DOJ R078

April 4, 2003

Alameda County
APR 09 2003
Environmental Health

Ms. Susan Hugo
Alameda County Health Care Services
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Re: First Quarter 2003 Groundwater Monitoring Report
Former ARCO Service Station #0374
6407 Telegraph Avenue
Oakland, CA
URS Project #38486086

Dear Ms. Hugo:

On behalf of Atlantic Richfield Company (ARCO – an affiliated company of the Group Environmental Management Company), URS Corporation (URS) is submitting the *First Quarter 2003 Groundwater Monitoring Report* for Former ARCO Service Station #0374, located at 6407 Telegraph Avenue, Oakland, California.

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

Sincerely,

URS CORPORATION

Scott Robinson
Project Manager

David A. Bero, P.G.,R.G.
Senior Geologist

REGISTERED GEOLOGIST
DAVID A. BERO
DB
NO. 7036
Exp. 2/05
STATE OF CALIFORNIA

Enclosure: First Quarter 2003 Groundwater Monitoring Report

cc: Mr. Chuck Headlee, California Regional Water Quality Control Board 1515 Clay Street, Suite 1400 Oakland, CA 94612
Mr. Paul Supple, ARCO, P.O. Box 6549, Moraga, CA 94570

REPORT

FIRST QUARTER 2003 GROUNDWATER MONITORING

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

Prepared for
Atlantic Richfield Company

April 4, 2003

URS
URS Corporation
500 12th Street, Suite 200
Oakland, California 94607

38486086

Date: April 4, 2003
Quarter: 1Q 03

ATLANTIC RICHFIELD COMPANY QUARTERLY GROUNDWATER MONITORING REPORT

Facility No.: 0374 Address: 6407 Telegraph Avenue, Oakland CA
Atlantic Richfield Co. Environmental Engineer: Paul Supple
Consulting Co./Contact Person: URS Corporation/ Scott Robinson
Consultant Project No.: 38486086
Primary Agency: Alameda County Health Care Services Agency (ACHCSA)

WORK PERFORMED THIS QUARTER (First – 2003):

1. Performed first quarter groundwater monitoring event on January 29, 2003.
2. Prepared and submitted fourth quarter 2002 groundwater monitoring report.

WORK PROPOSED FOR NEXT QUARTER (Second – 2003):

1. Perform second quarter 2003 groundwater monitoring event.
2. Prepare and submit first quarter 2003 groundwater monitoring report.
3. Replace Oxygen Releasing Compound (ORC) socks in wells MW-3 and MW-4.

Current Phase of Project:	GW monitoring/sampling
Frequency of Groundwater Sampling:	Quarterly: MW-5 Semi-Annually (2nd & 4th quarters): MW-3, MW-4, MW-5 Annually (2nd quarter): MW-1 , MW-6
Frequency of Groundwater Monitoring:	Quarterly
Is Free Product (FP) Present On-Site:	No
Current Remediation Techniques:	ORC Socks (MW-3 and MW-4)
Approximate Depth to Groundwater:	4.79 (MW-6) to 7.22 (MW-2 / MW-5) feet
Groundwater Gradient (direction):	Southwest
Groundwater Gradient (magnitude):	0.027 feet per foot

DISCUSSION:

Beginning this quarter, groundwater samples were analyzed by EPA method 8260B for TPH-g, BTEX, and fuel oxygenates. In the one well (MW-5) sampled this quarter there were no detections of TPH-g, benzene, or MTBE.

RECOMMENDATIONS:

We recommend changing the sampling frequency of well MW-5 from quarterly to annually and well MW-3 from semi-annually to annually. These wells have consistently had low to non-detect concentrations for the constituents of concern. We will continue to gauge water levels quarterly to calculate groundwater flow.

