



Shell Oil Products US

June 30, 2003

20223

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

Alameda County
JUL 02 2003
Environmental Health

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

Dear Mr. Gholami:

Attached for your review and comment is a copy of the *First 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

June 30, 2003

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

Re: **First Quarter 2003 Monitoring Report**
Shell-branded Service Station
540 Hegenberger Road
Oakland, California
Incident #98995752
Cambria Project #245-0414-002



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.

FIRST 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. In addition, Blaine collected a sample from the canal northwest of the site and attempted to collect samples from two storm drain inlets north of the site which were dry during the sampling event. Cambria prepared a vicinity map, which includes previously submitted well survey information (Figure 1) and a groundwater elevation contour map (Figure 2). Data from the Arco site is presented on Figure 2. However, water level elevation data for the Arco site are anomalous, and were not used in contouring. Shell recently resurveyed all wellhead elevations while obtaining latitude and longitude data required for Geotracker.

Interim Remedial Action: 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

**Cambria
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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 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 Installation: Design and installation of the GWE system described in our *Interim Remedial Work Plan* dated February 13, 2003 was completed. System operation began on April 28, 2003. Discharge authorization was received from East Bay Municipal Utility District (EBMUD) in a permit dated March 26, 2003.

Monitoring wells MW-1, MW-3, and MW-5, and tank backfill well BW-B are used as extraction wells. System analytical data are summarized in Table 1. To assess system production, groundwater level measurements and flow meter readings have been recorded at various times of operation. 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 0.3 to 1.5 gallons per minute.

Through May 12, 2003, a total of 23,045 gallons of groundwater have been extracted. A total of 0.52 pounds of MTBE has been recovered. Mass removal data are presented in Table 2.

ANTICIPATED SECOND QUARTER 2003 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 north of the site at 566 Hegenberger Road. Arco and Shell will exchange water level and analytical data on these events. Cambria has notified Arco's consultant of the apparently anomalous wellhead elevation data, and will use this data in preparing groundwater contours if it is corrected. Cambria will prepare a report documenting those activities.

GWE System: We will operate the system under the conditions of the EBMUD discharge permit.

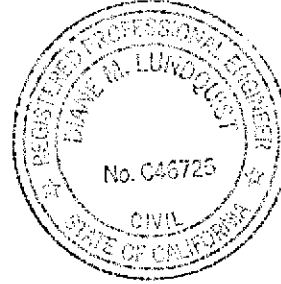
CLOSING

We appreciate the opportunity to work with you on this project. Please call Diane Lundquist at (510) 420-3334 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc



Diane Lundquist, P.E.
Principal Engineer



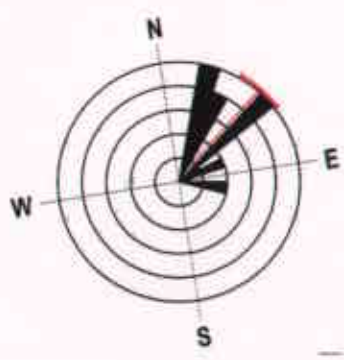
Figures: 1 - Vicinity/Area Well Survey Map
2 - Groundwater Elevation Contour Map

Tables: 1 - Groundwater Extraction – System Analytical Data
2 - Groundwater Extraction – Operation and Mass Removal Data

Attachments: A - Blaine Groundwater Monitoring Report and Field Notes
B - Arco Groundwater Data

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

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Shell Groundwater Gradient Direction
August 1998 through March 2003
(20 events)

EXPLANATION

- MW-2 ◆ Shell monitoring well
- BW-A ▲ Tank backfill well
- MW-1 ⊕ Well used for groundwater extraction
- MW-1 ⊛ ARCO monitoring well, survey data not referenced to mean sea level (msl), not used for contouring
- 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)
- ▶ Flow direction
- NS Not surveyed
- NA Not available
- Groundwater flow direction and gradient (ft/ft)
- xx.xx Groundwater elevation contour, in feet above msl, dashed where inferred
- Well ELEV Benzene MTBE Groundwater elevation, in feet above msl
Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8260; results in parentheses were analyzed by EPA Method 8020.

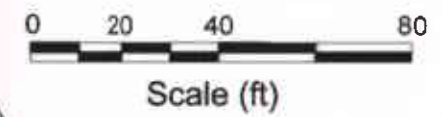
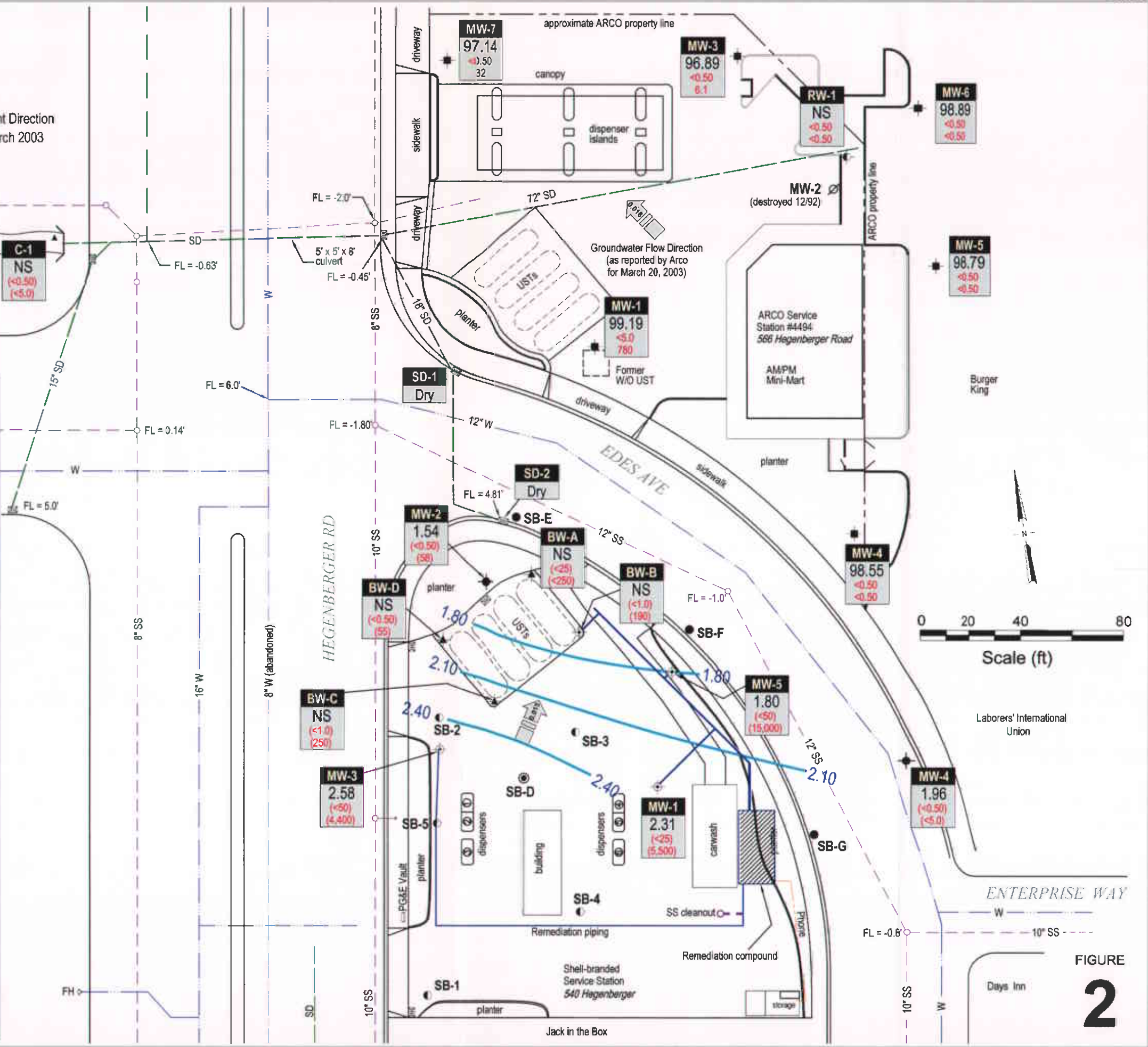


