

February 20, 2003

Mr. Scott Seery
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

**Re: Fourth Quarter 2002 Groundwater Monitoring Report
ARCO Service Station # 2162
15135 Hesperian Boulevard
San Leandro, California
URS Project #38465937**

Dear Mr. Seery:

On behalf of Atlantic Richfield Company (ARCO-an affiliated company of the Group Environmental Management Company), URS Corporation (URS) is submitting the *Fourth Quarter 2002 Groundwater Monitoring Report* for the ARCO Service Station #2162, located at 15135 Hesperian Boulevard, San Leandro, California.

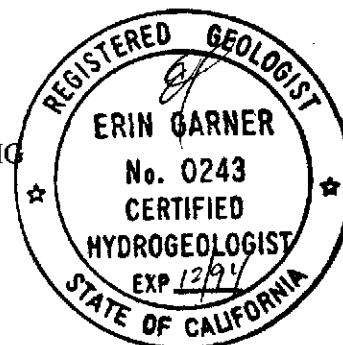
If you have any questions regarding this submission, please call (510) 874-3280.

Sincerely,

URS CORPORATION

Scott Robinson
Project Manager

Erin Garner, CHG
Project Director



Enclosure: Fourth Quarter 2002 Groundwater Monitoring Report

cc: Mr. Paul Supple, ARCO, PO Box 6549 Moraga, CA 94570
Mr. Mike Bakaldin, City of San Leandro Environmental Services Division, 835 East 14th St., San Leandro, CA 94577
Mr. John Jang, RWQCB, S.F. Bay Region, 1515 Clay St., Ste. 1400, Oakland, CA 94612



Atlantic Richfield Company
(a BP affiliated company)

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

February 20, 2003

Re: Fourth Quarter 2002 Groundwater Monitoring Report
ARCO Station 2162
15135 Hesperian Blvd.
San Leandro, CA.

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

Submitted by:

Paul Supple
Environmental Business Manager

REPORT

**FOURTH QUARTER 2002
GROUNDWATER MONITORING**

ARCO SERVICE STATION #2162
15135 HESPERIAN BOULEVARD
SAN LEANDRO, CALIFORNIA

Prepared for
Atlantic Richfield Company

February 20, 2003

URS

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

38465937

Date: February 20, 2003
Quarter: 4Q 02

ATLANTIC RICHFIELD COMPANY QUARTERLY GROUNDWATER MONITORING REPORT

Former Facility No.: 2162 Address: 15135 Hesperian Boulevard, San Leandro, CA
Atlantic Richfield Co. Environmental Engineer: Paul Supple
Consulting Co./Contact Person: URS Corporation/ Scott Robinson
Consultant Project No.: 38465937
Primary Agency: ACHCSA

WORK PERFORMED THIS QUARTER (Fourth – 2002):

1. Prepared third quarter 2002 groundwater monitoring report.
2. Performed fourth quarter 2002 groundwater monitoring and sampling event October 9, 2002.

WORK PROPOSED FOR NEXT QUARTER (First – 2003):

1. Prepare and submit fourth quarter 2002 groundwater monitoring report.
2. Perform first quarter 2003 groundwater monitoring event.
3. Perform product line replacement and removal.

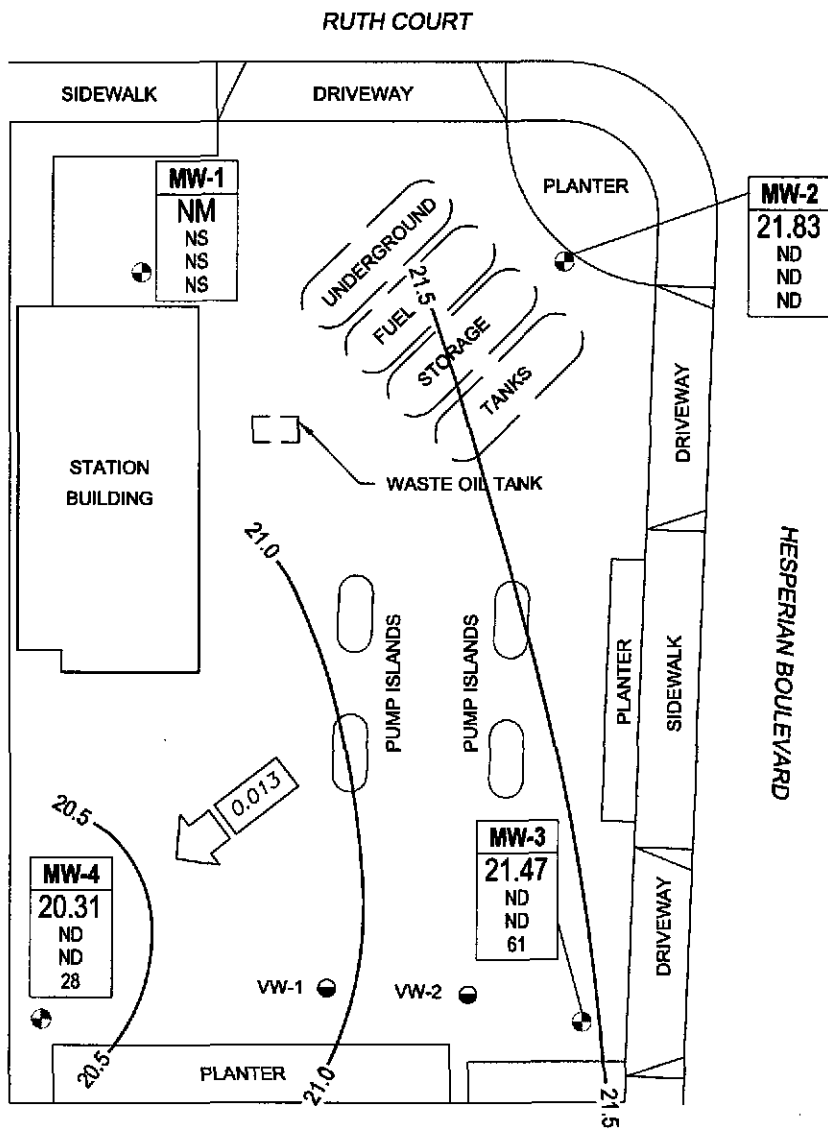
Current Phase of Project: GW monitoring/sampling
Frequency of Groundwater Sampling: Quarterly: MW-1, MW-2, MW-3, MW-4
Frequency of Groundwater Monitoring: Quarterly
Is Free Product (FP) Present On-Site: No
Current Remediation Techniques: Natural Attenuation
Approximate Depth to Groundwater: 8.55 ft (MW-2) to 10.08 ft (MW-4) feet
Groundwater Gradient (direction): Southwest
Groundwater Gradient (magnitude): 0.013 feet per foot

