R0163

URS

October 18, 2004

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

**Re: Third Quarter 2004 Monitoring Report**
**Former ARCO Service Station #6002**
**6235 Seminary Avenue**
**Oakland, California**
**URS Project #38486727**

Dear Mr. Schultz:

On behalf of Atlantic Richfield Company (a BP affiliated company), URS Corporation (URS) is submitting the *Third Quarter 2004 Groundwater Monitoring Report* for the Former ARCO Service Station #6002, located at 6235 Seminary Avenue, Oakland, California.

If you have any questions regarding this submission, please call (510) 874-3280.

Sincerely,

**URS CORPORATION**

Scott Robinson
Project Manager

Robert Horwath, R.G.
Portfolio Manager

REGISTERED GEOLOGIST
ROBERT M. HORWATH
NO. 5925
4/05
STATE OF CALIFORNIA

Enclosure: Third Quarter 2004 Groundwater Monitoring Report

cc: Mr. Paul Supple, Atlantic Richfield Company (RM), (electronic copy uploaded to ENFOS)

URS Corporation
1333 Broadway, Suite 800
Oakland, CA 94612-1924
Tel: 510.893.3600
Fax: 510.874.3268

**REPORT**

# THIRD QUARTER 2004 GROUNDWATER MONITORING

## FORMER ARCO SERVICE STATION #6002
## 6235 SEMINARY AVENUE
## OAKLAND, CALIFORNIA

*Prepared for*
RM

October 18, 2004

URS Corporation
1333 Broadway, Suite 800
Oakland, California 94612

38486727

Date: October 18, 2004

Quarter: 3Q 04

## RM QUARTERLY GROUNDWATER MONITORING REPORT

| | | | |
|---|---|---|---|
| Former Facility No.: | 6002 | Address: | 6235 Seminary Avenue, Oakland, California |
| RM Environmental Business Manager: | | | Paul Supple |
| Consulting Co./Contact Person: | | | URS Corporation / Scott Robinson |
| Consultant Project No.: | | | 38486727 |
| Primary Agency | | | Alameda County Environmental Health (ACEH) |

**WORK PERFORMED THIS QUARTER (Third – 2004):**

1. Performed third quarter 2004 groundwater monitoring event on August 30, 2004.

**WORK PROPOSED FOR NEXT QUARTER (Fourth – 2004):**

1. Prepare and submit this third quarter 2004 groundwater monitoring report
2. Perform fourth quarter 2004 groundwater monitoring event.
3. Prepare and submit fourth quarter 2004 groundwater monitoring report.

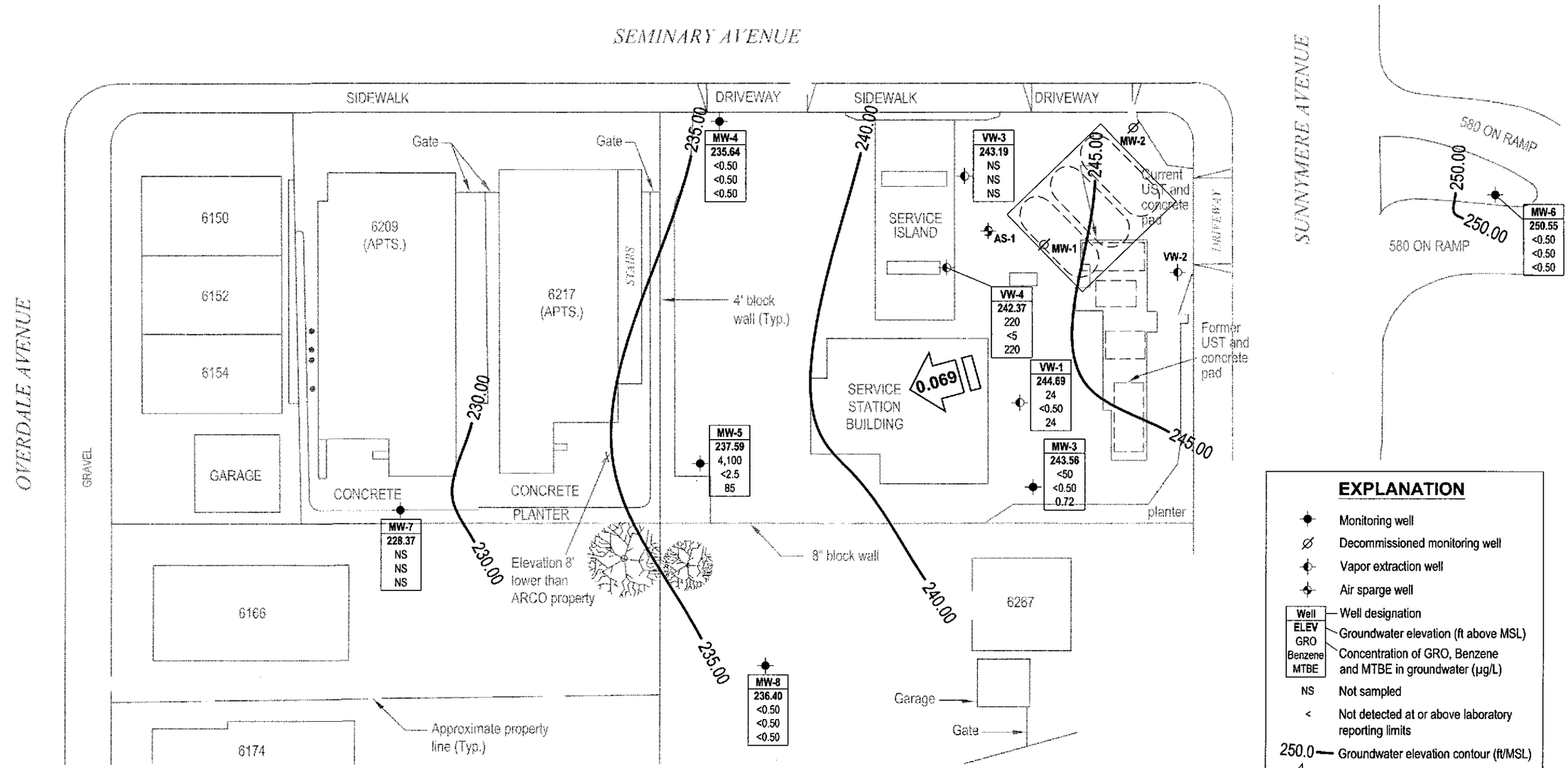
| | |
|---|---|
| Current Phase of Project: | GW monitoring/sampling |
| Frequency of Groundwater Sampling: | Annual (3rd quarter): MW-3, MW-4, MW-6, MW-7, and MW-8<br>Quarterly: MW-5, VW-1, and VW-4 |
| Frequency of Groundwater Monitoring: | Quarterly |
| Is Free Product (FP) Present On-Site: | No |
| Bulk Soil Removed to Date : | Approximately 370 cubic yards of TPH impacted soil |
| Current Remediation Techniques: | Natural Attenuation |
| Approximate Depth to Groundwater: | 7.39 (MW-6) to 13.27 (MW-7) feet |
| Groundwater Gradient (direction): | Southwest |
| Groundwater Gradient (magnitude): | 0.069 feet per foot |

**DISCUSSION:**

Gasoline Range Organics (GRO) were detected above laboratory reporting limits in one of the seven wells sampled this quarter at a concentrations ranging from 24 µg/L (VW-1) to 4,100 µg/L (MW-5). Benzene was not detected above the laboratory reporting limits in any of the wells sampled. Methyl-tert-Butyl Ether (MTBE) was detected above laboratory reporting limits in four wells at concentrations ranging from 0.72 µg/L (MW-3) to 220 µg/L (VW-4). Tert-Butyl Alcohol (TBA) was detected above the laboratory reporting limit in two wells at concentrations of 100 µg/L (MW-5) and 5,400 µg/L (VW-4). Ethyl-tert-Butyl Ether (ETBE) was detected above the laboratory reporting limit in one well at a concentration of 5.4 µg/L (VW-4).

**ATTACHMENTS:**

- Figure 1 – Groundwater Elevation Contour and Analytical Summary Map – August 30, 2004
- Table 1 – Groundwater Elevation and Analytical Data
- Table 2 – Fuel Additives Analytical Data
- Table 3 – Groundwater Flow Direction and Gradient
- Attachment A – Field Procedures and Field Data Sheets
- Attachment B – Laboratory Procedures, Certified Analytical Reports and Chain-of-Custody Records
- Attachment C – EDCC and EDF/Geowell Submittal Confirmation




NOTE: SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES.
SITE DIMESIONS AND FACILITY LOCATIONS NOT VERIFIED.

## EXPLANATION

- Monitoring well
- Decommissioned monitoring well
- Vapor extraction well
- Air sparge well
- Well — Well designation
- ELEV — Groundwater elevation (ft above MSL)
- GRO / Benzene / MTBE — Concentration of GRO, Benzene and MTBE in groundwater (µg/L)
- NS — Not sampled
- < — Not detected at or above laboratory reporting limits
- 250.0 — Groundwater elevation contour (ft/MSL)
- 0.069 — Approximate groundwater flow direction and gradient (ft/ft)

| | | | |
|---|---|---|---|
| URS | Project No. 38486727<br>Former ARCO Service Station #6002<br>6235 Seminary Avenue<br>Oakland, California | GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL SUMMARY MAP<br>Third Quarter 2004 (August 30, 2004) | FIGURE<br>1 |

Oct 18, 2004 - 1:13pm
X:\e_env_waste\BP GEM\Sites\Scott Robinson\Paul Supple\6002\Monitoring\Qtr. 3, 2004\6002-3Q04-GW.dwg

**Table 1**
**Groundwater Elevation and Analytical Data**

Former ARCO Service Station #6002
6235 Seminary Avenue, Oakland, California

| Well Number | Date Sampled | Purge/ Not Purged | TOC Elevation (ft-MSL) | Top of Screen (ft., bgs) | Bottom of Screen (ft., bgs) | Well Depth (ft., bgs) | Depth to Water (ft.) | FP Thickness (ft.) | Groundwater Elevation (ft-MSL) | TPH-g/GRO (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | MTBE 8021B* (µg/L) | MTBE 8260 (µg/L) | Dissolved Oxygen[5] (mg/L) | pH Level[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-3 | 03/15/95 | | 248.35 | 5.00 | NA | 24.40 | 6.76 | 0.00 | 241.59 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- |
| | 05/30/95 | | 248.35 | 5.00 | NA | 24.40 | 7.81 | 0.00 | 240.54 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- |
| | 09/01/95 | | 248.35 | 5.00 | NA | 24.40 | 8.65 | 0.00 | 239.70 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 11/13/95 | | 248.35 | 5.00 | NA | 24.40 | 8.25 | 0.00 | 240.10 | 120 | 45 | 0.7 | ND<0.5 | 6.2 | -- | -- | -- | -- |
| | 02/23/96 | | 248.35 | 5.00 | NA | 24.40 | 6.64 | 0.00 | 241.71 | ND<50 | ND<0.5 | ND<0.5 | 0.6 | 1.9 | ND<3 | -- | -- | -- |
| | 05/10/96 | | 248.35 | 5.00 | NA | 24.40 | 7.95 | 0.00 | 240.40 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 08/09/96 | | 248.35 | 5.00 | NA | 24.40 | 8.06 | 0.00 | 240.29 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 11/08/96 | | 248.35 | 5.00 | NA | 24.40 | NR | NR | NR | Not sampled: inaccessible | | | | | | | | |
| | 03/21/97 | | 248.35 | 5.00 | NA | 24.40 | 8.21 | 0.00 | 240.14 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 05/27/97 | | 248.35 | 5.00 | NA | 24.40 | 8.25 | 0.00 | 240.10 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 08/05/97 | | 248.35 | 5.00 | NA | 24.40 | 8.29 | 0.00 | 240.06 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 10/29/97 | | 248.35 | 5.00 | NA | 24.40 | 8.58 | 0.00 | 239.77 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 02/25/98 | | 248.35 | 5.00 | NA | 24.40 | 7.69 | 0.00 | 240.66 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 05/12/98 | | 248.35 | 5.00 | NA | 24.40 | 8.20 | 0.00 | 240.15 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 07/28/98 | | 248.35 | 5.00 | NA | 24.40 | 8.55 | 0.00 | 239.80 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 10/27/98 | | 248.35 | 5.00 | NA | 24.40 | 8.30 | 0.00 | 240.05 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 02/08/99 | | 248.35 | 5.00 | NA | 24.40 | 7.90 | 0.00 | 240.45 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 06/01/99 | | 248.35 | 5.00 | NA | 24.40 | 8.40 | 0.00 | 239.95 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 08/25/99 | | 248.35 | 5.00 | NA | 24.40 | 8.49 | 0.00 | 239.86 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 10/29/99 | | 248.35 | 5.00 | NA | 24.40 | 8.52 | 0.00 | 239.83 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 02/16/00 | NP | 248.35 | 5.00 | NA | 24.40 | 8.03 | 0.00 | 240.32 | ND<50 | ND<0.5 | 0.8 | ND<0.5 | ND<1 | ND<3 | -- | 8.51 | 8.51 |
| | 06/23/00 | | 248.35 | 5.00 | NA | 24.40 | 7.55 | 0.00 | 240.80 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 08/17/00 | | 248.35 | 5.00 | NA | 24.40 | 8.65 | 0.00 | 239.70 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 11/10/00 | | 248.35 | 5.00 | NA | 24.40 | 7.19 | 0.00 | 241.16 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 02/12/01 | NP | 248.35 | 5.00 | NA | 24.40 | 8.60 | 0.00 | 239.75 | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | 0.81 | 0.81 |
| | 04/13/01 | | 248.35 | 5.00 | NA | 24.40 | 6.13 | 0.00 | 242.22 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 07/18/01 | | 248.35 | 5.00 | NA | 24.40 | 6.47 | 0.00 | 241.88 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 10/01/01 | | 248.35 | 5.00 | NA | 24.40 | 6.99 | 0.00 | 241.36 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 01/14/02 | NP | 248.35 | 5.00 | NA | 24.40 | 5.47 | 0.00 | 242.88 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<5.0 | -- | -- | -- |
| | 04/03/02 | | 248.35 | 5.00 | NA | 24.40 | 6.95 | 0.00 | 241.40 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 08/08/02 | | 248.35 | 5.00 | NA | 24.40 | 8.78 | 0.00 | 239.57 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 11/27/02 | | 248.35 | 5.00 | NA | 24.40 | 8.52 | 0.00 | 239.83 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 02/10/03[4] | NP | 248.35 | 5.00 | NA | 24.40 | 8.40 | 0.00 | 239.95 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | -- | ND<0.50 | 0.7 | 6.4 |
| | 06/03/03 | | 248.35 | 5.00 | NA | 24.40 | 8.40 | 0.00 | 239.95 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 08/14/03 | | 248.35 | 5.00 | NA | 24.40 | 8.60 | 0.00 | 239.75 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 11/13/03 | | 248.35 | 5.00 | NA | 24.40 | 8.41 | 0.00 | 239.94 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 2/13/2004[6] | | 253.88 | 5.00 | NA | 24.40 | 8.40 | 0.00 | 245.48 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 05/04/04 | NP | 253.88 | 5.00 | NA | 24.40 | 8.28 | 0.00 | 245.60 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | **08/30/04** | **NP** | **253.88** | 5.00 | NA | 24.40 | **10.32** | **0.00** | **243.56** | **ND<50** | **ND<0.50** | **ND<0.50** | **ND<0.50** | **ND<0.50** | | **0.72** | **1.4** | **6.4** |

