Atlantic Richfield Company
(a BP affiliated company)

P.O. Box 6549
Moraga, California 94570
Phone: (925) 299-8891
Fax: (925) 299-8872

July 6, 2005



**Re: Second Quarter 2005 Groundwater Monitoring Report**
**ARCO Service Station #2111**
**1156 Davis Street**
**San Leandro, California**
**File #R0-494/STID 774**

I declare, that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct.

Submitted by:

Paul Supple
Environmental Business Manager

URS

July 6, 2005

Ms. Donna Drogas
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

**Re: Second Quarter 2005 Groundwater Monitoring Report**
**ARCO Service Station #2111**
**1156 Davis Street**
**San Leandro, California**
**File #R0-494/STID 774**

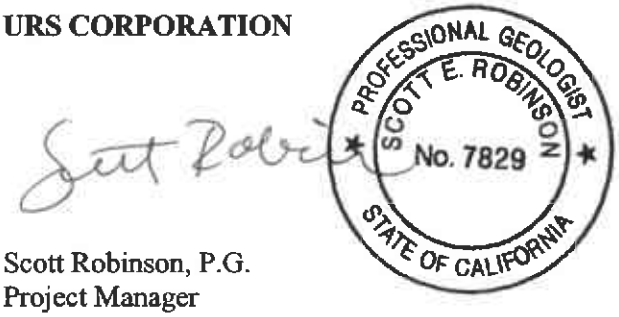
Dear Ms. Drogas:

On behalf of Atlantic Richfield Company, a BP affiliated company, URS Corporation (URS) is submitting the *Second Quarter 2005 Groundwater Monitoring Report* for ARCO Service Station #2111, located at 1156 Davis Street, San Leandro, California.

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

Sincerely,

**URS CORPORATION**




Scott Robinson, P.G.
Project Manager

Enclosure: Second Quarter 2005 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**

# SECOND QUARTER 2005 GROUNDWATER MONITORING REPORT

ARCO SERVICE STATION #2111
1156 DAVIS STREET
SAN LEANDRO, CALIFORNIA

*Prepared for*
RM

July 6, 2005

URS
URS Corporation
1333 Broadway, Suite 800
Oakland, California 94612

Date: July 6, 2005

Quarter: 2Q 05

# SECOND QUARTER 2005 GROUNDWATER MONITORING REPORT

| | | | |
|---|---|---|---|
| Facility No.: | 2111 | Address: | 1156 Davis Street, San Leandro, California |
| RM Environmental Business Manager: | | | Paul Supple |
| Consulting Co./Contact Person: | | | URS Corporation / Scott Robinson |
| Primary Agency: | | | Alameda County Environmental Health (ACEH) |
| File/Case #: | | | RO-494/ STID 744 |

**WORK PERFORMED THIS QUARTER (Second – 2005):**

1. Performed second quarter 2005 groundwater monitoring event on April 11, 2005.
2. Performed monthly free product bailing at well MW-2.
3. Prepared and submitted this Second Quarter 2005 Groundwater Monitoring Report

**WORK PROPOSED FOR NEXT QUARTER (Third – 2005):**

1. Perform third quarter 2005 groundwater monitoring event.
2. Prepare and submit Third Quarter 2005 Groundwater Monitoring Report.
3. Check MW-2 monthly for free product.
4. Start construction of Dual Phase Extraction/Groundwater Extraction treatment system.
5. Offsite investigation.

**SITE SUMMARY**

| | |
|---|---|
| Current Phase of Project: | Groundwater monitoring/sampling/interim remediation |
| Frequency of Groundwater Sampling: | Quarterly: Wells MW-1 through MW-5 and MW-8<br>Annually (3rd Quarter): MW-6 |
| Frequency of Groundwater Monitoring: | Quarterly |
| Is Free Product (FP) Present On-Site: | No |
| FP recovered this quarter (to 6/20/05): | 0 gallons |
| Cumulative FP Recovered from 6/28/99 to 6/20/05: | 1.44 gallons |
| Current Remediation Techniques: | Bailing free product as needed from MW-2 |
| Approximate Depth to Groundwater: | 12.05 (MW-6) to 14.82 (MW-1) feet |
| Groundwater Gradient (direction): | North to West |
| Groundwater Gradient (magnitude): | 0.009 to 0.01 feet per foot |

**DISCUSSION:**

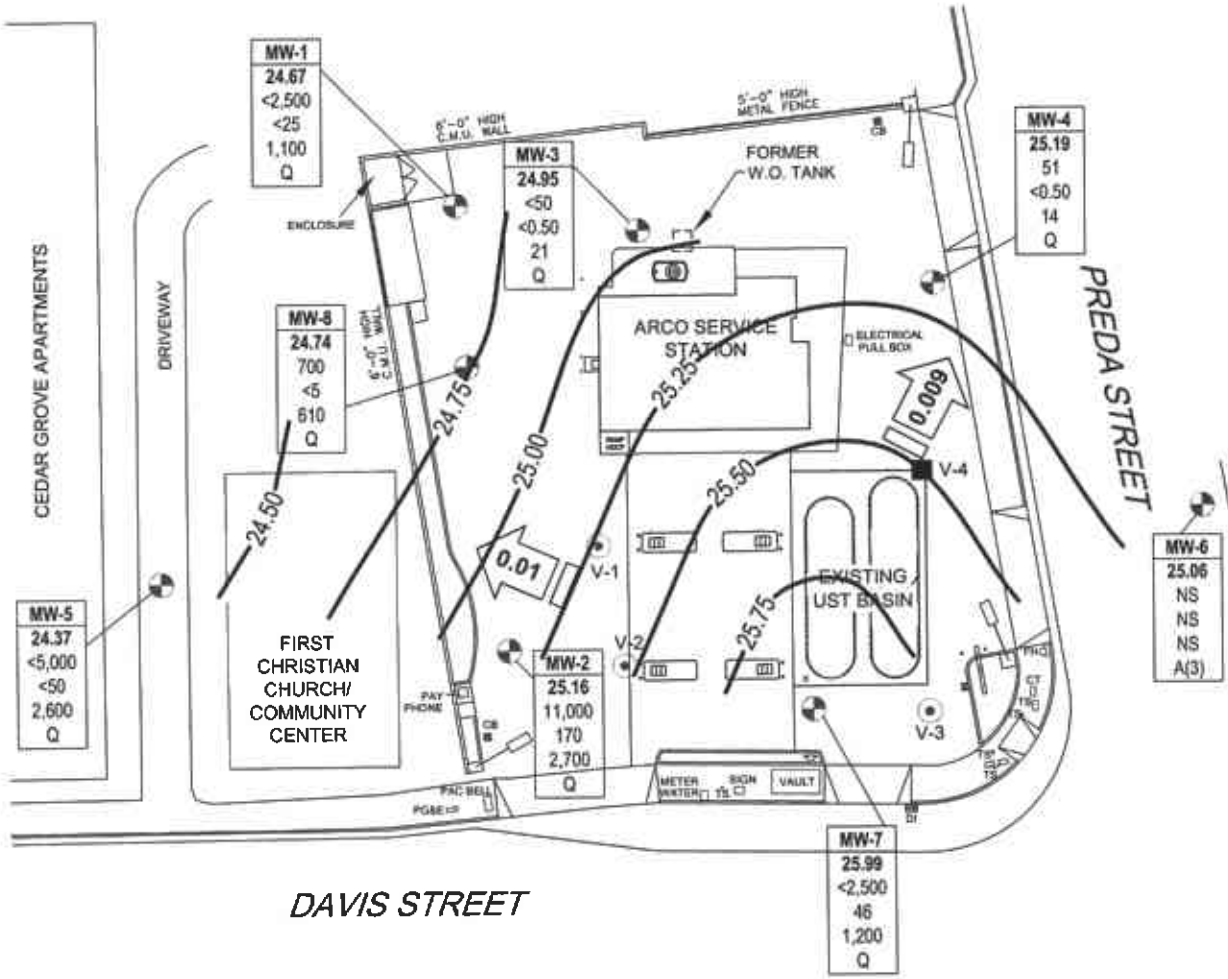
Gasoline range organics were detected at or above the laboratory reporting limits in three of the seven wells sampled this quarter at concentrations ranging from 51 µg/L (MW-4) to 11,000 µg/L (MW-2). Benzene was detected at or above the laboratory reporting limit in two wells at concentrations of 46 µg/L (MW-7) and 170 µg/L (MW-2). Ethylbenzene was detected at or above the laboratory reporting limit in one well at a concentration of 580 µg/L (MW-2). Xylenes were detected at or above the laboratory reporting limits in two wells at concentrations of

25 µg/L (MW-1) and 630 µg/L (MW-2). Methyl tert-butyl ether was detected at or above the laboratory reporting limit in all seven wells at concentrations ranging from 14 µg/L (MW-4) to 2,700 µg/L (MW-2). Tert-amyl methyl ether was detected at or above the laboratory reporting limit in four wells at concentrations ranging from 2.0 µg/L (MW-3) to 34 µg/L (MW-1). No other fuel components were detected at or above the laboratory reporting limits in wells sampled this quarter.

Free product monitoring events were conducted at well MW-2 on April 13, May 12, and June 20, 2005. No free product was recovered from well MW-2 during this quarter.

**ATTACHMENTS:**

- Figure 1 – Groundwater Elevation Contour and Analytical Summary Map – April 11, 2005
- Table 1 – Groundwater Elevation and Analytical Data
- Table 2 – Fuel Additive Analytical Data
- Table 3 –Groundwater Flow Direction and Gradient
- Table 4 – Approximate Cumulative Floating Product Recovered (1999 – Present)
- Attachment A – Field Procedures and Field Data Sheets
- Attachment B – Laboratory Procedures, Certified Analytical Reports and Chain-of-Custody Records
- Attachemnt C – Historical Groundwater Data
- Attachment D – Error Check Reports and EDF/Geowell Submittal Confirmations




**LEGEND**

- MONITORING WELL LOCATION
- VAPOR EXTRACTION WELL LOCATION
- DESTROYED WELL LOCATION
- Well — WELL DESIGNATION
- ELEV — GROUNDWATER ELEVATION (FT/MSL)
- GRO / Benzene / MTBE — CONCENTRATIONS OF GRO, BENZENE & MTBE IN MICROGRAMS PER LITER (µg/L)
- A/Q — SAMPLING FREQUENCY
- 0.01 — GROUNDWATER FLOW DIRECTION AND GRADIENT (FT/FT)
- 25.25 — GROUNDWATER ELEVATION CONTOUR (FT/MSL)
- Q — SAMPLED QUATERLY
- A(3) — SAMPLED ANNUALLY, THIRD QUARTER
- < — NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMIT
- NS — NOT SAMPLED

NORTH

0 40 80

SCALE IN FEET

NOTE: SITE MAP ADAPTED FROM DELTA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

| | | | |
|---|---|---|---|
| URS | Project No. 38487175<br>ARCO Service Station #2111<br>1156 Davis Street<br>San Leandro, California | GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL SUMMARY MAP<br>Second Quarter 2005 (April 11, 2005) | FIGURE<br>1 |

## Table 1

### Groundwater Elevation and Analytical Data

ARCO Service Station #2111

1156 Davis St, San Leandro, CA

| Well No. | Date | P/ NP | Footnotes/ Comments | TOC (ft MSL) | Top of Screen (ft bgs) | Bottom of Screen (ft bgs) | DTW (ft bgs) | GWE (ft MSL) | GRO/ TPH-g (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | MTBE (µg/L) | DO (mg/L) | pH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 6/26/2000 | -- | | 39.6 | 12.50 | 26.00 | 16.46 | 23.14 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 7/20/2000 | -- | | 39.6 | 12.50 | 26.00 | 16.89 | 22.71 | 360 | 110 | <0.5 | <0.5 | 2.7 | 2,100 | -- | -- |
| | 9/19/2000 | -- | | 39.6 | 12.50 | 26.00 | 17.62 | 21.98 | 290 | 76 | <0.5 | <0.5 | 2.3 | 1,500 | -- | -- |
| | 12/21/2000 | -- | | 39.6 | 12.50 | 26.00 | 17.39 | 22.21 | 257 | 64 | 2.89 | 1.31 | 4.57 | 1,080/1,060 | -- | -- |
| | 3/13/2001 | -- | | 39.6 | 12.50 | 26.00 | 15.70 | 23.90 | <500 | 52.5 | <5.0 | <5.0 | <5.0 | 1,430/1,370 | -- | -- |
| | 9/18/2001 | -- | | 39.6 | 12.50 | 26.00 | 18.24 | 21.36 | <500 | 64 | 7.3 | <5.0 | 52 | 810/1,100 | -- | -- |
| | 12/28/2001 | -- | | 39.6 | 12.50 | 26.00 | 15.95 | 23.65 | <500 | <5.0 | <5.0 | 5 | 22 | 1,200/1,100 | -- | -- |
| | 3/14/2002 | -- | | 39.6 | 12.50 | 26.00 | 16.01 | 23.59 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 34/40 | -- | -- |
| | 4/23/2002 | -- | | 39.6 | 12.50 | 26.00 | 15.43 | 24.17 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 30 | -- | -- |
| | 7/17/2002 | NP | | 39.6 | 12.50 | 26.00 | 17.50 | 22.10 | <50 | 1.2 | <0.50 | <0.50 | <0.50 | 29 | 6.9 | 6.9 |
| | 10/9/2002 | -- | c | 39.6 | 12.50 | 26.00 | 18.27 | 21.33 | 240 | 4.9 | <1.0 | 4.1 | 7.0 | 290 | 6.5 | 6.5 |
| | 1/13/2003 | -- | c | 39.6 | 12.50 | 26.00 | 15.37 | 24.23 | 760 | 34 | 11 | 17 | 56 | 300 | 6.8 | 6.8 |
| | 04/07/03 | -- | | 39.6 | 12.50 | 26.00 | 16.61 | 22.99 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 22 | 6.8 | 6.8 |
| | 7/9/2003 | -- | | 39.6 | 12.50 | 26.00 | 17.27 | 22.33 | <2,500 | <25 | <25 | <25 | <25 | 690 | 6.7 | 6.7 |
| | 02/05/2004 | NP | m | 39.49 | 12.50 | 26.00 | 16.28 | 23.21 | 2,800 | 31 | <25 | <25 | <25 | 1,100 | 0.90 | 6.5 |
| | 04/05/2004 | NP | | 39.49 | 12.50 | 26.00 | 16.25 | 23.24 | 5,800 | 46 | <25 | <25 | <25 | 1,700 | 1.0 | -- |
| | 07/13/2004 | NP | | 39.49 | 12.50 | 26.00 | 17.57 | 21.92 | <1,000 | <10 | <10 | <10 | <10 | 730 | 0.50 | 6.6 |
| | 11/04/2004 | NP | | 39.49 | 12.50 | 26.00 | 17.78 | 21.71 | 560 | <5.0 | <5.0 | <5.0 | <5.0 | 380 | 0.80 | 6.5 |
| | 01/20/2005 | NP | | 39.49 | 12.50 | 26.00 | 15.50 | 23.99 | 670 | <5.0 | <5.0 | <5.0 | <5.0 | 570 | 0.60 | 6.0 |
| | **04/11/2005** | **NP** | | **39.49** | **12.50** | **26.00** | **14.82** | **24.67** | **<2,500** | **<25** | **<25** | **<25** | **25** | **1,100** | **0.90** | **6.9** |
| MW-2 | 6/26/2000 | -- | a | 37.99 | 12.00 | 26.00 | 14.60 | 23.39 | -- | -- | -- | -- | -- | -- | -- | |
| | 7/20/2000 | -- | | 37.99 | 12.00 | 26.00 | 15.14 | 22.85 | 95,000 | 2,300 | 18,000 | 2,500 | 19,000 | 13,000 | -- | -- |
| | 9/19/2000 | -- | | 37.99 | 12.00 | 26.00 | 15.95 | 22.04 | 63,000 | 1,200 | 6,300 | 2,000 | 14,000 | 19,000 | -- | -- |
| | 12/21/00 | -- | b | 37.99 | 12.00 | 26.00 | -- | -- | 5,010 | 360 | 189 | 213 | 626 | 54,300/89,200 | -- | -- |
| | 12/21/2000 | -- | | 37.99 | 12.00 | 26.00 | 15.60 | 22.39 | 45,900 | -- | 2,130 | 1,160 | 9,460 | 22,400/24,700 | -- | -- |
| | 3/13/2001 | -- | b | 37.99 | 12.00 | 26.00 | -- | -- | <20,000 | 525 | 466 | 408 | 1,460 | 91,700/76,000 | -- | -- |
| | 3/13/2001 | -- | | 37.99 | 12.00 | 26.00 | 13.77 | 23.90 | 3,650 | 98.1 | <5.0 | <5.0 | 6.42 | 3,590/3,260 | -- | -- |
| | 9/18/2001 | -- | a | 37.99 | 12.00 | 26.00 | 16.86 | 21.13 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/28/2001 | -- | | 37.99 | 12.00 | 26.00 | 14.28 | 23.71 | 31,000 | 1,500 | 3,800 | 1,300 | 4,800 | 9,300/8,800 | -- | -- |
| | 3/14/2002 | -- | | 37.99 | 12.00 | 26.00 | 14.15 | 23.84 | 1,800 | 25 | 43 | 43 | 270 | 990/960 | -- | -- |
| | 4/23/2002 | -- | | 37.99 | 12.00 | 26.00 | 13.60 | 24.39 | 9,000 | 220 | 110 | 470 | 2,500 | 8,500 | -- | -- |

