URS

RO 456

January 30, 2004

Mr. Don Hwang
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-8577

Re: Fourth Quarter 2003 Status Report
BP Service Station #11102
100 MacArthur Boulevard
Oakland, California
URS Project #38486458

Dear Mr. Hwang:

On behalf of Atlantic Richfield Company (ARCO –a BP affiliated company), URS Corporation (URS) is submitting the *Fourth Quarter 2003 Status Report* for the Former BP Service Station #11102, located at 100 MacArthur Boulevard, Oakland, California.

If you have any questions regarding this submission, please call me at (510) 874-1720.

Sincerely,

URS CORPORATION

Leonard P. Niles

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

Attachment: Fourth Quarter 2003 Status Report

cc: Mr. Paul Supple, ARCO, P.O. Box 6549, Moraga, CA 94570
Ms. Liz Sewell, ConocoPhilips, 76 Broadway, Sacramento, CA 95818

URS Corporation
500 12th Street, Suite 200
Oakland, CA 94607-4014
Tel: 510.893.3600
Fax: 510.874.3268

Date: January 30, 2004

Quarter: 4Q 03

ATLANTIC RICHFIELD QUARTERLY STATUS REPORT

Facility No.: 11102 Address: 100 MacArthur Boulevard, Oakland, CA

BP Oil Company Environmental Engineer: Paul Supple

Consulting Co./Contact Person: URS Corporation/ Leonard Niles

Consultant Project No.: 38486458

Primary Agency/Case #: Alameda County Department of Environmental Health (ACDEH)/Case #RO0000456

WORK PERFORMED THIS QUARTER (Fourth – 2003):

1. Prepared and submitted fourth quarter 2003 status report.
2. Performed well head repairs on December 30, 2003.

WORK PROPOSED FOR NEXT QUARTER (First – 2004):

1. Perform first quarter 2004 groundwater monitoring event.
2. Prepare and submit first quarter 2004 groundwater monitoring report.
3. Prepare and submit workplan for additional subsurface investigation.
4. Perform additional well head repairs.

Current Phase of Project:	GW monitoring/sampling
Frequency of Groundwater Sampling:	Wells MW-1 through MW-3 semi-annually (1st and 3rd quarters)
Frequency of Groundwater Monitoring:	Semi-annually
Is Free Product (FP) Present On-Site:	No
Current Remediation Techniques:	None currently
Approximate Depth to Groundwater:	NA
Groundwater Gradient (direction):	NA
Groundwater Gradient (magnitude):	NA

DISCUSSION:

No sampling activities took place at this site during this quarter, except for well head repairs. The most recent quarterly data can be referenced in the third quarter 2003 quarterly monitoring report for the site. A workplan for additional onsite and offsite delineation of the dissolved-phase hydrocarbon plume is in preparation.

RO 456

REPORT

FIRST SEMI-ANNUAL 2004 GROUNDWATER MONITORING

FORMER BP SERVICE STATION #11102
100 MACARTHUR BOULEVARD,
OAKLAND, CALIFORNIA

Prepared for
Atlantic Richfield Company

February 16, 2004

URS
URS Corporation
1333 Broadway
Oakland, California 94612

38486804

URS

February 16, 2004

Mr. Don Hwang
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-8577

Re: First Semi-Annual 2004 Groundwater Monitoring Report
Former BP Service Station #11102
100 MacArthur Boulevard
Oakland, California
URS Project #38486804

Dear Mr. Hwang:

On behalf of the Atlantic Richfield Company (ARCO – a BP affiliated company), URS Corporation (URS) is submitting the *First Semi-Annual 2004 Groundwater Monitoring Report* for BP Service Station #11102, located at 100 MacArthur Boulevard, Oakland, California.

If you have any questions regarding this submittal, please call (510) 874–1720.

Sincerely,
URS CORPORATION

Leonard P. Niles

Leonard P. Niles, R.G., C.HG.
Project Manager

CERTIFIED HYDROGEOLOGIST
LEONARD P. NILES
NO. HG357
EXP. 3/31/04
STATE OF CALIFORNIA

Enclosure: First Semi-Annual 2004 Groundwater Monitoring Report

cc: Paul Supple, ARCO (electronic copy uploaded to ENFOS)
Liz Sewell, ConocoPhillips, 76 Broadway, Sacramento, CA 95818
Chris Jimmerson, Delta Environmental Consultants, 3164 Gold Camp Drive, Suite 200, Rancho Cordova, California 95670-6021

URS Corporation
500 12th Street, Suite 200
Oakland, CA 94607-4014
Tel: 510.893.3600
Fax: 510.874.3268

Date: February 16, 2004

Quarter: 1Q 04

BP SEMI-ANNUAL GROUNDWATER MONITORING REPORT

Facility No.:	11102	Address:	100 MacArthur Boulevard, Oakland, CA
BP Environmental Business Manager:			Paul Supple
Consulting Co./Contact Person:			URS Corporation/ Leonard Niles
Consultant Project No.:			38486804
Primary Agency/Case #:			Alameda County Department of Environmental Health (ACDEH)/Case #RO0000456

WORK PERFORMED THIS PERIOD (First Quarter – 2004):

1. Performed first semi-annual groundwater monitoring event on January 14, 2004.
2. Prepared and submitted first semi-annual 2004 groundwater monitoring report.
3. Performed wellhead repairs.
4. Prepare and submit workplan for additional subsurface investigation.

WORK PROPOSED FOR NEXT PERIOD (Second Quarter – 2004):

1. Prepare and submit second quarter status report
2. Begin implementing workplan for subsurface investigation pending agency approval (this action will possibly occur in the third quarter).

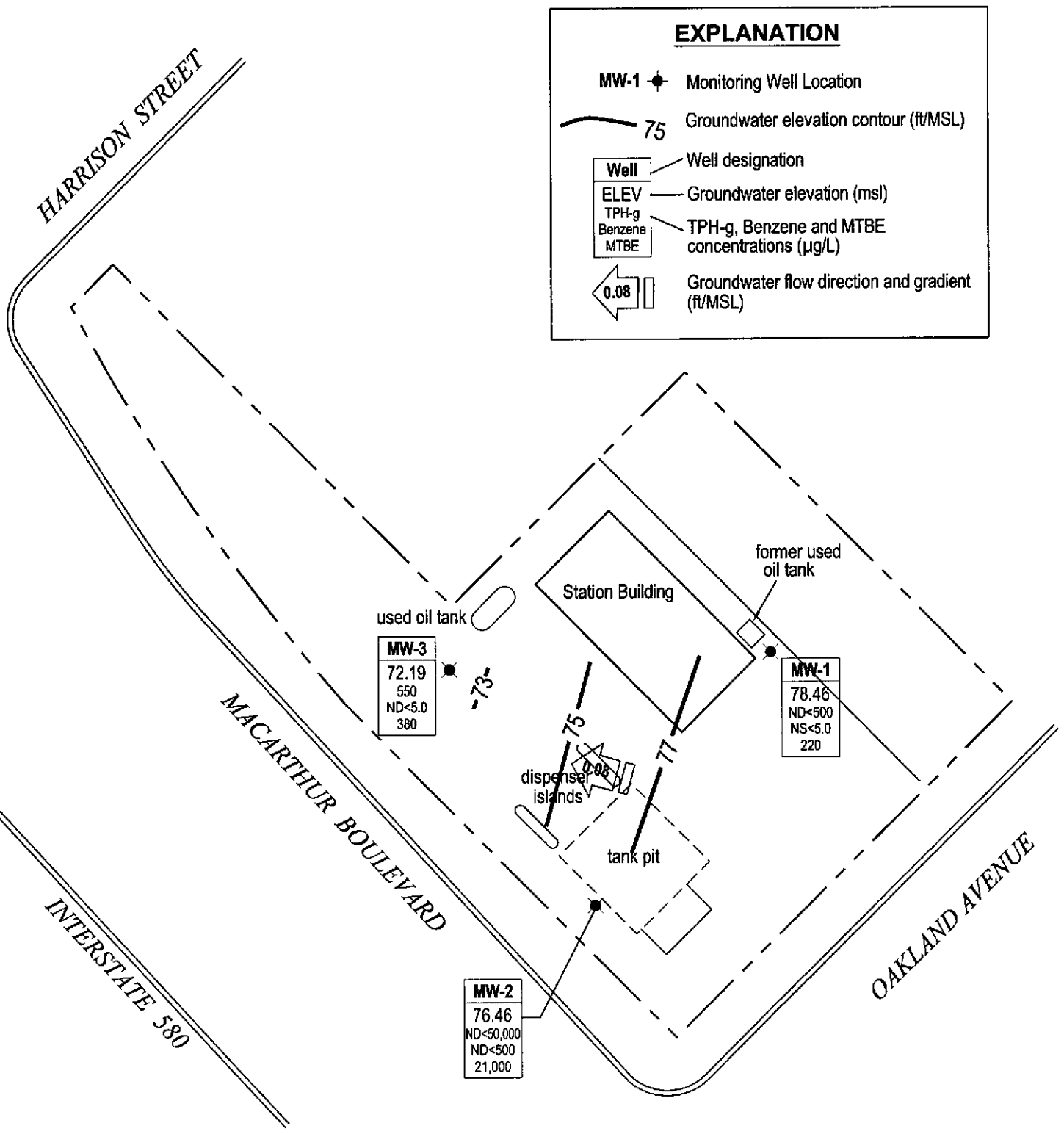
Current Phase of Project:	GW monitoring/sampling
Frequency of Groundwater Sampling:	Wells MW-1 through MW-3 semiannually (1st and 3rd quarters)
Frequency of Groundwater Monitoring:	Semiannual
Is Free Product (FP) Present On-Site:	No
Current Remediation Techniques:	None
Approximate Depth to Groundwater:	11.45 (MW-2) to 14.83 (MW-3) feet
Groundwater Gradient (direction):	West-Northwest
Groundwater Gradient (magnitude):	0.08 feet per foot