FIGURE
2

Groundwater Elevation
Contour Map

March 20, 2003



C A M B R I A

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

G:\OAKLAND\410HEGENBERGER\FIGURES\10M03.MP.DWG

Table 1: Groundwater Extraction - System Analytical Data - Shell-branded Service Station, Incident #98995752, 540 Hegenberger, Oakland, California

Sample Date (mm/dd/yyyy)	Influent			Midfluent 1			Midfluent 2			Effluent		
	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc. (ppb)	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc. (ppb)	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc. (ppb)	TPHg Conc. (ppb)	Benzene Conc. (ppb)	MTBE Conc. (ppb)
04/28/2003	<1,000	<10	2,700	<50	<0.50	<0.50	<50	<0.50	<0.50	<50	<0.50	<0.50

Abbreviations & Notes:

TPHg = Total purgeable hydrocarbons as gasoline
 MTBE = Methyl tert-butyl ether
 Conc. = Concentration
 ppb = parts per billion, equivalent to µg/l
 TPHg, benzene, and MTBE analyzed by EPA Method 8260B

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

Site Visit (mm/dd/yy)	Hour Meter (hours)	Flow Meter Reading (gal)	Period Volume (gal)	Operational Flow Rate (gpm)	Cumulative Volume (gal)	TPHg			Benzene			MTBE				
						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)		
04/28/2003	3.3	840	0	0.00	0	<1,000	0.000	0.000	<10	0.000	0.000	2,700	0.000	0.000		
05/02/2003	101.3	6,680	5,840	1.0	5,840		0.024	0.024		0.000	0.000		0.132	0.132		
05/12/2003	341.2	23,885	17,205	1.2	23,045		0.072	0.096		0.001	0.001		0.388	0.519		
Total Extracted Volume=				23,045	Total Pounds Removed:			0.10	Total Pounds Removed:			0.00	Total Pounds Removed:			0.52
Average Operational Flow Rate=				1.1	Total Gallons Removed:			0.02	Total Gallons Removed:			0.00	Total Gallons Removed:			0.08

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

Mass removed based on the formula: volume extracted (gal) x Concentration (µg/L) x (g/10⁶µg) 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 3.3 hours and 880 gallons on flow meter.

ATTACHMENT A
Blaine Groundwater Monitoring Report
and Field Notes

BLAINE
TECH SERVICES, INC.



1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
(408) 573-7771 FAX
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CONTRACTOR'S LICENSE #746684
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April 25, 2003

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

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

Monitoring performed on March 20, 2003

Groundwater Monitoring Report 030320-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-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

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)
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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-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
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

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	12/02/1999	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-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
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

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)
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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

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

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

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-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-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
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-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-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

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)
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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.

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.

Blaine Tech Services, Inc.

April 08, 2003

1680 Rogers Avenue
San Jose, CA 95112-1105
Attn.: Leon Gearhart
Project#: 030320-DA1
Project: 98995752
Site: 540 Hegenberger Rd.
Oakland, CA

Dear Mr. Gearhart,


Attached is our report for your samples received on 03/20/2003 16:53
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
05/04/2003 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: tgranicher@stl-inc.com

Sincerely,



Tod Granicher
Project Manager

Gas/BTEX Compounds by 8015M/8021

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 030320-DA1

98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.
Oakland, CA

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-1	03/20/2003 11:34	Water	1
MW-2	03/20/2003 09:01	Water	2
MW-3	03/20/2003 11:57	Water	3
MW-4	03/20/2003 08:10	Water	4
MW-5	03/20/2003 11:15	Water	5
BW-A	03/20/2003 10:05	Water	6
BW-B	03/20/2003 09:28	Water	7
BW-C	03/20/2003 10:25	Water	8
BW-D	03/20/2003 11:00	Water	9
C-1	03/20/2003 08:30	Water	10

Gas/BTEX Compounds by 8015M/8021

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 030320-DA1

98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.

Oakland, CA

Prep(s):	5030	Test(s):	8015M
	5030		8021B
Sample ID:	MW-1	Lab ID:	2003-03-0461 - 1
Sampled:	03/20/2003 11:34	Extracted:	4/3/2003 15:29
Matrix:	Water	QC Batch#:	2003/04/03-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	3800	2500	ug/L	50.00	04/03/2003 15:29	g
Benzene	ND	25	ug/L	50.00	04/03/2003 15:29	
Toluene	ND	25	ug/L	50.00	04/03/2003 15:29	
Ethyl benzene	ND	25	ug/L	50.00	04/03/2003 15:29	
Xylene(s)	ND	25	ug/L	50.00	04/03/2003 15:29	
MTBE	5500	250	ug/L	50.00	04/03/2003 15:29	
Surrogates(s)						
Trifluorotoluene	102.5	58-124	%	50.00	04/03/2003 15:29	
4-Bromofluorobenzene-FID	88.8	50-150	%	50.00	04/03/2003 15:29	

Gas/BTEX Compounds by 8015M/8021

Blaine Tech Services, Inc.

