



Atlantic Richfield Company  
(a BP affiliated company)

P.O. Box 6549  
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July 30, 2004

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

Alameda County  
JUL 30 2004  
Environmental Health

Re: Second Quarter 2004 Groundwater Monitoring Report  
Atlantic Richfield Company Service Station #4977  
2770 Castro Valley Blvd.  
Castro Valley, California  
URS Project #38486724

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

Submitted by:

Paul Supple  
Environmental Business Manager



July 30, 2004

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

Alameda County  
Environmental Health  
JUL 30 2004

**Re: Second Quarter 2004 Groundwater Monitoring Report  
Atlantic Richfield Company Service Station #4977  
2770 Castro Valley Blvd  
Castro Valley, California  
URS Project #38486724**

Dear Mr. Shultz:

On behalf of Atlantic Richfield Company (RM), a BP affiliated company, URS Corporation (URS) is submitting the *Second Quarter 2004 Groundwater Monitoring Report* for Atlantic Richfield Company Service Station #4977, located at 2770 Castro Valley Blvd, Castro Valley, California.

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

Sincerely,

**URS CORPORATION**

Scott Robinson  
Project Manager

James F. Durkin, C.Hg.  
Senior Geologist



Enclosure: Second Quarter 2004 Groundwater Monitoring Report

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

**R E P O R T**

**SECOND QUARTER 2004  
GROUNDWATER MONITORING**

**ATLANTIC RICHFIELD COMPANY  
SERVICE STATION #4977  
2770 CASTRO VALLEY BLVD  
CASTRO VALLEY, CALIFORNIA**

*Prepared for*  
Atlantic Richfield Company

July 30, 2004

**URS**

URS Corporation  
1333 Broadway, Suite 800  
Oakland, California 94612

38486724

Date: July 30, 2004  
Quarter: 2Q 04

### ATLANTIC RICHFIELD COMPANY QUARTERLY GROUNDWATER MONITORING REPORT

Facility No.: 4977 Address: 2770 Castro Valley Blvd, Castro Valley, CA  
RM Environmental Business Manager: Paul Supple  
Consulting Co./Contact Person: URS Corporation / Scott Robinson  
Consultant Project No.: 38486724  
Primary Agency: Alameda County Environmental Health (ACEH)

#### WORK PERFORMED THIS QUARTER (Second – 2004):

1. Performed second quarter groundwater monitoring event on June 2, 2004.
2. Prepared and submitted first quarter 2004 groundwater monitoring report.

#### WORK PROPOSED FOR NEXT QUARTER (Third – 2004):

1. Perform third quarter groundwater monitoring event.
2. Prepare and submit second quarter 2004 groundwater monitoring report.

|                                       |   |
|---------------------------------------|---|
| Current Phase of Project:             | <u>Groundwater monitoring/sampling</u>    |
| Frequency of Groundwater Sampling:    | <u>Quarterly: Wells MW-1 through MW-3</u> |
| Frequency of Groundwater Monitoring:  | <u>Quarterly</u>                          |
| Is Free Product (FP) Present On-Site: | <u>No</u>                                 |
| Current Remediation Techniques:       | <u>Natural Attenuation</u>                |
| Approximate Depth to Groundwater:     | <u>7.14 ft (MW-2) to 8.95 ft (MW-1)</u>   |
| Groundwater Gradient (direction):     | <u>South</u>                              |
| Groundwater Gradient (magnitude):     | <u>0.025 feet per foot</u>                |

#### DISCUSSION:

Gasoline range organics (GRO) were detected above laboratory reporting limits in the three wells sampled this quarter at concentrations ranging from 53 µg/L (MW-1) to 25,000 µg/L (MW-2). Benzene was detected above laboratory reporting limits in all three wells at concentrations ranging from 1.4 µg/L (MW-1) to 680 µg/L (MW-2). Methyl-tert-butyl ether (MTBE) was detected above laboratory reporting limits in all three wells at concentrations ranging from 39 µg/L (MW-1) to 240 µg/L (MW-2). Tert-butyl alcohol (TBA) and tert-amyl methyl ether (TAME) were both detected above laboratory reporting limits in well MW-3 at concentrations of 130 µg/L and 0.56 µg/L, respectively.

**ATTACHMENTS:**

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

Table 1

**Groundwater Elevation and Analytical Data**  
 Atlantic Richfield Company Service Station #4977  
 2770 Castro Valley Blvd., Castro Valley, CA

| Well No. | Date        | P/ NP | Well Elevation TOC (feet) | Top of Screen Elevation | Bottom of Screen (ft bgs) | DTW (feet) | Product Thickness (feet) | GWE (feet) | 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     | 4/19/2002   | --    | 161.11                    | 156.11                  | 146.11                    | 11.21      | --                       | 149.90     | 660              | 12             | 1.3            | 4.3                  | 0.8                  | 38          | NA        | NA  |
|          | 9/27/2002   | --    | 161.11                    | 156.11                  | --                        | 9.29       | --                       | 151.82     | 130              | 7.7            | 0.87           | 5.4                  | 0.79                 | 39          | 1.7       | 6.9 |
|          | 12/16/2002* | --    | 161.11                    | 156.11                  | --                        | 8.55       | --                       | 152.56     | 77               | 1.8            | <0.50          | 0.69                 | <1.0                 | 42          | 1.6       | 6.9 |
|          | 3/11/2003   | --    | 161.11                    | 156.11                  | --                        | 8.07       | --                       | 153.04     | 140              | 9.8            | <0.50          | 5.6                  | <0.50                | 20          | 1.4       | 7.4 |
|          | 6/17/2003   | --    | 161.11                    | 156.11                  | --                        | 8.31       | --                       | 152.80     | 510              | 60             | 1.4            | 81                   | <1.0                 | 23          | 2.2       | 7   |
|          | 9/18/2003a  | --    | 161.11                    | 156.11                  | --                        | 9.45       | --                       | 151.66     | 72               | 2.4            | 1.4            | 1.6                  | 1.5                  | 39          | 2.7       | 7   |
|          | 12/11/2003  | P     | 161.11                    | 156.11                  | --                        | 8.80       | --                       | 152.31     | --               | 1.5            | <0.50          | 1.5                  | 4.4                  | 48          | 2.1       | 7.0 |
|          | 03/11/2004  | P     | 163.44                    | 156.11                  | --                        | 7.61       | --                       | 155.83     | <50              | 1.3            | <0.50          | 0.77                 | 1.3                  | 17          | 1.4       | 6.8 |
|          | 06/02/2004  | P     | 163.44                    | 156.11                  | --                        | 8.95       | --                       | 154.49     | 53               | 1.4            | <0.50          | 0.93                 | <0.50                | 39          | 2.3       | 7.1 |
| MW-2     | 4/19/2002   | --    | 161.87                    | 156.87                  | 146.87                    | 6.59       | --                       | 155.28     | 28,000           | 970            | 120            | 860                  | 6,900                | 760         | NA        | NA  |
|          | 9/27/2002   | --    | 161.87                    | 156.87                  | --                        | 7.18       | --                       | 154.69     | 17,000           | 1,400          | <50            | 1,200                | 3,700                | 1,400       | 1.5       | 6.8 |
|          | 12/16/2002* | --    | 161.87                    | 156.87                  | --                        | 7.31       | --                       | 154.56     | 17,000           | 1,000          | <50            | 980                  | 3,300                | 980         | 1.9       | 6.8 |
|          | 3/11/2003   | --    | 161.87                    | 156.87                  | --                        | 6.02       | --                       | 155.85     | 24,000           | 1,600          | 70             | 1,300                | 4,300                | 920         | 1.7       | 7.4 |
|          | 6/17/2003   | --    | 161.87                    | 156.87                  | --                        | 6.31       | --                       | 155.56     | 28,000           | 1,300          | 55             | 1,300                | 4,500                | 610         | 1.4       | 6.9 |
|          | 9/18/2003   | --    | 161.87                    | 156.87                  | --                        | 7.61       | --                       | 154.26     | 19,000           | 960            | 63             | 1,100                | 3,100                | 580         | 2.7       | 6.8 |
|          | 12/11/2003  | P     | 161.87                    | 156.87                  | --                        | 6.50       | --                       | 155.37     | --               | 710            | 53             | 1,300                | 3,800                | 490         | 2.0       | 7.0 |
|          | 03/11/2004  | P     | 164.29                    | 156.87                  | --                        | 6.02       | --                       | 158.27     | 19,000           | 830            | 49             | 1,500                | 4,000                | 410         | 0.80      | 6.5 |
|          | 06/02/2004  | P     | 164.29                    | 156.87                  | --                        | 7.14       | --                       | 157.15     | 25,000           | 680            | <50            | 1,300                | 3,900                | 240         | 4.3       | 7.1 |
| MW-3     | 4/19/2002   | --    | 162.14                    | 156.14                  | 147.14                    | 6.94       | --                       | 155.20     | 1,200            | 29             | 1.1            | 43                   | 62                   | 1,700       | NA        | NA  |
|          | 9/27/2002   | --    | 162.14                    | 156.14                  | --                        | 8.26       | --                       | 153.88     | 740              | 7.8            | <2.5           | 6.8                  | 4.4                  | 1,100       | 1         | 6.7 |
|          | 12/16/2002* | --    | 162.14                    | 156.14                  | --                        | 6.76       | --                       | 155.38     | 1,200            | 13             | <10            | 170                  | 88                   | 910         | 2.3       | 6.8 |
|          | 3/11/2003   | --    | 162.14                    | 156.14                  | --                        | 6.92       | --                       | 155.22     | <2,500           | <25            | <25            | <25                  | <25                  | 470         | 1.7       | 7.5 |
|          | 6/17/2003   | --    | 162.14                    | 156.14                  | --                        | 7.44       | --                       | 154.70     | <1,000           | <10            | <10            | 14                   | <10                  | 530         | 1.9       | 7   |
|          | 9/18/2003   | --    | 162.14                    | 156.14                  | --                        | 8.43       | --                       | 153.71     | 470              | 4.8            | <2.5           | 10                   | 9.2                  | 300         | 2.9       | 6.8 |
|          | 12/11/2003  | P     | 162.14                    | 156.14                  | --                        | 6.72       | --                       | 155.42     | --               | <5.0           | <5.0           | 7.0                  | 13                   | 180         | 1.9       | 6.9 |
|          | 03/11/2004  | P     | 164.53                    | 156.14                  | --                        | 6.09       | --                       | 158.44     | 360              | 1.9            | <1.0           | 5.6                  | 5.0                  | 110         | 2.6       | 6.8 |
|          | 06/02/2004  | P     | 164.53                    | 156.14                  | --                        | 7.50       | --                       | 157.03     | 380              | 2.8            | <0.50          | 8.0                  | 2.1                  | 43          | 3.6       | 7.3 |