DISCUSSION:

Groundwater samples were analyzed by EPA method 8260B for all the chemicals that were sampled. TPH-g was detected in one of the three wells sampled this quarter at a concentration of 550 µg/L (MW-3). Benzene was not detected at or above the laboratory reporting limits for any of the wells sampled. MTBE was detected in all three wells at concentrations of 220 µg/L (MW-1), 380 µg/L (MW-3), and 21,000 µg/L (MW-2). TBA was only detected in MW-1 at a concentration of 2,500 µg/L. A workplan for a subsurface investigation is being prepared per the ACDEH letter July 18, 2001 to further define the downgradient and source area extent of fuel hydrocarbons. The number of geoprobe borings proposed is seven. The workplan will be submitted this quarter.

ATTACHMENTS:

- Figure 1 – Groundwater Elevation Contour and Analytical Summary Map – January 14, 2004
- Table 1 – Groundwater Elevation and Analytical Data
- Chart 1 – Concentration and Water Level Trends, Well MW-1
- Chart 2 – Concentration and Water Level Trends, Well MW-2
- Attachment A – Field Procedures and Field Data Sheets
- Attachment B – Laboratory Procedures, Certified Analytical Reports, and Chain-of-Custody Records
- Attachment C – EDCC Report and EDF/Geowell Submittal Confirmation
- Attachment D – Well Repair Data



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

X:\x_env_waste\BP GEM\Sites\Niles Sites\11102\Reports\Monitoring\Qtr. 1, 2004\Drawings\GWEC-AS_1-14.dwg, 02/17/2004 05:44:39 PM, fjaweya0

URS	Project No. 38486804 Former BP Service Station #11102 100 MacArthur Boulevard Oakland, California	GROUNDWATER ELEVATION CONTOUR AND ANALYTICAL SUMMARY MAP First Quarter 2004 (January 14, 2004)	FIGURE 1

Table 1
Groundwater Elevation and Analytical Data

Former BP Service Station #11102
100 MacArthur Boulevard
Oakland, CA

WELL ID		DATE OF SAMPLING/ MONITORING	TOC (Feet)		DEPTH TO WATER (Feet)	GWE (Feet)		TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)		TOG (ug/l)	1,1-DCA (ug/l)	1,2-DCA (ug/l)	HVOC's (ug/l)		DO (ppm)	LAB
MW-1		11/04/89	90.20		13.21	76.99		ND<500	ND<50	3.4	0.6	ND<0.3	ND<0.3	---		ND<5000	---	0.9	---		---	SAL
		11/11/89			13.32	76.88		---	---	---	---	---	---	---		---	---	---	---		---	---
		04/03/90			12.46	77.74		820	---	64	1.9	23	34	---		---	---	---	---		---	ANA
		07/30/90			12.92	77.28		190	ND<50	11	ND<5.0	ND<5.0	ND<5.0	---		ND<5000	---	ND	---		---	ANA
		11/20/90			14.08	76.12		50	79	2.4	ND<0.3	ND<0.3	ND<0.3	---		ND<5000	---	4.0	---		---	SAL
		03/01/91			13.61	76.59		ND<100	ND<1000	0.9	ND<0.3	ND<0.3	0.3	---		14000	---	ND	---		---	SAL
		08/19/91			15.74	74.46		370	ND<50	35	0.73	6.4	5.6	---		ND<5000	---	1.4	---		---	SEQ
		11/13/91			14.08	76.12		60	ND<50	0.68	ND<0.3	ND<0.3	ND<0.3	---		ND<5000	---	1.0	---		---	SEQ
		02/24/92			12.52	77.68		140	100	3.9	0.66	1.2	3.8	---		ND<5000	---	1.7	---		---	SEQ
		05/19/92			11.8	78.40		4200	910	440	21	250	37	---		ND<5000	---	ND	---		---	SEQ
		06/17/92			12.01	78.19		4000	560	350	14	150	17	---		ND<5000	---	ND	---		---	SEQ
		07/22/92			12.42	77.78		4000	---	ND<5.0	19	210	61	---		---	---	---	---		---	ANA
		08/14/92			12.75	77.45		2400	1700	330	20	150	47	---		ND<5000	---	ND<2.5	---		---	SEQ
		11/11/92			13.69	76.51		260	92	30	3.4	7.6	6.8	---		ND<5000	---	ND<2.5	---		---	ANA
		06/07/93			10.93	79.27		3400	440	98	11	21	7.6	---		---	6.2	0.9	---		---	PACE
	(c)	06/07/93			---	---		3700	---	120	12	26	9.5	---		---	---	---	---		---	PACE
		12/02/93			12.72	77.48		1100	120	8.3	3.6	0.6	1.5	---		ND<5000	2.6	1.8	---		---	PACE
		06/22/94			11.81	78.39		2100	ND<50	32	3.8	2.2	17	4000	(d)	ND<5000	2.3	3.3	---		3.2	PACE
	(c)	06/22/94			---	---		2100	---	30	3.2	2.0	15	2000	(d)	---	---	---	---		---	PACE
		01/10/95			10.97	79.23		ND<500	420	120	ND<5	ND<5	ND<10	---		---	ND<1	1	---		3.9	ATI
	(c)	01/10/95			---	---		ND<500	---	120	ND<5	5	ND<10	---		---	---	---	---		---	ATI
		06/21/95			9.38	80.82		4700	1300	16	ND<5.0	ND<5.0	ND<10	---		2900	2.0	0.38	0.6	(e)	6.7	ATI
	(c)	06/21/95			---	---		3600	---	ND<13	ND<5.0	ND<5.0	ND<10	---		---	---	---	---		---	ATI
		12/27/95			11.55	78.65		430	2100	ND<2.5	ND<2.5	ND<2.5	ND<5.0	1200		640	0.67	ND<0.20	---		6.3	ATI
		06/13/96			9.28	80.92		3200	920	51	ND<12	ND<12	ND<12	4000		2000	---	---	---		6.3	SPL
		12/04/96			11.91	78.29		1400	280	6.2	ND<5	ND<5	ND<5	2600		2000	ND<5.0	ND<5.0	6.0	(f)	6.7	SPL
		06/10/97			8.97	81.23		7900	1700	12	ND<10	ND<10	ND<10	15000		ND<5	ND<250	ND<250	ND		6.0	SPL
	(c)	06/10/97			---	---		7700	---	14	ND<25	ND<25	ND<25	13000		---	---	---	---		---	SPL
		12/12/97			11.37	78.83		440	760	8.8	ND<1.0	2.6	9.4	6700		1200	ND<1.0	ND<1.0	ND		5.5	SPL
		06/18/98			8.02	82.18		7500	2900	ND<2.5	ND<5.0	ND<5.0	ND<5.0	5600		ND<5	ND<5.0	ND<5.0	ND		4.9	SPL
		03/09/99			9.80	80.40		32000	---	100	16	72	110	49000		---	---	---	---		---	SPL
		09/28/99			10.78	79.42		1000	---	ND<5.0	ND<5.0	ND<5.0	ND<5.0	730		---	ND<1.0	ND<1.0	ND<1.0		---	SPL
		10/14/99			10.84	79.36		---	660	---	---	---	---	---		---	---	---	---		---	SPL
		03/27/00			9.83	80.37		4300	---	160	19	37	43	28000		---	---	ND<500	---		---	PACE
		09/28/00			11.33	78.87		2700	---	10	2.6	1.1	2.7	28000		---	---	---	---		---	PACE
		03/08/01			10.96	79.24		8200	---	23.5	6.09	5.23	8.97	11600		---	---	---	---		---	PACE
		09/21/01			12.07	78.13		6000	---	37.9	ND<0.5	ND<0.5	ND<1.5	7370		---	---	---	---		---	PACE
		02/28/02			10.48	79.72		6400	---	60.8	ND<5.0	6.43	ND<10	7750		---	---	---	---		---	PACE
		09/06/02*			11.20	79.00		1400	---	ND<5.0	ND<5.0	ND<5.0	ND<5.0	6000		---	---	---	---		---	SEQ
		02/19/03	(h)		11.29	78.91		ND<10000	---	ND<100	110	ND<100	ND<100	4,500		---	---	---	---		---	SEQ
		07/14/03			11.18	79.02		710	---	11	ND<10	ND<10	ND<10	940		---	---	---	---		---	SEQ
		01/14/04			**11.74**	**78.46**		**ND<500**	**---**	**ND<5.0**	**ND<5.0**	**ND<5.0**	**ND<5.0**	**220**								**SEQ**

