



Atlantic Richfield Company
(a BP affiliated company)

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Alameda County
APR 01 2005
Environmental Health

March 31, 2005

Re: First Quarter 2005 Groundwater Monitoring Report
ARCO Service Station #4977
2770 Castro Valley Blvd
Castro Valley, California
R0-2436 / STID 658

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



March 31, 2005

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

Alameda County
APR 01 2005
Environmental Health

**Re: First Quarter 2005 Groundwater Monitoring Report
ARCO Service Station #4977
2770 Castro Valley Blvd
Castro Valley, California
R0-2436 / STID 658**

Dear Mr. Schultz:

On behalf of Atlantic Richfield Company, a BP affiliated company, URS Corporation (URS) is submitting the *First Quarter 2005 Groundwater Monitoring Report* for ARCO Service Station #4977, located at 2770 Castro Valley Blvd, Castro Valley, California.

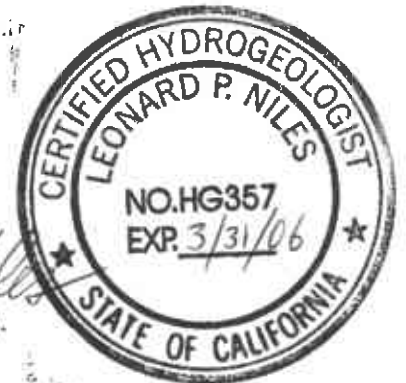
If you have any questions regarding this submission, please call (510) 874-3280.

Sincerely,

URS CORPORATION

Scott Robinson
Project Manager

Leonard P. Niles
Leonard P. Niles, R.G./C.H.G.
Senior Geologist



Enclosure: First Quarter 2005 Groundwater Monitoring Report

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

R E P O R T

**FIRST QUARTER 2005
GROUNDWATER MONITORING
REPORT**

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

Prepared for
RM

March 31, 2005

URS

URS Corporation
1333 Broadway, Suite 800
Oakland, California 94612

Date: March 31, 2005
Quarter: 1Q 05

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
Primary Agency: Alameda County Environmental Health (ACEH)
Case No.: R0-2436 / STID 658

WORK PERFORMED THIS QUARTER (First – 2005):

1. Performed first quarter groundwater monitoring event on March 7, 2005.
2. Prepared and submitted this First Quarter 2005 Groundwater Monitoring Report.

WORK PROPOSED FOR NEXT QUARTER (Second – 2005):

1. Perform second quarter 2005 groundwater monitoring event.
2. Prepare and submit Second Quarter 2005 Groundwater Monitoring Report.

SITE SUMMARY:

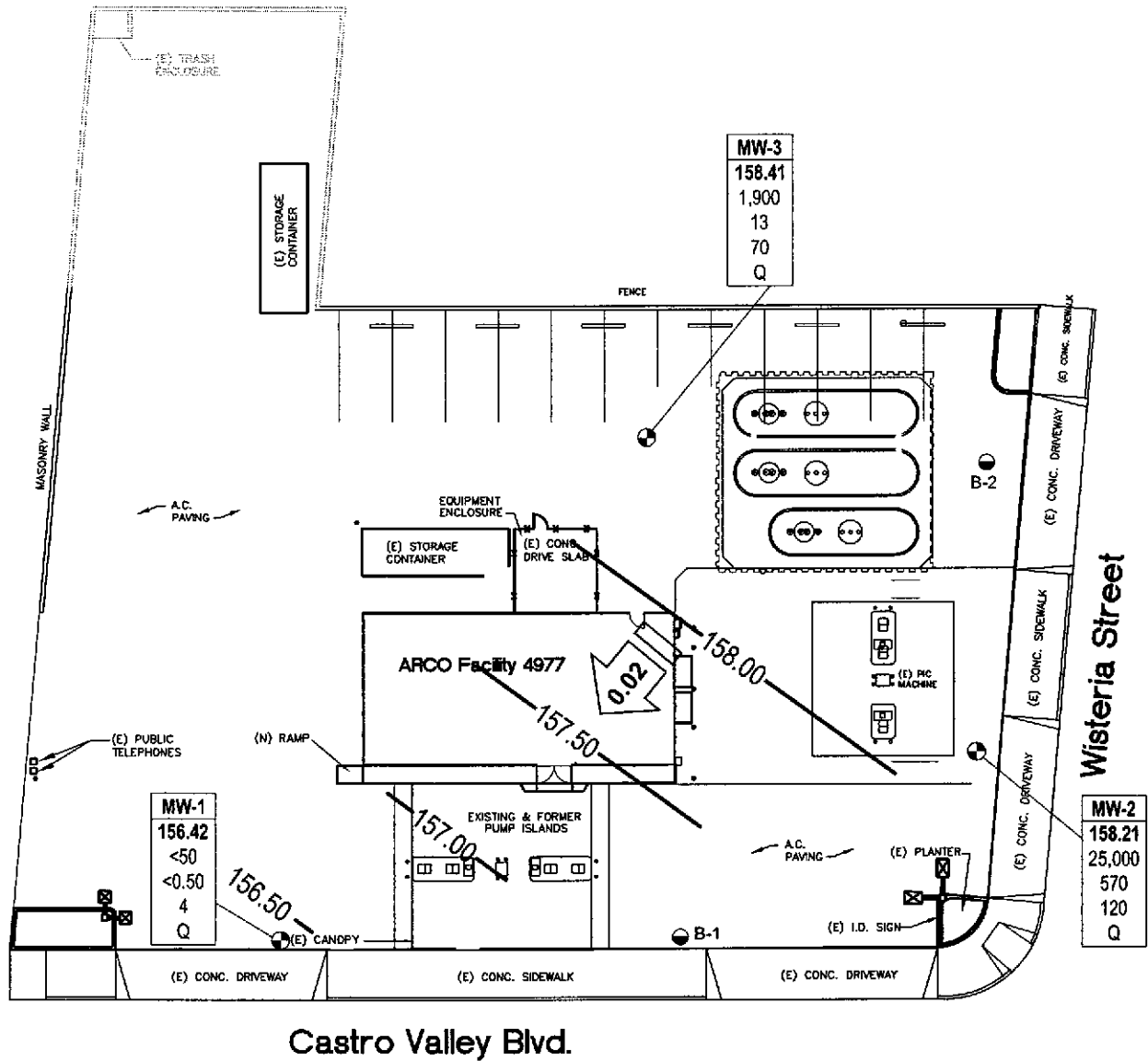
Current Phase of Project:	<u>Groundwater monitoring/sampling</u>
Frequency of Groundwater Sampling:	<u>Quarterly: Wells MW-1 through MW-3</u>
Frequency of Groundwater Monitoring:	<u>Quarterly</u>
Is Free Product (FP) Present On-Site:	<u>No</u>
Current Remediation Techniques:	<u>Natural Attenuation</u>
Approximate Depth to Groundwater:	<u>6.08 ft (MW-2) to 7.02 ft (MW-1)</u>
Groundwater Gradient (direction):	<u>South</u>
Groundwater Gradient (magnitude):	<u>0.02 feet per foot</u>

DISCUSSION:

During purging prior to sampling, well MW-1 dewatered at 12 gallons, well MW-2 dewatered at 8 gallons, and well MW-3 dewatered at 12 gallons. Gasoline range organics (GRO) were detected at or above laboratory reporting limits in two of the three wells sampled this quarter at concentrations of 1,900 µg/L (MW-3) and 25,000 µg/L (MW-2). Benzene was detected at or above laboratory reporting limits in two wells at concentrations of 13 µg/L (MW-3) and 570 µg/L (MW-2). Methyl-tert-butyl ether (MTBE) was detected at or above laboratory reporting limits in three wells at concentrations ranging from 4.0 µg/L (MW-1) to 120 µg/L (MW-2). Ethylbenzene was detected at or above the laboratory reporting limits in two wells at concentrations of 93 µg/L (MW-3) and 1,400 µg/L (MW-2). Tert-butyl alcohol (TBA) was detected at or above laboratory reporting limits in well MW-3 at a concentration of 190 µg/L. Toluene was detected at or above the laboratory reporting limits in well MW-2 at a concentration of 33 µg/L. Total Xylenes were detected at or above the laboratory reporting limits in two wells at concentrations of 29 µg/L (MW-3) and 3,900 µg/L (MW-2).