ATTACHMENTS:

- Table 1 – Groundwater Elevation and Analytical Data
- Table 2 – Groundwater Flow Direction and Gradient
- Table 3 – Fuel Oxygenate Data
- Figure 1 – Groundwater Elevation Contour and Analytical Summary Map – January 29, 2003
- Attachment A – Field Procedures and Field Data Sheets
- Attachment B – Laboratory Procedures, Certified Analytical Reports, and Chain-of-Custody Records
- Attachment C – Historic Groundwater Data
- Attachment D – EDCC Report and EDF/Geowell Submittal Confirmation

Table 1
Groundwater Elevation and Analytical Data

Former ARCO Service Station #374
6407 Telegraph Avenue
Oakland, California

Well Number	Date Sampled	Top of Riser Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
MW-1	6/20/2000	158.91	6.86	152.05	NS	NS	NS	NS	NS	NS	NA
	9/28/2000		7.50	151 41	NS	NS	NS	NS	NS	NS	NA
	12/17/2000		7.49	151.42	NS	NS	NS	NS	NS	NS	NA
	3/23/2001		5.90	153.01	ND<50	ND<0.5	ND<0.5	ND<0 5	ND<0.5	2,710	NA
	6/21/2001		7 45	151.46	NS	NS	NS	NS	NS	NS	NA
	9/23/2001		8.46	150.45	NS	NS	NS	NS	NS	NS	NA
	12/31/2001		5.50	153.41	NS	NS	NS	NS	NS	NS	NA
	3/21/2002		4 71	154.2	ND<5,000	ND<50	ND<50	ND<50	ND<50	2,000	NA
	4/17/2002		5 54	153 37	NS	NS	NS	NS	NS	NS	NA
	8/12/2002		7.77	151.14	NS	NS	NS	NS	NS	NS	NA
	12/6/2002		7.65	151.26	NS	NS	NS	NS	NS	NS	NA
	01/29/2003[b]		**5.88**	**153.03**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NA**
MW-2	6/20/2000	157.92	7.67	150.25	NS	NS	NS	NS	NS	NS	NA
	9/28/2000		8 51	149 41	NS	NS	NS	NS	NS	NS	NA
	12/17/2000		8.14	149.78	NS	NS	NS	NS	NS	NS	NA
	3/23/2001		7.21	150.71	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2 5	NA
	6/21/2001		7 99	149 93	NS	NS	NS	NS	NS	NS	NA
	9/23/2001		8.52	149.4	NS	NS	NS	NS	NS	NS	NA
	12/31/2001		6 01	151.91	NS	NS	NS	NS	NS	NS	NA
	3/21/2002		5.95	151.97	ND<50	ND<0.5	ND<0 5	ND<0.5	ND<0.5	45	NA
	4/17/2002		6.45	151.47	NS	NS	NS	NS	NS	NS	NA
	8/12/2002		8 08	149 84	NS	NS	NS	NS	NS	NS	NA
	12/6/2002		8.29	149.63	NS	NS	NS	NS	NS	NS	NA
	01/29/2003[b]		**7.22**	**150.7**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NA**

Table 1
Groundwater Elevation and Analytical Data

Former ARCO Service Station #374
6407 Telegraph Avenue
Oakland, California

Well Number	Date Sampled	Top of Riser Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
MW-3	6/20/2000	153.64	6.42	147.22	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	NA
	9/28/2000		7.31	146.33	NS	NS	NS	NS	NS	NS	NA
	12/17/2000		6.45	147.19	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2 5	NA
	3/23/2001		6.01	147.63	NS	NS	NS	NS	NS	NS	NA
	6/21/2001		6 80	146.84	110	5 5	ND<0.5	5.4	4.1	2 5	NA
	9/23/2001		7 32	146.32	NS	NS	NS	NS	NS	NS	NA
	12/31/2001		4.48	149.16	ND<50	ND<0.5	ND<0 5	ND<0 5	ND<0.5	4.9	NA
	3/21/2002		4.36	149 28	NS	NS	NS	NS	NS	NS	NA
	4/17/2002		5 31	148 33	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	8.7	NA
	8/12/2002		7.00	146.64	NS	NS	NS	NS	NS	NS	NA
	12/6/2002		7.32	146.32	ND<50	ND<0.5	ND<0 5	ND<0 5	ND<0.5	6 2	1.4
	01/29/2003[b]		**6.07**	**147.57**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NA**
MW-4	6/20/2000	156.53	7.50	149.03	20,000	5,100	440	1,000	1,700	ND<250	NA
	9/28/2000		8.20	148.33	NS	NS	NS	NS	NS	NS	NA
	12/17/2000		8.11	148 42	4,320	1,240	ND<20	27.2	249	ND<100	NA
	3/23/2001		6.69	149 84	NS	NS	NS	NS	NS	NS	NA
	6/21/2001		8.01	148.52	2,800	470	16	19	160	130	NA
	9/23/2001		8 91	147.62	NS	NS	NS	NS	NS	NS	NA
	12/31/2001		4 42	152.11	4,600	1,500	100	160	210	160	NA
	3/21/2002		4.98	151.55	NS	NS	NS	NS	NS	NS	NA
	4/17/2002		6.23	150 30	7,100	2,200	110	290	450	ND<250	NA
	8/12/2002		8.24	148 29	NS	NS	NS	NS	NS	NS	NA
	12/6/2002		8.42	148.11	1,500[a]	410	6.8	20	29	43	1.1
	01/29/2003[b]		**7.20**	**149.33**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NA**