**Table 1**
**Groundwater Elevation and Analytical Data**

Former ARCO Service Station #6002
6235 Seminary Avenue, Oakland, California

| Well Number | Date Sampled | Purge/ Not Purged | TOC Elevation (ft-MSL) | Top of Screen (ft., bgs) | Bottom of Screen (ft., bgs) | Well Depth (ft., bgs) | Depth to Water (ft.) | FP Thickness (ft.) | Groundwater Elevation (ft-MSL) | TPH-g/GRO (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | MTBE 8021B* (µg/L) | MTBE 8260 (µg/L) | Dissolved Oxygen[5] (mg/L) | pH Level[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-4 | 03/15/95 | | 242.91 | 4.50 | NA | 24.00 | 9.37 | 0.00 | 233.54 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- |
| | 05/30/95 | | 242.91 | 4.50 | NA | 24.00 | 11.47 | 0.00 | 231.44 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- |
| | 09/01/95 | | 242.91 | 4.50 | NA | 24.00 | 12.28 | 0.00 | 230.63 | 78 | ND<0.5 | 0.7 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 11/13/95 | | 242.91 | 4.50 | NA | 24.00 | 11.75 | 0.00 | 231.16 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- |
| | 02/23/96 | | 242.91 | 4.50 | NA | 24.00 | 8.51 | 0.00 | 234.40 | 59 | 1.2 | 7.4 | 1.6 | 9.3 | 3 | -- | -- | -- |
| | 05/10/96 | | 242.91 | 4.50 | NA | 24.00 | 11.35 | 0.00 | 231.56 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 08/09/96 | | 242.91 | 4.50 | NA | 24.00 | 9.70 | 0.00 | 233.21 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 11/08/96 | | 242.91 | 4.50 | NA | 24.00 | 11.79 | 0.00 | 231.12 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 03/21/97 | | 242.91 | 4.50 | NA | 24.00 | 10.94 | 0.00 | 231.97 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 81 | -- | -- | -- |
| | 05/27/97 | | 242.91 | 4.50 | NA | 24.00 | 11.51 | 0.00 | 231.40 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 08/05/97 | | 242.91 | 4.50 | NA | 24.00 | 11.90 | 0.00 | 231.01 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 10/29/97 | | 242.91 | 4.50 | NA | 24.00 | 12.00 | 0.00 | 230.91 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 02/25/98 | | 242.91 | 4.50 | NA | 24.00 | 8.34 | 0.00 | 234.57 | ND<50 | ND<0.5 | 0.9 | ND<0.5 | 0.9 | 4 | -- | -- | -- |
| | 05/12/98 | | 242.91 | 4.50 | NA | 24.00 | 10.93 | 0.00 | 231.98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 07/28/98 | | 242.91 | 4.50 | NA | 24.00 | 12.08 | 0.00 | 230.83 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 10/27/98 | | 242.91 | 4.50 | NA | 24.00 | 11.40 | 0.00 | 231.51 | ND<5,000 | ND<50 | ND<50 | 160 | 64 | 6,400 | -- | -- | -- |
| | 02/08/99 | | 242.91 | 4.50 | NA | 24.00 | 8.40 | 0.00 | 234.51 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 06/01/99 | NP | 242.91 | 4.50 | NA | 24.00 | 11.93 | 0.00 | 230.98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | 4.0 | 4.0 |
| | 08/25/99 | NP | 242.91 | 4.50 | NA | 24.00 | 12.21 | 0.00 | 230.70 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | 1.29 | 1.29 |
| | 10/29/99 | NP | 242.91 | 4.50 | NA | 24.00 | 12.37 | 0.00 | 230.54 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<1 | ND<3 | -- | 1.50 | 1.50 |
| | 02/16/00 | NP | 242.91 | 4.50 | NA | 24.00 | 7.45 | 0.00 | 235.46 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<1 | ND<3 | -- | 2.38 | 2.38 |
| | 06/23/00 | NP | 242.91 | 4.50 | NA | 24.00 | 12.31 | 0.00 | 230.60 | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | 2.80 | 2.80 |
| DUP | 08/17/00 | | 242.91 | 4.50 | NA | 24.00 | -- | -- | -- | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | -- | -- |
| | 08/17/00 | NP | 242.91 | 4.50 | NA | 24.00 | 11.92 | 0.00 | 230.99 | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | 2.38 | 2.38 |
| | 11/10/00 | NP | 242.91 | 4.50 | NA | 24.00 | 10.80 | 0.00 | 232.11 | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | 1.55 | 1.55 |
| | 02/12/01 | NP | 242.91 | 4.50 | NA | 24.00 | 11.65 | 0.00 | 231.26 | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | 1.12 | 1.12 |
| | 04/13/01 | NP | 242.91 | 4.50 | NA | 24.00 | 8.17 | 0.00 | 234.74 | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | -- | -- |
| DUP | 04/13/01 | | 242.91 | 4.50 | NA | 24.00 | -- | -- | -- | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | -- | -- |
| | 07/18/01 | NP | 242.91 | 4.50 | NA | 24.00 | 8.51 | 0.00 | 234.40 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<2.5 | -- | -- | -- |
| | 10/01/01 | NP | 242.91 | 4.50 | NA | 24.00 | 8.71 | 0.00 | 234.20 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<2.5 | -- | -- | -- |
| | 01/14/02 | NP | 242.91 | 4.50 | NA | 24.00 | 7.13 | 0.00 | 235.78 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<5.0 | -- | -- | -- |
| DUP | 01/14/02 | | 242.91 | 4.50 | NA | 24.00 | -- | -- | -- | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<5.0 | -- | -- | -- |
| | 04/03/02 | NP | 242.91 | 4.50 | NA | 24.00 | 10.1 | 0.00 | 232.81 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<2.5 | -- | -- | -- |
| | 08/08/02 | NP | 242.91 | 4.50 | NA | 24.00 | 12.64 | 0.00 | 230.27 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<2.5 | -- | 2.4 | 8.1 |
| | 11/27/02 | NP | 242.91 | 4.50 | NA | 24.00 | 12.01 | 0.00 | 230.90 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | -- | 4.7 | 2.5 | 6.5 |
| | 02/10/03[4] | NP | 242.91 | 4.50 | NA | 24.00 | 11.22 | 0.00 | 231.69 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | -- | ND<0.50 | 0.8 | 6.6 |
| | 06/03/03 | NP | 242.91 | 4.50 | NA | 24.00 | 11.54 | 0.00 | 231.37 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | -- | ND<0.50 | 3.9 | 6.0 |
| | 08/14/03 | NP | 242.91 | 4.50 | NA | 24.00 | 12.41 | 0.00 | 230.50 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | -- | ND<0.50 | 1.8 | 6.3 |
| | 11/13/03 | | 242.91 | 4.50 | NA | 24.00 | 11.64 | 0.00 | 231.27 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 2/13/2004[9] | | 248.62 | 4.50 | NA | 24.00 | 10.28 | 0.00 | 238.34 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 05/04/04 | | 248.62 | 4.50 | NA | 24.00 | 12.04 | 0.00 | 236.58 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | **08/30/04** | **NP** | **248.62** | **4.50** | **NA** | **24.00** | **12.98** | **0.00** | **235.64** | **ND<50** | **ND<0.50** | **ND<0.50** | **ND<0.50** | **ND<0.50** | | **ND<0.50** | **1.6** | **5.8** |

**Table 1**
**Groundwater Elevation and Analytical Data**

Former ARCO Service Station #6002
6235 Seminary Avenue, Oakland, California

| Well Number | Date Sampled | Purge/ Not Purged | TOC Elevation (ft-MSL) | Top of Screen (ft., bgs) | Bottom of Screen (ft., bgs) | Well Depth (ft., bgs) | Depth to Water (ft.) | FP Thickness (ft.) | Groundwater Elevation (ft-MSL) | TPH-g/GRO (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | MTBE 8021B* (µg/L) | MTBE 8260 (µg/L) | Dissolved Oxygen[5] (mg/L) | pH Level[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-5 | 03/15/95 | | 244.82 | 5.00 | NA | 24.40 | 11.99 | 0.00 | 232.83 | 21,000 | 870 | 22 | 1,600 | 1,900 | -- | -- | -- | -- |
| | 05/30/95 | | 244.82 | 5.00 | NA | 24.40 | 12.97 | 0.00 | 231.85 | 17,000 | 2,100 | 250 | 1,000 | 520 | -- | -- | -- | -- |
| | 09/01/95 | | 244.82 | 5.00 | NA | 24.40 | 14.03 | 0.00 | 230.79 | 19,000 | 1,500 | 25 | 1,600 | 880 | 8,300 | -- | -- | -- |
| | 11/13/95 | | 244.82 | 5.00 | NA | 24.40 | 13.65 | 0.00 | 231.17 | 21,000 | 1,300 | 22 | 1,400 | 630 | -- | -- | -- | -- |
| | 02/23/96 | | 244.82 | 5.00 | NA | 24.40 | 11.93 | 0.00 | 232.89 | 27,000 | 1,300 | ND<50 | 1,600 | 1,500 | 730 | -- | -- | -- |
| | 05/10/96 | | 244.82 | 5.00 | NA | 24.40 | 13.05 | 0.00 | 231.77 | 17,000 | 460 | 21 | 760 | 480 | 1,000 | -- | -- | -- |
| | 08/09/96 | | 244.82 | 5.00 | NA | 24.40 | 13.22 | 0.00 | 231.60 | 16,000 | 420 | 14 | 870 | 390 | 1,500 | -- | -- | -- |
| | 11/08/96 | | 244.82 | 5.00 | NA | 24.40 | NR | NR | NR | Not sampled: well inaccessible | | | | | | | | |
| | 03/21/97 | | 244.82 | 5.00 | NA | 24.40 | 13.24 | 0.00 | 231.58 | 18,000 | 110 | ND<50 | 730 | 1,500 | 1,800 | -- | -- | -- |
| | 05/27/97 | | 244.82 | 5.00 | NA | 24.40 | 13.10 | 0.00 | 231.72 | 21,000 | 86 | ND<20 | 810 | 610 | 1,700 | -- | -- | -- |
| | 08/05/97 | | 244.82 | 5.00 | NA | 24.40 | 13.14 | 0.00 | 231.68 | 340 | 2.2 | ND<0.5 | 15 | 8.8 | 39 | -- | -- | -- |
| | 10/29/97 | | 244.82 | 5.00 | NA | 24.40 | 13.03 | 0.00 | 231.79 | 19,000 | 130 | ND<20 | 1,400 | 620 | 1,700 | -- | -- | -- |
| | 02/25/98 | | 244.82 | 5.00 | NA | 24.40 | 11.33 | 0.00 | 233.49 | 8,500 | 19 | 13 | 190 | 100 | 170 | -- | -- | -- |
| | 05/12/98 | | 244.82 | 5.00 | NA | 24.40 | 12.81 | 0.00 | 232.01 | 10,000 | 34 | ND<10 | 390 | 220 | 610 | -- | -- | -- |
| | 07/28/98 | | 244.82 | 5.00 | NA | 24.40 | 13.12 | 0.00 | 231.70 | 15,000 | 68 | ND<10 | 690 | 620 | 1,000 | -- | -- | -- |
| | 10/27/98 | | 244.82 | 5.00 | NA | 24.40 | 12.90 | 0.00 | 231.92 | 15,000 | 60 | ND<10 | 770 | 400 | 890 | -- | -- | -- |
| | 02/08/99 | | 244.82 | 5.00 | NA | 24.40 | 11.08 | 0.00 | 233.74 | 8,200 | 23 | ND<10 | 290 | 120 | ND<60 | -- | -- | -- |
| | 06/01/99 | NP | 244.82 | 5.00 | NA | 24.40 | 12.95 | 0.00 | 231.87 | 11,000 | 33 | 3.3 | 340 | 180 | 580 | -- | 1.0 | 1.0 |
| | 08/25/99 | NP | 244.82 | 5.00 | NA | 24.40 | 12.99 | 0.00 | 231.83 | 9,200 | 26 | 14 | 420 | 270 | 1,100 | -- | 0.37 | 0.37 |
| | 10/29/99 | NP | 244.82 | 5.00 | NA | 24.40 | 13.10 | 0.00 | 231.72 | 11,000 | 19 | 9.8 | 260 | 150 | 590 | -- | 1.27 | 1.27 |
| | 02/16/00 | NP | 244.82 | 5.00 | NA | 24.40 | 8.21 | 0.00 | 236.61 | 12,000 | 8.1 | 10 | 340 | 160 | 130 | -- | 1.42 | 1.42 |
| | 06/23/00 | NP | 244.82 | 5.00 | NA | 24.40 | 12.90 | 0.00 | 231.92 | 9,680 | 38.0 | ND<20.0 | 212 | 114 | 930 | -- | 1.40 | 1.40 |
| | 08/17/00 | NP | 244.82 | 5.00 | NA | 24.40 | 13.00 | 0.00 | 231.82 | 10,500 | 15.0 | 7.98 | 223 | 118 | 430 | -- | 0.68 | 0.68 |
| | 11/10/00 | NP | 244.82 | 5.00 | NA | 24.40 | 12.50 | 0.00 | 232.32 | 7,030 | 19.7 | ND<10.0 | 190 | 43.6 | 445 | -- | 1.27 | 1.27 |
| | 02/12/01 | NP | 244.82 | 5.00 | NA | 24.40 | 12.81 | 0.00 | 232.01 | 8,840 | 33.9 | ND<10.0 | 186 | 56.4 | 352 | -- | 0.40 | 0.40 |
| | 04/13/01 | NP | 244.82 | 5.00 | NA | 24.40 | 11.31 | 0.00 | 233.51 | 9,020 | 54.2 | 43.3 | 137 | 96.0 | 297 | -- | -- | -- |
| | 07/18/01 | NP | 244.82 | 5.00 | NA | 24.40 | 11.59 | 0.00 | 233.23 | 13,000 | 19 | 10 | 110 | 49 | 230 | -- | -- | -- |
| | 10/01/01 | NP | 244.82 | 5.00 | NA | 24.40 | 11.84 | 0.00 | 232.98 | 8,500 | 6.9 | ND<1.0 | 87 | 27 | 220 | -- | -- | -- |
| | 01/14/02 | NP | 244.82 | 5.00 | NA | 24.40 | 10.75 | 0.00 | 234.07 | 9,500 | ND<20 | ND<20 | 140 | 22 | ND<200 | -- | -- | -- |
| | 04/03/02 | NP | 244.82 | 5.00 | NA | 24.40 | 12.50 | 0.00 | 232.32 | 2,400 | 21 | ND<5.0 | 91 | 8.5 | 130 | -- | -- | -- |
| DUP | 04/03/02 | NP | 244.82 | 5.00 | NA | 24.40 | -- | -- | -- | 2,700 | 24.0 | 5.1 | 92 | 8.5 | 130 | -- | -- | -- |
| | 08/08/02 | NP | 244.82 | 5.00 | NA | 24.40 | 12.83 | 0.00 | 231.99 | 2,000 | ND<20 | ND<20 | 48 | ND<20 | 520 | -- | 0.8 | 6.9 |
| | 11/27/02 | NP | 244.82 | 5.00 | NA | 24.40 | 12.79 | 0.00 | 232.03 | 2,200 | ND<10 | ND<10 | 33 | ND<10 | -- | 150 | 0.8 | 6.4 |
| | 02/10/03[4] | NP | 244.82 | 5.00 | NA | 24.40 | 12.62 | 0.00 | 232.20 | 2,600 | ND<2.5 | ND<2.5 | 47 | 4.2 | -- | 100 | 0.7 | 6.6 |
| | 06/03/03 | NP | 244.82 | 5.00 | NA | 24.40 | 12.41 | 0.00 | 232.41 | 2,400 | ND<5.0 | ND<5.0 | 26 | ND<5.0 | -- | 160 | 1.8 | 6.3 |
| | 08/14/03 | | 244.82 | 5.00 | NA | 24.40 | NR | NR | NR | Not sampled: well inaccessible | | | | | | | | |
| | 11/13/03 | NP | 244.82 | 5.00 | NA | 24.40 | 12.49 | 0.00 | 232.33 | 1,900 | ND<5.0 | ND<5.0 | 13 | ND<5.0 | -- | 90 | 0.9 | 6.4 |
| | 2/13/2004[6] | NP | 250.55 | 5.00 | NA | 24.40 | 12.38 | 0.00 | 238.17 | 1,400 | 1.4 | 1.9 | 23 | 3.6 | -- | 90 | 1.1 | 6.7 |
| | 05/04/04 | NP | 250.55 | 5.00 | NA | 24.40 | 12.65 | 0.00 | 237.90 | 5,800 | ND<2.5 | ND<2.5 | 13 | ND<2.5 | -- | 130 | 1.1 | 6.3 |
| | **08/30/04** | **P** | **250.55** | **5.00** | **NA** | **24.40** | **12.96** | **0.00** | **237.59** | **4,100** | **ND<2.5** | **ND<2.5** | **ND<2.5** | **ND<2.5** | | **85** | **--** | **6.4** |
| | | | | | | | | | | | | | | | | | | |

**Table 1**
**Groundwater Elevation and Analytical Data**

Former ARCO Service Station #6002
6235 Seminary Avenue, Oakland, California

| Well Number | Date Sampled | Purge/ Not Purged | TOC Elevation (ft-MSL) | Top of Screen (ft., bgs) | Bottom of Screen (ft., bgs) | Well Depth (ft., bgs) | Depth to Water (ft.) | FP Thickness (ft.) | Groundwater Elevation (ft-MSL) | TPH-g/GRO (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | MTBE 8021B* (µg/L) | MTBE 8260 (µg/L) | Dissolved Oxygen[5] (mg/L) | pH Level[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-6 | 06/29/95 | | NR | 17.00 | NA | 30.00 | 6.63 | 0.00 | NR | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- |
| | 09/01/95 | | NR | 17.00 | NA | 30.00 | NR | NR | NR | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 11/13/95 | | NR | 17.00 | NA | 30.00 | 7.70 | 0.00 | NR | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 02/23/96 | | NR | 17.00 | NA | 30.00 | 9.82 | 0.00 | NR | ND<50 | ND<0.5 | 0.8 | ND<0.5 | 0.6 | ND<3 | -- | -- | -- |
| | 05/10/96 | | NR | 17.00 | NA | 30.00 | 15.25 | 0.00 | NR | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 08/09/96 | | 252.20 | 17.00 | NA | 30.00 | 11.11 | 0.00 | 241.09 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 11/08/96 | | 252.20 | 17.00 | NA | 30.00 | 9.31 | 0.00 | 242.89 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 03/21/97 | | 252.20 | 17.00 | NA | 30.00 | 9.40 | 0.00 | 242.80 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 05/27/97 | | 252.20 | 17.00 | NA | 30.00 | 7.08 | 0.00 | 245.12 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 08/05/97 | | 252.20 | 17.00 | NA | 30.00 | 7.12 | 0.00 | 245.08 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 10/29/97 | | 252.20 | 17.00 | NA | 30.00 | 7.42 | 0.00 | 244.78 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 02/25/98 | | 252.20 | 17.00 | NA | 30.00 | 10.35 | 0.00 | 241.85 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 05/12/98 | | 252.20 | 17.00 | NA | 30.00 | 15.83 | 0.00 | 236.37 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 07/28/98 | | 252.20 | 17.00 | NA | 30.00 | 11.84 | 0.00 | 240.36 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 10/27/98 | | 252.20 | 17.00 | NA | 30.00 | 9.73 | 0.00 | 242.47 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 02/08/99 | | 252.20 | 17.00 | NA | 30.00 | 8.10 | 0.00 | 244.10 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 06/01/99 | | 252.20 | 17.00 | NA | 30.00 | 17.84 | 0.00 | 234.36 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 08/25/99 | | 252.20 | 17.00 | NA | 30.00 | 11.00 | 0.00 | 241.20 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 10/29/99 | | 252.20 | 17.00 | NA | 30.00 | 9.03 | 0.00 | 243.17 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 02/16/00 | P | 252.20 | 17.00 | NA | 30.00 | 7.71 | 0.00 | 244.49 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<1 | ND<3 | -- | 2.42 | 2.42 |
| | 06/23/00 | | 252.20 | 17.00 | NA | 30.00 | 6.69 | 0.00 | 245.51 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 08/17/00 | | 252.20 | 17.00 | NA | 30.00 | 6.95 | 0.00 | 245.25 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 11/10/00 | | 252.20 | 17.00 | NA | 30.00 | 11.79 | 0.00 | 240.41 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 02/12/01 | P | 252.20 | 17.00 | NA | 30.00 | 7.35 | 0.00 | 244.85 | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | 1.66 | 1.66 |
| DUP | 02/12/01 | | 252.20 | 17.00 | NA | 30.00 | -- | -- | -- | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | -- | -- |
| | 04/13/01 | | 252.20 | 17.00 | NA | 30.00 | 10.52 | 0.00 | 241.68 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 07/18/01 | | 252.20 | 17.00 | NA | 30.00 | 11.03 | 0.00 | 241.17 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 10/01/01 | | 252.20 | 17.00 | NA | 30.00 | 11.31 | 0.00 | 240.89 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 01/14/02 | P | 252.20 | 17.00 | NA | 30.00 | 9.87 | 0.00 | 242.33 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<5.0 | -- | -- | -- |
| | 04/03/02 | | 252.20 | 17.00 | NA | 30.00 | 12.19 | 0.00 | 240.01 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 08/08/02 | | 252.20 | 17.00 | NA | 30.00 | 7.04 | 0.00 | 245.16 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 11/27/02 | | 252.20 | 17.00 | NA | 30.00 | 6.85 | 0.00 | 245.35 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 02/10/03[4] | NP | 252.20 | 17.00 | NA | 30.00 | 6.74 | 0.00 | 245.46 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | -- | ND<0.50 | 1.1 | 7.4 |
| | 06/03/03 | | 252.20 | 17.00 | NA | 30.00 | 14.35 | 0.00 | 237.85 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 08/14/03 | | 252.20 | 17.00 | NA | 30.00 | 10.74 | 0.00 | 241.46 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 11/13/03 | | 252.20 | 17.00 | NA | 30.00 | 10.68 | 0.00 | 241.52 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 2/13/2004[6] | | 257.94 | 17.00 | NA | 30.00 | 7.38 | 0.00 | 250.56 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 05/04/04 | | 257.94 | 17.00 | NA | 30.00 | 7.43 | 0.00 | 250.51 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | **08/30/04** | **P** | **257.94** | **17.00** | **NA** | **30.00** | **7.39** | **0.00** | **250.55** | **ND<50** | **ND<0.50** | **ND<0.50** | **ND<0.50** | **ND<0.50** | | **ND<0.50** | **2.5** | **7.0** |
| | | | | | | | | | | | | | | | | | | |