## Table 1

### Groundwater Elevation and Analytical Data

ARCO Service Station #2111
1156 Davis St, San Leandro, CA

| Well No. | Date | P/ NP | Footnotes/ Comments | TOC (ft MSL) | Top of Screen (ft bgs) | Bottom of Screen (ft bgs) | DTW (ft bgs) | GWE (ft MSL) | GRO/ TPH-g (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | MTBE (µg/L) | DO (mg/L) | pH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-2 | 7/17/2002 | NP | a, c | 37.99 | 12.00 | 26.00 | 15.75 | -- | 74,000 | 280 | 290 | 820 | 10,000 | 19,000/0.4 | 6.8 | 6.8 |
| | 10/9/02 | NP | g | 37.99 | 12.00 | 26.00 | 16.69 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 1/13/03 | -- | g, h | 37.99 | 12.00 | 26.00 | 13.59 | 24.61 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 04/07/03 | -- | g, h | 37.99 | 12.00 | 26.00 | 14.70 | 23.69 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 07/09/03 | -- | g, h | 37.99 | 12.00 | 26.00 | 15.48 | 22.57 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 02/05/2004 | NP | g,m | 37.86 | 12.00 | 26.00 | 14.43 | 23.53 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 04/05/2004 | NP | | 37.86 | 12.00 | 26.00 | 14.35 | 23.51 | 2,300 | 33 | <5.0 | <5.0 | 200 | 750 | 0.60 | -- |
| | 07/13/2004 | NP | | 37.86 | 12.00 | 26.00 | 15.79 | 22.07 | 59,000 | 380 | <50 | 2,100 | 7,900 | 5,800 | 0.30 | 6.4 |
| | 08/31/2004 | -- | | 37.86 | 12.00 | 26.00 | 15.89 | 21.97 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 11/04/2004 | -- | g, h | 37.86 | 12.00 | 26.00 | 15.92 | 21.94 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 01/20/2005 | NP | o | 37.86 | 12.00 | 26.00 | 13.71 | 24.15 | 30,000 | 450 | <50 | 1,300 | 3,300 | 7,000 | 0.70 | 6.2 |
| | **04/11/2005** | **NP** | | **37.86** | **12.00** | **26.00** | **12.70** | **25.16** | **11,000** | **170** | **<50** | **580** | **630** | **2,700** | **0.90** | **6.8** |
| MW-3 | 6/26/2000 | -- | | 39.32 | 12.00 | 26.00 | 15.96 | 23.36 | -- | -- | -- | -- | -- | -- | -- | NA |
| | 7/20/2000 | -- | | 39.32 | 12.00 | 26.00 | 16.42 | 22.90 | <50 | <0.5 | <0.5 | <0.5 | <1.0 | 130 | -- | -- |
| | 9/19/2000 | -- | | 39.32 | 12.00 | 26.00 | 17.18 | 22.14 | 190 | 17 | <0.5 | 1.4 | 2.4 | 160 | -- | -- |
| | 12/21/2000 | -- | | 39.32 | 12.00 | 26.00 | 16.97 | 22.35 | 187 | 17.8 | <0.5 | 2.47 | 2.5 | 143/125 | -- | -- |
| | 3/13/2001 | -- | | 39.32 | 12.00 | 26.00 | 15.17 | 24.15 | 72.4 | 2.83 | <0.5 | <0.5 | <0.5 | 126/122 | -- | -- |
| | 9/18/2001 | -- | | 39.32 | 12.00 | 26.00 | 17.81 | 21.51 | 140 | 6.4 | <0.5 | 3.5 | 1.6 | 110/75 | -- | -- |
| | 12/28/2001 | -- | | 39.32 | 12.00 | 26.00 | 15.44 | 23.88 | 130 | 5.9 | <0.5 | 0.99 | 0.55 | 90/63 | -- | -- |
| | 3/14/2002 | -- | | 39.32 | 12.00 | 26.00 | 15.50 | 23.82 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 100/88 | -- | -- |
| | 4/23/2002 | -- | | 39.32 | 12.00 | 26.00 | 14.96 | 24.36 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 77 | -- | -- |
| | 7/17/2002 | NP | | 39.32 | 12.00 | 26.00 | 17.09 | 22.23 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 47 | 7.2 | 7.2 |
| | 10/9/2002 | NP | | 39.32 | 12.00 | 26.00 | 17.87 | 21.45 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 26/29 | 7.2 | 7.2 |
| | 1/13/2003 | NP | l (Toluene and MTBE) | 39.32 | 12.00 | 26.00 | 14.78 | 24.54 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 59 | 6.8 | 6.8 |
| | 04/07/03 | NP | | 39.32 | 12.00 | 26.00 | 16.15 | 23.17 | 88 | <0.50 | <0.50 | <0.50 | <0.50 | 75 | 7.0 | 7.0 |
| | 7/9/2003 | -- | | 39.32 | 12.00 | 26.00 | 16.79 | 22.53 | 100 | <0.50 | <0.50 | <0.50 | <0.50 | 52 | 6.5 | 6.5 |
| | 02/05/2004 | NP | m | 39.19 | 11.90 | 26.00 | 15.66 | 23.53 | 240 | <0.50 | <0.50 | <0.50 | <0.50 | 37 | 0.50 | -- |
| | 04/05/2004 | NP | | 39.19 | 11.90 | 26.00 | 15.78 | 23.41 | 140 | <0.50 | <0.50 | <0.50 | 0.60 | 53 | 1.0 | 6.6 |
| | 07/13/2004 | NP | | 39.19 | 11.90 | 26.00 | 17.20 | 21.99 | 120 | <0.50 | <0.50 | <0.50 | <0.50 | 35 | 0.80 | 6.7 |
| | 11/04/2004 | NP | | 39.19 | 11.90 | 26.00 | 17.32 | 21.87 | 160 | <0.50 | <0.50 | <0.50 | <0.50 | 25 | 0.80 | 6.5 |
| | 01/20/2005 | NP | | 39.19 | 11.90 | 26.00 | 15.07 | 24.12 | 160 | <0.50 | <0.50 | <0.50 | <0.50 | 27 | 0.60 | 6.1 |
| | **04/11/2005** | **NP** | | **39.19** | **11.90** | **26.00** | **14.24** | **24.95** | **<50** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **21** | **0.60** | **6.1** |
| MW-4 | 6/26/2000 | -- | | 38.1 | 10.00 | 24.00 | 14.59 | 23.51 | -- | -- | -- | -- | -- | -- | -- | NA |

## Table 1

### Groundwater Elevation and Analytical Data

ARCO Service Station #2111

1156 Davis St, San Leandro, CA

| Well No. | Date | P/ NP | Footnotes/ Comments | TOC (ft MSL) | Top of Screen (ft bgs) | Bottom of Screen (ft bgs) | DTW (ft bgs) | GWE (ft MSL) | GRO/ TPH-g (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | MTBE (µg/L) | DO (mg/L) | pH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-4 | 7/20/2000 | -- | | 38.1 | 10.00 | 24.00 | 15.04 | 23.06 | 97 | 7.9 | <0.5 | <0.5 | 1.1 | 51 | -- | -- |
| | 9/19/2000 | -- | | 38.1 | 10.00 | 24.00 | 15.83 | 22.27 | 110 | 7 | <0.5 | <0.5 | <1.0 | 60 | -- | -- |
| | 12/21/2000 | -- | | 38.1 | 10.00 | 24.00 | 15.59 | 22.51 | 120 | 5.6 | <0.5 | 1.72 | <0.5 | 46.3/48.6 | -- | -- |
| | 3/13/2001 | -- | | 38.1 | 10.00 | 24.00 | 13.73 | 24.37 | 76 | 0.796 | <0.5 | <0.5 | <0.5 | 53.7/50 | -- | -- |
| | 9/18/2001 | -- | | 38.1 | 10.00 | 24.00 | 16.50 | 21.60 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 25/26 | -- | -- |
| | 12/28/2001 | -- | | 38.1 | 10.00 | 24.00 | 14.03 | 24.07 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 15/11 | -- | -- |
| | 3/14/2002 | -- | | 38.1 | 10.00 | 24.00 | 14.10 | 24.00 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 31/28 | -- | -- |
| | 4/23/2002 | -- | | 38.1 | 10.00 | 24.00 | 13.57 | 24.53 | <50 | 2.8 | <0.5 | <0.5 | <0.5 | 42 | -- | -- |
| | 7/17/2002 | NP | | 38.1 | 10.00 | 24.00 | 15.76 | 22.34 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 16 | 7.1 | 7.1 |
| | 10/9/2002 | NP | | 38.1 | 10.00 | 24.00 | 16.59 | 21.51 | <50 | 2.2 | <0.50 | <0.50 | <0.50 | 20/23 | 7.1 | 7.1 |
| | 1/13/2003 | NP | d | 38.1 | 10.00 | 24.00 | 13.43 | 24.67 | 52 | <0.50 | 1.6 | <0.50 | <0.50 | 22 | 6.6 | 6.6 |
| | 04/07/03 | NP | | 38.1 | 10.00 | 24.00 | 14.74 | 23.36 | 65 | <0.50 | <0.50 | <0.50 | <0.50 | 24 | 6.6 | 6.6 |
| | 7/9/2003 | -- | | 38.1 | 10.00 | 24.00 | 15.44 | 22.66 | 120 | <0.50 | <0.50 | <0.50 | <0.50 | 34 | 6.6 | 6.6 |
| | 02/05/2004 | NP | m | 37.99 | 10.00 | 24.00 | 14.39 | 23.60 | 120 | <0.50 | <0.50 | <0.50 | <0.50 | 22 | 0.50 | 6.6 |
| | 04/05/2004 | NP | | 37.99 | 10.00 | 24.00 | 14.37 | 23.62 | 110 | <0.50 | <0.50 | <0.50 | <0.50 | 27 | 1.10 | 6.5 |
| | 07/13/2004 | NP | | 37.99 | 10.00 | 24.00 | 15.96 | 22.03 | 77 | <0.50 | <0.50 | <0.50 | <0.50 | 27 | 0.60 | 6.6 |
| | 11/04/2004 | NP | | 37.99 | 10.00 | 24.00 | 16.02 | 21.97 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 19 | 1.20 | 6.7 |
| | 01/20/2005 | NP | | 37.99 | 10.00 | 24.00 | 13.72 | 24.27 | 65 | <0.50 | <0.50 | <0.50 | <0.50 | 18 | 0.60 | 6.1 |
| | **04/11/2005** | **NP** | | **37.99** | **10.00** | **24.00** | **12.80** | **25.19** | **51** | **<0.50** | **<0.50** | **<0.50** | **<0.50** | **14** | **0.70** | **6.2** |
| MW-5 | 6/26/2000 | -- | | 37.21 | 9.50 | 23.50 | 14.27 | 22.94 | -- | -- | -- | -- | -- | -- | -- | |
| | 7/20/2000 | -- | | 37.21 | 9.50 | 23.50 | 14.69 | 22.52 | 55 | <0.5 | <0.5 | <0.5 | <1.0 | 14,000 | -- | -- |
| | 9/19/2000 | -- | | 37.21 | 9.50 | 23.50 | 15.36 | 21.85 | 54 | <0.5 | <0.5 | <0.5 | <1.0 | 13,000 | -- | -- |
| | 12/21/2000 | -- | | 37.21 | 9.50 | 23.50 | 15.15 | 22.06 | 72.9 | 2.51 | <0.5 | <0.5 | 0.961 | 19,200/21,200 | -- | -- |
| | 3/13/2001 | -- | | 37.21 | 9.50 | 23.50 | 13.50 | 23.71 | <500 | <5 | <5 | <5 | <5 | 15,900/20,000 | -- | -- |
| | 9/18/2001 | -- | | 37.21 | 9.50 | 23.50 | 15.94 | 21.27 | <10,000 | <100 | <100 | <100 | <1,000 | 22,000/20,000 | -- | -- |
| | 12/28/2001 | -- | | 37.21 | 9.50 | 23.50 | 13.45 | 23.76 | <10,000 | <100 | <100 | <100 | <100 | 10,000/10,000 | -- | -- |
| | 3/14/2002 | -- | | 37.21 | 9.50 | 23.50 | 13.82 | 23.39 | <5,000 | <50 | <50 | <50 | <50 | 7,100/7,700 | -- | -- |
| | 4/23/2002 | -- | | 37.21 | 9.50 | 23.50 | 13.25 | 23.96 | <5,000 | <50 | <50 | <50 | <50 | 8,900 | -- | -- |
| | 7/17/2002 | NP | d | 37.21 | 9.50 | 23.50 | 15.27 | 21.94 | 7,900 | <50 | <50 | <50 | <50 | 13,000 | 7.5 | 7.5 |
| | 10/9/2002 | NP | e | 37.21 | 9.50 | 23.50 | 16.02 | 21.19 | 2,400 | <20 | <20 | <20 | <20 | 7,300/7,500 | 6.7 | 6.7 |