Table 1
Groundwater Elevation and Analytical Data

Former ARCO Service Station #374
6407 Telegraph Avenue
Oakland, California

Well Number	Date Sampled	Top of Riser Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
MW-5	6/20/2000	151.33	7 84	143 49	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	NA
	9/28/2000		8.37	142 96	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA
	12/17/2000		8.36	142.97	ND<50	ND< 0.5	ND< 0.5	ND< 0.5	ND< 0 5	ND<2.5	NA
	3/23/2001		7.55	143.78	ND<50	ND< 0.5	ND< 0.5	ND< 0 5	ND< 0.5	ND<2 5	NA
	6/21/2001		8.20	143.13	ND<50	ND< 0 5	ND< 0.5	ND< 0.5	ND< 0 5	ND<2.5	NA
	9/23/2001		8 68	142.65	ND<50	ND<0.5	ND< 0.5	ND< 0 5	ND< 0.5	ND<2 5	NA
	12/31/2001		7.57	143 76	ND<50	ND<0.5	ND< 0.5	ND< 0.5	ND< 0.5	ND<2.5	NA
	3/21/2002		6.12	145.21	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3 2	NA
	4/17/2002		6.61	144.72	ND<50	ND<0 5	ND< 0.5	ND< 0.5	ND< 0 5	ND<2.5	NA
	8/12/2002		8.14	143.19	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	4 1
	12/6/2002		8 65	142.68	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	1.1
	01/29/2003[b]		**7.22**	**144.11**	**ND<50**	**ND<0.5**	**ND<0.5**	**ND<0.5**	**ND<0.5**	**ND<0.5**	**1**
MW-6	6/20/2000	153.84	4.79	149 05	NS	NS	NS	NS	NS	NS	NA
	9/28/2000		5 39	148.45	NS	NS	NS	NS	NS	NS	NA
	12/17/2000		4.71	149.13	NS	NS	NS	NS	NS	NS	NA
	3/23/2001		4 69	149.15	ND<50	ND< 0.5	ND< 0.5	ND< 0.5	ND< 0.5	ND<2.5	NA
	6/21/2001		5 22	148.62	NS	NS	NS	NS	NS	NS	NA
	9/23/2001		5.40	148 44	NS	NS	NS	NS	NS	NS	NA
	12/31/2001		3.95	149.89	NS	NS	NS	NS	NS	NS	NA
	3/21/2002		2.94	150 9	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	5.2	NA
	4/17/2002		5 11	148.73	NS	NS	NS	NS	NS	NS	NA
	8/12/2002		5.23	148.61	NS	NS	NS	NS	NS	NS	NA
	12/6/2002		5.29	148.55	NS	NS	NS	NS	NS	NS	NA
	01/29/2003[b]		**4.79**	**149.05**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NA**

Table 1
Groundwater Elevation and Analytical Data

Former ARCO Service Station #374
6407 Telegraph Avenue
Oakland, California

TPH = Total Petroleum Hydrocarbons
MTBE = Methyl tertiary butyl ether analyzed by EPA Method 8021B unless otherwise noted
µg/L = Micrograms per liter
mg/L = Milligram per liter
NM = Not measured
NS = Not sampled
ND< = less than laboratory detection limit stated to the right
NA = Not Available
a = Chromatogram Pattern: Gasoline C6-C10
b = Beginning this quarter, groundwater samples were analyzed by EPA method 8260B for TPH-g, BTEX, and fuel oxygenates

Source: The data within this table collected prior to August 2002 was provided to URS by Group Environmental Management Company and its previous consultants. URS has not verified the accuracy of this information.