**Table 1**
**Groundwater Elevation and Analytical Data**

Former ARCO Service Station #6002
6235 Seminary Avenue, Oakland, California

| Well Number | Date Sampled | Purge/ Not Purged | TOC Elevation (ft-MSL) | Top of Screen (ft., bgs) | Bottom of Screen (ft., bgs) | Well Depth (ft., bgs) | Depth to Water (ft.) | FP Thickness (ft.) | Groundwater Elevation (ft-MSL) | TPH-g/GRO (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | MTBE 8021B* (µg/L) | MTBE 8260 (µg/L) | Dissolved Oxygen[5] (mg/L) | pH Level[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-7 | 08/09/96 | | 235.95 | 8.50 | NA | 13.30 | NR | NR | NR | Not sampled: well was dry | | | | | | | | |
| | 11/08/96 | | 235.95 | 8.50 | NA | 13.30 | NR | NR | NR | Not sampled: well was dry | | | | | | | | |
| | 01/27/97 | | 235.95 | 8.50 | NA | 13.30 | NR | NR | NR | 2,900 | 29 | ND<5 | ND<5 | 580 | 220 | -- | -- | -- |
| | 03/21/97 | | 235.95 | 8.50 | NA | 13.30 | 7.13 | 0.00 | 228.82 | 590 | 3.5 | ND<0.5 | ND<0.5 | 1.3 | 90 | -- | -- | -- |
| | 05/27/97 | | 235.95 | 8.50 | NA | 13.30 | 9.02 | 0.00 | 226.93 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 08/05/97 | | 235.95 | 8.50 | NA | 13.30 | 12.33 | 0.00 | 223.62 | 110 | 0.5 | ND<0.5 | ND<0.5 | 0.8 | 81 | -- | -- | -- |
| | 10/29/97 | | 235.95 | 8.50 | NA | 13.30 | NR | NR | NR | Not sampled: well was dry | | | | | | | | |
| | 02/25/98 | | 235.95 | 8.50 | NA | 13.30 | 8.04 | 0.00 | 227.91 | ND<50 | ND<0.5 | 0.6 | ND<0.5 | 0.7 | ND<3 | -- | -- | -- |
| | 05/12/98 | | 235.95 | 8.50 | NA | 13.30 | 8.88 | 0.00 | 227.07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 07/28/98 | | 235.95 | 8.50 | NA | 13.30 | 10.50 | 0.00 | 225.45 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 10/27/98 | | 235.95 | 8.50 | NA | 13.30 | 8.75 | 0.00 | 227.20 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 02/08/99 | | 235.95 | 8.50 | NA | 13.30 | 9.35 | 0.00 | 226.60 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 06/01/99 | NP | 235.95 | 8.50 | NA | 13.30 | 9.85 | 0.00 | 226.10 | 250 | ND<0.5 | 0.6 | ND<0.5 | 1.6 | 18 | -- | 1.0 | 1.0 |
| | 08/25/99 | NP | 235.95 | 8.50 | NA | 13.30 | 11.31 | 0.00 | 224.64 | 119 | ND<0.5 | 5.7 | ND<0.5 | ND<0.5 | 11 | -- | 0.41 | 0.41 |
| | 10/29/99 | NP | 235.95 | 8.50 | NA | 13.30 | 9.08 | 0.00 | 226.87 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<1 | ND<3 | -- | 1.29 | 1.29 |
| | 02/25/00 | NP | 235.95 | 8.50 | NA | 13.30 | 8.02 | 0.00 | 227.93 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<1 | 38 | -- | 2.10 | 2.10 |
| | 06/23/00 | NP | 235.95 | 8.50 | NA | 13.30 | 10.68 | 0.00 | 225.27 | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | 14.4 | -- | 1.60 | 1.60 |
| | 08/17/00 | NP | 235.95 | 8.50 | NA | 13.30 | 11.85 | 0.00 | 224.10 | 70.0 | ND<0.500 | 0.678 | ND<0.500 | 1.07 | 14.2 | -- | 1.59 | 1.59 |
| | 11/10/00 | NP | 235.95 | 8.50 | NA | 13.30 | 9.62 | 0.00 | 226.33 | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | 1.09 | 1.09 |
| | 02/12/01 | NP | 235.95 | 8.50 | NA | 13.30 | 12.10 | 0.00 | 223.85 | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | 0.84 | 0.84 |
| | 04/13/01 | P | 235.95 | 8.50 | NA | 13.30 | 7.95 | 0.00 | 228.00 | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | -- | -- |
| | 07/18/01 | P | 235.95 | 8.50 | NA | 13.30 | 8.20 | 0.00 | 227.75 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<2.5 | -- | -- | -- |
| | 10/01/01 | NP | 235.95 | 8.50 | NA | 13.30 | 8.59 | 0.00 | 227.36 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<2.5 | -- | -- | -- |
| | 01/14/02 | P | 235.95 | 8.50 | NA | 13.30 | 6.93 | 0.00 | 229.02 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<5.0 | -- | -- | -- |
| | 04/03/02 | P | 235.95 | 8.50 | NA | 13.30 | 8.31 | 0.00 | 227.64 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<2.5 | -- | -- | -- |
| | 08/08/02 | P | 235.95 | 8.50 | NA | 13.30 | 12.11 | 0.00 | 223.84 | Not sampled: insufficient water/recharge for purge/sample | | | | | | | | |
| | 11/27/02 | NP | 235.95 | 8.50 | NA | 13.30 | 13.01 | 0.00 | 222.94 | Not sampled: insufficient water | | | | | | | | |
| | 02/10/03[4] | NP | 235.95 | 8.50 | NA | 13.30 | 10.02 | 0.00 | 225.93 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | -- | ND<0.50 | 1.5 | 6.7 |
| | 06/03/03 | NP | 235.95 | 8.50 | NA | 13.30 | 6.82 | 0.00 | 229.13 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | -- | ND<0.50 | 8.1 | 6.8 |
| | 08/14/03 | P | 235.95 | 8.50 | NA | 13.30 | 8.16 | 0.00 | 227.79 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | -- | ND<0.50 | 2.8 | 6.7 |
| | 11/13/03 | | 235.95 | 8.50 | NA | 13.30 | 8.07 | 0.00 | 227.88 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 2/13/2004[6] | | 241.64 | 8.50 | NA | 13.30 | 7.62 | 0.00 | 234.02 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 05/04/04 | | 241.64 | 8.50 | NA | 13.30 | 11.01 | 0.00 | 230.63 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | **08/30/04** | **NP** | **241.64** | **8.50** | **NA** | **13.30** | **13.27** | **0.00** | **228.37** | -- | -- | -- | -- | -- | | -- | -- | -- |

**Table 1**
**Groundwater Elevation and Analytical Data**

Former ARCO Service Station #6002
6235 Seminary Avenue, Oakland, California

| Well Number | Date Sampled | Purge/ Not Purged | TOC Elevation (ft-MSL) | Top of Screen (ft., bgs) | Bottom of Screen (ft., bgs) | Well Depth (ft., bgs) | Depth to Water (ft.) | FP Thickness (ft.) | Groundwater Elevation (ft-MSL) | TPH-g/GRO (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | MTBE 8021B* (µg/L) | MTBE 8260 (µg/L) | Dissolved Oxygen[5] (mg/L) | pH Level[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-8 | 08/09/96 | | 240.37 | 5.50 | NA | 13.90 | 9.41 | 0.00 | 230.96 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 11/08/96 | | 240.37 | 5.50 | NA | 13.90 | 9.19 | 0.00 | 231.18 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 03/21/97 | | 240.37 | 5.50 | NA | 13.90 | 8.55 | 0.00 | 231.82 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 05/27/97 | | 240.37 | 5.50 | NA | 13.90 | 11.06 | 0.00 | 229.31 | 91 | 0.6 | ND<0.5 | ND<0.5 | 0.6 | 66 | -- | -- | -- |
| | 08/05/97 | | 240.37 | 5.50 | NA | 13.90 | 9.32 | 0.00 | 231.05 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 10/29/97 | | 240.37 | 5.50 | NA | 13.90 | 9.35 | 0.00 | 231.02 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 02/25/98 | | 240.37 | 5.50 | NA | 13.90 | 7.08 | 0.00 | 233.29 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 05/12/98 | | 240.37 | 5.50 | NA | 13.90 | 8.61 | 0.00 | 231.76 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 07/28/98 | | 240.37 | 5.50 | NA | 13.90 | 9.63 | 0.00 | 230.74 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 4 | -- | -- | -- |
| | 10/27/98 | | 240.37 | 5.50 | NA | 13.90 | 9.30 | 0.00 | 231.07 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 02/08/99 | | 240.37 | 5.50 | NA | 13.90 | 5.56 | 0.00 | 234.81 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 06/01/99 | | 240.37 | 5.50 | NA | 13.90 | NR | NR | NR | Not sampled: well inaccessible | | | | | | | | |
| | 08/25/99 | | 240.37 | 5.50 | NA | 13.90 | NR | NR | NR | Not sampled: well inaccessible | | | | | | | | |
| | 10/29/99 | | 240.37 | 5.50 | NA | 13.90 | NR | NR | NR | Not sampled: well inaccessible | | | | | | | | |
| | 02/16/00 | | 240.37 | 5.50 | NA | 13.90 | NR | NR | NR | Not sampled: well inaccessible | | | | | | | | |
| | 06/23/00 | NP | 240.37 | 5.50 | NA | 13.90 | 9.45 | 0.00 | 230.92 | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | 1.90 | 1.90 |
| | 08/17/00 | NP | 240.37 | 5.50 | NA | 13.90 | 6.40 | 0.00 | 233.97 | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | 2.56 | 2.56 |
| | 11/10/00 | NP | 240.37 | 5.50 | NA | 13.90 | 6.25 | 0.00 | 234.12 | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | 1.93 | 1.93 |
| DUP | 11/10/00 | | 240.37 | 5.50 | NA | 13.90 | -- | -- | -- | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | -- | -- |
| | 02/12/01 | NP | 240.37 | 5.50 | NA | 13.90 | 8.11 | 0.00 | 232.26 | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | 1.65 | 1.65 |
| | 04/13/01 | P | 240.37 | 5.50 | NA | 13.90 | 5.19 | 0.00 | 235.18 | ND<50.0 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | ND<2.50 | -- | -- | -- |
| | 07/18/01 | NP | 240.37 | 5.50 | NA | 13.90 | 5.55 | 0.00 | 234.82 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<2.5 | -- | -- | -- |
| | 10/01/01 | NP | 240.37 | 5.50 | NA | 13.90 | 6.41 | 0.00 | 233.96 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<2.5 | -- | -- | -- |
| | 01/14/02 | P | 240.37 | 5.50 | NA | 13.90 | 5.07 | 0.00 | 235.30 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<5.0 | -- | -- | -- |
| | 04/03/02 | P | 240.37 | 5.50 | NA | 13.90 | 8.60 | 0.00 | 231.77 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<2.5 | -- | -- | -- |
| | 08/08/02 | P | 240.37 | 5.50 | NA | 13.90 | 9.58 | 0.00 | 230.79 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<2.5 | -- | 1.7 | 7.0 |
| | 11/27/02 | P | 240.37 | 5.50 | NA | 13.90 | 9.15 | 0.00 | 231.22 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | -- | ND<0.50 | 3.1 | 6.7 |
| | 02/10/03[4] | P | 240.37 | 5.50 | NA | 13.90 | 8.55 | 0.00 | 231.82 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | -- | ND<0.50 | 1.3 | 6.6 |
| | 06/03/03 | P | 240.37 | 5.50 | NA | 13.90 | 8.72 | 0.00 | 231.65 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | -- | ND<0.50 | 9.1 | 6.3 |
| | 08/14/03 | P | 240.37 | 5.50 | NA | 13.90 | 9.52 | 0.00 | 230.85 | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | -- | ND<0.50 | 5.5 | 6.4 |
| | 11/13/03 | | 240.37 | 5.50 | NA | 13.90 | 9.45 | 0.00 | 230.92 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 2/13/2004[6] | | 246.09 | 5.50 | NA | 13.90 | 8.38 | 0.00 | 237.71 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 05/04/04 | | 246.09 | 5.50 | NA | 13.90 | 9.30 | 0.00 | 236.79 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | **08/30/04** | **P** | **246.09** | **5.50** | **NA** | **13.90** | **9.69** | **0.00** | **236.40** | **ND<50** | **ND<0.50** | **ND<0.50** | **ND<0.50** | **0.75** | | **ND<0.50** | **5.1** | **6.5** |