**Table 1**

**Groundwater Elevation and Analytical Data**  
**Atlantic Richfield Company Service Station #4977**  
**2770 Castro Valley Blvd., Castro Valley, CA**

**Notes:**

Please note that 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 inclusion of non-TPHg analytes within the requested fuel range resulting in a higher concentration being reported.

Wells were re-surveyed on 3/23/2004.

MSL = above mean sea level

GRO/TPH-g = gasoline range organics (changed from C6-C10 to C4-C12 2Q2004)/total petroleum hydrocarbons in the gasoline range (C5-C9).

MTBE = methyl tertiary butyl ether analyzed by EPA Method 8021B unless otherwise noted. (before 12/16/02)

DTW = depth to water

GWE = groundwater elevation

BGS = below ground surface

TOC = top of casing

DO = dissolved oxygen

pH = measured in field

ug/L = micrograms per liter

mg/L = milligrams per liter

ppm = parts per million

P/NP = purged/not purged

< = not detected at or above laboratory reporting limits

\* =TPH, BTEX, and MTBE analyzed by EPA Method 8260B beginning on 4th Quarter Sampling event (12/16/02)

a = This sample was originally analyzed within the EPA recommended hold time. Re-analysis for confirmation or dilution was performed past the recommended hold time. The results may still be used for their intended purpose.

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

**Table 2**

**Groundwater Gradient Data**

Atlantic Richfield Company Service Station #4977  
2770 Castro Valley Blvd., Castro Valley, CA

| <b>Date Sampled</b> | <b>Approximate Flow Direction</b> | <b>Approximate Hydraulic Gradient</b> |
|---------------------|-----------------------------------|---------------------------------------|
| 4/19/2002           | Southwest                         | 0.038                                 |
| 9/27/2002           | Southwest                         | 0.021                                 |
| 12/16/2002          | Southeast                         | 0.029                                 |
| 3/11/2003           | South                             | 0.024                                 |
| 6/17/2003           | South-Southwest                   | 0.022                                 |
| 9/18/2003           | South-Southwest                   | 0.022                                 |
| 3/11/2004           | South-Southwest                   | 0.024                                 |
| 6/2/2004            | South                             | 0.025                                 |

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



Table 3

## Fuel Additives Analytical Data

Atlantic Richfield Company Service Station #4977  
2770 Castro Valley Blvd., Castro Valley, 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) |
|-------------|--------------|----------------|------------|-------------|-------------|-------------|-------------|----------------|------------|
| MW-1        | 12/16/2002   | <50            | <5.0       | --          | --          | <0.50       | <0.50       | <0.50          | <0.50      |
|             | 3/11/2003    | <100           | <20        | 20          | --          | <0.50       | <0.50       | <0.50          | <0.50      |
|             | 6/17/2003    | <200           | <40        | 23          | --          | <1.0        | <1.0        | <1.0           | <1.0       |
|             | 9/18/2003a   | <100           | <20        | 39          | --          | <0.50       | <0.50       | <0.50          | <0.50      |
|             | 12/11/2003   | <100           | <20        | 48          | <0.50       | <0.50       | <0.50       | <0.50          | <0.50      |
|             | 03/11/2004   | <100           | <20        | 17          | <0.50       | <0.50       | <0.50       | <0.50          | <0.50      |
|             | 06/02/2004   | <100           | <20        | 39          | <0.50       | <0.50       | <0.50       | <0.50          | <0.50      |
| MW-2        | 12/16/2002   | <5,000         | <500       | --          | --          | <50         | <50         | <50            | <50        |
|             | 3/11/2003    | <10,000        | <2,000     | 920         | --          | <50         | <50         | <50            | <50        |
|             | 6/17/2003    | <10,000        | <2,000     | 610         | --          | <50         | <50         | <50            | <50        |
|             | 9/18/2003    | <5,000         | <1,000     | 580         | --          | <25         | <25         | <25            | <25        |
|             | 12/11/2003   | <5,000         | <1,000     | 490         | <25         | <25         | <25         | <25            | <25        |
|             | 03/11/2004   | <2,000         | <400       | 410         | <10         | <10         | <10         | <10            | <10        |
|             | 06/02/2004   | <10,000        | <2,000     | 240         | <50         | <50         | <50         | <50            | <50        |
| MW-3        | 12/16/2002   | <1,000         | <100       | --          | --          | <10         | 12          | <10            | <10        |
|             | 3/11/2003    | <5,000         | <1,000     | 470         | --          | <25         | <25         | <25            | <25        |
|             | 6/17/2003    | <2,000         | <400       | 530         | --          | <10         | <10         | <10            | <10        |
|             | 9/18/2003    | <500           | <100       | 300         | --          | <2.5        | 3.2         | <2.5           | <2.5       |
|             | 12/11/2003   | <1,000         | <200       | 180         | <5.0        | <5.0        | <5.0        | <5.0           | <5.0       |
|             | 03/11/2004   | <200           | 570        | 110         | <1.0        | <1.0        | <1.0        | <1.0           | <1.0       |
|             | 06/02/2004   | <100           | 130        | 43          | <0.50       | <0.50       | 0.56        | <0.50          | <0.50      |

**Table 3**

**Fuel Additives Analytical Data**

Atlantic Richfield Company Service Station #4977  
2770 Castro Valley Blvd., Castro Valley, CA

Notes:

TBA = tert-Butyl alcohol

MTBE = Methyl tert-butyl ether

DIPE = Di-isopropyl ether

ETBE = Ethyl tert butyl ether

TAME = tert-Amyl methyl ether

1,2-DCE = 1,2-Dichloroethane

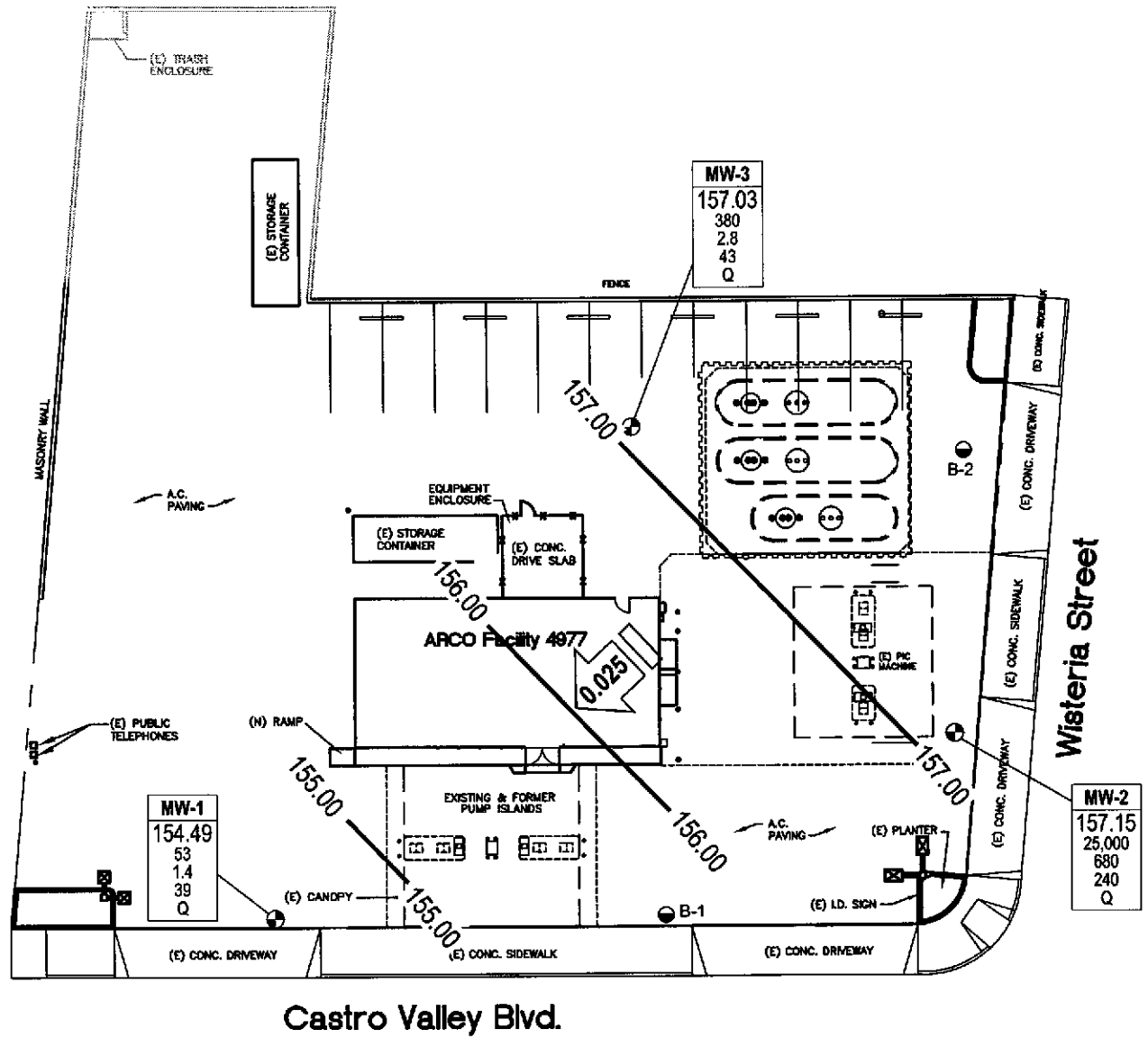
EDB = 1, 2 Dibromoethane

ug/L = micrograms per liter

< = Not detected at or above laboratory reporting limit

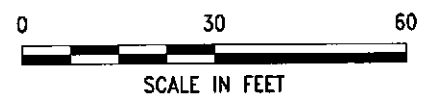
a = This sample was originally analyzed within the EPA recommended hold time. Re-analysis for confirmation or dilution was performed past the recommended hold time. The results may still be used for their intended purpose.

Jul 28, 2004 - 2:58pm  
 X:\env\_waste\jg\CEM\Shea\Scott\Robinson\Paul\_Supplier\4977\Monitoring\Qtr\_2\_2004\Drawings\GVEC-AS\_6-2-04.dwg



**LEGEND**

- MONITORING WELL
  - SOIL BORING
- |             |                                      |
|-------------|--------------------------------------|
| <b>Well</b> | WELL DESIGNATION                     |
| <b>ELEV</b> | GROUNDWATER ELEVATION (FT ABOVE MSL) |
| <b>GRO</b>  | CONCENTRATION OF GRO, BENZENE        |
| <b>MTBE</b> | AND MTBE IN GROUNDWATER (µg/L)       |
| <b>Q</b>    | SAMPLING FREQUENCY                   |
- ND< NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMITS
  - Q SAMPLED QUARTERLY
  - 156.00 — GROUNDWATER ELEVATION CONTOUR (FT ABOVE MSL)
  - GROUNDWATER FLOW DIRECTION AND GRADIENT (FT/FT)



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



**Project No. 38486724**  
 Arco Service Station #4977  
 2770 Castro Valley Boulevard  
 Castro Valley, California

**GROUNDWATER ELEVATION CONTOUR  
 AND ANALYTICAL SUMMARY MAP**  
 Second Quarter 2004 (June 2, 2004)

FIGURE  
**1**

**ATTACHMENT A**

**FIELD PROCEDURES AND FIELD DATA SHEETS**

## FIELD PROCEDURES

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### 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.



## ARCO / BP WELL MONITORING DATA SHEET

|                          |                                   |
|--------------------------|-----------------------------------|
| BTS #: 040802-MD2        | Station # Arco 4977               |
| Sampler: MM              | Date: 6/2/04                      |
| Well I.D.: MW-1          | Well Diameter: 2 3 ④ 6 8          |
| Total Well Depth: 14.95  | Depth to Water: 8.95              |
| 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 <sup>2</sup> * 0.163 |

Purge Method:  Bailer      Sampling Method:  Bailer  
 Disposable Bailer       Disposable Bailer  
 Positive Air Displacement       Extraction Port  
 Electric Submersible      Other: \_\_\_\_\_  
 Extraction Pump  
Other: \_\_\_\_\_

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

|                       |   |                   |   |                   |       |
|-----------------------|---|-------------------|---|-------------------|-------|
| 3.9                   | X | 3                 | = | 11.7              | Gals. |
| 1 Case Volume (Gals.) |   | Specified Volumes |   | Calculated Volume |       |

| Time | Temp (°F) | pH  | Conductivity (mS or μS) | Gals. Removed | Observations                   |
|------|-----------|-----|-------------------------|---------------|--------------------------------|
| 1036 | 71.7      | 7.0 | 1280                    | 9             | clear                          |
| 1037 |           |     |                         |               | well dewatered @ 6 DTW = 12.91 |
| 1110 | 69.5      | 7.1 | 1314                    | -             | cloudy DTW = 12.51 @ 91' depth |
|      |           |     |                         |               |                                |

Did well dewater?  Yes      No      Gallons actually evacuated: 6

Sampling Time: 1110      Sampling Date: 6/2/04

Sample I.D.: MW-1      Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for: GRO BTEX MTBE DRO      Other: Cxyls, 1,2,4-EDB, Ethanol

|                    |            |      |             |      |
|--------------------|------------|------|-------------|------|
| D.O. (if req'd):   | Pre-purge: | mg/L | Post-purge: | mg/L |
|                    |            |      |             | 2.3  |
| O.R.P. (if req'd): | Pre-purge: | mV   | Post-purge: | mV   |





## ARCO / BP WELL MONITORING DATA SHEET

|                                   |  |
|-----------------------------------|--|
| BTS #: <u>040602-MD</u>           | Station # <u>Arco 4977</u>               |
| Sampler: <u>MD</u>                | Date: <u>6/2/04</u>                      |
| Well I.D.: <u>MW-3</u>            | Well Diameter: 2 3 <u>(4)</u> 6 8 _____  |
| Total Well Depth: <u>14.93</u>    | Depth to Water: <u>7.5</u>               |
| Depth to Free Product:            | Thickness of Free Product (feet):        |
| Referenced to: <u>(PVC)</u> Grade | D.O. Meter (if req'd): <u>(YSI)</u> HACH |

| Well Diameter | Multiplier | Well Diameter | Multiplier                  |
|---------------|------------|---------------|-----------------------------|
| 1"            | 0.04       | 4"            | 0.65                        |
| 2"            | 0.16       | 6"            | 1.47                        |
| 3"            | 0.37       | Other         | radius <sup>2</sup> * 0.163 |

|  |   |
|--|---|
| Purge Method:  | Sampling Method:                                      |
| <input type="checkbox"/> Bailor  | <input type="checkbox"/> Bailor                       |
| <input type="checkbox"/> Disposable Bailor                               | <input checked="" type="checkbox"/> Disposable Bailor |
| <input type="checkbox"/> Positive Air Displacement                       | <input type="checkbox"/> Extraction Port              |
| <input checked="" type="checkbox"/> Electric Submersible Extraction Pump | Other: _____  |
| 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.