Table 2

Groundwater Flow Direction and Gradient

Former ARCO Service Station #0374
6407 Telegraph Avenue
Oakland, California

Date Measured	Average Flow Direction	Average Hydraulic Gradient
01/31/1996	Southwest	0.04
04/10/1996	Southwest	0.04
07/16/1996	Southwest	0.03
10/14/1996	Southwest	0.03
03/27/1997	Southwest	0.04
05/27/1997	Southwest	0.03
08/12/1997	Southwest	0.04
11/17/1997	Southwest	0.03
03/16/1998	Southwest	0.03
05/12/1998	Southwest	0.04
07/27/98	Southwest	0.04
10/15/98	Southwest	0.02
02/18/99	Southwest	0.05
05/24/99	Southwest	0.03
08/27/99	Southwest	0.03
10/26/99	Southwest	0.03
02/03/00	Southwest	0.047
06/20/00	Southwest	0.035
09/28/00	Southwest	0.034
12/17/00	Southwest	0.032
03/23/01	Southwest	0.034
06/21/01	Southwest	0.032
09/23/01	Southwest	0.029
12/31/01	Southwest	0.043
03/21/02	Southwest	0.038
04/17/02	Southwest	0.031
08/12/02	Southwest	0.032
12/06/02	Southwest	0.020
01/29/03	**Southwest**	**0.027**

Note:

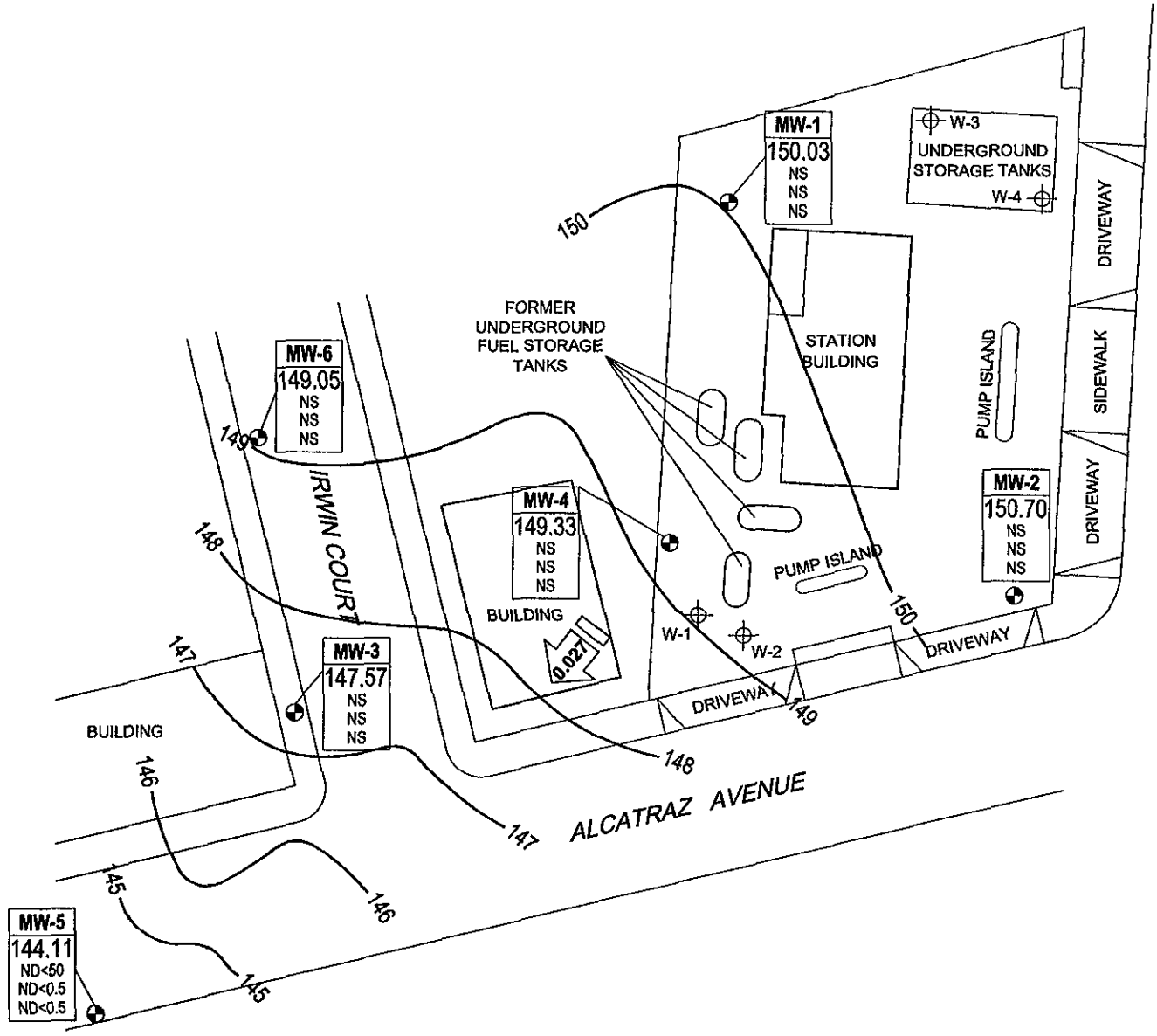
The data within this table collected prior to August 2002 was provided to URS by Group Environmental Management Company and its previous consultants. URS has not verified the accuracy of this information.