DISCUSSION:

TPH-g and benzene were not detected in any of the three wells sampled this quarter. MTBE was detected in two wells at concentrations of 28 µg/L (MW-4) and 61 µg/L (MW-3). Well MW-1 was not monitored this quarter because it was covered by a car.

ATTACHMENTS:

- Table 1 - Groundwater Elevation and Analytical Data
- Table 2 - Summary of Groundwater Flow Direction and Gradient
- Figure 1 - Groundwater Elevation Contour and Analytical Summary Map – October 9, 2002
- 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 and EDF/Geowell Submittal Confirmation

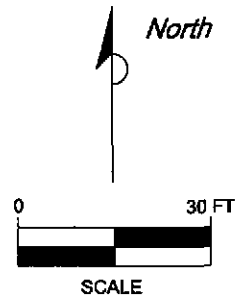


LEGEND

- MW-1 MONITORING WELL LOCATION
- VW-1 SOIL VAPOR EXTRACTION WELL LOCATION
- 21.5 WATER TABLE CONTOUR IN FEET ABOVE MSL
- 0.013 APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT
- | Well |
|---------|
| ELEV |
| TPH-g |
| Benzene |
| MTBE |

 WELL DESIGNATION
- | |
|---------|
| ELEV |
| TPH-g |
| Benzene |
| MTBE |

 GROUNDWATER ELEVATION IN FEET ABOVE MSL
 CONCENTRATION OF TPH-g, BENZENE AND MTBE
 IN MICROGRAMS PER LITER (µg/L)
- ND NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMITS
- NM NOT MONITORED
- NM NOT SAMPLED



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

URS	Project No. 38486120	GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL SUMMARY MAP Fourth Quarter 2002 (October 9, 2002)	FIGURE 1
	ARCO Service Station 2162 15135 Hesperian Boulevard San Leandro, California		

**Table 1
Groundwater Elevation and Analytical Data**

ARCO Service Station # 2162
15135 Hesperian Boulevard
San Leandro, California

Well Number	Date Sampled	Top of Riser Elevation (feet, MSL)	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	TPH as					
					Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
MW-1	06/20/00	31.19	8.33	22.86	<50	<0.5	0.8	<0.5	<1.0	<10
	09/29/00		9.07	22.12	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	12/17/00		8.69	22.50	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	03/23/01		8.19	23.00	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	06/20/01		8.97	22.22	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	09/22/01		9.56	21.63	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	12/28/01		8.40	22.79	<50	<0.5	<0.5	<0.5	0.63	<2.5
	03/14/02		8.05	23.14	<50	<0.5	<0.5	<0.5	<0.5	170
	04/18/02		8.27	22.92	<50	<0.5	<0.5	<0.5	<0.5	NS
	07/19/02		NP	8.88	22.31	<50	<0.5	<0.5	<0.5	<0.5
10/09/02	NP	a	NM	NM	NS	NS	NS	NS	NS	
MW-2	06/20/00	30.38	7.38	23.00	NS	NS	NS	NS	NS	NS
	09/29/00		8.08	22.30	266	<0.5	<0.5	<0.5	<0.5	<2.5
	12/17/00		7.80	22.58	175	<0.5	<0.5	0.659	<0.5	<2.5
	03/23/01		7.23	23.15	351	<0.5	<0.5	0.912	<0.5	<2.5
	06/20/01		7.98	22.40	360	<0.5	<0.5	0.74	<0.5	<2.5
	09/22/01		8.55	21.83	190	<0.5	<0.5	<0.5	<0.5	<2.5
	12/28/01		7.53	22.85	130	<0.5	0.93	<0.5	0.51	<2.5
	03/14/02		7.17	23.21	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	04/18/02		7.31	23.07	74	<0.5	<0.5	<0.5	<0.5	NS
	07/19/02		P	7.93	22.45	<50	<0.5	<0.5	<0.5	<0.5
10/09/02	P	8.55	21.83	<50	<0.5	<0.5	<0.5	<0.5	<2.5	