ATTACHMENTS:

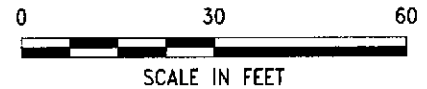
- Figure 1 - Groundwater Elevation Contour and Analytical Summary Map – March 7, 2005
- Table 1 - Groundwater Elevation and Analytical Data
- Table 2 - Fuel Additives Analytical Data
- Table 3 - Groundwater Flow Direction and Gradient
- Attachment A - Field Procedures and Field Data Sheets
- Attachment B - Laboratory Procedures, Certified Analytical Reports and Chain-of-Custody Records
- Attachment C – Error Check Reports and EDF/Geowell Submittal Confirmations



Castro Valley Blvd.

LEGEND

- MONITORING WELL
 - SOIL BORING
- | Well | ELEV | GRO | Benzene | MTBE | Q |
|------|--------|--------|---------|------|---|
| MW-1 | 156.42 | <50 | <0.50 | 4 | Q |
| MW-2 | 158.21 | 25,000 | 570 | 120 | Q |
| MW-3 | 158.41 | 1,900 | 13 | 70 | Q |
- < NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMITS
 - Q SAMPLED QUARTERLY
 - 157.00 GROUNDWATER ELEVATION CONTOUR (FT ABOVE MSL)
 - 0.02 GROUNDWATER FLOW DIRECTION AND GRADIENT (FT/FT)



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

Mar 24, 2005 - 3:12pm
 X:\env\wst\ar\GCH\after\Scott Robinson\Paul_Supple\4977\Monitoring\2005 Qtr. 1\Drawings\4977-1005-GV.dwg



Project No. 38487184
Arco Service Station #4977
2770 Castro Valley Boulevard
Castro Valley, California

GROUNDWATER ELEVATION CONTOUR
AND ANALYTICAL SUMMARY MAP
First Quarter 2005 (March 7, 2005)

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	
	03/07/2005	P		163.44	5.00	15.00	7.02	156.42	<50	<0.50	<0.50	<0.50	<0.50	4.0	2.4	6.8	
	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	
03/07/2005	P		164.29	5.00	15.00	6.08	158.21	25,000	570	33	1,400	3,900	120	2.3	6.8		
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		

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-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
	03/07/2005	P		164.53	5.00	15.00	6.12	158.41	1,900	13	<1.0	93	29	70	2.3	6.8

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
	03/07/2005	<100	<20	4.0	<0.50	<0.50	<0.50	<0.50	<0.50	
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
	03/07/2005	<5,000	<1,000	120	<25	<25	<25	<25	<25	
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
	03/07/2005	<200	190	70	<1.0	<1.0	<1.0	<1.0	<1.0	

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
3/7/2005	South	0.02

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 # 050307-DW-4 Date 3-7-05 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 TOC
MW-1	4					7.02	15.00	↓
MW-2	4					6.08	14.67	↓
MW-3	4					6.12	14.90	↓

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>050307-DW-4</u>	Station # <u>4977</u>
Sampler: <u>DW</u>	Date: <u>3-7-05</u>
Well I.D.: <u>MW-1</u>	Well Diameter: 2 3 <u>④</u> 6 8 <u> </u>
Total Well Depth: <u>15.00</u>	Depth to Water: <u>7.02</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSD</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>5.2</u>	X	<u>3</u>	=	<u>15.6</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u>)	Gals. Removed	Observations
<u>14:12</u>	<u>70.5</u>	<u>6.7</u>	<u>1170</u>	<u>5.2</u>	
<u>14:14</u>	<u>68.8</u>	<u>6.8</u>	<u>1169</u>	<u>10.4</u>	
		<u>well dewatered @ 12</u>		<u>9/ DTW = 13.20</u>	
<u>14:43</u>	<u>69.0</u>	<u>6.8</u>	<u>1126</u>	<u>-</u>	<u>DTW = 10.34 (cite log)</u>