Table 1
Groundwater Elevation and Analytical Data

Former BP Service Station #11102
100 MacArthur Boulevard
Oakland, CA

WELL ID	DATE OF SAMPLING/ MONITORING	TOC (Feet)	(a) DEPTH TO WATER (Feet)	GWE (Feet)	(b) TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	1,1-DCA (ug/l)	1,2-DCA (ug/l)	HVOC's (ug/l)	DO (ppm)	LAB
MW-2	11/04/89	87.91	15.84	72.07	ND<500	---	6.5	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	---	---	SAL
	11/11/89		14.75	73.16	---	---	---	---	---	---	---	---	---	---	---	---	---
	04/03/90		15.25	72.66	ND<500	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	ANA
	07/30/90		15.59	72.32	61	---	6.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	ANA
	11/20/90		17.81	70.10	ND<50	---	0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	---	---	SAL
	03/01/91		17.11	70.80	ND<100	---	0.4	ND<0.3	ND<0.3	ND<0.3	---	---	---	4.0	---	---	SAL
	08/19/91		17.97	69.94	ND<30	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	---	---	SEQ
	11/13/91		16.76	71.15	38	---	0.32	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	---	---	SEQ
	02/24/92		15.07	72.84	ND<50	---	ND<0.5	ND<0.5	ND<0.5	0.58	---	---	---	16	---	---	SEQ
	05/19/92		14.7	73.21	ND<50	---	0.55	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	SEQ
	07/22/92		15.6	72.31	90	---	1.3	0.6	0.9	1.9	---	---	---	---	---	---	ANA
	08/14/92		15.88	72.03	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/11/92		16.19	71.72	52	---	2.8	ND<0.5	ND<0.5	0.9	---	---	---	---	---	---	ANA
(c)	11/11/92		---	---	65	---	3.2	ND<0.5	ND<0.5	1.0	---	---	---	---	---	---	ANA
	06/07/93		14.42	73.49	1200	---	14	2.8	1.9	1.7	---	---	---	---	---	---	PACE
	12/02/93		14.94	---	790	---	3.4	0.5	10	ND<0.5	3700 (d)	---	---	---	---	---	PACE
(c)	12/02/93		---	---	2100	---	32	3.8	2.2	17	3700 (d)	---	2.3	---	---	---	PACE
	06/22/94		14.25	73.66	110	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	120 (d)	---	---	---	---	3.9	PACE
	01/10/95		13.64	74.27	ND<50	---	ND<0.5	ND<0.5	0.6	1	---	---	---	---	---	4.3	ATI
	06/21/95		11.66	76.25	4700	---	ND<10	ND<10	ND<10	ND<20	---	---	---	---	---	7.8	ATI
	12/27/95		13.11	74.80	6100	---	ND<25	ND<25	ND<25	ND<50	20000	---	---	---	---	6.7	ATI
(c)	12/27/95		---	---	6300	---	ND<25	ND<25	ND<25	ND<50	19000	---	---	---	---	---	ATI
	06/13/96		10.86	77.05	8300	---	ND<2.5	ND<2.5	ND<2.5	ND<2.5	13000	---	---	---	---	6.5	SPL
(c)	06/13/96		---	---	8700	---	ND<5	ND<5	ND<5	ND<5	13000	---	---	---	---	---	SPL
	12/04/96		13.03	74.88	5900	---	ND<2.5	ND<5	ND<5	ND<5	11000	---	---	---	---	6.3	SPL
(c)	12/04/96		---	---	5900	---	ND<2.5	ND<5	ND<5	ND<5	11000	---	---	---	---	---	SPL
	06/10/97		10.04	77.87	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	---	5.8	SPL
	12/12/97		12.44	75.47	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	---	5.7	SPL
	06/18/98		8.89	79.02	50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	---	5.3	SPL
(c)	06/18/98		---	---	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	---	---	SPL
	03/09/99		10.20	77.71	15000	---	ND<5.0	ND<5.0	ND<5.0	ND<5.0	23000	---	---	---	---	---	SPL
	09/28/99		11.81	76.10	36000	---	ND<5.0	12	7.0	26	35000	---	ND<5.0	7.7	ND<5.0	---	SPL
	10/14/99		10.27	77.64	---	100	---	---	---	---	---	---	---	---	---	---	SPL
	03/27/00		9.98	77.93	1300	---	ND<0.5	ND<0.5	0.51	ND<0.5	5800	---	---	ND<100	---	---	PACE
	09/28/00		11.40	76.51	1600	---	1.8	1.7	0.54	2.2	15000	---	---	---	---	---	PACE
	03/08/01		11.16	76.75	20000	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	29100	---	---	---	---	---	PACE
	09/21/01		11.65	76.26	5000	---	ND<0.5	ND<0.5	ND<0.5	ND<1.5	6110	---	---	---	---	---	PACE
	02/28/02		9.86	78.05	3200	---	35.1	ND<0.5	ND<0.5	ND<1.0	4620	---	---	---	---	---	PACE
	09/06/02*		12.32	75.59	1900	---	ND<10	ND<10	ND<10	ND<10	15000	---	---	---	---	---	SEQ
	02/19/03 (h)		11.63	76.28	45000	---	ND<250	ND<250	ND<250	ND<250	32000	---	---	---	---	---	SEQ
	07/14/03		12.07	75.84	9300	---	ND<500	ND<500	ND<500	ND<500	24000	---	---	---	---	---	SEQ
	01/14/04		**11.45**	**76.46**	**ND<50000**		**ND<500**	**ND<500**	**ND<500**	**ND<500**	**21000**	---	---	---	---	---	**SEQ**

