* | | *76 - 132* | | *12/11/14 17:13* | *40* |
| *4-Bromofluorobenzene (Surr)* | *94* | | *80 - 120* | | *12/11/14 17:13* | *40* |
| *Toluene-d8 (Surr)* | *98* | | *80 - 128* | | *12/11/14 17:13* | *40* |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzene** | **190** | | 20 | | ug/L | | | 12/11/14 17:13 | 40 |
| **Toluene** | **380** | | 20 | | ug/L | | | 12/11/14 17:13 | 40 |
| **Ethylbenzene** | **950** | | 20 | | ug/L | | | 12/11/14 17:13 | 40 |
| **Xylenes, Total** | **4000** | | 40 | | ug/L | | | 12/11/14 17:13 | 40 |
| Methyl-t-Butyl Ether (MTBE) | ND | | 20 | | ug/L | | | 12/11/14 17:13 | 40 |
| tert-Butyl alcohol (TBA) | ND | | 400 | | ug/L | | | 12/11/14 17:13 | 40 |
| Isopropyl Ether (DIPE) | ND | | 20 | | ug/L | | | 12/11/14 17:13 | 40 |
| Ethyl-t-butyl ether (ETBE) | ND | | 20 | | ug/L | | | 12/11/14 17:13 | 40 |
| Tert-amyl-methyl ether (TAME) | ND | | 20 | | ug/L | | | 12/11/14 17:13 | 40 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *94* | | *80 - 120* | | *12/11/14 17:13* | *40* |
| *Dibromofluoromethane (Surr)* | *97* | | *76 - 132* | | *12/11/14 17:13* | *40* |
| *Toluene-d8 (Surr)* | *98* | | *80 - 128* | | *12/11/14 17:13* | *40* |

## Client Sample ID: S-14

**Lab Sample ID: 440-96181-9**

**Date Collected: 12/08/14 12:10**

**Matrix: Water**

**Date Received: 12/10/14 09:55**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Fuel Hydrocarbons (C4-C12)** | **8800** | | 250 | | ug/L | | | 12/11/14 17:44 | 5 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *97* | | *76 - 132* | | *12/11/14 17:44* | *5* |
| *4-Bromofluorobenzene (Surr)* | *87* | | *80 - 120* | | *12/11/14 17:44* | *5* |
| *Toluene-d8 (Surr)* | *98* | | *80 - 128* | | *12/11/14 17:44* | *5* |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzene** | **430** | | 2.5 | | ug/L | | | 12/11/14 17:44 | 5 |
| **Toluene** | **58** | | 2.5 | | ug/L | | | 12/11/14 17:44 | 5 |
| **Methyl-t-Butyl Ether (MTBE)** | **4.4** | | 2.5 | | ug/L | | | 12/11/14 17:44 | 5 |
| tert-Butyl alcohol (TBA) | ND | | 50 | | ug/L | | | 12/11/14 17:44 | 5 |
| Isopropyl Ether (DIPE) | ND | | 2.5 | | ug/L | | | 12/11/14 17:44 | 5 |
| Ethyl-t-butyl ether (ETBE) | ND | | 2.5 | | ug/L | | | 12/11/14 17:44 | 5 |
| Tert-amyl-methyl ether (TAME) | ND | | 2.5 | | ug/L | | | 12/11/14 17:44 | 5 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *87* | | *80 - 120* | | *12/11/14 17:44* | *5* |
| *Dibromofluoromethane (Surr)* | *97* | | *76 - 132* | | *12/11/14 17:44* | *5* |

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-96181-1

**Client Sample ID: S-14**
**Date Collected: 12/08/14 12:10**
**Date Received: 12/10/14 09:55**

**Lab Sample ID: 440-96181-9**
**Matrix: Water**

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

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *98* | | *80 - 128* | | *12/11/14 17:44* | *5* |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Ethylbenzene** | **520** | | 13 | | ug/L | | | 12/12/14 15:49 | 25 |
| **Xylenes, Total** | **570** | | 25 | | ug/L | | | 12/12/14 15:49 | 25 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *110* | | *80 - 120* | | *12/12/14 15:49* | *25* |
| *Dibromofluoromethane (Surr)* | *108* | | *76 - 132* | | *12/12/14 15:49* | *25* |
| *Toluene-d8 (Surr)* | *112* | | *80 - 128* | | *12/12/14 15:49* | *25* |

# Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-96181-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260B | Volatile Organic Compounds (GC/MS) | SW846 | TAL IRV |
| 8260B/CA_LUFTMS | Volatile Organic Compounds by GC/MS | SW846 | TAL IRV |
| 8015B | Diesel Range Organics (DRO) (GC) Low Level | SW846 | TAL IRV |

**Protocol References:**

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

**Laboratory References:**

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

## Client Sample ID: S-6

**Lab Sample ID: 440-96181-1**

**Date Collected: 12/08/14 12:05**

**Matrix: Ground Water**

**Date Received: 12/10/14 09:55**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 10 | 10 mL | 10 mL | 223941 | 12/11/14 13:41 | YK | TAL IRV |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 10 | 10 mL | 10 mL | 223942 | 12/11/14 13:41 | YK | TAL IRV |
| Silica Gel Cleanup | Prep | 3510C SGC | | | 1085 mL | 1 mL | 224006 | 12/11/14 09:22 | AP | TAL IRV |
| Silica Gel Cleanup | Analysis | 8015B | | 1 | 1085 mL | 1 mL | 224031 | 12/11/14 19:24 | CN | TAL IRV |

## Client Sample ID: S-7

**Lab Sample ID: 440-96181-2**

**Date Collected: 12/08/14 12:30**

**Matrix: Ground Water**

**Date Received: 12/10/14 09:55**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 200 | 10 mL | 10 mL | 223941 | 12/11/14 14:11 | YK | TAL IRV |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 200 | 10 mL | 10 mL | 223942 | 12/11/14 14:11 | YK | TAL IRV |
| Silica Gel Cleanup | Prep | 3510C SGC | | | 1075 mL | 1 mL | 224006 | 12/11/14 09:22 | AP | TAL IRV |
| Silica Gel Cleanup | Analysis | 8015B | | 5 | 1075 mL | 1 mL | 224687 | 12/15/14 19:32 | KW | TAL IRV |

## Client Sample ID: S-8

**Lab Sample ID: 440-96181-3**

**Date Collected: 12/08/14 12:45**

**Matrix: Ground Water**

**Date Received: 12/10/14 09:55**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 100 | 10 mL | 10 mL | 223941 | 12/11/14 14:42 | YK | TAL IRV |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 100 | 10 mL | 10 mL | 223942 | 12/11/14 14:42 | YK | TAL IRV |
| Silica Gel Cleanup | Prep | 3510C SGC | | | 1075 mL | 1 mL | 224006 | 12/11/14 09:22 | AP | TAL IRV |
| Silica Gel Cleanup | Analysis | 8015B | | 1 | 1075 mL | 1 mL | 224033 | 12/11/14 20:29 | CN | TAL IRV |

## Client Sample ID: S-9

**Lab Sample ID: 440-96181-4**

**Date Collected: 12/08/14 11:50**

**Matrix: Ground Water**

**Date Received: 12/10/14 09:55**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 5 | 10 mL | 10 mL | 223941 | 12/11/14 15:12 | YK | TAL IRV |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 5 | 10 mL | 10 mL | 223942 | 12/11/14 15:12 | YK | TAL IRV |
| Silica Gel Cleanup | Prep | 3510C SGC | | | 1070 mL | 1 mL | 224006 | 12/11/14 09:22 | AP | TAL IRV |
| Silica Gel Cleanup | Analysis | 8015B | | 1 | 1070 mL | 1 mL | 224031 | 12/11/14 20:07 | CN | TAL IRV |