**Table 1**
**Groundwater Elevation and Analytical Data**

Former ARCO Service Station #6002
6235 Seminary Avenue, Oakland, California

| Well Number | Date Sampled | Purge/ Not Purged | TOC Elevation (ft-MSL) | Top of Screen (ft., bgs) | Bottom of Screen (ft., bgs) | Well Depth (ft., bgs) | Depth to Water (ft.) | FP Thickness (ft.) | Groundwater Elevation (ft-MSL) | TPH-g/GRO (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | MTBE 8021B* (µg/L) | MTBE 8260 (µg/L) | Dissolved Oxygen[5] (mg/L) | pH Level[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VW-1 | 02/23/96 | | NR | 6.00 | NA | 13.50 | 5.29 | 0.00 | NR | 21,000 | 490 | 57 | 520 | 1,500 | 240 | -- | -- | -- |
| | 05/10/96 | | NR | 6.00 | NA | 13.50 | 6.80 | 0.00 | NR | 3,700 | 61 | ND<5 | 100 | 50 | 200 | -- | -- | -- |
| | 08/09/96 | | NR | 6.00 | NA | 13.50 | 7.03 | 0.00 | NR | 970 | 2.7 | ND<2.5 | 2.7 | 3.7 | 180 | -- | -- | -- |
| | 11/08/96 | | NR | 6.00 | NA | 13.50 | NR | NR | NR | Not sampled: well inaccessible | | | | | | | | |
| | 03/21/97 | | NR | 6.00 | NA | 13.50 | 7.51 | 0.00 | NR | 640 | ND<4 | ND<1 | 1 | 3 | 194 | -- | -- | -- |
| | 05/27/97 | | NR | 6.00 | NA | 13.50 | 7.51 | 0.00 | NR | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 08/05/97 | | NR | 6.00 | NA | 13.50 | 7.51 | 0.00 | NR | 630 | ND<1 | ND<1 | 3 | 2 | 120 | -- | -- | -- |
| | 10/29/97 | | NR | 6.00 | NA | 13.50 | 7.53 | 0.00 | NR | 600 | ND<0.5 | ND<0.5 | ND<0.5 | 1.6 | 84 | -- | -- | -- |
| | 02/25/98 | | NR | 6.00 | NA | 13.50 | 6.77 | 0.00 | NR | 230 | ND<4 | ND<0.7 | 1.2 | 0.5 | 27 | -- | -- | -- |
| | 05/12/98 | | NR | 6.00 | NA | 13.50 | 7.43 | 0.00 | NR | 340 | ND<0.5 | 0.5 | 2.3 | 0.8 | 29 | -- | -- | -- |
| | 07/28/98 | | NR | 6.00 | NA | 13.50 | 7.00 | 0.00 | NR | 240 | ND<0.5 | ND<0.5 | ND<0.5 | 1.1 | 54 | -- | -- | -- |
| | 10/27/98 | | NR | 6.00 | NA | 13.50 | 7.52 | 0.00 | NR | 230 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 65 | -- | -- | -- |
| | 02/08/99 | | NR | 6.00 | NA | 13.50 | 7.05 | 0.00 | NR | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | 36 [3] | -- | -- |
| | 06/01/99 | NP | NR | 6.00 | NA | 13.50 | 7.55 | 0.00 | NR | 180 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 23 | -- | 1.0 | 1.0 |
| | 08/25/99 | NP | NR | 6.00 | NA | 13.50 | 7.66 | 0.00 | NR | 130 | ND<0.5 | 5.6 | ND<0.5 | ND<0.5 | 40 | -- | 0.39 | 0.39 |
| | 10/29/99 | NP | NR | 6.00 | NA | 13.50 | 7.59 | 0.00 | NR | 200 | 1.0 | ND<0.5 | 0.6 | 1.6 | 36 | -- | 0.89 | 0.89 |
| | 02/16/00 | NP | NR | 6.00 | NA | 13.50 | 7.03 | 0.00 | NR | 210 | ND<0.5 | 0.9 | 2.2 | 1.9 | 11 | -- | 1.41 | 1.41 |
| | 06/23/00 | NP | NR | 6.00 | NA | 13.50 | 7.71 | 0.00 | NR | 175 | 1.04 | ND<0.500 | ND<0.500 | ND<0.500 | 14.4 | -- | 1.90 | 1.90 |
| | 08/17/00 | NP | NR | 6.00 | NA | 13.50 | 7.75 | 0.00 | NR | 180 | ND<0.500 | ND<0.500 | 0.622 | 0.760 | 23.7 | -- | 0.63 | 0.63 |
| | 11/10/00 | NP | NR | 6.00 | NA | 13.50 | 6.83 | 0.00 | NR | 157 | 0.955 | ND<0.500 | 0.973 | ND<0.500 | 32.5 | -- | 1.03 | 1.03 |
| | 02/12/01 | NP | NR | 6.00 | NA | 13.50 | 7.85 | 0.00 | NR | 273 | 0.627 | ND<0.500 | ND<0.500 | 0.507 | 9.19 | -- | 0.47 | 0.47 |
| | 04/13/01 | P | NR | 6.00 | NA | 13.50 | 5.11 | 0.00 | NR | 213 | ND<0.500 | ND<0.500 | ND<0.500 | ND<0.500 | 6.38 | -- | -- | -- |
| | 07/18/01 | P | NR | 6.00 | NA | 13.50 | 5.39 | 0.00 | NR | 270 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | 20 | -- | -- | -- |
| | 10/01/01 | NP | NR | 6.00 | NA | 13.50 | 6.50 | 0.00 | NR | 200 | ND<0.50 | ND<0.50 | ND<0.50 | 0.81 | 14 | -- | -- | -- |
| | 01/14/02 | P | NR | 6.00 | NA | 13.50 | 5.04 | 0.00 | NR | 110 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | 6.4 | -- | -- | -- |
| | 04/03/02 | P | NR | 6.00 | NA | 13.50 | 7.51 | 0.00 | NR | 91 | 0.72 | ND<0.50 | ND<0.50 | ND<0.50 | 12.0 | -- | -- | -- |
| | 08/08/02 | P | NR | 6.00 | NA | 13.50 | 9.58 | 0.00 | NR | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | 33.0 | -- | 0.6 | 6.3 |
| | 11/27/02 | P | NR | 6.00 | NA | 13.50 | 7.42 | 0.00 | NR | 52 | 0.72 | 0.78 | ND<0.50 | ND<0.50 | -- | 21 | 1.0 | 6.1 |
| | 02/10/03[4] | NP | NR | 6.00 | NA | 13.50 | 7.38 | 0.00 | NR | 52 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | -- | 11 | 1.7 | 6.5 |
| | 06/03/03 | P | NR | 6.00 | NA | 13.50 | 7.30 | 0.00 | NR | 71 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | -- | 13 | 3.3 | 6.3 |
| | 08/14/03 | P | NR | 6.00 | NA | 13.50 | 7.59 | 0.00 | NR | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | -- | 18 | 0.3 | 6.1 |
| | 11/13/03 | P | NR | 6.00 | NA | 13.50 | 7.43 | 0.00 | NR | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | -- | 13 | 0.6 | 6.1 |
| | 2/13/2004[6] | P | 253.19 | 6.00 | NA | 13.50 | 7.35 | 0.00 | 245.84 | 59 | ND<0.50 | ND<0.50 | ND<0.50 | 0.56 | -- | 8 | 1.0 | 6.0 |
| | 05/04/04 | P | 253.19 | 6.00 | NA | 13.50 | 7.30 | 0.00 | 245.89 | ND<50 | 0.71 | ND<0.50 | ND<0.50 | 0.60 | -- | 11 | 0.1 | 6.4 |
| | **08/30/04** | **P** | **253.19** | **6.00** | **NA** | **13.50** | **8.50** | **0.00** | **244.69** | **ND<50** | **ND<0.50** | **ND<0.50** | **ND<0.50** | **ND<0.50** | **--** | **24** | **0.2** | **6.2** |
| | | | | | | | | | | | | | | | | | | |
| VW-3 | 08/08/02 | | NR | NA | NA | NA | 8.85 | 0.00 | NR | ND<50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | 2.5 | -- | 0.7 | 6.1 |
| | 11/27/02 | | NR | NA | NA | NA | 8.80 | 0.00 | NR | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 02/10/03[4] | | NR | NA | NA | NA | 8.41 | 0.00 | NR | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 06/03/03 | | NR | NA | NA | NA | 8.71 | 0.00 | NR | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 08/14/03 | | NR | NA | NA | NA | 8.81 | 0.00 | NR | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 11/13/03 | | NR | NA | NA | NA | 8.75 | 0.00 | NR | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 2/13/2004[6] | | 252.26 | NA | NA | NA | 8.48 | 0.00 | 243.78 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 05/04/04 | | 252.26 | NA | NA | NA | 8.85 | 0.00 | 243.41 | -- | -- | -- | -- | -- | | -- | -- | -- |
| | **08/30/04** | | **252.26** | **NA** | **NA** | **NA** | **9.07** | **0.00** | **243.19** | -- | -- | -- | -- | -- | | -- | -- | -- |
| | | | | | | | | | | | | | | | | | | |

**Table 1**
**Groundwater Elevation and Analytical Data**

Former ARCO Service Station #6002
6235 Seminary Avenue, Oakland, California

| Well Number | Date Sampled | Purge/ Not Purged | TOC Elevation (ft-MSL) | Top of Screen (ft., bgs) | Bottom of Screen (ft., bgs) | Well Depth (ft., bgs) | Depth to Water (ft.) | FP Thickness (ft.) | Groundwater Elevation (ft-MSL) | TPH-g/GRO (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | MTBE 8021B* (µg/L) | MTBE 8260 (µg/L) | Dissolved Oxygen[5] (mg/L) | pH Level[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VW-4 | 05/10/96 | | NR | 6.00 | NA | 15.00 | 8.58 | 0.00 | NR | 13,000 | 2,500 | 41 | 420 | 660 | 43,000 | -- | -- | -- |
| | 08/09/96 | | NR | 6.00 | NA | 15.00 | 11.70 | 0.00 | NR | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | 6,200 | -- | -- | -- |
| | 11/08/96 | | NR | 6.00 | NA | 15.00 | 9.38 | 0.00 | NR | 7,800 | 510 | 7 | 180 | 370 | 21,000 | -- | -- | -- |
| | 03/21/97 | | NR | 6.00 | NA | 15.00 | 9.11 | 0.00 | NR | 10,000 | 290 | 10 | 270 | 230 | 8,900 | -- | -- | -- |
| | 05/27/97 | | NR | 6.00 | NA | 15.00 | 9.34 | 0.00 | NR | Not sampled: well sampled semi-annually, during the first and third quarters | | | | | | | | |
| | 08/05/97 | | NR | 6.00 | NA | 15.00 | 9.47 | 0.00 | NR | ND<10,000 | 180 | ND<100 | ND<100 | 110 | 12,000 | -- | -- | -- |
| | 10/29/97 | | NR | 6.00 | NA | 15.00 | 9.35 | 0.00 | NR | 9,800 | 200 | 69 | 260 | 360 | 4,900 | -- | -- | -- |
| | 02/25/98 | | NR | 6.00 | NA | 15.00 | 7.08 | 0.00 | NR | ND<50 | 2.5 | ND<0.5 | ND<0.5 | 0.7 | ND<3 | -- | -- | -- |
| | 05/12/98 | | NR | 6.00 | NA | 15.00 | 9.17 | 0.00 | NR | 3,200 | ND<20 | 22 | 29 | 52 | 2,100 | -- | -- | -- |
| | 07/28/98 | | NR | 6.00 | NA | 15.00 | 9.55 | 0.00 | NR | ND<10,000 | ND<100 | ND<100 | ND<100 | ND<100 | 5,100 | -- | -- | -- |
| | 10/27/98 | | NR | 6.00 | NA | 15.00 | 9.92 | 0.00 | NR | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | | |
| | 02/08/99 | | NR | 6.00 | NA | 15.00 | 7.50 | 0.00 | NR | ND<2,500 | ND<25 | ND<25 | 28 | ND<25 | 2,400 | 3,100 [3] | -- | -- |
| | 06/01/99 | NP | NR | 6.00 | NA | 15.00 | 9.87 | 0.00 | NR | 2,100 | 2.5 | 1.1 | 2.5 | 15 | 3,300 | -- | 2.0 | 2.0 |
| | 08/25/99 | NP | NR | 6.00 | NA | 15.00 | 9.78 | 0.00 | NR | 1,300 | 4.4 | 4.9 | 1.7 | 2.9 | 4,600 | -- | 0.36 | 0.36 |
| | 10/29/99 | NP | NR | 6.00 | NA | 15.00 | 9.93 | 0.00 | NR | 1,400 | ND<0.5 | 1.8 | 1.6 | 3.0 | 4,200 | -- | 1.18 | 1.18 |
| | 02/16/00 | NP | NR | 6.00 | NA | 15.00 | 7.45 | 0.00 | NR | 1,800 | ND<0.5 | 2.9 | 15 | 10 | 3,400 | -- | 1.01 | 1.01 |
| DUP 1 | 06/23/00 | | -- | 6.00 | NA | 15.00 | -- | -- | -- | 1,260 | ND<2.00 | ND<2.00 | ND<2.00 | 2.73 | 2,720 | -- | -- | -- |
| | 06/23/00 | NP | NR | 6.00 | NA | 15.00 | 9.74 | 0.00 | NR | 1,360 | ND<2.00 | 2.26 | ND<2.00 | 2.25 | 4,900 | -- | 1.50 | 1.50 |
| | 08/17/00 | NP | NR | 6.00 | NA | 15.00 | 9.95 | 0.00 | NR | 2,230 | ND<10.0 | ND<10.0 | ND<10.0 | ND<10.0 | 5,310 | -- | 1.13 | 1.13 |
| | 11/10/00 | NP | NR | 6.00 | NA | 15.00 | 9.22 | 0.00 | NR | 1,390 | 18.5 | ND<5.00 | ND<5.00 | ND<5.00 | 8,840 | -- | 1.25 | 1.25 |
| | 02/12/01 | NP | NR | 6.00 | NA | 15.00 | 8.99 | 0.00 | NR | 1,400 | 9.42 | ND<2.00 | 17.8 | 16.1 | 3,570 | -- | 0.91 | 0.91 |
| | 04/13/01 | NP | NR | 6.00 | NA | 15.00 | 7.80 | 0.00 | NR | 556 | 3.82 | ND<1.25 | ND<1.25 | ND<1.25 | 2,450 | -- | -- | -- |
| | 07/18/01 | NP | NR | 6.00 | NA | 15.00 | 7.73 | 0.00 | NR | 2,100 | 9.2 | ND<2.0 | ND<2.0 | ND<2.0 | 3,700 | -- | -- | -- |
| DUP 1 | 07/18/01 | | -- | 6.00 | NA | 15.00 | -- | -- | -- | 2,000 | 8.7 | 2.2 | ND<2.0 | ND<2.0 | 3,400 | -- | -- | -- |
| | 10/01/01 | NP | NR | 6.00 | NA | 15.00 | 6.69 | 0.00 | NR | 2,000 | ND<10 | ND<10 | ND<10 | 13 | 5,900 | -- | -- | -- |
| DUP | 10/01/01 | | -- | 6.00 | NA | 15.00 | -- | -- | -- | 1,800 | ND<10 | ND<10 | ND<10 | ND<10 | 5,800 | -- | -- | -- |
| | 01/14/02 | P | NR | 6.00 | NA | 15.00 | 5.93 | 0.00 | NR | 580 | ND<2.0 | ND<2.0 | ND<2.0 | ND<2.0 | 2,700 | -- | -- | -- |
| | 04/03/02 | NP | NR | 6.00 | NA | 15.00 | 9.6 | 0.00 | NR | 1,400 | 5.2 | 16.0 | ND<5.0 | 9.6 | 2,200 | -- | -- | -- |
| | 08/08/02 | | NR | 6.00 | NA | 15.00 | 10.01 | 0.00 | NR | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 11/27/02 | P | NR | 6.00 | NA | 15.00 | 10.30 | 0.00 | NR | ND<10,000 | ND<100 | ND<100 | ND<100 | ND<100 | -- | 3,800 | 1.7 | 6.7 |
| | 02/10/03[4] | NP | NR | 6.00 | NA | 15.00 | 10.06 | 0.00 | NR | ND<5,000 | ND<50 | ND<50 | ND<50 | ND<50 | -- | 2,500 | 1.0 | 6.8 |
| | 06/03/03 | P | NR | 6.00 | NA | 15.00 | 10.04 | 0.00 | NR | ND<1,000 | ND<10 | ND<10 | ND<10 | ND<10 | -- | 440 | 1.9 | 6.6 |
| | 08/14/03 | P | NR | 6.00 | NA | 15.00 | 9.66 | 0.00 | NR | ND<500 | ND<5.0 | ND<5.0 | ND<5.0 | ND<5.0 | -- | 170 | 0.8 | 6.7 |
| | 11/13/03 | P | NR | 6.00 | NA | 15.00 | 10.01 | 0.00 | NR | ND<500 | ND<5.0 | ND<5.0 | ND<5.0 | ND<5.0 | -- | 130 | 1.7 | 6.4 |
| | 2/13/2004[6] | P | 252.69 | 6.00 | NA | 15.00 | 9.34 | 0.00 | 243.35 | 330 | ND<2.5 | ND<2.5 | ND<2.5 | 3.0 | -- | 210 | 2.0 | 6.6 |
| | 05/04/04 | P | 252.69 | 6.00 | NA | 15.00 | 10.07 | 0.00 | 242.62 | 130 | ND<1.0 | ND<1.0 | ND<1.0 | ND<1.0 | -- | 66 | 1.2 | 6.8 |
| | **08/30/04** | **P** | **252.69** | **6.00** | **NA** | **15.00** | **10.32** | **0.00** | **242.37** | **ND<500** | **ND<5.0** | **ND<5.0** | **ND<5.0** | **ND<5.0** | **--** | **220** | **1.1** | **6.6** |

**Table 1**
**Groundwater Elevation and Analytical Data**

Former ARCO Service Station #6002
6235 Seminary Avenue, Oakland, California

---

| Abbreviation | |
|---|---|
| -- | = not analyzed, not available, or not applicable |
| * | = EPA method 8020 prior to 10/29/99 |
| µg/L | = micrograms per liter |
| BTEX | = Benzene, toluene, ethylbenzene, xylenes by EPA method 8260B (EPA method 8021B from 10/29/99 to 2/10/03, and 8020 prior to 10/29/99). |
| DUP | = duplicate |
| ft-MSL | = elevation in feet, relative to mean sea level |
| GRO | = Gasoline Range Organics, C4- C12 Range |
| mg/L | = milligrams per liter |
| MTBE | = Methyl tertiary butyl ether |
| ND< | = not detected at or above the laboratory reporting limit |
| NR | = not reported; data not available or not measurable |
| NP | = Not purged prior to sampling. |
| P | = Purged prior to sampling. |
| TOC | = Top of Casing |
| TPH-g | = Total petroleum hydrocarbons as gasoline by modified EPA method 8260B (EPA Method 8015M prior to 2/10/03). |
| 1 | = [corrected elevation (Z')] = Z + (h * 0.73) where: Z: measured elevation, h: floating product thickness, 0.73: density ratio of oil to water |
| 2 | = analyzed by EPA method 8240 |
| 3 | = also analyzed for fuel oxygenates |
| 4 | =TPH-g, BTEX and MTBE analyzed by EPA method 8260B beginning on 1st quarter 2003 sampling event |
| 5 | = Dissolved oxygen and pH levels are field measurements. |
| 6 | = Well Surveyed to NAVD'88 datum on 1/27/04. |

Source: The data within this table collected prior to April 2002 was provided to URS by Atlantic Richfield Company and their previous consultants. URS has not verified the accuracy of this information.

Notes: For previous historical groundwater elevation data please refer to Fourth Quarter 1995 Groundwater Monitoring Program Results, ARCO Service Station 6002, Oakland, California, (EMCON, February 23, 1996)

Beginning Fourth Quarter 2003, the laboratory modified the reported analyte list. Total Petroleum Hydrocarbons as Gasoline (TPGg) has been changed to Gasoline Range Organics (GRO). The resulting data may be impacted by the impacted by the potential inclusion of non-TPHg analytes within the requested fuel range resulting in a higher concentration being reported. Beginning Second Quarter 2004, the carbon range was changed from C6 to C10 to C4 to C12.