**Table 1
Groundwater Elevation and Analytical Data**

ARCO Service Station # 2162
15135 Hesperian Boulevard
San Leandro, California

Well Number	Date Sampled	Top of Riser Elevation (feet, MSL)	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, MSL)	TPH as						
					Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	
MW-3	06/20/00	30.30	7.75	22.55	NS	NS	NS	NS	NS	NS	
	09/29/00		8.46	21.84	<50	<0.5	<0.5	<0.5	<0.5	128	
	12/17/00		8.01	22.29	<50	<0.5	<0.5	<0.5	<0.5	46.7	
	03/23/01		7.70	22.60	<50	<0.5	<0.5	<0.5	<0.5	26.8	
	06/20/01		8.23	22.07	<50	<0.5	<0.5	<0.5	<0.5	30	
	09/22/01		8.89	21.41	<50	<0.5	<0.5	<0.5	<0.5	12	
	12/28/01		7.83	22.47	<50	<0.5	<0.5	<0.5	<0.5	6.2	
	03/14/02		7.48	22.82	<50	<0.5	<0.5	<0.5	<0.5	47	
	04/18/02		7.62	22.68	<50	<0.5	<0.5	<0.5	<0.5	NS	
	07/19/02		P	8.23	22.07	100 ^b	<1.0	<1.0	<1.0	<1.0	330
	10/09/02		P	8.83	21.47	<50	<0.5	<0.5	<0.5	<0.5	61
MW-4	06/20/00	30.39	8.87	21.52	NS	NS	NS	NS	NS	NS	
	09/29/00		9.61	20.78	<50	1.02	<0.5	<0.5	<0.5	12.2	
	12/17/00		9.17	21.22	<50	<0.5	<0.5	<0.5	<0.5	5.81	
	03/23/01		8.70	21.69	<50	<0.5	<0.5	<0.5	<0.5	3.04	
	06/20/01		9.51	20.88	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
	09/22/01		10.06	20.33	<50	<0.5	<0.5	<0.5	<0.5	5.2	
	12/28/01		8.86	21.53	<50	<0.5	<0.5	<0.5	<0.5	4.3	
	03/14/02		8.52	21.87	<50	<0.5	<0.5	<0.5	<0.5	5.1	
	04/18/02		8.76	21.63	<50	<0.5	<0.5	<0.5	<0.5	NS	
	07/19/02		NP	9.39	21.00	<50	<0.5	<0.5	<0.5	<0.5	30
	10/09/02		NP	10.08	20.31	<50	<0.5	<0.5	<0.5	<0.5	28

Table 1
Groundwater Elevation and Analytical Data

ARCO Service Station # 2162
15135 Hesperian Boulevard
San Leandro, California

TPH	= Total petroleum hydrocarbons analyzed using EPA Method 8015B, Modified
BTEX	= Benzene, toluene, ethyl benzene, and total xylenes analyzed using EPA Method 8021B.
MTBE	= Methyl tertiary butyl ether analyzed by EPA Method 8021B unless otherwise noted
µg/L	= Micrograms per liter equivalent to parts per billion (ppb)
<	= Not detected at or above specified laboratory method detection limit
MSL	= Mean sea level
TOC	= Top of casing
P	= Purge
NP	= No Purge
NS	= Not sampled
a	= Well not accessible - car parked over.
b	= Hydrocarbon pattern is present in the requested fuel quantitation range but does not represent the pattern of the requested fuel

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

Table 2
Groundwater Flow Direction and Gradient

ARCO Service Station # 2162
15135 Hesperian Boulevard
San Leandro, California

Date Measured	Average Flow Direction	Average Hydraulic Gradient
06/20/00	Southwest	0.010
09/29/00	Southwest	0.010
12/17/00	Southwest	0.010
03/23/01	Southwest	0.011
06/20/01	Southwest	0.013
09/22/01	Southwest	0.012
12/28/01	Southwest	0.010
03/14/02	Southwest	0.011
04/18/02	Southwest	0.012
07/19/02	Southwest	0.012
10/09/02	Southwest	0.013

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

ATTACHMENT A
FIELD PROCEDURES AND FIELD DATA SHEETS

FIELD PROCEDURES

Sampling Procedures

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

WELL GAUGING DATA

Project # 021009-BA2 Date 10/09/02 Client Arco 2102

Site 15135 MRSERIAN BLVD, SAN LEANDRO

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	
MW-1	4	unable to access car parked over well					15.96	TOC	NPE@ 8'
MW-2	4					8.55*	15.96	↓	NPE@ 8'
MW-3	4					8.83	14.96		
MW-4	4					10.08*	17.70		Dedicated Tubing NPE@ 8'
* gauged w/ tubing in well									

BP WELL MONITORING DATA SHEET

Project #: <u>021009-BA2</u>	Station # <u>2162</u>
Sampler: <u>Brian Alcorn</u>	Date: <u>10/09/02</u>
Well I.D.: <u>MW-1</u>	Well Diameter: 2 3 <u>(4)</u> 6 8 <u> </u>
Total Well Depth: <u>15.95</u>	Depth to Water: <u> </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 ² * 0.163

Purge Method: ~~Bailer~~
~~Disposable Bailer~~
~~Middleburg~~
~~Electric Submersible Extraction Pump~~

Sampling Method: ~~Bailer~~
~~Disposable Bailer~~
~~Extraction Port~~
 Other:

Other:

<u>0</u>	x	<u>3</u>	=	<u>0</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
					WELL INACCESSIBLE DUE TO
					UNMOVABLE CAR PARKED OVER IT.

Did well dewater? Yes No Gallons actually evacuated: 0

Sampling Time: Sampling Date:

Sample I.D.: Laboratory: Pace Other

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

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

BP WELL MONITORING DATA SHEET

Project #: <u>021009-BA2</u>	Station # <u>2162</u>
Sampler: <u>BRIAN ALCORN</u>	Date: <u>10/09/02</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>(4)</u> 6 8 <u> </u>
Total Well Depth: <u>15.96</u>	Depth to Water: <u>8.55</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 ² * 0.163

Purge Method: ~~Bailer~~
~~Disposable Bailer~~
~~Middleburg~~
~~Electric Submersible~~
~~Extraction Pump~~
 Other: _____

Sampling Method: Bailer
Disposable Bailer
 Extraction Port
 Other: _____

No
Purge @ 8'

ϕ	x	<u>3</u>	=	ϕ	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u>)	Gals. Removed	Observations
<u>1145</u>	<u>75.5</u>	<u>7.3</u>	<u>595</u>	<u>ϕ</u>	<u>clear</u>