## Client Sample ID: S-10

**Lab Sample ID: 440-96181-5**

**Date Collected: 12/08/14 11:25**

**Matrix: Ground Water**

**Date Received: 12/10/14 09:55**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 10 mL | 10 mL | 223941 | 12/11/14 15:43 | YK | TAL IRV |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 10 mL | 10 mL | 223942 | 12/11/14 15:43 | YK | TAL IRV |
| Silica Gel Cleanup | Prep | 3510C SGC | | | 1080 mL | 1 mL | 224006 | 12/11/14 09:22 | AP | TAL IRV |
| Silica Gel Cleanup | Analysis | 8015B | | 1 | 1080 mL | 1 mL | 224033 | 12/11/14 20:51 | CN | TAL IRV |

## Client Sample ID: S-11

**Lab Sample ID: 440-96181-6**

**Date Collected: 12/08/14 11:05**

**Matrix: Ground Water**

**Date Received: 12/10/14 09:55**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 10 mL | 10 mL | 223941 | 12/11/14 16:13 | YK | TAL IRV |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 10 mL | 10 mL | 223942 | 12/11/14 16:13 | YK | TAL IRV |
| Silica Gel Cleanup | Prep | 3510C SGC | | | 1030 mL | 1 mL | 224006 | 12/11/14 09:22 | AP | TAL IRV |
| Silica Gel Cleanup | Analysis | 8015B | | 1 | 1030 mL | 1 mL | 224033 | 12/11/14 21:13 | CN | TAL IRV |

## Client Sample ID: S-12

**Lab Sample ID: 440-96181-7**

**Date Collected: 12/08/14 11:35**

**Matrix: Ground Water**

**Date Received: 12/10/14 09:55**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 10 mL | 10 mL | 223941 | 12/11/14 16:43 | YK | TAL IRV |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 1 | 10 mL | 10 mL | 223942 | 12/11/14 16:43 | YK | TAL IRV |
| Silica Gel Cleanup | Prep | 3510C SGC | | | 1080 mL | 1 mL | 224006 | 12/11/14 09:22 | AP | TAL IRV |
| Silica Gel Cleanup | Analysis | 8015B | | 1 | 1080 mL | 1 mL | 224033 | 12/11/14 21:34 | CN | TAL IRV |

## Client Sample ID: S-13

**Lab Sample ID: 440-96181-8**

**Date Collected: 12/08/14 12:20**

**Matrix: Water**

**Date Received: 12/10/14 09:55**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 40 | 10 mL | 10 mL | 223941 | 12/11/14 17:13 | YK | TAL IRV |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 40 | 10 mL | 10 mL | 223942 | 12/11/14 17:13 | YK | TAL IRV |

## Client Sample ID: S-14

**Lab Sample ID: 440-96181-9**

**Date Collected: 12/08/14 12:10**

**Matrix: Water**

**Date Received: 12/10/14 09:55**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 5 | 10 mL | 10 mL | 223941 | 12/11/14 17:44 | YK | TAL IRV |

# Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-96181-1

**Client Sample ID: S-14**
**Date Collected: 12/08/14 12:10**
**Date Received: 12/10/14 09:55**

**Lab Sample ID: 440-96181-9**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | DL | 25 | 10 mL | 10 mL | 224260 | 12/12/14 15:49 | AL | TAL IRV |
| Total/NA | Analysis | 8260B/CA_LUFTMS | | 5 | 10 mL | 10 mL | 223942 | 12/11/14 17:44 | YK | TAL IRV |

**Laboratory References:**

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

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

**Lab Sample ID: MB 440-223941/5**
**Matrix: Water**
**Analysis Batch: 223941**

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 0.50 | | ug/L | | | 12/11/14 09:07 | 1 |
| Toluene | ND | | 0.50 | | ug/L | | | 12/11/14 09:07 | 1 |
| Ethylbenzene | ND | | 0.50 | | ug/L | | | 12/11/14 09:07 | 1 |
| Xylenes, Total | ND | | 1.0 | | ug/L | | | 12/11/14 09:07 | 1 |
| Methyl-t-Butyl Ether (MTBE) | ND | | 0.50 | | ug/L | | | 12/11/14 09:07 | 1 |
| tert-Butyl alcohol (TBA) | ND | | 10 | | ug/L | | | 12/11/14 09:07 | 1 |
| Isopropyl Ether (DIPE) | ND | | 0.50 | | ug/L | | | 12/11/14 09:07 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 0.50 | | ug/L | | | 12/11/14 09:07 | 1 |
| Tert-amyl-methyl ether (TAME) | ND | | 0.50 | | ug/L | | | 12/11/14 09:07 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *91* | | *80 - 120* | | *12/11/14 09:07* | *1* |
| *Dibromofluoromethane (Surr)* | *99* | | *76 - 132* | | *12/11/14 09:07* | *1* |
| *Toluene-d8 (Surr)* | *97* | | *80 - 128* | | *12/11/14 09:07* | *1* |

