

PD-2436



Atlantic Richfield Company
(a BP affiliated company)

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Phone: (714) 670-5303
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January 25, 2005

Re: Fourth Quarter 2004 Groundwater Monitoring Report
ARCO 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:

Kyle Christie
Environmental Business Manager

Alameda County
FEB 14 2005
Environmental Health

Alameda County
Environmental Health
JAN 25 2005

January 25, 2005

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

**Re: Fourth Quarter 2004 Groundwater Monitoring Report
ARCO Service Station #4977
2770 Castro Valley Blvd
Castro Valley, California
URS Project #38486724**

Dear Mr. Schultz:

On behalf of Atlantic Richfield Company, a BP affiliated company, URS Corporation (URS) is submitting the *Fourth Quarter 2004 Groundwater Monitoring Report* for ARCO 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



Robert Horwath, R.G.
Portfolio Manager



Enclosure: Fourth Quarter 2004 Groundwater Monitoring Report

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

R E P O R T

**FOURTH QUARTER 2004
GROUNDWATER MONITORING
REPORT**

**ARCO SERVICE STATION #4977
2770 CASTRO VALLEY BLVD
CASTRO VALLEY, CALIFORNIA**

Prepared for
RM

January 25, 2005

URS

URS Corporation
1333 Broadway, Suite 800
Oakland, California 94612

38486724

Date: January 25, 2005
Quarter: 4Q 04

RM 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 (Fourth – 2004):

1. Prepared and submitted Third Quarter 2004 Groundwater Monitoring Report.
2. Performed fourth quarter groundwater monitoring event on December 15, 2004.

WORK PROPOSED FOR NEXT QUARTER (First – 2005):

1. Prepare and submit this Fourth Quarter 2004 Groundwater Monitoring Report.
2. Perform first quarter 2005 groundwater monitoring event.

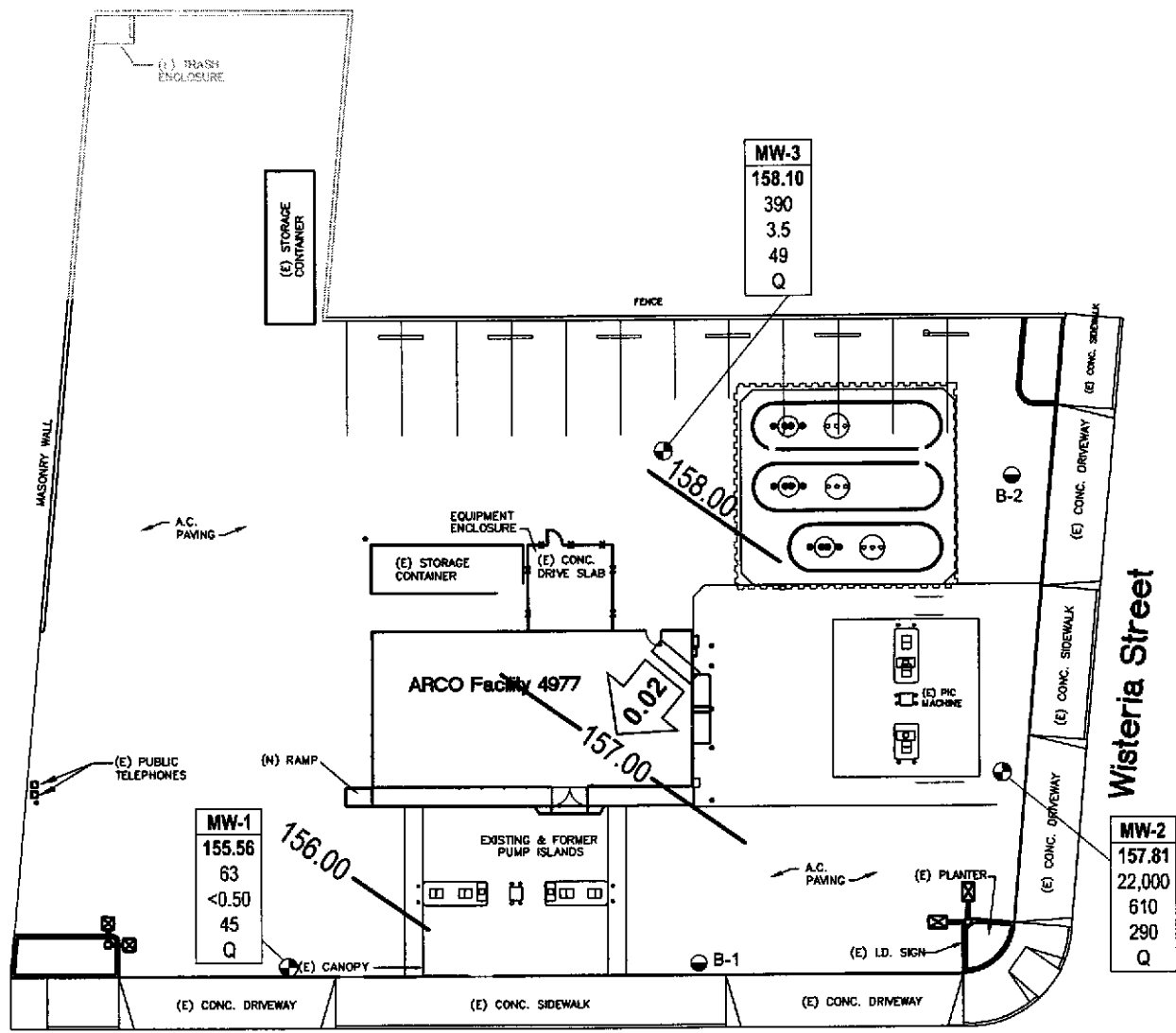
Current Phase of Project: Groundwater monitoring/sampling
Frequency of Groundwater Sampling: Quarterly: Wells MW-1 through MW-3
Frequency of Groundwater Monitoring: Quarterly
Is Free Product (FP) Present On-Site: Sheen in well MW-2
Current Remediation Techniques: Natural Attenuation
Approximate Depth to Groundwater: 6.43 ft (MW-3) to 7.88 ft (MW-1)
Groundwater Gradient (direction): South
Groundwater Gradient (magnitude): 0.02 feet per foot