Did well dewater? Yes No Gallons actually evacuated: ϕ

Sampling Time: 1145 Sampling Date: 10/09/02

Sample I.D.: MW-2 Laboratory: Pace Sequoia Other _____

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

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

BP WELL MONITORING DATA SHEET

Project #: <u>021009-BA2</u>	Station # <u>2162</u>
Sampler: <u>BRIAN ALORN</u>	Date: <u>10/09/02</u>
Well I.D.: <u>MW-3</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth: <u>14.96</u>	Depth to Water: <u>8.83</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 ² * 0.163

Purge Method: <u>Bailer</u> Disposable Bailer Middleburg <u>Electric Submersible</u> Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> <u>Disposable Bailer</u> Extraction Port Other: _____
--	---

<u>4.0</u>	x	<u>3</u>	=	<u>12.0</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u>)	Gals. Removed	Observations
1126	76.1	7.4	627	4	clear
1127	75.1	7.3	618	8	"
<u>Dewatered</u>				10	DTW 10.64
1135	76.0	7.4	627	—	80% 10.06 DTW 8.98

Did well dewater? <u>Yes</u> No	Gallons actually evacuated: <u>10</u>
Sampling Time: <u>1135</u>	Sampling Date: <u>10/09/02</u>
Sample I.D.: <u>MW-3</u>	Laboratory: Pace <u>Sequoia</u> Other _____
Analyzed for: <u>TPH-G BTEX MTBE</u> TPH-D Other:	
D.O. (if req'd):	Pre-purge: _____ mg/L
	Post-purge: <u>0.5</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV
	Post-purge: _____ mV

BP WELL MONITORING DATA SHEET

Project #: <u>021009-BA2</u>	Station # <u>2162</u>
Sampler: <u>BRIAN ALLORN</u>	Date: <u>10/09/02</u>
Well I.D.: <u>MW-4</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>17.70</u>	Depth to Water: <u>10.08</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 ² * 0.163

Purge Method: ~~Bailer~~
~~Disposable Bailer~~
~~Middleburg~~
~~Electric Submersible~~
~~Extraction Pump~~
 Other: _____

No @ 8'
PURGE

Sampling Method: Bailer
Disposable Bailer
 Extraction Port
 Other: _____

ϕ	x	<u>3</u>	=	ϕ	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>μS</u>)	Gals. Removed	Observations
1110	73.9	8.0	880	ϕ	clear

Did well dewater? Yes No Gallons actually evacuated: ϕ

Sampling Time: 1110 Sampling Date: 10/09/02

Sample I.D.: MW-4 Laboratory: Pace Sequoia Other _____

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

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



Chain of Custody Record

Project Name _____
 BP BU/GEM CO Portfolio: _____
 BP Laboratory Contract Number: _____

Date: 10/09/02Requested Due Date (mm/dd/yy) Standard

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

Client To:	BP/GEM Facility No.:	Consultant/Contractor: URS
Name: SEQUOIA	BP/GEM Facility Address: 15135 HESPERIAN BLVD, San Leandro, CA	Address: 500 12th St., Ste. 200
Address: 885 Jarvis Dr. Morgan Hill, CA 95037	Site ID No. ARCO 2162	Oakland, CA 94609-4014
	Site Lat/Long:	e-mail EDD: syed_rehan@urscorp.com
	California Global ID #: T0600100084	Consultant/Contractor Project No.: J5-00002162.01 00427
PM: Latonya Pelt	BP/GEM PM Contact: PAUL SUPPLE	Consultant Tele/Fax: 510-874-1735/510-874-3288
/Fax: 408-776-9600 / 408-782-6308	Address:	Consultant/Contractor PM: Scott Robinson
Report Type & QC Level: Send EDF Reports		Invoice to: Consultant/Contractor or (BP/GEM) (Circle one)
JBM Account No.:	Tele/Fax:	BP/GEM Work Release No: INTRIM -50319

Bottle Order 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 ₂ SO ₄	HNO ₃	HCl	TPH-G/BTEX (8015/8021)	TPH-D (8015)	MTBE (8021)	MTBE, TAME, ETBE DIPE, TBA (8260)	1,2-DCA & HDB (8260)		
1	MW-2	1145		X			3					X		X					
2	MW-3	1135		X			3					X		X					
3	MW-4	1110		X			3					X		X					
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquisher's Name: <u>Brian Alcorn</u>	Relinquished By / Affiliation: <u>[Signature]</u>	Date: <u>10/10/02</u>	Time: <u>1118</u>	Accepted By / Affiliation: <u>[Signature]</u>	Date: <u>10/10/02</u>	Time: <u>1118</u>
Relinquisher's Company: <u>BLANK TECH SERVICES</u>						
Relinquishment Date:						
Relinquishment Method:						
Relinquishment Tracking No.:						

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

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

WELLHEAD INSPECTION CHECKLIST AND REPAIR ORDER

Client Arco Inspection Date 10/09/02

Site Address 15135 HESPERIAN BLVD, SAN LEANDRO Inspected By Brian Alcorn

1. Lid on box?	6. Casing secure?	12. Water standing in wellbox?	15. Well cap functional?
2. Lid broken?	7. Casing cut level?	12a. Standing above the top of casing?	16. Can cap be pulled loose?
3. Lid bolts missing?	8. Debris in wellbox?	12b. Standing below the top of casing?	17. Can cap seal out water?
4. Lid bolts stripped?	9. Wellbox is too far above grade?	12c. Water even with the top of casing?	18. Padlock present?
5. Lid seal intact?	10. Wellbox is too far below grade?	13. Well cap present?	19. Padlock functional?
	11. Wellbox is crushed/damaged?	14. Well cap found secure?	

Check box if no deficiencies were found. Note below deficiencies you were able to correct.