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 030320-DA1

98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.
Oakland, CA

Prep(s):	5030	Test(s):	8015M
	5030		8021B
Sample ID:	MW-2	Lab ID:	2003-03-0461 - 2
Sampled:	03/20/2003 09:01	Extracted:	4/2/2003 11:47
Matrix:	Water	QC Batch#:	2003/04/02-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	56	50	ug/L	1.00	04/02/2003 11:47	g
Benzene	ND	0.50	ug/L	1.00	04/02/2003 11:47	
Toluene	ND	0.50	ug/L	1.00	04/02/2003 11:47	
Ethyl benzene	ND	0.50	ug/L	1.00	04/02/2003 11:47	
Xylene(s)	ND	0.50	ug/L	1.00	04/02/2003 11:47	
MTBE	58	5.0	ug/L	1.00	04/02/2003 11:47	
Surrogates(s)						
Trifluorotoluene	103.3	58-124	%	1.00	04/02/2003 11:47	
4-Bromofluorobenzene-FID	100.8	50-150	%	1.00	04/02/2003 11:47	

Gas/BTEX Compounds by 8015M/8021

Blaine Tech Services, Inc.

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Project: 030320-DA1
98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.
Oakland, CA

Prep(s):	5030 5030	Test(s):	8015M 8021B
Sample ID:	MW-3	Lab ID:	2003-03-0461 - 3
Sampled:	03/20/2003 11:57	Extracted:	4/3/2003 13:25
Matrix:	Water	QC Batch#:	2003/04/03-01-02

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	5100	5000	ug/L	100.00	04/03/2003 13:25	g
Benzene	ND	50	ug/L	100.00	04/03/2003 13:25	
Toluene	ND	50	ug/L	100.00	04/03/2003 13:25	
Ethyl benzene	ND	50	ug/L	100.00	04/03/2003 13:25	
Xylene(s)	ND	50	ug/L	100.00	04/03/2003 13:25	
MTBE	4400	500	ug/L	100.00	04/03/2003 13:25	
Surrogates(s)						
Trifluorotoluene	98.2	58-124	%	100.00	04/03/2003 13:25	
4-Bromofluorobenzene-FID	88.2	50-150	%	100.00	04/03/2003 13:25	

Gas/BTEX Compounds by 8015M/8021

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Project: 030320-DA1
98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.
Oakland, CA

Prep(s):	5030 5030	Test(s):	8015M 8021B
Sample ID:	MW-4	Lab ID:	2003-03-0461 - 4
Sampled:	03/20/2003 08:10	Extracted:	4/2/2003 12:59
Matrix:	Water	QC Batch#:	2003/04/02-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	04/02/2003 12:59	
Benzene	ND	0.50	ug/L	1.00	04/02/2003 12:59	
Toluene	ND	0.50	ug/L	1.00	04/02/2003 12:59	
Ethyl benzene	ND	0.50	ug/L	1.00	04/02/2003 12:59	
Xylene(s)	ND	0.50	ug/L	1.00	04/02/2003 12:59	
MTBE	ND	5.0	ug/L	1.00	04/02/2003 12:59	
Surrogates(s)						
Trifluorotoluene	101.6	58-124	%	1.00	04/02/2003 12:59	
4-Bromofluorobenzene-FID	96.4	50-150	%	1.00	04/02/2003 12:59	

Gas/BTEX Compounds by 8015M/8021

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Project: 030320-DA1

98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.

Oakland, CA

Prep(s):	5030	Test(s):	8015M
	5030		8021B
Sample ID:	MW-5	Lab ID:	2003-03-0461 - 5
Sampled:	03/20/2003 11:15	Extracted:	4/2/2003 14:48
Matrix:	Water	QC Batch#:	2003/04/02-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	12000	5000	ug/L	100.00	04/02/2003 14:48	g
Benzene	ND	50	ug/L	100.00	04/02/2003 14:48	
Toluene	ND	50	ug/L	100.00	04/02/2003 14:48	
Ethyl benzene	ND	50	ug/L	100.00	04/02/2003 14:48	
Xylene(s)	ND	50	ug/L	100.00	04/02/2003 14:48	
MTBE	15000	500	ug/L	100.00	04/02/2003 14:48	
Surrogates(s)						
Trifluorotoluene	104.1	58-124	%	100.00	04/02/2003 14:48	
4-Bromofluorobenzene-FID	93.4	50-150	%	100.00	04/02/2003 14:48	

Gas/BTEX Compounds by 8015M/8021

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Project: 030320-DA1
98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.
Oakland, CA

Prep(s):	5030 5030	Test(s):	8015M 8021B
Sample ID:	BW-A	Lab ID:	2003-03-0461 - 6
Sampled:	03/20/2003 10:05	Extracted:	4/2/2003 15:21
Matrix:	Water	QC Batch#:	2003/04/02-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed ~	Flag
Gasoline	ND	2500	ug/L	50.00	04/02/2003 15:21	
Benzene	ND	25	ug/L	50.00	04/02/2003 15:21	
Toluene	ND	25	ug/L	50.00	04/02/2003 15:21	
Ethyl benzene	ND	25	ug/L	50.00	04/02/2003 15:21	
Xylene(s)	ND	25	ug/L	50.00	04/02/2003 15:21	
MTBE	ND	250	ug/L	50.00	04/02/2003 15:21	
Surrogates(s)						
Trifluorotoluene	107.3	58-124	%	50.00	04/02/2003 15:21	
4-Bromofluorobenzene-FID	99.0	50-150	%	50.00	04/02/2003 15:21	

Gas/BTEX Compounds by 8015M/8021

Blaine Tech Services, Inc.