Table 1
Groundwater Elevation and Analytical Data

Former BP Service Station #11102
100 MacArthur Boulevard
Oakland, CA

WELL ID	DATE OF SAMPLING/ MONITORING	TOC (Feet)	(a) DEPTH TO WATER (Feet)	GWE (Feet)	(b) TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	1,1-DCA (ug/l)	1,2-DCA (ug/l)	HVOC's (ug/l)	DO (ppm)	LAB
MW-3	11/04/89	87.02	15.4	71.62	ND<500	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	---	---	SAL
	11/11/89		14.1	72.92	---	---	---	---	---	---	---	---	---	---	---	---	---
	04/03/90		13.90	73.12	ND<100	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	ANA
	07/30/90		13.77	73.25	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	---	---	---	---	ANA
	11/20/90		14.67	72.35	ND<50	---	0.3	0.8	0.4	1.5	---	---	---	---	---	---	SAL
	03/01/91		15.22	71.80	ND<100	---	0.4	ND<0.3	ND<0.3	ND<0.3	---	---	---	ND	---	---	SAL
	08/19/91		13.15	73.87	ND<30	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	---	---	SEQ
	11/13/91		15.66	71.36	ND<30	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	---	---	---	---	---	SEQ
	02/24/92		15.01	72.01	ND<50	---	0.65	1.4	0.66	4.4	---	---	---	ND	---	---	SEQ
	05/19/92		15.52	71.50	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	SEQ
	07/22/92		15.63	71.39	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ND<5000	---	ND<0.50	---	---	ANA
	08/14/92		13.57	73.45	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/11/92		14.13	72.89	ND<50	---	ND<0.5	0.7	ND<0.5	1.3	---	---	---	---	---	---	ANA
	06/07/93		12.13	74.89	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
	12/02/93		13.29	73.73	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
	06/22/94		12.78	74.24	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	2.9	PACE
	01/10/95		12.01	75.01	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	---	1	---	3.8	ATI
	06/21/95		11.57	75.45	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	---	7.4	ATI
	12/27/95		13.47	73.55	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	5.7	---	---	---	---	7.3	ATI
	06/13/96		11.22	75.80	60	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<10	---	---	---	---	6.8	SPL
	12/04/96		13.28	73.74	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	---	---	---	6.7	SPL
	06/10/97		10.22	76.80	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	---	6.1	SPL
	12/12/97		12.61	74.41	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	---	5.6	SPL
(c)	12/12/97		---	---	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	---	---	SPL
	06/18/98		9.07	77.95	50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	---	---	5.3	SPL
	06/18/98		12.80	74.22	---	---	---	---	---	---	---	---	---	---	---	---	---
	09/28/99		13.76	73.26	---	---	---	---	---	---	---	---	---	---	---	---	---
	03/27/00		13.77	73.25	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.6	---	---	---	---	---	PACE
	09/28/00		11.28	75.74	ND<50	---	ND<0.5	7.4	ND<0.5	1.3	2.0	---	---	---	---	---	PACE
	03/08/01		11.75	75.27	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	60.4	---	---	---	---	---	PACE
	09/21/01		11.33	75.69	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1.5	8.18	---	---	---	---	---	PACE
	02/28/02		10.86	76.16	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1.0	25.5	---	---	---	---	---	PACE
	09/06/02*		12.73	74.29	ND<50	---	1.2	ND<0.5	ND<0.5	1.0	16	---	---	---	---	---	SEQ
	02/19/03 (h)		11.72	75.30	ND<500	---	ND<5.0	ND<5.0	ND<5.0	ND<5.0	110	---	---	---	---	---	SEQ
	07/14/03		13.76	73.26	ND<50	---	ND<0.50	ND<0.50	ND<0.50	0.67	28	---	---	---	---	---	SEQ
	01/14/04		**14.83**	**72.19**	**550**	**---**	**ND<5.0**	**ND<5.0**	**ND<5.0**	**ND<5.0**	**380**	**---**	**---**	**---**	**---**	**---**	**SEQ**

Table 1
Groundwater Elevation and Analytical Data

Former BP Service Station #11102
100 MacArthur Boulevard
Oakland, CA

WELL ID		DATE OF SAMPLING/ MONITORING	TOC (Feet)	(a) DEPTH TO WATER (Feet)	GWE (Feet)	(b) TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TOG (ug/l)	1,1-DCA (ug/l)	1,2-DCA (ug/l)	HVOC's (ug/l)	DO (ppm)	LAB
QC-2	(g)	11/11/92	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	ANA
QC-2	(g)	06/07/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
QC-2	(g)	12/02/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
QC-2	(g)	06/22/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---	---	---	PACE
QC-2	(g)	01/10/95	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	---	---	---	---	ATI
QC-2	(g)	06/21/95	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	---	---	---	ATI
QC-2	(g)	12/27/95	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	---	---	---	ATI
QC-2	(g)	06/13/96	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<10	---	---	---	---	---	SPL

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
TPH-D	Total petroleum hydrocarbons as diesel
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
TOG	Total oil and grease
1,1-DCA	1,1-Dichloroethane
1,2-DCA	1,2-Dichloroethane
1,2-DBA	1,2-Dibromoethane
HVOC's	Halogenated volatile organic compounds
MTBE	Methyl tert butyl ether
DIPE	Di-Isopropyl Ether
ETBE	Ethyl t-Butyl Ether
TAME	t-Amyl Methyl Ether
DO	Dissolved oxygen
ug/l	Micrograms per liter
ppm	Parts per million
ND	Not detected above reported detection limit
---	Not analyzed/measured/applicable
SAL	Superior Analytical Laboratory
ANA	Anametrix, Inc.
SEQ	Sequoia Analytical Laboratory
PACE	Pace, Inc.
ATI	Analytical Technologies, Inc.
SPL	Southern Petroleum Laboratories

(a) Top of casing elevations surveyed to the nearest 0.01 foot above mean sea level.

(b) Groundwater elevations in feet above mean sea level.

(c) Blind duplicate.

(d) A copy of the documentation for this data is included in Appendix C of Alisto report 10-076-06-002.

(e) Tetrachloroethene.

(f) Trans-1,2-Dichloroethene

(g) Travel blank.

(h) TPH, BTEX, and MTBE analyzed by EPA Method 8260B beginning on 1st Quarter Sampling event (2/19/03)

(i) Discrete peak @ C6-C7.

* The data within this table collected prior to June 2002 was provided to URS by Atlantic Richfield Company and their previous consultants. URS has not verified the accuracy of this information.

