Atlantic Richfield Company
(a BP affiliated company)
P.O. Box 6549

Moraga, California 94570
Phone: (925) 299-8891

## RECEIVED

By lopprojectop at 11:22 am, Apr 17, 2006

April 3, 2006

## Re: ARCO Service Station \# 374

6407 Telegraph Avenue
Oakland, California
First Quarter 2006 Groundwater Monitoring Report ACEH Case \# 3884
"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:


Environmental Business Manager

## Re: First Quarter 2006 Groundwater Monitoring Report ARCO Service Station \#0374 <br> 6407 Telegraph Avenue <br> Oakland, California <br> ACEH Case \#3884

Dear Mr. Hwang:

On behalf of Atlantic Richfield Company, a BP affiliated company, URS Corporation (URS) is submitting the First Quarter 2006 Groundwater Monitoring Report for ARCO Service Station \#0374, located at 6407 Telegraph Avenue, Oakland, California.

If you have any questions regarding this submission, please call (510) 874-3296.
Sincerely,
ERS CORPORATION


Barbara Jakub, P.G. Project Manager


Enclosure: First Quarter 2006 Groundwater Monitoring Report
cc: Mr. Paul Supple, Atlantic Richfield Company (RM), electronic copy uploaded to ENFOS Mr. Rob Miller, Broadbent \& Associates, Inc., electronic copy uploaded to ENFOS

# FIRST QUARTER 2006 GROUNDWATER MONITORING REPORT 

ARCO SERVICE STATION \#0374
6407 TELEGRAPH AVENUE OAKLAND, CALIFORNIA

Prepared for RM

April 3, 2006

URS Corporation
1333 Broadway, Suite 800
Oakland, California 94612

| Date: | April 3, 2006 |
| :--- | :--- |
| Quarter: | 1Q 06 |

## FIRST QUARTER 2006 GROUNDWATER MONITORING REPORT

| Facility No.: 0374 | Address: | 6407 Telegraph Avenue, Oakland, CA |
| :---: | :---: | :---: |
| RM Environmental Business Manager: |  | Paul Supple |
| Consulting Co./Contact Person: |  | URS Corporation / Barbara Jakub |
| Primary Agency |  | Alameda County Environmental Health (ACEH) |
| ACEH Case \#: |  | 3884 |

## WORK PERFORMED THIS QUARTER

(First - 2006):

1. Performed the first quarter 2006 groundwater monitoring event on February 16, 2006.
2. Prepared and submitted this First Quarter 2006 Groundwater Monitoring Report.

## WORK PROPOSED FOR NEXT QUARTER

(Second - 2006):

1. Perform the second quarter 2006 groundwater monitoring event.
2. Prepare and submit the Second Quarter 2006 Groundwater Monitoring Report.

SITE SUMMARY:
Current Phase of Project:
Frequency of Groundwater Sampling:

Frequency of Groundwater Monitoring:
Is Free Product Present On-Site:
Current Remediation Techniques:
Approximate Depth to Groundwater:
Groundwater Gradient (direction):
Groundwater Gradient (magnitude):

GW monitoring/sampling
Quarterly: MW-1
Semi-Annually ( $1^{\text {st }} \& 3^{\text {rd }}$ quarters): MW-2, MW-4
Annually ( $3^{\text {rd }}$ quarter): MW-3, MW-5, MW-6
Quarterly
No
None
4.24 (MW-6) to 9.22 (MW-5) feet

Southwest
0.09 feet per foot

## DISCUSSION:

Gasoline range organics were detected at or above the laboratory reporting limit in two of the three wells sampled this quarter at concentrations of 350 micrograms per liter ( $\mu \mathrm{g} / \mathrm{L}$ ) (MW-1) and $9,400 \mu \mathrm{~g} / \mathrm{L}$ (MW-4). Benzene, toluene, ethylbenzene, and xylenes were detected at or above their respective laboratory reporting limits in one well (MW-4) at concentrations of $1,800 \mu \mathrm{~g} / \mathrm{L}, 130 \mu \mathrm{~g} / \mathrm{L}, 600 \mu \mathrm{~g} / \mathrm{L}$, and $420 \mu \mathrm{~g} / \mathrm{L}$, respectively. Methyl tert-butyl ether was detected at or above the laboratory reporting limit in three wells at concentrations ranging from $35 \mu \mathrm{~g} / \mathrm{L}$ (MW-4) to $340 \mu \mathrm{~g} / \mathrm{L}$ (MW-1). No other fuel components were detected at or above their respective laboratory reporting limits in any of the wells sampled this quarter.

## ATTACHMENTS:

- Figure 1 - Groundwater Elevation Contour and Analytical Summary Map -- February 16, 2006
- Table 1 - Groundwater Elevation and Analytical Data
- Table 2 - Fuel Additives Analytical Data
- Table 3 - Groundwater Gradient Data
- Attachment A - Field Procedures and Field Data Sheets
- Attachment B - Laboratory Procedures, Certified Analytical Reports, and Chain-of-Custody Records
- Attachment C - Error Check Reports and EDF/Geowell Submittal Confirmations


Table 1

## Groundwater Elevation and Analytical Data

ARCO Service Station \#0374
6407 Telegraph Ave., Oakland, CA

| Well No. | Date | $\begin{aligned} & \text { P/ } \\ & \text { NP } \end{aligned}$ | Footnotes Comments | $\begin{gathered} \text { TOC } \\ \text { (ft MSL) } \end{gathered}$ | Top of Screen (ft bgs) | Bottom of Screen (ft bgs) | DTW <br> (ft bgs) | GWE (ft MSL) | GRO/ TPH-g ( $\mu \mathrm{g} / \mathrm{L}$ ) | Benzene ( $\mu \mathrm{g} / \mathrm{L}$ ) | Toluene ( $\mu \mathrm{g} / \mathrm{L}$ ) | $\begin{gathered} \text { Ethyl- } \\ \text { benzene } \\ \text { ( } \mu \mathrm{g} / \mathrm{L}) \end{gathered}$ | Total Xylenes ( $\mu \mathrm{g} / \mathrm{L}$ ) | MTBE ( $\mu \mathrm{g} / \mathrm{L}$ ) | $\begin{gathered} \text { DO } \\ (\mathrm{mg} / \mathrm{L}) \end{gathered}$ | pH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MW-1 | 6/20/2000 | - |  | 158.91 | 7.00 | 27.00 | 6.86 | 152.05 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 9/28/2000 | -- |  | 158.91 | 7.00 | 27.00 | 7.50 | 151.41 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 12/17/2000 | -- |  | 158.91 | 7.00 | 27.00 | 7.49 | 151.42 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 3/23/2001 | -- |  | 158.91 | 7.00 | 27.00 | 5.90 | 153.01 | $<50$ | $<0.5$ | $<0.5$ | <0.5 | <0.5 | 2,710 | -- | -- |
|  | 6/21/2001 | -- |  | 158.91 | 7.00 | 27.00 | 7.45 | 151.46 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 9/23/2001 | -- |  | 158.91 | 7.00 | 27.00 | 8.46 | 150.45 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 12/31/2001 | -- |  | 158.91 | 7.00 | 27.00 | 5.50 | 153.41 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 3/21/2002 | -- |  | 158.91 | 7.00 | 27.00 | 4.71 | 154.20 | <5,000 | <50 | $<50$ | $<50$ | $<50$ | 2,000 | -- | -- |
|  | 4/17/2002 | -- |  | 158.91 | 7.00 | 27.00 | 5.54 | 153.37 | -- | -- | -- | -- | -- | -- | -- | $\rightarrow$ |
|  | 8/12/2002 | - |  | 158.91 | 7.00 | 27.00 | 7.77 | 151.14 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 12/6/2002 | - |  | 158.91 | 7.00 | 27.00 | 7.65 | 151.26 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 1/29/2003 | -- | b | 158.91 | 7.00 | 27.00 | 5.88 | 153.03 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 5/23/2003 | -- |  | 158.91 | 7.00 | 27.00 | 5.62 | 153.29 | <10,000 | $<100$ | $<100$ | <100 | <100 | 1,600 | 1.3 | 7.1 |
|  | 9/4/2003 | -- |  | 158.91 | 7.00 | 27.00 | 7.85 | 151.06 | -- | - | -- | -- | -- | -- | -- | -- |
|  | 11/20/2003 | P |  | 158.91 | 7.00 | 27.00 | 8.17 | 150.74 | 1,600 | $<10$ | $<10$ | $<10$ | $<10$ | 1,500 | 1.7 | 6.7 |
|  | 02/02/2004 | P |  | 164.57 | 7.00 | 27.00 | 6.71 | 157.86 | -- | -- | -- | -- | - | -- | 1.0 | -- |
|  | 05/14/2004 | P |  | 164.57 | 7.00 | 27.00 | 7.08 | 157.49 | <2,500 | $<25$ | <25 | $<25$ | <25 | 1,200 | 1.4 | 6.6 |
|  | 09/02/2004 | P |  | 164.57 | 7.00 | 27.00 | 8.12 | 156.45 | 580 | $<5.0$ | $<5.0$ | $<5.0$ | $<5.0$ | 660 | 3.8 | 6.7 |
|  | 11/04/2004 | P |  | 164.57 | 7.00 | 27.00 | 7.38 | 157.19 | 1,700 | $<10$ | $<10$ | <10 | $<10$ | 580 | 6.0 | 6.5 |
|  | 02/08/2005 | P |  | 164.57 | 7.00 | 27.00 | 6.60 | 157.97 | <1,000 | $<10$ | $<10$ | <10 | $<10$ | 610 | 0.71 | 6.5 |
|  | 05/09/2005 | $P$ | e | 164.57 | 7.00 | 27.00 | 6.84 | 157.73 | 540 | <5.0 | $<5.0$ | $<5.0$ | 5.5 | 620 | 3.12 | 6.6 |
|  | 08/11/2005 | $P$ |  | 164.57 | 7.00 | 27.00 | 7.36 | 157.21 | 540 | <2.5 | $<2.5$ | $<2.5$ | 4.0 | 390 | 0.8 | 6.6 |
|  | 11/18/2005 | $P$ | e | 164.57 | 7.00 | 27.00 | 8.02 | 156.55 | 350 | $<2.5$ | $<2.5$ | <2.5 | $<2.5$ | 340 | 2.6 | 6.7 |
|  | 02/16/2006 | P | e | 164.57 | 7.00 | 27.00 | 6.44 | 158.13 | 350 | $<2.5$ | $<2.5$ | <2.5 | <2.5 | 340 | 1.6 | 6.7 |
| MW-2 | 6/20/2000 | -- |  | 157.92 | 7.00 | 27.00 | 7.67 | 150.25 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 9/28/2000 | -- |  | 157.92 | 7.00 | 27.00 | 8.51 | 149.41 | -- | -- | -- | -- | -- | - | -- | -- |
|  | 12/17/2000 | -- |  | 157.92 | 7.00 | 27.00 | 8.14 | 149.78 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 3/23/2001 | -- |  | 157.92 | 7.00 | 27.00 | 7.21 | 150.71 | $<50$ | $<0.5$ | $<0.5$ | $<0.5$ | <0.5 | $<2.5$ | -- | -* |
|  | 6/21/2001 | -- |  | 157.92 | 7.00 | 27.00 | 7.99 | 149.93 | -- | - | -- | $\cdots$ | -- | - | -- | -- |
|  | 9/23/2001 | -- |  | 157.92 | 7.00 | 27.00 | 8.52 | 149.40 | -- | -- | $\cdots$ | -- | -- | -- | -- | $\cdots$ |
|  | 12/31/2001 | -- |  | 157.92 | 7.00 | 27.00 | 6.01 | 151.91 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 3/21/2002 | -- |  | 157.92 | 7.00 | 27.00 | 5.95 | 151.97 | $<50$ | $<0.5$ | $<0.5$ | $<0.5$ | $<0.5$ | 45 | -- | -- |
|  | 4/17/2002 | -- |  | 157.92 | 7.00 | 27.00 | 6.45 | 151.47 | -- | -- | - | -- | -- | -- | -- | -- |