**Lab Sample ID: LCS 440-223941/6**
**Matrix: Water**
**Analysis Batch: 223941**

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzene | 25.0 | 21.4 | | ug/L | | 86 | 68 - 130 |
| Toluene | 25.0 | 21.2 | | ug/L | | 85 | 70 - 130 |
| Ethylbenzene | 25.0 | 21.8 | | ug/L | | 87 | 70 - 130 |
| Methyl-t-Butyl Ether (MTBE) | 25.0 | 24.7 | | ug/L | | 99 | 63 - 131 |
| tert-Butyl alcohol (TBA) | 250 | 257 | | ug/L | | 103 | 70 - 130 |
| Isopropyl Ether (DIPE) | 25.0 | 23.7 | | ug/L | | 95 | 58 - 139 |
| Ethyl-t-butyl ether (ETBE) | 25.0 | 23.0 | | ug/L | | 92 | 60 - 136 |
| Tert-amyl-methyl ether (TAME) | 25.0 | 23.1 | | ug/L | | 92 | 57 - 139 |
| m,p-Xylene | 25.0 | 22.5 | | ug/L | | 90 | 70 - 130 |
| o-Xylene | 25.0 | 22.9 | | ug/L | | 92 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *90* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *100* | | *76 - 132* |
| *Toluene-d8 (Surr)* | *97* | | *80 - 128* |

**Lab Sample ID: 440-95851-A-2 MS**
**Matrix: Water**
**Analysis Batch: 223941**

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

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 25.0 | 22.8 | | ug/L | | 91 | 66 - 130 |
| Toluene | ND | | 25.0 | 22.3 | | ug/L | | 89 | 70 - 130 |
| Ethylbenzene | ND | | 25.0 | 23.2 | | ug/L | | 93 | 70 - 130 |
| Methyl-t-Butyl Ether (MTBE) | ND | | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 |
| tert-Butyl alcohol (TBA) | ND | | 250 | 277 | | ug/L | | 111 | 70 - 130 |
| Isopropyl Ether (DIPE) | ND | | 25.0 | 24.3 | | ug/L | | 97 | 64 - 138 |

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

**Lab Sample ID: 440-95851-A-2 MS**
**Matrix: Water**
**Analysis Batch: 223941**

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

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Ethyl-t-butyl ether (ETBE) | ND | | 25.0 | 21.3 | | ug/L | | 85 | 70 - 130 |
| Tert-amyl-methyl ether (TAME) | ND | | 25.0 | 19.6 | | ug/L | | 78 | 68 - 133 |
| m,p-Xylene | ND | | 25.0 | 24.4 | | ug/L | | 98 | 70 - 133 |
| o-Xylene | ND | | 25.0 | 25.2 | | ug/L | | 101 | 70 - 133 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *87* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *98* | | *76 - 132* |
| *Toluene-d8 (Surr)* | *93* | | *80 - 128* |