Table 2
Fuel Oxygenates Analytical Data
Former BP Service Station #11102
100 MacArthur Boulevard
Oakland, CA

Well ID	DATE OF SAMPLING/ MONITORING	Ethanol (ug/L)	TBA (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)
MW-1	7/14/03	ND<2000	2700	940	ND<20	ND<20	ND<20
	1/14/04	**ND<1000**	**2500**	**220**	**ND<5.0**	**ND<5.0**	**ND<5.0**
MW-2	7/14/03	ND<100000	ND<20000	24000	ND<1000	ND<1000	ND<1000
	1/14/04	**ND<100000**	**ND<20000**	**21000**	**ND<500**	**ND<500**	**ND<500**
MW-3	7/14/03	ND<100	ND<20	28	ND<1.0	ND<1.0	ND<1.0
	1/14/04	**ND<1000**	**ND<200**	**380**	**ND<5.0**	**ND<5.0**	**ND<5.0**

ABBREVIATIONS:

ug/L	Micrograms per liter
ND	Not detected above laboratory detection limit
TBA	tert-Butyl Alcohol
MTBE	Methyl tert butyl ether
DIPE	Di-Isopropyl Ether
ETBE	Ethyl t-Butyl Ether
TAME	t-Amyl Methyl Ether

Concentration and Water Level Trends
Well MW-1

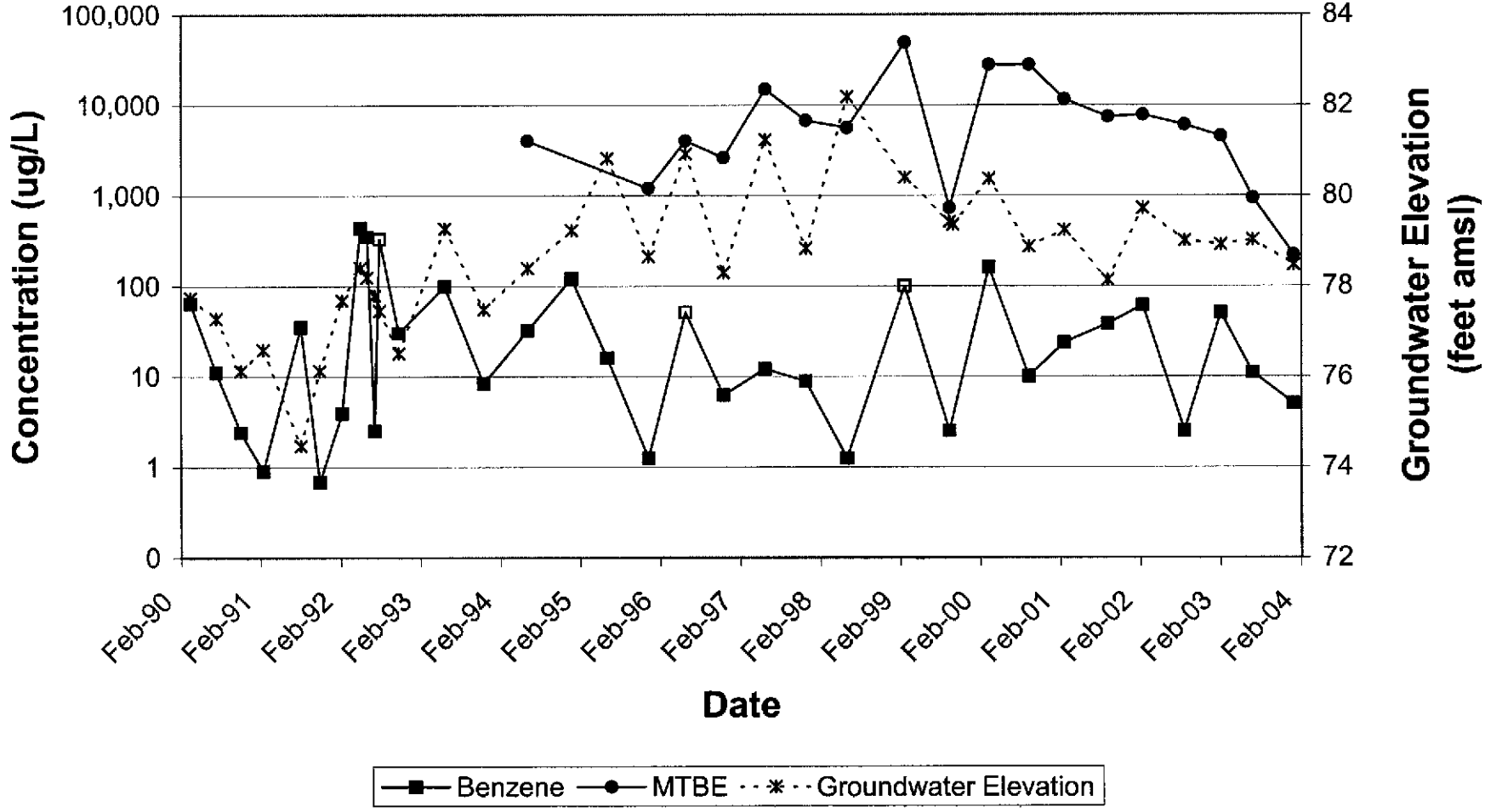
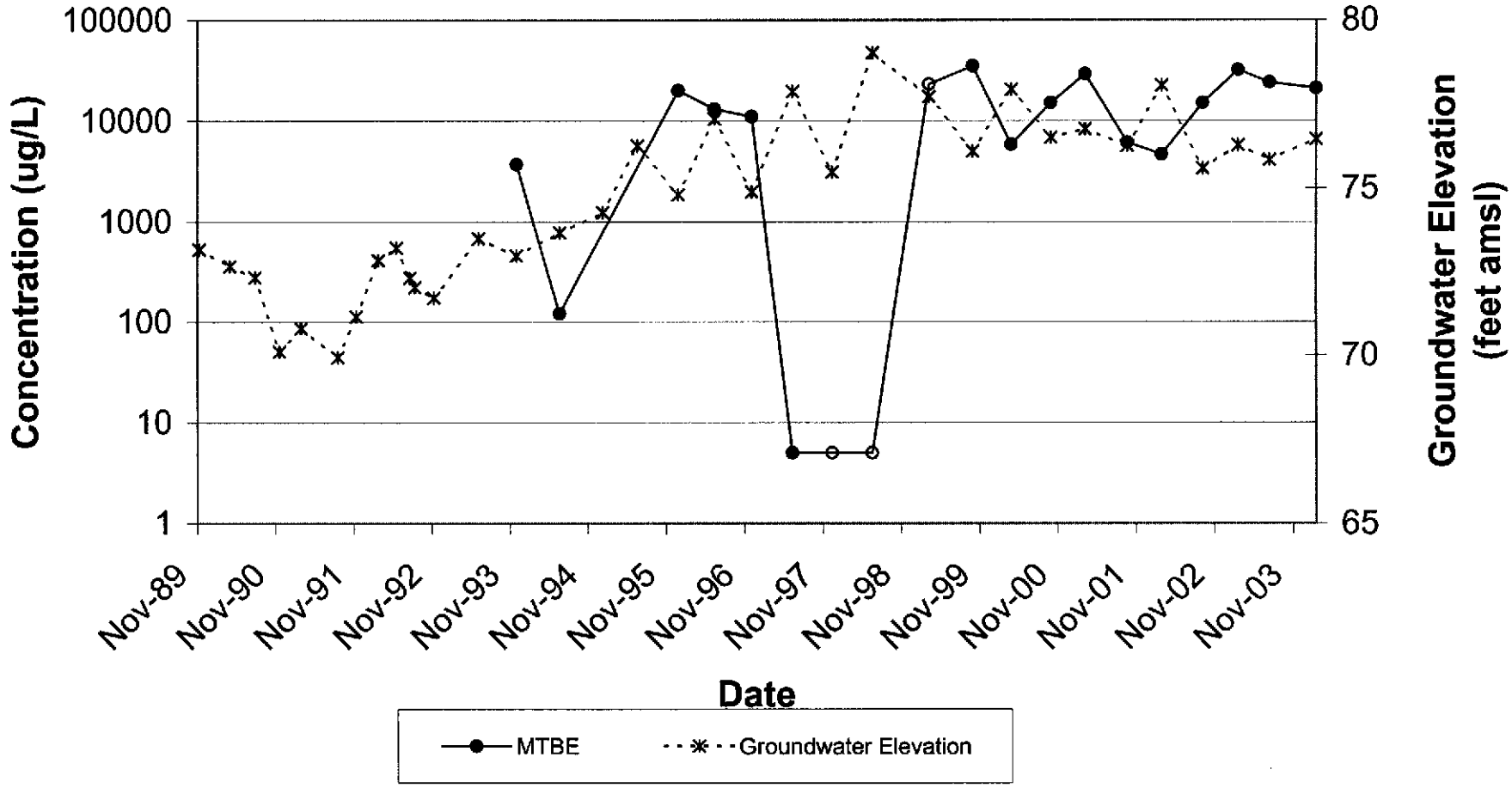


Chart 1

Concentration and Water Level Trends
Well MW-2



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 # 040114-JP2 Date 1/14/04 Client ARCO/BP : 11102

Site 100 MacArthur Blvd, Oakland

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					11.74	32.01	TOC	
MW-2	4					11.45	32.43		
MW-3	4					14.83	32.55		

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 040114-JP2	Station # 11102
Sampler: M. Pyrch	Date: 1/14/04
Well I.D.: MW-1	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth: 32.01	Depth to Water: 11.74
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius^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.