**Table 1**
**Groundwater Elevation and Analytical Data**

Former ARCO Service Station #6002
6235 Seminary Avenue, Oakland, California

| Well Number | Date Sampled | Purge/ Not Purged | TOC Elevation (ft-MSL) | Top of Screen (ft., bgs) | Bottom of Screen (ft., bgs) | Well Depth (ft., bgs) | Depth to Water (ft.) | FP Thickness (ft.) | Groundwater Elevation (ft-MSL) | TPH-g/GRO (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | MTBE 8021B* (µg/L) | MTBE 8260 (µg/L) | Dissolved Oxygen[5] (mg/L) | pH Level[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 03/15/95 | | 247.06 | -- | -- | -- | 7.37 | 0.00 | 239.69 | 13,000 | 1,200 | 44 | 770 | 1,100 | -- | -- | -- | -- |
| | 05/30/95 | | 247.06 | -- | -- | -- | 8.48 | *0.00* | *238.58* | 19,000 | 1,600 | 30 | 890 | 1,400 | -- | -- | -- | -- |
| | 09/01/95 | | 247.06 | -- | -- | -- | 9.47 | 0.00 | 237.59 | 14,000 | 1,300 | 28 | 480 | *780* | *24,000* | -- | -- | -- |
| | 11/13/95 | | 247.06 | -- | -- | -- | 8.78 | 0.01 | 238.29 [1] | 11,000 | 570 | 17 | 260 | 410 | -- | 25,000 [2] | -- | -- |
| | 02/23/96 | | 247.06 | -- | -- | -- | Well was decommissioned on 2-12-96 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| MW-2 | 03/15/95 | | 249.30 | -- | -- | -- | 8.25 | 0.00 | 241.05 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- |
| | 05/30/95 | | 249.30 | -- | -- | -- | 9.93 | 0.00 | 239.37 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- |
| | 09/01/95 | | 249.30 | -- | -- | -- | 10.69 | 0.00 | 238.61 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<3 | -- | -- | -- |
| | 11/13/95 | | 249.30 | -- | -- | -- | 10.32 | 0.00 | 238.98 | ND<50 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | -- | -- |
| | 02/23/96 | | 249.30 | -- | -- | -- | Well was decommissioned on 2-12-96 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| VW-2 | 02/23/96 | | NR | -- | -- | -- | 6.92 | 0.00 | NR | -- | -- | -- | -- | -- | | -- | -- | -- |
| | 08/08/02 | | NR | -- | -- | -- | 10.51 | 0.00 | NR | -- | -- | -- | -- | -- | | -- | -- | -- |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| AS-1 | 06/29/95 | | NR | -- | -- | -- | 9.20 | 0.00 | NR | ND<50 | 1.6 | ND<0.5 | 0.9 | 0.9 | -- | -- | -- | -- |

## Table 2

### Fuel Additives Analytical Data

Former ARCO Station #6002
6235 Seminary Ave., Oakland, CA

| Well Number | Date Sampled | Ethanol (µg/L) | TBA (µg/L) | MtBE (µg/L) | DIPE (µg/L) | EtBE (µg/L) | TAME (µg/L) | 1,2-DCA (µg/L) | EDB (µg/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| MW-3 | 2/10/2003 | <40 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | NA | NA | |
| | 6/3/2003 | NS | NS | -- | NS | NS | NS | NS | NS | |
| | 8/14/2003 | NS | NS | -- | NS | NS | NS | NS | NS | |
| | **08/30/2004** | **<100** | **<20** | **0.72** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | |
| MW-4 | 2/10/2003 | <40 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | NA | NA | |
| | 6/3/2003 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | NA | NA | |
| | 8/14/2003 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| | **08/30/2004** | **<100** | **<20** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | |
| MW-5 | 2/10/2003 | <200 | <100 | 100 | <0.50 | <0.50 | <0.50 | NA | NA | |
| | 6/3/2003 | <1,000 | <200 | 160 | <5.0 | <5.0 | <5.0 | NA | NA | |
| | 8/14/2003 | NS | NS | -- | NS | NS | NS | NS | NS | |
| | 11/13/2003 | <1,000 | <200 | 90 | <5.0 | <5.0 | <5.0 | -- | -- | |
| | 02/13/2004 | <200 | 41 | 90 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | |
| | 05/05/2004 | <500 | <100 | 130 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | |
| | **08/30/2004** | **<500** | **100** | **85** | **<2.5** | **<2.5** | **<2.5** | **<2.5** | **<2.5** | |
| MW-6 | 2/10/2003 | <40 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | NA | NA | |
| | 6/3/2003 | NS | NS | -- | NS | NS | NS | NS | NS | |
| | 8/14/2003 | NS | NS | -- | NS | NS | NS | NS | NS | |
| | **08/30/2004** | **<100** | **<20** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | |
| MW-7 | 2/10/2003 | <40 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | NA | NA | |
| | 6/3/2003 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | NA | NA | |
| | 8/14/2003 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| MW-8 | 2/10/2003 | <40 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | NA | NA | |
| | 6/3/2003 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | NA | NA | |
| | 8/14/2003 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| | **08/30/2004** | **<100** | **<20** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | |
| VW-1 | 2/10/2003 | <40 | <20 | 11 | <0.50 | <0.50 | <0.50 | NA | NA | |
| | 6/3/2003 | <100 | <20 | 13 | <0.50 | <0.50 | <0.50 | NA | NA | |
| | 8/14/2003 | <100 | <20 | 18 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| | 11/13/2003 | <100 | <20 | 13 | <0.50 | <0.50 | <0.50 | -- | -- | |
| | 02/13/2004 | <100 | <20 | 8.0 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |

## Table 2

### Fuel Additives Analytical Data

Former ARCO Station #6002
6235 Seminary Ave., Oakland, CA

| Well Number | Date Sampled | Ethanol (µg/L) | TBA (µg/L) | MtBE (µg/L) | DIPE (µg/L) | EtBE (µg/L) | TAME (µg/L) | 1,2-DCA (µg/L) | EDB (µg/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| VW-1 | 05/05/2004 | <100 | <20 | 11 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | |
| | **08/30/2004** | **<100** | **<20** | **24** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | |
| VW-4 | 2/10/2003 | <4,000 | <2,000 | 2500 | <0.50 | <0.50 | <0.50 | NA | NA | |
| | 6/3/2003 | <2,000 | 4,100 | 440 | <10 | <10 | <10 | NA | NA | |
| | 8/14/2003 | <1,000 | 3,200 | 170 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | |
| | 11/13/2003 | <1,000 | 3,300 | 130 | <5.0 | <5.0 | <5.0 | -- | -- | |
| | 02/13/2004 | <500 | 1,300 | 210 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | |
| | 05/05/2004 | <200 | 1,500 | 66 | <1.0 | 1.3 | <1.0 | <1.0 | <1.0 | |
| | **08/30/2004** | **<1,000** | **5,400** | **220** | **<5.0** | **5.4** | **<5.0** | **<5.0** | **<5.0** | |

## Table 2

### Fuel Additives Analytical Data

Former ARCO Station #6002
6235 Seminary Ave., Oakland, CA

Abbreviations:
TBA = tert-Butyl alcohol
DIPE = Di-isopropyl ether
ETBE = Ethyl tert-butyl ether
MTBE = Methyl tert-butyl ether
TAME = tert-Amyl methyl ether
1,2-DCA = 1,2-Dichloroethane
EDB = 1,2-Dibromoethane
ug/L = Micrograms per Liter
< = Not detected at or above the laboratory reporting limit.

Notes:
1. All volatile organic compounds (Ethanol, TBA, MTBE, DIPE, ETBE, and TAME) analyzed using EPA Method 8260B.

## Table 3

### Groundwater Gradient Data

Former ARCO Station #6002
6235 Seminary Ave., Oakland, CA

| Date Sampled | Approximate Flow Direction | Approximate Hydraulic Gradient |
|---|---|---|
| 3/15/1995 | West-Southwest | 0.080 |
| 5/30/1995 | West-Southwest | 0.080 |
| 9/1/1995 | West-Southwest | 0.090 |
| 11/13/1995 | West-Southwest | 0.080 |
| 2/23/1996 | West-Southwest | 0.080 |
| 5/10/1996 | West-Southwest | 0.080 |
| 8/9/1996 | Southwest | 0.080 |
| 11/8/1996 | Southwest | 0.055 |
| 3/21/1997 | West-Southwest | 0.051 |
| 5/27/1997 | West-Southwest | 0.069 |
| 8/5/1997 | West | 0.076 |
| 10/29/1997 | West-Southwest | 0.036 |
| 2/25/1998 | West-Southwest | 0.052 |
| 5/12/1998 | West | 0.070 |
| 7/28/1998 | West | 0.070 |
| 10/27/1998 | West-Southwest | 0.060 |
| 2/8/1999 | West-Southwest | 0.070 |
| 6/1/1999 | West-Northwest | 0.070 |
| 8/25/1999 | West-Southwest | 0.070 |
| 10/29/1999 | West | 0.070 |
| 2/16/2000 | Southwest | 0.050 |
| 6/23/2000 | West | 0.042 |
| 8/17/2000 | West | 0.087 |
| 11/10/2000 | West-Southwest | 0.080 |
| 2/12/2001 | West-Southwest | 0.074 |
| 4/13/2001 | West | 0.085 |
| 7/18/2001 | West | 0.075 |
| 10/1/2001 | West-Southwest | 0.083 |
| 1/14/2002 | West-Southwest | 0.072 |
| 4/3/2002 | West-Southwest | 0.084 |
| 8/8/2002 | West-Southwest | 0.088 |
| 11/27/2002 | West-Southwest | 0.075 |
| 2/10/2003 | Southwest | 0.062 |
| 6/3/2003 | West | 0.069 |
| 8/14/2003 | West-Southwest | 0.066 |
| 11/13/2003 | West-Southwest | 0.066 |
| 2/13/2004 | Southwest | 0.053 |
| 5/4/2004 | Southwest | 0.060 |
| **8/30/2004** | **Southwest** | **0.069** |

## Table 3

### Groundwater Gradient Data

Former ARCO Station #6002
6235 Seminary Ave., Oakland, CA

| Date Sampled | Approximate Flow Direction | Approximate Hydraulic Gradient |
|---|---|---|

Source:
The data within this table collected prior to April 2002 was provided to URS by Remediation Management and their previous consultants. URS has not verified the accuracy of this information.

# ATTACHMENT A

# FIELD PROCEDURES AND FIELD DATA SHEETS

# FIELD PROCEDURES

## Sampling Procedures

The sampling procedure for each well consists first of measuring the water level and depth to bottom, and checking for the presence of free phase petroleum product (free product), using either an electronic indicator and a clear Teflon™ bailer or an oil-water interface probe. Wells not containing free product are purged approximately three casing volumes of water (or until dewatered) using a centrifugal pump, gas displacement pump, or bailer. Equipment and purging method used for the current sampling event is noted on the attached field data sheets. During purging, temperature, pH, and electrical conductivity are monitored to document that these parameters are stable prior to collecting samples. After purging, water levels are allowed to partially (approximately 80%) recover. Groundwater samples (both purge and no purge) are collected using a Teflon bailer, placed into appropriate Environmental Protection Agency- (EPA) approved containers, labeled, logged onto chain-of-custody records, and transported on ice to a California State-certified laboratory. Wells with free product are not sampled and free product is removed according to California Code of Regulation, Title 23, Div. 3, Chap. 16, Section 2655, UST Regulations.

# WELL GAUGING DATA

Project # 040830-BA1 Date 8/30/04 Client Arco 6002

Site 6235 Seminary Ave, Oakland

| Well ID | 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 | |
|---|---|---|---|---|---|---|---|---|---|
| MW-3 | 4 | | | | | 10.32 | 24.43 | TOC | |
| MW-4 | 4 | | | | | 12.98 | 24.14 | | |
| MW-5 | 4 | | | | | 12.96 | 24.51 | | |
| MW-6 | 2 | | | | | 7.39 | 32.04 | | |
| MW-7 | 2 | | | | | 13.27 | 13.28 | | |
| MW-8 | 2 | | | | | 9.69 | 14.01 | | |
| VW-1 | 4 | | | | | 8.50 | 13.88 | | |
| VW-3 | 4 | | | | | 9.07 | 14.22 | | |
| VW-4 | 4 | | | | | 10.32 | 14.92 | → | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

# ARCO / BP WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 040830-3A1 | Station # 6002 |
| Sampler: Brian Mcm | Date: 8/30/04 |
| Well I.D.: MW-3 | Well Diameter: 2 3 (4) 6 8 ____ |
| Total Well Depth: 24.43 | Depth to Water: 10.32 |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Referenced to: (PVC) Grade | D.O. Meter (if req'd): (YSI) HACH |

| 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 |

Purge Method: Bailer / Disposable Bailer / Positive Air Displacement / Electric Submersible / Extraction Pump / Other: ____

Sampling Method: Bailer / (Disposable Bailer) / Extraction Port / Other: ____

Top of Screen: ____

If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

No Purge @ 51

____ (1 Case Volume (Gals.)) X ____ (Specified Volumes) = ____ Gals. (Calculated Volume)

| Time | Temp (°F) | pH | Conductivity (mS or (uS)) | Gals. Removed | Observations |
|---|---|---|---|---|---|
| 0910 | 68.8 | 6.4 | 454 | / | clear |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Did well dewater? Yes No — Gallons actually evacuated: /

Sampling Time: 0910 — Sampling Date: 8/30/04

Sample I.D.: MW-3 — Laboratory: Pace (Sequoia) Other ____

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

| | | | | |
|---|---|---|---|---|
| D.O. (if req'd): | Pre-purge: | mg/L | (Post-purge): | 1.4 mg/L |
| O.R.P. (if req'd): | Pre-purge: | mV | Post-purge: | mV |

# ARCO / BP WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 040830-BA1 | Station # 6002 |
| Sampler: Brian Alcorn | Date: 8/30/04 |
| Well I.D.: MW-4 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth: 24.14 | Depth to Water: 12.98 |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Referenced to: (PVC) Grade | D.O. Meter (if req'd): (YSI) HACH |

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

Purge Method: Bailer / ~~Disposable Bailer~~ / Positive Air Displacement / Electric Submersible / Extraction Pump / Other: ___

Sampling Method: Bailer / (Disposable Bailer) / Extraction Port / Other: ___

Top of Screen: ___

No Purge @ 4.5'

If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

| 1 Case Volume (Gals.) | X | Specified Volumes | = | Calculated Volume | Gals. |
|---|---|---|---|---|---|
| ___ | X | ___ | = | ___ | Gals. |

| Time | Temp (°F) | pH | Conductivity (mS or (µS)) | Gals. Removed | Observations |
|---|---|---|---|---|---|
| 0845 | 70.9 | 5.8 | 623 | — | clear |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| | | | |
|---|---|---|---|
| Did well dewater? Yes No | | Gallons actually evacuated: | — |
| Sampling Time: 0845 | | Sampling Date: 8/30/04 | |
| Sample I.D.: MW-4 | | Laboratory: Pace (Sequoia) Other ___ | |
| Analyzed for: TPH-G BTEX MTBE TPH-D | | Other: | |
| D.O. (if req'd): | Pre-purge: ___ mg/L | Post-purge: | 1.6 mg/L |
| O.R.P. (if req'd): | Pre-purge: ___ mV | Post-purge: | ___ mV |

# ARCO / BP WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 040830-BA1 | Station # 6002 |
| Sampler: Brian Alcorn | Date: 8/30/04 |
| Well I.D.: MW-5 | Well Diameter: 2 3 (4) 6 8 ____ |
| Total Well Depth: 24.51 | Depth to Water: 12.96 |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Referenced to: (PVC) Grade | D.O. Meter (if req'd): (YSI) HACH |

| 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 |

Purge Method: Bailer / Disposable Bailer / Positive Air Displacement / (Electric Submersible) / Extraction Pump / Other: ____

Sampling Method: Bailer / (Disposable Bailer) / Extraction Port / Other: ____

Top of Screen: ____

If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

7.5 (1 Case Volume (Gals.)) X 3 (Specified Volumes) = 22.5 (Calculated Volume) Gals.

| Time | Temp (°F) | pH | Conductivity (mS or (µS)) | Gals. Removed | Observations |
|---|---|---|---|---|---|
| 1111 | 71.1 | 6.4 | 586 | 7.5 | clear, strong odor |
| 1114 | 70.8 | 6.4 | 575 | 15.0 | " " |
| 1117 | 70.0 | 6.4 | 574 | 22.5 | " " |
| | | | | | |
| | | | | | |

Did well dewater? Yes (No) Gallons actually evacuated: 22.5

Sampling Time: 1120 Sampling Date: 8/30/04

Sample I.D.: MW-5 Laboratory: Pace (Sequoia) Other ____

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

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

# ARCO / BP WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 040830-BA1 | Station # 6002 |
| Sampler: Brian Alcorn | Date: 8/30/04 |
| Well I.D.: MW-6 | Well Diameter: (2) 3 4 6 8 ____ |
| Total Well Depth: 32.04 | Depth to Water: 7.39 |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Referenced to: (PVC) Grade | D.O. Meter (if req'd): (YSI) HACH |

| 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 |

Purge Method: Bailer (Disposable Bailer) Positive Air Displacement Electric Submersible Extraction Pump Other: _____

Sampling Method: Bailer (Disposable Bailer) Extraction Port Other: _____

Top of Screen: _____

If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

4.0 (1 Case Volume (Gals.)) X 3 (Specified Volumes) = 12.0 (Calculated Volume) Gals.

| Time | Temp (°F) | pH | Conductivity (mS or µS) | Gals. Removed | Observations |
|---|---|---|---|---|---|
| 0942 | 68.3 | 6.9 | 418 | 4.0 | cloudy brown |
| 0951 | 68.9 | 7.0 | 409 | 8.0 | " |
| 0959 | 69.2 | 7.0 | 405 | 12.0 | " |
| | | | | | |
| | | | | | |

Did well dewater? Yes (No) Gallons actually evacuated: 12.0

Sampling Time: 1005 Sampling Date: 8/30/04

Sample I.D.: MW-6 Laboratory: Pace (Sequoia) Other _____

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

| | | | | | |
|---|---|---|---|---|---|
| D.O. (if req'd): | Pre-purge: | mg/L | Post-purge: | 2.5 | mg/L |
| O.R.P. (if req'd): | Pre-purge: | mV | Post-purge: | | mV |

# ARCO / BP WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 040830-BA1 | Station # 6002 |
| Sampler: Brian Alcorn | Date: 8/30/04 |
| Well I.D.: MW-7 | Well Diameter: (2) 3 4 6 8 ____ |
| Total Well Depth: 13.28 | Depth to Water: 13.27 |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Referenced to: (PVC) Grade | D.O. Meter (if req'd): YSI HACH |

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

Purge Method: Bailer / Disposable Bailer / Positive Air Displacement / Electric Submersible / Extraction Pump / Other: _____

Sampling Method: Bailer / Disposable Bailer / Extraction Port / Other: _____

Top of Screen: _____

If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

_____ (1 Case Volume (Gals.)) X _____ (Specified Volumes) = _____ (Calculated Volume) Gals.

| Time | Temp (°F) | pH | Conductivity (mS or µS) | Gals. Removed | Observations |
|---|---|---|---|---|---|
| | Insufficient Water to Purge or Sample | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| | | | |
|---|---|---|---|
| Did well dewater? Yes / No | | Gallons actually evacuated: | |
| Sampling Time: | | Sampling Date: | |
| Sample I.D.: | | Laboratory: Pace Sequoia Other_____ | |
| Analyzed for: TPH-G BTEX MTBE TPH-D Other: | | | |
| D.O. (if req'd): | Pre-purge: ____ mg/L | Post-purge: | ____ mg/L |
| O.R.P. (if req'd): | Pre-purge: ____ mV | Post-purge: | ____ mV |