Did well dewater? <u>Yes</u> No	Gallons actually evacuated: <u>12</u>	
Sampling Time: <u>14:43</u>	Sampling Date: <u>3-7-05</u>	
Sample I.D.: <u>MW-1</u>	Laboratory: Pace <u>Sequoia</u> Other _____	
Analyzed for: <u>GRO</u> <u>BTEX</u> MTBE DRO	Other: <u>see SOW</u>	
D.O. (if req'd):	Pre-purge: _____ mg/L	Post-purge: <u>2.4</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>050307-DW-4</u>	Station # <u>4977</u>
Sampler: <u>DW</u>	Date: <u>3-7-05</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth: <u>14.67</u>	Depth to Water: <u>6.08</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSD</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: <input type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Positive Air Displacement <input checked="" type="checkbox"/> Electric Submersible Extraction Pump Other: _____	Sampling Method: <input type="checkbox"/> Bailer <input checked="" type="checkbox"/> Disposable Bailer <input type="checkbox"/> 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>5.6</u>	x	<u>3</u>	=	<u>16.8</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u>)	Gals. Removed	Observations
<u>14:34</u>	<u>67.8</u>	<u>6.7</u>	<u>703</u>	<u>5.6</u>	<u>odor</u>
		<u>well dewatered @ 8 gal. DTW = 12.75</u>			
<u>15:00</u>	<u>67.6</u>	<u>6.8</u>	<u>720</u>	—	<u>DTW = 8.05</u>

Did well dewater? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Gallons actually evacuated: <u>8</u>	
Sampling Time: <u>15:00</u>	Sampling Date: <u>3-7-05</u>	
Sample I.D.: <u>MW-2</u>	Laboratory: Pace <u>Sequoia</u> Other _____	
Analyzed for: <input checked="" type="checkbox"/> GRO <input checked="" type="checkbox"/> BTEX MTBE DRO	Other: <u>see Sow</u>	
D.O. (if req'd):	Pre-purge: _____ ^{mg/L}	Post-purge: <u>2.3</u> ^{mg/L}
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>050307-DW-4</u>	Station # <u>4977</u>
Sampler: <u>DW</u>	Date: <u>3-7-05</u>
Well I.D.: <u>MW-3</u>	Well Diameter: 2 3 <u>(4)</u> 6 8 _____
Total Well Depth: <u>14.90</u>	Depth to Water: <u>6.12</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> Disposible Bailer Positive Air Displacement <u>X</u> Electric Submersible Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> <u>X</u> Disposible 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>5.7</u>	X	<u>3</u>	=	<u>17.1</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or <u>µS</u>)	Gals. Removed	Observations
<u>14:22</u>	<u>67.6</u>	<u>6.8</u>	<u>778</u>	<u>5.7</u>	
<u>14:23</u>	<u>67.0</u>	<u>6.8</u>	<u>804</u>	<u>11.4</u>	
					<u>well dewatered @ 12 gal. DTW = 13.05</u>
<u>14:53</u>	<u>67.3</u>	<u>6.8</u>	<u>834</u>	-	<u>DTW = 6.52</u>

Did well dewater? <u>Yes</u> No	Gallons actually evacuated: <u>12</u>	
Sampling Time: <u>14:53</u>	Sampling Date: <u>3-7-05</u>	
Sample I.D.: <u>MW-3</u>	Laboratory: Pace <u>Sequoia</u> Other _____	
Analyzed for: <u>GRO</u> <u>BTEX</u> MTBE DRO	Other: <u>Sec Sow</u>	
D.O. (if req'd):	Pre-purge: _____ mg/L	Post-purge: <u>2.3</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV



Chain of Custody Record

Project Name: ARCO 4977 Analytical for QMR sampling 050307-06-4
 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): 10 DAY TAT

On-site Time: <u>13:40</u>	Temp: <u>68°</u>
Off-site Time:	Temp:
Sky Conditions: <u>pt. cloudy</u>	
Meteorological Events:	
Wind Speed:	Direction:

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

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	GROBTEX (8260)	MIBB, TAME, ETBE, DEPR, TBA (8260)	EDB, 1,2-DCA (8260)	Ethanol (8260)		
1	mc-1	1443	3-7	X			3						X	X	X	X			
2	mc-2	1500	↓				↓							X	X	X	X		
3	mc-3	1453	↓				↓							X	X	X	X		
4	TB-4977-030705	-	↓				2												ON HOLD
5																			
6																			
7																			
8																			
9																			
10																			

Sampler's Name: <u>Dave Walter</u>	Relinquished By / Affiliation: <u>David C. Walt</u>	Date:	Time:	Accepted By / Affiliation:	Date:	Time:
Sampler's Company: <u>Blaine Tech</u>						
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						
Special Instructions:						
Custody Seals In Place Yes <input checked="" type="checkbox"/> No	Temp Blank Yes <input checked="" type="checkbox"/> No	Cooler Temperature on Receipt	F/C	Trip Blank Yes <input checked="" type="checkbox"/> No		

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:
32

added equip. 2 any other
rinse water adjustments

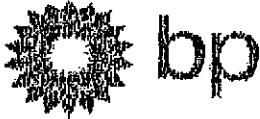
TOTAL GALS. RECOVERED 34 loaded onto
BTS vehicle # 47

BTS event # time date
050307-DW-4 1515 3/7/05

signature David C. Helt

REC'D AT time date

unloaded by
signature



WELLHEAD INSPECTION CHECKLIST
BP / GEM

Date 3-7-05

Site Address 2770 Castro Valley Blvd Castro Valley

Job Number 050307-0w-4 Technician DW

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
MW-1	X							
MW-2		X						
MW-3		X						

NOTES: _____

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.



18 March, 2005

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

RE: ARCO #4977, Castro Valley, CA
Work Order: MOC0302

Enclosed are the results of analyses for samples received by the laboratory on 03/08/05 15:05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race
Senior Project Manager

CA ELAP Certificate #1210

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

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

MOC0302
Reported:
03/18/05 17:15

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MOC0302-01	Water	03/07/05 14:43	03/08/05 15:05
MW-2	MOC0302-02	Water	03/07/05 15:00	03/08/05 15:05
MW-3	MOC0302-03	Water	03/07/05 14:53	03/08/05 15:05
TB-4977-030705	MOC0302-04	Water	03/07/05 00:00	03/08/05 15:05

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 intact 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

MOC0302
Reported:
03/18/05 17:15

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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MW-1 (MOC0302-01) Water Sampled: 03/07/05 14:43 Received: 03/08/05 15:05

tert-Amyl methyl ether	ND	0.50	ug/l	1	5C17006	03/17/05	03/18/05	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	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	4.0	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>		103 %	60-135	"	"	"	"	"	

MW-2 (MOC0302-02) Water Sampled: 03/07/05 15:00 Received: 03/08/05 15:05

tert-Amyl methyl ether	ND	25	ug/l	50	5C17006	03/17/05	03/18/05	EPA 8260B	
Benzene	570	25	"	"	"	"	"	"	
tert-Butyl alcohol	ND	1000	"	"	"	"	"	"	
Di-isopropyl ether	ND	25	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	25	"	"	"	"	"	"	
1,2-Dichloroethane	ND	25	"	"	"	"	"	"	
Ethanol	ND	5000	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	25	"	"	"	"	"	"	
Ethylbenzene	1400	25	"	"	"	"	"	"	
Methyl tert-butyl ether	120	25	"	"	"	"	"	"	
Toluene	33	25	"	"	"	"	"	"	
Xylenes (total)	3900	25	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	25000	2500	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %	60-135	"	"	"	"	"	