Table 1

## Groundwater Elevation and Analytical Data

ARCO Service Station \#0374
6407 Telegraph Ave., Oakland, CA

| Well No. | Date | $\begin{aligned} & \mathbf{P /} \\ & \mathbf{N P} \end{aligned}$ | Footnotes/ Comments | $\begin{gathered} \text { TOC } \\ \text { (ft MSL) } \end{gathered}$ | Top of Screen (ft bgs) | Bottom of Screen (ft bgs) | DTW (ft bgs) | $\left.\begin{gathered} \text { GWE } \\ \text { (ft MSL) } \end{gathered} \right\rvert\,$ | $\begin{aligned} & \text { GRO/ } \\ & \text { TPH-g } \\ & (\mu \mathrm{g} / \mathrm{L}) \end{aligned}$ | Benzene ( $\mu \mathrm{g} / \mathrm{L}$ ) | Toluene ( $\mu \mathrm{g} / \mathrm{L}$ ) | Ethylbenzene ( $\mu \mathrm{g} / \mathrm{L}$ ) | Total Xylenes ( $\mu \mathrm{g} / \mathrm{L}$ ) | MTBE ( $\mu \mathrm{g} / \mathrm{L}$ ) | $\begin{gathered} \mathrm{DO} \\ (\mathrm{mg} / \mathrm{L}) \end{gathered}$ | pH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MW-2 | 8/12/2002 | - |  | 157.92 | 7.00 | 27.00 | 8.08 | 149.84 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 12/6/2002 | - |  | 157.92 | 7.00 | 27.00 | 8.29 | 149.63 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 1/29/2003 | -- | b | 157.92 | 7.00 | 27.00 | 7.22 | 150.70 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 5/23/2003 | -- |  | 157.92 | 7.00 | 27.00 | 6.85 | 151.07 | <50 | $<0.50$ | $<0.50$ | $<0.50$ | <0.50 | 55 | 1.4 | 7.2 |
|  | 9/4/2003 | -- |  | 157.92 | 7.00 | 27.00 | 7.94 | 149.98 | -- | -- | -- | --- | -- | - | -- | -- |
|  | 11/20/2003 | -- |  | 157.92 | 7.00 | 27.00 | 8.05 | 149.87 | -- | -- | - | -- | -- | -- | -- | -- |
|  | 02/02/2004 | P |  | 163.46 | 7.00 | 27.00 | 7.00 | 156.46 | 74 | <0.50 | <0.50 | <0.50 | <0.50 | 37 | 1.1 | 8.9 |
|  | 05/14/2004 | - |  | 163.46 | 7.00 | 27.00 | 7.97 | 155.49 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 09/02/2004 | P |  | 163.46 | 7.00 | 27.00 | 8.19 | 155.27 | <250 | $<2.5$ | <2.5 | <2.5 | <2.5 | 67 | 2.7 | 6.9 |
|  | 11/04/2004 | -- |  | 163.46 | 7.00 | 27.00 | 7.54 | 155.92 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 02/08/2005 | P |  | 163.46 | 7.00 | 27.00 | 6.72 | 156.74 | <50 | $<0.50$ | $<0.50$ | $<0.50$ | $<0.50$ | 30 | 0.86 | 6.7 |
|  | 05/09/2005 | -- |  | 163.46 | 7.00 | 27.00 | 7.16 | 156.30 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 08/11/2005 | P |  | 163.46 | 7.00 | 27.00 | 7.85 | 155.61 | $<50$ | <0.50 | $<0.50$ | <0.50 | <0.50 | 35 | 1.0 | 6.6 |
|  | 11/18/2005 | - |  | 163.46 | 7.00 | 27.00 | 8.23 | 155.23 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 02/16/2006 | P |  | 163.46 | 7.00 | 27.00 | 6.82 | 156.64 | <50 | $<0.50$ | $<0.50$ | $<0.50$ | <0.50 | 39 | 1.3 | 7.0 |
| MW-3 | 6/20/2000 | - |  | 153.64 | 7.00 | 27.00 | 6.42 | 147.22 | <50 | $<0.5$ | $<0.5$ | $<0.5$ | $<1.0$ | <10 | -- | -- |
|  | 9/28/2000 | -- |  | 153.64 | 7.00 | 27.00 | 7.31 | 146.33 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 12/17/2000 | - |  | 153.64 | 7.00 | 27.00 | 6.45 | 147.19 | $<50$ | $<0.5$ | $<0.5$ | $<0.5$ | $<0.5$ | $<2.5$ | -- | - |
|  | 3/23/2001 | -- |  | 153.64 | 7.00 | 27.00 | 6.01 | 147.63 | -- | -- | -- | -- | -- | - | -- | -- |
|  | 6/21/2001 | -- |  | 153.64 | 7.00 | 27.00 | 6.80 | 146.84 | 110 | 5.5 | $<0.5$ | 5.4 | 4.1 | 2.5 | -- | -- |
|  | 9/23/2001 | -- |  | 153.64 | 7.00 | 27.00 | 7.32 | 146.32 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 12/31/2001 | -- |  | 153.64 | 7.00 | 27.00 | 4.48 | 149.16 | <50 | $<0.5$ | <0.5 | $<0.5$ | <0.5 | 4.9 | -- | -- |
|  | 3/21/2002 | -- |  | 153.64 | 7.00 | 27.00 | 4.36 | 149.28 | -- | -- | - | -- | -- | -- | -- | -- |
|  | 4/17/2002 | -- |  | 153.64 | 7.00 | 27.00 | 5.31 | 148.33 | <50 | <0.5 | <0.5 | $<0.5$ | $<0.5$ | 8.7 | -- | -- |
|  | 8/12/2002 | -- |  | 153.64 | 7.00 | 27.00 | 7.00 | 146.64 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 12/6/2002 | -- |  | 153.64 | 7.00 | 27.00 | 7.32 | 146.32 | <50 | $<0.5$ | $<0.5$ | $<0.5$ | $<0.5$ | 6.2 | 1.4 | 6.7 |
|  | 1/29/2003 | -- | b | 153.64 | 7.00 | 27.00 | 6.07 | 147.57 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 5/23/2003 | - |  | 153.64 | 7.00 | 27.00 | 6.45 | 147.19 | <50 | <0.50 | <0.50 | $<0.50$ | <0.50 | 1.6 | 0.9 | 7.7 |
|  | 9/4/2003 | -- | c | 153.64 | 7.00 | 27.00 | 6.93 | 146.71 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 11/20/2003 | - | c | 153.64 | 7.00 | 27.00 | 7.04 | 146.50 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 02/02/2004 | -- |  | 159.21 | 7.00 | 27.00 | 5.92 | 153.29 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 05/14/2004 | - |  | 159.21 | 7.00 | 27.00 | 7.52 | 151.69 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 09/02/2004 | P |  | 159.21 | 7.00 | 27.00 | 7.19 | 152.02 | $<50$ | <0.50 | $<0.50$ | $<0.50$ | <0.50 | 6.5 | 9.3 | 8.9 |