Table 3
Oxygenate Analytical Data

ARCO Service Station #771
899 Rincon Avenue, Livermore, California

Well Number	Date Sampled	Ethanol (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-Dichloro-ethane (µg/L)	1,2 Dibromo-ethane (EDB) (µg/L)
MW-5	**01/29/2003**	**ND<40**	**ND<20**	**ND<0.5**	**ND<0.5**	**ND<0.5**	**ND<0.5**	**ND<0.5**	**ND<0.5**

Note = All fuel oxygenate compounds analyzed using EPA Method 8260B
TBA = tert-Butyl alcohol
MTBE = Methyl tert-butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tert butyl ether
TAME = tert-Amyl methyl ether
µg/L = micrograms per liter



LEGEND

- MONITORING WELL LOCATION
- TANK PIT MONITORING WELL LOCATION
- Well / ELEV / TPH-g / Benzene / MTBE — WELL DESIGNATION; GROUNDWATER ELEVATION; TPH-g, BENZENE & MTBE CONCENTRATIONS IN GROUNDWATER (µg/L)
- ND< — NOT DETECTED AT OR ABOVE LABORATORY LIMITS
- NS — NOT SAMPLED
- 0.027 — APPROXIMATE GROUNDWATER FLOW AND DIRECTION (FT/FT)
- 150 — GROUNDWATER ELEVEATION CONTOUR (FT ABOVE MSL)

NOTE: SITE MAP ADAPTED FROM IT CORPORATION FIGURES.
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

NORTH

0 40 80

SCALE IN FEET

URS	Project No. 38486086 Arco Service Station #0374 6407 Telegraph Avenue Oakland, California	GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL SUMMARY MAP First Quarter 2003 (January 29, 2003)	FIGURE 1

X:\x_env\waste\BP GEM\Sites\Scott Robinson\Paul Supple\0374\Reports\Monitoring\Qtr. 1, 2003\Drawings\GWEC-AS_1-29.dwg

ATTACHMENT A

FIELD PROCEDURES AND FIELD DATA SHEETS

FIELD PROCEDURES

Sampling Procedures

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

WELL GAUGING DATA

Project # 030129-MT2 Date 1-29-03 Client 374

Site 6407 Telegraph Ave, Oakland, CA

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	
MW-1	4					5.88	26.72		
MW-2	4					7.22	26.29		
MW-3	4					6.07	26.76		
MW-4	4					7.20	26.95		
MW-5	4					7.27	23.04		
MW-6	4					4.79	14.58	TOC	

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 030129-MT2	Station # 374
Sampler: M. TOLL	Date: 1-29-03
Well I.D.: MW-5	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 23.04	Depth to Water: 7.22
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH

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

Purge Method: Bailer / Disposable Bailer / Middleburg / (Electric Submersible) / (Extraction Pump) / Other: ___

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

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

10.3 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 30.9 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1423	67.4	6.4	630	10.3	
1425	67.8	6.6	623	20.6	
1427	67.7	6.6	620	30.9	

Did well dewater? Yes (No) Gallons actually evacuated: 31

Sampling Time: 1435 Sampling Date: 1-29-03

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

Analyzed for: (TPH-G) (BTEX) MTBE TPH-D Other: Oxy. & Ethanol by 8260

D.O. (if req'd):	Pre-purge:	mg/L	(Post-purge:)	1.0 mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