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

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

MOC0302
 Reported:
 03/18/05 17:15

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
MW-3 (MOC0302-03) Water Sampled: 03/07/05 14:53 Received: 03/08/05 15:05									
tert-Amyl methyl ether	ND	1.0	ug/l	2	5C17006	03/17/05	03/18/05	EPA 8260B	
Benzene	13	1.0	"	"	"	"	"	"	
tert-Butyl alcohol	190	40	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
Ethanol	ND	200	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	93	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	70	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	29	1.0	"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	1900	100	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97 %		60-135					

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

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

 MOC0302
 Reported:
 03/18/05 17:15

**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 5C17006 - EPA 5030B P/T / EPA 8260B

Blank (5C17006-BLK1)										
Prepared & Analyzed: 03/17/05										
tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	5.0	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	100	"							
Ethyl tert-butyl ether	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C4-C12)	ND	50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.81</i>		<i>"</i>	<i>5.00</i>		<i>96</i>	<i>60-135</i>			

Laboratory Control Sample (5C17006-BS1)										
Prepared & Analyzed: 03/17/05										
tert-Amyl methyl ether	10.5	0.50	ug/l	10.0		105	80-115			
Benzene	9.56	0.50	"	10.0		96	65-115			
tert-Butyl alcohol	49.7	5.0	"	50.0		99	75-150			
Di-isopropyl ether	10.9	0.50	"	10.0		109	75-125			
1,2-Dibromoethane (EDB)	9.66	0.50	"	10.0		97	85-120			
1,2-Dichloroethane	10.3	0.50	"	10.0		103	85-130			
Ethanol	193	100	"	200		96	70-135			
Ethyl tert-butyl ether	10.5	0.50	"	10.0		105	75-130			
Ethylbenzene	9.96	0.50	"	10.0		100	75-135			
Methyl tert-butyl ether	10.2	0.50	"	10.0		102	65-125			
Toluene	9.64	0.50	"	10.0		96	85-120			
Xylenes (total)	31.7	0.50	"	30.0		106	85-125			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.78</i>		<i>"</i>	<i>5.00</i>		<i>96</i>	<i>60-135</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

 MOC0302
 Reported:
 03/18/05 17:15

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 5C17006 - EPA 5030B P/T / EPA 8260B

Laboratory Control Sample (5C17006-BS2)										Prepared & Analyzed: 03/17/05
Benzene	5.72	0.50	ug/l	6.40		89	65-115			
Ethylbenzene	8.05	0.50	"	7.52		107	75-135			
Methyl tert-butyl ether	9.59	0.50	"	9.92		97	65-125			
Toluene	32.9	0.50	"	31.9		103	85-120			
Xylenes (total)	41.0	0.50	"	36.6		112	85-125			
Gasoline Range Organics (C4-C12)	434	50	"	440		99	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.99</i>		<i>"</i>	<i>5.00</i>		<i>100</i>	<i>60-135</i>			

Laboratory Control Sample Dup (5C17006-BS1)										Prepared & Analyzed: 03/17/05
tert-Amyl methyl ether	10.6	0.50	ug/l	10.0		106	80-115	0.9	15	
Benzene	10.0	0.50	"	10.0		100	65-115	4	20	
tert-Butyl alcohol	50.8	5.0	"	50.0		102	75-150	2	25	
Di-isopropyl ether	11.0	0.50	"	10.0		110	75-125	0.9	15	
1,2-Dibromoethane (EDB)	9.79	0.50	"	10.0		98	85-120	1	15	
1,2-Dichloroethane	11.0	0.50	"	10.0		110	85-130	7	20	
Ethanol	195	100	"	200		98	70-135	1	35	
Ethyl tert-butyl ether	10.9	0.50	"	10.0		109	75-130	4	25	
Ethylbenzene	10.2	0.50	"	10.0		102	75-135	2	15	
Methyl tert-butyl ether	10.7	0.50	"	10.0		107	65-125	5	20	
Toluene	9.70	0.50	"	10.0		97	85-120	0.6	20	
Xylenes (total)	31.5	0.50	"	30.0		105	85-125	0.6	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>4.80</i>		<i>"</i>	<i>5.00</i>		<i>96</i>	<i>60-135</i>			