Table 1

## Groundwater Elevation and Analytical Data

ARCO Service Station \#0374
6407 Telegraph Ave., Oakland, CA

| Well No. | Date | $\begin{aligned} & \mathbf{P} / \\ & \mathbf{N P} \end{aligned}$ | Footnotes/ Comments | $\begin{gathered} \text { TOC } \\ \text { (ft MSL) } \end{gathered}$ | Top of Screen (ft bgs) | Bottom of Screen (ft bgs) | $\begin{gathered} \text { DTW } \\ \text { (ft bgs) } \end{gathered}$ | $\left\|\begin{array}{c} \text { GWE } \\ (\mathrm{ft} \text { MSL) } \end{array}\right\|$ | $\begin{aligned} & \text { GROI } \\ & \text { TPH-g } \\ & (\mu \mathrm{g} / \mathrm{L}) \end{aligned}$ | $\begin{gathered} \text { Benzene } \\ (\mu \mathrm{g} / \mathrm{L}) \end{gathered}$ | Toluene ( $\mu \mathrm{g} / \mathrm{L}$ ) | Ethyl- benzene ( $\mu \mathrm{g} / \mathrm{L}$ ) | Total Xylenes $(\mu \mathrm{g} / \mathrm{L})$ ( $\mu \mathrm{g} / \mathrm{L}$ ) | MTBE ( $\mu \mathrm{g} / \mathrm{L}$ ) | $\begin{gathered} \mathrm{DO} \\ (\mathrm{mg} / \mathrm{L}) \end{gathered}$ | pH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MW-3 | 11/04/2004 | -- |  | 159.21 | 7.00 | 27.00 | 6.40 | 152.81 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 02/08/2005 | -- |  | 159.21 | 7.00 | 27.00 | 6.01 | 153.20 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 05/09/2005 | - |  | 159.21 | 7.00 | 27.00 | 6.74 | 152.47 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 08/11/2005 | P |  | 159.21 | 7.00 | 27.00 | 6.77 | 152.44 | <50 | <0.50 | <0.50 | <0.50 | $<0.50$ | 11 | 1.9 | 6.5 |
|  | 11/18/2005 | -- |  | 159.21 | 7.00 | 27.00 | 7.83 | 151.38 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 02/16/2006 | -- |  | 159.21 | 7.00 | 27.00 | 7.26 | 151.95 | - | -- | -- | -- | -- | -- | -- | -- |
| MW-4 | 6/20/2000 | - | c | 156.53 | 7.00 | 27.00 | 7.50 | 149.03 | 20,000 | 5,100 | 440 | 1,000 | 1,700 | $<250$ | -- | -- |
|  | 9/28/2000 | -- |  | 156.53 | 7.00 | 27.00 | 8.20 | 148.33 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 12/17/2000 | -- |  | 156.53 | 7.00 | 27.00 | 8.11 | 148.42 | 4,320 | 1,240 | <20 | 27.2 | 249 | <100 | -- | -- |
|  | 3/23/2001 | -- |  | 156.53 | 7.00 | 27.00 | 6.69 | 149.84 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 6/21/2001 | -- |  | 156.53 | 7.00 | 27.00 | 8.01 | 148.52 | 2,800 | 470 | 16 | 19 | 160 | 130 | -- | -- |
|  | 9/23/2001 | -- |  | 156.53 | 7.00 | 27.00 | 8.91 | 147.62 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 12/31/2001 | -- |  | 156.53 | 7.00 | 27.00 | 4.42 | 152.11 | 4,600 | 1,500 | 100 | 160 | 210 | 160 | - | -- |
|  | 3/21/2002 | -- |  | 156.53 | 7.00 | 27.00 | 4.98 | 151.55 | -- | -- | -- | -- | -- | - | - | -- |
|  | 4/17/2002 | -- |  | 156.53 | 7.00 | 27.00 | 6.23 | 150.30 | 7,100 | 2,200 | 110 | 290 | 450 | <250 | -- | -- |
|  | 8/12/2002 | - |  | 156.53 | 7.00 | 27.00 | 8.24 | 148.29 | -- | -- | -- | -- | -- | -- | - | - |
|  | 12/6/2002 | - | a | 156.53 | 7.00 | 27.00 | 8.42 | 148.11 | 1,500 | 410 | 6.8 | 20 | 29 | 43 | 1.1 | 6.7 |
|  | 1/29/2003 | -- | b | 156.53 | 7.00 | 27.00 | 7.20 | 149.33 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 5/23/2003 | - |  | 156.53 | 7.00 | 27.00 | 7.18 | 149.35 | <5,000 | 1,300 | 89 | 210 | 260 | <50 | 1.4 | 6.9 |
|  | 9/4/2003 | -- | c | 156.53 | 7.00 | 27.00 | 8.15 | 148.38 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 11/20/2003 | -- | c | 156.53 | 7.00 | 27.00 | 8.73 | 147.80 | -- | -- | - | -- | -- | -- | -- | -- |
|  | 02/02/2004 | P | c | 163.25 | 7.00 | 27.00 | 6.25 | 157.00 | 980 | 280 | 21 | 29 | 38 | 29 | 1.4 | 10.6 |
|  | 05/14/2004 | -- |  | 163.25 | 7.00 | 27.00 | 8.38 | 154.87 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 09/02/2004 | P |  | 163.25 | 7.00 | 27.00 | 8.36 | 154.89 | 260 | 11 | <1.0 | 5.5 | 14 | 28 | 2.4 | 7.4 |
|  | 11/04/2004 | -- | c | 163.25 | 7.00 | 27.00 | 7.71 | 155.54 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 02/08/2005 | P |  | 163.25 | 7.00 | 27.00 | 6.27 | 156.98 | 7,500 | 1,700 | 320 | 480 | 920 | 45 | 0.65 | 6.5 |
|  | 05/09/2005 | - |  | 163.25 | 7.00 | 27.00 | 5.90 | 157.35 | -- | -- | -- | -- | -- | -- | -- | $-$ |
|  | 08/11/2005 | P |  | 163.25 | 7.00 | 27.00 | 7.96 | 155.29 | 3,100 | 1,100 | 41 | 160 | 110 | 32 | 0.6 | 6.5 |
|  | 11/18/2005 | - |  | 163.25 | 7.00 | 27.00 | 8.57 | 154.68 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 02/16/2006 | P |  | 163.25 | 7.00 | 27.00 | 6.28 | 156.97 | 9,400 | 1,800 | 130 | 600 | 420 | 35 | 0.5 | 6.8 |
| MW-5 | 6/20/2000 | -- |  | 151.33 | 10.00 | 23.00 | 7.84 | 143.49 | $<50$ | <0.5 | <0.5 | <0.5 | $<1.0$ | $<10$ | -- | -- |
|  | 9/28/2000 | -- |  | 151.33 | 10.00 | 23.00 | 8.37 | 142.96 | $<50$ | $<0.5$ | $<0.5$ | $<0.5$ | $<0.5$ | <2.5 | -- | -- |
|  | 12/17/2000 | -- |  | 151.33 | 10.00 | 23.00 | 8.36 | 142.97 | <50 | $<0.5$ | $<0.5$ | <0.5 | $<0.5$ | <2.5 | -- | -- |

