RO 223

Shell Oil Products US

February 5, 2004

Amir K. Gholami
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Alameda County
FEB 10 2004

Subject: **Shell-branded Service Station**
540 Hegenberger Road
Oakland, California

Dear Mr. Gholami:

Attached for your review and comment is a copy of the *Fourth Quarter 2003 Monitoring Report* for the above referenced site. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

As always, please feel free to contact me directly at (559) 645-9306 with any questions or concerns.

Sincerely,

Shell Oil Products US

Karen Petryna

Karen Petryna
Sr. Environmental Engineer

20945 S. Wilmington Ave., Carson, CA 90810 Phone (559) 645-9306 Facsimile (559) 645-5643

CAMBRIA

February 5, 2004

Amir K. Gholami, REHS
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Fourth Quarter 2003 Monitoring Report**
Shell-branded Service Station
540 Hegenberger Road
Oakland, California
Incident #98995752
Cambria Project #246-0414-002

FEB 10 2004

Dear Mr. Gholami:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell), Cambria Environmental Technology, Inc. (Cambria) is submitting this groundwater monitoring report in accordance with the reporting requirements of 23 CCR 2652d.

FOURTH QUARTER 2003 ACTIVITIES

Groundwater Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged water levels, sampled the monitoring wells, calculated groundwater elevations, and compiled the analytical data. The adjacent Arco station located at 566 Hegenberger Road was sampled concurrently. Cambria prepared a vicinity map, which includes previously submitted well survey information (Figure 1) and a groundwater elevation contour map (Figure 2). Blaine's report, presenting the laboratory reports and supporting field documents is included as Attachment A. Data from the Arco site is presented on Figure 2 and included as Attachment B.

Historical Interim Remediation Summary: From July 1999 through June 2000, groundwater extraction (GWE) was performed at the site to remove dissolved-phase hydrocarbons and methyl tert-butyl ether (MTBE) from beneath the site. From June through December 2000, dual-phase vacuum extraction (DVE) was conducted to enhance GWE and to extract vapor-phase hydrocarbon and MTBE from the soil as well. DVE was discontinued after the December 2000 event, and monthly DVE events were resumed in May 2001. Due to low vapor mass-removal rates, DVE was discontinued in October 2001, and monthly GWE was re-initiated. Wells MW-1 and MW-3 and tank backfill well BW-D were used for extraction until April 2002, when

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extraction from the tank backfill was switched from well BW-D to BW-B due to higher historic MTBE concentrations observed in this well. A total of 13.7 lbs. of MTBE was removed from the subsurface during DVE and GWE events. Monthly GWE events were discontinued in March 2003 when construction of a fixed GWE system was initiated.

GWE System: During the fourth quarter, Cambria continued to operate the GWE system. Monitoring wells MW-1, MW-3, and MW-5, and tank backfill well BW-B were used as extraction wells. Extraction from well BW-B was discontinued on December 18, 2003 due to decreasing MTBE concentrations in groundwater in the tank backfill. Table 1 summarizes system analytical data. Groundwater level measurements and flow meter readings have been recorded at various times of operation to assess system production. Table 2 summarizes the field data and system operation and calculates mass removal. Based on the field data, the GWE system operated at average flow rates ranging from approximately 0.20 to 0.51 gallons per minute.

Through January 6, 2004, a total of 214,611 gallons of groundwater has been extracted. A total of 18.1 pounds of MTBE has been recovered. Mass removal data are presented in Table 2.

Influent samples collected from the GWE system show a decreasing trend in MTBE concentrations since system operation was initiated. Data from the most recent influent sampling event on January 6, 2004 show an MTBE concentration which has decreased to 240 parts per billion (ppb), a decrease of two orders of magnitude from its historical maximum of 29,000 ppb shortly after system startup. Groundwater monitoring well sampling data also demonstrates decreasing trends in MTBE concentrations.

ANTICIPATED FIRST QUARTER 2004 ACTIVITIES

Groundwater Monitoring: Blaine will gauge water levels, sample the monitoring wells using the non-purging method, and tabulate the data. In addition, Blaine will sample tank backfill well BW-D. The sampling event will take place concurrently with sampling at the Arco station located at 566 Hegenberger Road. Arco and Shell will exchange water level and analytical data on these events. Cambria will prepare a report documenting those activities.

GWE System: We will operate the system under the conditions of the East Bay Municipal Utility District discharge permit.

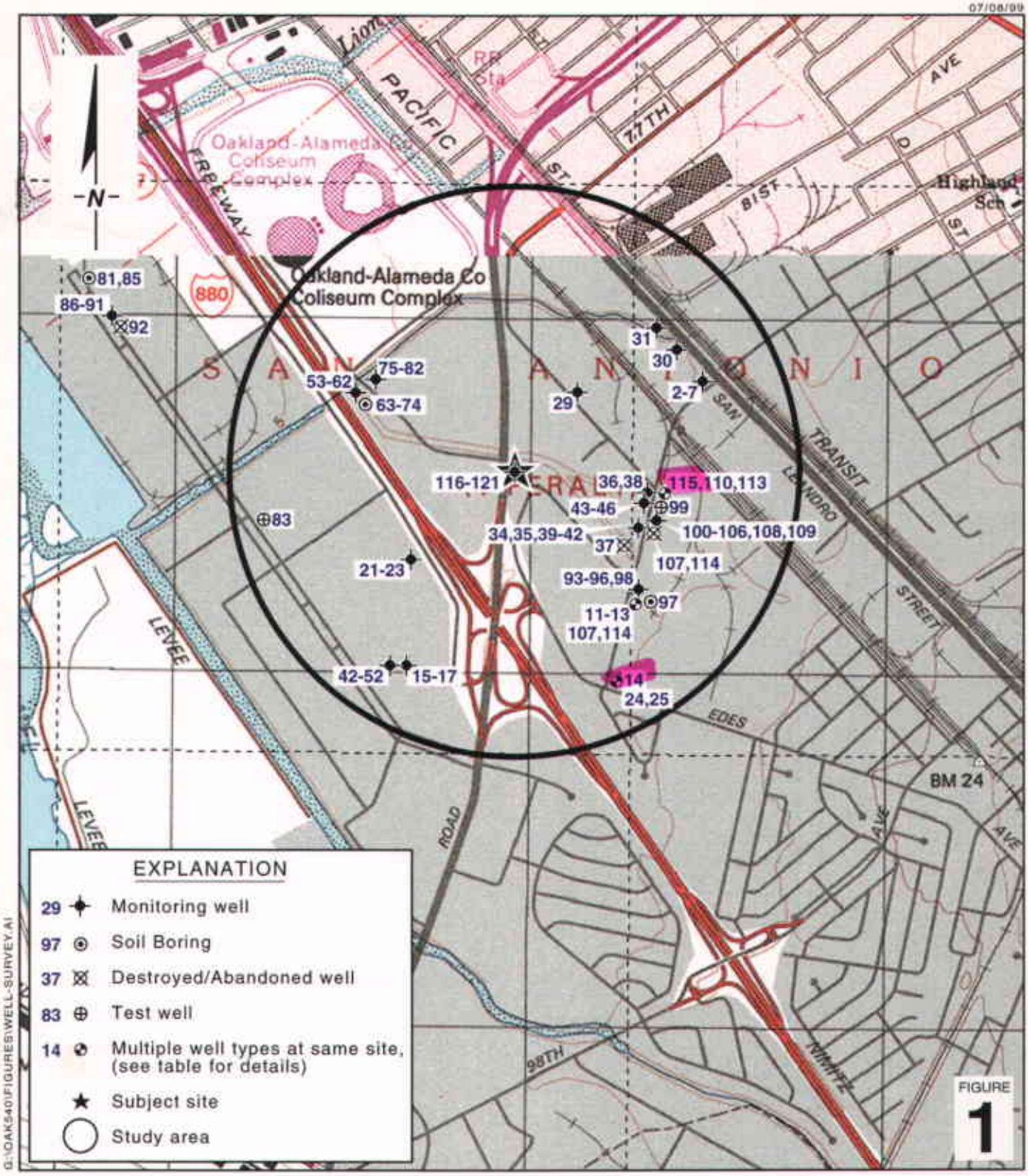

FIGURE 1

0 1/8 1/4 1/2 1 MILES

SCALE 1:1/4

Shell-branded Service Station
540 Hegenberger Road
Oakland, California
Incident #98995752

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Area Well Survey

(1/2-Mile Radius)

02/05/04

Groundwater Elevation Contour Map

December 3, 2003

EXPLANATION

- MW-2 — Shell monitoring well
- BW-A — Tank backfill well
- MW-1 — Well used for groundwater extraction
- MW-1 — ARCO monitoring well
- RW-1 — ARCO recovery well
- SB-1 — Soil boring location (March 1998)
- SB-D — Soil boring location (July 1998)
- SB-E — Soil boring location (August 2000)
- C-1 — Canal sampling location
- FH — Fire hydrant
- FL = 5.0' — Flowline elevation (msl)
- Sanitary sewer main (SS)
- Water line (W)
- Storm drain (SD)
- Telephone line (T)
- Flow direction
- NS — Not surveyed
- Groundwater flow direction
- xx.xx — Groundwater elevation contour, in feet above msl, approximately located, dashed where inferred

Well designation
ELEV — Groundwater elevation, in feet above msl
Benzene / MTBE — Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8260.