## Table 1

### Groundwater Elevation and Analytical Data

ARCO Service Station #2111
1156 Davis St, San Leandro, CA

| Well No. | Date | P/ NP | Footnotes/ Comments | TOC (ft MSL) | Top of Screen (ft bgs) | Bottom of Screen (ft bgs) | DTW (ft bgs) | GWE (ft MSL) | GRO/ TPH-g (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | MTBE (µg/L) | DO (mg/L) | pH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-5 | 1/13/2003 | NP | e, k, j (benzene and total xylenes) | 37.21 | 9.50 | 23.50 | 13.20 | 24.01 | 6,400 | <50 | <50 | <50 | <50 | 8,900 | 6.8 | 6.8 |
| | 04/07/03 | NP | | 37.21 | 9.50 | 23.50 | 14.42 | 22.79 | <10,000 | <100 | <100 | <100 | <100 | 3,700 | 6.8 | 6.8 |
| | 7/9/2003 | -- | | 37.21 | 9.50 | 23.50 | 15.01 | 22.20 | 11,000 | <50 | <50 | <50 | <50 | 6,500 | 6.9 | 6.9 |
| | 02/05/2004 | NP | m | 37.12 | 9.00 | 23.50 | 14.10 | 23.02 | 8,100 | <50 | <50 | <50 | <50 | 7,900 | 1.50 | -- |
| | 04/05/2004 | NP | | 37.12 | 9.00 | 23.50 | 14.14 | 22.98 | 4,000 | <25 | <25 | <25 | <25 | 2,000 | 1.0 | 6.6 |
| | 07/13/2004 | NP | | 37.12 | 9.00 | 23.50 | 15.37 | 21.75 | <5,000 | <50 | <50 | <50 | <50 | 4,000 | 0.80 | 6.7 |
| | 11/04/2004 | NP | | 37.12 | 9.00 | 23.50 | 15.53 | 21.59 | 7,400 | <50 | <50 | <50 | <50 | 6,300 | 3.50 | 6.7 |
| | 01/20/2005 | NP | n | 37.12 | 9.00 | 23.50 | 13.51 | 23.61 | 6,500 | <50 | <50 | <50 | <50 | 6,900 | 0.70 | 6.5 |
| | **04/11/2005** | **NP** | | **37.12** | **9.00** | **23.50** | **12.75** | **24.37** | **<5,000** | **<50** | **<50** | **<50** | **<50** | **2,600** | **0.50** | **7.0** |
| MW-6 | 6/26/2000 | -- | | 37.11 | 10.00 | 25.00 | 13.46 | 23.65 | -- | -- | -- | -- | -- | -- | -- | NA |
| | 7/20/2000 | -- | | 37.11 | 10.00 | 25.00 | 13.94 | 23.17 | <50 | <0.5 | <0.5 | <0.5 | <1.0 | <3.0 | -- | -- |
| | 9/19/2000 | -- | | 37.11 | 10.00 | 25.00 | 14.41 | 22.70 | <50 | <0.5 | <0.5 | <0.5 | <1.0 | <3.0 | -- | -- |
| | 12/21/2000 | -- | | 37.11 | 10.00 | 25.00 | 14.53 | 22.58 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | -- | -- |
| | 3/13/2001 | -- | | 37.11 | 10.00 | 25.00 | 12.67 | 24.44 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | -- | -- |
| | 9/18/2001 | -- | | 37.11 | 10.00 | 25.00 | 15.42 | 21.69 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5/<2.0 | -- | -- |
| | 12/28/2001 | -- | | 37.11 | 10.00 | 25.00 | 12.96 | 24.15 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 12/<0.5 | -- | -- |
| | 3/14/2002 | -- | | 37.11 | 10.00 | 25.00 | 12.98 | 24.13 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | -- | -- |
| | 4/23/2002 | -- | | 37.11 | 10.00 | 25.00 | 12.44 | 24.67 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 3.1 | -- | -- |
| | 7/17/2002 | NP | | 37.11 | 10.00 | 25.00 | 14.65 | 22.46 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | 7.3 | 7.3 |
| | 10/9/2002 | NP | | 37.11 | 10.00 | 25.00 | 15.51 | 21.60 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | 7.1 | 7.1 |
| | 1/13/2003 | NP | | 37.11 | 10.00 | 25.00 | 12.27 | 24.84 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | 6.8 | 6.8 |
| | 04/07/03 | NP | | 37.11 | 10.00 | 25.00 | 13.61 | 23.50 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | 6.6 | 6.6 |
| | 7/9/2003 | -- | | 37.11 | 10.00 | 25.00 | 14.34 | 22.77 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | 7 | 7.0 |
| | 02/05/2004 | -- | m | 37.11 | 10.00 | 25.00 | 13.38 | 23.73 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 04/05/2004 | -- | | 37.11 | 10.00 | 25.00 | 13.31 | 23.80 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 07/13/2004 | NP | | 37.11 | 10.00 | 25.00 | 14.65 | 22.46 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | 2.70 | 6.8 |
| | 11/04/2004 | -- | | 37.11 | 10.00 | 25.00 | 14.95 | 22.16 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 01/20/2005 | -- | | 37.11 | 10.00 | 25.00 | 12.57 | 24.54 | -- | -- | -- | -- | -- | -- | -- | -- |
| | **04/11/2005** | -- | | **37.11** | **10.00** | **25.00** | **12.05** | **25.06** | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-7 | 6/26/2000 | -- | | 38.68 | 12.00 | 27.00 | 14.34 | 24.34 | -- | -- | -- | -- | -- | -- | -- | |
| | 7/20/2000 | -- | | 38.68 | 12.00 | 27.00 | 15.26 | 23.42 | 14,000 | 5.4 | <0.5 | 2.8 | 5.9 | 71,000 | -- | -- |
| | 9/19/2000 | -- | | 38.68 | 12.00 | 27.00 | 15.70 | 22.98 | 8,400 | 420 | 38 | 470 | 220 | 5,600 | -- | -- |

## Table 1

### Groundwater Elevation and Analytical Data

ARCO Service Station #2111

1156 Davis St, San Leandro, CA

| Well No. | Date | P/ NP | Footnotes/ Comments | TOC (ft MSL) | Top of Screen (ft bgs) | Bottom of Screen (ft bgs) | DTW (ft bgs) | GWE (ft MSL) | GRO/ TPH-g (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Total Xylenes (µg/L) | MTBE (µg/L) | DO (mg/L) | pH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-7 | 12/21/2000 | -- | | 38.68 | 12.00 | 27.00 | 16.02 | 22.66 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 3/13/2001 | -- | | 38.68 | 12.00 | 27.00 | 14.18 | 24.50 | <2,000 | 154 | 63 | 46.3 | 127 | 175,000/160,000 | -- | -- |
| | 9/18/2001 | -- | | 38.68 | 12.00 | 27.00 | 17.02 | 21.66 | <100,000 | 1,900 | <1,000 | <1,000 | 2,800 | 190,000/370,000 | -- | -- |
| | 12/28/2001 | -- | | 38.68 | 12.00 | 27.00 | 14.81 | 23.87 | <20,000 | <200 | <200 | <200 | <200 | 84,000/72,000 | -- | -- |
| | 3/14/2002 | -- | | 38.68 | 12.00 | 27.00 | 14.60 | 24.08 | <50,000 | <500 | <500 | <500 | <500 | 85,000/85,000 | -- | -- |
| | 4/23/2002 | -- | | 38.68 | 12.00 | 27.00 | 13.94 | 24.74 | <20,000 | 530 | 200 | 220 | 800 | 67,000 | -- | -- |
| | 7/17/2002 | NP | d | 38.68 | 12.00 | 27.00 | 16.27 | 22.41 | 26,000 | 720 | <250 | <250 | 860 | 120,000 | 6.9 | 6.9 |
| | 10/9/2002 | NP | d | 38.68 | 12.00 | 27.00 | 17.16 | 21.52 | 110,000 | 1,500 | 4,400 | 820 | 5,400 | 97,000/120,000 | 6.8 | 6.8 |
| | 1/13/2003 | NP | f (TPH-g, BTEX, MTBE) | 38.68 | 12.00 | 27.00 | 13.82 | 24.86 | <50,000 | <500 | <500 | <500 | 2,200 | 33,000 | 6.6 | 6.6 |
| | 04/07/03 | NP | | 38.68 | 12.00 | 27.00 | 14.52 | 24.16 | <2,500 | 30 | <25 | <25 | <25 | 710 | 7.0 | 7.0 |
| | 7/9/2003 | -- | | 38.68 | 12.00 | 27.00 | 15.97 | 22.71 | 66,000 | <500 | <500 | <500 | <500 | 36,000 | 6.7 | 6.7 |
| | 02/05/2004 | NP | m | 38.54 | 12.00 | 27.00 | 14.75 | 23.79 | 55,000 | 300 | <250 | <250 | <250 | 34,000 | 1.0 | 6.7 |
| | 04/05/2004 | NP | | 38.54 | 12.00 | 27.00 | 14.63 | 23.91 | 62,000 | 520 | <250 | <250 | 380 | 37,000 | 1.0 | 6.7 |
| | 07/13/2004 | NP | | 38.54 | 12.00 | 27.00 | 16.31 | 22.23 | <100,000 | <1,000 | <1,000 | <1,000 | <1,000 | 56,000 | 0.70 | 6.7 |
| | 11/04/2004 | -- | | 38.54 | 12.00 | 27.00 | 16.46 | 22.08 | 70,000 | <500 | <500 | <500 | <500 | 71,000 | 2.0 | 6.6 |
| | 01/20/2005 | NP | n | 38.54 | 12.00 | 27.00 | 14.05 | 24.49 | 34,000 | <250 | <250 | <250 | <250 | 36,000 | 0.60 | 6.3 |
| | **04/11/2005** | **NP** | | **38.54** | **12.00** | **27.00** | **12.55** | **25.99** | **<2,500** | **46** | **<25** | **<25** | **<25** | **1,200** | **0.70** | **6.8** |
| MW-8 | 02/05/2004 | P | m | 38.91 | 18.00 | 38.00 | 15.61 | 23.30 | 3,600 | <25 | <25 | <25 | <25 | 1,900 | 6.90 | 6.8 |
| | 04/05/2004 | P | | 38.91 | 18.00 | 38.00 | 15.64 | 23.27 | 1,900 | <10 | <10 | <10 | <10 | 1,200 | 3.20 | 6.7 |
| | 07/13/2004 | P | | 38.91 | 18.00 | 38.00 | 17.22 | 21.69 | <1,000 | <10 | <10 | <10 | <10 | 760 | 1.60 | 6.7 |
| | 11/04/2004 | P | | 38.91 | 18.00 | 38.00 | 17.19 | 21.72 | 960 | <5.0 | <5.0 | <5.0 | <5.0 | 820 | 1.80 | 6.7 |
| | 01/20/2005 | P | | 38.91 | 18.00 | 38.00 | 15.25 | 23.66 | <2,500 | <25 | <25 | <25 | <25 | 1,400 | 1.50 | 6.4 |
| | **04/11/2005** | **P** | | **38.91** | **18.00** | **38.00** | **14.17** | **24.74** | **700** | **<5.0** | **<5.0** | **<5.0** | **<5.0** | **610** | **1.10** | **7.1** |

## Table 1

## Groundwater Elevation and Analytical Data

ARCO Service Station #2111
1156 Davis St, San Leandro, CA

ABBREVIATIONS:
-- = Not analyzed/applicable/measured/available
< = Not detected at or above laboratory reporting limit
DO = Dissolved oxygen
DTW = Depth to water in feet below ground surface
ft bgs = feet below ground surface
ft MSL = feet above mean sea level
GRO = Gasoline Range Organics, range C4-C12
GWE = Groundwater elevation measured in feet above mean sea level
mg/L = Milligrams per liter
MTBE = Methyl tert butyl ether
NP = Not Purged
P = Purge
TOC = Top of casing measured in feet above mean sea level
TPH-g = Total petroleum hydrocarbons as gasoline
ug/L = Micrograms per liter

FOOTNOTES:
a = Product sheen noted
b = Well was sampled after batch extraction event.
c = Chromatogram Pattern: Gasoline C6-C10 for GRO/TPH-g.
d = Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel for GRO/TPH-g.
e = Discrete peak @C6-C7 for GRO/TPH-g.
f = This sample was analyzed beyond the EPA recommended holding time. The results may still be useful for their intended purpose.
g = Well not sampled due to the detection of free product.
h = Groundwater elevation adjusted for free product: (thickness of free product x 0.8) + measured groundwater elevation
j = The closing calibration was outside acceptance limits by 1%. This should be considered in evaluating the result. The average % difference for all analytes met the 15% requirement and the QC suggests that calibration linearity is not a factor.
k = The closing calibration was outside acceptance limits by 6%. This should be considered in evaluating the result. The average % difference for all analytes met the 15% requirement and the QC suggests that calibration linearity is not a factor.
l = This analyte was not confirmed using a secondary column in accordance to client contract.
m = TOC elevations re-surveyed to NAVD '88 on February 23, 2004.
n = Hydrocarbon result partly due to indiv. peak(s) in quant. range.
o = Light to moderate sheen

NOTES:
Beginning with the second quarter 2003 sampling event (04/07/03), TPH-g, BTEX, and MTBE analyzed by EPA method 8260B. Prior to 04/07/03, TPH-g was analyzed by EPA method 8015 modified and MTBE was analyzed by EPA methods 8020/ 8260B.

Beginning in the fourth quarter 2003, the laboratory modified the reported analyte list. Total petroleum hydrocarbons as gasoline (TPHg) has been changed to gasoline range organics (GRO). The resulting data may be impacted by the potential of non-TPHg analytes within the requested fuel range resulting in a higher concentration being reported.

Beginning in the second quarter 2004, the carbon range for GRO was changed from C6-C10 to C4-C12.

Values for dissolved oxygen (DO) and pH were obtained through field measurements.