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

Project: 030320-DA1
98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.
Oakland, CA

Prep(s):	5030 5030	Test(s):	8015M 8021B
Sample ID:	BW-B	Lab ID:	2003-03-0461 - 7
Sampled:	03/20/2003 09:28	Extracted:	4/3/2003 12:28
Matrix:	Water	QC Batch#:	2003/04/03-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	170	100	ug/L	2.00	04/03/2003 12:28	g
Benzene	ND	1.0	ug/L	2.00	04/03/2003 12:28	
Toluene	ND	1.0	ug/L	2.00	04/03/2003 12:28	
Ethyl benzene	ND	1.0	ug/L	2.00	04/03/2003 12:28	
Xylene(s)	ND	1.0	ug/L	2.00	04/03/2003 12:28	
MTBE	190	10	ug/L	2.00	04/03/2003 12:28	
Surrogates(s)						
Trifluorotoluene	101.4	58-124	%	2.00	04/03/2003 12:28	
4-Bromofluorobenzene-FID	90.6	50-150	%	2.00	04/03/2003 12:28	

Gas/BTEX Compounds by 8015M/8021

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Project: 030320-DA1

98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.
Oakland, CA

Prep(s):	5030	Test(s):	8015M
	5030		8021B
Sample ID:	BW-C	Lab ID:	2003-03-0461 - 8
Sampled:	03/20/2003 10:25	Extracted:	4/3/2003 13:00
Matrix:	Water	QC Batch#:	2003/04/03-01-05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	270	100	ug/L	2.00	04/03/2003 13:00	g
Benzene	ND	1.0	ug/L	2.00	04/03/2003 13:00	
Toluene	ND	1.0	ug/L	2.00	04/03/2003 13:00	
Ethyl benzene	ND	1.0	ug/L	2.00	04/03/2003 13:00	
Xylene(s)	ND	1.0	ug/L	2.00	04/03/2003 13:00	
MTBE	250	10	ug/L	2.00	04/03/2003 13:00	
Surrogates(s)						
Trifluorotoluene	106.4	58-124	%	2.00	04/03/2003 13:00	
4-Bromofluorobenzene-FID	90.1	50-150	%	2.00	04/03/2003 13:00	

Gas/BTEX Compounds by 8015M/8021

Blaine Tech Services, Inc.

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1680 Rogers Avenue

San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 030320-DA1

98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.

Oakland, CA

Prep(s):	5030	Test(s):	8015M
	5030		8021B
Sample ID:	BW-D	Lab ID:	2003-03-0461 - 9
Sampled:	03/20/2003 11:00	Extracted:	4/3/2003 16:34
Matrix:	Water	QC Batch#:	2003/04/03-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	71	50	ug/L	1.00	04/03/2003 16:34	g
Benzene	ND	0.50	ug/L	1.00	04/03/2003 16:34	
Toluene	ND	0.50	ug/L	1.00	04/03/2003 16:34	
Ethyl benzene	ND	0.50	ug/L	1.00	04/03/2003 16:34	
Xylene(s)	ND	0.50	ug/L	1.00	04/03/2003 16:34	
MTBE	55	5.0	ug/L	1.00	04/03/2003 16:34	
Surrogates(s)						
Trifluorotoluene	112.4	58-124	%	1.00	04/03/2003 16:34	
4-Bromofluorobenzene-FID	95.3	50-150	%	1.00	04/03/2003 16:34	

Gas/BTEX Compounds by 8015M/8021

Blaine Tech Services, Inc.

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San Jose, CA 95112-1105

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Project: 030320-DA1

98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.

Oakland, CA

Prep(s):	5030	Test(s):	8015M
	5030		8021B
Sample ID:	C-1	Lab ID:	2003-03-0461 - 10
Sampled:	03/20/2003 08:30	Extracted:	4/2/2003 17:29
Matrix:	Water	QC Batch#:	2003/04/02-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	04/02/2003 17:29	
Benzene	ND	0.50	ug/L	1.00	04/02/2003 17:29	
Toluene	ND	0.50	ug/L	1.00	04/02/2003 17:29	
Ethyl benzene	ND	0.50	ug/L	1.00	04/02/2003 17:29	
Xylene(s)	ND	0.50	ug/L	1.00	04/02/2003 17:29	
MTBE	ND	5.0	ug/L	1.00	04/02/2003 17:29	
Surrogates(s)						
Trifluorotoluene	101.0	58-124	%	1.00	04/02/2003 17:29	
4-Bromofluorobenzene-FID	97.1	50-150	%	1.00	04/02/2003 17:29	

Gas/BTEX Compounds by 8015M/8021

Blaine Tech Services, Inc.

Attn.: Leon Gearhart

1680 Rogers Avenue

San Jose, CA 95112-1105

Phone: (408) 573-0555 Fax: (408) 573-7771

Project: 030320-DA1
98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.
Oakland, CA

Batch QC Report					
Prep(s): 5030				Test(s): 8015M	
Method Blank		Water		QC Batch # 2003/04/02-01.05	
MB: 2003/04/02-01 05-006				Date Extracted: 04/02/2003 09:30	

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	04/02/2003 09:30	
Benzene	ND	0.5	ug/L	04/02/2003 09:30	
Toluene	ND	0.5	ug/L	04/02/2003 09:30	
Ethyl benzene	ND	0.5	ug/L	04/02/2003 09:30	
Xylene(s)	ND	0.5	ug/L	04/02/2003 09:30	
MTBE	ND	5.0	ug/L	04/02/2003 09:30	
Surrogates(s)					
Trifluorotoluene	98.3	58-124	%	04/02/2003 09:30	
4-Bromofluorobenzene-FID	98.5	50-150	%	04/02/2003 09:30	

Gas/BTEX Compounds by 8015M/8021

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Project: 030320-DA1

98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.

Oakland, CA

Batch QC Report					
Prep(s): 5030				Test(s): 8015M	
Method Blank		Water		QC Batch # 2003/04/03-01.02	
MB: 2003/04/03-01.02-004				Date Extracted: 04/03/2003 08:46	

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	04/03/2003 08:46	
Benzene	ND	0.5	ug/L	04/03/2003 08:46	
Toluene	ND	0.5	ug/L	04/03/2003 08:46	
Ethyl benzene	ND	0.5	ug/L	04/03/2003 08:46	
Xylene(s)	ND	0.5	ug/L	04/03/2003 08:46	
MTBE	ND	5.0	ug/L	04/03/2003 08:46	
Surrogates(s)					
Trifluorotoluene	86.9	58-124	%	04/03/2003 08:46	
4-Bromofluorobenzene-FID	92.9	50-150	%	04/03/2003 08:46	

Gas/BTEX Compounds by 8015M/8021

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Project: 030320-DA1
98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.
Oakland, CA