HEGENBERGER ROAD

Shell-branded Service Station
540 Hegenberger

ARCO Service Station #4494
566 Hegenberger

EDES AVE

COLISEUM WAY

ENTERPRISE WAY

Canal C-1

Former W/O UST

AM/PM Mini-Mart

Burger King

Jack in the Box Restaurant

Days Inn

Laborers' International Union

Remediation compound

Remediation piping

carwash

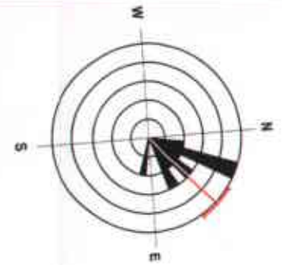
dispensers

building

PG&E Vault

MW-3 <-5.32 <0.50 180
BW-D NS 110 560
MW-2 0.24 <2.5 99
MW-7 1.65 <0.50 4.2
MW-1 3.46 2.6 260
MW-1 <-7.83 <13 3,600
MW-5 -6.76 <0.50 70
MW-4 1.44 <0.50 15
MW-4 3.70 <0.50 - 9/22/03 <0.50 - 9/22/03
MW-5 4.07 <0.50 - 9/22/03 <0.50 - 9/22/03
MW-6 4.29 <0.50 - 9/22/03 <0.50 - 9/22/03
MW-3 2.18 <0.50 - 9/22/03 3.9 - 9/22/03
RW-1 3.92 <0.50 <0.50
MW-2 (destroyed 12/92)

SB-1, SB-2, SB-3, SB-4, SB-5, SB-D, SB-E, SB-F, SB-G, BW-A, BW-B, BW-C, BW-D, SD-1, SD-2



Shell Groundwater Gradient Direction
August 1998 through March 2003
(20 events prior to groundwater extraction)

0 20 40 80
Scale (ft)

FIGURE
2

Shell-branded Service Station
540 Hegenberger Road
Oakland, California
Incident #98995752

CAMBRIA

G:\OAKLAND\540HEGENBERGER\FIGURES\540M03.DWG

Table 2: Groundwater Extraction - Operation and Mass Removal Data - Shell-branded Service Station, Incident #98995752, 540 Hegenberger Road , Oakland, CA

			Period			TPHg			Benzene			MTBE		
Site Visit (mm/dd/yy)	Hour Meter (hours)	Flow Meter Reading (gal)	Period Volume (gal)	Operational Flow Rate (gpm)	Cumulative Volume (gal)	TPHg Conc. (ppb)	Period Removal (pounds)	Cumulative Removal (pounds)	Benzene Conc. (ppb)	Period Removal (pounds)	Cumulative Removal (pounds)	MTBE Conc. (ppb)	Period Removal (pounds)	Cumulative Removal (pounds)
04/28/03	3.3	840	0	0.00	0	<1,000	0.000	0.000	<10	0.000	0.000	2,700	0.000	0.000
05/02/03	101.3	6,680	5,840	0.99	5,840		0.024	0.024		0.000	0.000		0.132	0.132
05/12/03	341.2	23,885	17,205	1.20	23,045	<10,000	0.718	0.742	<100	0.007	0.007	21,000	3.015	3.146
05/27/03	699.9	45,085	21,200	0.99	44,245	<10,000	0.885	1.627	<100	0.009	0.016	29,000	5.130	8.277
06/09/03	1011.8	58,453	13,368	0.71	57,613	<25,000	1.394	3.021	<250	0.014	0.030	20,000	2.231	10.507
06/23/03	1347.2	67,082	8,629	0.43	66,242	<500	0.018	3.039	<5.0	0.000	0.030	1,300	0.094	10.601
07/08/03	1706.9	80,092	13,010	0.60	79,252	<1,000	0.054	3.093	<10	0.001	0.031	2,000	0.217	10.818
07/25/03	2113.6	97,580	17,488	0.72	96,740	<500	0.036	3.130	<50	0.004	0.035	16,000	2.335	13.153
08/05/03	2136.0	98,536	956	0.71	97,696	<5,000	0.020	3.150	<50	0.000	0.035	11,000	0.088	13.241
08/19/03	2473.8	114,245	15,709	0.78	113,405	<10,000	0.655	3.805	<100	0.007	0.041	13,000	1.704	14.945
09/05/03	2881.3	125,020	10,775	0.44	124,180	<5,000	0.225	4.030	<50	0.002	0.044	8,900	0.800	15.745
09/19/03	3218.8	136,594	11,574	0.57	135,754	<2,000	0.097	4.126	<20	0.001	0.045	6,900	0.666	16.411
10/01/03	3503.6	145,329	8,735	0.51	144,489	<2,500	0.091	4.218	<25	0.001	0.045	5,300	0.386	16.798
10/17/03	3821.0	154,978	9,649	0.51	154,138		0.101	4.318		0.001	0.046		0.427	17.224
10/31/03	4155.5	165,292	10,314	0.51	164,452		0.108	4.426		0.001	0.048		0.456	17.681
11/14/03	4299.6	171,405	6,113	0.71	170,565	<1,300	0.033	4.459	20	0.001	0.049	1,300	0.066	17.747
11/19/03	4300.4	171,405	0	0.00	170,565		0.000	4.459		0.000	0.049		0.000	17.747
11/26/03	4468.3	179,248	7,843	0.78	178,408		0.043	4.502		0.001	0.050		0.085	17.832
12/02/03	4614.1	186,020	6,772	0.77	185,180	<1,300	0.037	4.538	45	0.003	0.052	1,200	0.068	17.900
12/18/03	5000.8	205,130	19,110	0.82	204,290		0.104	4.642		0.007	0.060		0.191	18.091
01/02/04	5361.9	209,447	4,317	0.20	208,607		0.023	4.665		0.002	0.061		0.043	18.134
01/06/04	5451.1	210,081	634	0.12	209,241	<250	0.001	4.666	<2.5	0.000	0.061	240	0.001	18.136
		Total Extracted Volume=		**214,611**		**Total Pounds Removed:**		**4.672**	**Total Pounds Removed:**		**0.061**	**Total Pounds Removed:**		**18.1**
		Average Period Operational Flow Rate=		**0.61**		**Total Gallons Removed:**		**0.76**	**Total Gallons Removed:**		**0.010**	**Total Gallons Removed:**		**2.94**

Abbreviations & Notes:

TPHg = Total purgeable hydrocarbons as gasoline
MTBE = Methyl tert-butyl ether
Conc. = Concentration
ppb = Parts per billion, equivalent to µg/L
µg/L = Micrograms per liter
L = Liter gal = Gallon g = Gram

Table 2: Groundwater Extraction - Operation and Mass Removal Data - Shell-branded Service Station, Incident #98995752, 540 Hegenberger Road , Oakland, CA

		Period				TPHg			Benzene			MTBE		
Site Visit (mm/dd/yy)	Hour Meter (hours)	Flow Meter Reading (gal)	Period Volume (gal)	Operational Flow Rate (gpm)	Cumulative Volume (gal)	TPHg Conc. (ppb)	Period Removal (pounds)	Cumulative Removal (pounds)	Benzene Conc. (ppb)	Period Removal (pounds)	Cumulative Removal (pounds)	MTBE Conc. (ppb)	Period Removal (pounds)	Cumulative Removal (pounds)

Mass removed based on the formula: volume extracted (gal) x Concentration (µg/L) x (g/10^6µg) x (pound/453.6g) x (3.785 L/gal)
When constituents are not detected, the concentration is assumed to be equal to half the detection limit in subsequent calculations.
Volume removal data based on the formula: mass (pounds) x (density)$^{-1}$ (cc/g) x 453.6 (g/pound) x (L/1000 cc) * (gal/3.785 L)
Density inputs: TPHg = 0.73 g/cc, TPHd = 0.87 g/cc, MTBE = 0.74 g/cc
TPHg, BTEX, and MTBE analyzed by EPA Method 8260B
System started on 4/28/03 with 3.3hours and 880 gallons on flow meter.

ATTACHMENT A

Blaine Groundwater Monitoring Report and Field Notes

BLAINE
TECH SERVICES, INC.

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(408) 573-0555 PHONE
CONTRACTOR'S LICENSE #746684
www.blainetech.com

December 17, 2003

Karen Petryna
Shell Oil Products US
P.O. Box 7869
Burbank, CA 91510-7869

Fourth Quarter 2003 Groundwater Monitoring at
Shell-branded Service Station
540 Hegenberger Road
Oakland, CA

Monitoring performed on December 3, 2003

Groundwater Monitoring Report **031203-DA-1**

This report covers the routine monitoring of groundwater wells at this Shell-branded facility. In accordance with standard procedures that conform to Regional Water Quality Control Board requirements, routine field data collection includes depth to water, total well depth, thickness of any separate immiscible layer, water column volume, calculated purge volume (if applicable), elapsed evacuation time (if applicable), total volume of water removed (if applicable), and standard water parameter instrument readings. Sample material is collected, contained, stored, and transported to the laboratory in conformance with EPA standards. Purgewater (if applicable) is, likewise, collected and transported to the Martinez Refining Company.

Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL CONCENTRATIONS**. The full analytical report for the most recent samples and the field data sheets are attached to this report.

At a minimum, Blaine Tech Services, Inc. field personnel are certified on completion of a forty-hour Hazardous Materials and Emergency Response training course per 29 CFR 1910.120. Field personnel are also enrolled in annual eight-hour refresher courses.

Blaine Tech Services, Inc. conducts sampling and documentation assignments of this type as an independent third party. Our activities at this site consisted of objective data and sample collection only. No interpretation of analytical results, defining of hydrological conditions or formulation of recommendations was performed.

Please call if you have any questions.

Yours truly,

Leon Gearhart
Project Coordinator

LG/jt

attachments: Cumulative Table of WELL CONCENTRATIONS
Certified Analytical Report
Field Data Sheets

cc: Anni Kreml
Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A
Oakland, CA 94608