# ARCO / BP WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 040830-BA1 | Station # 6002 |
| Sampler: Brian Alcorn | Date: 8/30/04 |
| Well I.D.: MW-8 | Well Diameter: (2) 3 4 6 8 ____ |
| Total Well Depth: 14.01 | Depth to Water: 9.69 |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Referenced to: (PVC) Grade | D.O. Meter (if req'd): (YSI) HACH |

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

Purge Method: Bailer / (Disposable Bailer) / Positive Air Displacement / Electric Submersible / Extraction Pump / Other: ____

Sampling Method: Bailer / (Disposable Bailer) / Extraction Port / Other: ____

Top of Screen: ____

If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

.75 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 2.25 (Calculated Volume) Gals.

| Time | Temp (°F) | pH | Conductivity (mS or (uS)) | Gals. Removed | Observations |
|---|---|---|---|---|---|
| 1020 | 68.5 | 6.8 | 402 | .75 | cloudy gray |
| 1024 | 68.2 | 6.5 | 411 | 1.5 | " |
| | Well Dewatered @ 1.5 gallons | | | | |
| 1130 | 70.7 | 6.9 | 398 | 1.5 | " |
| | | | | | |

Did well dewater? (Yes) No — Gallons actually evacuated: 1.5

Sampling Time: 1130 @ departure — Sampling Date: 8/30/04

Sample I.D.: MW-8 — Laboratory: Pace (Sequoia) Other ____

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

| | | | | |
|---|---|---|---|---|
| D.O. (if req'd): | Pre-purge: | mg/L | (Post-purge): | 5.1 mg/L |
| O.R.P. (if req'd): | Pre-purge: | mV | Post-purge: | mV |

# ARCO / BP WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 040820-3A1 | Station # 6602 |
| Sampler: Brian Alcorn | Date: 8/30/04 |
| Well I.D.: VW-1 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth: 13.88 | Depth to Water: 8.50 |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Referenced to: (PVC) Grade | D.O. Meter (if req'd): (YSI) HACH |

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

Purge Method: Bailer / Disposable Bailer / Positive Air Displacement / (Electric Submersible) / Extraction Pump / Other: ___

Sampling Method: Bailer / (Disposable Bailer) / Extraction Port / Other: ___

Top of Screen: ___ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

3.5 (1 Case Volume (Gals.)) X 3 (Specified Volumes) = 10.5 (Calculated Volume) Gals.

| Time | Temp (°F) | pH | Conductivity (mS or (µS)) | Gals. Removed | Observations |
|---|---|---|---|---|---|
| 1036 | 72.6 | 6.4 | 618 | 3.5 | cloudy gray |
| 1037 | 71.9 | 6.2 | 610 | 7.0 | " |
| 1038 | 71.4 | 6.2 | 597 | 10.5 | " |
| | | | | | |
| | | | | | |

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

Sampling Time: 1045 Sampling Date: 8/30/04

Sample I.D.: VW-1 Laboratory: Pace (Sequoia) Other ___

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

| | | | | |
|---|---|---|---|---|
| D.O. (if req'd): | Pre-purge: | mg/L | (Post-purge): | 0.2 mg/L |
| O.R.P. (if req'd): | Pre-purge: | mV | Post-purge: | mV |

# ARCO / BP WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 040830-BA1 | Station # 6602 |
| Sampler: Brian Alcon | Date: 8/30/04 |
| Well I.D.: MW-4 | Well Diameter: 2 3 (4) 6 8 ____ |
| Total Well Depth: 14.92 | Depth to Water: 10.32 |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Referenced to: (PVC) Grade | D.O. Meter (if req'd): (YSI) HACH |

| 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 |

Purge Method: Bailer / Disposable Bailer / Positive Air Displacement / Electric Submersible / Extraction Pump / Other: _____

Sampling Method: Bailer / (Disposable Bailer) / Extraction Port / Other: _____

Top of Screen: _____

If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

| 3.0 | X | 3 | = | 9.0 Gals. |
|---|---|---|---|---|
| 1 Case Volume (Gals.) | | Specified Volumes | | Calculated Volume |

| Time | Temp (°F) | pH | Conductivity (mS or (uS)) | Gals. Removed | Observations |
|---|---|---|---|---|---|
| 1053 | 71.6 | 6.2 | 605 | 3.0 | cloudy gray |
| 1054 | 71.8 | 6.4 | 748 | 6.0 | " |
| 1055 | 72.3 | 6.6 | 761 | 9.0 | " |
| | | | | | |
| | | | | | |

| | | | |
|---|---|---|---|
| Did well dewater? Yes (No) | | Gallons actually evacuated: 9.0 | |
| Sampling Time: 1100 | | Sampling Date: 8/30/04 | |
| Sample I.D.: MW-4 | | Laboratory: Pace (Sequoia) Other_____ | |
| Analyzed for: TPH-G BTEX MTBE TPH-D | | Other: | |
| D.O. (if req'd): Pre-purge: | mg/L | (Post-purge): | 1.1 mg/L |
| O.R.P. (if req'd): Pre-purge: | mV | Post-purge: | mV |

# BP GEM OIL COMPANY TYPE **A** BILL OF LADING

SOURCE RECORD **BILL OF LADING** FOR NON-HAZARDOUS PURGEWATER RECOVERED FROM GROUNDWATER WELLS AT BP GEM OIL COMPANY FACILITIES IN THE STATE OF CALIFORNIA. THE NON-HAZARDOUS PURGE- WATER WHICH HAS BEEN RECOVERED FROM GROUND- WATER WELLS IS COLLECTED BY THE CONTRACTOR, MADE UP INTO LOADS OF APPROPRIATE SIZE AND HAULED BY DILLARD ENVIRONMENTAL TO THE ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY IN LIVERMORE, CALIFORNIA.

The contractor performing this work is BLAINE TECH SERVICES, INC. (BTS), 1680 Rogers Avenue, San Jose, CA 95112 (phone [408] 573-0555). Blaine Tech Services, Inc. is authorized by BP GEM OIL COMPANY to recover, collect, apportion into loads the Non-Hazardous Well Purgewater that is drawn from wells at the BP GEM Oil Company facility indicated below and deliver that purgewater to BTS. Transport routing of the Non-Hazardous Well Purgewater may be direct from one BP GEM facility to the designated destination point; from one BP GEM facility to the designated destination point via another BP GEM facility; from a BP GEM facility to the designated destination point via the contractor's facility, or any combination thereof. The Non-Hazardous Well Purgewater is and remains the property of BP GEM Oil Company.

This **Source Record BILL OF LADING** was initiated to cover the recovery of Non-Hazardous Well Purgewater from wells at the BP GEM Oil Company facility described below:

6002

Station #

6235 Seminary, Oakland

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

added equip. rinse water _____

any other adjustments _____

**TOTAL GALS. RECOVERED** 56

loaded onto BTS vehicle # 58

| BTS event # | time | date |
|---|---|---|
| 040830-BA1 | 1145 | 8/30/04 |

signature

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

| REC'D AT | time | date |
|---|---|---|
| | | / / |

unloaded by signature _____

# ATTACHMENT B

# LABORATORY PROCEDURES, CERTIFIED ANALYTICAL REPORTS, AND CHAIN-OF-CUSTODY RECORDS

# LABORATORY PROCEDURES

## Laboratory Procedures

The groundwater samples were analyzed for the presence of the chemicals mentioned in the chain of custody using standard EPA methods. The methods of analysis for the groundwater samples are documented in the certified analytical report. The certified analytical reports and chain-of-custody record are presented in this attachment. The analytical data provided by the laboratory approved by RM have been reviewed and verified by that laboratory.

Sequoia
Analytical

885 Jarvis Drive
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FAX (408) 782-6308
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15 September, 2004

Scott Robinson
URS Corporation [Arco]
1333 Broadway, Suite 800
Oakland, CA 94612

RE: ARCO #6002, Oakland, CA
Work Order: MNI0014

Enclosed are the results of analyses for samples received by the laboratory on 08/31/04 15:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race
Senior Project Manager

CA ELAP Certificate #1210

Sequoia Analytical

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www.sequoialabs.com

| | | |
|---|---|---|
| URS Corporation [Arco] | Project: ARCO #6002, Oakland, CA | MNI0014 |
| 1333 Broadway, Suite 800 | Project Number: INTRIM-50675 | **Reported:** |
| Oakland CA, 94612 | Project Manager: Scott Robinson | 09/15/04 19:00 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| MW-3 | MNI0014-01 | Water | 08/30/04 09:10 | 08/31/04 15:30 |
| MW-4 | MNI0014-02 | Water | 08/30/04 08:45 | 08/31/04 15:30 |
| MW-5 | MNI0014-03 | Water | 08/30/04 11:20 | 08/31/04 15:30 |
| MW-6 | MNI0014-04 | Water | 08/30/04 10:05 | 08/31/04 15:30 |
| MW-8 | MNI0014-05 | Water | 08/30/04 11:30 | 08/31/04 15:30 |
| VW-1 | MNI0014-06 | Water | 08/30/04 10:45 | 08/31/04 15:30 |
| VW-4 | MNI0014-07 | Water | 08/30/04 11:00 | 08/31/04 15:30 |
| TB-6002-08302004 | MNI0014-08 | Water | 08/30/04 11:45 | 08/31/04 15:30 |

The carbon range for the TPH-GRO has been changed from C6-C10 to C4-C12. The carbon range for TPH-DRO has been changed from C10-C28 to C10-C36. EPA 8015B has been modified to better meet the requirements of California regulatory agencies.

These samples were received with no custody seals.

Sequoia Analytical

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| | | |
|---|---|---|
| URS Corporation [Arco] | Project: ARCO #6002, Oakland, CA | MNI0014 |
| 1333 Broadway, Suite 800 | Project Number: INTRIM-50675 | **Reported:** |
| Oakland CA, 94612 | Project Manager: Scott Robinson | 09/15/04 19:00 |

## Volatile Organic Compounds by EPA Method 8260B

### Sequoia Analytical - Morgan Hill

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-3 (MNI0014-01) Water Sampled: 08/30/04 09:10 Received: 08/31/04 15:30** | | | | | | | | | |
| tert-Amyl methyl ether | ND | 0.50 | ug/l | 1 | 4I09027 | 09/09/04 | 09/10/04 | EPA 8260B | |
| Benzene | ND | 0.50 | " | " | " | " | " | " | |
| tert-Butyl alcohol | ND | 20 | " | " | " | " | " | " | |
| Di-isopropyl ether | ND | 0.50 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 0.50 | " | " | " | " | " | " | |
| Ethanol | ND | 100 | " | " | " | " | " | " | |
| Ethyl tert-butyl ether | ND | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| **Methyl tert-butyl ether** | **0.72** | 0.50 | " | " | " | " | " | " | |
| Toluene | ND | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.50 | " | " | " | " | " | " | |
| Gasoline Range Organics (C4-C12) | ND | 50 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *88 %* | *78-129* | | " | " | " | " | |
| **MW-4 (MNI0014-02) Water Sampled: 08/30/04 08:45 Received: 08/31/04 15:30** | | | | | | | | | |
| tert-Amyl methyl ether | ND | 0.50 | ug/l | 1 | 4I09027 | 09/09/04 | 09/10/04 | EPA 8260B | |
| Benzene | ND | 0.50 | " | " | " | " | " | " | |
| tert-Butyl alcohol | ND | 20 | " | " | " | " | " | " | |
| Di-isopropyl ether | ND | 0.50 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 0.50 | " | " | " | " | " | " | |
| Ethanol | ND | 100 | " | " | " | " | " | " | |
| Ethyl tert-butyl ether | ND | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 0.50 | " | " | " | " | " | " | |
| Toluene | ND | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.50 | " | " | " | " | " | " | |
| Gasoline Range Organics (C4-C12) | ND | 50 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *88 %* | *78-129* | | " | " | " | " | |

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| | | |
|---|---|---|
| URS Corporation [Arco] | Project: ARCO #6002, Oakland, CA | MNI0014 |
| 1333 Broadway, Suite 800 | Project Number: INTRIM-50675 | **Reported:** |
| Oakland CA, 94612 | Project Manager: Scott Robinson | 09/15/04 19:00 |

## Volatile Organic Compounds by EPA Method 8260B

### Sequoia Analytical - Morgan Hill

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-5 (MNI0014-03) Water Sampled: 08/30/04 11:20 Received: 08/31/04 15:30** | | | | | | | | | |
| tert-Amyl methyl ether | ND | 2.5 | ug/l | 5 | 4I10020 | 09/10/04 | 09/10/04 | EPA 8260B | |
| Benzene | ND | 2.5 | " | " | " | " | " | " | |
| ***tert-Butyl alcohol*** | **100** | 100 | " | " | " | " | " | " | |
| Di-isopropyl ether | ND | 2.5 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 2.5 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 2.5 | " | " | " | " | " | " | |
| Ethanol | ND | 500 | " | " | " | " | " | " | |
| Ethyl tert-butyl ether | ND | 2.5 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 2.5 | " | " | " | " | " | " | |
| **Methyl tert-butyl ether** | **85** | 2.5 | " | " | " | " | " | " | |
| Toluene | ND | 2.5 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 2.5 | " | " | " | " | " | " | |
| **Gasoline Range Organics (C4-C12)** | **4100** | 250 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *91 %* | *78-129* | | " | " | " | " | |
| **MW-6 (MNI0014-04) Water Sampled: 08/30/04 10:05 Received: 08/31/04 15:30** | | | | | | | | | |
| tert-Amyl methyl ether | ND | 0.50 | ug/l | 1 | 4I10002 | 09/10/04 | 09/10/04 | EPA 8260B | |
| Benzene | ND | 0.50 | " | " | " | " | " | " | |
| tert-Butyl alcohol | ND | 20 | " | " | " | " | " | " | |
| Di-isopropyl ether | ND | 0.50 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 0.50 | " | " | " | " | " | " | |
| Ethanol | ND | 100 | " | " | " | " | " | " | |
| Ethyl tert-butyl ether | ND | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 0.50 | " | " | " | " | " | " | |
| Toluene | ND | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.50 | " | " | " | " | " | " | |
| Gasoline Range Organics (C4-C12) | ND | 50 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *83 %* | *78-129* | | " | " | " | " | |

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| | | |
|---|---|---|
| URS Corporation [Arco] | Project: ARCO #6002, Oakland, CA | MNI0014 |
| 1333 Broadway, Suite 800 | Project Number: INTRIM-50675 | **Reported:** |
| Oakland CA, 94612 | Project Manager: Scott Robinson | 09/15/04 19:00 |

## Volatile Organic Compounds by EPA Method 8260B

## Sequoia Analytical - Morgan Hill

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-8 (MNI0014-05) Water Sampled: 08/30/04 11:30 Received: 08/31/04 15:30** | | | | | | | | | |
| tert-Amyl methyl ether | ND | 0.50 | ug/l | 1 | 4I10002 | 09/10/04 | 09/10/04 | EPA 8260B | |
| Benzene | ND | 0.50 | " | " | " | " | " | " | |
| tert-Butyl alcohol | ND | 20 | " | " | " | " | " | " | |
| Di-isopropyl ether | ND | 0.50 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 0.50 | " | " | " | " | " | " | |
| Ethanol | ND | 100 | " | " | " | " | " | " | |
| Ethyl tert-butyl ether | ND | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| Methyl tert-butyl ether | ND | 0.50 | " | " | " | " | " | " | |
| Toluene | ND | 0.50 | " | " | " | " | " | " | |
| **Xylenes (total)** | **0.75** | 0.50 | " | " | " | " | " | " | |
| Gasoline Range Organics (C4-C12) | ND | 50 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *88 %* | | *78-129* | " | " | " | " | |
| **VW-1 (MNI0014-06) Water Sampled: 08/30/04 10:45 Received: 08/31/04 15:30** | | | | | | | | | |
| tert-Amyl methyl ether | ND | 0.50 | ug/l | 1 | 4I10002 | 09/10/04 | 09/10/04 | EPA 8260B | |
| Benzene | ND | 0.50 | " | " | " | " | " | " | |
| tert-Butyl alcohol | ND | 20 | " | " | " | " | " | " | |
| Di-isopropyl ether | ND | 0.50 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 0.50 | " | " | " | " | " | " | |
| Ethanol | ND | 100 | " | " | " | " | " | " | |
| Ethyl tert-butyl ether | ND | 0.50 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| **Methyl tert-butyl ether** | **24** | 0.50 | " | " | " | " | " | " | |
| Toluene | ND | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.50 | " | " | " | " | " | " | |
| Gasoline Range Organics (C4-C12) | ND | 50 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *90 %* | | *78-129* | " | " | " | " | |

Sequoia Analytical

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| | | |
|---|---|---|
| URS Corporation [Arco] | Project: ARCO #6002, Oakland, CA | MNI0014 |
| 1333 Broadway, Suite 800 | Project Number: INTRIM-50675 | **Reported:** |
| Oakland CA, 94612 | Project Manager: Scott Robinson | 09/15/04 19:00 |

## Volatile Organic Compounds by EPA Method 8260B

### Sequoia Analytical - Morgan Hill

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **VW-4 (MNI0014-07) Water Sampled: 08/30/04 11:00 Received: 08/31/04 15:30** | | | | | | | | | |
| tert-Amyl methyl ether | ND | 5.0 | ug/l | 10 | 4I10002 | 09/10/04 | 09/10/04 | EPA 8260B | |
| Benzene | ND | 5.0 | " | " | " | " | " | " | |
| **tert-Butyl alcohol** | **5400** | 200 | " | " | " | " | " | " | |
| Di-isopropyl ether | ND | 5.0 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 5.0 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 5.0 | " | " | " | " | " | " | |
| Ethanol | ND | 1000 | " | " | " | " | " | " | |
| **Ethyl tert-butyl ether** | **5.4** | 5.0 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 5.0 | " | " | " | " | " | " | |
| **Methyl tert-butyl ether** | **220** | 5.0 | " | " | " | " | " | " | |
| Toluene | ND | 5.0 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 5.0 | " | " | " | " | " | " | |
| Gasoline Range Organics (C4-C12) | ND | 500 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *89 %* | *78-129* | | " | " | " | " | |