**Lab Sample ID: 440-95851-A-2 MSD**
**Matrix: Water**
**Analysis Batch: 223941**

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

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | | 25.0 | 23.0 | | ug/L | | 92 | 66 - 130 | 1 | 20 |
| Toluene | ND | | 25.0 | 22.6 | | ug/L | | 90 | 70 - 130 | 1 | 20 |
| Ethylbenzene | ND | | 25.0 | 23.7 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| Methyl-t-Butyl Ether (MTBE) | ND | | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 3 | 25 |
| tert-Butyl alcohol (TBA) | ND | | 250 | 282 | | ug/L | | 113 | 70 - 130 | 2 | 25 |
| Isopropyl Ether (DIPE) | ND | | 25.0 | 25.0 | | ug/L | | 100 | 64 - 138 | 3 | 25 |
| Ethyl-t-butyl ether (ETBE) | ND | | 25.0 | 21.9 | | ug/L | | 87 | 70 - 130 | 3 | 25 |
| Tert-amyl-methyl ether (TAME) | ND | | 25.0 | 20.3 | | ug/L | | 81 | 68 - 133 | 4 | 30 |
| m,p-Xylene | ND | | 25.0 | 24.2 | | ug/L | | 97 | 70 - 133 | 1 | 25 |
| o-Xylene | ND | | 25.0 | 24.7 | | ug/L | | 99 | 70 - 133 | 2 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *90* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *98* | | *76 - 132* |
| *Toluene-d8 (Surr)* | *95* | | *80 - 128* |

**Lab Sample ID: MB 440-224260/4**
**Matrix: Water**
**Analysis Batch: 224260**

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | | 0.50 | | ug/L | | | 12/12/14 09:32 | 1 |
| Xylenes, Total | ND | | 1.0 | | ug/L | | | 12/12/14 09:32 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *114* | | *80 - 120* | | *12/12/14 09:32* | *1* |
| *Dibromofluoromethane (Surr)* | *108* | | *76 - 132* | | *12/12/14 09:32* | *1* |
| *Toluene-d8 (Surr)* | *109* | | *80 - 128* | | *12/12/14 09:32* | *1* |

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

**Lab Sample ID: LCS 440-224260/5**
**Matrix: Water**
**Analysis Batch: 224260**

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Ethylbenzene | 25.0 | 26.1 | | ug/L | | 105 | 70 - 130 |
| m,p-Xylene | 25.0 | 26.9 | | ug/L | | 108 | 70 - 130 |
| o-Xylene | 25.0 | 26.1 | | ug/L | | 105 | 70 - 130 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *114* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *107* | | *76 - 132* |
| *Toluene-d8 (Surr)* | *109* | | *80 - 128* |

**Lab Sample ID: 440-96085-A-2 MS**
**Matrix: Water**
**Analysis Batch: 224260**

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

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | | 25.0 | 28.3 | | ug/L | | 113 | 70 - 130 |
| m,p-Xylene | ND | | 25.0 | 28.0 | | ug/L | | 112 | 70 - 133 |
| o-Xylene | ND | | 25.0 | 28.7 | | ug/L | | 115 | 70 - 133 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *116* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *110* | | *76 - 132* |
| *Toluene-d8 (Surr)* | *112* | | *80 - 128* |

**Lab Sample ID: 440-96085-A-2 MSD**
**Matrix: Water**
**Analysis Batch: 224260**

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

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | | 25.0 | 26.8 | | ug/L | | 107 | 70 - 130 | 5 | 20 |
| m,p-Xylene | ND | | 25.0 | 26.8 | | ug/L | | 107 | 70 - 133 | 5 | 25 |
| o-Xylene | ND | | 25.0 | 26.8 | | ug/L | | 107 | 70 - 133 | 7 | 20 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *4-Bromofluorobenzene (Surr)* | *115* | | *80 - 120* |
| *Dibromofluoromethane (Surr)* | *108* | | *76 - 132* |
| *Toluene-d8 (Surr)* | *106* | | *80 - 128* |

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

**Lab Sample ID: MB 440-223942/5**
**Matrix: Water**
**Analysis Batch: 223942**

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Volatile Fuel Hydrocarbons (C4-C12) | ND | | 50 | | ug/L | | | 12/11/14 09:07 | 1 |

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

**Lab Sample ID: MB 440-223942/5**
**Matrix: Water**
**Analysis Batch: 223942**

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

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Dibromofluoromethane (Surr) | 99 | | 76 - 132 | | 12/11/14 09:07 | 1 |
| 4-Bromofluorobenzene (Surr) | 91 | | 80 - 120 | | 12/11/14 09:07 | 1 |
| Toluene-d8 (Surr) | 97 | | 80 - 128 | | 12/11/14 09:07 | 1 |