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

## Table 2

### Fuel Additives Analytical Data

ARCO Service Station #2111
1156 Davis St, San Leandro, 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) | Footnotes/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 4/7/2003 | <100 | <20 | 1,100 | <0.50 | <0.50 | <0.50 | -- | -- | |
| | 7/9/2003 | <5,000 | <1,000 | 690 | <25 | <25 | <25 | -- | -- | |
| | 02/05/2004 | <5,000 | <1,000 | 1,100 | <25 | <25 | 32 | <25 | <25 | |
| | 04/05/2004 | <5,000 | <1,000 | 1,700 | <25 | <25 | 38 | <25 | <25 | a |
| | 07/13/2004 | <2,000 | 780 | 730 | <10 | <10 | 19 | <10 | <10 | a |
| | 11/04/2004 | <1,000 | <200 | 380 | <5.0 | <5.0 | 12 | <5.0 | <5.0 | |
| | 01/20/2005 | <1,000 | <200 | 570 | <5.0 | <5.0 | 17 | <5.0 | <5.0 | a |
| | **04/11/2005** | **<5,000** | **<1,000** | **1,100** | **<25** | **<25** | **34** | **<25** | **<25** | |
| MW-2 | 04/05/2004 | <1,000 | <200 | 750 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | |
| | 07/13/2004 | <10,000 | 12,000 | 5,800 | <50 | <50 | <50 | <50 | <50 | a |
| | 01/20/2005 | <10,000 | <2,000 | 7,000 | <50 | <50 | <50 | <50 | <50 | a |
| | **04/11/2005** | **<10,000** | **<2,000** | **2,700** | **<50** | **<50** | **<50** | **<50** | **<50** | |
| MW-3 | 4/7/2003 | <100 | <20 | 75 | <0.50 | <0.50 | 6.5 | -- | -- | |
| | 7/9/2003 | <100 | <20 | 52 | <0.50 | <0.50 | 4.2 | -- | -- | |
| | 02/05/2004 | <100 | <20 | 37 | <0.50 | <0.50 | 3.1 | <0.50 | <0.50 | |
| | 04/05/2004 | <100 | <20 | 53 | <0.50 | <0.50 | 3.7 | <0.50 | <0.50 | a |
| | 07/13/2004 | <100 | 44 | 35 | <0.50 | <0.50 | 3.2 | <0.50 | <0.50 | |
| | 11/04/2004 | <100 | <20 | 25 | <0.50 | <0.50 | 2.2 | <0.50 | <0.50 | |
| | 01/20/2005 | <100 | <20 | 27 | <0.50 | <0.50 | 2.6 | <0.50 | <0.50 | |
| | **04/11/2005** | **<100** | **<20** | **21** | **<0.50** | **<0.50** | **2.0** | **<0.50** | **<0.50** | |
| MW-4 | 4/7/2003 | <100 | <20 | 24 | <0.50 | <0.50 | 7.3 | -- | -- | |
| | 7/9/2003 | <100 | <20 | 34 | <0.50 | <0.50 | 9.8 | -- | -- | |
| | 02/05/2004 | <100 | <20 | 22 | <0.50 | <0.50 | 6.2 | <0.50 | <0.50 | |
| | 04/05/2004 | <100 | <20 | 27 | <0.50 | <0.50 | 7.2 | <0.50 | <0.50 | a |
| | 07/13/2004 | <100 | 26 | 27 | <0.50 | <0.50 | 7.4 | <0.50 | <0.50 | a |
| | 11/04/2004 | <100 | <20 | 19 | <0.50 | <0.50 | 5.1 | <0.50 | <0.50 | |
| | 01/20/2005 | <100 | <20 | 18 | <0.50 | <0.50 | 5.2 | <0.50 | <0.50 | |
| | **04/11/2005** | **<100** | **<20** | **14** | **<0.50** | **<0.50** | **4.0** | **<0.50** | **<0.50** | |
| MW-5 | 4/7/2003 | <20,000 | <4,000 | 3,700 | <100 | <100 | <100 | -- | -- | |
| | 7/9/2003 | <10,000 | <2,000 | 6,500 | <50 | <50 | <50 | -- | -- | |
| | 02/05/2004 | <10,000 | <2,000 | 7,900 | <50 | <50 | <50 | <50 | <50 | a |
| | 04/05/2004 | <5,000 | <1,000 | 2,000 | <25 | <25 | <25 | <25 | <25 | a |

## Table 2

### Fuel Additives Analytical Data

ARCO Service Station #2111
1156 Davis St, San Leandro, 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) | Footnotes/ Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| MW-5 | 07/13/2004 | <10,000 | 3,200 | 4,000 | <50 | <50 | <50 | <50 | <50 | a |
| | 11/04/2004 | <10,000 | <2,000 | 6,300 | <50 | <50 | <50 | <50 | <50 | |
| | 01/20/2005 | <10,000 | <2,000 | 6,900 | <50 | <50 | <50 | <50 | <50 | a |
| | **04/11/2005** | **<10,000** | **3,600** | **2,600** | **<50** | **<50** | **<50** | **<50** | **<50** | |
| MW-6 | 4/7/2003 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | |
| | 7/9/2003 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | |
| | 07/13/2004 | <100 | <20 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | a |
| MW-7 | 4/7/2003 | <5,000 | <1,000 | 710 | <25 | <25 | <25 | -- | -- | |
| | 7/9/2003 | <100,000 | <20,000 | 36,000 | <500 | <500 | <500 | -- | -- | |
| | 02/05/2004 | <50,000 | <10,000 | 34,000 | <250 | <250 | <250 | <250 | <250 | |
| | 04/05/2004 | <50,000 | <10,000 | 37,000 | <250 | <250 | <250 | <250 | <250 | |
| | 07/13/2004 | <200,000 | <40,000 | 56,000 | <1,000 | <1,000 | 1,300 | <1,000 | <1,000 | |
| | 11/04/2004 | <100,000 | <20,000 | 71,000 | <500 | <500 | <500 | <500 | <500 | |
| | 01/20/2005 | <50,000 | <10,000 | 36,000 | <250 | <250 | <250 | <250 | <250 | a |
| | **04/11/2005** | **<5,000** | **<1,000** | **1,200** | **<25** | **<25** | **<25** | **<25** | **<25** | |
| MW-8 | 02/05/2004 | <5,000 | <1,000 | 1,900 | <25 | <25 | <25 | <25 | <25 | |
| | 04/05/2004 | <2,000 | <400 | 1,200 | <10 | <10 | 12 | <10 | <10 | a |
| | 07/13/2004 | <2,000 | 770 | 760 | <10 | <10 | <10 | <10 | <10 | a |
| | 11/04/2004 | <1,000 | <200 | 820 | <5.0 | <5.0 | 9.6 | <5.0 | <5.0 | |
| | 01/20/2005 | <5,000 | <1,000 | 1,400 | <25 | <25 | <25 | <25 | <25 | a |
| | **04/11/2005** | **<1,000** | **<200** | **610** | **<5.0** | **<5.0** | **8.1** | **<5.0** | **<5.0** | |

## Table 2

### Fuel Additives Analytical Data

ARCO Service Station #2111
1156 Davis St, San Leandro, CA

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

FOOTNOTES:
a = The continuing calibration verification for ethanol was outside of client contractual acceptance limits. However, it was within method aceptance limits. The data should still be useful for its intended purpose.

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

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

## Table 3

### Groundwater Gradient Data

ARCO Service Station #2111
1156 Davis St, San Leandro, CA

| Date Sampled | Approximate Flow Direction | Approximate Hydraulic Gradient |
|---|---|---|
| 07/20/2000 | West-Northwest | 0.006 |
| 09/19/2000 | West-Northwest | 0.004 |
| 12/21/2000 | West-Northwest | 0.004 |
| 03/13/2001 | West-Northwest | 0.005 |
| 05/30/2001 | West-Northwest | 0.004 |
| 09/18/2001 | West-Northwest | 0.003 |
| 12/28/2001 | West-Northwest | 0.003 |
| 03/14/2002 | West | 0.004 |
| 04/23/2002 | West | 0.006 |
| 07/17/2002 | West | 0.003 |
| 10/09/2002 | West | 0.002 |
| 01/13/2003 | Southwest | 0.0043 |
| 04/07/2003 | West-Northwest | 0.009-0.011 |
| 07/09/2003 | West-Northwest | 0.004 |
| 10/01/2003 | West | 0.002 |
| 02/05/2004 | West | 0.004 |
| 04/05/2004 | West-Southwest | 0.004 |
| 07/13/2004 | West-Southwest | 0.003 |
| 11/04/2004 | West | 0.003 |
| 01/20/2005 | West | 0.009 |
| **04/11/2005** | **North to West** | **0.009 to 0.01** |

Note: The data within this table collected prior to July 2002 was provided to URS by RM and their previous consultants. URS has not verified the accuracy of this information.

**Table 4**
**Approximate Cumulative Floating Product Recovered**
**(1999 - present)**

ARCO Service Station #2111
1156 Davis Street, San Leandro California

| Well Designation | Product Recovery Field Date | Floating Product Thickness (feet) | Floating Product Recovered (gallons) |
|---|---|---|---|
| MW-2 | 06/28/99 | 0.45 | 0.30 |
| MW-2 | 06/30/99 | 0.015 | 0.01 |
| MW-2 | 07/07/99 | 0.06 | 0.04 |
| MW-2 | 07/23/99 | 0.008 | 0.01 |
| MW-2 | 08/25/99 | 0.02 | 0.01 |
| MW-2 | 09/21/99 | 0.01 | 0.01 |
| MW-2 | 11/10/99 | ND | 0.00 |
| MW-2 | 02/09/00 | ND | 0.00 |
| MW-2 | 04/23/02 | ND | 0.00 |
| MW-2 | 07/17/02 | Sheen | 0.00 |
| MW-2 | 10/9/2002 (1) | NA | 0.00 |
| MW-2 | 01/13/03 | 0.26 | 0.13 |
| MW-2 | 02/14/03 | ND | 0.00 |
| MW-2 | 03/24/03 | ND | 0.00 |
| MW-2 | 04/07/03 | 0.05 | 0.00 |
| MW-2 | 05/23/03 | ND | 0.00 |
| MW-2 | 06/24/03 | 0.03 | 0.01 |
| MW-2 | 07/09/03 | 0.07 | 0.03 |
| MW-2 | 07/31/03 | 0.05 | 0.03 |
| MW-2 | 09/04/03 | 0.02 | 0.01 |
| MW-2 | 10/01/03 | 0.07 | 0.02 |
| MW-2 | 11/12/03 | 0.59 | 0.36 |
| MW-2 | 12/11/03 | 0.05 | 0.07 |
| MW-2 | 02/05/04 | 0.13 | 0.02 |
| MW-2 | 02/16/04 | 0.02 | 0.01 |
| MW-2 | 03/11/04 | ND | 0.00 |
| MW-2 | 03/30/04 | ND | 0.00 |
| MW-2 | 04/05/04 | ND | 0.00 |
| MW-2 | 07/13/04 | ND | 0.00 |
| MW-2 | 08/31/04 | ND | 0.00 |
| MW-2 | 09/07/04 | ND | 0.00 |
| MW-2 | 11/04/04 | 0.22 | 0.14 |
| MW-2 | 11/29/04 | 0.02 | 0.05 |
| MW-2 | 12/15/04 | 0.24 | 0.16 |
| MW-2 | 01/20/05 | ND | 0.00 |
| MW-2 | 02/04/05 | Sheen | 0.00 |
| MW-2 | 03/23/05 | Sheen | 0.00 |
| **MW-2** | **04/11/05** | **ND** | **0.00** |
| **MW-2** | **05/12/05** | **ND** | **0.00** |
| **MW-2** | **06/20/05** | **ND** | **0.00** |
| **Approximate Cumulative Floating Product:** | | | **1.44** |

FOOTNOTES:
1) Free product encountered, but unable to gauge.

# 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 # 050411-MT1 Date 4/11/05 Client 211

Site 1156 Davis St., San Leandro

| 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~~ | NP - |
|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 4 | | | | | 14.92 | 26.20 | | 12.5 |
| MW-2 | 4 | | NO SPH | | | 12.70 | — | | 12 |
| MW-3 | 4 | | | | | 14.24 | 26.65 | | 11.9 |
| MW-4 | 4 | | | | | 12.80 | 21.65 | | 10 |
| MW-5 | 2 | | | | | 12.75 | 23.80 | | MT to 9.4 |
| MW-6 | 2 | | | | | 12.05 | 25.00 | | MT 2.4 to 10 |
| MW-7 | 4 | | | | | 12.55 | 27.20 | | MT to 12 |
| MW-8 | 2 | | | | | 14.17 | 39.75 | ⊥ | MT |
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# ARCO / BP WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 050411-MT1 | Station # 2111 |
| Sampler: MT | Date: 4/11/05 |
| Well I.D.: MW-1 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth: 26.10 | Depth to Water: 14.32 |
| 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: 12.5 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 No Purge (Specified Volumes) = ___ Gals. (Calculated Volume)

| Time | Temp (°F) | pH | Conductivity (mS or µS) | Gals. Removed | Observations |
|---|---|---|---|---|---|
| 1025 | 70.3 | 6.9 | 7k | — | Odor |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

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

Sampling Time: 1025 Sampling Date: 4/11/05

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

Analyzed for: GRO BTEX MTBE DRO Other: Refer to COC

| | | | | | |
|---|---|---|---|---|---|
| D.O. (if req'd): | Pre-purge: | mg/L | (Post-purge:) | 0.9 | mg/L |
| O.R.P. (if req'd): | Pre-purge: | mV | Post-purge: | | mV |

# ARCO / BP WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 050411-MT1 | Station # [redacted] 2111 |
| Sampler: MT | Date: 4/11/05 |
| Well I.D.: MW-2 | Well Diameter: 2 3 (4) 6 8 ____ |
| Total Well Depth: — | Depth to Water: 12.70 |
| 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: 12'

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 No Purge (Specified Volumes) = ____ (Calculated Volume) Gals.

| Time | Temp (°F) | pH | Conductivity (mS or µS) | Gals. Removed | Observations |
|---|---|---|---|---|---|
| 1050 | 70.1 | 6.8 | 924 | — | Odor |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

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

Sampling Time: 1050 Sampling Date: 4/11/05

Sample I.D.: MW-2 Laboratory: Pace (Sequoia) Other____

Analyzed for: GRO BTEX MTBE DRO Other: Refer to COC

| | | | | | |
|---|---|---|---|---|---|
| D.O. (if req'd): | Pre-purge: | mg/L | Post-purge: | 0.9 | mg/L |
| O.R.P. (if req'd): | Pre-purge: | mV | Post-purge: | | mV |

# ARCO / BP WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 050411-MT | Station # 2111 |
| Sampler: MT | Date: 4/11/05 |
| Well I.D.: MW-3 | Well Diameter: 2 3 (4) 6 8 ____ |
| Total Well Depth: 26.65 | Depth to Water: 14.24 |
| 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: 11.9

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 No Purge (Specified Volumes) = ____ Gals. (Calculated Volume)

| Time | Temp (°F) | pH | Conductivity (mS or µS) | Gals. Removed | Observations |
|---|---|---|---|---|---|
| 1015 | 68.9 | 6.1 | 720 | — | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