Batch QC Report			
Prep(s): 5030			Test(s): 8015M
Method Blank	Water		QC Batch # 2003/04/03-01.05
MB: 2003/04/03-01.05-003			Date Extracted: 04/03/2003 08:01

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	04/03/2003 08:01	
Benzene	ND	0.5	ug/L	04/03/2003 08:01	
Toluene	ND	0.5	ug/L	04/03/2003 08:01	
Ethyl benzene	ND	0.5	ug/L	04/03/2003 08:01	
Xylene(s)	ND	0.5	ug/L	04/03/2003 08:01	
MTBE	ND	5.0	ug/L	04/03/2003 08:01	
Surrogates(s)					
Trifluorotoluene	103.8	58-124	%	04/03/2003 08:01	
4-Bromofluorobenzene-FID	95.0	50-150	%	04/03/2003 08:01	

Gas/BTEX Compounds by 8015M/8021

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Project: 030320-DA1
98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.
Oakland, CA

Batch QC Report			
Prep(s): 5030		Test(s): 8021B	
Laboratory Control Spike		Water	QC Batch # 2003/04/02-01.05
LCS	2003/04/02-01.05-004	Extracted: 04/02/2003	Analyzed: 04/02/2003 08:26
LCSD	2003/04/02-01.05-005	Extracted: 04/02/2003	Analyzed: 04/02/2003 08:58

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	87.1	93.3	100.0	87.1	93.3	6.9	77-123	20		
Toluene	90.7	96.3	100.0	90.7	96.3	6.0	78-122	20		
Ethyl benzene	90.7	95.1	100.0	90.7	95.1	4.7	70-130	20		
Xylene(s)	268	281	300	89.3	93.7	4.8	75-125	20		
Surrogates(s)										
Trifluorotoluene	457	488	500	91.4	97.6		58-124			

Gas/BTEX Compounds by 8015M/8021

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Project: 030320-DA1

98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.

Oakland, CA

Batch QC Report

Prep(s): 5030

Test(s): 8021B

Laboratory Control Spike

Water

QC Batch # 2003/04/03-01.02

LCS 2003/04/03-01.02-005

Extracted: 04/03/2003

Analyzed: 04/03/2003 09:16

LCSD 2003/04/03-01.02-006

Extracted: 04/03/2003

Analyzed: 04/03/2003 09:45

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	95.5	92.9	100.0	95.5	92.9	2.8	77-123	20		
Toluene	94.8	92.6	100.0	94.8	92.6	2.3	78-122	20		
Ethyl benzene	94.7	93.3	100.0	94.7	93.3	1.5	70-130	20		
Xylene(s)	279	275	300	93.0	91.7	1.4	75-125	20		
Surrogates(s)										
Trifluorotoluene	432	420	500	86.4	84.0		58-124			

Gas/BTEX Compounds by 8015M/8021

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Project: 030320-DA1

98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.

Oakland, CA

Batch QC Report			
Prep(s): 5030		Test(s): 8015M	
Laboratory Control Spike		Water	QC Batch # 2003/04/03-01.02
LCS	2003/04/03-01.02-007	Extracted: 04/03/2003	Analyzed: 04/03/2003 10:15
LCSD	2003/04/03-01.02-008	Extracted: 04/03/2003	Analyzed: 04/03/2003 10:44

Compound	Conc. ug/L		Exp. Conc.	Recovery		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Gasoline	490	484	500	98.0	96.8	1.2	75-125	20		
<i>Surrogates(s)</i>										
4-Bromofluorobenzene-FID	477	473	500	95.4	94.6		50-150			

Gas/BTEX Compounds by 8015M/8021

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Project: 030320-DA1
98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.
Oakland, CA

Batch QC Report									
Prep(s): 5030					Test(s): 8021B				
Laboratory Control Spike			Water			QC Batch # 2003/04/03-01.05			
LCS	2003/04/03-01.05-004		Extracted: 04/03/2003			Analyzed: 04/03/2003 08:33			
LCSD	2003/04/03-01.05-005		Extracted: 04/03/2003			Analyzed: 04/03/2003 09:06			

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD %	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Benzene	91.4	98.7	100.0	91.4	98.7	7.7	77-123	20		
Toluene	96.5	103	100.0	96.5	103.0	6.5	78-122	20		
Ethyl benzene	95.8	101	100.0	95.8	101.0	5.3	70-130	20		
Xylene(s)	284	298	300	94.7	99.3	4.7	75-125	20		
Surrogates(s)										
Trifluorotoluene	486	522	500	97.2	104.4		58-124			

Gas/BTEX Compounds by 8015M/8021

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

Project: 030320-DA1
98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.
Oakland, CA

Batch QC Report			
Prep(s): 5030		Test(s): 8015M	
Laboratory Control Spike		Water	
QC Batch # 2003/04/03-01.05			
LCS	2003/04/03-01.05-006	Extracted: 04/03/2003	Analyzed: 04/03/2003 09:38
LCSD	2003/04/03-01.05-007	Extracted: 04/03/2003	Analyzed: 04/03/2003 10:10

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Gasoline	496	479	500	99.2	95.8	3.5	75-125	20		
<i>Surrogates(s)</i>										
4-Bromofluorobenzene-FID	512	495	500	102.4	99.0		50-150			

Gas/BTEX Compounds by 8015M/8021

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Project: 030320-DA1

98995752

Received: 03/20/2003 16:53

Site: 540 Hegenberger Rd.
Oakland, CA

Legend and Notes

Result Flag

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

STL San Francisco

Sample Receipt Checklist

Submission #: 2003- 03 . 0461

Checklist completed by: (initials) DSH Date: 03, 21, 03

Courier name: STL San Francisco Client _____

Custody seals intact on shipping container/samples Yes _____ No _____ Not Present

Chain of custody present? Yes No _____

Chain of custody signed when relinquished and received? Yes No _____

Chain of custody agrees with sample labels? Yes No _____

Samples in proper container/bottle? Yes No _____

Sample containers intact? Yes No _____

Sufficient sample volume for indicated test? Yes No _____

All samples received within holding time? Yes No _____

Container/Temp Blank temperature in compliance ($4^{\circ}C \pm 2$)? Temp: 23 $^{\circ}C$ Yes No _____

Water - VOA vials have zero headspace? No VOA vials submitted Yes No _____

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small - \bigcirc), M (medium - \bigcirc) or L (large - \bigcirc))