WELL CONCENTRATIONS
Shell-branded Service Station
540 Hegenberger Road
Oakland, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-1 (a)	08/26/1998	2,700	28	55	59	39	33,000	NA	10.54	7.91	2.63	1.8
MW-1 (b)	08/26/1998	<1,000	22	<10	<10	<10	17,000	NA	10.54	7.91	2.63	2.2
MW-1	12/28/1998	<5,000	<50.0	<50.0	<50.0	<50.0	153,000	33,000	10.54	8.75	1.79	1.9
MW-1	03/29/1999	<2,000	<20.0	<20.0	<20.0	<20.0	693,000	NA	10.54	8.32	2.22	2.0
MW-1	06/22/1999	20,000	<200	<200	<200	<200	150,000	NA	10.54	9.05	1.49	1.7
MW-1	09/30/1999	<2,500	<25.0	<25.0	<25.0	<25.0	30,900	NA	10.54	8.35	2.19	2.6
MW-1	11/19/1999	NA	NA	NA	NA	NA	NA	NA	10.54	9.58	0.96	NA
MW-1	11/24/1999	NA	NA	NA	NA	NA	NA	NA	10.54	9.65	0.89	NA
MW-1	12/02/1999	NA	NA	NA	NA	NA	NA	NA	10.54	9.55	0.99	NA
MW-1	12/10/1999	<50.0	29.7	<20.0	<20.0	<20.0	76,300	NA	10.54	8.86	1.68	1.2
MW-1	03/02/2000	<2,500	<25.0	<25.0	<25.0	<25.0	27,600	NA	10.54	8.83	1.71	3.2
MW-1	06/08/2000	<2,000	<20.0	<20.0	<20.0	<20.0	59,000	67,600	10.54	7.78	2.76	1.9
MW-1	09/05/2000	<10,000	411	<100	<100	<100	71,100	115,000e	10.54	7.84	2.70	NA
MW-1	12/15/2000	35,600	1,310	<50.0	<50.0	<50.0	136,000	f	10.54	7.65	2.89	NA
MW-1	03/09/2001	<10,000	1,390	<100	<100	<100	89,600	164,000	10.54	6.44	4.10	NA
MW-1	06/27/2001	<5,000	<50	<50	<50	<50	NA	19,000	10.54	8.46	2.08	NA
MW-1	09/19/2001	<5,000	<50	<50	<50	<50	NA	52,000	10.54	8.10	2.44	NA
MW-1	12/31/2001	<5,000	<25	<25	<25	<25	NA	17,000	10.54	7.31	3.23	NA
MW-1	03/14/2002	<20,000	<200	<200	<200	<200	NA	60,000	10.54	7.68	2.86	NA
MW-1	06/25/2002	<5,000	<50	<50	<50	<50	NA	34,000	10.54	8.40	2.14	NA
MW-1	09/19/2002	<2,500	<25	<25	<25	<25	NA	18,000	10.52	8.58	1.94	NA
MW-1	12/12/2002	<5,000	<50	<50	<50	<50	NA	30,000	10.52	8.41	2.11	NA
MW-1	01/02/2003	NA	<0.50	<0.50	<0.50	<1.0	NA	NA	10.52	7.45	3.07	NA
MW-1	03/20/2003 g	3,800	<25	<25	<25	<25	5,500	NA	10.52	8.21	2.31	NA
MW-1	06/23/2003	<10,000	<100	<100	<100	<200	NA	35,000	10.52	9.02	1.50	NA
MW-1	09/22/2003	<5,000	<50	<50	<50	<100	NA	15,000	10.52	15.74	-5.22	NA
MW-1	**12/03/2003**	**<1,300**	**<13**	**<13**	**<13**	**<25**	**NA**	**3,600**	**10.52**	**18.35 h**	**NA**	**NA**

WELL CONCENTRATIONS
Shell-branded Service Station
540 Hegenberger Road
Oakland, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-2 (a)	08/26/1998	<250	3.2	<2.5	<2.5	<2.5	4,000	NA	9.21	7.18	2.03	2.4
MW-2 (b)	08/26/1998	<250	3.1	<2.5	<2.5	<2.5	4,800	NA	9.21	7.18	2.03	2.7
MW-2 (D)(b)	08/26/1998	<250	4.8	<2.5	<2.5	6.0	3,300	NA	9.21	7.18	2.03	2.7
MW-2	12/28/1998	<50.0	<0.500	<0.500	<0.500	<0.500	28.8	NA	9.21	7.34	1.87	2.1
MW-2	03/29/1999	235	<0.500	<0.500	<0.500	3.4	101	NA	9.21	6.85	2.36	2.0
MW-2	06/22/1999	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	9.21	7.10	2.11	1.9
MW-2	09/30/1999	<50.0	<0.500	<0.500	<0.500	<0.500	1,700	NA	9.21	8.06	1.15	1.0
MW-2	12/10/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	9.21	8.61	0.60	1.4
MW-2	03/02/2000	<500	11.5	<5.00	<5.00	<5.00	5,280	NA	9.21	6.33	2.88	0.4
MW-2	06/08/2000	<50.0	0.670	<0.500	<0.500	<0.500	3,160	NA	9.21	6.87	2.34	1.6
MW-2	09/05/2000	<1,000	<10.0	<10.0	<10.0	<10.0	9,600	NA	9.21	6.79	2.42	NA
MW-2	12/15/2000	<200	<2.00	<2.00	<2.00	<2.00	6,320	NA	9.21	6.76	2.45	NA
MW-2	03/09/2001	<500	<5.00	<5.00	<5.00	<5.00	17,200	NA	9.21	6.28	2.93	NA
MW-2	06/27/2001	<100	1.4	<1.0	<1.0	<2.0	NA	470	9.21	7.12	2.09	NA
MW-2	09/19/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	330	9.21	7.17	2.04	NA
MW-2	12/31/2001	<100	<1.0	<1.0	<1.0	<1.0	NA	420	9.21	6.24	2.97	NA
MW-2	03/14/2002	<250	4.5	3.3	<2.5	<2.5	NA	1,600	9.21	6.72	2.49	NA
MW-2	06/25/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	110	9.21	7.23	1.98	NA
MW-2	09/19/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	90	9.19	7.48	1.71	NA
MW-2	12/12/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	170	9.19	7.33	1.86	NA
MW-2	03/20/2003 g	56	<0.50	<0.50	<0.50	<0.50	58	NA	9.19	7.65	1.54	NA
MW-2	06/23/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	44	9.19	8.72	0.47	NA
MW-2	09/22/2003	<250	<2.5	<2.5	<2.5	<5.0	NA	37	9.19	8.84	0.35	NA
MW-2	**12/03/2003**	**<250**	**<2.5**	**<2.5**	**<2.5**	**<5.0**	**NA**	**99**	**9.19**	**8.95**	**0.24**	**NA**
MW-3 (a)	08/26/1998	2,300	180	330	<0.50	420	44,000	NA	9.45	6.52	2.93	1.8
MW-3 (b)	08/26/1998	<50	<0.50	<0.50	<0.50	<0.50	52,000	75,000	9.45	6.52	2.93	2.3

WELL CONCENTRATIONS
Shell-branded Service Station
540 Hegenberger Road
Oakland, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-3	12/28/1998	<5,00	139	<50.0	<50.0	<50.0	15,100	NA	9.45	6.73	2.72	1.7
MW-3	03/29/1999	52,500	5,500	6,900	1,360	6,250	508,000	630,000 (c)	9.45	6.21	3.24	2.1
MW-3	06/22/1999	58,000	6,600	9,850	1,640	6,950	677,000	653,000	9.45	7.00	2.45	1.3
MW-3	09/30/1999	4,360	121	122	36.1	647	33,700	35,600	9.45	6.84	2.61	0.6
MW-3	11/19/1999	NA	NA	NA	NA	NA	NA	NA	9.45	7.93	1.52	NA
MW-3	11/24/1999	NA	NA	NA	NA	NA	NA	NA	9.45	8.25	1.20	NA
MW-3	12/02/1999	NA	NA	NA	NA	NA	NA	NA	9.45	7.55	1.90	NA
MW-3	12/10/1999	4,220	973	26.3	273	584	88,200	NA	9.45	7.28	2.17	2.5
MW-3	03/02/2000	65,300	5,210	10,300	2,650	15,100	56,800	59,800e	9.45	5.87	3.58	d
MW-3	06/08/2000	72,700	3,570	10,200	2,100	13,400	44,400	NA	9.45	5.32	4.13	1.1
MW-3	09/05/2000	26,100	959	2,910	1,090	5,640	24,000	NA	9.45	5.60	3.85	NA
MW-3	12/15/2000	5,190	438	8.39	483	530	19,100	11,800f	9.45	6.27	3.18	NA
MW-3	03/09/2001	5,880	472	42.2	392	1,290	41,800	NA	9.45	5.71	3.74	NA
MW-3	06/27/2001	9,100	330	79	140	1,600	NA	31,000	9.45	6.88	2.57	NA
MW-3	09/19/2001	790	14	18	17	67	NA	8,100	9.45	6.70	2.75	NA
MW-3	12/31/2001	<5,000	220	<50	86	<50	NA	22,000	9.45	5.92	3.53	NA
MW-3	03/14/2002	<2,500	<25	<25	<25	<25	NA	12,000	9.45	6.25	3.20	NA
MW-3	06/25/2002	<10,000	160	<100	<100	<100	NA	42,000	9.45	6.65	2.80	NA
MW-3	09/19/2002	<10,000	650	<100	280	360	NA	84,000	9.45	6.51	2.94	NA
MW-3	12/12/2002	<10,000	170	<100	<100	<100	NA	45,000	9.45	6.97	2.48	NA
MW-3	01/02/2003	NA	59	<5.0	5.3	<10	NA	NA	9.45	5.90	3.55	NA
MW-3	03/20/2003 g	5,100	<50	<50	<50	<50	4,400	NA	9.45	6.87	2.58	NA
MW-3	06/23/2003	<5,000	<50	<50	<50	<100	NA	8,100	9.45	13.80	-4.35	NA
MW-3	09/22/2003	<250	<2.5	4.6	<2.5	<5.0	NA	470	9.45	6.31	3.14	NA
MW-3	**12/03/2003**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**NA**	**180**	**9.45**	**14.77 h**	**NA**	**NA**
MW-4	09/25/2000	NA	NA	NA	NA	NA	NA	NA	9.88	7.64	2.24	NA
MW-4	12/15/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	9.88	7.55	2.33	NA

WELL CONCENTRATIONS
Shell-branded Service Station
540 Hegenberger Road
Oakland, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
MW-4	03/09/2001	<50.0	<0.500	0.730	<0.500	0.529	3.16	NA	9.88	7.04	2.84	NA
MW-4	06/27/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	9.88	7.76	2.12	NA
MW-4	09/19/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	9.88	7.69	2.19	NA
MW-4	12/31/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	9.88	7.08	2.80	NA
MW-4	03/14/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	9.88	7.57	2.31	NA
MW-4	06/25/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	9.88	8.50	1.38	NA
MW-4	09/19/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	9.88	8.22	1.66	NA
MW-4	12/12/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	9.88	8.08	1.80	NA
MW-4	03/20/2003 g	<50	<0.50	<0.50	<0.50	<0.50	<5.0	NA	9.88	7.92	1.96	NA
MW-4	06/23/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<5.0	9.88	8.18	1.70	NA
MW-4	09/22/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	16	9.88	8.28	1.60	NA
MW-4	**12/03/2003**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**NA**	**15**	**9.88**	**8.44**	**1.44**	**NA**
MW-5	06/18/2002	NA	NA	NA	NA	NA	NA	NA	NA	8.36	NA	NA
MW-5	06/25/2002	<10,000	<100	<100	<100	<100	NA	60,000	NA	8.30	NA	NA
MW-5	09/19/2002	<2,000	<20	<20	<20	<20	NA	7,200	10.03	8.44	1.59	NA
MW-5	12/12/2002	<5,000	<50	<50	<50	<50	NA	33,000	10.03	8.49	1.54	NA
MW-5	03/20/2003 g	12,000	<50	<50	<50	<50	15,000	NA	10.03	8.23	1.80	NA
MW-5	06/23/2003	<1,000	<10	<10	<10	<20	NA	1,700	10.03	16.70	-6.67	NA
MW-5	09/22/2003	<2,500	<25	<25	<25	<50	NA	4,400	10.03	16.70	-6.67	NA
MW-5	**12/03/2003**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**NA**	**70**	**10.03**	**16.79**	**-6.76**	**NA**
C-1	09/19/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	1.44	NA	NA
C-1	03/29/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	2.59	NA	NA
C-1	06/25/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	3.72	NA	NA
C-1	09/19/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	3.08	NA	NA
C-1	12/12/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	NA	0.64	NA	NA
C-1	03/20/2003 g	<50	<0.50	<0.50	<0.50	<0.50	<5.0	NA	NA	4.61	NA	NA