DISCUSSION:

During sampling, well MW-1 dewatered at 10 gallons and well MW-2 dewatered at 12 gallons. A sheen was also noted in MW-2 during sampling. Gasoline range organics (GRO) were detected at or above laboratory reporting limits in the three wells sampled this quarter at concentrations ranging from 63 µg/L (MW-1) to 22,000 µg/L (MW-2). Benzene was detected at or above laboratory reporting limits in two wells at concentrations of 3.5 µg/L (MW-3) and 610 µg/L (MW-2). Methyl-tert-butyl ether (MTBE) was detected at or above laboratory reporting limits in three wells at concentrations ranging from 45 µg/L (MW-1) to 290 µg/L (MW-2). Tert-butyl alcohol (TBA), tert-amyl methyl ether (TAME), and ethyl tert-butyl ether (ETBE) were each detected at or above laboratory reporting limits in well MW-3 at respective concentrations of 110 µg/L, 0.61 µg/L, and 0.52 µg/L.

ATTACHMENTS:

- Figure 1 - Groundwater Elevation Contour and Analytical Summary Map – December 15, 2004
- Table 1 - Groundwater Elevation and Analytical Data
- Table 2 - Fuel Additives Analytical Data
- Table 3 - Groundwater Flow Direction and Gradient
- Attachment A - Field Procedures and Field Data Sheets
- Attachment B - Laboratory Procedures, Certified Analytical Reports and Chain-of-Custody Records
- Attachment C – Error Check Report and EDF/Geowell Submittal Confirmation



Castro Valley Blvd.

Wisteria Street

LEGEND

- MONITORING WELL
 - SOIL BORING
- | | |
|-------------|--|
| Well | WELL DESIGNATION |
| ELEV | GROUNDWATER ELEVATION (FT ABOVE MSL) |
| GRO | CONCENTRATION OF GRO, BENZENE AND MTBE IN GROUNDWATER (µg/L) |
| Q | SAMPLING FREQUENCY |
- < 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
Fourth Quarter 2004 (December 15, 2004)