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

Sampling Time: 1015 Sampling Date: 4/11/05

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

Analyzed for: GRO BTEX MTBE DRO Other: Refer to COC

| | | | | |
|---|---|---|---|---|
| D.O. (if req'd): | Pre-purge: | mg/L | (Post-purge): | 0.6 mg/L |
| O.R.P. (if req'd): | Pre-purge: | mV | Post-purge: | mV |

# ARCO / BP WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 05041-MT1 | Station # 2111 |
| Sampler: MT | Date: 4/11/05 |
| Well I.D.: MW-4 | Well Diameter: 2 3 (4) 6 8 ____ |
| Total Well Depth: 21.65 | Depth to Water: 12.90 |
| 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: 10

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 No Purge (Specified Volumes) = ____ Gals. (Calculated Volume)

| Time | Temp (°F) | pH | Conductivity (mS or µS) | Gals. Removed | Observations |
|---|---|---|---|---|---|
| 1000 | 66.7 | 6.2 | 768 | — | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

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

Sampling Time: 1000 Sampling Date: 4/11/05

Sample I.D.: MW-4 Laboratory: Pace (Sequoia) Other ____

Analyzed for: (GRO) (BTEX) MTBE DRO Other: DIPE, EDB, 1,2 DCA & Ethanol

| | | | | | |
|---|---|---|---|---|---|
| D.O. (if req'd): | Pre-purge: | | mg/L | Post-purge: | 0.7 mg/L |
| O.R.P. (if req'd): | Pre-purge: | | mV | Post-purge: | mV |

# ARCO / BP WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 050411-MT1 | Station # 211 |
| Sampler: MT | Date: 4/11/05 |
| Well I.D.: MW-5 | Well Diameter: (2) 3 4 6 8 ____ |
| Total Well Depth: 23.90 | Depth to Water: 12.75 |
| 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: 9.4

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 No Purge (Specified Volumes) = ____ Gals. (Calculated Volume)

| Time | Temp (°F) | pH | Conductivity (mS or µS) | Gals. Removed | Observations |
|---|---|---|---|---|---|
| 1105 | 69.9 | 7.0 | 900 | — | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

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

Sampling Time: 1105 Sampling Date: 4/11/05

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

Analyzed for: GRO BTEX MTBE DRO Other: Refer to COC

| | | | | |
|---|---|---|---|---|
| D.O. (if req'd): | Pre-purge: | mg/L | Post-purge: | 0.5 mg/L |
| O.R.P. (if req'd): | Pre-purge: | mV | Post-purge: | mV |

# ARCO / BP WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 150411-MT | Station # 2111 |
| Sampler: MT | Date: 4/11/05 |
| Well I.D.: MW-7 | Well Diameter: 2 3 (4) 6 8 ____ |
| Total Well Depth: 27.20 | Depth to Water: 12.55 |
| 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: 12'

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 No Purge (Specified Volumes) = ____ Gals. (Calculated Volume)

| Time | Temp (°F) | pH | Conductivity (mS or µS) | Gals. Removed | Observations |
|---|---|---|---|---|---|
| 1055 | 70.2 | 6.8 | 721 | — | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

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

Sampling Time: 1055 Sampling Date: 4/11/05

Sample I.D.: MW-7 Laboratory: Pace (Sequoia) Other____

Analyzed for: GRO BTEX MTBE DRO Other: Refer to COC

| | | | | |
|---|---|---|---|---|
| D.O. (if req'd): | Pre-purge: | mg/L | Post-purge: | 0.7 mg/L |
| O.R.P. (if req'd): | Pre-purge: | mV | Post-purge: | mV |

# ARCO / BP WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 050411-MT1 | Station # 2111 |
| Sampler: MK | Date: 4/11/05 |
| Well I.D.: MW-3 | Well Diameter: (2) 3 4 6 8 ____ |
| Total Well Depth: 39.75 | Depth to Water: 14.17 |
| 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.

4 (1 Case Volume (Gals.)) X 3 (Specified Volumes) = 12 (Calculated Volume) Gals.

| Time | Temp (°F) | pH | Conductivity (mS or µS) | Gals. Removed | Observations |
|---|---|---|---|---|---|
| 1030 | 69.7 | 6.9 | 800 | 4 | Clear |
| 1035 | 69.5 | 7.0 | 850 | 8 | " |
| 1039 | 69.4 | 7.1 | 847 | 12 | " |
| | | | | | |
| | | | | | |

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

Sampling Time: 1045 Sampling Date: 4/11/05

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

Analyzed for: GRO BTEX MTBE DRO Other: Refer to COC

| | | | | | |
|---|---|---|---|---|---|
| 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:

2111

Station #

1156 Davis St., San Leandro

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

12

added equip. rinse water 1

any other adjustments _____

**TOTAL GALS. RECOVERED** 13

loaded onto BTS vehicle # 62

BTS event # 050411-MT1

time 1130

date 4/11/05

signature J Hall

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

REC'D AT

time

date

_____ _____ ___/___/___

unloaded by signature _____

# WELL GAUGING DATA

Project # 050512-DW-4 Date 5-12-05 Client Arco 2111

Site 1156 Davis St San Leandro

| 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-2 | 4 | No | SPH detected | | | 13.52 | - | TOC | |
| | | | | | | | | | |
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# ARCO / BP WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 050512-DW-4 | Station # 2111 |
| Sampler: DW | Date: 5-12-05 |
| Well I.D.: MW-2 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth: — | Depth to Water: 13.52 |
| 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.

_____ (1 Case Volume (Gals.)) x Check SPH (Specified Volumes) = _____ Gals. (Calculated Volume)

| Time | Temp (°F) | pH | Conductivity (mS or µS) | Gals. Removed | Observations |
|---|---|---|---|---|---|
| | | No | SPH detected | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| | | | |
|---|---|---|---|
| Did well dewater? Yes No | | Gallons actually evacuated: | |
| Sampling Time: | | Sampling Date: | |
| Sample I.D.: | | Laboratory: Pace Sequoia Other_____ | |
| Analyzed for: GRO BTEX MTBE DRO | | 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 |

# WELL GAUGING DATA

Project # 050620-PM2 Date 6-20-05 Client Arco 2111

Site 1156 Davis

| 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-2 | 4 | no | sph | detected | | 14.06 | - | | |
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# ARCO / BP WELL MONITORING DATA SHEET

| | |
|---|---|
| BTS #: 050620-PM2 | Station # ARCO 2111 |
| Sampler: PM | Date: 6-22-05 |
| Well I.D.: MW-2 | Well Diameter: 2 3 (4) 6 8 ___ |
| Total Well Depth: | Depth to Water: 14.06 |
| 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.

_____ (1 Case Volume (Gals.)) x check SPH (Specified Volumes) = _____ Gals. (Calculated Volume)

| Time | Temp (°F) | pH | Conductivity (mS or µS) | Gals. Removed | Observations |
|---|---|---|---|---|---|
| | | No SPH Detected | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| | | | |
|---|---|---|---|
| Did well dewater? Yes No | | Gallons actually evacuated: | |
| Sampling Time: | | Sampling Date: | |
| Sample I.D.: | | Laboratory: Pace (Sequoia) Other _____ | |
| Analyzed for: GRO BTEX MTBE DRO | | 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 |

# 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.

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29 April, 2005

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

RE: ARCO #2111, San Leandro, CA
Work Order: MOD0298

Enclosed are the results of analyses for samples received by the laboratory on 04/12/05 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race
Senior Project Manager

CA ELAP Certificate #1210

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| | | |
|---|---|---|
| URS Corporation [Arco] | Project:ARCO #2111, San Leandro, CA | MOD0298 |
| 1333 Broadway, Suite 800 | Project Number:G0C28-0004 | **Reported:** |
| Oakland CA, 94612 | Project Manager:Scott Robinson | 04/29/05 17:52 |

**ANALYTICAL REPORT FOR SAMPLES**

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| MW-1 | MOD0298-01 | Water | 04/11/05 10:25 | 04/12/05 16:00 |
| MW-2 | MOD0298-02 | Water | 04/11/05 10:50 | 04/12/05 16:00 |
| MW-3 | MOD0298-03 | Water | 04/11/05 10:15 | 04/12/05 16:00 |
| MW-4 | MOD0298-04 | Water | 04/11/05 10:00 | 04/12/05 16:00 |
| MW-5 | MOD0298-05 | Water | 04/11/05 11:05 | 04/12/05 16:00 |
| MW-7 | MOD0298-06 | Water | 04/11/05 10:55 | 04/12/05 16:00 |
| MW-8 | MOD0298-07 | Water | 04/11/05 10:45 | 04/12/05 16:00 |
| TB0411052111 | MOD0298-08 | Water | 04/11/05 00:00 | 04/12/05 16:00 |

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 intact custody seals.

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| | | |
|---|---|---|
| URS Corporation [Arco] | Project:ARCO #2111, San Leandro, CA | MOD0298 |
| 1333 Broadway, Suite 800 | Project Number:G0C28-0004 | **Reported:** |
| Oakland CA, 94612 | Project Manager:Scott Robinson | 04/29/05 17:52 |

## Volatile Organic Compounds by EPA Method 8260B

## Sequoia Analytical - Morgan Hill

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-1 (MOD0298-01) Water Sampled: 04/11/05 10:25 Received: 04/12/05 16:00** | | | | | | | | | |
| **tert-Amyl methyl ether** | **34** | 25 | ug/l | 50 | 5D22004 | 04/22/05 | 04/22/05 | EPA 8260B | |
| Benzene | ND | 25 | " | " | " | " | " | " | |
| tert-Butyl alcohol | ND | 1000 | " | " | " | " | " | " | |
| Di-isopropyl ether | ND | 25 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 25 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 25 | " | " | " | " | " | " | |
| Ethanol | ND | 5000 | " | " | " | " | " | " | |
| Ethyl tert-butyl ether | ND | 25 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 25 | " | " | " | " | " | " | |
| **Methyl tert-butyl ether** | **1100** | 25 | " | " | " | " | " | " | |
| Toluene | ND | 25 | " | " | " | " | " | " | |
| **Xylenes (total)** | **25** | 25 | " | " | " | " | " | " | |
| Gasoline Range Organics (C4-C12) | ND | 2500 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *102 %* | | *60-135* | " | " | " | " | |
| **MW-2 (MOD0298-02) Water Sampled: 04/11/05 10:50 Received: 04/12/05 16:00** | | | | | | | | | |
| tert-Amyl methyl ether | ND | 50 | ug/l | 100 | 5D22004 | 04/22/05 | 04/22/05 | EPA 8260B | |
| **Benzene** | **170** | 50 | " | " | " | " | " | " | |
| tert-Butyl alcohol | ND | 2000 | " | " | " | " | " | " | |
| Di-isopropyl ether | ND | 50 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 50 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 50 | " | " | " | " | " | " | |
| Ethanol | ND | 10000 | " | " | " | " | " | " | |
| Ethyl tert-butyl ether | ND | 50 | " | " | " | " | " | " | |
| **Ethylbenzene** | **580** | 50 | " | " | " | " | " | " | |
| **Methyl tert-butyl ether** | **2700** | 50 | " | " | " | " | " | " | |
| Toluene | ND | 50 | " | " | " | " | " | " | |
| **Xylenes (total)** | **630** | 50 | " | " | " | " | " | " | |
| **Gasoline Range Organics (C4-C12)** | **11000** | 5000 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *87 %* | | *60-135* | " | " | " | " | |

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|---|---|---|
| URS Corporation [Arco] | Project:ARCO #2111, San Leandro, CA | MOD0298 |
| 1333 Broadway, Suite 800 | Project Number:G0C28-0004 | **Reported:** |
| Oakland CA, 94612 | Project Manager:Scott Robinson | 04/29/05 17:52 |

## Volatile Organic Compounds by EPA Method 8260B

### Sequoia Analytical - Morgan Hill

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-3 (MOD0298-03) Water Sampled: 04/11/05 10:15 Received: 04/12/05 16:00** | | | | | | | | | |
| **tert-Amyl methyl ether** | **2.0** | 0.50 | ug/l | 1 | 5D22004 | 04/22/05 | 04/22/05 | 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** | **21** | 0.50 | " | " | " | " | " | " | |
| Toluene | ND | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.50 | " | " | " | " | " | " | |
| Gasoline Range Organics (C4-C12) | ND | 50 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *83 %* | *60-135* | | " | " | " | " | |
| **MW-4 (MOD0298-04) Water Sampled: 04/11/05 10:00 Received: 04/12/05 16:00** | | | | | | | | | |
| **tert-Amyl methyl ether** | **4.0** | 0.50 | ug/l | 1 | 5D22004 | 04/22/05 | 04/22/05 | 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** | **14** | 0.50 | " | " | " | " | " | " | |
| Toluene | ND | 0.50 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.50 | " | " | " | " | " | " | |
| **Gasoline Range Organics (C4-C12)** | **51** | 50 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *102 %* | *60-135* | | " | " | " | " | |

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| 1333 Broadway, Suite 800 | Project Number:G0C28-0004 | **Reported:** |
| Oakland CA, 94612 | Project Manager:Scott Robinson | 04/29/05 17:52 |

## Volatile Organic Compounds by EPA Method 8260B

## Sequoia Analytical - Morgan Hill

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-5 (MOD0298-05) Water Sampled: 04/11/05 11:05 Received: 04/12/05 16:00** | | | | | | | | | |
| tert-Amyl methyl ether | ND | 50 | ug/l | 100 | 5D22004 | 04/22/05 | 04/22/05 | EPA 8260B | |
| Benzene | ND | 50 | " | " | " | " | " | " | |
| **tert-Butyl alcohol** | **3600** | 2000 | " | " | " | " | " | " | |
| Di-isopropyl ether | ND | 50 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 50 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 50 | " | " | " | " | " | " | |
| Ethanol | ND | 10000 | " | " | " | " | " | " | |
| Ethyl tert-butyl ether | ND | 50 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 50 | " | " | " | " | " | " | |
| **Methyl tert-butyl ether** | **2600** | 50 | " | " | " | " | " | " | |
| Toluene | ND | 50 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 50 | " | " | " | " | " | " | |
| Gasoline Range Organics (C4-C12) | ND | 5000 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *103 %* | *60-135* | | " | " | " | " | |
| **MW-7 (MOD0298-06) Water Sampled: 04/11/05 10:55 Received: 04/12/05 16:00** | | | | | | | | | |
| tert-Amyl methyl ether | ND | 25 | ug/l | 50 | 5D22004 | 04/22/05 | 04/22/05 | EPA 8260B | |
| **Benzene** | **46** | 25 | " | " | " | " | " | " | |
| tert-Butyl alcohol | ND | 1000 | " | " | " | " | " | " | |
| Di-isopropyl ether | ND | 25 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 25 | " | " | " | " | " | " | |
| 1,2-Dichloroethane | ND | 25 | " | " | " | " | " | " | |
| Ethanol | ND | 5000 | " | " | " | " | " | " | |
| Ethyl tert-butyl ether | ND | 25 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 25 | " | " | " | " | " | " | |
| **Methyl tert-butyl ether** | **1200** | 25 | " | " | " | " | " | " | |
| Toluene | ND | 25 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 25 | " | " | " | " | " | " | |
| Gasoline Range Organics (C4-C12) | ND | 2500 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *102 %* | *60-135* | | " | " | " | " | |