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|---|---|---|
| URS Corporation [Arco] | Project: ARCO #6002, Oakland, CA | MNI0014 |
| 1333 Broadway, Suite 800 | Project Number: INTRIM-50675 | **Reported:** |
| Oakland CA, 94612 | Project Manager: Scott Robinson | 09/15/04 19:00 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control
## Sequoia Analytical - Morgan Hill

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 4I09027 - EPA 5030B P/T** | | | | | | | | | | |
| **Blank (4I09027-BLK1)** | | | | Prepared & Analyzed: 09/09/04 | | | | | | |
| tert-Amyl methyl ether | ND | 0.50 | ug/l | | | | | | | |
| Benzene | ND | 0.50 | " | | | | | | | |
| tert-Butyl alcohol | ND | 20 | " | | | | | | | |
| Di-isopropyl ether | ND | 0.50 | " | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | " | | | | | | | |
| 1,2-Dichloroethane | ND | 0.50 | " | | | | | | | |
| Ethanol | ND | 100 | " | | | | | | | |
| Ethyl tert-butyl ether | ND | 0.50 | " | | | | | | | |
| Ethylbenzene | ND | 0.50 | " | | | | | | | |
| Methyl tert-butyl ether | ND | 0.50 | " | | | | | | | |
| Toluene | ND | 0.50 | " | | | | | | | |
| Xylenes (total) | ND | 0.50 | " | | | | | | | |
| Gasoline Range Organics (C4-C12) | ND | 50 | " | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.16* | | " | *2.50* | | *86* | *78-129* | | | |
| **Laboratory Control Sample (4I09027-BS1)** | | | | Prepared & Analyzed: 09/09/04 | | | | | | |
| tert-Amyl methyl ether | 10.3 | 0.50 | ug/l | 10.0 | | 103 | 56-140 | | | |
| Benzene | 10.7 | 0.50 | " | 10.0 | | 107 | 78-124 | | | |
| tert-Butyl alcohol | 49.2 | 20 | " | 50.0 | | 98 | 0-206 | | | |
| Di-isopropyl ether | 10.3 | 0.50 | " | 10.0 | | 103 | 76-130 | | | |
| 1,2-Dibromoethane (EDB) | 11.1 | 0.50 | " | 10.0 | | 111 | 77-132 | | | |
| 1,2-Dichloroethane | 10.7 | 0.50 | " | 10.0 | | 107 | 77-136 | | | |
| Ethanol | 177 | 100 | " | 200 | | 88 | 31-186 | | | |
| Ethyl tert-butyl ether | 11.0 | 0.50 | " | 10.0 | | 110 | 61-141 | | | |
| Ethylbenzene | 11.1 | 0.50 | " | 10.0 | | 111 | 84-117 | | | |
| Methyl tert-butyl ether | 9.71 | 0.50 | " | 10.0 | | 97 | 63-137 | | | |
| Toluene | 10.4 | 0.50 | " | 10.0 | | 104 | 78-129 | | | |
| Xylenes (total) | 34.1 | 0.50 | " | 30.0 | | 114 | 83-125 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.21* | | " | *2.50* | | *88* | *78-129* | | | |

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| | | |
|---|---|---|
| URS Corporation [Arco] | Project: ARCO #6002, Oakland, CA | MNI0014 |
| 1333 Broadway, Suite 800 | Project Number: INTRIM-50675 | **Reported:** |
| Oakland CA, 94612 | Project Manager: Scott Robinson | 09/15/04 19:00 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Sequoia Analytical - Morgan Hill

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 4I09027 - EPA 5030B P/T** | | | | | | | | | | |
| **Laboratory Control Sample (4I09027-BS2)** | | | | Prepared & Analyzed: 09/09/04 | | | | | | |
| Gasoline Range Organics (C4-C12) | 370 | 50 | ug/l | 440 | | 84 | 70-124 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.12* | | " | *2.50* | | *85* | *78-129* | | | |
| **Laboratory Control Sample Dup (4I09027-BSD1)** | | | | Prepared: 09/09/04 Analyzed: 09/10/04 | | | | | | |
| tert-Amyl methyl ether | 10.9 | 0.50 | ug/l | 10.0 | | 109 | 56-140 | 6 | 12 | |
| Benzene | 11.2 | 0.50 | " | 10.0 | | 112 | 78-124 | 5 | 12 | |
| tert-Butyl alcohol | 48.8 | 20 | " | 50.0 | | 98 | 0-206 | 0.8 | 22 | |
| Di-isopropyl ether | 10.7 | 0.50 | " | 10.0 | | 107 | 76-130 | 4 | 9 | |
| 1,2-Dibromoethane (EDB) | 11.4 | 0.50 | " | 10.0 | | 114 | 77-132 | 3 | 9 | |
| 1,2-Dichloroethane | 11.2 | 0.50 | " | 10.0 | | 112 | 77-136 | 5 | 13 | |
| Ethanol | 173 | 100 | " | 200 | | 86 | 31-186 | 2 | 37 | |
| Ethyl tert-butyl ether | 11.3 | 0.50 | " | 10.0 | | 113 | 61-141 | 3 | 9 | |
| Ethylbenzene | 11.5 | 0.50 | " | 10.0 | | 115 | 84-117 | 4 | 10 | |
| Methyl tert-butyl ether | 10.1 | 0.50 | " | 10.0 | | 101 | 63-137 | 4 | 13 | |
| Toluene | 10.7 | 0.50 | " | 10.0 | | 107 | 78-129 | 3 | 10 | |
| Xylenes (total) | 34.8 | 0.50 | " | 30.0 | | 116 | 83-125 | 2 | 11 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.38* | | " | *2.50* | | *95* | *78-129* | | | |
| **Matrix Spike (4I09027-MS1)** | **Source: MNI0021-09** | | | Prepared: 09/09/04 Analyzed: 09/10/04 | | | | | | |
| Gasoline Range Organics (C4-C12) | 70800 | 5000 | ug/l | 44000 | 35000 | 81 | 70-124 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.16* | | " | *2.50* | | *86* | *78-129* | | | |
| **Matrix Spike Dup (4I09027-MSD1)** | **Source: MNI0021-09** | | | Prepared: 09/09/04 Analyzed: 09/10/04 | | | | | | |
| Gasoline Range Organics (C4-C12) | 68400 | 5000 | ug/l | 44000 | 35000 | 76 | 70-124 | 3 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.14* | | " | *2.50* | | *86* | *78-129* | | | |
| **Batch 4I10002 - EPA 5030B P/T** | | | | | | | | | | |
| **Blank (4I10002-BLK1)** | | | | Prepared & Analyzed: 09/10/04 | | | | | | |
| tert-Amyl methyl ether | ND | 0.50 | ug/l | | | | | | | |
| Benzene | ND | 0.50 | " | | | | | | | |
| tert-Butyl alcohol | ND | 20 | " | | | | | | | |
| Di-isopropyl ether | ND | 0.50 | " | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | " | | | | | | | |
| 1,2-Dichloroethane | ND | 0.50 | " | | | | | | | |
| Ethanol | ND | 100 | " | | | | | | | |
| Ethyl tert-butyl ether | ND | 0.50 | " | | | | | | | |
| Ethylbenzene | ND | 0.50 | " | | | | | | | |

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|---|---|---|
| URS Corporation [Arco] | Project: ARCO #6002, Oakland, CA | MNI0014 |
| 1333 Broadway, Suite 800 | Project Number: INTRIM-50675 | **Reported:** |
| Oakland CA, 94612 | Project Manager: Scott Robinson | 09/15/04 19:00 |

# Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Sequoia Analytical - Morgan Hill

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 4I10002 - EPA 5030B P/T** | | | | | | | | | | |
| **Blank (4I10002-BLK1)** | | | | Prepared & Analyzed: 09/10/04 | | | | | | |
| Methyl tert-butyl ether | ND | 0.50 | ug/l | | | | | | | |
| Toluene | ND | 0.50 | " | | | | | | | |
| Xylenes (total) | ND | 0.50 | " | | | | | | | |
| Gasoline Range Organics (C4-C12) | ND | 50 | " | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.17* | | " | *2.50* | | *87* | *78-129* | | | |
| **Laboratory Control Sample (4I10002-BS1)** | | | | Prepared & Analyzed: 09/10/04 | | | | | | |
| tert-Amyl methyl ether | 10.6 | 0.50 | ug/l | 10.0 | | 106 | 56-140 | | | |
| Benzene | 10.7 | 0.50 | " | 10.0 | | 107 | 78-124 | | | |
| tert-Butyl alcohol | 51.7 | 20 | " | 50.0 | | 103 | 0-206 | | | |
| Di-isopropyl ether | 10.5 | 0.50 | " | 10.0 | | 105 | 76-130 | | | |
| 1,2-Dibromoethane (EDB) | 11.2 | 0.50 | " | 10.0 | | 112 | 77-132 | | | |
| 1,2-Dichloroethane | 10.8 | 0.50 | " | 10.0 | | 108 | 77-136 | | | |
| Ethanol | 181 | 100 | " | 200 | | 90 | 31-186 | | | |
| Ethyl tert-butyl ether | 11.0 | 0.50 | " | 10.0 | | 110 | 61-141 | | | |
| Ethylbenzene | 11.1 | 0.50 | " | 10.0 | | 111 | 84-117 | | | |
| Methyl tert-butyl ether | 9.99 | 0.50 | " | 10.0 | | 100 | 63-137 | | | |
| Toluene | 10.4 | 0.50 | " | 10.0 | | 104 | 78-129 | | | |
| Xylenes (total) | 33.7 | 0.50 | " | 30.0 | | 112 | 83-125 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.20* | | " | *2.50* | | *88* | *78-129* | | | |
| **Laboratory Control Sample (4I10002-BS2)** | | | | Prepared & Analyzed: 09/10/04 | | | | | | |
| Gasoline Range Organics (C4-C12) | 340 | 50 | ug/l | 440 | | 77 | 70-124 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.23* | | " | *2.50* | | *89* | *78-129* | | | |
| **Laboratory Control Sample Dup (4I10002-BSD1)** | | | | Prepared & Analyzed: 09/10/04 | | | | | | |
| tert-Amyl methyl ether | 10.1 | 0.50 | ug/l | 10.0 | | 101 | 56-140 | 5 | 12 | |
| Benzene | 10.6 | 0.50 | " | 10.0 | | 106 | 78-124 | 0.9 | 12 | |
| tert-Butyl alcohol | 49.4 | 20 | " | 50.0 | | 99 | 0-206 | 5 | 22 | |
| Di-isopropyl ether | 10.1 | 0.50 | " | 10.0 | | 101 | 76-130 | 4 | 9 | |
| 1,2-Dibromoethane (EDB) | 10.5 | 0.50 | " | 10.0 | | 105 | 77-132 | 6 | 9 | |
| 1,2-Dichloroethane | 10.8 | 0.50 | " | 10.0 | | 108 | 77-136 | 0 | 13 | |
| Ethanol | 153 | 100 | " | 200 | | 76 | 31-186 | 17 | 37 | |
| Ethyl tert-butyl ether | 10.9 | 0.50 | " | 10.0 | | 109 | 61-141 | 0.9 | 9 | |
| Ethylbenzene | 10.6 | 0.50 | " | 10.0 | | 106 | 84-117 | 5 | 10 | |
| Methyl tert-butyl ether | 9.74 | 0.50 | " | 10.0 | | 97 | 63-137 | 3 | 13 | |
| Toluene | 10.0 | 0.50 | " | 10.0 | | 100 | 78-129 | 4 | 10 | |

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|---|---|---|
| URS Corporation [Arco] | Project: ARCO #6002, Oakland, CA | MNI0014 |
| 1333 Broadway, Suite 800 | Project Number: INTRIM-50675 | **Reported:** |
| Oakland CA, 94612 | Project Manager: Scott Robinson | 09/15/04 19:00 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Sequoia Analytical - Morgan Hill

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 4I10002 - EPA 5030B P/T** | | | | | | | | | | |
| **Laboratory Control Sample Dup (4I10002-BSD1)** | | | | Prepared & Analyzed: 09/10/04 | | | | | | |
| Xylenes (total) | 32.4 | 0.50 | ug/l | 30.0 | | 108 | 83-125 | 4 | 11 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.31* | | " | *2.50* | | *92* | *78-129* | | | |
| **Matrix Spike (4I10002-MS1)** | **Source: MNI0016-04** | | | Prepared & Analyzed: 09/10/04 | | | | | | |
| Gasoline Range Organics (C4-C12) | 16300 | 2500 | ug/l | 22000 | 1100 | 69 | 70-124 | | | LN |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.15* | | " | *2.50* | | *86* | *78-129* | | | |
| **Matrix Spike Dup (4I10002-MSD1)** | **Source: MNI0016-04** | | | Prepared & Analyzed: 09/10/04 | | | | | | |
| Gasoline Range Organics (C4-C12) | 17800 | 2500 | ug/l | 22000 | 1100 | 76 | 70-124 | 9 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.12* | | " | *2.50* | | *85* | *78-129* | | | |
| **Batch 4I10020 - EPA 5030B P/T** | | | | | | | | | | |
| **Blank (4I10020-BLK1)** | | | | Prepared & Analyzed: 09/10/04 | | | | | | |
| tert-Amyl methyl ether | ND | 0.50 | ug/l | | | | | | | |
| Benzene | ND | 0.50 | " | | | | | | | |
| tert-Butyl alcohol | ND | 20 | " | | | | | | | |
| Di-isopropyl ether | ND | 0.50 | " | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | " | | | | | | | |
| 1,2-Dichloroethane | ND | 0.50 | " | | | | | | | |
| Ethanol | ND | 100 | " | | | | | | | |
| Ethyl tert-butyl ether | ND | 0.50 | " | | | | | | | |
| Ethylbenzene | ND | 0.50 | " | | | | | | | |
| Methyl tert-butyl ether | ND | 0.50 | " | | | | | | | |
| Toluene | ND | 0.50 | " | | | | | | | |
| Xylenes (total) | ND | 0.50 | " | | | | | | | |
| Gasoline Range Organics (C4-C12) | ND | 50 | " | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.25* | | " | *2.50* | | *90* | *78-129* | | | |

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| URS Corporation [Arco] | Project: ARCO #6002, Oakland, CA | MNI0014 |
| 1333 Broadway, Suite 800 | Project Number: INTRIM-50675 | **Reported:** |
| Oakland CA, 94612 | Project Manager: Scott Robinson | 09/15/04 19:00 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Sequoia Analytical - Morgan Hill

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 4I10020 - EPA 5030B P/T** | | | | | | | | | | |
| **Laboratory Control Sample (4I10020-BS1)** | | | | Prepared & Analyzed: 09/10/04 | | | | | | |
| tert-Amyl methyl ether | 10.1 | 0.50 | ug/l | 10.0 | | 101 | 56-140 | | | |
| Benzene | 10.6 | 0.50 | " | 10.0 | | 106 | 78-124 | | | |
| tert-Butyl alcohol | 49.0 | 20 | " | 50.0 | | 98 | 0-206 | | | |
| Di-isopropyl ether | 10.1 | 0.50 | " | 10.0 | | 101 | 76-130 | | | |
| 1,2-Dibromoethane (EDB) | 10.8 | 0.50 | " | 10.0 | | 108 | 77-132 | | | |
| 1,2-Dichloroethane | 10.8 | 0.50 | " | 10.0 | | 108 | 77-136 | | | |
| Ethanol | 157 | 100 | " | 200 | | 78 | 31-186 | | | |
| Ethyl tert-butyl ether | 10.8 | 0.50 | " | 10.0 | | 108 | 61-141 | | | |
| Ethylbenzene | 11.0 | 0.50 | " | 10.0 | | 110 | 84-117 | | | |
| Methyl tert-butyl ether | 9.83 | 0.50 | " | 10.0 | | 98 | 63-137 | | | |
| Toluene | 10.2 | 0.50 | " | 10.0 | | 102 | 78-129 | | | |
| Xylenes (total) | 33.9 | 0.50 | " | 30.0 | | 113 | 83-125 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.13* | | *"* | *2.50* | | *85* | *78-129* | | | |
| **Laboratory Control Sample (4I10020-BS2)** | | | | Prepared & Analyzed: 09/10/04 | | | | | | |
| Gasoline Range Organics (C4-C12) | 401 | 50 | ug/l | 440 | | 91 | 70-124 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.21* | | *"* | *2.50* | | *88* | *78-129* | | | |
| **Laboratory Control Sample Dup (4I10020-BSD1)** | | | | Prepared: 09/10/04 Analyzed: 09/11/04 | | | | | | |
| tert-Amyl methyl ether | 10.6 | 0.50 | ug/l | 10.0 | | 106 | 56-140 | 5 | 12 | |
| Benzene | 11.0 | 0.50 | " | 10.0 | | 110 | 78-124 | 4 | 12 | |
| tert-Butyl alcohol | 48.4 | 20 | " | 50.0 | | 97 | 0-206 | 1 | 22 | |
| Di-isopropyl ether | 10.6 | 0.50 | " | 10.0 | | 106 | 76-130 | 5 | 9 | |
| 1,2-Dibromoethane (EDB) | 11.0 | 0.50 | " | 10.0 | | 110 | 77-132 | 2 | 9 | |
| 1,2-Dichloroethane | 11.0 | 0.50 | " | 10.0 | | 110 | 77-136 | 2 | 13 | |
| Ethanol | 157 | 100 | " | 200 | | 78 | 31-186 | 0 | 37 | |
| Ethyl tert-butyl ether | 11.2 | 0.50 | " | 10.0 | | 112 | 61-141 | 4 | 9 | |
| Ethylbenzene | 11.2 | 0.50 | " | 10.0 | | 112 | 84-117 | 2 | 10 | |
| Methyl tert-butyl ether | 9.94 | 0.50 | " | 10.0 | | 99 | 63-137 | 1 | 13 | |
| Toluene | 10.3 | 0.50 | " | 10.0 | | 103 | 78-129 | 1 | 10 | |
| Xylenes (total) | 33.8 | 0.50 | " | 30.0 | | 113 | 83-125 | 0.3 | 11 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.21* | | *"* | *2.50* | | *88* | *78-129* | | | |