13.1 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 39.3 Gals. (Calculated Volume)

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1313	61.5	6.6	734	13.5	clear, odor
1315	64.1	6.5	903	27	"
1320	64.4	6.6	909	39.5	"

Did well dewater? Yes (No) Gallons actually evacuated: 39.5

Sampling Time: 1325 Sampling Date: 1/14/04

Sample I.D.: MW-1 Laboratory: Pace (Sequoia) Other ____

Analyzed for: (TPH-G) (BTEX) MTBE TPH-D Other: oxy's, Ethanol, 1,2-D(A, EDB

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

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 040114-JP2	Station # 11102
Sampler: M. Pyrah	Date: 1/14/04
Well I.D.: MW-2	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 32.43	Depth to Water: 11.45
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

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

80% Recharge
15.65

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.

13.6 (1 Case Volume (Gals.)) X 3 (Specified Volumes) = 40.8 Gals. (Calculated Volume)

Time	Temp (°F)	pH	Conductivity (mS or (µS))	Gals. Removed	Observations
1255	63.1	6.1	716	13	clear
1258	64.5	6.2	705	26	"
1259	Dewatered @	29.84 DTW	@ 28 gallons		
1330	DTW =	26.58			
1337	62.3	6.9	1141	—	DTW = 26.24 (site cleaning)

Did well dewater? (Yes) No — Gallons actually evacuated: 28

Sampling Time: 1340 — Sampling Date: 1/14/04

Sample I.D.: MW-2 — Laboratory: Pace (Sequoia) Other ___

Analyzed for: (TPH-G) (BTEX) MTBE TPH-D Other: Oxy's, Ethanol, 1,2-DCA, EDB

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

ARCO / BP WELL MONITORING DATA SHEET

BTS #: 040114-JP2	Station # 11102
Sampler: M. Pyrch	Date: 1/14/04
Well I.D.: MW-3	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth: 32.55	Depth to Water: ~~3~~ JP 14.83
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius^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.

11.5 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 34.5 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
1258	66.6	7.4	596	11.5	clear
1301	68.0	7.4	645	23	"
1302		well dewatered @		27 gal.	DTW - 33.30 @ 1305
				"	29.05 @ 1311
1335	61.8	8.1	675	-	clear

Did well dewater? (Yes) No — Gallons actually evacuated: 27

Sampling Time: 1335 — Sampling Date: 1/14/04

Sample I.D.: MW-3 — Laboratory: Pace (Sequoia) Other ____

Analyzed for: (TPH-G) (BTEX) MTBE TPH-D Other: oxy's, ethanol, 1,2-DCA, EDB

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

bp

WELLHEAD INSPECTION CHECKLIST
BP / GEM

Date 1/14/04

Site Address 100 MacArthur Blvd, Oakland

Job Number 040114-JP2 Technician M. Pyrch

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					A	

NOTES: A) Repair order Submitted

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

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

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

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

11102

Station #

100 Macarthur Blvd. Oakland

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

85

added equip. rinse water: no

any other adjustments:

TOTAL GALS. RECOVERED 95

loaded onto BTS vehicle #:

BTS event #: 040114-SP2

time: 1415

date: 1/14/04

signature: [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 Atlantic Richfield Company have been reviewed and verified by that laboratory.

Sequoia
Analytical

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

30 January, 2004

Leonard Niles
URS Corporation [Arco]
500 12th Street, Suite 200
Oakland, CA 94607

RE: BP Heritage #11102, Oakland, CA
Work Order: MNA0473

Enclosed are the results of analyses for samples received by the laboratory on 01/15/04 15:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race
Senior Project Manager

CA ELAP Certificate #1210

Sequoia Analytical

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

URS Corporation [Arco]	Project: BP Heritage #11102, Oakland, CA	MNA0473
500 12th Street, Suite 200	Project Number: N/P	**Reported:**
Oakland CA, 94607	Project Manager: Leonard Niles	01/30/04 10:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MNA0473-01	Water	01/14/04 13:25	01/15/04 15:50
MW-2	MNA0473-02	Water	01/14/04 13:40	01/15/04 15:50
MW-3	MNA0473-03	Water	01/14/04 13:35	01/15/04 15:50

These samples were received with custody seals.

Sequoia Analytical

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

URS Corporation [Arco]	Project: BP Heritage #11102, Oakland, CA	MNA0473
500 12th Street, Suite 200	Project Number: N/P	**Reported:**
Oakland CA, 94607	Project Manager: Leonard Niles	01/30/04 10:40

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MNA0473-01) Water Sampled: 01/14/04 13:25 Received: 01/15/04 15:50									
Ethanol	ND	1000	ug/l	10	4A27006	01/27/04	01/27/04	EPA 8260B	
tert-Butyl alcohol	**2500**	200	"	"	"	"	"	"	
Methyl tert-butyl ether	**220**	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Gasoline Range Organics	ND	500	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*105 %*		*78-129*	"	"	"	"	
MW-2 (MNA0473-02) Water Sampled: 01/14/04 13:40 Received: 01/15/04 15:50									
Ethanol	ND	100000	ug/l	1000	4A27006	01/27/04	01/27/04	EPA 8260B	
tert-Butyl alcohol	ND	20000	"	"	"	"	"	"	
Methyl tert-butyl ether	**21000**	500	"	"	"	"	"	"	
Di-isopropyl ether	ND	500	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	500	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	500	"	"	"	"	"	"	
1,2-Dichloroethane	ND	500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	500	"	"	"	"	"	"	
Benzene	ND	500	"	"	"	"	"	"	
Toluene	ND	500	"	"	"	"	"	"	
Ethylbenzene	ND	500	"	"	"	"	"	"	
Xylenes (total)	ND	500	"	"	"	"	"	"	
Gasoline Range Organics	ND	50000	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*104 %*		*78-129*	"	"	"	"	

Sequoia Analytical

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URS Corporation [Arco]	Project: BP Heritage #11102, Oakland, CA	MNA0473
500 12th Street, Suite 200	Project Number: N/P	**Reported:**
Oakland CA, 94607	Project Manager: Leonard Niles	01/30/04 10:40

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (MNA0473-03) Water	**Sampled: 01/14/04 13:35**	**Received: 01/15/04 15:50**							
Ethanol	ND	1000	ug/l	10	4A27006	01/27/04	01/27/04	EPA 8260B	
tert-Butyl alcohol	ND	200	"	"	"	"	"	"	
Methyl tert-butyl ether	**380**	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Gasoline Range Organics	**550**	500	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*78-129*		"	"	"	"	

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URS Corporation [Arco]	Project: BP Heritage #11102, Oakland, CA	MNA0473
500 12th Street, Suite 200	Project Number: N/P	**Reported:**
Oakland CA, 94607	Project Manager: Leonard Niles	01/30/04 10:40