Table 1

## Groundwater Elevation and Analytical Data

ARCO Service Station \#0374
6407 Telegraph Ave., Oakland, CA

| Well No. | Date | $\begin{aligned} & \mathbf{P} / \\ & \mathbf{N P} \end{aligned}$ | Footnotes/ Comments | $\begin{gathered} \text { TOC } \\ \text { (ft MSL) } \end{gathered}$ | Top of Screen (ft bgs) | Bottom of Screen (ft bgs) | $\begin{aligned} & \text { DTW } \\ & \text { (ft bgs) } \end{aligned}$ | $\left\|\begin{array}{c} \text { GWE } \\ (\mathrm{ft} \text { MSL) }) \end{array}\right\|$ | $\begin{aligned} & \text { GROI } \\ & \text { TPH-g } \\ & (\mu \mathrm{g} / \mathrm{L}) \end{aligned}$ | Benzene ( $\mu \mathrm{g} / \mathrm{L}$ ) | Toluene ( $\mu \mathrm{g} / \mathrm{L}$ ) | Ethylbenzene ( $\mu \mathrm{g} / \mathrm{L}$ ) | Total Xylenes ( $\mu \mathrm{g} / \mathrm{L}$ ) | MTBE ( $\mu \mathrm{g} / \mathrm{L}$ ) | $\begin{aligned} & \mathrm{DO} \\ & (\mathrm{mg} / \mathrm{L}) \end{aligned}$ | pH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MW-5 | 3/23/2001 | - |  | 151.33 | 10.00 | 23.00 | 7.55 | 143.78 | <50 | < 0.5 | <0.5 | $<0.5$ | < 0.5 | <2.5 | -- | -- |
|  | 6/21/2001 | -- |  | 151.33 | 10.00 | 23.00 | 8.20 | 143.13 | <50 | < 0.5 | < 0.5 | < 0.5 | $<0.5$ | <2.5 | -- | -- |
|  | 9/23/2001 | - |  | 151.33 | 10.00 | 23.00 | 8.68 | 142.65 | <50 | $<0.5$ | < 0.5 | < 0.5 | $<0.5$ | $<2.5$ | -- | -- |
|  | 12/31/2001 | -- |  | 151.33 | 10.00 | 23.00 | 7.57 | 143.76 | <50 | <0.5 | $<0.5$ | $<0.5$ | < 0.5 | <2.5 | -- | -- |
|  | 3/21/2002 | -- |  | 151.33 | 10.00 | 23.00 | 6.12 | 145.21 | $<50$ | $<0.5$ | $<0.5$ | <0.5 | $<0.5$ | 3.2 | -- | -- |
|  | 4/17/2002 | -- |  | 151.33 | 10.00 | 23.00 | 6.61 | 144.72 | $<50$ | $<0.5$ | $<0.5$ | < 0.5 | < 0.5 | $<2.5$ | -- | -- |
|  | 8/12/2002 | -- |  | 151.33 | 10.00 | 23.00 | 8.14 | 143.19 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <2.5 | 4.1 | 7.6 |
|  | 12/6/2002 | -- |  | 151.33 | 10.00 | 23.00 | 8.65 | 142.68 | $<50$ | $<0.5$ | $<0.5$ | $<0.5$ | $<0.5$ | <2.5 | 1.1 | 6.8 |
|  | 1/29/2003 | -- | b | 151.33 | 10.00 | 23.00 | 7.22 | 144.11 | $<50$ | $<0.5$ | <0.5 | $<0.5$ | $<0.5$ | $<0.5$ | 1 | 6.6 |
|  | 5/23/2003 | -- |  | 151.33 | 10.00 | 23.00 | 7.31 | 144.02 | <50 | <0.50 | $<0.50$ | $<0.50$ | $<0.50$ | $<0.50$ | 1.1 | 6.6 |
|  | 9/4/2003 | -- |  | 151.33 | 10.00 | 23.00 | 9.50 | 141.83 | $<50$ | <0.50 | $<0.50$ | $<0.50$ | $<0.50$ | $<0.50$ | 3.2 | 6.7 |
|  | 11/20/2003 | - |  | 151.33 | 10.00 | 23.00 | 8.31 | 143.02 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 02/02/2004 | -- | c | 151.33 | 10.00 | 23.00 | 6.92 | 144.41 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 05/14/2004 | - |  | 151.33 | 10.00 | 23.00 | 8.56 | 142.77 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 09/02/2004 | P |  | 151.33 | 10.00 | 23.00 | 8.79 | 142.54 | $<50$ | $<0.50$ | $<0.50$ | <0.50 | <0.50 | $<0.50$ | 3.5 | 6.8 |
|  | 11/04/2004 | -- | c | 151.33 | 10.00 | 23.00 | 8.33 | 143.00 | -- | -- | -- | -- | -- | -- | $\cdots$ | -- |
|  | 02/08/2005 | -- |  | 151.33 | 10.00 | 23.00 | 7.28 | 144.05 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 05/09/2005 | -- |  | 151.33 | 10.00 | 23.00 | 8.19 | 143.14 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 08/11/2005 | P |  | 151.33 | 10.00 | 23.00 | 8.39 | 142.94 | <50 | $<0.50$ | $<0.50$ | $<0.50$ | $<0.50$ | $<0.50$ | 1.2 | 6.6 |
|  | 11/18/2005 | -- |  | 151.33 | 10.00 | 23.00 | 11.25 | 140.08 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 02/16/2006 | - |  | 151.33 | 10.00 | 23.00 | 9.22 | 142.11 | -- | -- | -- | -- | -- | -- | $\cdots$ | -- |
| MW-6 | 6/20/2000 | -- |  | 153.84 | 5.00 | 15.00 | 4.79 | 149.05 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 9/28/2000 | -- |  | 153.84 | 5.00 | 15.00 | 5.39 | 148.45 | -- | - | -- | -- | -- | -- | -- | -- |
|  | 12/17/2000 | -- |  | 153.84 | 5.00 | 15.00 | 4.71 | 149.13 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 3/23/2001 | -- |  | 153.84 | 5.00 | 15.00 | 4.69 | 149.15 | <50 | < 0.5 | <0.5 | < 0.5 | $<0.5$ | <2.5 | -- | -- |
|  | 6/21/2001 | -- |  | 153.84 | 5.00 | 15.00 | 5.22 | 148.62 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 9/23/2001 | - |  | 153.84 | 5.00 | 15.00 | 5.40 | 148.44 | -- | -- | - | - | -- | -- | -- | -- |
|  | 12/31/2001 | - |  | 153.84 | 5.00 | 15.00 | 3.95 | 149.89 | -- | -- | - | - | -- | -- | -- | -- |
|  | 3/21/2002 | -- |  | 153.84 | 5.00 | 15.00 | 2.94 | 150.90 | $<50$ | <0.5 | $<0.5$ | $<0.5$ | $<0.5$ | 5.2 | -- | -- |
|  | 4/17/2002 | -- |  | 153.84 | 5.00 | 15.00 | 5.11 | 148.73 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 8/12/2002 | -- |  | 153.84 | 5.00 | 15.00 | 5.23 | 148.61 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 12/6/2002 | -- |  | 153.84 | 5.00 | 15.00 | 5.29 | 148.55 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 1/29/2003 | -- | b | 153.84 | 5.00 | 15.00 | 4.79 | 149.05 | -- | - | -- | -- | -- | -- | -- | -- |