Chain of Custody Record

Project Name 03029-NT2

BP BU/GEM CO Portfolio:

BP Laboratory Contract Number:

Requested Due Date (mm/dd/yy)

ate: 1-29-03

On-site Time:	Temp:
Off- site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

d To:	
Name:	SEQUOIA
Address:	885 Jarvis Dr. Morgan Hill, CA 95037
PM:	Latonya Pelt
e/Fax:	408-776-9600 / 408-782-6308
ort Type & QC Level:	Send EDF Reports
GEM Account No.:	

BP/GEM Facility No.:	
BP/GEM Facility Address:	6407 TELEGRAPH AVE, OAKLAND, CA
Site ID No.	ARCO 374
Site Lat/Long:	
California Global ID #:	T0600100106
BP/GEM PM Contact:	PAUL SUPPLE
Address:	
Tele/Fax:	

Consultant/Contractor:	URS
Address:	500 12th St., Ste. 200 Oakland, CA 94609-4014
e-mail EDD:	syed_rehan@urscorp.com
Consultant/Contractor Project No.:	25-00000374.01 00427
Consultant Tele/Fax:	510-874-1735/510-874-3268
Consultant/Contractor PM:	Scott Robinson
Invoice to:	Consultant/Contractor or (BP/GEM) (Circle one)
BP/GEM Work Release No:	INTRIM -50419

Bottle Order No:

n No.	Sample Description	Time	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Sediments	Matrix: Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	Preservatives: H_2SO_4	Preservatives: HNO_3	Preservatives: HCl	Requested Analysis: TPH-G / BTEX (8015/8021) (8260)	Requested Analysis: TPH-D (8015)	Requested Analysis: MTBE (8021)	Requested Analysis: MTBE, TAME, ETBE DIPE, TBA (8260)	Requested Analysis: 1,2-DCA & EDB (8260)	Requested Analysis: (8260) Oxygenates*	Requested Analysis: Ethanol	Sample Point Lat/Long and Comments
1	MW-5	1435		X				3				X	X					X	X	Oxygenates to include MTBE, ETBE, TAME, DIPE TBA!
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

npler's Name:	Michael Toll	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
npler's Company:	Blaine Tech Services	Hall / BTS	1/30/03	1517		1/30/03	1520
pment Date:							
pment Method:							
pment Tracking No:							

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

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

WELLHEAD INSPECTION CHECKLIST

Client 374 Date 1-29-03

Site Address 6407 Telegraph Ave, Oakland

Job Number 030129-MT2 Technician M. TOLL

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-1	NPT							✓
MW-2	✓							
MW-3	✓							
MW-4	✓							
MW-5				✓	✓			✓
MW-6	NPT							✓

NOTES:

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

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

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

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

374

Station #

6802 Telegraph Ave, Oakland, CA

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

30

added equip. rinse water 1

any other adjustments

TOTAL GALS. RECOVERED 32

loaded onto BTS vehicle # 51

BTS event #	time	date
03029-MT2	1450	1/29/03

signature ~Hall

* *

REC'D AT	time	date
BTS-SJ		1/29/03

unloaded by signature ~Hall

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 Group Environmental Management Company have been reviewed and verified by that laboratory.

Sequoia Analytical

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

20 February, 2003

Scott Robinson
URS Corporation
500 12th Street, Suite 100
Oakland, CA 94607

RE: ARCO #374, Oakland, Ca
Sequoia Work Order: MMA0736

Enclosed are the results of analyses for samples received by the laboratory on 01/30/03 16:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya K. Pelt

Latonya Pelt
Project Manager

CA ELAP Certificate #1210

Sequoia Analytical

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

URS Corporation	Project: ARCO #374, Oakland, Ca	MMA0736
500 12th Street, Suite 100	Project Number: 6407 Telegraph Ave, Oakland, CA	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	02/20/03 17:12

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-5	MMA0736-01	Water	01/29/03 14:35	01/30/03 16:20

There were no custody seals that were received with this project.