**Lab Sample ID: LCS 440-223942/7**
**Matrix: Water**
**Analysis Batch: 223942**

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Volatile Fuel Hydrocarbons (C4-C12) | 500 | 384 | | ug/L | | 77 | 55 - 130 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| Dibromofluoromethane (Surr) | 101 | | 76 - 132 |
| 4-Bromofluorobenzene (Surr) | 91 | | 80 - 120 |
| Toluene-d8 (Surr) | 96 | | 80 - 128 |

**Lab Sample ID: 440-95851-A-2 MS**
**Matrix: Water**
**Analysis Batch: 223942**

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

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Volatile Fuel Hydrocarbons (C4-C12) | ND | | 1730 | 1690 | | ug/L | | 98 | 50 - 145 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| Dibromofluoromethane (Surr) | 98 | | 76 - 132 |
| 4-Bromofluorobenzene (Surr) | 87 | | 80 - 120 |
| Toluene-d8 (Surr) | 93 | | 80 - 128 |

**Lab Sample ID: 440-95851-A-2 MSD**
**Matrix: Water**
**Analysis Batch: 223942**

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

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Fuel Hydrocarbons (C4-C12) | ND | | 1730 | 1700 | | ug/L | | 98 | 50 - 145 | 0 | 20 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| Dibromofluoromethane (Surr) | 98 | | 76 - 132 |
| 4-Bromofluorobenzene (Surr) | 90 | | 80 - 120 |
| Toluene-d8 (Surr) | 95 | | 80 - 128 |

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-96181-1

## Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level

**Lab Sample ID: MB 440-224006/1-A**
**Matrix: Water**
**Analysis Batch: 224033**

**Client Sample ID: Method Blank**
**Prep Type: Silica Gel Cleanup**
**Prep Batch: 224006**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| C10-C28 | ND | | 50 | | ug/L | | 12/11/14 09:22 | 12/11/14 18:40 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *n-Octacosane* | *75* | | *45 - 120* | *12/11/14 09:22* | *12/11/14 18:40* | *1* |

**Lab Sample ID: LCS 440-224006/2-A**
**Matrix: Water**
**Analysis Batch: 224033**

**Client Sample ID: Lab Control Sample**
**Prep Type: Silica Gel Cleanup**
**Prep Batch: 224006**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C10-C28 | | | 1000 | 676 | | ug/L | | 68 | 40 - 115 | | |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *n-Octacosane* | *72* | | *45 - 120* |

**Lab Sample ID: LCSD 440-224006/3-A**
**Matrix: Water**
**Analysis Batch: 224033**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Silica Gel Cleanup**
**Prep Batch: 224006**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C10-C28 | | | 1000 | 685 | | ug/L | | 68 | 40 - 115 | 1 | 25 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *n-Octacosane* | *70* | | *45 - 120* |

## GC/MS VOA

### Analysis Batch: 223941

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 440-95851-A-2 MS | Matrix Spike | Total/NA | Water | 8260B | |
| 440-95851-A-2 MSD | Matrix Spike Duplicate | Total/NA | Water | 8260B | |
| 440-96181-1 | S-6 | Total/NA | Ground Water | 8260B | |
| 440-96181-2 | S-7 | Total/NA | Ground Water | 8260B | |
| 440-96181-3 | S-8 | Total/NA | Ground Water | 8260B | |
| 440-96181-4 | S-9 | Total/NA | Ground Water | 8260B | |
| 440-96181-5 | S-10 | Total/NA | Ground Water | 8260B | |
| 440-96181-6 | S-11 | Total/NA | Ground Water | 8260B | |
| 440-96181-7 | S-12 | Total/NA | Ground Water | 8260B | |
| 440-96181-8 | S-13 | Total/NA | Water | 8260B | |
| 440-96181-9 | S-14 | Total/NA | Water | 8260B | |
| LCS 440-223941/6 | Lab Control Sample | Total/NA | Water | 8260B | |
| MB 440-223941/5 | Method Blank | Total/NA | Water | 8260B | |