Table 1

## Groundwater Elevation and Analytical Data

ARCO Service Station \#0374
6407 Telegraph Ave., Oakland, CA

| Well No. | Date | $\begin{aligned} & \text { P/ } \\ & \mathbf{N P} \end{aligned}$ | Footnotes/ Comments | $\left\|\begin{array}{c} \mathrm{TOC} \\ \text { (ft MSL) } \end{array}\right\|$ | Top of Screen (ft bgs) | Bottom of Screen (ft bgs) | DTW (ft bgs) | $\begin{gathered} \text { GWE } \\ \text { (ft MSL) } \end{gathered}$ | $\begin{aligned} & \text { GROl } \\ & \text { TPH } \\ & (\mu \mathrm{g} / \mathrm{L}) \end{aligned}$ | Benzene ( $\mu \mathrm{g} / \mathrm{L}$ ) | Toluene ( $\mu \mathrm{g} / \mathrm{L}$ ) | Ethylbenzene ( $\mu \mathrm{g} / \mathrm{L}$ ) | Total Xylenes ( $\mu \mathrm{g} / \mathrm{L}$ ) | MTBE ( $\mu \mathrm{g} / \mathrm{L}$ ) | $\begin{array}{\|c} \mathrm{DO} \\ (\mathrm{mg} / \mathrm{L}) \end{array}$ | pH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MW-6 | 5/23/2003 | -- |  | 153.84 | 5.00 | 15.00 | 4.31 | 149.53 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 9.4 | 1 | 6.7 |
|  | 09/04/03 | -- | d | 153.84 | 5.00 | 15.00 | -- | -- | -- | -- | -- | -- | -- | -- | - | -- |
|  | 11/20/2003 | - |  | 153.84 | 5.00 | 15.00 | 6.31 | 147.53 | -- | -- | -- | -- | -- | -- | -- | - |
|  | 02/02/2004 | -- |  | 159.41 | 5.00 | 15.00 | 4.78 | 154.63 | - | -- | -- | -- | -- | -- | -- | -- |
|  | 05/14/2004 | -- |  | 159.41 | 5.00 | 15.00 | 6.29 | 153.12 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 09/02/2004 | - | d | 159.41 | 5.00 | 15.00 | 5.79 | 153.62 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 11/04/2004 | - | d | 159.41 | 5.00 | 15.00 | -- | -- | -- | -- | -- | -- | -- | - | -- | -- |
|  | 02/08/2005 | -- |  | 159.41 | 5.00 | 15.00 | 5.13 | 154.28 | -- | -- | -- | -- | -- | -- | -- | -- |
|  | 05/09/2005 | -- |  | 159.41 | 5.00 | 15.00 | 4.52 | 154.89 | $\cdots$ | -- | -- | -- | -- | -- | - | -- |
|  | 08/11/2005 | P |  | 159.41 | 5.00 | 15.00 | 5.02 | 154.39 | $<50$ | $<0.50$ | $<0.50$ | $<0.50$ | <0.50 | 7.9 | 2.1 | 6.6 |
|  | 11/18/2005 | -- |  | 159.41 | 5.00 | 15.00 | 6.31 | 153.10 | -- | - | -- | -- | -- | -- | - | -- |
|  | 02/16/2006 | -- |  | 159.41 | 5.00 | 15.00 | 4.24 | 155.17 | -- | -- | -* | -- | -- | -- | -- | -- |

## Table 1

## Groundwater Elevation and Analytical Data <br> \section*{ARCO Service Station \#0374}

6407 Telegraph Ave., Oakland, CA
SYMBOLS AND ABBREVIATIONS:
-- = Not analyzed/applicable/measured/available
<= Not detected at or above laboratory reporting limit
DO = Dissolved oxygen
DTW = Depth to water in ft bgs
t bgs = Feet below ground surface
MSL = Feet above mean sea level
GRO = Gasoline range organics
GWE $=$ Groundwater elevation measured in ft MSL
$\mathrm{mg} / \mathrm{L}=$ Milligrams per liter
MTBE = Methyl tert-butyl ether
NP = Well was not purged prior to sampling
$\mathrm{P}=$ Well was purged prior to sampling
TOC = Top of casing measured in ft MSL
TPH-g $=$ Total petroleum hydrocarbons as gasoline
$\mu \mathrm{g} / \mathrm{L}=$ Micrograms per liter
BTEX = Benzene, toluene, ethylbenzene and xylenes

## FOOTNOTES:

$\mathrm{a}=$ Chromatogram pattern: Gasoline C6-C10 for GRO/TPH-g.
$b=$ Beginning this quarter, groundwater samples were analyzed by EPA method 8260B for TPH-g, BTEX, and fuel oxygenates
$c=$ Wells gauged with ORC sock in well.
d = Well inaccessible
$\mathrm{e}=$ The hydrocarbon result for GRO was partly due to individual peaks in the quantitative range.

## NOTES:

 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 $\mathrm{C} 6-\mathrm{C} 10$ to $\mathrm{C} 4-\mathrm{C} 12$.
Values for DO and pH were obtained through field measurements.
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.
The DTW's and TOC's for wells MW-5 and MW-6 were taken from Delta Environmental sampling sheets because the well logs were not available.

Table 2

## Fuel Additives Analytical Data

ARCO Service Station \#0374
6407 Telegraph Ave., Oakland, CA

|  | Date Sampled | Ethanol ( $\mu \mathrm{g} / \mathrm{L}$ ) | $\begin{gathered} \hline \text { TBA } \\ (\mu \mathrm{g} / \mathrm{L}) \end{gathered}$ | $\begin{aligned} & \hline \text { MTBE } \\ & (\mu \mathrm{g} / \mathrm{L}) \end{aligned}$ | $\begin{aligned} & \hline \text { DIPE } \\ & (\mu \mathrm{g} / \mathrm{L}) \end{aligned}$ | $\begin{aligned} & \text { ETBE } \\ & (\mu \mathrm{g} / \mathrm{L}) \end{aligned}$ | $\begin{aligned} & \text { TAME } \\ & (\mu \mathrm{g} / \mathrm{L}) \end{aligned}$ | $\begin{gathered} 1,2-D C A \\ (\mu \mathrm{~g} / \mathrm{L}) \end{gathered}$ | $\begin{aligned} & \mathrm{EDB} \\ & (\mathrm{\mu g} / \mathrm{L}) \end{aligned}$ | Footnotes/ Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MW-1 | 5/23/2003 | <20,000 | <4,000 | 1,600 | <100 | <100 | <100 | -- | -- |  |
|  | 11/20/2003 | <2,000 | $<400$ | 1,500 | <10 | $<10$ | <10 | -- | -- | a |
|  | 05/14/2004 | <5,000 | <1,000 | 1,200 | <25 | <25 | <25 | <25 | <25 |  |
|  | 09/02/2004 | <1,000 | <200 | 660 | <5.0 | < 5.0 | <5.0 | $<5.0$ | <5.0 |  |
|  | 11/04/2004 | <2,000 | $<400$ | 580 | $<10$ | <10 | <10 | <10 | $<10$ |  |
|  | 02/08/2005 | <2,000 | $<400$ | 610 | <10 | $<10$ | <10 | <10 | <10 |  |
|  | 05/09/2005 | <1,000 | <200 | 620 | <5.0 | <5.0 | <5.0 | $<5.0$ | <5.0 | a |
|  | 08/11/2005 | <500 | 250 | 390 | <2.5 | <2.5 | 2.6 | <2.5 | $<2.5$ | a |
|  | 11/18/2005 | $<500$ | <100 | 340 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | a |
|  | 02/16/2006 | <1,500 | <100 | 340 | <2.5 | $<2.5$ | <2.5 | <2.5 | <2.5 |  |
| MW-2 | 5/23/2003 | $<100$ | <20 | 55 | $<0.50$ | $<0.50$ | 0.53 | -- | -- |  |
|  | 02/02/2004 | <100 | $<20$ | 37 | $<0.50$ | $<0.50$ | $<0.50$ | $<0.50$ | <0.50 |  |
|  | 09/02/2004 | $<500$ | <100 | 67 | $<2.5$ | $<2.5$ | <2.5 | <2.5 | $<2.5$ |  |
|  | 02/08/2005 | <100 | <20 | 30 | <0.50 | <0.50 | <0.50 | $<0.50$ | <0.50 |  |
|  | 08/11/2005 | <100 | <20 | 35 | $<0.50$ | <0.50 | <0.50 | $<0.50$ | <0.50 | a |
|  | 02/16/2006 | $<300$ | $<20$ | 39 | $<0.50$ | $<0.50$ | <0.50 | <0.50 | $<0.50$ |  |
| MW-3 | 5/23/2003 | <100 | $<20$ | 1.6 | $<0.50$ | $<0.50$ | $<0.50$ | -- | -- |  |
|  | 09/02/2004 | $<100$ | <20 | 6.5 | <0.50 | $<0.50$ | $<0.50$ | $<0.50$ | $<0.50$ |  |
|  | 08/11/2005 | $<100$ | $<20$ | 11 | $<0.50$ | $<0.50$ | <0.50 | $<0.50$ | $<0.50$ | a |
| MW-4 | 5/23/2003 | <10,000 | <2,000 | <50 | $<50$ | $<50$ | $<50$ | -- | -- |  |
|  | 02/02/2004 | <500 | <100 | 29 | <2.5 | <2.5 | 2.6 | <2.5 | $<2.5$ |  |
|  | 09/02/2004 | <200 | $<40$ | 28 | <1.0 | <1.0 | $<1.0$ | $<1.0$ | $<1.0$ |  |
|  | 02/08/2005 | <5,000 | <1,000 | 45 | $<25$ | $<25$ | $<25$ | <25 | <25 |  |
|  | 08/11/2005 | <2,000 | $<400$ | 32 | $<10$ | $<10$ | <10 | $<10$ | <10 |  |
|  | 02/16/2006 | <6,000 | <400 | 35 | $<10$ | $<10$ | $<10$ | $<10$ | $<10$ |  |
| MW-5 | 1/29/2003 | $<40$ | $<20$ | <0.50 | $<0.50$ | $<0.50$ | <0.50 | -- | -- |  |
|  | 5/23/2003 | <100 | <20 | <0.50 | <0.50 | <0.50 | $<0.50$ | -- | -- |  |
|  | 9/4/2003 | $<100$ | $<20$ | $<0.50$ | <0.50 | $<0.50$ | $<0.50$ | <0.50 | $<0.50$ |  |
|  | 09/02/2004 | <100 | <20 | <0.50 | $<0.50$ | $<0.50$ | <0.50 | <0.50 | <0.50 |  |
|  | 08/11/2005 | $<100$ | $<20$ | $<0.50$ | $<0.50$ | $<0.50$ | $<0.50$ | $<0.50$ | $<0.50$ |  |
| MW-6 | 5/23/2003 | <100 | <20 | 9.4 | <0.50 | $<0.50$ | $<0.50$ | -- | - |  |
|  | 08/11/2005 | <100 | $<20$ | 7.9 | $<0.50$ | $<0.50$ | $<0.50$ | <0.50 | <0.50 | a |