Well I.D.	Deficiency	Corrective Action Taken
MW-4	Bad cap/lock	Replaced 4" / #2357
MW-3	Bad cap/lock	Replaced 4" / #2357

Note below all deficiencies that could not be corrected and still need to be corrected.

Well I.D.	Persisting Deficiency	BTS Office assigns or defers Correction to:	Date assigned	Date corrected
MW-4	Retap/Helicoil Standing water below casing			
MW-3	Retap/Helicoil Standing water below casing			
MW-2	Bad cap/lock			

Note: Unable to access MW-1
~~REPAIR ORDER~~

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:

2162

Station #

1535 HESPERIAN BLVD, SAN LEANDRO

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

10

added equip. rinse water 2

any other adjustments _____

TOTAL GALS. RECOVERED 12

loaded onto BTS vehicle # 14

BTS event # 021009-BA2 time 1200 date 10/09/02

signature 

REC'D AT _____ time _____ date _____

unloaded by _____
signature _____

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

LABORATORY PROCEDURES

Laboratory Procedures

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



**Sequoia
Analytical**

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

27 October, 2002

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

RE: ARCO #2162, San Leandro, Ca
Sequoia Report: MLJ0429

Enclosed are the results of analyses for samples received by the laboratory on 10/10/02 17:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya Pelt
Project Manager

CA ELAP Certificate #1210



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

Project: ARCO #2162, San Leandro, Ca
Project Number: ARCO #2162, San Leandro, CA
Project Manager: Scott Robinson

Reported:
10/27/02 11:58

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2	MLJ0429-01	Water	10/09/02 11:45	10/10/02 17:10
MW-3	MLJ0429-02	Water	10/09/02 11:35	10/10/02 17:10
MW-4	MLJ0429-03	Water	10/09/02 11:10	10/10/02 17:10

Sequoia Analytical - Morgan Hill

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Latonya Pelt, Project Manager



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

Project: ARCO #2162, San Leandro, Ca
Project Number: ARCO #2162, San Leandro, CA
Project Manager: Scott Robinson

Reported:
10/27/02 11:58

**Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEXM by EPA 8021B
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (MLJ0429-01) Water Sampled: 10/09/02 11:45 Received: 10/10/02 17:10									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	2J20001	10/20/02	10/20/02	8015Bm/8021 B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		88.4 %		55-142	"	"	"	"	
MW-3 (MLJ0429-02) Water Sampled: 10/09/02 11:35 Received: 10/10/02 17:10									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	2J20001	10/20/02	10/20/02	8015Bm/8021 B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	61	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		80.0 %		55-142	"	"	"	"	
MW-4 (MLJ0429-03) Water Sampled: 10/09/02 11:10 Received: 10/10/02 17:10									
Gasoline Range Organics (C6-C10)	ND	50	ug/l	1	2J20001	10/20/02	10/20/02	8015Bm/8021 B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	28	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		79.1 %		55-142	"	"	"	"	



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

Project: ARCO #2162, San Leandro, Ca
Project Number: ARCO #2162, San Leandro, CA
Project Manager: Scott Robinson

Reported:
10/27/02 11:58

**Total Purgeable Hydrocarbons (C6-C10) by EPA 8015B modified, BTEXM by EPA 8021B - Quality Control
Sequoia Analytical - Morgan Hill**

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

Batch 2J20001 - EPA 5030B [P/T]

Blank (2J20001-BLK1)

Prepared & Analyzed: 10/20/02

Gasoline Range Organics (C6-C10)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	9.78		"	10.0		97.8	55-142			

LCS (2J20001-BS1)

Prepared & Analyzed: 10/20/02

Benzene	9.58	0.50	ug/l	10.0		95.8	68-140			
Toluene	9.95	0.50	"	10.0		99.5	76-127			
Ethylbenzene	9.63	0.50	"	10.0		96.3	77-130			
Xylenes (total)	31.6	0.50	"	30.0		105	78-128			
Surrogate: a,a,a-Trifluorotoluene	9.40		"	10.0		94.0	55-142			

LCS (2J20001-BS2)

Prepared & Analyzed: 10/20/02

Gasoline Range Organics (C6-C10)	216	50	ug/l	250		86.4	62-134			
Surrogate: a,a,a-Trifluorotoluene	7.73		"	10.0		77.3	55-142			

Matrix Spike (2J20001-MS1)

Source: MLJ0260-03

Prepared & Analyzed: 10/20/02

Gasoline Range Organics (C6-C10)	475	50	ug/l	550	ND	86.4	62-134			
Benzene	6.59	0.50	"	6.60	ND	99.8	68-140			
Toluene	44.9	0.50	"	39.7	ND	113	76-127			
Ethylbenzene	10.2	0.50	"	9.20	ND	108	77-130			
Xylenes (total)	54.0	0.50	"	46.1	ND	117	78-128			
Surrogate: a,a,a-Trifluorotoluene	10.5		"	10.0		105	55-142			

Matrix Spike Dup (2J20001-MSD1)

Source: MLJ0260-03

Prepared & Analyzed: 10/20/02

Gasoline Range Organics (C6-C10)	457	50	ug/l	550	ND	83.1	62-134	3.86	41	
Benzene	6.16	0.50	"	6.60	ND	93.3	68-140	6.75	30	
Toluene	42.0	0.50	"	39.7	ND	106	76-127	6.67	30	
Ethylbenzene	9.45	0.50	"	9.20	ND	99.8	77-130	7.63	21	
Xylenes (total)	51.1	0.50	"	46.1	ND	111	78-128	5.52	21	
Surrogate: a,a,a-Trifluorotoluene	10.1		"	10.0		101	55-142			

Sequoia Analytical - Morgan Hill

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



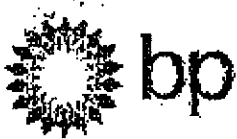
URS Corporation
500 12th Street, Suite 100
Oakland CA, 94607