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4A27006 - EPA 5030B P/T										
Blank (4A27006-BLK1)				Prepared & Analyzed: 01/27/04						
Ethanol	ND	100	ug/l							
tert-Butyl alcohol	ND	20	"							
Methyl tert-butyl ether	ND	0.50	"							
Di-isopropyl ether	ND	0.50	"							
Ethyl tert-butyl ether	ND	0.50	"							
tert-Amyl methyl ether	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	*5.03*		"	*5.00*		*101*	*78-129*			
Laboratory Control Sample (4A27006-BS1)				Prepared & Analyzed: 01/27/04						
Ethanol	169	100	ug/l	200		84.5	31-143			
tert-Butyl alcohol	53.3	20	"	50.0		107	56-131			
Methyl tert-butyl ether	11.0	0.50	"	10.0		110	63-137			
Di-isopropyl ether	10.9	0.50	"	10.0		109	76-130			
Ethyl tert-butyl ether	11.3	0.50	"	10.0		113	81-121			
tert-Amyl methyl ether	10.4	0.50	"	10.0		104	82-140			
1,2-Dichloroethane	11.6	0.50	"	10.0		116	77-136			
1,2-Dibromoethane (EDB)	12.1	0.50	"	10.0		121	77-132			
Benzene	10.6	0.50	"	10.0		106	69-124			
Toluene	10.6	0.50	"	10.0		106	78-129			
Ethylbenzene	11.0	0.50	"	10.0		110	84-132			
Xylenes (total)	32.1	0.50	"	30.0		107	83-137			
Surrogate: 1,2-Dichloroethane-d4	*5.09*		"	*5.00*		*102*	*78-129*			

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URS Corporation [Arco]	Project: BP Heritage #11102, Oakland, CA	MNA0473
500 12th Street, Suite 200	Project Number: N/P	**Reported:**
Oakland CA, 94607	Project Manager: Leonard Niles	01/30/04 10:40

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4A27006 - EPA 5030B P/T										
Laboratory Control Sample (4A27006-BS2)				Prepared & Analyzed: 01/27/04						
Methyl tert-butyl ether	8.73	0.50	ug/l	9.92		88.0	63-137			
Benzene	5.24	0.50	"	6.40		81.9	69-124			
Toluene	32.2	0.50	"	29.7		108	78-129			
Ethylbenzene	7.97	0.50	"	6.96		115	84-132			
Xylenes (total)	39.6	0.50	"	33.7		118	83-137			
Gasoline Range Organics	380	50	"	440		86.4	70-113			
Surrogate: 1,2-Dichloroethane-d4	*5.30*		*"*	*5.00*		*106*	*78-129*			
Laboratory Control Sample Dup (4A27006-BSD1)				Prepared & Analyzed: 01/27/04						
Ethanol	173	100	ug/l	200		86.5	31-143	2.34	20	
tert-Butyl alcohol	51.3	20	"	50.0		103	56-131	3.82	20	
Methyl tert-butyl ether	10.9	0.50	"	10.0		109	63-137	0.913	20	
Di-isopropyl ether	10.8	0.50	"	10.0		108	76-130	0.922	20	
Ethyl tert-butyl ether	11.4	0.50	"	10.0		114	81-121	0.881	20	
tert-Amyl methyl ether	10.8	0.50	"	10.0		108	82-140	3.77	20	
1,2-Dichloroethane	11.5	0.50	"	10.0		115	77-136	0.866	20	
1,2-Dibromoethane (EDB)	12.0	0.50	"	10.0		120	77-132	0.830	20	
Benzene	10.8	0.50	"	10.0		108	69-124	1.87	20	
Toluene	10.8	0.50	"	10.0		108	78-129	1.87	20	
Ethylbenzene	11.2	0.50	"	10.0		112	84-132	1.80	20	
Xylenes (total)	33.0	0.50	"	30.0		110	83-137	2.76	20	
Surrogate: 1,2-Dichloroethane-d4	*4.90*		*"*	*5.00*		*98.0*	*78-129*			
Laboratory Control Sample Dup (4A27006-BSD2)				Prepared & Analyzed: 01/27/04						
Methyl tert-butyl ether	9.12	0.50	ug/l	9.92		91.9	63-137	4.37	20	
Benzene	5.55	0.50	"	6.40		86.7	69-124	5.75	20	
Toluene	33.5	0.50	"	29.7		113	78-129	3.96	20	
Ethylbenzene	8.07	0.50	"	6.96		116	84-132	1.25	20	
Xylenes (total)	39.8	0.50	"	33.7		118	83-137	0.504	20	
Gasoline Range Organics	396	50	"	440		90.0	70-113	4.12	9	
Surrogate: 1,2-Dichloroethane-d4	*5.10*		*"*	*5.00*		*102*	*78-129*			

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URS Corporation [Arco]	Project: BP Heritage #11102, Oakland, CA	MNA0473
500 12th Street, Suite 200	Project Number: N/P	**Reported:**
Oakland CA, 94607	Project Manager: Leonard Niles	01/30/04 10:40

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4A27006 - EPA 5030B P/T										
Matrix Spike (4A27006-MS1)	**Source: MNA0462-01**			Prepared: 01/27/04 Analyzed: 01/28/04						
Ethanol	1510	1000	ug/l	2000	ND	75.5	31-143			
tert-Butyl alcohol	569	200	"	500	ND	114	56-131			
Methyl tert-butyl ether	650	5.0	"	100	540	110	63-137			
Di-isopropyl ether	109	5.0	"	100	ND	109	76-130			
Ethyl tert-butyl ether	115	5.0	"	100	ND	115	81-121			
tert-Amyl methyl ether	105	5.0	"	100	ND	105	82-140			
1,2-Dichloroethane	117	5.0	"	100	ND	117	77-136			
1,2-Dibromoethane (EDB)	117	5.0	"	100	ND	117	77-132			
Benzene	110	5.0	"	100	1.9	108	69-124			
Toluene	105	5.0	"	100	ND	105	78-129			
Ethylbenzene	102	5.0	"	100	ND	102	84-132			
Xylenes (total)	305	5.0	"	300	ND	102	83-137			
Surrogate: 1,2-Dichloroethane-d4	*5.28*		*"*	*5.00*		*106*	*78-129*			
Matrix Spike Dup (4A27006-MSD1)	**Source: MNA0462-01**			Prepared: 01/27/04 Analyzed: 01/28/04						
Ethanol	1850	1000	ug/l	2000	ND	92.5	31-143	20.2	20	QR-02
tert-Butyl alcohol	614	200	"	500	ND	123	56-131	7.61	20	
Methyl tert-butyl ether	641	5.0	"	100	540	101	63-137	1.39	20	
Di-isopropyl ether	108	5.0	"	100	ND	108	76-130	0.922	20	
Ethyl tert-butyl ether	113	5.0	"	100	ND	113	81-121	1.75	20	
tert-Amyl methyl ether	104	5.0	"	100	ND	104	82-140	0.957	20	
1,2-Dichloroethane	119	5.0	"	100	ND	119	77-136	1.69	20	
1,2-Dibromoethane (EDB)	116	5.0	"	100	ND	116	77-132	0.858	20	
Benzene	104	5.0	"	100	1.9	102	69-124	5.61	20	
Toluene	106	5.0	"	100	ND	106	78-129	0.948	20	
Ethylbenzene	107	5.0	"	100	ND	107	84-132	4.78	20	
Xylenes (total)	319	5.0	"	300	ND	106	83-137	4.49	20	
Surrogate: 1,2-Dichloroethane-d4	*5.20*		*"*	*5.00*		*104*	*78-129*			

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URS Corporation [Arco]	Project: BP Heritage #11102, Oakland, CA	MNA0473
500 12th Street, Suite 200	Project Number: N/P	**Reported:**
Oakland CA, 94607	Project Manager: Leonard Niles	01/30/04 10:40

Notes and Definitions

QR-02	The RPD result exceeded the control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

(MNA0473

Page 1 of 1

Chain of Custody Record

bp

Project Name 11102 GWM
BP BU/GEM CO Portfolio Retail
BP Laboratory Contract Number: Atlantic Richfield Company
Date: 1/14/04 Requested Due Date (mm/dd/yy) 14 day TAT

On-site Time: 1250 Temp: 59°
Off- site Time: 1420 Temp: 59°
Sky Conditions: Cloudy
Meteorological Events: Showers
Wind Speed: N/A Direction: NA