## Table 2

## Fuel Additives Analytical Data <br> ARCO Service Station \#0374 <br> 6407 Telegraph Ave., Oakland, CA

SYMBOLS AND ABBREVIATIONS:
.- = Not analyzed/applicable/measured/available
$<=$ Not detected at or above the laboratory reporting limi
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
$\mu \mathrm{g} / \mathrm{L}=$ Micrograms per Lite

## FOOTNOTES:



NOTES:
All volatile organic compounds analyzed using EPA Method 8260B.

Table 3
Groundwater Gradient Data
ARCO Service Station \#0374
6407 Telegraph Ave., Oakland, CA

| Date Sampled | Approximate Flow Direction | Approximate Hydraulic Gradient |
| :---: | :---: | :---: |
| 1/31/1996 | Southwest | 0.04 |
| 4/10/1996 | Southwest | 0.04 |
| 7/16/1996 | Southwest | 0.03 |
| 10/14/1996 | Southwest | 0.03 |
| 3/27/1997 | Southwest | 0.04 |
| 5/27/1997 | Southwest | 0.03 |
| 8/12/1997 | Southwest | 0.04 |
| 11/17/1997 | Southwest | 0.03 |
| 3/16/1998 | Southwest | 0.03 |
| 5/12/1998 | Southwest | 0.04 |
| 7/27/1998 | Southwest | 0.04 |
| 10/15/1998 | Southwest | 0.02 |
| 2/18/1999 | Southwest | 0.05 |
| 5/24/1999 | Southwest | 0.03 |
| 8/27/1999 | Southwest | 0.03 |
| 10/26/1999 | Southwest | 0.03 |
| 2/3/2000 | Southwest | 0.047 |
| 6/20/2000 | Southwest | 0.035 |
| 9/28/2000 | Southwest | 0.034 |
| 12/17/2000 | Southwest | 0.032 |
| 3/23/2001 | Southwest | 0.034 |
| 6/21/2001 | Southwest | 0.032 |
| 9/23/2001 | Southwest | 0.029 |
| 12/31/2001 | Southwest | 0.043 |
| 3/21/2002 | Southwest | 0.038 |
| 4/17/2002 | Southwest | 0.031 |
| 8/12/2002 | Southwest | 0.032 |
| 12/6/2002 | Southwest | 0.020 |
| 1/29/2003 | Southwest | 0.027 |
| 5/23/2003 | Southwest | 0.039 |
| 9/4/2003 | Southwest | 0.033 |
| 11/20/2003 | Southwest | 0.029 |
| 2/2/2004 | Southwest | 0.043 |
| 5/14/2004 | Southwest | 0.037 |
| 9/2/2004 | Southwest | 0.027 |
| 11/4/2004 | Southwest | 0.034 |
| 2/8/2005 | Southwest | 0.061 |

Table 3

## Groundwater Gradient Data

ARCO Service Station \#0374
6407 Telegraph Ave., Oakland, CA

| Date Sampled | Approximate Flow Direction | Approximate Hydraulic Gradient |
| :---: | :---: | :---: |
| $5 / 9 / 2005$ | Southwest | 0.08 |
| $8 / 11 / 2005$ | Southwest | 0.06 |
| $11 / 18 / 2005$ | Southwest | 0.07 |
| $2 / 16 / 2006$ | Southwest | 0.09 |

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

## ATTACHMENT A

FIELD PROCEDURES AND FIELD DATA SHEETS

## FIELD PROCEDURES

## Sampling Procedures

The sampling procedure for each well consists first of measuring the water level and depth to bottom, and checking for the presence of free phase petroleum product (free product), using either an electronic indicator and a clear Teflon ${ }^{\mathrm{TM}}$ 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\# $060216-3172$
Date $\qquad$ $02 / 16106$ Client $\qquad$ 374

Site 6407 Telegraph AN Oakland


Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (408) 573-0555

ARCO / BP WELL MONITORING DATA SHEET


Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (408) 573-0555

## ARCO / BP WELL MONITORING DATA SHEET

| BTS \#: $0602 / 6-112$ | Station \# 3 7 c |
| :---: | :---: |
| Sampler: $\rfloor\rangle$ | Date: $02 / 16 / 06$ |
| Well I.D.: $\mu w-2$ | Well Diameter: 213 (4) 688 |
| Total Well Depth: 26.25 | Depth to Water: 6.82 |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Referenced to: PVC ${ }^{\text {P }}$, Grade. | D.O. Meter (if req'd): YSI $^{\text {d }}$ HACH |
| Weil Diameler  <br> $i^{\prime \prime}$ Mullipilier <br> $2^{\prime \prime}$ 0.04 <br> $3^{\prime \prime}$ 0.16 | Well Diamster $\frac{\text { Multiplier }}{0.0}$ <br> $4^{\prime \prime}$ 1.65 <br> Other radius $^{2} * 0.163$ |
| Purge Method: Bailer <br> Disposable Bailer  <br> Positive Air Displacement  <br> Electric Submersible  <br> Extraction Pump  <br>  Other; | Sampling Method:Bailer <br> Disprsable Haqer <br> Extraction Port |

Top of Screen: $\qquad$ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.
$\frac{12.6}{1 \text { Case Volume (Gals.) }} \times \frac{3}{\text { Specified Volumes }}=\frac{37-8}{\text { Calculated Volume }}$ Gals.


Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (408) 573-0555

ARCO / BP WELL MONITORING DATA SHEET


Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (408) 573.0555

## BP GEM OIL COMPANY TYPE A BILL OF LADING

SOURCE RECORD BILL OF LADING FOR NONHAZARDOUS PURGEWATER RECOVERED FROM GROUNDWATER WELLS AT BP GEM OIL COMPANY facilities in the state of california. the nonHAZARDOUS 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 $\mathbb{N}$ LIVERMORE, CALIFORNIA.

The contractor performing this work is PLAINE 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:


## ATTACHMENT B

## LABORATORY PROCEDURES,

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

## Laboratory Procedures

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

Sequoia

6 March, 2006

Barbara Jakub
URS Corporation [Arco]
1333 Broadway, Suite 800
Oakland, CA 94612

RE: ARCO \#0374, Oakland, CA
Work Order: MPB0814
Enclosed are the results of analyses for samples received by the laboratory on 02/17/06 17:26. If you have any questions concerning this report, please feel free to contact me.

Sincerely,


Lisa Race
Senior Project Manager

CA ELAP Certificate \#1210

The results in this laboratory report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the BPGCLN Technical Specifications, applicable Federal, State, local regulations and certification requirements as well as the methodologies as described in laboratory SOPs reviewed by the BPGCLN. This entire report was reviewed and approved for release.

| URS Corporation [Arco] | Project:ARCO \#0374, Oakland, CA | MPB0814 |
| :--- | :---: | :---: |
| 1333 Broadway, Suite 800 | Project Number:G0C21-0010 | Reported: |
| Oakland CA, 94612 | Project Manager:Barbara Jakub | $03 / 06 / 0613: 12$ |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
| :--- | :--- | :--- | :---: | :---: |
| MW-1 | MPB0814-01 | Water | $02 / 16 / 06$ | $15: 40$ |

The carbon range for the TPH-GRO has been changed from $\mathrm{C} 6-\mathrm{C} 10$ to $\mathrm{C} 4-\mathrm{C} 12$. The carbon range for TPH-DRO has been changed from $\mathrm{C} 10-\mathrm{C} 28$ to $\mathrm{C} 10-\mathrm{C} 36$. EPA 8015 B has been modified to better meet the requirements of California regulatory agencies.