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|---|---|---|
| URS Corporation [Arco] | Project: ARCO #6002, Oakland, CA | MNI0014 |
| 1333 Broadway, Suite 800 | Project Number: INTRIM-50675 | **Reported:** |
| Oakland CA, 94612 | Project Manager: Scott Robinson | 09/15/04 19:00 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Sequoia Analytical - Morgan Hill

| Analyte | Result | *Reporting Limit* | Units | Spike Level | Source Result | %REC | %REC Limits | *RPD* | RPD *Limit* | *Notes* |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 4I10020 - EPA 5030B P/T** | | | | | | | | | | |
| **Matrix Spike (4I10020-MS1)** | **Source: MNI0051-02** | | | Prepared: 09/10/04 | | Analyzed: 09/11/04 | | | | |
| tert-Amyl methyl ether | 1070 | 50 | ug/l | 1000 | ND | 107 | 56-140 | | | |
| Benzene | 1100 | 50 | " | 1000 | ND | 110 | 78-124 | | | |
| tert-Butyl alcohol | 13800 | 2000 | " | 5000 | 8800 | 100 | 0-206 | | | |
| Di-isopropyl ether | 1050 | 50 | " | 1000 | ND | 105 | 76-130 | | | |
| 1,2-Dibromoethane (EDB) | 1100 | 50 | " | 1000 | ND | 110 | 77-132 | | | |
| 1,2-Dichloroethane | 1090 | 50 | " | 1000 | ND | 109 | 77-126 | | | |
| Ethanol | 16800 | 10000 | " | 20000 | ND | 84 | 31-186 | | | |
| Ethyl tert-butyl ether | 1130 | 50 | " | 1000 | 12 | 112 | 61-141 | | | |
| Ethylbenzene | 1070 | 50 | " | 1000 | ND | 107 | 84-117 | | | |
| Methyl tert-butyl ether | 5710 | 50 | " | 1000 | 4800 | 91 | 63-137 | | | |
| Toluene | 982 | 50 | " | 1000 | ND | 98 | 78-129 | | | |
| Xylenes (total) | 3270 | 50 | " | 3000 | ND | 109 | 83-125 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.24* | | " | *2.50* | | *90* | *78-129* | | | |
| **Matrix Spike (4I10020-MS2)** | **Source: MNI0019-04** | | | Prepared: 09/10/04 | | Analyzed: 09/11/04 | | | | |
| Gasoline Range Organics (C4-C12) | 56900 | 5000 | ug/l | 44000 | 18000 | 88 | 70-124 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.31* | | " | *2.50* | | *92* | *78-129* | | | |
| **Matrix Spike Dup (4I10020-MSD1)** | **Source: MNI0051-02** | | | Prepared: 09/10/04 | | Analyzed: 09/11/04 | | | | |
| tert-Amyl methyl ether | 1090 | 50 | ug/l | 1000 | ND | 109 | 56-140 | 2 | 12 | |
| Benzene | 1120 | 50 | " | 1000 | ND | 112 | 78-124 | 2 | 12 | |
| tert-Butyl alcohol | 14200 | 2000 | " | 5000 | 8800 | 108 | 0-206 | 3 | 22 | |
| Di-isopropyl ether | 1070 | 50 | " | 1000 | ND | 107 | 76-130 | 2 | 9 | |
| 1,2-Dibromoethane (EDB) | 1120 | 50 | " | 1000 | ND | 112 | 77-132 | 2 | 9 | |
| 1,2-Dichloroethane | 1090 | 50 | " | 1000 | ND | 109 | 77-126 | 0 | 13 | |
| Ethanol | 21700 | 10000 | " | 20000 | ND | 108 | 31-186 | 25 | 37 | |
| Ethyl tert-butyl ether | 1130 | 50 | " | 1000 | 12 | 112 | 61-141 | 0 | 9 | |
| Ethylbenzene | 1130 | 50 | " | 1000 | ND | 113 | 84-117 | 5 | 10 | |
| Methyl tert-butyl ether | 5730 | 50 | " | 1000 | 4800 | 93 | 63-137 | 0.3 | 13 | |
| Toluene | 1050 | 50 | " | 1000 | ND | 105 | 78-129 | 7 | 10 | |
| Xylenes (total) | 3480 | 50 | " | 3000 | ND | 116 | 83-125 | 6 | 11 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.19* | | " | *2.50* | | *88* | *78-129* | | | |

Sequoia Analytical

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
www.sequoialabs.com

| | | |
|---|---|---|
| URS Corporation [Arco] | Project: ARCO #6002, Oakland, CA | MNI0014 |
| 1333 Broadway, Suite 800 | Project Number: INTRIM-50675 | **Reported:** |
| Oakland CA, 94612 | Project Manager: Scott Robinson | 09/15/04 19:00 |

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

## Sequoia Analytical - Morgan Hill

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch 4I10020 - EPA 5030B P/T** | | | | | | | | | | |
| **Matrix Spike Dup (4I10020-MSD2)** | **Source: MNI0019-04** | | | Prepared: 09/10/04 Analyzed: 09/11/04 | | | | | | |
| Gasoline Range Organics (C4-C12) | 56400 | 5000 | ug/l | 44000 | 18000 | 87 | 70-124 | 0.9 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *2.17* | | " | *2.50* | | *87* | *78-129* | | | |

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| | | |
|---|---|---|
| URS Corporation [Arco] | Project: ARCO #6002, Oakland, CA | MNI0014 |
| 1333 Broadway, Suite 800 | Project Number: INTRIM-50675 | **Reported:** |
| Oakland CA, 94612 | Project Manager: Scott Robinson | 09/15/04 19:00 |

## Notes and Definitions

| | |
|---|---|
| LN | MS and/or MSD below acceptance limits. See Blank Spike(LCS). |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

# Chain of Custody Record

Project Name 6002 GWM
BP BU/GEM CO Portfolio Retail MNI00014
BP Laboratory Contract Number: Atlantic Richfield Company
Date: 8/30/04
Requested Due Date (mm/dd/yy) 14 day TAT

On-site Time: 0830 Temp: 70
Off-site Time: 1145 Temp: 75
Sky Conditions: clear
Meteorological Events:
Wind Speed: Direction:

| | | |
|---|---|---|
| Send To: | BP/GEM Facility No.: ARCO 6002 | Consultant/Contractor: URS |
| Lab Name: SEQUOIA | BP/GEM Facility Address: 6235 Seminary Ave, OAKLAND, CA | Address: 1333 Broadway, Suite 800 |
| Lab Address: 885 Jarvis Dr. | Site ID No. ARCO 6002 | Oakland, CA 94612 |
| Morgan Hill, CA 95037 | Site Lat/Long: | e-mail EDD: donna_cosper@URSCorp.com |
| | California Global ID #: T0600100105 | Consultant/Contractor Project No.: 35-00006002.01 00427 |
| Lab PM Lisa Race | BP/GEM PM Contact: PAUL SUPPLE | Consultant Tele/Fax: 510-893-3600/510-874-3268 |
| Tele/Fax: 408-776-9600 / 408-782-6308 | Address: P.O. Box 6549 | Consultant/Contractor PM: Scott Robinson |
| Report Type & QC Level: 1 Send EDF Reports | Moraga, CA 94570 | Invoice to: Consultant/Contractor or BP/GEM (Circle one) |
| BP/GEM Account No.: | Tele/Fax: 925-299-8891/925-299-8872 | BP/GEM Work Release No: INTRIM -50675 |

Lab Bottle Order No:

| Item No. | Sample Description | Time | Matrix: Soil/Solid | Matrix: Water/Liquid | Matrix: Sediments | Matrix: Air | Laboratory No. MNI00014 | No. of containers | Preservatives: Unpreserved | Preservatives: $H_2SO_4$ | Preservatives: $HNO_3$ | Preservatives: HCl | Requested Analysis: GRO / BTEX 8015/8021/8260 | Requested Analysis: DRO w/SGC (8015) | Requested Analysis: MTBE (8021) | Requested Analysis: MTBE (8260) | Requested Analysis: MTBE, TAME, ETBE DIPE, TBA (8260) | Requested Analysis: 1,2-DCA & EDB (8260) | Requested Analysis: Ethanol (8260) | Sample Point Lat/Long and Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-3 | 0910 | | X | | | -1 | 3 | | | | X | X | | | | X | X | X | |
| 2 | MW-4 | 0845 | | X | | | -2 | 3 | | | | X | X | | | | X | X | X | |
| 3 | MW-5 | 1120 | | X | | | -3 | 3 | | | | X | X | | | | X | X | X | |
| 4 | MW-6 | 1005 | | X | | | -4 | 3 | | | | X | X | | | | X | X | X | |
| 5 | MW-8 | 1130 | | X | | | -5 | 3 | | | | X | X | | | | X | X | X | |
| 6 | VW-1 | 1045 | | X | | | -6 | 3 | | | | X | X | | | | X | X | X | |
| 7 | VW-4 | 1100 | | X | | | -7 | 3 | | | | X | X | | | | X | X | X | |
| 8 | TB-6002-083004-1 | 1145 | | X | | | -8 | 2 | | | | | | | | | | | | ON HOLD |
| 9 | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | |

| Sampler's Name: Brian Alcorn | Relinquished By / Affiliation | Date | Time | Accepted By / Affiliation | Date | Time |
|---|---|---|---|---|---|---|
| Sampler's Company: Blaine Tech Services | | 8/31/04 | 1015 | | 8/31/04 | 1015 |
| Shipment Date: | | 8/31/04 | 1535 | (MH) | 8/31/04 | 1530 |
| Shipment Method: | | | | | | |
| Shipment Tracking No: | | | | | | |

Special Instructions: Address Invoice to BP/GEM but send to URS for approval

Seals In Place Yes X No Temperature Blank Yes X No Cooler Temperature on Receipt °F/C Trip Blank Yes X No

Distribution: White Copy - Laboratory / Yellow Copy - BP/GEM / Pink Copy - Consultant/Contractor

# ATTACHMENT C

# EDCC REPORT AND EDF/GEOWELL SUBMITTAL CONFIRMATION

# Electronic Submittal Information

Main Menu | View/Add Facilities | Upload EDD | Check EDD

**ARCO # 06002 - T0600100105 - BACK TO SUBMITTAL STATUS**
6235 SEMINARY AVE
OAKLAND, CA 94605

**GEO_WELL DATA**

| Submitted By | Submitted Date | Confirmation # | Global ID |
|---|---|---|---|
| SRIJESH THAPA (CONTRACTOR) | 9/28/2004 | 7081312417 | T0600100105 |

| # | GLOBAL ID | FIELD POINT NAME | STATUS | GW MEAS DATE | DTFPROD | DTW | RISER HT | TOT DEPTH | GW MEAS DESC |
|---|---|---|---|---|---|---|---|---|---|
| 1 | T0600100105 | MW-3 | ACT | 8/30/2004 | | 10.32 | | 24.33 | |
| 2 | T0600100105 | MW-4 | ACT | 8/30/2004 | | 12.98 | | 24.13 | |
| 3 | T0600100105 | MW-5 | ACT | 8/30/2004 | | 12.96 | | 24.48 | |
| 4 | T0600100105 | MW-6 | ACT | 8/30/2004 | | 7.39 | | 32.02 | |
| 5 | T0600100105 | MW-7 | ACT | 8/30/2004 | | 13.27 | | 13.02 | |
| 6 | T0600100105 | MW-8 | ACT | 8/30/2004 | | 9.69 | | 13.99 | |
| 7 | T0600100105 | VW-1 | ACT | 8/30/2004 | | 8.35 | | 13.9 | |
| 8 | T0600100105 | VW-3 | ACT | 8/30/2004 | | 9.07 | | 14.08 | |
| 9 | T0600100105 | VW-4 | ACT | 8/30/2004 | | 10.32 | | 14.85 | |

Logged in as URSCORP-OAKLAND (CONTRACTOR) CONTACT SITE ADMINISTRATOR.

# Electronic Submittal Information

Main Menu | View/Add Facilities | Upload EDD | Check EDD

**SUCCESSFUL EDF CHECK - NO ERRORS**

| | |
|---|---|
| ORGANIZATION NAME: | URS Corporation-Oakland Office |
| USER NAME: | URSCORP-OAKLAND |
| DATE CHECKED: | 9/27/2004 5:00:28 PM |
| GLOBAL ID: | T0600100105 |
| FILE UPLOADED: | ARCO#6002-EDF-MNI0014.zip |

No errors were found in your EDF upload file.

**If you want to submit this file to the SWRCB, choose the "Upload EDD" option in the above menu and follow the instructions.**

When you complete the submittal process, you will be given a confirmation number for your submittal.

**Click here to view the detections report for this upload.**

**ARCO # 06002**
6235 SEMINARY AVE
OAKLAND, CA 94605

**Regional Board - Case #: 01-0113**
SAN FRANCISCO BAY RWQCB (REGION 2) - **(BG)**
**Local Agency (lead agency) - Case #: 3942**
ALAMEDA COUNTY LOP - **(UNK)**

## SAMPLE DETECTIONS REPORT

| | |
|---|---|
| # FIELD POINTS SAMPLED | 7 |
| # FIELD POINTS WITH DETECTIONS | 5 |
| # FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL | 2 |
| SAMPLE MATRIX TYPES | WATER |

## METHOD QA/QC REPORT

| | |
|---|---|
| METHODS USED | 8260FA |
| TESTED FOR REQUIRED ANALYTES? | N |
| MISSING PARAMETERS NOT TESTED: | |
| - 8260FA REQUIRES DBFM TO BE TESTED | |
| - 8260FA REQUIRES BR4FBZ TO BE TESTED | |
| - 8260FA REQUIRES BZMED8 TO BE TESTED | |
| LAB NOTE DATA QUALIFIERS | Y |

## QA/QC FOR 8021/8260 SERIES SAMPLES

| | |
|---|---|
| TECHNICAL HOLDING TIME VIOLATIONS | 0 |
| METHOD HOLDING TIME VIOLATIONS | 0 |
| LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT | 0 |
| LAB BLANK DETECTIONS | 0 |
| DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING? | |
| - LAB METHOD BLANK | Y |
| - MATRIX SPIKE | Y |
| - MATRIX SPIKE DUPLICATE | Y |

| | |
|---|---|
| - BLANK SPIKE | Y |
| - SURROGATE SPIKE | Y |

**WATER SAMPLES FOR 8021/8260 SERIES**

| | |
|---|---|
| MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135% | Y |
| MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30% | Y |
| SURROGATE SPIKES % RECOVERY BETWEEN 85-115% | Y |
| BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130% | Y |

**SOIL SAMPLES FOR 8021/8260 SERIES**

| | |
|---|---|
| MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135% | n/a |
| MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30% | n/a |
| SURROGATE SPIKES % RECOVERY BETWEEN 70-125% | n/a |
| BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130% | n/a |

**FIELD QC SAMPLES**

| SAMPLE | COLLECTED | DETECTIONS > REPDL |
|---|---|---|
| QCTB SAMPLES | N | 0 |
| QCEB SAMPLES | N | 0 |
| QCAB SAMPLES | N | 0 |

Logged in as URSCORP-OAKLAND (CONTRACTOR) CONTACT SITE ADMINISTRATOR.

# Electronic Submittal Information

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Your EDF file has been succcessfully uploaded!

**Confirmation Number:** 9308484137
**Date/Time of Submittal:** 9/27/2004 5:03:57 PM
**Facility Global ID:** T0600100105
**Facility Name:** ARCO # 06002
**Submittal Title:** 3Q04 GW Monitoring Site 6002
**Submittal Type:** GW Monitoring Report

**Click here to view the detections report for this upload.**

**ARCO # 06002**
6235 SEMINARY AVE
OAKLAND, CA 94605

**Regional Board - Case #: 01-0113**
SAN FRANCISCO BAY RWQCB (REGION 2) - **(BG)**
**Local Agency (lead agency) - Case #: 3942**
ALAMEDA COUNTY LOP - **(UNK)**

| CONF # | TITLE | QUARTER |
|---|---|---|
| 9308484137 | 3Q04 GW Monitoring Site 6002 | Q3 2004 |

| SUBMITTED BY | SUBMIT DATE | STATUS |
|---|---|---|
| Srijesh Thapa | 9/27/2004 | PENDING REVIEW |

## SAMPLE DETECTIONS REPORT

| | |
|---|---|
| # FIELD POINTS SAMPLED | 7 |
| # FIELD POINTS WITH DETECTIONS | 5 |
| # FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL | 2 |
| SAMPLE MATRIX TYPES | WATER |

## METHOD QA/QC REPORT

| | |
|---|---|
| METHODS USED | 8260FA |
| TESTED FOR REQUIRED ANALYTES? | N |
| MISSING PARAMETERS NOT TESTED: | |
| - 8260FA REQUIRES DBFM TO BE TESTED | |
| - 8260FA REQUIRES BR4FBZ TO BE TESTED | |
| - 8260FA REQUIRES BZMED8 TO BE TESTED | |
| LAB NOTE DATA QUALIFIERS | Y |

## QA/QC FOR 8021/8260 SERIES SAMPLES

| | |
|---|---|
| TECHNICAL HOLDING TIME VIOLATIONS | 0 |
| METHOD HOLDING TIME VIOLATIONS | 0 |
| LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT | 0 |
| LAB BLANK DETECTIONS | 0 |
| DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING? | |
| - LAB METHOD BLANK | Y |
| - MATRIX SPIKE | Y |
| - MATRIX SPIKE DUPLICATE | Y |
| - BLANK SPIKE | Y |
| - SURROGATE SPIKE | Y |

## WATER SAMPLES FOR 8021/8260 SERIES

| | |
|---|---|
| MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135% | Y |

| | |
|---|---|
| MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30% | Y |
| SURROGATE SPIKES % RECOVERY BETWEEN 85-115% | Y |
| BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130% | Y |

**SOIL SAMPLES FOR 8021/8260 SERIES**

| | |
|---|---|
| MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135% | n/a |
| MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30% | n/a |
| SURROGATE SPIKES % RECOVERY BETWEEN 70-125% | n/a |
| BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130% | n/a |

**FIELD QC SAMPLES**

| SAMPLE | COLLECTED | DETECTIONS > REPDL |
|---|---|---|
| QCTB SAMPLES | N | 0 |
| QCEB SAMPLES | N | 0 |
| QCAB SAMPLES | N | 0 |

Logged in as URSCORP-OAKLAND (CONTRACTOR) CONTACT SITE ADMINISTRATOR.