FIGURE
1

Table 1

Groundwater Elevation and Analytical Data

ARCO Service Station #4977

2770 Castro Valley Blvd., Castro Valley, CA

Well No.	Date	P/ NP	Footnotes/ Comments	TOC (ft MSL)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (ft bgs)	GWE (ft MSL)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	pH
MW-1	4/19/2002	--		161.11	5.00	15.00	11.21	149.90	660	12	1.3	4.3	0.8	38	--	--
	9/27/2002	--		161.11	5.00	15.00	9.29	151.82	130	7.7	0.87	5.4	0.79	39	1.7	6.9
	12/16/2002	--	a	161.11	5.00	15.00	8.55	152.56	77	1.8	<0.50	0.69	<1.0	42	1.6	6.9
	3/11/2003	--		161.11	5.00	15.00	8.07	153.04	140	9.8	<0.50	5.6	<0.50	20	1.4	7.4
	6/17/2003	--		161.11	5.00	15.00	8.31	152.80	510	60	1.4	81	<1.0	23	2.2	7
	9/18/2003	--	b	161.11	5.00	15.00	9.45	151.66	72	2.4	1.4	1.6	1.5	39	2.7	7
	12/11/2003	P		161.11	5.00	15.00	8.80	152.31	79	1.5	<0.50	1.5	4.4	48	2.1	7.0
	03/11/2004	P		163.44	5.00	15.00	7.61	155.83	<50	1.3	<0.50	0.77	1.3	17	1.4	6.8
	06/02/2004	P		163.44	5.00	15.00	8.95	154.49	53	1.4	<0.50	0.93	<0.50	39	2.3	7.1
	09/22/2004	P		163.44	5.00	15.00	9.42	154.02	70	<0.50	<0.50	<0.50	<0.50	48	1.7	6.8
	12/15/2004	P		163.44	5.00	15.00	7.88	155.56	63	<0.50	<0.50	<0.50	<0.50	45	1.8	6.9
	MW-2	4/19/2002	--		161.87	5.00	15.00	6.59	155.28	28,000	970	120	860	6,900	760	--
9/27/2002		--		161.87	5.00	15.00	7.18	154.69	17,000	1,400	<50	1,200	3,700	1,400	1.5	6.8
12/16/2002		--	a	161.87	5.00	15.00	7.31	154.56	17,000	1,000	<50	980	3,300	980	1.9	6.8
3/11/2003		--		161.87	5.00	15.00	6.02	155.85	24,000	1,600	70	1,300	4,300	920	1.7	7.4
6/17/2003		--		161.87	5.00	15.00	6.31	155.56	28,000	1,300	55	1,300	4,500	610	1.4	6.9
9/18/2003		--		161.87	5.00	15.00	7.61	154.26	19,000	960	63	1,100	3,100	580	2.7	6.8
12/11/2003		P		161.87	5.00	15.00	6.50	155.37	29,000	710	53	1,300	3,800	490	2.0	7.0
03/11/2004		P		164.29	5.00	15.00	6.02	158.27	19,000	830	49	1,500	4,000	410	0.8	6.5
06/02/2004		P		164.29	5.00	15.00	7.14	157.15	25,000	680	<50	1,300	3,900	240	4.3	7.1
09/22/2004		--		164.29	5.00	15.00	7.63	156.66	15,000	980	<25	980	940	390	--	6.7
12/15/2004		P	c	164.29	5.00	15.00	6.48	157.81	22,000	610	26	1,300	3,200	290	0.3	6.9
MW-3		4/19/2002	--		162.14	5.00	15.00	6.94	155.20	1,200	29	1.1	43	62	1,700	--
	9/27/2002	--		162.14	5.00	15.00	8.26	153.88	740	7.8	<2.5	6.8	4.4	1,100	1	6.7
	12/16/2002	--	a	162.14	5.00	15.00	6.76	155.38	1,200	13	<10	170	88	910	2.3	6.8
	3/11/2003	--		162.14	5.00	15.00	6.92	155.22	<2,500	<25	<25	<25	<25	470	1.7	7.5
	6/17/2003	--		162.14	5.00	15.00	7.44	154.70	<1,000	<10	<10	14	<10	530	1.9	7
	9/18/2003	--		162.14	5.00	15.00	8.43	153.71	470	4.8	<2.5	10	9.2	300	2.9	6.8
	12/11/2003	P		162.14	5.00	15.00	6.72	155.42	<500	<5.0	<5.0	7.0	13	180	1.9	6.9
	03/11/2004	P		164.53	5.00	15.00	6.09	158.44	360	1.9	<1.0	5.6	5.0	110	2.6	6.8
	06/02/2004	P		164.53	5.00	15.00	7.50	157.03	380	2.8	<0.50	8.0	2.1	43	3.6	7.3
	09/22/2004	P		164.53	5.00	15.00	8.00	156.53	270	<0.50	<0.50	0.54	<0.50	50	1.8	6.9
	12/15/2004	P		164.53	5.00	15.00	6.43	158.10	390	3.5	<0.50	20	3.7	49	1.1	6.9

Table 1
Groundwater Elevation and Analytical Data
ARCO Service Station #4977
2770 Castro Valley Blvd., Castro Valley, CA

SYMBOLS AND ABBREVIATIONS:

< = not detected at or above laboratory reporting limits

--- = not measured, sampled, analyzed, applicable

BGS = below ground surface

DO = dissolved oxygen

DTW = depth to water

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

GWE = groundwater elevation

mg/L = milligrams per liter

MSL = above mean sea level

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

P/NP = purged/not purged

pH = measured in field

ppm = parts per million

TOC = top of casing

ug/L = micrograms per liter

FOOTNOTES:

a =TPH, BTEX, and MTBE analyzed by EPA Method 8260B beginning on 4th quarter sampling event (12/16/02)

b = 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.

c = Sheen

NOTES:

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

Beginning in the fourth quarter 2003, the laboratory modified the reported analyte list. TPHg was changed to 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.

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

Table 2

Fuel Additives Analytical Data
 ARCO 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)	Footnotes/Comments
MW-1	12/16/2002	<50	<5.0	42	<0.50	<0.50	<0.50	<0.50	<0.50	
	3/11/2003	<100	<20	20	<0.50	<0.50	<0.50	<0.50	<0.50	
	6/17/2003	<200	<40	23	<1.0	<1.0	<1.0	<1.0	<1.0	
	9/18/2003	<100	<20	39	<0.50	<0.50	<0.50	<0.50	<0.50	a
	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	
	09/22/2004	<100	<20	48	<0.50	<0.50	<0.50	<0.50	<0.50	
	12/15/2004	<100	<20	45	<0.50	<0.50	<0.50	<0.50	<0.50	a
MW-2	12/16/2002	<5,000	<500	980	<50	<50	<50	<50	<50	
	3/11/2003	<10,000	<2,000	920	<50	<50	<50	<50	<50	
	6/17/2003	<10,000	<2,000	610	<50	<50	<50	<50	<50	
	9/18/2003	<5,000	<1,000	580	<25	<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	
	09/22/2004	<5,000	<1,000	390	<25	<25	<25	<25	<25	
	12/15/2004	<2,000	<400	290	<10	<10	<10	<10	<10	a
MW-3	12/16/2002	<1,000	<100	910	<10	<10	12	<10	<10	
	3/11/2003	<5,000	<1,000	470	<25	<25	<25	<25	<25	
	6/17/2003	<2,000	<400	530	<10	<10	<10	<10	<10	
	9/18/2003	<500	<100	300	<2.5	<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	
	09/22/2004	<100	28	50	<0.50	<0.50	0.51	<0.50	<0.50	
	12/15/2004	<100	110	49	<0.50	0.52	0.61	<0.50	<0.50	a

Table 2

Fuel Additives Analytical Data

ARCO Service Station #4977

2770 Castro Valley Blvd., Castro Valley, CA

SYMBOLS AND ABBREVIATIONS:

< = Not detected at or above laboratory reporting limit

--- = Not sampled, analyzed

1,2-DCE = 1,2-Dichloroethane

DIPE = Di-isopropyl ether

EDB = 1, 2 Dibromoethane

ETBE = Ethyl tert butyl ether

MTBE = Methyl tert-butyl ether

TAME = Tert-amyl methyl ether

TBA = Tert-butyl alcohol

ug/L = Micrograms per liter

FOOTNOTES:

a = 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.