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| URS Corporation [Arco] | Project:ARCO #2111, San Leandro, CA | MOD0298 |
| 1333 Broadway, Suite 800 | Project Number:G0C28-0004 | **Reported:** |
| Oakland CA, 94612 | Project Manager:Scott Robinson | 04/29/05 17:52 |

## Volatile Organic Compounds by EPA Method 8260B

### Sequoia Analytical - Morgan Hill

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW-8 (MOD0298-07) Water** | **Sampled: 04/11/05 10:45** | **Received: 04/12/05 16:00** | | | | | | | |
| **tert-Amyl methyl ether** | **8.1** | 5.0 | ug/l | 10 | 5D22004 | 04/22/05 | 04/22/05 | EPA 8260B | |
| Benzene | ND | 5.0 | " | " | " | " | " | " | |
| tert-Butyl alcohol | ND | 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 | ND | 5.0 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 5.0 | " | " | " | " | " | " | |
| **Methyl tert-butyl ether** | **610** | 5.0 | " | " | " | " | " | " | |
| Toluene | ND | 5.0 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 5.0 | " | " | " | " | " | " | |
| **Gasoline Range Organics (C4-C12)** | **700** | 500 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *96 %* | *60-135* | | " | " | " | " | |

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|---|---|---|
| URS Corporation [Arco] | Project:ARCO #2111, San Leandro, CA | MOD0298 |
| 1333 Broadway, Suite 800 | Project Number:G0C28-0004 | **Reported:** |
| Oakland CA, 94612 | Project Manager:Scott Robinson | 04/29/05 17:52 |

## 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 5D22004 - EPA 5030B P/T / EPA 8260B** | | | | | | | | | | |
| **Blank (5D22004-BLK1)** | | | | Prepared & Analyzed: 04/22/05 | | | | | | |
| 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* | *4.72* | | " | *5.00* | | *94* | *78-129* | | | |
| **Laboratory Control Sample (5D22004-BS1)** | | | | Prepared & Analyzed: 04/22/05 | | | | | | |
| tert-Amyl methyl ether | 10.4 | 0.50 | ug/l | 10.0 | | 104 | 82-140 | | | |
| Benzene | 9.36 | 0.50 | " | 10.0 | | 94 | 69-124 | | | |
| tert-Butyl alcohol | 51.0 | 20 | " | 50.0 | | 102 | 56-131 | | | |
| Di-isopropyl ether | 11.0 | 0.50 | " | 10.0 | | 110 | 76-130 | | | |
| 1,2-Dibromoethane (EDB) | 9.96 | 0.50 | " | 10.0 | | 100 | 77-132 | | | |
| 1,2-Dichloroethane | 10.6 | 0.50 | " | 10.0 | | 106 | 77-136 | | | |
| Ethanol | 200 | 100 | " | 200 | | 100 | 31-143 | | | |
| Ethyl tert-butyl ether | 11.3 | 0.50 | " | 10.0 | | 113 | 81-121 | | | |
| Ethylbenzene | 9.27 | 0.50 | " | 10.0 | | 93 | 84-132 | | | |
| Methyl tert-butyl ether | 11.1 | 0.50 | " | 10.0 | | 111 | 63-137 | | | |
| Toluene | 11.0 | 0.50 | " | 10.0 | | 110 | 78-129 | | | |
| Xylenes (total) | 28.7 | 0.50 | " | 30.0 | | 96 | 83-137 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *4.98* | | " | *5.00* | | *100* | *78-129* | | | |

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|---|---|---|
| URS Corporation [Arco] | Project:ARCO #2111, San Leandro, CA | MOD0298 |
| 1333 Broadway, Suite 800 | Project Number:G0C28-0004 | **Reported:** |
| Oakland CA, 94612 | Project Manager:Scott Robinson | 04/29/05 17:52 |

## 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 5D22004 - EPA 5030B P/T / EPA 8260B** | | | | | | | | | | |
| **Laboratory Control Sample (5D22004-BS2)** | | | | Prepared & Analyzed: 04/22/05 | | | | | | |
| Benzene | 5.22 | 0.50 | ug/l | 6.40 | | 82 | 69-124 | | | |
| Ethylbenzene | 7.43 | 0.50 | " | 7.52 | | 99 | 84-132 | | | |
| Methyl tert-butyl ether | 9.87 | 0.50 | " | 9.92 | | 99 | 63-137 | | | |
| Toluene | 34.7 | 0.50 | " | 31.9 | | 109 | 78-129 | | | |
| Xylenes (total) | 37.5 | 0.50 | " | 36.6 | | 102 | 83-137 | | | |
| Gasoline Range Organics (C4-C12) | 353 | 50 | " | 440 | | 80 | 70-124 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *5.01* | | " | *5.00* | | *100* | *78-129* | | | |
| **Laboratory Control Sample Dup (5D22004-BSD1)** | | | | Prepared & Analyzed: 04/22/05 | | | | | | |
| tert-Amyl methyl ether | 9.81 | 0.50 | ug/l | 10.0 | | 98 | 82-140 | 6 | 20 | |
| Benzene | 10.0 | 0.50 | " | 10.0 | | 100 | 69-124 | 7 | 20 | |
| tert-Butyl alcohol | 54.3 | 20 | " | 50.0 | | 109 | 56-131 | 6 | 20 | |
| Di-isopropyl ether | 10.9 | 0.50 | " | 10.0 | | 109 | 76-130 | 0.9 | 20 | |
| 1,2-Dibromoethane (EDB) | 9.64 | 0.50 | " | 10.0 | | 96 | 77-132 | 3 | 20 | |
| 1,2-Dichloroethane | 10.1 | 0.50 | " | 10.0 | | 101 | 77-136 | 5 | 20 | |
| Ethanol | 203 | 100 | " | 200 | | 102 | 31-143 | 1 | 20 | |
| Ethyl tert-butyl ether | 10.6 | 0.50 | " | 10.0 | | 106 | 81-121 | 6 | 20 | |
| Ethylbenzene | 9.79 | 0.50 | " | 10.0 | | 98 | 84-132 | 5 | 20 | |
| Methyl tert-butyl ether | 10.1 | 0.50 | " | 10.0 | | 101 | 63-137 | 9 | 20 | |
| Toluene | 11.1 | 0.50 | " | 10.0 | | 111 | 78-129 | 0.9 | 20 | |
| Xylenes (total) | 29.8 | 0.50 | " | 30.0 | | 99 | 83-137 | 4 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *4.63* | | " | *5.00* | | *93* | *78-129* | | | |
| **Matrix Spike (5D22004-MS1)** | **Source: MOD0298-05** | | | Prepared & Analyzed: 04/22/05 | | | | | | |
| Benzene | 509 | 50 | ug/l | 640 | ND | 80 | 69-124 | | | |
| Ethylbenzene | 710 | 50 | " | 752 | ND | 94 | 84-132 | | | |
| Methyl tert-butyl ether | 3340 | 50 | " | 992 | 2600 | 75 | 63-137 | | | |
| Toluene | 3270 | 50 | " | 3190 | ND | 103 | 78-129 | | | |
| Xylenes (total) | 3560 | 50 | " | 3660 | ND | 97 | 83-137 | | | |
| Gasoline Range Organics (C4-C12) | 35200 | 5000 | " | 44000 | 4200 | 70 | 70-124 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *5.12* | | " | *5.00* | | *102* | *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 #2111, San Leandro, CA | MOD0298 |
| 1333 Broadway, Suite 800 | Project Number:G0C28-0004 | **Reported:** |
| Oakland CA, 94612 | Project Manager:Scott Robinson | 04/29/05 17:52 |

## 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 5D22004 - EPA 5030B P/T / EPA 8260B** | | | | | | | | | | |
| **Matrix Spike Dup (5D22004-MSD1)** | **Source: MOD0298-05** | | | Prepared & Analyzed: 04/22/05 | | | | | | |
| Benzene | 539 | 50 | ug/l | 640 | ND | 84 | 69-124 | 6 | 20 | |
| Ethylbenzene | 749 | 50 | " | 752 | ND | 100 | 84-132 | 5 | 20 | |
| Methyl tert-butyl ether | 3100 | 50 | " | 992 | 2600 | 50 | 63-137 | 7 | 20 | LN |
| Toluene | 3360 | 50 | " | 3190 | ND | 105 | 78-129 | 3 | 20 | |
| Xylenes (total) | 3870 | 50 | " | 3660 | ND | 106 | 83-137 | 8 | 20 | |
| Gasoline Range Organics (C4-C12) | 35000 | 5000 | " | 44000 | 4200 | 70 | 70-124 | 0.6 | 20 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *4.51* | | " | *5.00* | | *90* | *78-129* | | | |

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| | | |
|---|---|---|
| URS Corporation [Arco] | Project:ARCO #2111, San Leandro, CA | MOD0298 |
| 1333 Broadway, Suite 800 | Project Number:G0C28-0004 | **Reported:** |
| Oakland CA, 94612 | Project Manager:Scott Robinson | 04/29/05 17:52 |

**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 or MDL, if MDL is specified |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

# Chain of Custody Record



bp

**Project Name:** Analytical for QMR sampling

**BP BU/AR Region/Enfos Segment:** BP > Americas > West Coast > Retail > WCBU > CA > Central > 2111 > HistoricalBL

**State or Lead Regulatory Agency:** California Regional Water Quality Control Board - San Fr

**Requested Due Date (mm/dd/yy):** 10 Day TAT

| | | | |
|---|---|---|---|
| On-site Time: | 0930 | Temp: | 68 |
| Off-site Time: | 1130 | Temp: | 74 |
| Sky Conditions: | Clear | | |
| Meteorological Events: | NONE | | |
| Wind Speed: | 0 | Direction | 0 |

| | |
|---|---|
| Lab Name: Sequoia | |
| Address: 885 Jarvis Drive | |
| Morgan Hill, CA 95037 | |
| Lab PM: Lisa Race | |
| Tele/Fax: 408.782.8156 / 408.782.6308 | |
| BP/AR PM Contact: Paul Supple | |
| Address: P.O. Box 6549 | |
| Moraga, CA 94570 | |
| Tele/Fax: 925.299.8891 / 925.299.8872 | |

| | |
|---|---|
| BP/AR Facility No.: | 2111 |
| BP/AR Facility Address: | 1156 Davis St, San Leandro, CA 94577 |
| Site Lat/Long: | 37.721928 / -122.168 |
| California Global ID No.: | T0600101764 |
| Enfos Project No.: | G0C28-0004 |
| Provision or RCOP: | Provision |
| Phase/WBS: | 04 - Mon/Remed by Natural Attenuation |
| Sub Phase/Task: | 03 - Analytical |
| Cost Element: | 05 - Subcontracted Costs |

| | |
|---|---|
| Consultant/Contractor: | URS |
| Address: | 1333 Broadway, Suite 800 |
| | Oakland, CA 94612 |
| Consultant/Contractor Project No.: | 38487022 |
| Consultant/Contractor PM: | Scott Robinson |
| Tele/Fax: | 510.874.3280 / 510.874.3268 |
| Report Type & QC Level: | Level 1 with EDF |
| E-mail EDD To: | Rachel_Lindvall@urscorp.com |
| Invoice to: | Atlantic Richfield Company |

Lab Bottle Order No: 2111

| Item No. | Sample Description | Time | Date | Matrix: Soil/Solid | Matrix: Water/Liquid | Matrix: Air | Laboratory No. | No. of Containers | Preservative: Unpreserved | Preservative: $H_2SO_4$ | Preservative: $HNO_3$ | Preservative: HCl | Preservative: Methanol | Requested Analysis: GRO / BTEX (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-1 | 1025 | 4/11/05 | | X | | 01 | 3 | | | | X | | X | X | X | X | MOD0298 |
| 2 | MW-2 | 1050 | | | X | | 02 | 3 | | | | X | | X | X | X | X | |
| 3 | MW-3 | 1015 | | | X | | 03 | 3 | | | | X | | X | X | X | X | |
| 4 | MW-4 | 1000 | | | X | | 04 | 3 | | | | X | | X | X | X | X | |
| 5 | MW-5 | 1105 | | | X | | 05 | 3 | | | | X | | X | X | X | X | |
| 6 | MW-7 | 1055 | | | X | | 06 | 3 | | | | X | | X | X | X | X | |
| 7 | MW-8 | 1045 | | | X | | 07 | 3 | | | | X | | X | X | X | X | |
| 8 | TB0411052111 | | | | X | | 08 | 2 | | | | X | | X | X | X | X | |
| 9 | | | | | | | | | | | | | | | | | | ON HOLD |
| 10 | | | | | | | | | | | | | | | | | | |

| Relinquished By / Affiliation | Date | Time | Accepted By / Affiliation | Date | Time |
|---|---|---|---|---|---|
| | 4/11/05 | 1440 | | 4/12 | 14:40 |
| | | | | 4/12 | 1600 |

Sampler's Name: Mike Dill

Sampler's Company: BlaineTech

Shipment Date:

Shipment Method:

Shipment Tracking No:

**Special Instructions:**

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

# SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: bp
REC. BY (PRINT): JT
WORKORDER: 4T0062298

DATE REC'D AT LAB: 4/12/05
TIME REC'D AT LAB: 1600
DATE LOGGED IN: 4-12-05

For Regulatory Purposes?
DRINKING WATER YES / (NO)
WASTE WATER (YES) / NO

(For clients requiring preservation checks at receipt, document here ⬇)

| CIRCLE THE APPROPRIATE RESPONSE | LAB SAMPLE # | DASH # | CLIENT ID | CONTAINER DESCRIPTION | PRESERVATIVE | pH | SAMPLE MATRIX | DATE SAMPLED | REMARKS: CONDITION (ETC.) |
|---|---|---|---|---|---|---|---|---|---|
| 1. Custody Seal(s) (Present) / Absent; (Intact) / Broken* | 01 | A-C | MW-1 | VOA-3 | HCl | – | W | 4/11/05 | |
| 2. Chain-of-Custody (Present) / Absent* | 02 | | MW-2 | 80ME | | | | | |
| 3. Traffic Reports or Packing List: Present / (Absent) | 03 | | MW-3 | | | | | | |
| 4. Airbill: Airbill / Sticker; Present / (Absent) | 04 | | MW-4 | | | | | | |
| 5. Airbill #: | 05 | | MW-5 | | | | | | |
| 6. Sample Labels: (Present) / Absent | 06 | | MW-7 | | | | | | |
| 7. Sample IDs: (Listed) / Not Listed on Chain-of-Custody | 07 | | MW-8 | | | | | | |
| 8. Sample Condition: (Intact) / Broken* / Leaking* | 08 | D | TB 041105 2111 | VOA-2 | | | | | |
| 9. Does information on chain-of-custody, traffic reports and sample labels agree? (Yes) / No* | | | | | | | | | |
| 10. Sample received within hold time? (Yes) / No* | | | | | | | | | |
| 11. Adequate sample volume received? (Yes) / No* | | | | | | | | | |
| 12. Proper Preservatives used? (Yes) / No* | | | | | | | | | |
| 13. Trip Blank / Temp Blank Received? (circle which, if yes) (Yes) / No* | | | | | | | | | |
| 14. Temp Rec. at Lab: 3.7°C; Is temp 4 +/-2°C? (Yes) / No** | | | | | | | | | |

(Acceptance range for samples requiring thermal pres.)