WELL CONCENTRATIONS
Shell-branded Service Station
540 Hegenberger Road
Oakland, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
SD-1	09/19/2001	Unable to sample		NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-1	03/29/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-1	06/25/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-1	09/19/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-1	12/12/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-1	03/20/2003	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-2	09/19/2001	Unable to sample		NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-2	03/29/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-2	06/25/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-2	09/19/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-2	12/12/2002	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SD-2	03/20/2003	Dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BW-A	06/22/1999	318	<0.50	<0.50	0.590	1.48	4,470	NA	NA	4.71	NA	1.1
BW-A	06/25/2002	<500	<5.0	<5.0	<5.0	18	NA	3,100	NA	5.14	NA	NA
BW-A	09/19/2002	<200	<2.0	<2.0	<2.0	<2.0	NA	<20	NA	7.19	NA	NA
BW-A	12/12/2002	<500	<5.0	<5.0	<5.0	<5.0	NA	2,900	NA	6.40	NA	NA
BW-A	03/20/2003 g	<2,500	<25	<25	<25	<25	<250	NA	NA	5.36	NA	NA
BW-A	06/23/2003	<1,000	<10	<10	<10	<20	NA	<100	NA	10.27	NA	NA
BW-B	06/22/1999	<250	<2.5	<2.5	<2.5	<2.5	8,600	NA	NA	5.90	NA	1.2
BW-B	06/27/2001	<5,000	<50	<50	<50	<50	NA	40,000	NA	5.83	NA	NA
BW-B	12/31/2001	<2,000	<20	<20	<20	<20	NA	9,200	NA	4.19	NA	NA
BW-B	03/14/2002	<2,000	<20	<20	<20	<20	NA	9,400	NA	5.24	NA	NA
BW-B	06/25/2002	<2,000	<20	<20	<20	<20	NA	6,600	NA	6.19	NA	NA
BW-B	09/19/2002	<500	<5.0	<5.0	<5.0	<5.0	NA	<50	NA	8.46	NA	NA

WELL CONCENTRATIONS
Shell-branded Service Station
540 Hegenberger Road
Oakland, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
BW-B	12/12/2002	<500	<5.0	<5.0	<5.0	<5.0	NA	1,700	NA	7.46	NA	NA
BW-B	03/20/2003 g	170	<1.0	<1.0	<1.0	<1.0	190	NA	NA	6.23	NA	NA
BW-B	06/23/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	43	NA	9.95	NA	NA
BW-C	06/22/1999	<50	<0.50	<0.50	<0.50	0.98	11,000	NA	NA	5.91	NA	1.6
BW-C	06/25/2002	<5,000	<50	<50	<50	<50	NA	20,000	NA	6.49	NA	NA
BW-C	09/19/2002	<1,000	<10	<10	<10	<10	NA	400	NA	8.52	NA	NA
BW-C	12/12/2002	<2,000	<20	<20	<20	<20	NA	8,000	NA	7.57	NA	NA
BW-C	03/20/2003 g	270	<1.0	<1.0	<1.0	<1.0	250	NA	NA	6.48	NA	NA
BW-C	06/23/2003	<1,000	<10	<10	<10	<20	NA	170	NA	11.48	NA	NA
BW-D	06/22/1999	<50.0	<0.500	<0.500	<0.500	<0.500	2,190	NA	NA	4.78	NA	1.4
BW-D	06/25/2002	Well inaccessible		NA	NA	NA	NA	NA	NA	NA	NA	NA
BW-D	07/02/2002	<1,000	23	<10	<10	<10	NA	<100	NA	6.36	NA	NA
BW-D	09/19/2002	<250	<2.5	<2.5	<2.5	<2.5	NA	<25	NA	7.25	NA	NA
BW-D	12/12/2002	<5,000	<50	<50	<50	<50	NA	16,000	NA	6.21	NA	NA
BW-D	03/20/2003 g	71	<0.50	<0.50	<0.50	<0.50	55	NA	NA	5.23	NA	NA
BW-D	06/23/2003	<1,000	<10	<10	<10	<20	NA	<100	NA	10.25	NA	NA
BW-D	09/22/2003	<100	<1.0	<1.0	<1.0	<2.0	NA	120	NA	10.18	NA	NA
BW-D	**12/03/2003**	**<1,300**	**110**	**<13**	**<13**	**29**	**NA**	**560**	**NA**	**10.20**	**NA**	**NA**

WELL CONCENTRATIONS
Shell-branded Service Station
540 Hegenberger Road
Oakland, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)

Abbreviations:
TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to June 27, 2001, analyzed by EPA Method 8015.
BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to June 27, 2001, analyzed by EPA Method 8020.
MTBE = Methyl-tertiary-butyl ether
TOC = Top of Casing Elevation
GW = Groundwater
DO = Dissolved Oxygen
ppm = Parts per million
ug/L = Parts per billion
MSL = Mean sea level
ft = Feet
<n = Below detection limit
D = Duplicate sample
NA = Not applicable

Notes:
a = Pre-purge
b = Post purge
c = Lab confirmed MTBE by mistake. MTBE value at MW-1 should have been confirmed instead.
d = DO reading not taken.
e = Sample was analyzed outside of the EPA recommended holding time.
f = The second highest MTBE hit was mistakenly confirmed. MTBE for MW-1 should have been confirmed.
g = On March 20, 2003, all analyses run by EPA Method 8015/8020.
h = Depth to top of pump; pump prevented depth to water measurement.
Site surveyed September 21, 2000, by Virgil Chavez Land Surveying of Vallejo, California.
C-1 is a canal sample location.
SD-1 and SD-2 are storm drains.
Wells MW-1 through MW-5 surveyed January 24 and June 19, 2002, by Virgil Chavez Land Surveying of Vallejo, California.

SEVERN TRENT STL

Submission#: 2003-12-0105

Blaine Tech Services, Inc.

December 16, 2003

1680 Rogers Avenue
San Jose, CA 95112-1105

Attn.: Leon Gearhart

Project#: 031203-DA1
Project: 98995752
Site: 540 Hegenberger Road, Oakland

Dear Mr.Gearhart,

Attached is our report for your samples received on 12/03/2003 14:35
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 01/17/2004 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: vvancil@stl-inc.com

Sincerely,

Vincent Vancil
Project Manager

SEVERN TRENT STL

Submission #: 2003-12-0105

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.
Attn.: Leon Gearhart

1680 Rogers Avenue
San Jose, CA 95112-1105
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 031203-DA1
98995752

Received: 12/03/2003 14:35

Site: 540 Hegenberger Road, Oakland

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-1	12/03/2003 07:30	Water	1
MW-2	12/03/2003 08:59	Water	2
MW-3	12/03/2003 07:35	Water	3
MW-4	12/03/2003 08:25	Water	4
MW-5	12/03/2003 07:45	Water	5
BW-D	12/03/2003 09:17	Water	6

SEVERN TRENT STL

Submission #: 2003-12-0105

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.
Attn.: Leon Gearhart

1680 Rogers Avenue
San Jose, CA 95112-1105
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 031203-DA1
98995752

Received: 12/03/2003 14:35

Site: 540 Hegenberger Road, Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**MW-1**	Lab ID:	2003-12-0105 - 1
Sampled:	12/03/2003 07:30	Extracted:	12/11/2003 12:29
Matrix:	Water	QC Batch#:	2003/12/11-1A.64

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1300	ug/L	25.00	12/11/2003 12:29	
Benzene	ND	13	ug/L	25.00	12/11/2003 12:29	
Toluene	ND	13	ug/L	25.00	12/11/2003 12:29	
Ethylbenzene	ND	13	ug/L	25.00	12/11/2003 12:29	
Total xylenes	ND	25	ug/L	25.00	12/11/2003 12:29	
Methyl tert-butyl ether (MTBE)	3600	13	ug/L	25.00	12/11/2003 12:29	
Surrogate(s)						
1,2-Dichloroethane-d4	108.9	76-130	%	25.00	12/11/2003 12:29	
Toluene-d8	95.0	78-115	%	25.00	12/11/2003 12:29	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue
San Jose, CA 95112-1105
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 031203-DA1
98995752

Received: 12/03/2003 14:35

Site: 540 Hegenberger Road, Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**MW-2**	Lab ID:	2003-12-0105 - 2
Sampled:	12/03/2003 08:59	Extracted:	12/9/2003 11:11
Matrix:	Water	QC Batch#:	2003/12/09-1A.66

Analysis Flag: lm (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	250	ug/L	5.00	12/09/2003 11:11	
Benzene	ND	2.5	ug/L	5.00	12/09/2003 11:11	
Toluene	ND	2.5	ug/L	5.00	12/09/2003 11:11	
Ethylbenzene	ND	2.5	ug/L	5.00	12/09/2003 11:11	
Total xylenes	ND	5.0	ug/L	5.00	12/09/2003 11:11	
Methyl tert-butyl ether (MTBE)	99	2.5	ug/L	5.00	12/09/2003 11:11	
Surrogate(s)						
1,2-Dichloroethane-d4	111.2	76-130	%	5.00	12/09/2003 11:11	
Toluene-d8	97.2	78-115	%	5.00	12/09/2003 11:11	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue
San Jose, CA 95112-1105
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 031203-DA1
98995752