These samples were received with no custody seals.

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600

FAX (408) 782-6308 www.sequoialabs.com

| URS Corporation [Arco] | Project:ARCO \#0374, Oakland, CA | MPB0814 |
| :--- | :---: | :---: |
| 1333 Broadway, Suite 800 | Project Number:G0C21-0010 | Reported: |
| Oakland CA, 94612 | Project Manager:Barbara Jakub | $03 / 06 / 0613: 12$ |

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

| Analyte | Result | orting <br> Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MW-1 (MPB0814-01) Water Sampled: 02/16/06 15:40 Received: 02/17/06 17:26 |  |  |  |  |  |  |  |  |  |
| tert-Amyl methyl ether | ND | 2.5 | ug/ | 5 | 6C01024 | 03/01/06 | 03/02/06 | EPA 8260B |  |
| Benzene | ND | 2.5 | " | " | " | " | " | " |  |
| tert-Butyl alcohol | ND | 100 | " | " | " | " | " | " |  |
| Di-isopropyl ether | ND | 2.5 | " | " | " | " | " | " |  |
| 1,2-Dibromoethane (EDB) | ND | 2.5 | " | " | " | " | " | " |  |
| 1,2-Dichloroethane | ND | 2.5 | " | " | " | " | " | " |  |
| Ethanol | ND | 1500 | " | " | " | " | " | " |  |
| Ethyl tert-butyl ether | ND | 2.5 | " | " | " | " | " | " |  |
| Ethylbenzene | ND | 2.5 | " | " | " | " | " | " |  |
| Methyl tert-butyl ether | 340 | 2.5 | " | " | " | " | " | " |  |
| Toluene | ND | 2.5 | " | " | " | " | " | " |  |
| Xylenes (total) | ND | 2.5 | " | " | " | " | " | " |  |
| Gasoline Range Organics (C4-C12) | 350 | 250 | " | " | " | " | " | " | PV |
| Surrogate: 1,2-Dichloroethane-d4 |  | 87 \% |  |  | " | " | " | " |  |
| Surrogate: Toluene-d8 |  | 86\% |  |  | " | " | " | " |  |
| Surrogate: Dibromofluoromethane |  | $97 \%$ |  |  | " | " | " | " |  |
| Surrogate: 4-Bromofluorobenzene |  | $84 \%$ |  |  | " | " | " | " |  |

MW-2 (MPB0814-02) Water Sampled: 02/16/06 14:50 Received: 02/17/06 17:26

| tert-Amyl methyl ether | ND | 0.50 | ug/l |  | 6C01024 | 03/01/06 | 03/02/06 | 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 | 300 | " |  | " | " | " | " |
| Ethyl tert-butyl ether | ND | 0.50 | " |  | " | " | " | " |
| Ethylbenzene | ND | 0.50 | " |  | " | " | " | " |
| Methyl tert-butyl ether | 39 | 0.50 | " |  | " | " | " | " |
| Toluene | ND | 0.50 | " |  | " | " | " | " |
| Xylenes (total) | ND | 0.50 | " |  | " | " | " | " |
| Gasoline Range Organics (C4-C12) | ND | 50 | " |  | " | " | " | " |
| Surrogate: 1,2-Dichloroethane-d4 |  | 82\% |  |  | " | " | " | " |
| Surrogate: Toluene-d8 |  | 86\% |  |  | " | " | " | " |
| Surrogate: Dibromofluoromethane |  | 91\% |  |  | " | " | " | " |
| Surrogate: 4-Bromofluorobenzene |  | $82 \%$ |  |  | " | " | " | " |

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.

| URS Corporation [Arco] | Project:ARCO \#0374, Oakland, CA | MPB0814 |
| :--- | :---: | :---: |
| 1333 Broadway, Suite 800 | Project Number:G0C21-0010 | Reported: |
| Oakland CA, 94612 | Project Manager:Barbara Jakub | $03 / 06 / 0613: 12$ |

## Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

| Reporting |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Analyte | Result | Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |

MW-4 (MPB0814-03) Water Sampled: 02/16/06 15:10 Received: 02/17/06 17:26

| tert-Amyl methyl ether | ND | 10 | ug/l | 20 | 6C01024 | 03/01/06 | 03/02/06 | EPA 8260B |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Benzene | 1800 | 10 | " | " | " | " | " | " |
| tert-Butyl alcohol | ND | 400 | " | " | " | " | " | " |
| Di-isopropyl ether | ND | 10 | " | " | " | " | " | " |
| 1,2-Dibromoethane (EDB) | ND | 10 | " | " | " | " | " | " |
| 1,2-Dichloroethane | ND | 10 | " | " | " | " | " | " |
| Ethanol | ND | 6000 | " | " | " | " | " | " |
| Ethyl tert-butyl ether | ND | 10 | " | " | " | " | " | " |
| Ethylbenzene | 600 | 10 | " | " | " | " | " | " |
| Methyl tert-butyl ether | 35 | 10 | " | " | " | " | " | " |
| Toluene | 130 | 10 | " | " | " | " | " | " |
| Xylenes (total) | 420 | 10 | " | " | " | " | " | " |
| Gasoline Range Organics (C4-C12) | 9400 | 1000 | " | " | " | " | " | " |
| Surrogate: 1,2-Dichloroethane-d4 |  | $94 \%$ |  |  | " | " | " | " |
| Surrogate: Toluene-d8 |  | $91 \%$ |  |  | " | " | " | " |
| Surrogate: Dibromofluoromethane |  | $92 \%$ |  |  | " | " | " | " |
| Surrogate: 4-Bromofluorobenzene |  | $88 \%$ |  |  | " | " | " | " |

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

| Project:ARCO \#0374, Oakland, CA | MPB0814 |
| :---: | :---: |
| Project Number:G0C21-0010 | Reported: |
| Project Manager:Barbara Jakub | $03 / 06 / 0613: 12$ |

03/06/06 13:12

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

|  | Reporting |  |  | Spike | Source |  | \%REC |  | RPD |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Analyte | Result | Limit | Units | Level | Result | \%REC | Limits | RPD | Limit | Notes |

Batch 6C01024-EPA 5030B P/T / EPA 8260B

| Blank (6C01024-BLK1) | Prepared: 03/01/06 Analyzed: 03/02/06 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| tert-Amyl methyl ether | ND | 0.50 | ug/1 |  |  |  |
| 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 | 300 | " |  |  |  |
| 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 | 4.25 |  | " | 5.00 | 85 | 60-135 |
| Surrogate: Toluene-d8 | 4.35 |  | " | 5.00 | 87 | 70.120 |
| Surrogate: Dibromofluoromethane | 4.71 |  | " | 5.00 | 94 | 65-130 |
| Surrogate: 4-Bromofluorobenzene | 4.30 |  | " | 5.00 | 86 | 70-120 |
| Laboratory Control Sample (6C01024-BS1) |  |  |  | epared | 03/0 |  |
| tert-Amyl methyl ether | 14.7 | 0.50 | ug/1 | 16.3 | 90 | 80-115 |
| Benzene | 4.77 | 0.50 | $\cdots$ | 5.04 | 95 | 65-115 |
| tert-Butyl alcohol | 152 | 20 | " | 169 | 90 | 75-150 |
| Di-isopropyl ether | 14.8 | 0.50 | " | 16.2 | 91 | 75-125 |
| 1,2-Dibromoethane (EDB) | 16.5 | 0.50 | " | 16.6 | 99 | 85-120 |
| 1,2-Dichloroethane | 13.7 | 0.50 | " | 15.5 | 88 | 85-130 |
| Ethanol | 149 | 300 | " | 165 | 90 | 70-135 |
| Ethyl tert-butyl ether | 13.3 | 0.50 | " | 16.4 | 81 | 75-130 |
| Ethylbenzene | 7.35 | 0.50 | " | 7.28 | 101 | 75-135 |
| Methyl tert-butyl ether | 6.80 | 0.50 | " | 7.84 | 87 | 65-125 |
| Toluene | 34.6 | 0.50 | " | 38.0 | 91 | 85-120 |
| Xylenes (total) | 37.1 | 0.50 | " | 40.8 | 91 | 85-125 |
| Gasoline Range Organics (C4-C12) | 418 | 50 | " | 440 | 95 | 60-140 |
| Surrogate: 1,2-Dichloroethane-d4 | 4.40 |  | " | 5.00 | 88 | 60-135 |
| Surrogate: Toluene-d8 | 4.81 |  | " | 5.00 | 96 | 70-120 |
| Surrogate: Dibromofluoromethane | 4.41 |  | ${ }^{\prime \prime}$ | 5.00 | 88 | 65-130 |
| Surrogate: 4-Bromofluorobenzene | 4.48 |  | " | 5.00 | 90 | 70-120 |

Sequoia Analytical - Morgan Hill
The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.