Table 3

Groundwater Gradient Data
ARCO Service Station #4977
2770 Castro Valley Blvd., Castro Valley, CA

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
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
9/22/2004	South	0.025
12/15/2004	South	0.020

Source : The data within this table collected prior to September 2002 was provided to URS by RM 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 # 01215-MD3 Date 12/15/04 Client Arco 4977

Site 2770 Castro Valley Blvd., Castro Valley

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 TOB
NW-1	4					7.88	14.92	↓
NW-2	4					6.98	14.64	
NW-3	4					6.93	14.94	

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>041215-M03</u>	Station # <u>4977</u>
Sampler: <u>NW</u>	Date: <u>12/15/04</u>
Well I.D.: <u>NW-1</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>14.92</u>	Depth to Water: <u>7.88</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVE</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 Positive Air Displacement <input checked="" type="checkbox"/> Electric Submersible Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> <input checked="" type="checkbox"/> 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.

<u>4.6</u>	x	<u>3</u>	=	<u>13.8</u> Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Conductivity (mS or μ S)	Gals. Removed	Observations
1131	70.9	6.9	1303	5	cloudy
1133	70.8	6.7	1290	10	"
				well de-watered @ 10	
1200	71.9	6.9	1385	—	cloudy odor DTW=13.00

Did well dewater? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Gallons actually evacuated: <u>10</u>	
Sampling Time: <u>1200</u>	Sampling Date: <u>12/15/04</u>	
Sample I.D.: <u>NW-1</u>	Laboratory: Pace <u>Sequoia</u> Other _____	
Analyzed for: GRO BTEX MTBE DRO	Other: <u>Seo Scope</u>	
D.O. (if req'd):	Pre-purge: _____ mg/L	Post-purge: <u>1.8</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>041215-MWB</u>	Station # <u>4977</u>
Sampler: <u>MP</u>	Date: <u>12/15/04</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>(4)</u> 6 8 <u> </u>
Total Well Depth: <u>14.64</u>	Depth to Water: <u>6.98</u>
Depth to Free Product: <u> </u>	Thickness of Free Product (feet): <u> </u>
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>	Sampling Method: <u>Bailer</u>
<u>Disposable Bailer</u>	<u>(Disposable Bailer)</u>
<u>Positive Air Displacement</u>	<u>Extraction Port</u>
<u>(Electric Submersible)</u>	Other: <u> </u>
<u>Extraction Pump</u>	
Other: <u> </u>	

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>5.3</u>	x	<u>3</u>	=	<u>15.9</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>(µS)</u>)	Gals. Removed	Observations
<u>1141</u>	<u>71.8</u>	<u>6.7</u>	<u>1011</u>	<u>5.3</u>	<u>cloudy, odor, slick</u>
<u>1142</u>	<u>71.2</u>	<u>6.7</u>	<u>1010</u>	<u>11</u>	<u> </u>
<u>Well de-watered 12</u>					
<u>1215</u>	<u>70.3</u>	<u>6.9</u>	<u>1008</u>	<u>-</u>	<u>cloudy, odor, slick</u>
<u>DTW = 10.81</u>					

Did well dewater? <u>(Yes)</u> No	Gallons actually evacuated: <u>12</u>
Sampling Time: <u>1215</u>	Sampling Date: <u>12/15/04</u>
Sample I.D.: <u>MW-2</u>	Laboratory: Pace <u>(Sequoia)</u> Other <u> </u>
Analyzed for: GRO BTEX MTBE DRO	Other: <u>See Scope</u>
D.O. (if req'd):	Pre-purge: <u> </u> mg/L
	Post-purge: <u>0.3</u> mg/L
O.R.P. (if req'd):	Pre-purge: <u> </u> mV
	Post-purge: <u> </u> mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>041215-1003</u>	Station # <u>4977</u>
Sampler: <u>MW</u>	Date: <u>12/15/04</u>
Well I.D.: <u>MW-3</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>1494</u>	Depth to Water: <u>6.43</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
 Positive Air Displacement
 Electric Submersible
 Extraction Pump
 Other: _____

Sampling Method: Bailer
 Disposable Bailer
 Extraction Port
 Other: _____

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

<u>5.5</u>	x	<u>3</u>	=	<u>16.5</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
<u>1113</u>	<u>67.6</u>	<u>7.1</u>	<u>826</u>	<u>5.5</u>	<u>cloudy, odor</u>
<u>1114</u>	<u>70.3</u>	<u>6.9</u>	<u>849</u>	<u>11</u>	<u>clear, odor</u>
<u>1116</u>	<u>70.0</u>	<u>6.9</u>	<u>813</u>	<u>16.5</u>	<u>clear, odor</u>

Did well dewater? Yes No Gallons actually evacuated: 16.5

Sampling Time: 1125 Sampling Date: 12/15/04

Sample I.D.: MW-3 Laboratory: Pace Seepcoia Other _____

Analyzed for: GRO BTEX MTBE DRO Other: SEE SCOPE

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	<u>1.1</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:

4977

Station #

2770 Castro Valley Blvd, Castro Valley

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

45


added equip. _____
rinse water _____

any other adjustments _____

TOTAL GALS. RECOVERED 45

loaded onto BTS vehicle # 59

BTS event # 09R15-M03 time 1220 date 02/15/04

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 RM 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

4 January, 2005

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

RE: ARCO #4977, Castro Valley, CA
Work Order: MNL0535

Enclosed are the results of analyses for samples received by the laboratory on 12/16/04 09:46. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Leticia Reyes For 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: G09JZ-0203
 Project Manager: Scott Robinson

 MNL0535
 Reported:
 01/04/05 15:46

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MNL0535-01	Water	12/15/04 12:00	12/16/04 09:46
MW-2	MNL0535-02	Water	12/15/04 12:15	12/16/04 09:46
MW-3	MNL0535-03	Water	12/15/04 11:25	12/16/04 09:46
TB-4977-12152004	MNL0535-04	Water	12/15/04 00:00	12/16/04 09:46

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: G09JZ-0203
 Project Manager: Scott Robinson

 MNL0535
 Reported:
 01/04/05 15:46

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MNL0535-01) Water Sampled: 12/15/04 12:00 Received: 12/16/04 09:46									
tert-Amyl methyl ether	ND	0.50	ug/l	1	4L27006	12/27/04	12/27/04	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	IC
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	45	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	63	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96 %		78-129	"	"	"	"	
MW-2 (MNL0535-02) Water Sampled: 12/15/04 12:15 Received: 12/16/04 09:46									
tert-Amyl methyl ether	ND	10	ug/l	20	4L27006	12/27/04	12/27/04	EPA 8260B	
Benzene	610	10	"	"	"	"	"	"	
tert-Butyl alcohol	ND	400	"	"	"	"	"	"	
Di-isopropyl ether	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	10	"	"	"	"	"	"	
1,2-Dichloroethane	ND	10	"	"	"	"	"	"	
Ethanol	ND	2000	"	"	"	"	"	"	IC
Ethyl tert-butyl ether	ND	10	"	"	"	"	"	"	
Ethylbenzene	1300	10	"	"	"	"	"	"	
Methyl tert-butyl ether	290	10	"	"	"	"	"	"	
Toluene	26	10	"	"	"	"	"	"	
Xylenes (total)	3200	10	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	22000	1000	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95 %		78-129	"	"	"	"	

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

 Project: ARCO #4977, Castro Valley, CA
 Project Number: G09JZ-0203
 Project Manager: Scott Robinson

 MNL0535
 Reported:
 01/04/05 15:46

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (MNL0535-03) Water - Sampled: 12/15/04 11:25 Received: 12/16/04 09:46									
tert-Amyl methyl ether	0.61	0.50	ug/l	1	4L27006	12/27/04	12/27/04	EPA 8260B	
Benzene	3.5	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	110	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	100	"	"	"	"	"	"	IC
Ethyl tert-butyl ether	0.52	0.50	"	"	"	"	"	"	
Ethylbenzene	20	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	49	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	3.7	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	390	50	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		98 %		78-129	"	"	"	"	

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

 Project: ARCO #4977, Castro Valley, CA
 Project Number: G09JZ-0203
 Project Manager: Scott Robinson

 MNL0535
 Reported:
 01/04/05 15:46

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	RPD RPD	RPD RPD	Notes
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Batch 4L27006 - EPA 5030B P/T / EPA 8260B
Blank (4L27006-BLK1)

Prepared & Analyzed: 12/27/04

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	"						IC
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	"						
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.75		"	5.00		95		78-129	

Laboratory Control Sample (4L27006-BS1)

Prepared & Analyzed: 12/27/04

tert-Amyl methyl ether	10.8	0.50	ug/l	10.0		108		82-140	
Benzene	9.53	0.50	"	10.0		95		69-124	
tert-Butyl alcohol	50.2	20	"	50.0		100		56-131	
Di-isopropyl ether	10.5	0.50	"	10.0		105		76-130	
1,2-Dibromoethane (EDB)	10.6	0.50	"	10.0		106		77-132	
1,2-Dichloroethane	11.1	0.50	"	10.0		111		77-136	
Ethanol	150	100	"	200		75		31-143	IC
Ethyl tert-butyl ether	10.2	0.50	"	10.0		102		81-121	
Ethylbenzene	9.87	0.50	"	10.0		99		84-132	
Methyl tert-butyl ether	11.4	0.50	"	10.0		114		63-137	
Toluene	9.46	0.50	"	10.0		95		78-129	
Xylenes (total)	28.6	0.50	"	30.0		95		83-137	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.55		"	5.00		91		78-129	

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

 Project: ARCO #4977, Castro Valley, CA
 Project Number: G09JZ-0203
 Project Manager: Scott Robinson

 MNL0535
 Reported:
 01/04/05 15:46

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
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Batch 4L27006 - EPA 5030B P/T / EPA 8260B

Laboratory Control Sample (4L27006-BS2)				Prepared & Analyzed: 12/27/04						
Benzene	4.72	0.50	ug/l	6.40		74	69-124			
Ethylbenzene	8.06	0.50	"	7.52		107	84-132			
Methyl tert-butyl ether	8.12	0.50	"	9.92		82	63-137			
Toluene	32.8	0.50	"	31.9		103	78-129			
Xylenes (total)	40.2	0.50	"	36.6		110	83-137			
Gasoline Range Organics (C4-C12)	382	50	"	440		87	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.53</i>		<i>"</i>	<i>5.00</i>		<i>91</i>	<i>78-129</i>			