|                       |   |                   |   |                   |
|-----------------------|---|-------------------|---|-------------------|
| <u>4.8</u>            | X | <u>3</u>          | = | _____ Gals.       |
| 1 Case Volume (Gals.) |   | Specified Volumes |   | Calculated Volume |

| Time | Temp (°F) | pH                            | Conductivity (mS or µS) | Gals. Removed | Observations       |
|------|-----------|-------------------------------|-------------------------|---------------|--------------------|
| 1054 | 71.3      | 7.1                           | 680                     | 5             | clear              |
| 1055 | 70.7      | 7.2                           | 641                     | 10            | "                  |
| 1056 |           | well dewatered <sup>(c)</sup> |                         | 10            | DTW = 12.87        |
| 1145 | 69.7      | 7.3                           | 705                     | -             | clear DTW = 10.07  |
|      |           |                               |                         |               | (c) site departure |

|   |   |                             |
|---|---|-----------------------------|
| Did well dewater? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Gallons actually evacuated: <u>10</u>     |                             |
| Sampling Time: <u>1145</u>  | Sampling Date: <u>6/2/04</u>              |                             |
| Sample I.D.: <u>MW-3</u>  | Laboratory: Pace Sequoia Other _____      |                             |
| Analyzed for: <u>(GRO) (TEX)</u> MTBE DRO   | Other: <u>OPYS, 1,2-DCA, EDB, Ethanol</u> |                             |
| D.O. (if req'd):  | Pre-purge: _____ mg/L                     | Post-purge: <u>3.6</u> 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 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:

Arco 4977

Station #

2770 Castro Valley Blvd, Castro Valley

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

24

added equip.  
rinse water

any other  
adjustments

TOTAL GALS.  
RECOVERED

24

loaded onto  
BTS vehicle #

57

BTS event #

time

date

040602-M02

noon

6/2/04

signature

*[Handwritten Signature]*

REC'D AT

time

date

BTS

1500

6/2/04

unloaded by  
signature

*[Handwritten Signature]*

**ATTACHMENT B**  
**LABORATORY PROCEDURES,**  
**CERTIFIED ANALYTICAL REPORTS,**  
**AND CHAIN-OF-CUSTODY RECORDS**

## **LABORATORY PROCEDURES**

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### **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 Atlantic Richfield Company have been reviewed and verified by that laboratory.



22 June, 2004

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

RE: ARCO #4977, Castro Valley, CA  
Work Order: MNF0102

Enclosed are the results of analyses for samples received by the laboratory on 06/03/04 14:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race  
Senior Project Manager

CA ELAP Certificate #1210

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

Project: ARCO #4977, Castro Valley, CA  
Project Number: INTRIM-50467  
Project Manager: Scott Robinson

MNF0102  
Reported:  
06/22/04 18:49

**ANALYTICAL REPORT FOR SAMPLES**

| Sample ID      | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|----------------|---------------|--------|----------------|----------------|
| MW-1           | MNF0102-01    | Water  | 06/02/04 11:10 | 06/03/04 14:45 |
| MW-2           | MNF0102-02    | Water  | 06/02/04 11:30 | 06/03/04 14:45 |
| MW-3           | MNF0102-03    | Water  | 06/02/04 11:45 | 06/03/04 14:45 |
| TB-4977-060204 | MNF0102-04    | Water  | 06/02/04 10:15 | 06/03/04 14:45 |

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

These samples were received with no custody seals.

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

Project: ARCO #4977, Castro Valley, CA  
Project Number: INTRIM-50467  
Project Manager: Scott Robinson

MNF0102  
Reported:  
06/22/04 18:49

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

| Analyte   | Result       | Reporting<br>Limit | Units  | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---|--------------|--------------------|--------|----------|---------|----------|----------|-----------|-------|
| <b>MW-1 (MNF0102-01) Water</b> Sampled: 06/02/04 11:10 Received: 06/03/04 14:45 |              |                    |        |          |         |          |          |           |       |
| tert-Amyl methyl ether  | ND           | 0.50               | ug/l   | 1        | 4F14006 | 06/14/04 | 06/14/04 | EPA 8260B |       |
| <b>Benzene</b>  | <b>1.4</b>   | 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               | "      | "        | "       | "        | "        | "         |       |
| <b>Ethylbenzene</b>   | <b>0.93</b>  | 0.50               | "      | "        | "       | "        | "        | "         |       |
| <b>Methyl tert-butyl ether</b>  | <b>39</b>    | 0.50               | "      | "        | "       | "        | "        | "         |       |
| Toluene   | ND           | 0.50               | "      | "        | "       | "        | "        | "         |       |
| Xylenes (total)   | ND           | 0.50               | "      | "        | "       | "        | "        | "         |       |
| <b>Gasoline Range Organics (C4-C12)</b>   | <b>53</b>    | 50                 | "      | "        | "       | "        | "        | "         |       |
| <i>Surrogate: 1,2-Dichloroethane-d4</i>   |              | 97.0 %             | 78-129 |          | "       | "        | "        | "         |       |
| <b>MW-2 (MNF0102-02) Water</b> Sampled: 06/02/04 11:30 Received: 06/03/04 14:45 |              |                    |        |          |         |          |          |           |       |
| tert-Amyl methyl ether  | ND           | 50                 | ug/l   | 100      | 4F14006 | 06/14/04 | 06/14/04 | EPA 8260B |       |
| <b>Benzene</b>  | <b>680</b>   | 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                 | "      | "        | "       | "        | "        | "         |       |
| <b>Ethylbenzene</b>   | <b>1300</b>  | 50                 | "      | "        | "       | "        | "        | "         |       |
| <b>Methyl tert-butyl ether</b>  | <b>240</b>   | 50                 | "      | "        | "       | "        | "        | "         |       |
| Toluene   | ND           | 50                 | "      | "        | "       | "        | "        | "         |       |
| <b>Xylenes (total)</b>  | <b>3900</b>  | 50                 | "      | "        | "       | "        | "        | "         |       |
| <b>Gasoline Range Organics (C4-C12)</b>   | <b>25000</b> | 5000               | "      | "        | "       | "        | "        | "         |       |
| <i>Surrogate: 1,2-Dichloroethane-d4</i>   |              | 100 %              | 78-129 |          | "       | "        | "        | "         |       |



|   |   |  |
|---|---|--|
| URS Corporation [Arco]<br>1333 Broadway, Suite 800<br>Oakland CA, 94612 | Project: ARCO #4977, Castro Valley, CA<br>Project Number: INTRIM-50467<br>Project Manager: Scott Robinson | MNF0102<br>Reported:<br>06/22/04 18:49 |
|---|---|--|

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

| Analyte   | Result | Reporting Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|---|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| <b>MW-3 (MNF0102-03) Water    Sampled: 06/02/04 11:45    Received: 06/03/04 14:45</b> |        |                 |       |          |         |          |          |           |       |
| tert-Amyl methyl ether  | 0.56   | 0.50            | ug/l  | 1        | 4F14006 | 06/14/04 | 06/14/04 | EPA 8260B |       |
| Benzene   | 2.8    | 0.50            | "     | "        | "       | "        | "        | "         |       |
| tert-Butyl alcohol  | 130    | 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  | 8.0    | 0.50            | "     | "        | "       | "        | "        | "         |       |
| Methyl tert-butyl ether   | 43     | 0.50            | "     | "        | "       | "        | "        | "         |       |
| Toluene   | ND     | 0.50            | "     | "        | "       | "        | "        | "         |       |
| Xylenes (total)   | 2.1    | 0.50            | "     | "        | "       | "        | "        | "         |       |
| Gasoline Range Organics (C4-C12)  | 380    | 50              | "     | "        | "       | "        | "        | "         |       |
| Surrogate: 1,2-Dichloroethane-d4  |        | 85.4 %          |       | 78-129   | "       | "        | "        | "         |       |



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

 Project: ARCO #4977, Castro Valley, CA  
 Project Number: INTRIM-50467  
 Project Manager: Scott Robinson