Project: ARCO #2162, San Leandro, Ca
Project Number: ARCO #2162, San Leandro, CA
Project Manager: Scott Robinson

Reported:
10/27/02 11:58

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



Chain of Custody Record

ML50429

Project Name _____
 BP BU/GEM CO Portfolio: _____
 BP Laboratory Contract Number: _____

Date: 10/09/02 Requested Due Date (mm/dd/yy) Standard

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

Send To:	BP/GEM Facility No.:	Consultant/Contractor: URS
Lab Name: SEQUOIA	BP/GEM Facility Address: 15135 HESPERIAN BLVD. San Leandro, CA	Address: 500 12th St. Ste. 200
Lab Address: 885 Jarvis Dr. Morgan Hill, CA 95037	Site ID No. ARCO 2162	Oakland, CA 94609-4014
	Site Lat/Long:	e-mail EDD: syed_rehan@urscorp.com
	California Global ID #: T0600100084	Consultant/Contractor Project No.: 15-00002162.01 00427
Lab PM: Letonya Pelt	BP/GEM PM Contact: PAUL SUPPLE	Consultant Tele/Fax: 510-874-1735/510-874-3268
Tele/Fax: 408-778-9800 / 408-782-6308	Address:	Consultant/Contractor PM: Scott Robinson
Report Type & QC Level: Send EDP Reports		Invoice to: Consultant/Contractor or BP/GEM (circle one)
BP/GEM Account No.:	Tele/Fax:	BP/GEM Work Release No: INTRM-50319

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 ₂ SO ₄	HNO ₃	HCl	TEPH/BTEX (8015/8021)	TPH-D (8015)	MIBB (8021)	MTBE, TAME, ETBE (8015/8021)	
1	MW-2	1145		X			3				X	X					
2	MW-3	1155		X			3				X	X					
3	MW-4	1110		X			3				X	X					
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler's Name: <u>Brian Alcorn</u>	Relinquished By / Affiliation: <u>[Signature]</u>	Date: <u>10/9/02</u>	Time: <u>1118</u>	Accepted By / Affiliation: <u>[Signature]</u>	Date: <u>10/9/02</u>	Time: <u>1118</u>
Sampler's Company: <u>Blank Tech Services</u>		Date: <u>10/9/02</u>	Time: <u>710</u>		Date: <u>10/10/02</u>	Time: <u>1710</u>
Equipment Date:						
Equipment Method:						
Equipment Tracking No.:						

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

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

pcum

ATTACHMENT C
HISTORIC GROUNDWATER DATA

Table 1
Groundwater Elevation and Analytical Data
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, and MTBE)

ARCO Service Station 2162
15135 Hesperian Boulevard, San Leandro, California

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Xylenes (ppb)	MTBE 8020 (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
MW-1	02/26/96	31.19	7.14	24.05	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	
MW-1	05/23/96	31.19	7.70	23.49	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	
MW-1	08/21/96	31.19	8.75	22.44	210	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA	
MW-1	11/20/96	31.19	8.62	22.57	91	<0.5	<0.5	<0.5	<0.5	2.6	NA	NA	
MW-1	04/01/97	31.19	8.70	22.49	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA	NP
MW-1	06/10/97	31.19	8.45	22.74	94	<0.5	<0.5	0.68	0.56	6.4	NA	NA	NP
MW-1	09/17/97	31.19	9.20	21.99	<50	<0.5	<0.5	<0.5	<0.5	10	NA	1.0	NP
MW-1	12/12/97	31.19	8.00	23.19	<200	<2.0	<2.0	<2.0	<2.0	180	NA	2.0	NP
MW-1	03/25/98	31.19	7.00	24.19	<200	<2	<2	3	<2	180	NA	2.0	
MW-1	05/14/98	31.19	7.46	23.73	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	1.17	P
MW-1	07/31/98	31.19	8.10	23.09	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	2.0	NP
MW-1	10/12/98	31.19	8.60	22.59	<50	<0.5	<0.5	<0.5	<0.5	9	NA	2.5	NP
MW-1	02/11/99	31.19	7.32	23.87	<50	<0.5	<0.5	<0.5	<0.5	25	NA	1.0	P
MW-1	06/23/99	31.19	8.40	22.79	55	<0.5	<0.5	<0.5	<0.5	<3	NA	1.36	NP
MW-1	08/23/99	31.19	8.85	22.34	<50	<0.5	0.6	<0.5	<0.5	5	NA	1.42	NP
MW-1	10/27/99	31.19	8.50	22.69	<50	<0.5	<0.5	<0.5	<1	90	NA	0.83	NP
MW-2	02/26/96	30.38	6.41	23.97	770	<0.5	<0.5	45	28	NA	NA	NA	
MW-2	05/23/96	30.38	6.80	23.58	590	0.50	<0.5	35	18	NA	NA	NA	
MW-2	08/21/96	30.38	7.80	22.58	170	<0.5	<0.5	21	6.3	<2.5	NA	NA	
MW-2	11/20/96	30.38	7.73	22.65	88	<0.5	<0.5	7.9	1.1	<2.5	NA	NA	
MW-2	04/01/97	30.38	7.83	22.55	66	<0.5	<0.5	3.6	0.56	33	NA	NA	
MW-2	06/10/97	30.38	7.52	22.86	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA	NP
MW-2	09/17/97	30.38	8.24	22.14	<50	<0.5	<0.5	<0.5	<0.5	<3.0	NA	0.6	NP
MW-2	12/12/97	30.38	7.10	23.28	<50	<0.5	<0.5	<0.5	<0.5	<3.0	NA	1.2	NP
MW-2	03/25/98	30.38	6.27	24.11	<50	<0.5	<0.5	0.7	0.5	55	NA	1.0	
MW-2	05/14/98	30.38	6.54	23.84	210	<0.5	<0.5	3.3	<0.5	42	NA	1.47	P
MW-2	07/31/98	30.38	7.14	23.24	230	<0.5	<0.5	3.9	<0.5	6	NA	1.0	P
MW-2	10/12/98	30.38	7.65	22.73	110	<0.5	<0.5	1.5	<0.5	<3	NA	1.0	P