Laboratory Control Sample Dup (4L27006-BS1)				Prepared & Analyzed: 12/27/04						
tert-Amyl methyl ether	11.0	0.50	ug/l	10.0		110	82-140	2	20	
Benzene	10.4	0.50	"	10.0		104	69-124	9	20	
tert-Butyl alcohol	52.2	20	"	50.0		104	56-131	4	20	
Di-isopropyl ether	11.0	0.50	"	10.0		110	76-130	5	20	
1,2-Dibromoethane (EDB)	10.5	0.50	"	10.0		105	77-132	0.9	20	
1,2-Dichloroethane	11.4	0.50	"	10.0		114	77-136	3	20	
Ethanol	194	100	"	200		97	31-143	26	20	RB
Ethyl tert-butyl ether	10.4	0.50	"	10.0		104	81-121	2	20	
Ethylbenzene	10.8	0.50	"	10.0		108	84-132	9	20	
Methyl tert-butyl ether	11.3	0.50	"	10.0		113	63-137	0.9	20	
Toluene	10.3	0.50	"	10.0		103	78-129	9	20	
Xylenes (total)	32.0	0.50	"	30.0		107	83-137	11	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.51</i>		<i>"</i>	<i>5.00</i>		<i>90</i>	<i>78-129</i>			

Matrix Spike (4L27006-MS1)		Source: MNL0534-07		Prepared & Analyzed: 12/27/04						
Benzene	2240	25	ug/l	320	2100	44	69-124			LN
Ethylbenzene	728	25	"	376	330	106	84-132			
Methyl tert-butyl ether	502	25	"	496	37	94	63-137			
Toluene	1680	25	"	1600	12	104	78-129			
Xylenes (total)	3260	25	"	1830	1300	107	83-137			
Gasoline Range Organics (C4-C12)	32300	2500	"	22000	12000	92	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.44</i>		<i>"</i>	<i>5.00</i>		<i>89</i>	<i>78-129</i>			

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

Project: ARCO #4977, Castro Valley, CA
Project Number: G09JZ-0203
Project Manager: Scott Robinson

MNL0535
Reported:
01/04/05 15:46

**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
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Batch 4L27006 - EPA 5030B P/T / EPA 8260B

Matrix Spike Dup (4L27006-MSD1)	Source: MNL0534-07			Prepared & Analyzed: 12/27/04						
Benzene	2370	25	ug/l	320	2100	84	69-124	6	20	
Ethylbenzene	767	25	"	376	330	116	84-132	5	20	
Methyl tert-butyl ether	524	25	"	496	37	98	63-137	4	20	
Toluene	1800	25	"	1600	12	112	78-129	7	20	
Xylenes (total)	3400	25	"	1830	1300	115	83-137	4	20	
Gasoline Range Organics (C4-C12)	34400	2500	"	22000	12000	102	70-124	6	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.59</i>		<i>"</i>	<i>5.00</i>		<i>92</i>	<i>78-129</i>			

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

Project: ARCO #4977, Castro Valley, CA
Project Number: G09JZ-0203
Project Manager: Scott Robinson

MNL0535
Reported:
01/04/05 15:46

Notes and Definitions

RB RPD exceeded method control limit; % recoveries within limits.

LN MS and/or MSD below acceptance limits. See Blank Spike(LCS).

IC Calib. verif. is within method limits but outside contract limits

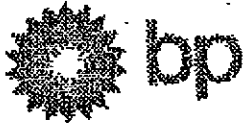
DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference



Chain of Custody Record

REVISED 12/17

Project Name: ARCO 4977 Analytical for QMR sampling
 BP BU/AR Region/Enfos Segment: BP > Americas > West Coast > Retail > WCBU > CA > Central > 4977 > Historical/BL
 State or Lead Regulatory Agency: Alameda County Environmental Health Agency
 Requested Due Date (mm/dd/yy): 12/01/04

On-site Time: <u>050</u>	Temp: <u>60</u>
Off-site Time: <u>1220</u>	Temp: <u>65</u>
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name: <u>Sequoia</u>	BP/AR Facility No.: <u>4977</u>	Consultant/Contractor: <u>URS</u>
Address: <u>885 Jarvis Drive</u>	BP/AR Facility Address: <u>2770 Castro Valley Blvd., Castro Valley, CA</u>	Address: <u>1333 Broadway, Suite 800</u>
<u>Morgan Hill, CA 95037</u>	Site Lat/Long: <u>37.694794 / -122.084</u>	<u>Oakland, CA 94612</u>
Lab PM: <u>Lisa Rave</u>	California Global ID No.: <u>T0600100089</u>	Consultant/Contractor Project No.: <u>38486574</u>
Tele/Fax: <u>408.782.8156 / 408.782.6308</u>	Enfos Project No.: <u>G091Z-0203</u>	Consultant/Contractor PM: <u>Scott Robinson</u>
BP/AR PM Contact: <u>Paul Supple</u>	Provision or RCOP: <u>Provision</u>	Tele/Fax: <u>510.874.3280 / 510.874.3268</u>
Address: <u>P.O. Box 6549</u>	Phase/WBS: <u>04 - Monitored by Natural Attenuation</u>	Report Type & QC Level: <u>Level 1 with BDI</u>
<u>Moraga, CA 94570</u>	Sub Phase/Task: <u>03 - Analytical</u>	E-mail RDD To: <u>Danna.Casper@urscorp.com</u>
Tele/Fax: <u>925.299.8891 / 925.299.8872</u>	Cost Element: <u>05 - Subcontracted Costs</u>	Invoice to: <u>Atlantic Richfield Company</u>