 MNF0102  
 Reported:  
 06/22/04 18:49

**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 4F14006 - EPA 5030B P/T**
**Blank (4F14006-BLK1)**

Prepared &amp; Analyzed: 06/14/04

|                                  |    |      |      |  |  |  |  |  |  |  |
|----------------------------------|----|------|------|--|--|--|--|--|--|--|
| tert-Amyl methyl ether           | ND | 0.50 | ug/l |  |  |  |  |  |  |  |
| Benzene                          | ND | 0.50 | "    |  |  |  |  |  |  |  |
| tert-Butyl alcohol               | ND | 20   | "    |  |  |  |  |  |  |  |
| Di-isopropyl ether               | ND | 0.50 | "    |  |  |  |  |  |  |  |
| 1,2-Dibromoethane (EDB)          | ND | 0.50 | "    |  |  |  |  |  |  |  |
| 1,2-Dichloroethane               | ND | 0.50 | "    |  |  |  |  |  |  |  |
| Ethanol                          | ND | 100  | "    |  |  |  |  |  |  |  |
| Ethyl tert-butyl ether           | ND | 0.50 | "    |  |  |  |  |  |  |  |
| Ethylbenzene                     | ND | 0.50 | "    |  |  |  |  |  |  |  |
| Methyl tert-butyl ether          | ND | 0.50 | "    |  |  |  |  |  |  |  |
| Toluene                          | ND | 0.50 | "    |  |  |  |  |  |  |  |
| Xylenes (total)                  | ND | 0.50 | "    |  |  |  |  |  |  |  |
| Gasoline Range Organics (C4-C12) | ND | 50   | "    |  |  |  |  |  |  |  |

*Surrogate: 1,2-Dichloroethane-d4*

5.31

"

5.00

106

78-129

**Laboratory Control Sample (4F14006-BS1)**

Prepared &amp; Analyzed: 06/14/04

|                         |      |      |      |      |  |      |        |  |  |  |
|-------------------------|------|------|------|------|--|------|--------|--|--|--|
| tert-Amyl methyl ether  | 9.33 | 0.50 | ug/l | 10.0 |  | 93.3 | 56-140 |  |  |  |
| Benzene                 | 8.51 | 0.50 | "    | 10.0 |  | 85.1 | 78-124 |  |  |  |
| tert-Butyl alcohol      | 45.3 | 20   | "    | 50.0 |  | 90.6 | 0-206  |  |  |  |
| Di-isopropyl ether      | 8.95 | 0.50 | "    | 10.0 |  | 89.5 | 76-130 |  |  |  |
| 1,2-Dibromoethane (EDB) | 9.40 | 0.50 | "    | 10.0 |  | 94.0 | 77-132 |  |  |  |
| 1,2-Dichloroethane      | 8.72 | 0.50 | "    | 10.0 |  | 87.2 | 77-136 |  |  |  |
| Ethanol                 | 161  | 100  | "    | 200  |  | 80.5 | 31-186 |  |  |  |
| Ethyl tert-butyl ether  | 9.01 | 0.50 | "    | 10.0 |  | 90.1 | 61-141 |  |  |  |
| Ethylbenzene            | 9.48 | 0.50 | "    | 10.0 |  | 94.8 | 84-117 |  |  |  |
| Methyl tert-butyl ether | 7.88 | 0.50 | "    | 10.0 |  | 78.8 | 63-137 |  |  |  |
| Toluene                 | 10.1 | 0.50 | "    | 10.0 |  | 101  | 78-129 |  |  |  |
| Xylenes (total)         | 28.7 | 0.50 | "    | 30.0 |  | 95.7 | 83-125 |  |  |  |

*Surrogate: 1,2-Dichloroethane-d4*

4.63

"

5.00

92.6

78-129

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

Project: ARCO #4977, Castro Valley, CA  
Project Number: INTRIM-50467  
Project Manager: Scott Robinson

MNF0102  
Reported:  
06/22/04 18:49

**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 4F14006 - EPA 5030B P/T**
**Laboratory Control Sample (4F14006-BS2)**

Prepared &amp; Analyzed: 06/14/04

|   |             |      |      |             |  |             |               |  |  |  |
|---|-------------|------|------|-------------|--|-------------|---------------|--|--|--|
| Benzene                                 | 5.22        | 0.50 | ug/l | 6.40        |  | 81.6        | 78-124        |  |  |  |
| Ethylbenzene                            | 6.82        | 0.50 | "    | 6.96        |  | 98.0        | 84-117        |  |  |  |
| Methyl tert-butyl ether                 | 7.56        | 0.50 | "    | 9.92        |  | 76.2        | 63-137        |  |  |  |
| Toluene                                 | 32.8        | 0.50 | "    | 29.7        |  | 110         | 78-129        |  |  |  |
| Xylenes (total)                         | 35.0        | 0.50 | "    | 33.7        |  | 104         | 83-125        |  |  |  |
| Gasoline Range Organics (C4-C12)        | 419         | 50   | "    | 440         |  | 95.2        | 70-124        |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>4.71</i> |      | "    | <i>5.00</i> |  | <i>94.2</i> | <i>78-129</i> |  |  |  |

**Laboratory Control Sample Dup (4F14006-BSD1)**

Prepared &amp; Analyzed: 06/14/04

|   |             |      |      |             |  |             |               |      |    |      |
|---|-------------|------|------|-------------|--|-------------|---------------|------|----|------|
| tert-Amyl methyl ether                  | 11.2        | 0.50 | ug/l | 10.0        |  | 112         | 56-140        | 18.2 | 12 | QC21 |
| Benzene                                 | 10.6        | 0.50 | "    | 10.0        |  | 106         | 78-124        | 21.9 | 12 | QC21 |
| tert-Butyl alcohol                      | 48.9        | 20   | "    | 50.0        |  | 97.8        | 0-206         | 7.64 | 22 |      |
| Di-isopropyl ether                      | 11.0        | 0.50 | "    | 10.0        |  | 110         | 76-130        | 20.6 | 9  | QC21 |
| 1,2-Dibromoethane (EDB)                 | 9.24        | 0.50 | "    | 10.0        |  | 92.4        | 77-132        | 1.72 | 9  |      |
| 1,2-Dichloroethane                      | 10.8        | 0.50 | "    | 10.0        |  | 108         | 77-136        | 21.3 | 13 | QC21 |
| Ethanol                                 | 197         | 100  | "    | 200         |  | 98.5        | 31-186        | 20.1 | 37 |      |
| Ethyl tert-butyl ether                  | 10.9        | 0.50 | "    | 10.0        |  | 109         | 61-141        | 19.0 | 9  | QC21 |
| Ethylbenzene                            | 9.68        | 0.50 | "    | 10.0        |  | 96.8        | 84-117        | 2.09 | 10 |      |
| Methyl tert-butyl ether                 | 9.92        | 0.50 | "    | 10.0        |  | 99.2        | 63-137        | 22.9 | 13 | QC21 |
| Toluene                                 | 10.9        | 0.50 | "    | 10.0        |  | 109         | 78-129        | 7.62 | 10 |      |
| Xylenes (total)                         | 30.6        | 0.50 | "    | 30.0        |  | 102         | 83-125        | 6.41 | 11 |      |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>4.78</i> |      | "    | <i>5.00</i> |  | <i>95.6</i> | <i>78-129</i> |      |    |      |

**Laboratory Control Sample Dup (4F14006-BSD2)**

Prepared &amp; Analyzed: 06/14/04

|   |             |      |      |             |  |             |               |      |    |  |
|---|-------------|------|------|-------------|--|-------------|---------------|------|----|--|
| Benzene                                 | 5.42        | 0.50 | ug/l | 6.40        |  | 84.7        | 69-124        | 3.76 | 20 |  |
| Ethylbenzene                            | 7.56        | 0.50 | "    | 6.96        |  | 109         | 84-132        | 10.3 | 20 |  |
| Methyl tert-butyl ether                 | 8.65        | 0.50 | "    | 9.92        |  | 87.2        | 63-137        | 13.4 | 20 |  |
| Toluene                                 | 36.0        | 0.50 | "    | 29.7        |  | 121         | 78-129        | 9.30 | 20 |  |
| Xylenes (total)                         | 36.9        | 0.50 | "    | 33.7        |  | 109         | 83-137        | 5.29 | 20 |  |
| Gasoline Range Organics (C4-C12)        | 445         | 50   | "    | 440         |  | 101         | 70-124        | 6.02 | 20 |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>4.86</i> |      | "    | <i>5.00</i> |  | <i>97.2</i> | <i>78-129</i> |      |    |  |

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

 Project: ARCO #4977, Castro Valley, CA  
 Project Number: INTRIM-50467  
 Project Manager: Scott Robinson