Received: 12/03/2003 14:35

Site: 540 Hegenberger Road, Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**MW-3**	Lab ID:	2003-12-0105 - 3
Sampled:	12/03/2003 07:35	Extracted:	12/9/2003 11:35
Matrix:	Water	QC Batch#:	2003/12/09-1A.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/09/2003 11:35	
Benzene	ND	0.50	ug/L	1.00	12/09/2003 11:35	
Toluene	ND	0.50	ug/L	1.00	12/09/2003 11:35	
Ethylbenzene	ND	0.50	ug/L	1.00	12/09/2003 11:35	
Total xylenes	ND	1.0	ug/L	1.00	12/09/2003 11:35	
Methyl tert-butyl ether (MTBE)	180	0.50	ug/L	1.00	12/09/2003 11:35	
Surrogate(s)						
1,2-Dichloroethane-d4	111.2	76-130	%	1.00	12/09/2003 11:35	
Toluene-d8	94.4	78-115	%	1.00	12/09/2003 11:35	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.
Attn.: Leon Gearhart

1680 Rogers Avenue
San Jose, CA 95112-1105
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 031203-DA1
98995752

Received: 12/03/2003 14:35

Site: 540 Hegenberger Road, Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**MW-4**	Lab ID:	2003-12-0105 - 4
Sampled:	12/03/2003 08:25	Extracted:	12/9/2003 11:59
Matrix:	Water	QC Batch#:	2003/12/09-1A.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/09/2003 11:59	
Benzene	ND	0.50	ug/L	1.00	12/09/2003 11:59	
Toluene	ND	0.50	ug/L	1.00	12/09/2003 11:59	
Ethylbenzene	ND	0.50	ug/L	1.00	12/09/2003 11:59	
Total xylenes	ND	1.0	ug/L	1.00	12/09/2003 11:59	
Methyl tert-butyl ether (MTBE)	15	0.50	ug/L	1.00	12/09/2003 11:59	
Surrogate(s)						
1,2-Dichloroethane-d4	112.9	76-130	%	1.00	12/09/2003 11:59	
Toluene-d8	93.5	78-115	%	1.00	12/09/2003 11:59	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.
Attn.: Leon Gearhart

1680 Rogers Avenue
San Jose, CA 95112-1105
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 031203-DA1
98995752

Received: 12/03/2003 14:35

Site: 540 Hegenberger Road, Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**MW-5**	Lab ID:	2003-12-0105 - 5
Sampled:	12/03/2003 07:45	Extracted:	12/11/2003 12:51
Matrix:	Water	QC Batch#:	2003/12/11-1A.64

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	12/11/2003 12:51	
Benzene	ND	0.50	ug/L	1.00	12/11/2003 12:51	
Toluene	ND	0.50	ug/L	1.00	12/11/2003 12:51	
Ethylbenzene	ND	0.50	ug/L	1.00	12/11/2003 12:51	
Total xylenes	ND	1.0	ug/L	1.00	12/11/2003 12:51	
Methyl tert-butyl ether (MTBE)	70	0.50	ug/L	1.00	12/11/2003 12:51	
Surrogate(s)						
1,2-Dichloroethane-d4	94.2	76-130	%	1.00	12/11/2003 12:51	
Toluene-d8	97.4	78-115	%	1.00	12/11/2003 12:51	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.
Attn.: Leon Gearhart

1680 Rogers Avenue
San Jose, CA 95112-1105
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 031203-DA1
98995752

Received: 12/03/2003 14:35

Site: 540 Hegenberger Road, Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	BW-D	Lab ID:	2003-12-0105 - 6
Sampled:	12/03/2003 09:17	Extracted:	12/11/2003 13:13
Matrix:	Water	QC Batch#:	2003/12/11-1A.64

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1300	ug/L	25.00	12/11/2003 13:13	
Benzene	110	13	ug/L	25.00	12/11/2003 13:13	
Toluene	ND	13	ug/L	25.00	12/11/2003 13:13	
Ethylbenzene	ND	13	ug/L	25.00	12/11/2003 13:13	
Total xylenes	29	25	ug/L	25.00	12/11/2003 13:13	
Methyl tert-butyl ether (MTBE)	560	13	ug/L	25.00	12/11/2003 13:13	
Surrogate(s)						
1,2-Dichloroethane-d4	124.0	76-130	%	25.00	12/11/2003 13:13	
Toluene-d8	101.6	78-115	%	25.00	12/11/2003 13:13	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.
Attn.: Leon Gearhart

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San Jose, CA 95112-1105
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 031203-DA1
98995752

Received: 12/03/2003 14:35

Site: 540 Hegenberger Road, Oakland

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Method Blank — **Water** — **QC Batch # 2003/12/09-1A.66**

MB: 2003/12/09-1A.66-023 — Date Extracted: 12/09/2003 10:23

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/09/2003 10:23	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	12/09/2003 10:23	
Benzene	ND	0.5	ug/L	12/09/2003 10:23	
Toluene	ND	0.5	ug/L	12/09/2003 10:23	
Ethylbenzene	ND	0.5	ug/L	12/09/2003 10:23	
Total xylenes	ND	1.0	ug/L	12/09/2003 10:23	
Surrogates(s)					
1,2-Dichloroethane-d4	108.8	76-130	%	12/09/2003 10:23	
Toluene-d8	99.2	78-115	%	12/09/2003 10:23	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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San Jose, CA 95112-1105
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 031203-DA1
98995752

Received: 12/03/2003 14:35

Site: 540 Hegenberger Road, Oakland

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Method Blank — **Water** — **QC Batch # 2003/12/11-1A.64**

MB: 2003/12/11-1A.64-031 — Date Extracted: 12/11/2003 10:31

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/11/2003 10:31	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	12/11/2003 10:31	
Benzene	ND	0.5	ug/L	12/11/2003 10:31	
Toluene	ND	0.5	ug/L	12/11/2003 10:31	
Ethylbenzene	ND	0.5	ug/L	12/11/2003 10:31	
Total xylenes	ND	1.0	ug/L	12/11/2003 10:31	
Surrogates(s)					
1,2-Dichloroethane-d4	89.8	76-130	%	12/11/2003 10:31	
Toluene-d8	93.6	78-115	%	12/11/2003 10:31	

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.
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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 031203-DA1
98995752

Received: 12/03/2003 14:35

Site: 540 Hegenberger Road, Oakland

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Laboratory Control Spike — **Water** — **QC Batch # 2003/12/09-1A.66**

LCS 2003/12/09-1A.66-036 — Extracted: 12/09/2003 — Analyzed: 12/09/2003 09:36
LCSD 2003/12/09-1A.66-059 — Extracted: 12/09/2003 — Analyzed: 12/09/2003 09:59

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	21.4	22.0	25	85.6	88.0	2.8	65-165	20		
Benzene	23.3	23.9	25	93.2	95.6	2.5	69-129	20		
Toluene	24.0	24.1	25	96.0	96.4	0.4	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	531	512	500	106.2	102.4		76-130			
Toluene-d8	502	491	500	100.4	98.2		78-115			

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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San Jose, CA 95112-1105
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 031203-DA1
98995752

Received: 12/03/2003 14:35

Site: 540 Hegenberger Road, Oakland

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Laboratory Control Spike — **Water** — **QC Batch # 2003/12/11-1A.64**

LCS 2003/12/11-1A.64-047 — Extracted: 12/11/2003 — Analyzed: 12/11/2003 09:47

LCSD 2003/12/11-1A.64-009 — Extracted: 12/11/2003 — Analyzed: 12/11/2003 10:09

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	23.0	23.2	25	92.0	92.8	0.9	65-165	20		
Benzene	21.4	22.4	25	85.6	89.6	4.6	69-129	20		
Toluene	21.8	23.4	25	87.2	93.6	7.1	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	494	463	500	98.8	92.6		76-130			
Toluene-d8	469	470	500	93.8	94.0		78-115			

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.
Attn.: Leon Gearhart

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San Jose, CA 95112-1105
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 031203-DA1
98995752

Received: 12/03/2003 14:35

Site: 540 Hegenberger Road, Oakland

Batch QC Report

Prep(s): 5030B | Test(s): 8260B

Matrix Spike (MS / MSD) | **Water** | **QC Batch # 2003/12/09-1A.66**

MW-4 >> MS | Lab ID: 2003-12-0105 - 004

MS: 2003/12/09-1A.66-060 | Extracted: 12/09/2003 | Analyzed: 12/09/2003 12:23 | Dilution: 1.00

MSD: 2003/12/09-1A.66-047 | Extracted: 12/09/2003 | Analyzed: 12/09/2003 12:47 | Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	35.9	32.8	14.74	25	84.6	72.4	15.5	65-165	20		
Benzene	22.5	23.2	0	25	90.0	92.8	3.1	69-129	20		
Toluene	23.0	23.2	0.076	25	91.7	92.8	0.9	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	518	535		500	103.6	107.1		76-130			
Toluene-d8	494	497		500	98.8	99.4		78-115			

Gas/BTEX/MTBE by 8260B (C6-C12)

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

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San Jose, CA 95112-1105
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 031203-DA1
98995752

Received: 12/03/2003 14:35

Site: 540 Hegenberger Road, Oakland

Legend and Notes

Analysis Flag

lm

Reporting limits raised due to high level of non-target analyte materials.

o

Reporting limits were raised due to high level of analyte present in the sample.