### Analysis Batch: 223942

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 440-95851-A-2 MS | Matrix Spike | Total/NA | Water | 8260B/CA_LUFT MS | |
| 440-95851-A-2 MSD | Matrix Spike Duplicate | Total/NA | Water | 8260B/CA_LUFT MS | |
| 440-96181-1 | S-6 | Total/NA | Ground Water | 8260B/CA_LUFT MS | |
| 440-96181-2 | S-7 | Total/NA | Ground Water | 8260B/CA_LUFT MS | |
| 440-96181-3 | S-8 | Total/NA | Ground Water | 8260B/CA_LUFT MS | |
| 440-96181-4 | S-9 | Total/NA | Ground Water | 8260B/CA_LUFT MS | |
| 440-96181-5 | S-10 | Total/NA | Ground Water | 8260B/CA_LUFT MS | |
| 440-96181-6 | S-11 | Total/NA | Ground Water | 8260B/CA_LUFT MS | |
| 440-96181-7 | S-12 | Total/NA | Ground Water | 8260B/CA_LUFT MS | |
| 440-96181-8 | S-13 | Total/NA | Water | 8260B/CA_LUFT MS | |
| 440-96181-9 | S-14 | Total/NA | Water | 8260B/CA_LUFT MS | |
| LCS 440-223942/7 | Lab Control Sample | Total/NA | Water | 8260B/CA_LUFT MS | |
| MB 440-223942/5 | Method Blank | Total/NA | Water | 8260B/CA_LUFT MS | |

### Analysis Batch: 224260

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 440-96085-A-2 MS | Matrix Spike | Total/NA | Water | 8260B | |
| 440-96085-A-2 MSD | Matrix Spike Duplicate | Total/NA | Water | 8260B | |
| 440-96181-9 - DL | S-14 | Total/NA | Water | 8260B | |
| LCS 440-224260/5 | Lab Control Sample | Total/NA | Water | 8260B | |
| MB 440-224260/4 | Method Blank | Total/NA | Water | 8260B | |

## GC Semi VOA

### Prep Batch: 224006

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 440-96181-1 | S-6 | Silica Gel Cleanup | Ground Water | 3510C SGC | |
| 440-96181-2 | S-7 | Silica Gel Cleanup | Ground Water | 3510C SGC | |
| 440-96181-3 | S-8 | Silica Gel Cleanup | Ground Water | 3510C SGC | |
| 440-96181-4 | S-9 | Silica Gel Cleanup | Ground Water | 3510C SGC | |
| 440-96181-5 | S-10 | Silica Gel Cleanup | Ground Water | 3510C SGC | |
| 440-96181-6 | S-11 | Silica Gel Cleanup | Ground Water | 3510C SGC | |
| 440-96181-7 | S-12 | Silica Gel Cleanup | Ground Water | 3510C SGC | |
| LCS 440-224006/2-A | Lab Control Sample | Silica Gel Cleanup | Water | 3510C SGC | |
| LCSD 440-224006/3-A | Lab Control Sample Dup | Silica Gel Cleanup | Water | 3510C SGC | |
| MB 440-224006/1-A | Method Blank | Silica Gel Cleanup | Water | 3510C SGC | |

### Analysis Batch: 224031

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 440-96181-1 | S-6 | Silica Gel Cleanup | Ground Water | 8015B | 224006 |
| 440-96181-4 | S-9 | Silica Gel Cleanup | Ground Water | 8015B | 224006 |

### Analysis Batch: 224033

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 440-96181-3 | S-8 | Silica Gel Cleanup | Ground Water | 8015B | 224006 |
| 440-96181-5 | S-10 | Silica Gel Cleanup | Ground Water | 8015B | 224006 |
| 440-96181-6 | S-11 | Silica Gel Cleanup | Ground Water | 8015B | 224006 |
| 440-96181-7 | S-12 | Silica Gel Cleanup | Ground Water | 8015B | 224006 |
| LCS 440-224006/2-A | Lab Control Sample | Silica Gel Cleanup | Water | 8015B | 224006 |
| LCSD 440-224006/3-A | Lab Control Sample Dup | Silica Gel Cleanup | Water | 8015B | 224006 |
| MB 440-224006/1-A | Method Blank | Silica Gel Cleanup | Water | 8015B | 224006 |