 MNF0102  
 Reported:  
 06/22/04 18:49

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

| Analyte | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

**Batch 4F14006 - EPA 5030B P/T**
**Matrix Spike (4F14006-MS1)**      **Source: MNF0102-02**      **Prepared: 06/14/04**      **Analyzed: 06/15/04**

|   |             |      |          |             |       |             |               |  |  |  |
|---|-------------|------|----------|-------------|-------|-------------|---------------|--|--|--|
| Benzene                                 | 1230        | 50   | ug/l     | 640         | 680   | 85.9        | 78-124        |  |  |  |
| Ethylbenzene                            | 1990        | 50   | "        | 696         | 1300  | 99.1        | 84-117        |  |  |  |
| Methyl tert-butyl ether                 | 1100        | 50   | "        | 992         | 240   | 86.7        | 63-137        |  |  |  |
| Toluene                                 | 3620        | 50   | "        | 2970        | 46    | 120         | 78-129        |  |  |  |
| Xylenes (total)                         | 7790        | 50   | "        | 3370        | 3900  | 115         | 83-125        |  |  |  |
| Gasoline Range Organics (C4-C12)        | 67400       | 5000 | "        | 44000       | 25000 | 96.4        | 70-124        |  |  |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>4.67</i> |      | <i>"</i> | <i>5.00</i> |       | <i>93.4</i> | <i>78-129</i> |  |  |  |

**Matrix Spike Dup (4F14006-MSD1)**      **Source: MNF0102-02**      **Prepared: 06/14/04**      **Analyzed: 06/15/04**

|   |             |      |          |             |       |             |               |      |    |  |
|---|-------------|------|----------|-------------|-------|-------------|---------------|------|----|--|
| Benzene                                 | 1300        | 50   | ug/l     | 640         | 680   | 96.9        | 78-124        | 5.53 | 12 |  |
| Ethylbenzene                            | 2070        | 50   | "        | 696         | 1300  | 111         | 84-117        | 3.94 | 10 |  |
| Methyl tert-butyl ether                 | 1150        | 50   | "        | 992         | 240   | 91.7        | 63-137        | 4.44 | 13 |  |
| Toluene                                 | 3860        | 50   | "        | 2970        | 46    | 128         | 78-129        | 6.42 | 10 |  |
| Xylenes (total)                         | 8060        | 50   | "        | 3370        | 3900  | 123         | 83-125        | 3.41 | 11 |  |
| Gasoline Range Organics (C4-C12)        | 71800       | 5000 | "        | 44000       | 25000 | 106         | 70-124        | 6.32 | 20 |  |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | <i>4.83</i> |      | <i>"</i> | <i>5.00</i> |       | <i>96.6</i> | <i>78-129</i> |      |    |  |



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

Project: ARCO #4977, Castro Valley, CA  
Project Number: INTRIM-50467  
Project Manager: Scott Robinson

MNF0102  
Reported:  
06/22/04 18:49

### Notes and Definitions

QC21 The RPD result exceeded the control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

(MNFO102)



### Chain of Custody Record

Project Name 4977 GWM  
 BP BU/GEM CO Portfolio Retail  
 BP Laboratory Contract Number: Atlantic Richfield Company  
 Requested Due Date (mm/dd/yy) 14 day TAT

Date: 6/2/04

|                              |                 |
|------------------------------|-----------------|
| On-site Time: <u>1015</u>    | Temp: <u>70</u> |
| Off-site Time: <u>1200</u>   | Temp: <u>81</u> |
| Sky Conditions: <u>clear</u> |                 |
| Meteorological Events:       |                 |
| Wind Speed:                  | Direction:      |

|   |  |   |
|---|--|---|
| Send To:  | BP/GEM Facility No.: <u>ARCO 4977</u>                                    | Consultant/Contractor: <u>URS</u>                               |
| Lab Name: <u>SEQUOIA</u>                          | BP/GEM Facility Address: <u>2770 Castro Valley Rd, Castro Valley, CA</u> | Address: <u>1333 Broadway, Suite 800</u>                        |
| Lab Address: <u>885 Jarvis Dr.</u>                | Site ID No. <u>ARCO 4977</u>   | <u>Oakland, CA 94612</u>  |
| <u>Morgan Hill, CA 95037</u>                      | Site Lat/Long:   | e-mail EDD: <u>donna.casper@URSCorp.com</u>                     |
|   | California Global ID #:  | Consultant/Contractor Project No.: <u>J5-00004977.01 00427</u>  |
| Lab PM <u>Lisa Race</u>                           | BP/GEM PM Contact: <u>PAUL SUPPLE</u>                                    | Consultant Tele/Fax: <u>510-893-3600/510-874-3268</u>           |
| Tele/Fax: <u>408-776-9600 / 408-782-6308</u>      | Address: <u>P.O. Box 6649</u>  | Consultant/Contractor PM: <u>Scott Robinson</u>                 |
| Report Type & QC Level: <u>1 Send EDF Reports</u> | <u>Moraga, CA 94570</u>  | Invoice to: Consultant/Contractor or <u>BP/GEM</u> (Circle one) |
| BP/GEM Account No.:                               | Tele/Fax: <u>925-299-8891/925-299-8872</u>                               | BP/GEM Work Release No: <u>INTRIM -50467</u>                    |

| Item No. | Sample Description | Time | Matrix     |              |           |     | Laboratory No. | No. of containers | Preservatives |                                |                  |     | Requested Analysis          |                   |              |             |                          | Sample Point Lat/Long and Comments |                      |
|----------|--------------------|------|------------|--------------|-----------|-----|----------------|-------------------|---------------|--------------------------------|------------------|-----|-----------------------------|-------------------|--------------|-------------|--------------------------|------------------------------------|----------------------|
|          |                    |      | Soil/Solid | Water/Liquid | Sediments | Air |                |                   | Unpreserved   | H <sub>2</sub> SO <sub>4</sub> | HNO <sub>3</sub> | HCl | CRO/BTEX (801.5/802) (8260) | DRO w/SGC (801.5) | MTBE (802.1) | MTBE (8260) | MTBE, TAME, ETBE (802.1) |                                    | 1,2-DCA & EDB (8260) |
| 1        | MW-1               | 1110 |            | ✓            |           |     | 01             | 3                 |               |                                |                  |     | ✓                           |                   |              |             |                          |                                    |                      |
| 2        | MW-2               | 1130 |            | ✓            |           |     | 02             | 3                 |               |                                |                  |     | ✓                           |                   |              |             |                          |                                    |                      |
| 3        | MW-3               | 1145 |            | ✓            |           |     | 03             | 3                 |               |                                |                  |     | ✓                           |                   |              |             |                          |                                    |                      |
| 4        | IB-4977-06204      | 1015 |            | ✓            |           |     | 04             | 2                 |               |                                |                  |     | ✓                           |                   |              |             |                          |                                    | OK 10/18             |
| 5        |                    |      |            |              |           |     |                |                   |               |                                |                  |     |                             |                   |              |             |                          |                                    |                      |
| 6        |                    |      |            |              |           |     |                |                   |               |                                |                  |     |                             |                   |              |             |                          |                                    |                      |
| 7        |                    |      |            |              |           |     |                |                   |               |                                |                  |     |                             |                   |              |             |                          |                                    |                      |
| 8        |                    |      |            |              |           |     |                |                   |               |                                |                  |     |                             |                   |              |             |                          |                                    |                      |
| 9        |                    |      |            |              |           |     |                |                   |               |                                |                  |     |                             |                   |              |             |                          |                                    |                      |
| 10       |                    |      |            |              |           |     |                |                   |               |                                |                  |     |                             |                   |              |             |                          |                                    |                      |

|  |   |                     |                   |   |                     |                   |
|--|---|---------------------|-------------------|---|---------------------|-------------------|
| Sampler's Name: <u>John DeLong</u>             | Relinquished By / Affiliation: <u>[Signature]</u> | Date: <u>6/3/04</u> | Time: <u>1155</u> | Accepted By / Affiliation: <u>[Signature]</u> | Date: <u>6/3/04</u> | Time: <u>1155</u> |
| Sampler's Company: <u>Blaine Test Services</u> |   | Date: <u>6/2/04</u> | Time: <u>1445</u> | Accepted By / Affiliation: <u>[Signature]</u> | Date: <u>6/3/04</u> | Time: <u>1445</u> |
| Shipment Date:                                 |   |                     |                   |   |                     |                   |
| Consignment Method:                            |   |                     |                   |   |                     |                   |
| Consignment Tracking No.:                      |   |                     |                   |   |                     |                   |