LAB: STL

SHELL Chain Of Custody Record

80793

Lab Identification (if necessary):

Address:

City, State, Zip:

Shell Project Manager to be invoiced: Karen Petryna

☑ SCIENCE & ENGINEERING ☐ TECHNICAL SERVICES ☐ CAMT HOUSTON

2003-12-0105

INCIDENT NUMBER (S&E ONLY): 9 8 9 9 5 7 5 2

SAP or CRMT NUMBER (TS/CRMT):

DATE: 12/3/03

PAGE: 1 of 1

SAMPLING COMPANY	LOG CODE	SITE ADDRESS (Incl. and City)	SHELL/GIS NO.
Blaine Tech Services	BTSS	540 Hegenberger Road, Oakland	T0600102123

ADDRESS	CONSULTANT PROJECT NO.
1680 Rogers Avenue, San Jose, CA 95112	031203-DA1

PROJECT CONTACT (Hardcopy or PDF Report to)	CONSULTANT/ Responsible Party or Designated Agent	PHONE NO.	E-MAIL	BTS #
Leon Gearhart	Anni Kreml	(510)420-3335	ShellOaklandEDF@cambria-env.com	

TELEPHONE	FAX	E-MAIL	SAMPLER NAME (print)	LAB USE ONLY
408-573-0555	408-573-7771	lgearhart@blainetech.com	David Allbut	

TURNAROUND TIME (BUSINESS DAYS): ☑ 10 DAYS ☐ 5 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

GC/MS MTBE CONFIRMATION: HIGHEST: _____ HIGHEST per BORING: _____ ALL: _____

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED ☐

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B/8260B)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	1,2-DCA (8260B)	EDB (8260B)	TPH - Diesel, Extractable (8015m)
	MW-1	12/3/03	0730	W	3	X	X		X						
	MW-2		0859			X	X		X						
	MW-3		0735			X	X		X						
	MW-4		0825			X	X		X						
	MW-5		0745			X	X		X						
	BW-D		0917			X	X		X						

FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes

3.4

TEMPERATURE ON RECEIPT C°

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
David Allbut		12/3/03	1435
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
		12/3/03	
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
		12/03/03	1640

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client

OSO Graphic: (714) 998-9702

12/1999 Revision

WELL GAUGING DATA

Project # 031203-DA1 Date 12/3/03 Client Shell

Site 540 Hegenberger Rd. Oakland, CA

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	
MW-1	2		Top of Pump = 18.35			—	—	TOC	EXT
MW-2	2					8.95	19.90		
MW-3	2			Top of Pump = 14.77		—			EXT
MW-4	4					8.44	18.45		
MW-5	4					16.79	—		EXT
BW-D	12	O				10.20	12.25	↓	
* Gauged w/ stinger in well									

SHELL WELL MONITORING DATA SHEET

BTS #: 031203-DA1	Site: 540 Hegenberger Rd. Oakland, CA
Sampler: DA	Date: 12/3/03
Well I.D.: MW-1	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): —	Depth to Water (DTW): Top of Pump = 18.35
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: —	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; X Extraction Pump; Other ____

Sampling Method: Bailer; Disposable Bailer; X Extraction Port; Dedicated Tubing; Other: ____

____ (Gals.) X EXT SYS = ____ Gals.
1 Case Volume | Specified Volumes | Calculated Volume

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

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
0727	63.0	6.9	8795	122	—	clear

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

Sampling Date: 12/3/03 Sampling Time: 0730 Depth to Water: —

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

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

SHELL WELL MONITORING DATA SHEET

BTS #: 031203-DA1	Site: 540 Hegenberger Rd. Oakland, CA
Sampler: DA	Date: 12/3/03
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 19.90	Depth to Water (DTW): 8.95
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.14	

Purge Method: x Bailer; Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other____

Sampling Method: x Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: ____

1.7 (Gals.) X	3	= 5.1 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

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

Time	Temp (°F)	pH	Cond. (mS or (uS))	Turbidity (NTUs)	Gals. Removed	Observations
0843	66.2	7.6	~~376~~ 2973	7200	2.0	tan, cloudy
0846	67.7	7.5	3621	7200	4.0	"
0849	67.5	7.3	3747	7200	5.5	"

Did well dewater? Yes (No) Gallons actually evacuated: 5.5

Sampling Date: 12/3/03 Sampling Time: 0859 Depth to Water: 11.14

Sample I.D.: MW-2 Laboratory: (STL) Other____

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

SHELL WELL MONITORING DATA SHEET

BTS #: 031203-DA1	Site: 540 Hegenberger Rd. Oakland, CA
Sampler: DA	Date: 12/3/03
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): —	Depth to Water (DTW): Top of Pump = 14.77
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: —	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; ✓ Extraction Pump; Other_____

Sampling Method: Bailer; Disposable Bailer; ✓ Extraction Port; Dedicated Tubing; Other: _____

Pump Running

_____ (Gals.) X EXT SYS = _____ Gals.
1 Case Volume | Specified Volumes | Calculated Volume

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

Time	Temp (°F)	pH	Cond. (mS or (uS))	Turbidity (NTUs)	Gals. Removed	Observations
0732	61.4	7.3	13040	6		clear

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

Sampling Date: 12/3/03 Sampling Time: 0735 Depth to Water: —

Sample I.D.: MW-3 Laboratory: (STL) Other_____

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

SHELL WELL MONITORING DATA SHEET

BTS #: 031203-DA1	Site: 540 Hegenberger Rd. Oakland, CA
Sampler: DA	Date: 12/3/03
Well I.D.: MW-4	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth (TD): 18.45	Depth to Water (DTW): 3.44
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.44	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; x Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other____

Sampling Method: Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: ____

6.5 (Gals.) X 3 = 19.5 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

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

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
0819	61.9	7.4	5602	158	6.5	cloudy
0820	64.8	7.3	5103	103	13	"
0821	66.2	7.3	7991	104	19.5	"

Did well dewater? Yes (No) Gallons actually evacuated: 19.5

Sampling Date: 12/3/03 Sampling Time: 0825 Depth to Water: 11.18 traffic well

Sample I.D.: MW-4 Laboratory: (STL) Other____

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

SHELL WELL MONITORING DATA SHEET

BTS #: 031203-DA1	Site: 540 Hegenberger Rd. Oakland, CA
Sampler: DA	Date: 12/3/03
Well I.D.: MW-5	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth (TD): —	Depth to Water (DTW): 16.79
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: —	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; X Extraction Pump; Other____

Sampling Method: Bailer; Disposable Bailer; X Extraction Port; Dedicated Tubing; Other: @ wellhead w/ compressor

Pump Running

____(Gals.) X EXT SYS = ____ Gals.
1 Case Volume | Specified Volumes | Calculated Volume

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

Time	Temp (°F)	pH	Cond. (mS or (uS))	Turbidity (NTUs)	Gals. Removed	Observations
0743	61.0	7.6	7078	4	—	clear

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

Sampling Date: 12/3/03 Sampling Time: 0745 Depth to Water: —

Sample I.D.: MW-5 Laboratory: (STD) Other____

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

SHELL WELL MONITORING DATA SHEET

BTS #: 031203-DA1	Site: 540 Hegenberger Rd. Oakland, CA
Sampler: DA	Date: 12/3/03
Well I.D.: Bw-D	Well Diameter: 2 3 4 6 8 12
Total Well Depth (TD): 12.25	Depth to Water (DTW): 10.20
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.61	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; X Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: X Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

1 Case Volume		Specified Volumes		Calculated Volume
12.0 (Gals.)	X	3	=	36.0 Gals.

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

12" = 5.87

Time	Temp (°F)	pH	Cond. (mS or (uS))	Turbidity (NTUs)	Gals. Removed	Observations
0909	65.4	6.7	3786	48	12	H_2S odor, clear
0912	67.2	6.7	4732	15	24	"
0914	68.0	6.7	4921	9	36	"

Did well dewater? Yes (No) Gallons actually evacuated: 36

Sampling Date: 12/3/03 Sampling Time: 0917 Depth to Water: 10.20

Sample I.D.: Bw-D Laboratory: (STL) Other_____

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

ATTACHMENT B

Arco Groundwater Data

Table 1
Groundwater Elevation and Analytical Data

ARCO Service Station #4494
566 Hegenberger Road
Oakland, California

Well Number	Date Sampled	Top of Riser Elevation [f] (ft)	Top of Screen (ft., MSL?)	Bottom of Screen (ft., MSL?)	Total Well Depth (ft., BGS)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)	pH
MW-1	06/20/00	106.10				7.02	99.08	ND<1,000	ND<10	ND<10	ND<10	ND<20	14,000/15,000[a]	NA	NA
	09/28/00					7.07	99.03	ND<500	ND<5.0	ND<5.0	ND<5.0	ND<5.0	13000/18,800[a]	NA	NA
	12/17/00					6.95	99.15	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	10,600	NA	NA
	03/28/01					6.88	99.22	ND<500	ND<5.0	ND<5.0	ND<5.0	ND<5.0	16,900	NA	NA
	06/21/01					7.18	98.92	ND<1,000	ND<10	ND<10	ND<10	ND<10	3,400	NA	NA
	09/23/01					7.11	98.99	ND<1,000	ND<10	ND<10	ND<10	ND<10	2200/1800[a]	NA	NA
	12/31/01					6.91	99.19	ND<5,000	ND<50	ND<50	ND<50	ND<50	14,000	NA	NA
	03/14/02					6.85	99.25	ND<5,000	ND<50	ND<50	ND<50	ND<50	6,200	NA	NA
	04/17/02					5.89	100.21	ND<5,000	ND<50	ND<50	ND<50	ND<50	4,500	NA	NA
	08/08/02					7.19	98.91	230[b]	ND<2.0	ND<2.0	ND<2.0	ND<2.0	660/440[a]	4.5	7.8
	12/12/02					7.28	98.82	630[d]	ND<5.0	ND<5.0	ND<5.0	ND<5.0	1300/830[a]	1.9	7.6
	03/20/03[e]					6.91	99.19	1,100	ND<5.0	ND<5.0	ND<5.0	ND<5.0	780	2.2	8.5
	06/23/03					7.61	98.49	530	ND<5.0	ND<5.0	ND<5.0	ND<5.0	260	1.2	7.6
	09/22/03	11.36	-2.00		22.70	7.78	-7.78	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	17	3.5	7.7
	12/03/03					**7.90**	**3.46**	**410**	**2.6**	**9.8**	**ND<2.5**	**11**	**260**	**2.1**	**6.9**
MW-3	06/20/00	106.29				9.18	97.11	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	27/27[a]	NA	NA
	09/28/00					9.33	96.96	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	4.3/ND<2.0[a]	NA	NA
	12/17/00					9.31	96.98	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	03/28/01					9.23	97.06	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	7.42	NA	NA
	06/21/01					9.58	96.71	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	09/23/01					9.76	96.53	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	12/31/01					8.78	97.51	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	03/14/02					9.25	97.04	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	4	NA	NA
	04/17/02					8.44	97.85	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	08/08/02					9.63	96.66	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	2.6	7.9
	12/12/02					9.51	96.78	ND<50[d]	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	3.0	6.8
	03/20/03[e]					9.40	96.89	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	6.1	1.2	7.0
	06/23/03					9.36	96.93	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	5.2	0.9	8.2
	09/22/03	11.62	4.62		17.70	9.48	2.14	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	3.9	1.4	7.9
	12/03/03					**9.44**	**2.18**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**