### Analysis Batch: 224687

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 440-96181-2 | S-7 | Silica Gel Cleanup | Ground Water | 8015B | 224006 |

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-96181-1

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| ID | Analyte identified by RT & presence of single mass ion |

## Glossary

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

# Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 4411 Foothill Blvd., Oakland

TestAmerica Job ID: 440-96181-1

## Laboratory: TestAmerica Irvine

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

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Alaska | State Program | 10 | CA01531 | 06-30-15 |
| Arizona | State Program | 9 | AZ0671 | 10-13-15 |
| California | LA Cty Sanitation Districts | 9 | 10256 | 01-31-15 |
| California | State Program | 9 | 2706 | 06-30-16 |
| Guam | State Program | 9 | Cert. No. 12.002r | 01-23-15 |
| Hawaii | State Program | 9 | N/A | 01-29-15 * |
| Nevada | State Program | 9 | CA015312007A | 07-31-15 |
| New Mexico | State Program | 6 | N/A | 01-29-15 |
| Northern Mariana Islands | State Program | 9 | MP0002 | 01-29-15 |
| Oregon | NELAP | 10 | 4005 | 01-29-15 |
| USDA | Federal | | P330-09-00080 | 06-06-15 |
| USEPA UCMR | Federal | 1 | CA01531 | 01-31-15 |

* Certification renewal pending - certification considered valid.

# 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
PO #:
INCIDENT # (ENV. SERVICES): 9 8 9 9 5 7 4 6
SAP #: 1 3 5 6 8 6
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 12/8/14
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): Anni Kreml, CRA, Emeryville, CA
PHONE NO: 510-420-3335
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) 885-4455 x 108
FAX: (310) 637-5802
E-MAIL: lking@blainetech.com
SAMPLER NAME(S) (Print): Nicholas Drachenberg
LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
☆ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND
☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

**SPECIAL INSTRUCTIONS OR NOTES:**
1) Please upload the "CRA EQuIS 4-file EDD" to the CRA Website (http://cralabeddupload.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**

TEMPERATURE ON RECEIPT, °C: 4.3/3.5 4.4/3.6 IR-64

440-96181 Chain of Custody

| 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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | WG 141208-NDL | 120814 | ND | S-6 | 1205 | WG | X | | | X | | 5 | X | X | | | | X | | | | | | |
| | WG | | ND | S-7 | 1230 | WG | X | | | X | | 5 | X | X | | | | X | | | | | | |
| | WG | | ND | S-8 | 1245 | WG | X | | | X | | 5 | X | X | | | | X | | | | | | |
| | WG | | ND | S-9 | 1150 | WG | X | | | X | | 5 | X | X | | | | X | | | | | | |
| | WG | | ND | S-10 | 1125 | WG | X | | | X | | 5 | X | X | | | | X | | | | | | |
| | WG | | ND | S-11 | 1105 | WG | X | | | X | | 5 | X | X | | | | X | | | | | | |
| | WG | | ND | S-12 | 1135 | WG | X | | | X | | 5 | X | X | | | | X | | | | | | |
| | WG | | ND | S-13 | 1220 | WG | X | | | X | | 3 | X | | | | | X | | | | | | |
| | WG | | ND | S-14 | 1210 | WG | X | | | X | | 3 | X | | | | | X | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| Relinquished by (Signature) | Received by (Signature) (sample custodian) | 12/18/14 | 1530 |
| Relinquished by (Signature) Sample Custodian BTS | Received by (Signature) | 12.9.14 | 1020 |
| Relinquished by (Signature) 1.1°C 12/9/14 1515 | Received by (Signature) VuBach | 12-9-14 12/10/10 | 11:35 9:55 |

Fed-6227 6456 8240

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12/23/2014

# Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 440-96181-1

**Login Number: 96181**

**List Source: TestAmerica Irvine**

**List Number: 1**

**Creator: Blocker, Kristina M**

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