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

Vials in Place Yes  No     
  Temperature Blank Yes  No     
  Cooler Temperature on Receipt  F/C     
  Trip Blank Yes  No

# SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: URS  
 REC. BY (PRINT): Andrew Traffic  
 WORKORDER: MNE0102

DATE REC'D AT LAB: 6/3/04  
 TIME REC'D AT LAB: 14:46  
 DATE LOGGED IN: 6-4-04

DRINKING WATER for  
 regulatory purposes: YES /  NO  
 WASTE WATER for  
 regulatory purposes: YES /  NO

| CIRCLE THE APPROPRIATE RESPONSE   |  | LAB SAMPLE # | DASH # | CLIENT ID       | CONTAINER DESCRIPTION | PRESERVATIVE | SAMPLE MATRIX | DATE SAMPLED | REMARKS: CONDITION (ETC.) |
|---|--|--------------|--------|-----------------|-----------------------|--------------|---------------|--------------|---------------------------|
| 1. Custody Seal(s)  | Present / <del>Absent</del><br>Intact / Broken*              | 01           |        | MW-1            | (3)VOA                | HCL          | Liquid        | 6/2/04       | 4128030 = Lot #           |
| 2. Chain-of-Custody   | <del>Present</del> / Absent*                                 | 02           |        | MW-2            | ↓                     | ↓            | ↓             | ↓            | ↓                         |
| 3. Traffic Reports or Packing List:   | Present / <del>Absent</del>                                  | 03           |        | MW-3            | ↓                     | ↓            | ↓             | ↓            | ↓                         |
| 4. Airbill:   | Airbill / Sticker<br>Present / <del>Absent</del>             | 04           |        | TJ3-4477-060204 | (2)VOA                | ↓            | ↓             | ↓            | 4071030 = Lot #           |
| 5. Airbill #:   |  |              |        |                 |                       |              |               |              |                           |
| 6. Sample Labels:   | <del>Present</del> / Absent                                  |              |        |                 |                       |              |               |              |                           |
| 7. Sample IDs:  | <del>Listed</del> / Not Listed<br>on Chain-of-Custody        |              |        |                 |                       |              |               |              |                           |
| 8. Sample Condition:  | <del>Intact</del> / Broken* /<br>Leaking*                    |              |        |                 |                       |              |               |              |                           |
| 9. Does information on chain-of-custody, traffic reports and sample labels agree?                                   | <input checked="" type="checkbox"/> Yes / No*                |              |        |                 |                       |              |               |              |                           |
| 10. Sample received within hold time:   | <input checked="" type="checkbox"/> Yes / No*                |              |        |                 |                       |              |               |              |                           |
| 11. Adequate sample volume received?  | <input checked="" type="checkbox"/> Yes / No*                |              |        |                 |                       |              |               |              |                           |
| 12. Proper Preservatives used:  | <input checked="" type="checkbox"/> Yes / No*                |              |        |                 |                       |              |               |              |                           |
| 13. Temp Rec. at Lab:<br>Is temp 4 +/-2°C?<br><small>(Acceptance range for samples requiring thermal pres.)</small> | <u>6°C</u><br><input checked="" type="checkbox"/> Yes / No** |              |        |                 |                       |              |               |              |                           |

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

**ATTACHMENT C**

**EDCC REPORT AND EDF/GEOWELL SUBMITTAL CONFIRMATION**

---

## Error Summary Log

07/12/04

EDF 1.2i All files present in deliverable.

---

|                    |  |
|--------------------|--|
| Laboratory:        | Sequoia Analytical Laboratories, Inc., Morgan Hill, CA |
| Project Name:      | ARCO #4977, Castro Valley                              |
| Work Order Number: | MNF0102  |
| Global ID:         | T0600100089  |
| Lab Report Number: | MNF0102062220041849                                    |



## Report Summary

| Labreport                    | Sampid | Labsampid   | Mtrx | QC  | Anmcode | Exmcode | Logdate  | Extdate  | Anadate  | Lablotctl | Run Sub |
|------------------------------|--------|-------------|------|-----|---------|---------|----------|----------|----------|-----------|---------|
| MNF01020622200 MW-1<br>41849 |        | MNF010201   | W    | CS  | 8260FA  | SW5030B | 06/02/04 | 06/14/04 | 06/14/04 | 4F14006   | 1       |
| MNF01020622200 MW-2<br>41849 |        | MNF010202   | W    | CS  | 8260FA  | SW5030B | 06/02/04 | 06/14/04 | 06/14/04 | 4F14006   | 1       |
| MNF01020622200 MW-3<br>41849 |        | MNF010203   | W    | CS  | 8260FA  | SW5030B | 06/02/04 | 06/14/04 | 06/14/04 | 4F14006   | 1       |
|                              |        | 4F14006BSD1 | WQ   | BD1 | 8260FA  | SW5030B | //       | 06/14/04 | 06/14/04 | 4F14006   | 1       |
|                              |        | 4F14006BSD2 | WQ   | BD2 | 8260FA  | SW5030B | //       | 06/14/04 | 06/14/04 | 4F14006   | 1       |
|                              |        | 4F14006BS1  | WQ   | BS1 | 8260FA  | SW5030B | //       | 06/14/04 | 06/14/04 | 4F14006   | 1       |
|                              |        | 4F14006BS2  | WQ   | BS2 | 8260FA  | SW5030B | //       | 06/14/04 | 06/14/04 | 4F14006   | 1       |
|                              |        | 4F14006BLK1 | WQ   | LB1 | 8260FA  | SW5030B | //       | 06/14/04 | 06/14/04 | 4F14006   | 1       |
|                              |        | 4F14006MS1  | W    | MS1 | 8260FA  | SW5030B | //       | 06/14/04 | 06/15/04 | 4F14006   | 1       |
|                              |        | 4F14006MSD1 | W    | SD1 | 8260FA  | SW5030B | //       | 06/14/04 | 06/15/04 | 4F14006   | 1       |

# EDFSAMP: Error Summary Log

07/12/04

| Error type                            | Logcode | Projname | Npdlwo | Sampid | Matrix |
|---------------------------------------|---------|----------|--------|--------|--------|
| There are no errors in this data file |         |          |        |        |        |

# EDFTEST: Error Summary Log

07/12/04

| Error type                            | Labsampid | Qccode | Anmcode | Exmcode | Anadate | Run number |
|---------------------------------------|-----------|--------|---------|---------|---------|------------|
| There are no errors in this data file |           |        |         |         | //      | 0          |

# EDFRES: Error Summary Log

07/12/04

| Error type               | Labsampid   | Qcocode | Matrix | Anmcode | Pvccode | Anadate  | Run number | Parlabel |
|--------------------------|-------------|---------|--------|---------|---------|----------|------------|----------|
| Warning: extra parameter | 4F14006MS1  | MS1     | W      | 8260FA  | PR      | 06/15/04 | 1          | BZ       |
| Warning: extra parameter | 4F14006MS1  | MS1     | W      | 8260FA  | PR      | 06/15/04 | 1          | BZME     |
| Warning: extra parameter | 4F14006MS1  | MS1     | W      | 8260FA  | PR      | 06/15/04 | 1          | DCA12D4  |
| Warning: extra parameter | 4F14006MS1  | MS1     | W      | 8260FA  | PR      | 06/15/04 | 1          | EBZ      |
| Warning: extra parameter | 4F14006MS1  | MS1     | W      | 8260FA  | PR      | 06/15/04 | 1          | GROC4C12 |
| Warning: extra parameter | 4F14006MS1  | MS1     | W      | 8260FA  | PR      | 06/15/04 | 1          | XYLENES  |
| Warning: extra parameter | 4F14006MSD1 | SD1     | W      | 8260FA  | PR      | 06/15/04 | 1          | BZ       |
| Warning: extra parameter | 4F14006MSD1 | SD1     | W      | 8260FA  | PR      | 06/15/04 | 1          | BZME     |
| Warning: extra parameter | 4F14006MSD1 | SD1     | W      | 8260FA  | PR      | 06/15/04 | 1          | DCA12D4  |
| Warning: extra parameter | 4F14006MSD1 | SD1     | W      | 8260FA  | PR      | 06/15/04 | 1          | EBZ      |
| Warning: extra parameter | 4F14006MSD1 | SD1     | W      | 8260FA  | PR      | 06/15/04 | 1          | GROC4C12 |
| Warning: extra parameter | 4F14006MSD1 | SD1     | W      | 8260FA  | PR      | 06/15/04 | 1          | XYLENES  |
| Warning: extra parameter | MNF010201   | CS      | W      | 8260FA  | PR      | 06/14/04 | 1          | BZ       |
| Warning: extra parameter | MNF010201   | CS      | W      | 8260FA  | PR      | 06/14/04 | 1          | BZME     |
| Warning: extra parameter | MNF010201   | CS      | W      | 8260FA  | PR      | 06/14/04 | 1          | DCA12D4  |
| Warning: extra parameter | MNF010201   | CS      | W      | 8260FA  | PR      | 06/14/04 | 1          | EBZ      |
| Warning: extra parameter | MNF010201   | CS      | W      | 8260FA  | PR      | 06/14/04 | 1          | GROC4C12 |
| Warning: extra parameter | MNF010201   | CS      | W      | 8260FA  | PR      | 06/14/04 | 1          | XYLENES  |
| Warning: extra parameter | MNF010202   | CS      | W      | 8260FA  | PR      | 06/14/04 | 1          | BZ       |
| Warning: extra parameter | MNF010202   | CS      | W      | 8260FA  | PR      | 06/14/04 | 1          | BZME     |
| Warning: extra parameter | MNF010202   | CS      | W      | 8260FA  | PR      | 06/14/04 | 1          | DCA12D4  |
| Warning: extra parameter | MNF010202   | CS      | W      | 8260FA  | PR      | 06/14/04 | 1          | EBZ      |
| Warning: extra parameter | MNF010202   | CS      | W      | 8260FA  | PR      | 06/14/04 | 1          | GROC4C12 |
| Warning: extra parameter | MNF010202   | CS      | W      | 8260FA  | PR      | 06/14/04 | 1          | XYLENES  |
| Warning: extra parameter | MNF010203   | CS      | W      | 8260FA  | PR      | 06/14/04 | 1          | BZ       |