Sequoia Analytical

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

URS Corporation	Project: ARCO #374, Oakland, Ca	MMA0736
500 12th Street, Suite 100	Project Number: 6407 Telegraph Ave, Oakland, CA	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	02/20/03 17:12

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5 (MMA0736-01) Water Sampled: 01/29/03 14:35 Received: 01/30/03 16:20									
Ethanol	ND	40	ug/l	1	3B13028	02/11/03	02/12/03	EPA 8260B	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*108 %*	*78-129*		"	"	"	"	

Sequoia Analytical

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

URS Corporation	Project: ARCO #374, Oakland, Ca	MMA0736
500 12th Street, Suite 100	Project Number: 6407 Telegraph Ave, Oakland, CA	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	02/20/03 17:12

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 3B13028 - EPA 5035										
Blank (3B13028-BLK1)				Prepared: 02/11/03 Analyzed: 02/12/03						
Ethanol	ND	40	ug/l							
tert-Butyl alcohol	ND	20	"							
Methyl tert-butyl ether	ND	0.50	"							
Di-isopropyl ether	ND	0.50	"							
Ethyl tert-butyl ether	ND	0.50	"							
tert-Amyl methyl ether	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C6-C10)	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	*5.24*		"	*5.00*		*105*	*78-129*			
Laboratory Control Sample (3B13028-BS1)				Prepared: 02/11/03 Analyzed: 02/12/03						
Methyl tert-butyl ether	9.27	0.50	ug/l	10.0		92.7	63-137			
Benzene	9.85	0.50	"	10.0		98.5	78-124			
Toluene	9.48	0.50	"	10.0		94.8	78-129			
Surrogate: 1,2-Dichloroethane-d4	*4.26*		"	*5.00*		*85.2*	*78-129*			
Laboratory Control Sample (3B13028-BS2)				Prepared: 02/11/03 Analyzed: 02/12/03						
Methyl tert-butyl ether	8.75	0.50	ug/l	9.04		96.8	63-137			
Benzene	5.30	0.50	"	5.44		97.4	78-124			
Toluene	29.0	0.50	"	32.8		88.4	78-129			
Gasoline Range Organics (C6-C10)	481	50	"	440		109	70-113			
Surrogate: 1,2-Dichloroethane-d4	*4.87*		"	*5.00*		*97.4*	*78-129*			

Sequoia Analytical

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

URS Corporation	Project: ARCO #374, Oakland, Ca	MMA0736
500 12th Street, Suite 100	Project Number: 6407 Telegraph Ave, Oakland, CA	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	02/20/03 17:12

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 3B13028 - EPA 5035										
Laboratory Control Sample Dup (3B13028-BSD1)				Prepared: 02/11/03 Analyzed: 02/12/03						
Methyl tert-butyl ether	9.88	0.50	ug/l	10.0		98.8	63-137	6 37	13	
Benzene	10.2	0.50	"	10.0		102	78-124	3.49	12	
Toluene	9.47	0.50	"	10.0		94.7	78-129	0.106	10	
Surrogate: 1,2-Dichloroethane-d4	*4.42*		"	*5.00*		*88.4*	*78-129*			
Laboratory Control Sample Dup (3B13028-BSD2)				Prepared: 02/11/03 Analyzed: 02/12/03						
Methyl tert-butyl ether	7.96	0.50	ug/l	9.04		88.1	63-137	9.46	13	
Benzene	5.18	0.50	"	5.44		95.2	78-124	2.29	12	
Toluene	29.1	0.50	"	32.8		88.7	78-129	0.344	10	
Gasoline Range Organics (C6-C10)	458	50	"	440		104	70-113	4.90	9	
Surrogate: 1,2-Dichloroethane-d4	*4.41*		"	*5.00*		*88.2*	*78-129*			

Sequoia Analytical

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

URS Corporation	Project: ARCO #374, Oakland, Ca	MMA0736
500 12th Street, Suite 100	Project Number: 6407 Telegraph Ave, Oakland, CA	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	02/20/03 17:12

Notes and Definitions

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

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: IRS
REC. BY (PRINT): TL
WORKORDER: MMA0736

DATE Received at Lab: 11/30/03
TIME Received at Lab: 1620
LOG IN DATE: 12-3-03

Drinking water for regulatory purposes: YES / NO
Wastewater for regulatory purposes: YES / NO