**Exception (if any): METALS / OFF ON ICE or Problem COC

4/12/05 JT

*IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION.

# ATTACHMENT C

# HISTORIC GROUNDWATER DATA

# Table 1
## Historical Groundwater Elevation and Analytical Data
## Petroleum Hydrocarbons and Their Constituents

## ARCO Service Station 2111
## 1156 Davis Street, San Leandro, California

| Well Designation | Water Level Field Date | Top of Casing Elevation ft-MSL | Depth to Water feet | Free Product Thickness feet | Groundwater Elevation ft-MSL | Water Sample Field Date | TPHG LUFT Method µg/L | Benzene EPA 8021B* µg/L | Toluene EPA 8021B* µg/L | Ethylbenzene EPA 8021B* µg/L | Total Xylenes EPA 8021B* µg/L | MTBE EPA 8021B* µg/L | MTBE EPA 8260 µg/L | TRPH EPA 418.1 µg/L | TPHD LUFT Method µg/L | Dissolved Oxygen mg/L | Purged/ Not Purged P/NP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 08-01-95 | 39.60 | 17.45 | ND | 22.15 | 08-01-95 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | -- | -- | | |
| MW-1 | 12-14-95 | 39.60 | 17.09 | ND | 22.51 | 12-14-95 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-1 | 03-21-96 | 39.60 | 14.72 | ND | 24.88 | 03-21-96 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-1 | 05-24-96 | 39.60 | 15.94 | ND | 23.66 | 05-24-96 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-1 | 08-09-96 | 39.60 | 17.89 | ND | 21.71 | 08-09-96 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-1 | 11-06-96 | 39.60 | 18.66 | ND | 20.94 | 11-06-96 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-1 | 03-24-97 | 39.60 | 16.13 | ND | 23.47 | 03-24-97 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-1 | 05-27-97 | 39.60 | 17.23 | ND | 22.37 | 05-28-97 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-1 | 08-07-97 | 39.60 | 18.68 | ND | 20.92 | 08-07-97 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-1 | 11-10-97 | 39.60 | 19.19 | ND | 20.41 | 11-10-97 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-1 | 02-16-98 | 39.60 | 12.61 | ND | 26.99 | 02-16-98 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-1 | 04-15-98 | 39.60 | 14.30 | ND | 25.30 | 04-15-98 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-1 | 07-24-98 | 39.60 | 16.40 | ND | 23.20 | 07-24-98 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-1 | 10-19-98 | 39.60 | 17.90 | ND | 21.70 | 10-19-98 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-1 | 01-28-99 | 39.60 | 16.85 | ND | 22.75 | 01-28-99 | <20,000 | 580 | <200 | <200 | 320 | 14,000 | -- | -- | -- | | |
| MW-1 | 06-25-99 | 39.60 | 17.35 | ND | 22.25 | 06-25-99 | 730 | 140 | 5 | 3 | 2 | 7,700 | -- | -- | -- | 0.79 | NP |
| MW-1 | 08-25-99 | 39.60 | 18.20 | ND | 21.40 | 08-25-99 | 390 | 66 | 8.5 | <2.5 | 8.6 | 3,700 | -- | -- | -- | 1.56 | NP |
| MW-1 | 11-10-99 | 39.60 | 17.77 | ND | 21.83 | 11-10-99 | 360 | 70 | 13 | 2.2 | 13 | 980 | -- | -- | -- | 0.30 | NP |
| MW-1 | 02-09-00 | 39.60 | 16.25 | ND | 23.35 | 02-09-00 | 190 | 4.5 | 0.9 | <0.5 | 12 | 3,500 | -- | -- | -- | 0.53 | NP |
| MW-2 | 08-01-95 | 37.99 | 15.67 | ND | 22.32 | 08-01-95 | 23,000 | 1,300 | 310 | 500 | 3,500 | -- | -- | -- | -- | | |
| MW-2 | 12-14-95 | 37.99 | 15.36 | ND | 22.63 | 12-14-95 | 7,300 | 900 | 25 | 180 | 1,000 | <200 | -- | -- | -- | | |
| MW-2 | 03-21-96 | 37.99 | 12.84 | ND | 25.15 | 03-21-96 | 9,600 | 850 | 30 | 280 | 1,400 | 250 | -- | -- | -- | | |
| MW-2 | 05-24-96 | 37.99 | 14.03 | ND | 23.96 | 05-24-96 | 2,300 | 300 | <5 | 73 | 310 | <25 | -- | -- | -- | | |
| MW-2 | 08-09-96 | 37.99 | 16.10 | ND | 21.89 | 08-09-96 | 2,800 | 290 | 6 | 75 | 320 | 50 | -- | -- | -- | | |

# Table 1
## Historical Groundwater Elevation and Analytical Data
## Petroleum Hydrocarbons and Their Constituents

## ARCO Service Station 2111
## 1156 Davis Street, San Leandro, California

| Well Designation | Water Level Field Date | Top of Casing Elevation ft-MSL | Depth to Water feet | Free Product Thickness feet | Groundwater Elevation ft-MSL | Water Sample Field Date | TPHG LUFT Method µg/L | Benzene EPA 8021B* µg/L | Toluene EPA 8021B* µg/L | Ethylbenzene EPA 8021B* µg/L | Total Xylenes EPA 8021B* µg/L | MTBE EPA 8021B* µg/L | MTBE EPA 8260 µg/L | TRPH EPA 418.1 µg/L | TPHD LUFT Method µg/L | Dissolved Oxygen mg/L | Purged/ Not Purged P/NP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-2 | 11-06-96 | 37.99 | 16.98 | ND | 21.01 | 11-06-96 | 750 | 76 | <1 | 15 | 51 | 110 | -- | -- | -- | | |
| MW-2 | 03-24-97 | 37.99 | 14.22 | ND | 23.77 | 03-24-97 | 790 | 18 | <1 | 2 | 6 | 280 | -- | -- | -- | | |
| MW-2 | 05-27-97 | 37.99 | 15.42 | ND | 22.57 | 05-28-97 | 750 | 14 | <1 | <1 | 10 | 150 | -- | -- | -- | | |
| MW-2 | 08-07-97 | 37.99 | 16.92 | ND | 21.07 | 08-07-97 | 360 | 31 | <2.5 | <2.5 | 15 | 260 | -- | -- | -- | | |
| MW-2 | 11-10-97 | 37.99 | 17.52 | ND | 20.47 | 11-10-97 | 1,300 | 82 | <5 | 14 | 49 | 550 | -- | -- | -- | | |
| MW-2 | 02-16-98 | 37.99 | 12.04 | ND | 25.95 | 02-16-98 | <2,500 | <25 | <25 | <25 | <25 | 4,200 | -- | -- | -- | | |
| MW-2 | 04-15-98 | 37.99 | 12.34 | ND | 25.65 | 04-15-98 | <10,000 | <100 | <100 | <100 | <100 | 7,300 | -- | -- | -- | | |
| MW-2 | 07-24-98 | 37.99 | 14.45 | ND | 23.54 | 07-24-98 | <2,500 | <25 | <25 | <25 | <25 | 1,500 | -- | -- | -- | | |
| MW-2 | 10-19-98 | 37.99 | 16.08 | ND | 21.91 | 10-19-98 | <1,000 | 18 | <10 | <10 | <10 | 1,100 | -- | -- | -- | | |
| MW-2 | 01-28-99 | 37.99 | 15.59 | 0.02 | 22.41 [1] | 01-28-99 | 160,000 | 3,000 | 24,000 | 4,400 | 31,000 | 23,000 | -- | -- | -- | | |
| MW-2 | 06-25-99 | 37.99 | 19.20 | 3.73[4] | 21.51 [1] | 06-25-99 | 120,000 | 6,900 | 21,000 | 2,600 | 19,000 | 18,000 | 17,000[3] | -- | -- | 0.49 | NP |
| MW-2 | 08-25-99 | 37.99 | 16.49 | 0.02 | 21.51 [1] | 08-25-99 | 92,000 | 2,200 | 16,000 | 3,200 | 19,000 | 11,000 | 9,400[3] | -- | -- | 0.84 | NP |
| MW-2 | 11-10-99 | 37.99 | 16.08 | ND | 21.91 | 11-10-99 | 56,000 | 2,400 | 5,900 | 1,500 | 10,000 | 17,000 | 21,000[3] | -- | -- | 0.41 | NP |
| MW-2 | 02-09-00 | 37.99 | 14.85 | ND | 23.14 | 02-09-00 | 1,700 | 270 | 14 | 17 | 21 | 70,000 | 55,000[3] | -- | -- | 0.97 | NP |
| MW-3 | 08-01-95 | 39.32 | 17.00 | ND | 22.32 | 08-01-95 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | 600 | 76[2] | | |
| MW-3 | 12-14-95 | 39.32 | 16.70 | ND | 22.62 | 12-14-95 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | <500 | <50 | | |
| MW-3 | 03-21-96 | 39.32 | 14.17 | ND | 25.15 | 03-21-96 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | <500 | <50 | | |
| MW-3 | 05-24-96 | 39.32 | 15.30 | ND | 24.02 | 05-24-96 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | <500 | <50 | | |
| MW-3 | 08-09-96 | 39.32 | 17.58 | ND | 21.74 | 08-09-96 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | <500 | -- | | |
| MW-3 | 11-06-96 | 39.32 | 18.33 | ND | 20.99 | 11-06-96 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-3 | 03-24-97 | 39.32 | 15.44 | ND | 23.88 | 03-24-97 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-3 | 05-27-97 | 39.32 | 16.75 | ND | 22.57 | 05-28-97 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-3 | 08-07-97 | 39.32 | 18.35 | ND | 20.97 | 08-07-97 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-3 | 11-10-97 | 39.32 | 18.83 | ND | 20.49 | 11-10-97 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |

# Table 1
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## Petroleum Hydrocarbons and Their Constituents

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## 1156 Davis Street, San Leandro, California

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-3 | 02-16-98 | 39.32 | 11.99 | ND | 27.33 | 02-16-98 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-3 | 04-15-98 | 39.32 | 13.75 | ND | 25.57 | 04-15-98 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-3 | 07-24-98 | 39.32 | 15.90 | ND | 23.42 | 07-24-98 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-3 | 10-19-98 | 39.32 | 17.45 | ND | 21.87 | 10-19-98 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-3 | 01-28-99 | 39.32 | 16.40 | ND | 22.92 | 01-28-99 | <100 | 14 | 4 | <1 | 6 | 100 | -- | -- | -- | | |
| MW-3 | 06-25-99 | 39.32 | 17.92 | ND | 21.40 | 06-25-99 | 83 | 9.0 | 1.4 | <0.5 | 2.5 | 220 | -- | -- | -- | 1.11 | NP |
| MW-3 | 08-25-99 | 39.32 | 17.79 | ND | 21.53 | 08-25-99 | 240 | 41 | 12 | 3.7 | 9.9 | 160 | -- | -- | -- | 1.13 | NP |
| MW-3 | 11-10-99 | 39.32 | 17.37 | ND | 21.95 | 11-10-99 | 620 | 100 | 9.7 | 4.1 | 21 | 150 | -- | -- | -- | 0.24 | NP |
| MW-3 | 02-09-00 | 39.32 | 15.77 | ND | 23.55 | 02-09-00 | <50 | <0.5 | 0.7 | <0.5 | <1 | 180 | -- | -- | -- | 0.62 | NP |
| MW-4 | 08-01-95 | 38.10 | 15.65 | ND | 22.45 | 08-01-95 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | -- | -- | | |
| MW-4 | 12-14-95 | 38.10 | 15.35 | ND | 22.75 | 12-14-95 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-4 | 03-21-96 | 38.10 | 12.74 | ND | 25.36 | 03-21-96 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-4 | 05-24-96 | 38.10 | 14.03 | ND | 24.07 | 05-24-96 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-4 | 08-09-96 | 38.10 | 16.10 | ND | 22.00 | 08-09-96 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-4 | 11-06-96 | 38.10 | 17.00 | ND | 21.10 | 11-06-96 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-4 | 03-24-97 | 38.10 | 14.21 | ND | 23.89 | 03-24-97 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-4 | 05-27-97 | 38.10 | 15.38 | ND | 22.72 | 05-28-97 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-4 | 08-07-97 | 38.10 | 16.95 | ND | 21.15 | 08-07-97 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-4 | 11-10-97 | 38.10 | 17.53 | ND | 20.57 | 11-10-97 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-4 | 02-16-98 | 38.10 | 10.65 | ND | 27.45 | 02-16-98 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-4 | 04-15-98 | 38.10 | 12.20 | ND | 25.90 | 04-15-98 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-4 | 07-24-98 | 38.10 | 14.47 | ND | 23.63 | 07-24-98 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-4 | 10-19-98 | 38.10 | 16.20 | ND | 21.90 | 10-19-98 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-4 | 01-28-99 | 38.10 | 15.02 | ND | 23.08 | 01-28-99 | 340 | 52 | 5.5 | <0.5 | 74 | 31 | -- | -- | -- | | |