| Error type               | Labsampid   | Qcocode | Matrix | Anmcode | Pvccode | Anadate  | Run number | Parlabel |
|--------------------------|-------------|---------|--------|---------|---------|----------|------------|----------|
| Warning: extra parameter | MNF010203   | CS      | W      | 8260FA  | PR      | 06/14/04 | 1          | BZME     |
| Warning: extra parameter | MNF010203   | CS      | W      | 8260FA  | PR      | 06/14/04 | 1          | DCA12D4  |
| Warning: extra parameter | MNF010203   | CS      | W      | 8260FA  | PR      | 06/14/04 | 1          | EBZ      |
| Warning: extra parameter | MNF010203   | CS      | W      | 8260FA  | PR      | 06/14/04 | 1          | GROC4C12 |
| Warning: extra parameter | MNF010203   | CS      | W      | 8260FA  | PR      | 06/14/04 | 1          | XYLENES  |
| Warning: extra parameter | 4F14006BLK1 | LB1     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | BZ       |
| Warning: extra parameter | 4F14006BLK1 | LB1     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | BZME     |
| Warning: extra parameter | 4F14006BLK1 | LB1     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | DCA12D4  |
| Warning: extra parameter | 4F14006BLK1 | LB1     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | EBZ      |
| Warning: extra parameter | 4F14006BLK1 | LB1     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | GROC4C12 |
| Warning: extra parameter | 4F14006BLK1 | LB1     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | XYLENES  |
| Warning: extra parameter | 4F14006BS1  | BS1     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | BZ       |
| Warning: extra parameter | 4F14006BS1  | BS1     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | BZME     |
| Warning: extra parameter | 4F14006BS1  | BS1     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | DCA12D4  |
| Warning: extra parameter | 4F14006BS1  | BS1     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | EBZ      |
| Warning: extra parameter | 4F14006BS1  | BS1     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | XYLENES  |
| Warning: extra parameter | 4F14006BS2  | BS2     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | BZ       |
| Warning: extra parameter | 4F14006BS2  | BS2     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | BZME     |
| Warning: extra parameter | 4F14006BS2  | BS2     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | DCA12D4  |
| Warning: extra parameter | 4F14006BS2  | BS2     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | EBZ      |
| Warning: extra parameter | 4F14006BS2  | BS2     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | GROC4C12 |
| Warning: extra parameter | 4F14006BS2  | BS2     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | XYLENES  |
| Warning: extra parameter | 4F14006BSD1 | BD1     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | BZ       |
| Warning: extra parameter | 4F14006BSD1 | BD1     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | BZME     |
| Warning: extra parameter | 4F14006BSD1 | BD1     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | DCA12D4  |
| Warning: extra parameter | 4F14006BSD1 | BD1     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | EBZ      |
| Warning: extra parameter | 4F14006BSD1 | BD1     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | XYLENES  |
| Warning: extra parameter | 4F14006BSD2 | BD2     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | BZ       |
| Warning: extra parameter | 4F14006BSD2 | BD2     | WQ     | 8260FA  | PR      | 06/14/04 | 1          | BZME     |

| Error type               | Labsampid   | Qccode | Matrix | Anmcode | Pvccode | Anadate  | Run number | Parlabel |
|--------------------------|-------------|--------|--------|---------|---------|----------|------------|----------|
| Warning: extra parameter | 4F14006BSD2 | BD2    | WQ     | 8260FA  | PR      | 06/14/04 | 1          | DCA12D4  |
| Warning: extra parameter | 4F14006BSD2 | BD2    | WQ     | 8260FA  | PR      | 06/14/04 | 1          | EBZ      |
| Warning: extra parameter | 4F14006BSD2 | BD2    | WQ     | 8260FA  | PR      | 06/14/04 | 1          | GROC4C12 |
| Warning: extra parameter | 4F14006BSD2 | BD2    | WQ     | 8260FA  | PR      | 06/14/04 | 1          | XYLENES  |

# EDFQC: Error Summary Log

07/12/04

| Error type                             | Lablotcti | Anmcode | Parlabel | Qccode | Labqcid |
|--|-----------|---------|----------|--------|---------|
| There are no errors in this data files |           |         |          |        |         |

# EDFCL: Error Summary Log

07/12/04

| Error type                            | Clevdate | Anmcode | Exmcode | Parlabel | Cicode |
|---------------------------------------|----------|---------|---------|----------|--------|
| There are no errors in this data file | //       |         |         |          |        |



**Electronic Submittal Information**

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Your EDF file has been successfully uploaded!

**Confirmation Number:** 7873669147  
**Date/Time of Submittal:** 7/12/2004 1:36:20 PM  
**Facility Global ID:** T0600100089  
**Facility Name:** ARCO  
**Submittal Title:** 2nd Qtr 2004 Monitoring Report #4977  
**Submittal Type:** GW Monitoring Report

[Click here to view the detections report for this upload.](#)

**ARCO** **Regional Board - Case #: 01-0097**  
 2770 CASTRO VALLEY BLVD SAN FRANCISCO BAY RWQCB (REGION 2) - (RDB)  
 CASTRO VALLEY, CA 94546 **Local Agency (lead agency) - Case #: 01-0097**  
 ALAMEDA COUNTY LOP - (UNK)

| CONF #        | TITLE                                | QUARTER        |
|---------------|--------------------------------------|----------------|
| 7873669147    | 2nd Qtr 2004 Monitoring Report #4977 | Q2 2004        |
| SUBMITTED BY  | SUBMIT DATE                          | STATUS         |
| Srijesh Thapa | 7/12/2004                            | PENDING REVIEW |

**SAMPLE DETECTIONS REPORT**

|   |       |
|---|-------|
| # FIELD POINTS SAMPLED                                | 3     |
| # FIELD POINTS WITH DETECTIONS                        | 3     |
| # FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL | 2     |
| SAMPLE MATRIX TYPES                                   | WATER |

**METHOD QA/QC REPORT**

|                                       |        |
|---------------------------------------|--------|
| METHODS USED                          | 8260FA |
| TESTED FOR REQUIRED ANALYTES?         | N      |
| MISSING PARAMETERS NOT TESTED:        |        |
| - 8260FA REQUIRES DBFM TO BE TESTED   |        |
| - 8260FA REQUIRES BR4FBZ TO BE TESTED |        |
| - 8260FA REQUIRES BZMEDB 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 > REPD |
|--------------|-----------|-------------------|
| QCTB SAMPLES | N         | 0                 |
| QCEB SAMPLES | N         | 0                 |
| QCAB SAMPLES | N         | 0                 |

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**Submittal Title: 2nd Qtr 2004 Geowell #4977**

**Submittal Date/Time: 7/12/2004 1:37:01 PM**

**Confirmation Number: 7424595475**

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