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	#	CLIENT ID	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s)	Present / Absent Intact / Broken*	1		MW-5	3 VOA HCl	(W)	11/29/03	
2. Chain-of-Custody	Present / Absent*							
3. Traffic Reports or Packing List:	Present / Absent							
4. Airbill:	Airbill / Sticker Present / Absent							
5. Airbill #:								
6. Sample Labels:	Present / Absent							
7. Sample IDs:	Listed / Not Listed on Chain-of-Custody							
8. Sample Condition:	Intact / Broken* / Leaking*							
9. Does information on custody reports, traffic reports and sample labels agree?	Yes / No*							
10. Sample received within hold time:	Yes / No*							
11. Proper Preservatives used:	Yes / No*							
12. Temp Rec. at Lab: 2°C Is temp 4 +/-2°C?	Yes / No**							

(Acceptance range for samples requiring thermal pres.)

**Exception (if any): Metals / DFF on ice? / DFF no ice? or Problem COC

*If Circled, contact Project Manager and attach record of resolution.

ATTACHMENT C

EDCC REPORT AND EDF/GEOWELL SUBMITTAL CONFIRMATION

Error Summary Log

03/10/03

EDF 1.2i All files present in deliverable.

Laboratory:	Sequoia Analytical Laboratories, Inc., Morgan Hill, CA
Project Name:	ARCO #374, Oakland, Ca
Work Order Number:	MMA0736
Global ID:	T0600100106
Lab Report Number:	MMA0736022020031712

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run	Sub
MMA07360220200 31712	MW-5	MMA073601	W	CS	8260+OX	SW5035	01/29/03	02/11/03	02/12/03	3B13028	1	
		3B13028BSD1	WQ	BD1	8260+OX	SW5035	/ /	02/11/03	02/12/03	3B13028	1	
		3B13028BSD2	WQ	BD2	8260+OX	SW5035	/ /	02/11/03	02/12/03	3B13028	1	
		3B13028BS1	WQ	BS1	8260+OX	SW5035	/ /	02/11/03	02/12/03	3B13028	1	
		3B13028BS2	WQ	BS2	8260+OX	SW5035	/ /	02/11/03	02/12/03	3B13028	1	
		3B13028BLK1	WQ	LB1	8260+OX	SW5035	/ /	02/11/03	02/12/03	3B13028	1	

EDFSAMP: Error Summary Log

03/10/03

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

EDFTEST: Error Summary Log

03/10/03

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

EDFRES: Error Summary Log

03/10/03

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	MMA073601	CS	W	8260+OX	PR	02/12/03	1	GROC6C10
Warning: extra parameter	MMA073601	CS	W	8260+OX	PR	02/12/03	1	XYLENES
Warning: extra parameter	3B13028BLK1	LB1	WQ	8260+OX	PR	02/12/03	1	GROC6C10
Warning: extra parameter	3B13028BLK1	LB1	WQ	8260+OX	PR	02/12/03	1	XYLENES
Warning: extra parameter	3B13028BS2	BS2	WQ	8260+OX	PR	02/12/03	1	GROC6C10
Warning: extra parameter	3B13028BSD2	BD2	WQ	8260+OX	PR	02/12/03	1	GROC6C10

EDFQC: Error Summary Log

03/10/03

Error type	Lablotctl	Anmcode	Parlabel	Qccode	Labqcid
There are no errors in this data files					

EDFCL: Error Summary Log

03/10/03

Error type	Clrevdate	Anmcode	Exmcode	Parlabel	Clcode
There are no errors in this data file	/ /				

AB2886 Electronic Delivery

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

Your EDF file has been succcessfully uploaded!

Confirmation Number: 3272199571
Date/Time of Submittal: 3/10/2003 4:14:06 PM
Facility Global ID: T0600100106
Facility Name: ARCO
Submittal Title: 1q03 qmr 374
Submittal Type: GW Monitoring Report

Logged in as URSCORP-OAKLAND (CONTRACTOR)

CONTACT SITE ADMINISTRATOR.

AB2886 Electronic Delivery

UPLOADING A GEO_WELL FILE

Processing is complete. No errors were found!
Your file has been successfully submitted!

Submittal Title:	**1q03 qmr 374**
Submittal Date/Time:	**3/10/2003 4:16:24 PM**
Confirmation Number:	**4823719620**

Back to Main Menu

Logged in as URSCORP-OAKLAND (CONTRACTOR)

CONTACT SITE ADMINISTRATOR.