Water - pH acceptable upon receipt? Yes No

pH adjusted- Preservative used: HNO₃ HCl H₂SO₄ NaOH ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments:

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: _____ / _____ /03

Client contacted: Yes No

Summary of discussion:

Corrective Action (per PM/Client):

WELL GAUGING DATA

Project # 030320-DA1

Date 3/20/03

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					8.21	23.63	TOC	--
MW-2	2					7.65	19.57		--
MW-3	2	Gauged after purging other wells Obstructed due to construction wells				6.87 mm	19.57 mm		.
MW-4	4					7.92	18.53		
MW-5	4					8.23	19.57		=
BW-A	12					5.36	12.88		.
BW-B	4					6.23	11.74		
BW-C	4					6.48	12.96		
BW-D	12 4					5.23	12.52	✓	
C-1	-		Top of concrete			4.61	-		
SD-1	-					dry	-		
SD-2	-					dry	-		

SHELL WELL MONITORING DATA SHEET

BTS #: 030320-DA1	Site: 540 Hegenberger Rd, Oakland, CA
Sampler: DA	Date: 3/20/03
Well I.D.: MW-1	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): 23.63	Depth to Water (DTW): 8.21
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="checkbox"/> VCO Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.29	

Purge Method: Bailor Water: Peristaltic Sampling Method: Bailor
 Disposable Bailor Extraction Pump Disposable Bailor
 Middleburg Other _____ Extraction Port
 Electric Submersible Other _____ Dedicated Tubing

$2.5 \text{ (Gals.)} \times 3 = 7.5 \text{ Gals.}$ I Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² + 0.163</td> </tr> </tbody> </table>	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
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														

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
1122	62.4	8.1	4030	7200	2.5	tan, cloudy
1125	63.9	8.0	7571	7200	5	"
1128	63.7	7.5	7923	7200	7.5	" DTW=14.65

Did well dewater? Yes No Gallons actually evacuated: 7.5

Sampling Date: 3/20/03 Sampling Time: 1134 Depth to Water: 11.29

Sample I.D.: MW-1 Laboratory: Kiff SPL Other: STL

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

EB I.D. (if applicable): @ _____ 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 #: 030320-DA1	Site: 540 Heegenberger Rd. Oakland, CA
Sampler: DA	Date: 3/20/03
Well I.D.: MW-2	Well Diameter: $\text{\textcircled{2}}$ 3 4 6 8 _____
Total Well Depth (TD): 19.57	Depth to Water (DTW): 7.65
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: $\text{\textcircled{PVC}}$ Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.00	

Purge Method: Bailer Water Sampling Method: Bailer
 Disposable Bailer Peristaltic Disposable Bailer
 Middleburg Extraction Pump Extraction Port
 Electric Submersible Other _____ Dedicated Tubing

Other: _____

1.9 (Gals.) X	3	= 5.7 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.09	4"	0.65
$\text{\textcircled{2}}$ 2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or $\text{\textcircled{US}}$)	Turbidity (NTUs)	Gals. Removed	Observations
852	61.3	7.5	1406	7200	2	cloudy
854	63.5	7.2	1059	7200	4	"
856	64.0	7.1	1102	7200	6	DTW = 11.77

Did well dewater? Yes $\text{\textcircled{ND}}$ Gallons actually evacuated: 6

Sampling Date: 3/20/03 Sampling Time: 901 Depth to Water: 11.77

Sample I.D.: MW-2 Laboratory: KIT SPL Other _____

Analyzed for: $\text{\textcircled{TPH-D}}$ $\text{\textcircled{BTEX}}$ $\text{\textcircled{MTBE}}$ 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 #: 030320-DA1	Site: 540 Heegenberger Rd, Oakland, CA
Sampler: DA	Date: 3/20/03
Well I.D.: Mw-3	Well Diameter: ② 3 4 6 8
Total Well Depth (TD): 19.57	Depth to Water (DTW): 6.87
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="checkbox"/> PWC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.41	

Purge Method: <input checked="" type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Middleburg <input type="checkbox"/> Electric Submersible	Water <input type="checkbox"/> Peristaltic <input type="checkbox"/> Extraction Pump <input type="checkbox"/> Other _____	Sampling Method: <input checked="" type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Extraction Port <input type="checkbox"/> Dedicated Tubing Other: _____
--	---	--

$2.0 \text{ (Gals.)} \times 3 = 6.0 \text{ Gals.}$ 1 Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	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
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														

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
Well gauged after New wellbox.						after purging other wells. Construction materials moved.
1145	63.7	8.6	8945	7200	2	dark grey, turbid, odor, sheen
1148	64.8	8.7	9243	7200	4	"
1151	65.4	8.6	10680	7200	6	"

Did well dewater? Yes No Gallons actually evacuated: 6

Sampling Date: 3/20/03 Sampling Time: 1157 Depth to Water: 9.41

Sample I.D.: Mw-3 Laboratory: Kiff SPL Other: STL

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

EB I.D. (if applicable): @ _____ 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 #: 030320-DA1	Site: 540 Heegenberger Rd. Oakland, CA
Sampler: DA	Date: 3/20/03
Well I.D.: MW-4	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 18.53	Depth to Water (DTW): 7.92
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grde	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.04	

Purge Method: Bailer Water Sampling Method: Bailer
 Disposable Bailer Peristaltic Disposable Bailer
 Middleburg Extraction Pump Extraction Port
 Electric Submersible Other _____ Dedicated Tubing

Other: _____

$6.9 \text{ (Gals.)} \times 3 = 20.7 \text{ Gals.}$ <p>I Case Volume Specified Volumes Calculated Volume</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	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
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														

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
802	62.5	7.1	3906	7200	7	cloudy
804	63.5	7.2	4522	7200	14	"
805	63.9	7.1	4699	7200	21	"

Did well dewater? Yes No Gallons actually evacuated: 21

Sampling Date: 3/20/03 Sampling Time: 810 Depth to Water: 11.61 traffic

Sample I.D.: MW-4 Laboratory: Kiff SPL Other: STL

Analyzed for: PH-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 #: 030320-DA1	Site: 540 Heegenberger Rd. Oakland, CA
Sampler: DA	Date: 3/20/03
Well I.D.: Mw-5	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 14.57	Depth to Water (DTW): 8.23
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.50	