Table 1
Groundwater Elevation and Analytical Data

ARCO Service Station #4494
566 Hegenberger Road
Oakland, California

Well Number	Date Sampled	Top of Riser Elevation [f] (ft)	Top of Screen (ft., MSL?)	Bottom of Screen (ft., MSL?)	Total Well Depth (ft., BGS)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)	pH
MW-4	06/20/00	107.40				8.49	98.91	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	NA	NA
	09/28/00					8.70	98.70	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<2.5	NA	NA
	12/17/00					8.53	98.87	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	03/28/01					8.59	98.81	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	06/21/01					8.79	98.61	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	09/23/01					8.67	98.73	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	12/31/01					8.03	99.37	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	03/14/02					8.48	98.92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	04/17/02					7.79	99.61	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	5.6	NA	NA
	08/08/02					8.90	98.50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	4.5	8.0
	12/12/02					9.07	98.33	ND<50[d]	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	5.6	6.2
	03/20/03[e]					8.85	98.55	ND<50	ND<0.50	ND<0.50	ND<0.50	0.50	ND<0.50	4.8	7.8
	06/23/03					9.26	98.14	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	6.3	7.5
	09/22/03	13.18	6.18		16.30	9.22	3.96	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	7.4	8.0
	12/03/03					**9.48**	**3.70**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
MW-5	06/20/00	105.19				7.65	97.54	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	NA	NA
	09/28/00					6.82	98.37	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<2.5	NA	NA
	12/17/00					6.50	98.69	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	03/28/01					6.34	98.85	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	06/21/01					7.88	97.31	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	09/23/01					6.98	98.21	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	12/31/01					5.01	100.18	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	03/14/02					5.93	99.26	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	04/17/02					5.37	99.82	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	8.5	NA	NA
	08/08/02					6.85	98.34	ND<50[b]	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	0.7	7.3
	12/12/02					6.53	98.66	ND<50[d]	2.2	4.7	1.3	6.8	ND<2.5	1.3	7.0
	03/20/03[e]					6.40	98.79	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	2.7	7.1
	06/23/03					6.72	98.47	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.3	7.2
	09/22/03	10.63	2.63		16.60	6.76	3.87	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.7	7.2
	12/03/03					**6.56**	**4.07**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**

Table 1
Groundwater Elevation and Analytical Data

ARCO Service Station #4494
566 Hegenberger Road
Oakland, California

Well Number	Date Sampled	Top of Riser Elevation [c] (ft)	Top of Screen (ft., MSL?)	Bottom of Screen (ft., MSL?)	Total Well Depth (ft., BGS)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)	pH
MW-6	06/20/00	105.07				6.24	98.83	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	NA	NA
	09/28/00					6.45	98.62	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<2.5	NA	NA
	12/17/00					6.26	98.81	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	03/28/01					6.10	98.97	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	06/21/01					7.68	97.39	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	09/23/01					6.72	98.35	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	12/23/01					4.68	100.39	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	03/14/02					5.55	99.52	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	04/17/02					4.96	100.11	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	7	NA	NA
	08/08/02					6.46	98.61	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	0.7	7.3
	12/12/02					6.18	98.89	65[d]	3.3	8.4	2.7	14	ND<2.5	1.1	6.9
	03/20/03[e]					6.18	98.89	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	2.2	7.0
	06/23/03					6.15	98.92	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	2.0	7.1
	09/22/03	10.41	2.41		17.80	6.43	3.98	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	2.5	7.0
	12/03/03					**6.12**	**4.29**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
MW-7	06/20/00	105.52				8.65	96.87	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	13/13[a]	NA	NA
	09/28/00					8.75	96.77	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	136/261[a]	NA	NA
	12/17/00					8.62	96.90	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	27.1	NA	NA
	03/28/01					8.66	96.86	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	51.5	NA	NA
	06/21/01					8.84	96.68	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	53	NA	NA
	09/23/01					8.75	96.77	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	35/21[a]	NA	NA
	12/23/01					7.79	97.73	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	440	NA	NA
	03/14/02					8.30	97.22	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	18	NA	NA
	04/17/02					7.43	98.09	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	67	NA	NA
	08/08/02					8.61	96.91	55[b]	ND<0.5	ND<0.5	ND<0.5	ND<0.5	130/100[a]	1.1	7.1
	12/12/02	**				8.55	NC	75[d]	ND< 0.5	ND< 0.5	ND< 0.5	ND< 0.5	160/130[a]	1.2	7.0
	03/20/03[e]					8.38	NC	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	32	2.2	7.2
	06/23/03					8.37	NC	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	14	0.8	7.1
	09/22/03	10.51	1.51		13.70	8.95	1.56	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	5.3	2.2	7.2
	12/03/03					**8.86**	**1.65**	**ND<50**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**4.2**	**0.1**	**7.2**

Table 1
Groundwater Elevation and Analytical Data

ARCO Service Station #4494
566 Hegenberger Road
Oakland, California

Well Number	Date Sampled	Top of Riser Elevation [f] (ft)	Top of Screen (ft., MSL?)	Bottom of Screen (ft., MSL?)	Total Well Depth (ft., BGS)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)	pH
RW-1	06/20/00	NE				8.21	NC	ND<50	ND<0.5	1.1	ND<0.5	ND<1.0	ND<10	NA	NA
	09/28/00					8.28	NC	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<2.5	NA	NA
	12/17/00					8.29	NC	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	03/28/01					8.16	NC	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	06/21/01					9.37	NC	160	5.1	ND<0.5	1.1	3.2	ND<2.5	NA	NA
	09/23/01					8.75	NC	57	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA	NA
	12/31/01					6.80	NC	520	3.1	ND<0.5	6.4	4.7	ND<2.5	NA	NA
	03/14/02					7.86	NC	240	3.7	ND<0.5	0.7	2.8	ND<2.5	NA	NA
	04/17/02					7.13	NC	ND<50	ND<0.5	1.6	ND<0.5	0.72	ND<2.5	NA	NA
	08/08/02					8.48	NC	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3.7/ND<0.5[a,c]	1.1	7.0
	12/12/02					8.63	NC	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	1.9	6.9
	03/20/03[e]					8.08	NC	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.9	7.3
	06/23/03					8.28	NC	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.1	7.3
	09/22/03	11.97			11.00	8.42	3.55	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.8	7.1
	12/03/03					**8.05**	**3.92**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**

TPH = Total Petroleum Hydrocarbons analyzed by EPA Method 8015M. (prior to 3/20/03)
MTBE = Methyl tertiary butyl ether analyzed by EPA Method 8021B unless otherwise noted. (prior to 3/20/03)
µg/L = Micrograms per liter
mg/L = Milligrams per liter
NC = Not calculated
NE = Not surveyed/No elevation
ND< = Not detected at or above specifed laboratory detection limit.
NA = Not available, not applicable, or not analyzed
a = Analyzed by EPA Method 8260
b = Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
c = This sample was analyzed beyond the EPA recommended holding time. The results may still be useful for their intended purpose.
d = Analyzed by EPA Method 8215B/8021B for Gasoline Range Organics
e = TPH-g, BTEX, and MTBE analyzed by EPA method 8260B beginning on 2003 samlping event (03/20/03)
f = Top of casing elvations were re-surveyed on July 18, 2003 by URS Corporation of Pleasant Hill, CA
** = Top of casing was found shattered on December 12, 2002. Top of Casing (TOC) unknown.
Source: The data within this table collected prior to August 2002 was provided to URS by Atlantic Richfield Company and their previous consultants. URS has not verified the accuracy of this information.

Table 2
Groundwater Flow Direction and Gradient

ARCO Service Station #4494
566 Hegenberger Road
Oakland, California

Date Measured	Average Flow Direction	Average Hydraulic Gradient
06/20/00	North-Northeast	0.015
09/28/00	North	0.018
12/17/00	North-Northwest	0.013
03/28/01	Northwest	0.011
06/21/01	North	0.017
09/23/01	North	0.020
12/31/01	North-Northwest	0.023
03/14/02	North-Northwest	0.017
04/14/02	Northwest	0.007
08/08/02	North-Northwest	0.022
12/12/02	North-Northwest	0.017
03/20/03	North-Northwest	0.016
06/23/03	Northwest	0.014
09/22/03	Northwest	0.017
12/03/03	**Northwest**	**0.013**

Note:

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

Table 3
Fuel Oxygenate Analytical Data

ARCO Service Station # 4494
566 Hegenberger Road
Oakland, California

Well Number	Date Sampled	Ethanol (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-1	03/20/03	ND<1,000	640	780	ND<5.0	ND<5.0	ND<5.0	NA	NA
	06/23/03	ND<1,000	ND<200	260	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	09/22/03	ND<100	250	17	ND<0.50	ND<0.50	ND<0.50	NA	NA
	12/03/03	**ND<500**	**ND<100**	**260**	**ND<2.5**	**ND<2.5**	**ND<2.5**	**NA**	**NA**
MW-3	03/20/03	ND<100	ND<20	601	ND<0.50	ND<0.50	1.1	NA	NA
	06/23/03	ND<100	ND<20	5.2	ND<0.50	ND<0.50	0.75	ND<0.50	ND<0.50
	09/22/03	ND<100	ND<20	3.9	ND<0.50	ND<0.50	ND<0.50	NA	NA
MW-4	03/20/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
	06/23/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	09/22/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
MW-5	03/20/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
	06/23/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	09/22/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
MW-6	03/20/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
	06/23/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	09/22/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
MW-7	03/20/03	ND<100	ND<20	32	ND<0.50	ND<0.50	0.62	NA	NA
	06/23/03	ND<100	170	14	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	09/22/03	ND<100	170	5.3	ND<0.50	ND<0.50	ND<0.50	NA	NA
	12/03/03	**ND<100**	**85**	**4.2**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**NA**	**NA**
RW-1	03/20/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA
	06/23/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	09/22/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50	NA	NA

Note = All fuel oxygenate compounds analyzed using EPA Method 8260B
TBA = tert-Butyl alcohol
MTBE = Methyl tert-butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tert butyl ether
TAME = tert-Amyl methyl ether
1,2-DCA = 1,2-Dichloroethane
EDB = 1,2-Dibromoethane
µg/L = micrograms per liter
ND< = Not detected at or above laboratory reporting limit
NA = Not analyzed

Sequoia
Analytical

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17 December, 2003

Scott Robinson
URS Corporation [Arco]
500 12th Street, Suite 200
Oakland, CA 94607

RE: ARCO #4494, Oakland, CA
Work Order: MML0161

Enclosed are the results of analyses for samples received by the laboratory on 12/04/03 15:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Theresa Allen

Theresa Allen
Project Manager

CA ELAP Certificate #1210

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URS Corporation [Arco]	Project: ARCO #4494, Oakland, CA	MML0161
500 12th Street, Suite 200	Project Number: INTRIM-50443	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	12/17/03 09:28

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MML0161-01	Water	12/03/03 10:55	12/04/03 15:15
MW-7	MML0161-02	Water	12/03/03 10:31	12/04/03 15:15

There were custody seal that were received with this project.