Matrix Spike (5C17006-MS1)										Source: MOC0199-04	Prepared & Analyzed: 03/17/05
Benzene	587	50	ug/l	640	ND	92	65-115				
Ethylbenzene	817	50	"	752	ND	109	75-135				
Methyl tert-butyl ether	4310	50	"	992	4100	21	65-125			BB, LN	
Toluene	3260	50	"	3190	ND	102	85-120				
Xylenes (total)	4310	50	"	3660	ND	118	85-125				
Gasoline Range Organics (C4-C12)	44100	5000	"	44000	5900	87	70-124				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>3.94</i>		<i>"</i>	<i>5.00</i>		<i>79</i>	<i>60-135</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

MOC0302
Reported:
03/18/05 17:15

**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 5C17006 - EPA 5030B P/T / EPA 8260B

Matrix Spike Dup (5C17006-MSD1)	Source: MOC0199-04			Prepared & Analyzed: 03/17/05						
Benzene	559	50	ug/l	640	ND	87	65-115	5	20	
Ethylbenzene	770	50	"	752	ND	102	75-135	6	15	
Methyl tert-butyl ether	4550	50	"	992	4100	45	65-125	5	20	BB, LN
Toluene	3130	50	"	3190	ND	98	85-120	4	20	
Xylenes (total)	4010	50	"	3660	ND	110	85-125	7	20	
Gasoline Range Organics (C4-C12)	43800	5000	"	44000	5900	86	70-124	0.7	20	
Surrogate: 1,2-Dichloroethane-d4	4.29		"	5.00		86	60-135			



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

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

MOC0302
Reported:
03/18/05 17:15

Notes and Definitions

BB, LN Sample > 4x spike concentration.
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference



Chain of Custody Record

Project Name: ARCO 4977 Analytical for QMR sampling 050307-06-4

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): 10 DAY TAT

On-site Time: <u>13:10</u>	Temp: <u>68°</u>
Off-site Time:	Temp:
Sky Conditions: <u>pt. cloudy</u>	
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 Race</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>G09JZ-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 - Mon/Remed by Natural Attenuation</u>	Report Type & QC Level: <u>Level 1 with EDP</u>
<u>Moraga, CA 94570</u>	Sub Phase/Task: <u>03 - Analytical</u>	E-mail EDD To: <u>Donna Cospers@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		
				Soil/Solid	Water/Liquid	Air			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	GRO/BTEX (8260)	MIBK, TAME, STBA, DIPE, TBA (8260)	EDB, 1,2-DCA (8260)	Ethanol (8260)			
1	<u>MW-1</u>	<u>1443</u>	<u>3-7</u>	<u>X</u>			<u>01</u>	<u>3</u>						<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>			
2	<u>MW-2</u>	<u>1500</u>	<u>↓</u>	<u>↓</u>			<u>02</u>	<u>↓</u>						<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>			
3	<u>MW-3</u>	<u>1453</u>	<u>↓</u>	<u>↓</u>			<u>03</u>	<u>↓</u>						<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>			
4	<u>TB-4977-030705</u>	<u>-</u>	<u>↓</u>	<u>↓</u>			<u>04</u>	<u>2</u>												<u>ON HOLD</u>
5																				
6																				
7																				
8																				
9																				
10																				

MOC 6302

ON HOLD

Sampler's Name: <u>Dave Walter</u>	Relinquished By / Affiliation: <u>David C. Walter</u>	Date: <u>3/8/05</u>	Time: <u>1403</u>	Accepted By: <u>[Signature]</u>	Affiliation:	Date: <u>3/8/05</u>	Time: <u>1505</u>
Sampler's Company: <u>Blaine Tech</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: ARC04977
 REC. BY (PRINT): JD
 WORKORDER: 1406302