Send To:	BP/GEM Facility No.: 11102	Consultant/Contractor: URS
Lab Name: SEQUOIA	BP/GEM Facility Address: 100 MCARTHUR BLVD., OAKLAND, CA	Address: 500 12th St., Ste. 200
Lab Address: 885 Jarvis Dr.	Site ID No. 11102	Oakland, CA 94609-4014
Morgan Hill, CA 95037	Site Lat/Long:	e-mail EDD: donna.cosper@URSCorp.com
	California Global ID #: T0600100908	Consultant/Contractor Project No.:
Lab PM Theresa Allen	BP/GEM PM Contact: PAUL SUPPLE	Consultant Tele/Fax: 510-893-3600/510-874-3268
Tele/Fax: 408-778-9600 / 408-782-6308	Address: P.O. Box 6549	Consultant/Contractor PM: Leonard Niles
Report Type & QC Level: 1 Send EDF Reports	Moraga, CA 94570	Invoice to: Consultant/Contractor or BP/GEM (Circle one)
BP/GEM Account No.: 400-6-21124	Tele/Fax: 925-299-8891/925-299-8872	BP/GEM Work Release No:

Lab Bottle Order No:

Item No.	Sample Description	Time	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Sediments	Matrix: Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	Preservatives: H_2SO_4	Preservatives: HNO_3	Preservatives: HCl	Requested Analysis: TPH-G / BTEX (8015/8021 or 8260)	Requested Analysis: TPH-D (8015)	Requested Analysis: MTBE (8021)	Requested Analysis: MTBE (8260)	Requested Analysis: MTBE, TAME, ETBE, DIPE, TBA (8260)	Requested Analysis: 1,2-DCA & EDB (8260)	Requested Analysis: Ethanol (8260)	Sample Point Lat/Long and Comments
1	MW-1	1325		X			01	3				X	X				X	X	X	
2	MW-2	1340		X			02	3				X	X				X	X	X	
3	MW-3	1335		X			03	3				X	X				X	X	X	
4	TB-01142004	1530		X			04	3				X	X					JP		On Hold
5																				
6																				
7																				
8																				
9																				
10																				

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Matthew Pogue / Pete Cor						
Sampler's Company: Blaine Tech Services		1/14/04	1416		1/14/04	1416
Shipment Date:		1/14/04	1550		1/15/04	1551
Shipment Method:						
Shipment Tracking No:						

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

Temperature Blank Yes X No Cooler Temperature on Receipt 6 °F/C Trip Blank Yes X No

White Copy - Laboratory / Yellow Copy - BP/GEM / Pink Copy - Consultant/Contractor

BP COC Rev. 1 2/501

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: BP
REC.-BY (PRINT): TL
WORKORDER: MNA0473

DATE REC'D AT LAB: 1/15/04
TIME REC'D AT LAB: 1650
DATE LOGGED IN: 1-16-04

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

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) (Present / Absent) Intact / Broken*	01		MW-1	(3) VOA	HCl	L	1/14/04	3316070
2. Chain-of-Custody (Present) / Absent*	02		MW-2	"	"	"	"	"
3. Traffic Reports or Packing List: Present / (Absent)	03		MW-3	"	"	"	"	"
4. Airbill: Airbill / Sticker (Present) / Absent	04		TB	(2) "	"	"	"	"
5. Airbill #:								
6. Sample Labels: (Present) / Absent								
7. Sample IDs: (Listed) / Not Listed on Chain-of-Custody								
8. Sample Condition: (Intact) / Broken* / Leaking*								
9. Does information on chain-of-custody, traffic reports and sample labels agree? (Yes) / No*								
10. Sample received within hold time: (Yes) / No*								
11. Adequate sample volume received? (Yes) / No*								
12. Proper Preservatives used: (Yes) / No*								
13. Temp Rec. at Lab: 5C Is temp 4 +/-2°C? (Yes) / No**								

(Acceptance range for samples requiring thermal pres.)
**Exception (if any): METALS / OFF ON ICE
*Problem COC

1/15/04 TL

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

*.xls
*1(10/03)
*3 (03/10/03)

ATTACHMENT C

EDCC REPORT AND EDF/GEOWELL SUBMITTAL CONFIRMATION

Error Summary Log

02/02/04

EDF 1.2i All files present in deliverable.

Laboratory:	Sequoia Analytical Laboratories, Inc., Morgan Hill, CA
Project Name:	BP Heritage #11102, Oakla
Work Order Number:	MNA0473
Global ID:	T0600100908
Lab Report Number:	MNA0473013020041040

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run Sub
MNA04730130200 41040	MW-1	MNA047301	W	CS	8260TPH	SW5030B	01/14/04	01/27/04	01/27/04	4A27006	1
MNA04730130200 41040	MW-2	MNA047302	W	CS	8260TPH	SW5030B	01/14/04	01/27/04	01/27/04	4A27006	1
MNA04730130200 41040	MW-3	MNA047303	W	CS	8260TPH	SW5030B	01/14/04	01/27/04	01/27/04	4A27006	1
		MNA046201	W	NC	8260TPH	SW5030B	/ /	01/27/04	01/28/04	4A27006	1
		4A27006BSD1	WQ	BD1	8260TPH	SW5030B	/ /	01/27/04	01/27/04	4A27006	1
		4A27006BSD2	WQ	BD2	8260TPH	SW5030B	/ /	01/27/04	01/27/04	4A27006	1
		4A27006BS1	WQ	BS1	8260TPH	SW5030B	/ /	01/27/04	01/27/04	4A27006	1
		4A27006BS2	WQ	BS2	8260TPH	SW5030B	/ /	01/27/04	01/27/04	4A27006	1
		4A27006BLK1	WQ	LB1	8260TPH	SW5030B	/ /	01/27/04	01/27/04	4A27006	1
		4A27006MS1	W	MS1	8260TPH	SW5030B	/ /	01/27/04	01/28/04	4A27006	1
		4A27006MSD1	W	SD1	8260TPH	SW5030B	/ /	01/27/04	01/28/04	4A27006	1

EDFSAMP: Error Summary Log

02/02/04

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

EDFTEST: Error Summary Log

02/02/04

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

EDFRES: Error Summary Log

02/02/04

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

AB2886 Electronic Delivery

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

Your EDF file has been succcessfully uploaded!

Confirmation Number: 7249339401
Date/Time of Submittal: 2/2/2004 5:29:31 PM
Facility Global ID: T0600100908
Facility Name: BP
Submittal Title: 1Q 2004 QMR
Submittal Type: GW Monitoring Report

Logged in as URSCORP-OAKLAND (CONTRACTOR)

CONTACT SITE ADMINISTRATOR.

AB2886 Electronic Delivery

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

UPLOADING A GEO_WELL FILE

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

Submittal Title:	**1Q 2004 Site 11102 GeoWell**
Submittal Date/Time:	**2/2/2004 5:32:50 PM**
Confirmation Number:	**8981220841**

Back to Main Menu

Logged in as URSCORP-OAKLAND (CONTRACTOR)

CONTACT SITE ADMINISTRATOR.

ATTACHMENT D

WELL REPAIR DATA

REPAIR DATA SHEET

Client Arco/BP 11107 Date 12/30/03

Site Address 100 MacArthur Blvd., Oakland, CA

Job Number 031230-MG1 Technician MG

Repair Location MW-2	Repair Location MW-3
Deficiencies Corrected Wellbox rim detached. Replaced w/ new W.B., 4 bags concrete	Deficiencies Corrected Dolphin lock. Cap rusted stuck. Added new 4" cap + lock.
Materials Used W.B., 4 bags concrete	Materials Used 4" cap, lock
Repair Location	Repair Location
Deficiencies Corrected	Deficiencies Corrected
Materials Used	Materials Used
Repair Location	Repair Location
Deficiencies Corrected	Deficiencies Corrected
Materials Used	Materials Used