Purge Method: <input type="checkbox"/> Bailor <input type="checkbox"/> Disposable Bailor <input type="checkbox"/> Middleburg <input checked="" type="checkbox"/> Electric Submersible	Water: <input type="checkbox"/> Peristaltic <input type="checkbox"/> Extraction Pump Other: _____	Sampling Method: <input checked="" type="checkbox"/> Bailor <input type="checkbox"/> Disposable Bailor <input type="checkbox"/> Extraction Port <input type="checkbox"/> Dedicated Tubing Other: _____
--	---	--

$7.4 \text{ (Gals.)} \times 3 = 22.2 \text{ Gals.}$
 I Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	<u>4</u> "	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
0740	64.0	5.9	1201	51	7.5	clear
0742	65.1	6.6	1212	167	15	cloudy
0743	64.6	6.8	1201	182	22.5	" DTW = 16.38

Did well dewater? Yes No Gallons actually evacuated: 22.5

Sampling Date: ~~0748~~ ^{3/20/03} Sampling Time: 1115 Depth to Water: 8.45

Sample I.D.: Mw-5 Laboratory: Kiff SPL Other: STL

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

EB I.D. (if applicable): @ _____ 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 #: 030320-DA1	Site: 540 Heegenberger Rd. Oakland, CA
Sampler: DA	Date: 3/20/03
Well I.D.: BW-B	Well Diameter: 2 3 ④ 6 8
Total Well Depth (TD): 11.74	Depth to Water (DTW): 6.23
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>RVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 7.33	

Purge Method: Bailer Disposable Bailer Middleburg Electric Submersible

Water: Peristaltic Extraction Pump Other _____

Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing

Other: _____

3.5 (Gals.) X 3 = 10.5 Gals.
 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	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	Gals. Removed	Observations
922	58.1	7.0	3677	2200	3.5	cloudy
923	60.3	7.0	2577	64.5	7	"
925	61.4	6.8	2432	51	10.5	"

Did well dewater? Yes No Gallons actually evacuated: 10.5

Sampling Date: 3/20/03 Sampling Time: 928 Depth to Water: 6.23

Sample I.D.: BW-B Laboratory: KITT SPL Other STL

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

EB I.D. (if applicable): _____ @ _____ 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 #: 030320-DA1	Site: 540 Heegenberger Rd. Oakland, CA
Sampler: DA	Date: 3/20/03
Well I.D.: BW-C	Well Diameter: 2 3 ④ 6 8
Total Well Depth (TD): 12.96	Depth to Water (DTW): 6.48
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 7.72	

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

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

$4.0 \text{ (Gals.)} \times 3 = 12.0 \text{ Gals.}$	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>④</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	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
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														
I Case Volume	Specified Volumes	Calculated Volume															

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
1020	59.6	6.8	951	68	4	clear
1021	63.1	6.5	1101	85	8	cloudy
1022	64.3	6.5	1156	121	12	"

Did well dewater? Yes No Gallons actually evacuated: 12

Sampling Date: 3/20/03 Sampling Time: 1025 Depth to Water: 6.52

Sample I.D.: BW-C Laboratory: Kiff SPL "Other" STL

Analyzed for: ~~PHL~~ ~~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

SHIELD WELL MONITORING DATA SHEET

BTS #: 030320-DA1	Site: 540 Heegenberger Rd. Oakland, CA
Sampler: DA	Date: 3/20/03
Well I.D.: C-1	Well Diameter: 2 3 4 6 8 <u>Canal</u>
Total Well Depth (TD): —	Depth to Water (DTW): 4.61
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>topok</u> PVC Grnde	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge ^{concrete} [(Height of Water Column x 0.20) + DTW]: —	

Purge Method: Bailer Disposable Bailer Middleburg Electric Submersible	Water: Peristaltic Extraction Pump Other: _____	Sampling Method: <input checked="" type="checkbox"/> Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____
---	---	---

(Gals.) X <u>Canal Sample</u> = _____ Gals. I Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	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
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														

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
827	57.7	8.3	7090	48	0	clear

Did well dewater? Yes No Gallons actually evacuated: 0

Sampling Date: 3/20/03 Sampling Time: 830 Depth to Water: —

Sample I.D.: C-1 Laboratory: Kiff SPL Other: STL

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 #: 030320-DA1	Site: 540 Heegenberger Rd. Oakland, CA
Sampler: DA	Date: 3/20/03
Well I.D.: 5D-1	Well Diameter: 2 3 4 6 8 _____
Total Well Depth (TD): —	Depth to Water (DTW): —
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 Middleburg Electric Submersible
 Water: Peristaltic Extraction Pump Other _____
 Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing
 Other: _____

_____ (Gals.) X _____ = _____ 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	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
						Storm Drain Dry

Did well dewater? Yes No Gallons actually evacuated: _____

Sampling Date: _____ Sampling Time: _____ Depth to Water: _____

Sample I.D.: _____ Laboratory: Kiff SPL 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 #: 030320-DA1	Site: 540 Heegenberger Rd. Oakland, CA
Sampler: DA	Date: 3/20/03
Well I.D.: 50-2	Well Diameter: 2 3 4 6 8 <u> </u>
Total Well Depth (TD): <u> </u>	Depth to Water (DTW): <u> </u>
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 Water Sampling Method: Bailer
 Disposable Bailer Peristaltic Disposable Bailer
 Middleburg Extraction Pump Extraction Port
 Electric Submersible Other: _____ Dedicated Tubing

_____ (Gals.) X _____ = _____ Gals. 1 Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	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
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														

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
						Storm Drain Dry

Did well dewater? Yes No Gallons actually evacuated: _____

Sampling Date: _____ Sampling Time: _____ Depth to Water: _____

Sample I.D.: _____ Laboratory: KIF SPL 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 (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
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
	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
	12/17/00		6.95	99.15	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	10,600	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
	06/21/01		7.18	98.92	ND<1,000	ND<10	ND<10	ND<10	ND<10	3,400	NA
	09/23/01		7.11	98.99	ND<1,000	ND<10	ND<10	ND<10	ND<10	2200/1800 ^a	NA
	12/31/01		6.91	99.19	ND<5,000	ND<50	ND<50	ND<50	ND<50	14,000	NA
	03/14/02		6.85	99.25	ND<5,000	ND<50	ND<50	ND<50	ND<50	6,200	NA
	04/17/02		5.89	100.21	ND<5,000	ND<50	ND<50	ND<50	ND<50	4,500	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
	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
	3/20/2003^e		6.91	99.19	1,100	ND<5.0	ND<5.0	ND<5.0	ND<5.0	780	2.2
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
	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
	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
	03/28/01		9.23	97.06	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	7.42	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
	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
	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
	03/14/02		9.25	97.04	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	4	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
	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
	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
	3/20/2003^e		9.40	96.89	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	6.1	1.2