# Table 1
## Historical Groundwater Elevation and Analytical Data
## Petroleum Hydrocarbons and Their Constituents

## ARCO Service Station 2111
## 1156 Davis Street, San Leandro, California

| Well Designation | Water Level Field Date | Top of Casing Elevation ft-MSL | Depth to Water feet | Free Product Thickness feet | Groundwater Elevation ft-MSL | Water Sample Field Date | TPHG LUFT Method µg/L | Benzene EPA 8021B* µg/L | Toluene EPA 8021B* µg/L | Ethylbenzene EPA 8021B* µg/L | Total Xylenes EPA 8021B* µg/L | MTBE EPA 8021B* µg/L | MTBE EPA 8260 µg/L | TRPH EPA 418.1 µg/L | TPHD LUFT Method µg/L | Dissolved Oxygen mg/L | Purged/ Not Purged P/NP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-4 | 06-25-99 | 38.10 | 15.57 | ND | 22.53 | 06-25-99 | 510 | 78 | 4.1 | 0.5 | 18 | 94 | -- | -- | -- | 0.90 | NP |
| MW-4 | 08-25-99 | 38.10 | 16.43 | ND | 21.67 | 08-25-99 | 660 | 130 | 21 | 6.4 | 39 | 110 | -- | -- | -- | 1.01 | NP |
| MW-4 | 11-10-99 | 38.10 | 16.02 | ND | 22.08 | 11-10-99 | 510 | 98 | 5.1 | 3.1 | 15 | 69 | -- | -- | -- | 0.28 | NP |
| MW-4 | 02-09-00 | 38.10 | 14.30 | ND | 23.80 | 02-09-00 | <50 | <0.5 | 0.9 | <0.5 | <1 | 55 | -- | -- | -- | 0.67 | NP |
| MW-5 | 03-21-96 | 37.21 | 12.60 | ND | 24.61 | 03-22-96 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 82 | -- | -- | -- | | |
| MW-5 | 05-24-96 | 37.21 | 13.71 | ND | 23.50 | 05-24-96 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 7 | -- | -- | -- | | |
| MW-5 | 08-09-96 | 37.21 | 15.60 | ND | 21.61 | 08-09-96 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 8 | -- | -- | -- | | |
| MW-5 | 11-06-96 | 37.21 | 16.36 | ND | 20.85 | 11-06-96 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 100 | -- | -- | -- | | |
| MW-5 | 03-24-97 | 37.21 | 13.87 | ND | 23.34 | 03-24-97 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 460 | -- | -- | -- | | |
| MW-5 | 05-27-97 | 37.21 | 14.71 | ND | 22.50 | 05-28-97 | <100 | <1 | <1 | <1 | <1 | 120 | -- | -- | -- | | |
| MW-5 | 08-07-97 | 37.21 | 16.90 | ND | 20.31 | 08-07-97 | <250 | <2.5 | <2.5 | <2.5 | <2.5 | 250 | -- | -- | -- | | |
| MW-5 | 11-10-97 | 37.21 | 16.88 | ND | 20.33 | 11-10-97 | <1,000 | <10 | <10 | <10 | <10 | 770 | -- | -- | -- | | |
| MW-5 | 02-16-98 | 37.21 | 10.56 | ND | 26.65 | 02-16-98 | <200 | <2 | <2 | <2 | <2 | 230 | -- | -- | -- | | |
| MW-5 | 04-15-98 | 37.21 | 12.20 | ND | 25.01 | 04-15-98 | <500 | <5 | <5 | <5 | <5 | 900 | -- | -- | -- | | |
| MW-5 | 07-24-98 | 37.21 | 14.20 | ND | 23.01 | 07-24-98 | <500 | <5 | <5 | <5 | <5 | 570 | -- | -- | -- | | |
| MW-5 | 10-19-98 | 37.21 | 15.74 | ND | 21.47 | 10-19-98 | <250 | <2.5 | <2.5 | <2.5 | <2.5 | 300 | -- | -- | -- | | |
| MW-5 | 01-28-99 | 37.21 | 14.60 | ND | 22.61 | 01-28-99 | <500 | 8 | <5 | <5 | <5 | 290 | -- | -- | -- | | |
| MW-5 | 06-25-99 | 37.21 | 15.10 | ND | 22.11 | 06-25-99 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 1,300 | -- | -- | -- | 0.76 | NP |
| MW-5 | 08-25-99 | 37.21 | 15.91 | ND | 21.30 | 08-25-99 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 6,700 | -- | -- | -- | 0.98 | NP |
| MW-5 | 11-10-99 | 37.21 | 15.52 | ND | 21.69 | 11-10-99 | 130 | 2.0 | 7.0 | 1.3 | 21 | 5,000 | -- | -- | -- | 0.21 | NP |
| MW-5 | 02-09-00 | 37.21 | 14.03 | ND | 23.18 | 02-09-00 | 92 | <0.5 | 0.8 | <0.5 | 1.0 | 7,900 | -- | -- | -- | 0.51 | NP |
| MW-6 | 03-21-96 | 37.11 | 11.55 | ND | 25.56 | 03-22-96 | <50 | <0.5 | 1.9 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-6 | 05-24-96 | 37.11 | 12.80 | ND | 24.31 | 05-24-96 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 6 | -- | -- | -- | | |

# Table 1
## Historical Groundwater Elevation and Analytical Data
## Petroleum Hydrocarbons and Their Constituents

## ARCO Service Station 2111
## 1156 Davis Street, San Leandro, California

| Well Designation | Water Level Field Date | Top of Casing Elevation ft-MSL | Depth to Water feet | Free Product Thickness feet | Groundwater Elevation ft-MSL | Water Sample Field Date | TPHG LUFT Method µg/L | Benzene EPA 8021B* µg/L | Toluene EPA 8021B* µg/L | Ethylbenzene EPA 8021B* µg/L | Total Xylenes EPA 8021B* µg/L | MTBE EPA 8021B* µg/L | MTBE EPA 8260 µg/L | TRPH EPA 418.1 µg/L | TPHD LUFT Method µg/L | Dissolved Oxygen mg/L | Purged/ Not Purged P/NP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-6 | 08-09-96 | 37.11 | Not surveyed | | | 08-09-96 | Not sampled: Car parked on well | | | | | | | | | | |
| MW-6 | 11-06-96 | 37.11 | Not surveyed | | | 11-06-96 | Not sampled: Car parked on well | | | | | | | | | | |
| MW-6 | 03-24-97 | 37.11 | 13.06 | ND | 24.05 | 03-24-97 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-6 | 05-27-97 | 37.11 | 14.30 | ND | 22.81 | 05-28-97 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-6 | 08-07-97 | 37.11 | 16.40 | ND | 20.71 | 08-07-97 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-6 | 11-10-97 | 37.11 | 16.53 | ND | 20.58 | 11-10-97 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-6 | 02-16-98 | 37.11 | Not surveyed | | | 02-16-98 | Not sampled: Car parked on well | | | | | | | | | | |
| MW-6 | 04-15-98 | 37.11 | 10.95 | ND | 26.16 | 04-15-98 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-6 | 07-24-98 | 37.11 | 13.30 | ND | 23.81 | 07-24-98 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-6 | 10-19-98 | 37.11 | Not surveyed | | | 10-19-98 | Not sampled: Car parked on well | | | | | | | | | | |
| MW-6 | 01-28-99 | 37.11 | 13.92 | ND | 23.19 | 01-28-99 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | | |
| MW-6 | 06-25-99 | 37.11 | 15.47 | ND | 21.64 | 06-25-99 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <3 | -- | -- | -- | 0.74 | NP |
| MW-6 | 08-25-99 | 37.11 | 15.39 | ND | 21.72 | 08-25-99 | <50 | <0.5 | 3.4 | 0.6 | 3.7 | <3 | -- | -- | -- | 0.92 | NP |
| MW-6 | 11-10-99 | 37.11 | 14.92 | ND | 22.19 | 11-10-99 | <50 | <0.5 | <0.5 | <0.5 | <1 | <3 | -- | -- | -- | 0.31 | NP |
| MW-6 | 02-09-00 | 37.11 | 13.30 | ND | 23.81 | 02-09-00 | <50 | <0.5 | 0.9 | <0.5 | 1.3 | <3 | -- | -- | -- | 0.79 | NP |
| MW-7 | 03-21-96 | 38.68 | 13.32 | ND | 25.36 | 03-22-96 | 32,000 | 870 | 450 | 970 | 4,900 | 280 | -- | -- | -- | | |
| MW-7 | 05-24-96 | 38.68 | 14.58 | ND | 24.10 | 05-24-96 | 22,000 | 570 | 40 | 42 | 1,900 | <200[2] | -- | -- | -- | | |
| MW-7 | 08-09-96 | 38.68 | 15.33 | ND | 23.35 | 08-09-96 | 14,000 | 390 | <10 | 180 | 470 | <200[2] | -- | -- | -- | | |
| MW-7 | 11-06-96 | 38.68 | 16.95 | ND | 21.73 | 11-06-96 | 9,500 | 440 | <10 | 210 | 150 | <100[2] | -- | -- | -- | | |
| MW-7 | 03-24-97 | 38.68 | 14.65 | ND | 24.03 | 03-24-97 | 6,400 | 420 | <10 | 260 | 13 | 480 | -- | -- | -- | | |
| MW-7 | 05-27-97 | 38.68 | 15.58 | ND | 23.10 | 05-28-97 | 5,000 | 420 | <5 | 230 | 10 | 460 | -- | -- | -- | | |
| MW-7 | 08-07-97 | 38.68 | 17.10 | ND | 21.58 | 08-07-97 | 3,900 | 350 | <5 | 200 | 10 | 330 | -- | -- | -- | | |
| MW-7 | 11-10-97 | 38.68 | 18.05 | ND | 20.63 | 11-10-97 | 5,600 | 590 | 10 | 370 | 43 | 540 | -- | -- | -- | | |
| MW-7 | 02-16-98 | 38.68 | 12.03 | ND | 26.65 | 02-16-98 | <5,000 | 390 | <50 | <50 | 61 | 4,300 | -- | -- | -- | | |

# Table 1
## Historical Groundwater Elevation and Analytical Data
## Petroleum Hydrocarbons and Their Constituents

## ARCO Service Station 2111
## 1156 Davis Street, San Leandro, California

| Well Designation | Water Level Field Date | Top of Casing Elevation ft-MSL | Depth to Water feet | Free Product Thickness feet | Groundwater Elevation ft-MSL | Water Sample Field Date | TPHG LUFT Method µg/L | Benzene EPA 8021B* µg/L | Toluene EPA 8021B* µg/L | Ethylbenzene EPA 8021B* µg/L | Total Xylenes EPA 8021B* µg/L | MTBE EPA 8021B* µg/L | MTBE EPA 8260 µg/L | TRPH EPA 418.1 µg/L | TPHD LUFT Method µg/L | Dissolved Oxygen mg/L | Purged/ Not Purged P/NP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-7 | 04-15-98 | 38.68 | 13.02 | ND | 25.66 | 04-15-98 | <10,000 | <100 | <100 | <100 | <100 | 8,900 | -- | -- | -- | | |
| MW-7 | 07-24-98 | 38.68 | 14.18 | ND | 24.50 | 07-24-98 | 5,800 | 180 | <50 | 74 | <50 | 4,200 | -- | -- | -- | | |
| MW-7 | 10-19-98 | 38.68 | 15.99 | ND | 22.69 | 10-19-98 | <2,500 | 54 | <25 | 72 | <25 | 3,000 | -- | -- | -- | | |
| MW-7 | 01-28-99 | 38.68 | 15.69 | ND | 22.99 | 01-28-99 | 4,500 | 560 | 250 | <50 | 94 | 6,200 | -- | -- | -- | | |
| MW-7 | 06-25-99 | 38.68 | 15.36 | ND | 23.32 | 06-25-99 | 3,900 | 520 | 160 | 46 | 100 | 45,000 | 63,000[3] | -- | -- | 0.56 | NP |
| MW-7 | 08-25-99 | 38.68 | 16.71 | ND | 21.97 | 08-25-99 | 3,400 | 730 | 77 | 51 | 110 | 62,000 | 76,000[3] | -- | -- | 0.90 | NP |
| MW-7 | 11-10-99 | 38.68 | 16.76 | ND | 21.92 | 11-10-99 | 15,000 | 340 | 19 | 13 | 20 | 55,000 | 91,000[3] | -- | -- | 0.37 | NP |
| MW-7 | 02-09-00 | 38.68 | 14.45 | 0.03 | 24.25 [1] | 02-09-00 | Not sampled: free product present | | | | | | | | | | |

ft-MSL: elevation in feet, relative to mean sea level
TPHG: total petroleum hydrocarbons as gasoline, California DHS LUFT Method
MTBE: Methyl tert-butyl ether
TRPH: total recoverable petroleum hydrocarbons
TPHD: total petroleum hydrocarbons as diesel, California DHS LUFT Method
*: EPA method 8020 prior to 11/10/99
EPA: United States Environmental Protection Agency
µg/L: micrograms per liter
mg/L: milligrams per liter
ND: none detected
--: not available or not analyzed
<: less than laboratory detection limit stated to the right
[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]: chromatogram fingerprint is not characteristic of diesel
[3]: also analyzed for fuel oxygenates
[4]: this value is suspected to be erroneous based on subsequent check by bailer (following day). See discussion

# Table 2
## Groundwater Flow Direction and Gradient

## ARCO Service Station 2111
## 1156 Davis Street, San Leandro, California

| Date Measured | Average Flow Direction | Average Hydraulic Gradient |
|---|---|---|
| 08-01-95 | NR | NR |
| 12-14-95 | West | 0.002 |
| 03-21-96 | West-Southwest | 0.005 |
| 05-24-96 | West | 0.003 |
| 08-09-96 | West-Northwest | 0.01 |
| 11-06-96 | West-Northwest | 0.007 |
| 03-24-97 | West | 0.005 |
| 05-27-97 | North-Northwest | 0.006 |
| 08-07-97 | West | 0.009 |
| 11-10-97 | West | 0.002 |
| 02-16-98 | South-Southwest | 0.013 |
| 04-15-98 | West-Southwest | 0.014 |
| 07-24-98 | Northwest | 0.01 |
| 10-19-98 | West | 0.008 |
| 01-28-99 | Southwest | 0.01 |
| 06-25-99 | North-Northwest | 0.017 |
| 08-25-99 | West-Northwest | 0.005 |
| 11-10-99 | West-Southwest | 0.002 |
| 02-09-00 | West-Northwest | 0.015 |

NR: not recorded

# ATTACHMENT D

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**ARCO # 02111**
1156 DAVIS ST
SAN
LEANDRO, CA 94577

**Regional Board - Case #: 01-1903**
SAN FRANCISCO BAY RWQCB (REGION 2) - **(RDB)**
**Local Agency (lead agency) - Case #: 744**
ALAMEDA COUNTY LOP - **(AG)**

## SAMPLE DETECTIONS REPORT

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

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**Submittal Title:** 2Q 2005 QMR EDF Site 2111
**Submittal Type:** GW Monitoring Report

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| **ARCO # 02111**<br>1156 DAVIS ST<br>SAN LEANDRO, CA 94577 | **Regional Board - Case #: 01-1903**<br>SAN FRANCISCO BAY RWQCB (REGION 2) - **(RDB)**<br>**Local Agency (lead agency) - Case #: 744**<br>ALAMEDA COUNTY LOP - **(AG)** |

| CONF # | TITLE | QUARTER |
|---|---|---|
| 1062812507 | 2Q 2005 QMR EDF Site 2111 | Q2 2005 |

| SUBMITTED BY | SUBMIT DATE | STATUS |
|---|---|---|
| Srijesh Thapa | 5/9/2005 | PENDING REVIEW |

## SAMPLE DETECTIONS REPORT

| | |
|---|---|
| # FIELD POINTS SAMPLED | 7 |
| # FIELD POINTS WITH DETECTIONS | 7 |
| # FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL | 5 |
| 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.