Item No.	Sample Description	Time	Date	Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis				Sample Point Lat/Long and Comments
				Solid	Liquid	Air			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	OROVEX (8260)	MIBK, TAME, ETBE, TIBP, TBA (8260)	EDA, 1,2-DCA (8260)	Ethanol (8260)	
1	MWS-1	1200	12/17/04	✓			01	3					X	X	X	X		
2	MWS-2	1215	12/17/04	✓			02	3					X	X	X	X		
3	MWS-3	1125	12/17/04	✓			03	3					X	X	X	X		
4	TR-4977-12/17/04		12/17/04	✓			04	2					X					ON HOLD 12/17/04
5																		
6																		
7																		
8																		
9																		
10																		

Sampler's Name: <u>John V. Jones</u>	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: <u>Blisac Tech</u>						
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						
Special Instructions:						
Custody Seals In Place Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Temp Blank Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Cooler Temperature on Receipt <input checked="" type="checkbox"/> R/C <input type="checkbox"/>	Trip Blank Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			

PLAINE LEON SERVICES FAX: 1-408-213-1111 REC 10 2004 10:24 P.02



Fax Transmittal

TO Lisa Race

DATE 12/16/2004

Total pages
including
cover sheet 2

OF Sequola Lab - Morgan Hill

FROM
Michael Ninokata
(408)573-0555 ext. 202

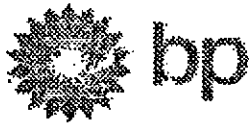
REMARKS: Sending correction to COC.

Site: ARGO 4977 - 2770 Castro Valley Blvd., Castro Valley

Event date: 12/15/04

Please note sample ID TB-4977-121504 to be placed on hold
and addition of 14 day TAT

Thanks



Chain of Custody Record

Project Name: ARCO 4977 Analytical for QMR sampling
 BP BU/AR Region/Enfos Segment: BP > Americas > West Coast > Retail > WCBU > CA > Central > 4977 > Historical/BL
 State or Lead Regulatory Agency: Alameda County Environmental Health Agency
 Requested Due Date (mm/dd/yy): 04/24/74

On-site Time: <u>050</u>	Temp: <u>60</u>
Off-site Time: <u>1220</u>	Temp: <u>65</u>
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name: <u>Sequoia</u>	BP/AR Facility No.: <u>4977</u>	Consultant/Contractor: <u>URS</u>
Address: <u>885 Jarvis Drive</u> <u>Morgan Hill, CA 95037</u>	BP/AR Facility Address: <u>2770 Castro Valley Blvd., Castro Valley, CA</u>	Address: <u>1333 Broadway, Suite 800</u> <u>Oakland, CA 94612</u>
Lab PM: <u>Lisa Race</u>	Site Lat/Long: <u>37.694794 / -122.084</u>	Consultant/Contractor Project No.: <u>38486574</u>
Tele/Fax: <u>408.782.8156 / 408.782.6308</u>	California Global ID No.: <u>T0600100089</u>	Consultant/Contractor PM: <u>Scott Robinson</u>
BP/AR PM Contact: <u>Paul Supple</u>	Enfos Project No.: <u>G09JZ-0203</u>	Tele/Fax: <u>510.874.3280 / 510.874.3268</u>
Address: <u>P.O. Box 6549</u> <u>Moraga, CA 94570</u>	Provision or RCOP: <u>Provision</u>	Report Type & QC Level: <u>Level 1 with EDF</u>
Tele/Fax: <u>925.299.8891 / 925.299.8872</u>	Phase/WBS: <u>04 - Mon/Remed by Natural Attenuation</u>	B-mail EDD To: <u>Donna.Casper@ursecorp.com</u>
	Sub Phase/Task: <u>03 - Analytical</u>	Invoice to: <u>Atlantic Richfield Company</u>
	Cost Element: <u>05 - Subcontracted Costs</u>	

Item No.	Sample Description	Time	Date	Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis					Sample Point Lat/Long and Comments		
				Soil/Solid	Water/Liquid	Air			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	GRO/BIEX (8260)	MIBK, TAME, ETBE, DEE, TEA (8260)	EDB, 1,2-DCA (8260)	Ethanol (8260)				
1	MW-1	1200	12/15/04	S	L	A	01	3			X			X	X	X					MNL 0535
2	MW-2	1215	12/15/04	S	L	A	02	3			X			X	X	X					
3	MW-3	1125	12/15/04	S	L	A	03	3			X			X	X	X					
4	TB-4977-12/15/04		12/15/04	S	L	A	04	2			X										
5																					
6																					
7																					
8																					
9																					
10																					

Sampler's Name: <u>John V. Long</u>	Relinquished By/ Affiliation:	Date:	Time:	Accepted By/ Affiliation:	Date:	Time:
Sampler's Company: <u>Blaine Tech</u>	<i>[Signature]</i>	<u>12/15/04</u>	<u>915</u>	<i>[Signature]</i>	<u>12/15/04</u>	<u>913</u>
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

Special Instructions:

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

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: ARCO 4977
 REC. BY (PRINT): TD
 WORKORDER: MDL 6535