885 Jarvis Drive

Reported:
03/06/06 13:12

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

|  | Reporting |  |  | Spike | Source |  | \%REC |  | RPD |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Analyte | Result | Limit | Units | Level | Result | \%REC | Limits | RPD | Limit | Notes |

## Batch 6C01024-EPA 5030B P/T / EPA 8260B

| Matrix Spike (6C01024-MS1) | Source: MPB0814-01 |  |  | Prepared: 03/01/06 Analyzed: 03/02/06 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| tert-Amyl methyl ether | 68.4 | 2.5 | ug/l | 81.6 | 1.6 | 82 | 80-115 |  |  |  |
| Benzene | 23.0 | 2.5 | " | 25.2 | ND | 91 | 65-115 |  |  |  |
| tert-Butyl alcohol | 844 | 100 | " | 844 | ND | 100 | 75-120 |  |  |  |
| Di-isopropyl ether | 71.7 | 2.5 | " | 81.2 | ND | 88 | 75-125 |  |  |  |
| 1,2-Dibromoethane (EDB) | 78.0 | 2.5 | " | 83.2 | ND | 94 | 85-120 |  |  |  |
| 1,2-Dichloroethane | 67.0 | 2.5 | " | 77.6 | ND | 86 | 85-130 |  |  |  |
| Ethanol | 874 | 1500 | " | 824 | ND | 106 | 70-135 |  |  |  |
| Ethyl tert-butyl ether | 63.6 | 2.5 | " | 82.0 | ND | 78 | 75-130 |  |  |  |
| Ethylbenzene | 33.4 | 2.5 | " | 36.4 | ND | 92 | 75-135 |  |  |  |
| Methyl tert-butyl ether | 322 | 2.5 | " | 39.2 | 340 | 0 | 65-125 |  |  | BB,LN |
| Toluene | 161 | 2.5 | " | 190 | ND | 85 | 85-120 |  |  |  |
| Xylenes (total) | 183 | 2.5 | " | 204 | ND | 90 | 85-125 |  |  |  |
| Gasoline Range Organics (C4-C12) | 2230 | 250 | " | 2200 | 350 | 85 | 60-140 |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4 | 4.18 |  | " | 5.00 |  | 84 | 60-135 |  |  |  |
| Surrogate: Toluene-d8 | 4.32 |  | " | 5.00 |  | 86 | 70-120 |  |  |  |
| Surrogate: Dibromofluoromethane | 4.22 |  | " | 5.00 |  | 84 | 65-130 |  |  |  |
| Surrogate: 4-Bromofluorobenzene | 4.41 |  | " | 5.00 |  | 88 | 70-120 |  |  |  |
| Matrix Spike Dup (6C01024-MSD1) | Source: MPB0814-01 |  |  | Prepared: 03/01/06 Analyzed: 03/02/06 |  |  |  |  |  |  |
| tert-Amyl methyl ether | 73.1 | 2.5 | ug/ | 81.6 | 1.6 | 88 | 80-115 | 7 | 15 |  |
| Benzene | 23.3 | 2.5 | " | 25.2 | ND | 92 | 65-115 | 1 | 20 |  |
| tert-Butyl alcohol | 882 | 100 | " | 844 | ND | 105 | 75-120 | 4 | 25 |  |
| Di-isopropyl ether | 74.8 | 2.5 | " | 81.2 | ND | 92 | 75-125 | 4 | 15 |  |
| 1,2-Dibromoethane (EDB) | 79.1 | 2.5 | " | 83.2 | ND | 95 | 85-120 | 1 | 15 |  |
| 1,2-Dichloroethane | 67.4 | 2.5 | " | 77.6 | ND | 87 | 85-130 | 0.6 | 20 |  |
| Ethanol | 887 | 1500 | " | 824 | ND | 108 | 70-135 | 1 | 35 |  |
| Ethyl tert-butyl ether | 65.5 | 2.5 | " | 82.0 | ND | 80 | 75-130 | 3 | 25 |  |
| Ethylbenzene | 34.0 | 2.5 | " | 36.4 | ND | 93 | 75-135 | 2 | 15 |  |
| Methyl tert-butyl ether | 333 | 2.5 | " | 39.2 | 340 | 0 | 65-125 | 3 | 20 | BB,LN |
| Toluene | 165 | 2.5 | " | 190 | ND | 87 | 85-120 | 2 | 20 |  |
| Xylenes (total) | 176 | 2.5 | " | 204 | ND | 86 | 85-125 | 4 | 20 |  |
| Gasoline Range Organics (C4-C12) | 2220 | 250 | " | 2200 | 350 | 85 | 60-140 | 0.4 | 25 |  |
| Surrogate: 1,2-Dichloroethane-d4 | 4.19 |  | " | 5.00 |  | 84 | 60-135 |  |  |  |
| Surrogate: Toluene-d8 | 4.77 |  | " | 5.00 |  | 95 | 70-120 |  |  |  |
| Surrogate: Dibromofluoromethane | 4.69 |  | " | 5.00 |  | 94 | 65-130 |  |  |  |
| Surrogate: 4-Bromofluorobenzene | 4.50 |  | " | 5.00 |  | 90 | 70-120 |  |  |  |

Sequoia Analytical - Morgan Hill
The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.

| URS Corporation [Arco] <br> 1333 Broadway, Suite 800 <br> Oakland CA, 94612 | Project:ARCO \#0374, <br> Project Number:G0C21-0010 <br> Project Manager:Barbara Jakub |
| :--- | :--- |
| PV | Hydrocarbon result partly due to individ. peak(s) in quant. range |
| BB,LN | Sample > 4x spike concentration. |
| 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

Project Name: Analytical for QMR sampling
BP BU/AR Region/Enfos Segment: $\quad$ BP $>$ Americas $>$ West Coast $>$ Retail $>$ WCBU $>$ CA $>$ Central $>374>$ HisloticalBL
State or Lead Regulatory Agency: California Reglonal Water Quality Control Board - San $\mathrm{Fr}_{\text {r }}$ Requested Due Date (mm/dd/yy): 10 Day TAT


Distribution: White Copy - Laboratury/Yellow Copy - BP/Atlańtic Richfield Co. /Pink Copy - Consultant/Contractor

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG


# ATTACHMENT C <br> ERROR CHECK REPORTS AND EDF/GEOWELL SUBMITTAL CONFIRMATIONS 

| Electronic Submittal Information Main Menu \| View/Add Facilities | Upload EDD / Check EDD |  |
| :---: | :---: |
| SUCCESSFUL GEO_WELL CHECK - NO ERRORS |  |
| ORGANIZATION NAME: USER NAME: DATE CHECKED: | URS Corporation-Oakland Office URSCORP-OAKLAND <br> 4/3/2006 4:19:03 PM |
| Processing is complete. No errors were found! You may now proceed to the upload page. <br> Back to Main Menu |  |



Electronic Submittal Information
Main Menu | View/Add Facilities | Upload EDD | Check EDD

## SUCCESSFUL EDF CHECK - NO ERRORS

ORGANIZATION NAME:
USER NAME:
DATE CHECKED:
GLOBAL ID:
FILE UPLOADED:

URS Corporation-Oakland Office
URSCORP-OAKLAND 4/3/2006 4:20:51 PM
T0600100106
ARCO\#0374-EDFMPB0814.zip

No errors were found in your EDF upload file.
If you want to submit this file to the SWRCB, choose the "Upload EDD" option in the above menu and follow the instructions.

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

Click here to view the detections report for this upload.

SOIL SAMPLES FOR 8021/8260 SERIES
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) \% RECOVERY BETWEEN 65135\%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 $70-$ ..... n/a
FIELD QC SAMPLES

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

## Electronic Submittal Information <br> Main Menu | View/Add Facilities \| Upload EDD | Check EDD

Your EDF file has been successfully uploaded!
Confirmation Number: 7156836450
Date/Time of Submittal: 4/3/2006 4:24:44 PM
Facility Global ID: T0600100106
Facility Name: ARCO \# 00374
Submittal Title: 1Q 2006 BP/ARCO 374 EDF
Submittal Type: GW Monitoring Report
Click here to view the detections report for this upload.


BLANK SPIKE / BLANK SPIKE DUPLICATES \% RECOVERY BETWEEN 70-130\% n/a

FIELD QC SAMPLES SAMPLE QCTB SAMPLES QCEB SAMPLES QCAB SAMPLES

COLLECTED
N
DETECTIONS $>$ REPDL

N
N
0
$\square$ 0