Table 1
Groundwater Elevation and Analytical Data
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, and MTBE)

ARCO Service Station 2162
15135 Hesperian Boulevard, San Leandro, California

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)	TPPH as					MTBE 8020 (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
					Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Xylenes (ppb)				
MW-2	02/11/99	30.38	6.55	23.83	660	<0.5	<0.5	6.7	0.7	3	NA	1.0	P
MW-2	06/23/99	30.38	7.48	22.90	270	<0.5	<0.5	2.2	0.8	<3	NA	NM	P
MW-2	08/23/99	30.38	7.89	22.49	200	<0.5	0.9	1.8	<0.5	<3	NA	1.17	P
MW-2	10/27/99	30.38	8.30	22.08	2,100	1.0	2.5	14	3	3	NA	0.75	NP
MW-3	02/26/96	30.30	6.72	23.58	120	5.0	<0.5	<0.5	<0.5	NA	NA	NA	
MW-3	05/23/96	30.30	7.18	23.12	140	12	<0.5	<0.5	<0.5	NA	NA	NA	
MW-3	08/21/96	30.30	8.17	22.13	<50	1.1	<0.5	<0.5	<0.5	130	NA	NA	
MW-3	11/20/96	30.30	8.03	22.27	55	<0.5	<0.5	<0.5	<0.5	59	NA	NA	
MW-3	04/01/97	30.30	8.09	22.21	<50	<0.5	<0.5	<0.5	<0.5	180	NA	NA	NP
MW-3	06/10/97	30.30	7.97	22.33	<50	<0.5	<0.5	<0.5	<0.5	1,900	NA	NA	NP
MW-3	09/17/97	30.30	8.54	21.76	<5,000	<50	<50	<50	<50	1,100	860	2.2	NP
MW-3	12/12/97	30.30	7.50	22.80	560	<5.0	<5.0	<5.0	5.0	370	NA	1.4	NP
MW-3	03/25/98	30.30	6.60	23.70	<500	<5	<5	<5	<5	470	NA	1.0	
MW-3	05/14/98	30.30	7.13	23.17	750	<5	<5	<5	<5	630	NA	1.97	P
MW-3	07/31/98	30.30	7.58	22.72	<500	<5	<5	<5	<5	590	NA	1.0	P
MW-3	10/12/98	30.30	8.00	22.30	<500	<5	<5	<5	<5	600	NA	2.0	P
MW-3	02/11/99	30.30	6.90	23.40	<500	<5	<5	<5	<5	280	NA	1.0	P
MW-3	06/23/99	30.30	7.82	22.48	220	<0.5	3.2	<0.5	<0.5	740	NA	1.98	P
MW-3	08/23/99	30.30	8.28	22.02	<50	<0.5	1.1	<0.5	<0.5	230	NA	1.20	P
MW-3	10/27/99	30.30	9.27	21.03	<50	<0.5	<0.5	<0.5	<1	<3	NA	0.81	NP
MW-4	02/26/96	30.39	7.59	22.80	110	9.9	<0.5	<0.5	<0.5	NA	NA	NA	
MW-4	05/23/96	30.39	8.22	22.17	69	8.0	<0.5	<0.5	<0.5	NA	NA	NA	
MW-4	08/21/96	30.39	9.28	21.11	<50	6.8	<0.5	<0.5	<0.5	<2.5	NA	NA	
MW-4	11/20/96	30.39	9.12	21.27	95	10	0.59	<0.5	0.52	3.8	NA	NA	
MW-4	04/01/97	30.39	8.45	21.94	73	5.7	<0.5	<0.5	<0.5	<2.5	NA	NA	
MW-4	06/10/97	30.39	9.00	21.39	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA	NP
MW-4	09/17/97	30.39	9.76	20.63	<50	3.2	<0.5	<0.5	<0.5	8.0	NA	0.2	NP

Table 1
Groundwater Elevation and Analytical Data
Total Purgeable Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, and MTBE)

ARCO Service Station 2162
15135 Hesperian Boulevard, San Leandro, California

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Xylenes (ppb)	MTBE 8020 (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
MW-4	12/12/97	30.39	8.45	21.94	<50	2.9	<0.5	<0.5	<0.5	14	NA	1.0	NP
MW-4	03/25/98	30.39	7.52	22.87	58	2.8	<0.5	<0.5	<0.5	<3	NA	3.0	
MW-4	05/14/98	30.39	8.03	22.36	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	3.24	NP
MW-4	07/31/98	30.39	8.67	21.72	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	2.0	NP
MW-4	10/12/98	30.39	9.15	21.24	<50	<0.5	<0.5	<0.5	<0.5	4	NA	1.5	NP
MW-4	02/11/99	30.39	7.80	22.59	61	2.5	<0.5	<0.5	<0.5	6	NA	1.0	P
MW-4	06/23/99	30.39	9.00	21.39	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	1.42	NP
MW-4	08/23/99	30.39	9.31	21.08	<50	<0.5	<0.5	<0.5	<0.5	6	NA	1.53	NP
MW-4	10/27/99	30.39	9.80	20.59	<50	<0.5	<0.5	<0.5	<1	6	NA	0.98	NP

TPPH = Total purgeable petroleum hydrocarbons by modified EPA method 8015
 BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA method 8020
 MTBE = Methyl tert -Butyl Ether
 MSL = Mean sea level
 TOC = Top of casing
 ppb = Parts per billion
 ppm = Parts per million
 NA = Not analyzed
 NM = Not measured
 < = Denotes concentration not present above laboratory detection limited stated to the right