DATE REC'D AT LAB: 12/16/04
 TIME REC'D AT LAB: 0945
 DATE LOGGED IN: 12-19-04

For Regulatory Purposes?
 DRINKING WATER YES NO
 WASTE WATER YES NO

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

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s)	Present / <input checked="" type="checkbox"/> Absent Intact / Broken*	61	AC	NW-1	VOA (3)	Hcl	-	W	12/15/04	<div style="font-size: 2em; font-weight: bold;">X</div>
2. Chain-of-Custody	<input checked="" type="checkbox"/> Present / Absent*	62	L	L-2	↓	↓	↓	↓	↓	
3. Traffic Reports or Packing List:	Present / <input checked="" type="checkbox"/> Absent	63	AP	13-4977-215 2014	↓	↓	↓	↓	↓	
4. Airbill:	Airbill / Sticker Present / Absent									
5. Airbill #:										
6. Sample Labels:	<input checked="" type="checkbox"/> Present / Absent									
7. Sample IDs:	<input checked="" type="checkbox"/> Listed / Not Listed on Chain-of-Custody									
8. Sample Condition:	Intact / Broken* / 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. Trip Blank / Temp Blank Received? (circle which, if yes)	<input checked="" type="checkbox"/> Yes / No*									
14. Temp Rec. at Lab: Is temp 4 +/- 2°C? <small>(Acceptance range for samples requiring thermal pres.)</small>	<u>2.8</u> <input checked="" type="checkbox"/> Yes / No**									

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

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

ATTACHMENT C

**ERROR CHECK REPORTS AND EDF/GEOWELL
SUBMITTAL CONFIRMATIONS**

Electronic Submittal Information

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SUCCESSFUL GEO_WELL CHECK - NO ERRORS

<u>ORGANIZATION NAME:</u>	URS Corporation-Oakland Office
<u>USER NAME:</u>	URSCORP-OAKLAND
<u>DATE CHECKED:</u>	1/11/2005 4:56:51 PM

Processing is complete. No errors were found!
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UPLOADING A GEO_WELL FILE

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

Submittal Title: 4Q2004 QMR Geowell ARCO Site
4977

Submittal Date/Time: 1/11/2005 4:57:44 PM

Confirmation
Number: 5731052994

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SUCCESSFUL EDF CHECK - NO ERRORS

<u>ORGANIZATION NAME:</u>	URS Corporation-Oakland Office
<u>USER NAME:</u>	URSCORP-OAKLAND
<u>DATE CHECKED:</u>	1/11/2005 4:59:03 PM
<u>GLOBAL ID:</u>	T0600100089
<u>FILE UPLOADED:</u>	ARCO#4977-EDF-MNL0535.zip

No errors were found in your EDF upload file.

If you want to submit this file to the SWRCB, choose the "Upload EDF" option in the above menu and follow the instructions.

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

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

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

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 BZMED8 TO BE TESTED	
LAB NOTE DATA QUALIFIERS	Y

QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS	0
METHOD HOLDING TIME VIOLATIONS	0
LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT	0
LAB BLANK DETECTIONS	0
DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?	
- LAB METHOD BLANK	Y
- MATRIX SPIKE	Y

- MATRIX SPIKE DUPLICATE	Y	
- BLANK SPIKE	Y	
- SURROGATE SPIKE	Y	
<u>WATER SAMPLES FOR 8021/8260 SERIES</u>		
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	
<u>SOIL SAMPLES FOR 8021/8260 SERIES</u>		
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	
<u>FIELD QC SAMPLES</u>		
<u>SAMPLE</u>	<u>COLLECTED</u>	<u>DETECTIONS > REPD</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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Confirmation Number: 8939702391
Date/Time of Submittal: 1/11/2005 4:59:48 PM
Facility Global ID: T0600100089
Facility Name: ARCO
Submittal Title: 4Q 2004 QMR EDF ARCO Site 4977
Submittal Type: GW Monitoring Report

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

ARCO 2770 CASTRO VALLEY BLVD CASTRO VALLEY, CA 94546	Regional Board - Case #: 01-0097 SAN FRANCISCO BAY RWQCB (REGION 2) - (RDB) Local Agency (lead agency) - Case #: 01-0097 ALAMEDA COUNTY LOP - (RWS)												
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">CONF #</td> <td style="width: 50%;">TITLE</td> <td style="width: 25%;">QUARTER</td> </tr> <tr> <td>8939702391</td> <td>4Q 2004 QMR EDF ARCO Site 4977</td> <td>Q4 2004</td> </tr> <tr> <td>SUBMITTED BY</td> <td>SUBMIT DATE</td> <td>STATUS</td> </tr> <tr> <td>Srijesh Thapa</td> <td>1/11/2005</td> <td>PENDING REVIEW</td> </tr> </table>	CONF #	TITLE	QUARTER	8939702391	4Q 2004 QMR EDF ARCO Site 4977	Q4 2004	SUBMITTED BY	SUBMIT DATE	STATUS	Srijesh Thapa	1/11/2005	PENDING REVIEW	
CONF #	TITLE	QUARTER											
8939702391	4Q 2004 QMR EDF ARCO Site 4977	Q4 2004											
SUBMITTED BY	SUBMIT DATE	STATUS											
Srijesh Thapa	1/11/2005	PENDING REVIEW											
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# FIELD POINTS SAMPLED	3												
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- 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												

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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

<u>SAMPLE</u>	<u>COLLECTED</u>	<u>DETECTIONS > REPD</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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