DATE REC'D AT LAB: 3/8/05
 TIME REC'D AT LAB: 1505
 DATE LOGGED IN: 3-11-05

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) <input checked="" type="radio"/> Present / Absent <input checked="" type="radio"/> Intact / Broken*	01		MW-2	V39 (3)	HCl	-	V	3/7/05	
2. Chain-of-Custody <input checked="" type="radio"/> Present / Absent*	02		↓ -2	↓ ↓	↓ ↓	↓ ↓	↓ ↓	↓ ↓	
3. Traffic Reports or Packing List: <input checked="" type="radio"/> Present / Absent	03		↓ -3	↓ (2)	↓	↓	↓	↓	
4. Airbill: <input checked="" type="radio"/> Present / Absent	04		TR-4977-030705						
5. Airbill #:									
6. Sample Labels: <input checked="" type="radio"/> Present / Absent									
7. Sample IDs: <input checked="" type="radio"/> Listed / Not Listed on Chain-of-Custody									
8. Sample Condition: <input checked="" type="radio"/> Intact / Broken* / Leaking*									
9. Does information on chain-of-custody, traffic reports and sample labels agree? <input checked="" type="radio"/> Yes / No*									
10. Sample received within hold time? <input checked="" type="radio"/> Yes / No*									
11. Adequate sample volume received? <input checked="" type="radio"/> Yes / No*									
12. Proper Preservatives used? <input checked="" type="radio"/> Yes / No*									
13. Trip Blank / Temp Blank Received? (circle which, if yes) <input checked="" type="radio"/> Yes / No*									
14. Temp Rec. at Lab: <u>27</u> Is temp 4 ± 2°C? <input checked="" type="radio"/> Yes / No**									

(Acceptance range for samples requiring thermal pres.)
 **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**

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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>	3/23/2005 12:06:36 PM

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**Submittal Title: 1Q 2005 QMR Geo_Well Site
4977**

Submittal Date/Time: 3/23/2005 12:10:14 PM

**Confirmation
Number: 9941268742**

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<u>ORGANIZATION NAME:</u>	URS Corporation-Oakland Office
<u>USER NAME:</u>	URSCORP-OAKLAND
<u>DATE CHECKED:</u>	3/23/2005 12:08:49 PM
<u>GLOBAL ID:</u>	T0600100089
<u>FILE UPLOADED:</u>	ARCO#4977-EDF-MOC0302.zip

No errors were found in your EDF upload file.

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

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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

WATER SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	Y
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	Y
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	Y

SOIL SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	n/a
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%	n/a
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	n/a

FIELD QC SAMPLES

<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: 7465385437
Date/Time of Submittal: 3/23/2005 12:12:17 PM
Facility Global ID: T0600100089
Facility Name: ARCO
Submittal Title: 1Q 2005 QMR EDF 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)
---	--

CONF #	TITLE	QUARTER
7465385437	1Q 2005 QMR EDF Site 4977	Q1 2005
SUBMITTED BY	SUBMIT DATE	STATUS
Srijesh Thapa	3/23/2005	PENDING REVIEW

SAMPLE DETECTIONS REPORT

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

METHOD QA/QC REPORT

METHODS USED	8260FA
TESTED FOR REQUIRED ANALYTES?	N
MISSING PARAMETERS NOT TESTED:	
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- 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

WATER SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	Y
---	---

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	Y
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	Y

SOIL SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	n/a
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%	n/a
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	n/a

FIELD QC SAMPLES

<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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YOUR DOCUMENT UPLOAD WAS SUCCESSFUL!

Facility Name:	ARCO
Global ID:	T0600100089
Title:	1Q 2005 QMR Site 4977
Document Type:	Monitoring Report - Quarterly
Submittal Type:	GEO_REPORT
Submittal Date/Time:	3/30/2005 12:46:12 PM
Confirmation Number:	8376815617

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