Table 2
Groundwater Flow Direction and Gradient

ARCO Service Station 2162
15135 Hesperian Boulevard, San Leandro, California

Date Measured	Average Flow Direction	Average Hydraulic Gradient
02/26/96	Southwest	0.009
05/23/96	South-Southwest	0.010
08/21/96	South-Southwest	0.01
11/20/96	South-Southwest	0.011
04/01/97	South-Southwest	0.004
06/10/97	South-Southwest	0.010
09/17/97	South-Southwest	0.01
12/12/97	Southwest	0.01
03/25/98	South-Southwest	0.008
05/14/98	Southwest	0.01
07/31/98	Southwest	0.01
10/12/98	Southwest	0.01
02/11/99	Southwest	0.008
06/23/99	Southwest	0.02
08/23/99	Southwest	0.013
10/27/99	South-Southwest	0.02

ATTACHMENT D

EDCC REPORT AND EDF/GEOWELL SUBMITTAL CONFIRMATION

Error Summary Log

01/28/03

EDF 1.2i All files present in deliverable.

Laboratory:	Sequoia Analytical Laboratories, Inc., Morgan Hill, CA
Project Name:	ARCO #2162, San Leandro,
Work Order Number:	MLJ0429
Global ID:	T0600100084
Lab Report Number:	MLJ0429012820030926

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run	Sub
MLJ042901282003 MW-2 0926		MLJ042901	W	CS	SW8021F	SW5030B	10/09/02	10/20/02	10/20/02	2J20001	1	
MLJ042901282003 MW-3 0926		MLJ042902	W	CS	SW8021F	SW5030B	10/09/02	10/20/02	10/20/02	2J20001	1	
MLJ042901282003 MW-4 0926		MLJ042903	W	CS	SW8021F	SW5030B	10/09/02	10/20/02	10/20/02	2J20001	1	
		MLJ026003	W	NC	SW8021F	SW5030B	//	10/20/02	10/20/02	2J20001	1	
		2J20001BS1	WQ	BS1	SW8021F	SW5030B	//	10/20/02	10/20/02	2J20001	1	
		2J20001BS2	WQ	BS2	SW8021F	SW5030B	//	10/20/02	10/20/02	2J20001	1	
		2J20001BLK1	WQ	LB1	SW8021F	SW5030B	//	10/20/02	10/20/02	2J20001	1	
		2J20001MS1	W	MS1	SW8021F	SW5030B	//	10/20/02	10/20/02	2J20001	1	
		2J20001MSD1	W	SD1	SW8021F	SW5030B	//	10/20/02	10/20/02	2J20001	1	

EDFSAMP: Error Summary Log

01/28/03

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

EDFTEST: Error Summary Log

01/28/03

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

EDFRES: Error Summary Log

01/28/03

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	2J20001MS1	MS1	W	SW8021F	PR	10/20/02	1	AAATFBZME
Warning: extra parameter	2J20001MS1	MS1	W	SW8021F	PR	10/20/02	1	GROC6C10
Warning: extra parameter	2J20001MSD1	SD1	W	SW8021F	PR	10/20/02	1	AAATFBZME
Warning: extra parameter	2J20001MSD1	SD1	W	SW8021F	PR	10/20/02	1	GROC6C10
Warning: extra parameter	MLJ026003	NC	W	SW8021F	PR	10/20/02	1	AAATFBZME
Warning: extra parameter	MLJ026003	NC	W	SW8021F	PR	10/20/02	1	GROC6C10
Warning: extra parameter	MLJ042901	CS	W	SW8021F	PR	10/20/02	1	AAATFBZME
Warning: extra parameter	MLJ042901	CS	W	SW8021F	PR	10/20/02	1	GROC6C10
Warning: extra parameter	MLJ042901	CS	W	SW8021F	PR	10/20/02	1	MTBE
Warning: extra parameter	MLJ042902	CS	W	SW8021F	PR	10/20/02	1	AAATFBZME
Warning: extra parameter	MLJ042902	CS	W	SW8021F	PR	10/20/02	1	GROC6C10
Warning: extra parameter	MLJ042902	CS	W	SW8021F	PR	10/20/02	1	MTBE
Warning: extra parameter	MLJ042903	CS	W	SW8021F	PR	10/20/02	1	AAATFBZME
Warning: extra parameter	MLJ042903	CS	W	SW8021F	PR	10/20/02	1	GROC6C10
Warning: extra parameter	MLJ042903	CS	W	SW8021F	PR	10/20/02	1	MTBE
Warning: extra parameter	2J20001BLK1	LB1	WQ	SW8021F	PR	10/20/02	1	AAATFBZME
Warning: extra parameter	2J20001BLK1	LB1	WQ	SW8021F	PR	10/20/02	1	GROC6C10
Warning: extra parameter	2J20001BLK1	LB1	WQ	SW8021F	PR	10/20/02	1	MTBE
Warning: extra parameter	2J20001BS1	BS1	WQ	SW8021F	PR	10/20/02	1	AAATFBZME
Warning: extra parameter	2J20001BS2	BS2	WQ	SW8021F	PR	10/20/02	1	AAATFBZME
Warning: extra parameter	2J20001BS2	BS2	WQ	SW8021F	PR	10/20/02	1	GROC6C10

EDFQC: Error Summary Log

01/28/03

Error type	Lablotctf	Anmcode	Parlabel	Qccode	Labqid
There are no errors in this data files					

EDFCL: Error Summary Log

01/28/03

Error type	Crevdate	Anmcode	Exmcode	Parlabel	Cicode
There are no errors in this data file	//				

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Facility Name: ARCO

Submittal Title: 4th Qtr 2002 Monitoring Report for #2162

Submittal Type: GW Monitoring Report

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