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URS Corporation [Arco]	Project: ARCO #4494, Oakland, CA	MML0161
500 12th Street, Suite 200	Project Number: INTRIM-50443	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	12/17/03 09:28

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MML0161-01) Water Sampled: 12/03/03 10:55 Received: 12/04/03 15:15									
Ethanol	ND	500	ug/l	5	3L10001	12/10/03	12/11/03	EPA 8260B	
tert-Butyl alcohol	ND	100	"	"	"	"	"	"	
Methyl tert-butyl ether	**260**	2.5	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.5	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	2.5	"	"	"	"	"	"	
Benzene	**2.6**	2.5	"	"	"	"	"	"	
Toluene	**9.8**	2.5	"	"	"	"	"	"	
Ethylbenzene	ND	2.5	"	"	"	"	"	"	
Xylenes (total)	**11**	2.5	"	"	"	"	"	"	
Gasoline Range Organics	**410**	250	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*107 %*	*78-129*		"	"	"	"	
MW-7 (MML0161-02) Water Sampled: 12/03/03 10:31 Received: 12/04/03 15:15									
Ethanol	ND	100	ug/l	1	3L10001	12/10/03	12/11/03	EPA 8260B	
tert-Butyl alcohol	**85**	20	"	"	"	"	"	"	
Methyl tert-butyl ether	**4.2**	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics	ND	50	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*78-129*		"	"	"	"	

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URS Corporation [Arco]	Project: ARCO #4494, Oakland, CA	MML0161
500 12th Street, Suite 200	Project Number: INTRIM-50443	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	12/17/03 09:28

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 3L10001 - EPA 5030B P/T										
Blank (3L10001-BLK1)				Prepared & Analyzed: 12/10/03						
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	*5.40*		"	*5.00*		*108*	*78-129*			
Laboratory Control Sample (3L10001-BS1)				Prepared & Analyzed: 12/10/03						
Ethanol	203	100	ug/l	200		102	31-186			
tert-Butyl alcohol	44.7	20	"	50.0		89.4	0-206			
Methyl tert-butyl ether	10.0	0.50	"	10.0		100	63-137			
Di-isopropyl ether	9.34	0.50	"	10.0		93.4	76-130			
Ethyl tert-butyl ether	9.63	0.50	"	10.0		96.3	61-141			
tert-Amyl methyl ether	9.39	0.50	"	10.0		93.9	56-140			
1,2-Dichloroethane	10.8	0.50	"	10.0		108	77-136			
1,2-Dibromoethane (EDB)	9.11	0.50	"	10.0		91.1	77-132			
Benzene	10.3	0.50	"	10.0		103	78-124			
Toluene	9.66	0.50	"	10.0		96.6	78-129			
Ethylbenzene	8.90	0.50	"	10.0		89.0	84-117			
Xylenes (total)	26.5	0.50	"	30.0		88.3	83-125			
Surrogate: 1,2-Dichloroethane-d4	*5.32*		"	*5.00*		*106*	*78-129*			

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URS Corporation [Arco]	Project: ARCO #4494, Oakland, CA	MML0161
500 12th Street, Suite 200	Project Number: INTRIM-50443	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	12/17/03 09:28

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 3L10001 - EPA 5030B P/T										
Laboratory Control Sample (3L10001-BS2)				Prepared & Analyzed: 12/10/03						
Methyl tert-butyl ether	8.41	0.50	ug/l	9.92		84.8	63-137			
Benzene	5.59	0.50	"	6.40		87.3	78-124			
Toluene	30.0	0.50	"	29.7		101	78-129			
Ethylbenzene	6.99	0.50	"	6.96		100	84-117			
Xylenes (total)	33.4	0.50	"	33.7		99.1	83-125			
Gasoline Range Organics	415	50	"	440		94.3	70-113			
Surrogate: 1,2-Dichloroethane-d4	*5.62*		"	*5.00*		*112*	*78-129*			
Laboratory Control Sample Dup (3L10001-BSD1)				Prepared: 12/10/03 Analyzed: 12/11/03						
Ethanol	191	100	ug/l	200		95.5	31-186	6.09	37	
tert-Butyl alcohol	42.3	20	"	50.0		84.6	0-206	5.52	22	
Methyl tert-butyl ether	9.74	0.50	"	10.0		97.4	63-137	2.63	13	
Di-isopropyl ether	9.35	0.50	"	10.0		93.5	76-130	0.107	9	
Ethyl tert-butyl ether	9.45	0.50	"	10.0		94.5	61-141	1.89	9	
tert-Amyl methyl ether	9.54	0.50	"	10.0		95.4	56-140	1.58	12	
1,2-Dichlorocthane	10.8	0.50	"	10.0		108	77-136	0.00	13	
1,2-Dibromoethane (EDB)	9.27	0.50	"	10.0		92.7	77-132	1.74	9	
Benzene	10.1	0.50	"	10.0		101	78-124	1.96	12	
Toluene	9.50	0.50	"	10.0		95.0	78-129	1.67	10	
Ethylbenzene	9.36	0.50	"	10.0		93.6	84-117	5.04	10	
Xylenes (total)	25.8	0.50	"	30.0		86.0	83-125	2.68	11	
Surrogate: 1,2-Dichloroethane-d4	*5.27*		"	*5.00*		*105*	*78-129*			
Laboratory Control Sample Dup (3L10001-BSD2)				Prepared: 12/10/03 Analyzed: 12/11/03						
Methyl tert-butyl ether	8.06	0.50	ug/l	9.92		81.2	63-137	4.25	13	
Benzene	5.58	0.50	"	6.40		87.2	78-124	0.179	12	
Toluene	29.7	0.50	"	29.7		100	78-129	1.01	10	
Ethylbenzene	7.19	0.50	"	6.96		103	84-117	2.82	10	
Xylenes (total)	33.0	0.50	"	33.7		97.9	83-125	1.20	11	
Gasoline Range Organics	393	50	"	440		89.3	70-113	5.45	9	
Surrogate: 1,2-Dichloroethane-d4	*5.18*		"	*5.00*		*104*	*78-129*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.

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URS Corporation [Arco]	Project: ARCO #4494, Oakland, CA	MML0161
500 12th Street, Suite 200	Project Number: INTRIM-50443	**Reported:**
Oakland CA, 94607	Project Manager: Scott Robinson	12/17/03 09:28

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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MML0161

Page 1 of 1

Chain of Custody Record

bp

Project Name 4494GWM
BP BU/GEM CO Portfolio Retail
BP Laboratory Contract Number: Atlantic Richfield Company
Date: 12/3/03 Requested Due Date (mm/dd/yy) 14 day TAT

On-site Time: 0925 Temp: 62.1
Off-site Time: 1125 Temp: 62.3
Sky Conditions: cloudy
Meteorological Events: —
Wind Speed: 5 mph Direction: E

Send To:	BP/GEM Facility No.: ARCO 4494	Consultant/Contractor: URS
Lab Name: SEQUOIA	BP/GEM Facility Address: 566 HEGENBERGER, OAKLAND, CA	Address: 500 12th St., Ste. 200
Lab Address: 885 Jarvis Dr.	Site ID No. ARCO 4494	Oakland, CA 94608-4014
Morgan Hill, CA 95037	Site Lat/Long:	e-mail EDD: donna_cosper@URSCorp.com
	California Global ID #: T0600100104	Consultant/Contractor Project No.: 35-00004494.01 00427
Lab PM Theresa Allen	BP/GEM PM Contact: PAUL SUPPLE	Consultant Tele/Fax: 510-893-3600/510-874-3268
Tele/Fax: 408-776-9600 / 408-782-6308	Address: P.O. Box 6549	Consultant/Contractor PM: Scott Robinson
Report Type & QC Level: 1 Send EDF Reports	Moraga, CA 94570	Invoice to: Consultant/Contractor or BP/GEM (Circle one)
BP/GEM Account No.:	Tele/Fax: 925-299-8891/925-299-8872	BP/GEM Work Release No: INTRIM -50443

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 (8015/8021/8260)	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	1055		✓			01	3				✓	✓				✓		✓	
2	MW-7	1031		↓			02	3				✓	✓				✓		✓	
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Sampler's Name: David Mallet	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Blaine Tech	David Mallet / BTS	12/4/03	1006		12/4/03	10:06
Shipment Date:		12/4/03	1515		12/4/03	1515
Shipment Method:						
Shipping No:						

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

Ice Chest Yes ✓ No Temperature Blank Yes No ✓ Cooler Temperature on Receipt 5 °F/C Trip Blank Yes No ✓

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

BP COC Rev. 1 2/500

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: VRS
REC. BY (PRINT): TL
WORKORDER: MML0161

DATE REC'D AT LAB: 12/4/07
TIME REC'D AT LAB: 1515
DATE LOGGED IN: 12-5-03

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*	12[illegible], CL		MW-1	(3) Vom L	HCl	L	12/3	328/270
2. Chain-of-Custody Present / Absent*			MW-7					
3. Traffic Reports or Packing List: Present / Absent								
4. Airbill: Airbill / Sticker Present / Absent								
5. Airbill #:								
6. Sample Labels: Present / Absent								
7. Sample IDs: Listed / Not Listed on Chain-of-Custody								
8. Sample Condition: Intact / Broken* / Leaking*								
9. Does information on 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: 5°C Is temp 4 +/-2°C? Yes / No**								

(Acceptance range for samples requiring thermal pres.)

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

12/4/07

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

rv 4.xls
n 4 (11/10/03)
Revision 3 (03/18/03)
6/03