Table 1
Groundwater Elevation and Analytical Data

ARCO Service Station #4494
566 Hegenberger Road
Oakland, California

Well Number	Date Sampled	Top of Riser Elevation (ft)	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)	
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	
	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	
	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	
	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	
	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	
	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	
	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	
	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	
	04/17/02		7.79	99.61	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	5.6	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	
	12/12/02		9.07	98.33	ND<50 ^d	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	5.6
	3/20/2003^e		8.85	98.55	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	0.50	ND<0.50	4.8
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	
	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	
	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	
	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	
	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	
	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	
	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	
	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	
	04/17/02		5.37	99.82	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	8.5	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	
	12/12/02		6.53	98.66	ND<50 ^d	2.2	4.7	1.3	6.8	ND<2.5	1.3	
	3/20/2003^e		6.40	98.79	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	2.7

**Table 1
Groundwater Elevation and Analytical Data**

ARCO Service Station #4494
566 Hegenberger Road
Oakland, California

Well Number	Date Sampled	Top of Riser Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
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
	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
	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
	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
	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
	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
	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
	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
	04/17/02		4.96	100.11	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	7	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
	12/12/02		6.18	98.89	65 ^d	3.3	8.4	2.7	14	ND<2.5	1.1
3/20/2003^e	6.18	98.89	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	2.2	
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
	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
	12/17/00		8.62	96.90	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	27.1	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
	06/21/01		8.84	96.68	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	53	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
	12/23/01		7.79	97.73	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	440	NA
	03/14/02		8.30	97.22	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	18	NA
	04/17/02		7.43	98.09	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	67	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
	12/12/02		**	8.55	--	75 ^d	ND<0.5	ND<0.5	ND<0.5	ND<0.5	160/130 ^a
3/20/2003^e	8.38	97.14	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	32	2.2	

**Table 1
Groundwater Elevation and Analytical Data**

ARCO Service Station #4494
566 Hegenberger Road
Oakland, California

Well Number	Date Sampled	Top of Riser Elevation (ft)	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)
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
	09/28/00		8.28	NC	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<2.5	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
	03/28/01		8.16	NC	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA
	06/21/01		9.37	NC	160	5.1	ND<0.5	1.1	3.2	ND<2.5	NA
	09/23/01		8.75	NC	57	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.5	NA
	12/31/01		6.80	NC	520	3.1	ND<0.5	6.4	4.7	ND<2.5	NA
	03/14/02		7.86	NC	240	3.7	ND<0.5	0.7	2.8	ND<2.5	NA
	04/17/02		7.13	NC	ND<50	ND<0.5	1.6	ND<0.5	0.72	ND<2.5	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
	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
	3/20/2003 ^e			8.08	NC	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50

TPH = Total Petroleum Hydrocarbons

MTBE = Methyl tertiary butyl ether analyzed by EPA Method 8021B unless otherwise noted

µg/L = Micrograms per liter

NC = Not calculated

NE = Not surveyed/No elevation

ND< = Not detected at or above specified laboratory detection limit.

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 sampling event (03/20/03)

** = 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 Group Environmental Management Company and their previous consultants. URS has not verified the accuracy of this information.

Table 1
Groundwater Elevation and Analytical Data

Service Station # 4494
566 Hagenberger Road
Oakland, California

Note:	Samples analyzed for benzene, toluene, ethyl benzene, and total xylenes using EPA Method 8020, 8021, 8021A, or 8021B.
TPH	= Total petroleum hydrocarbons analyzed using EPA Method 8015, Modified
MTBE	= Methyl tertiary butyl ether analyzed using EPA Method 8021, 8021A, or 8021B
µg/L	= Micrograms per liter equivalent to parts per billion (ppb)
mg/L	= Milligrams per liter equivalent to parts per million (ppm)
MSL	= Mean sea level
TOB	= Top of box
ND<	= Not detected at or above specified laboratory method detection limit
NA	= Not analyzed
NS	= Not sampled
NM	= Not measured
NP	= Not purged
1	= Chromatogram Pattern: Unidentified Hydrocarbons C6-C12
2	= This sample was analyzed beyond the EPA recommended holding time. The results may still be useful for their intended purpose.
3	= Confirmed by using EPA Method 8240, 8260, 8260A, or 8260B
4	= Well inaccessible
5	= Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
6	= The continuing calibration standard was outside of the acceptance criteria. This should be considered in evaluating the result for its intended purpose.
7	= The reported compound(s) have been confirmed by GCMS analysis.
m	= TPH-g, BTEX, and MTBE analyzed by EPA method 8260B beginning on 2003 sampling event (xx/xx/xx)
Source:	The data within this table collected prior to June 2002 was provided to URS by Group Environmental Management Company and their previous consultants. URS has not verified the accuracy of this information.

Table 2
Groundwater Flow Direction and Gradient

ARCO Service Station #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

Note:

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

**Table 3
Oxygenate Analytical Data**

Service Station # 4494
566 Hagenberger 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)
MW-1	03/20/03	ND<1000	640	780	ND<5.0	ND<5.0	ND<5.0
MW-3	03/20/03	ND<100	ND<20	601	ND<0.50	ND<0.50	1.1
MW-4	03/20/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50
MW-5	03/20/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50
MW-6	03/20/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50
MW-7	03/20/03	ND<100	ND<20	32	ND<0.50	ND<0.50	0.62
RW-1	03/20/03	ND<100	ND<20	ND<0.50	ND<0.50	ND<0.50	ND<0.50

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
µg/L = micrograms per liter
ND< = Less than laboratory reporting limit
NA = Data not available, not analyzed, or not applicable
NS = Not Sampled



7 April, 2003

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

RE: ARCO #4494, Oakland, Ca
Sequoia Work Order: MMC0742

Enclosed are the results of analyses for samples received by the laboratory on 03/21/03 10:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya Pelt
Project Manager

CA ELAP Certificate #1210



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

Project: ARCO #4494, Oakland, Ca
Project Number: ARCO #4494, Oakland, CA
Project Manager: Scott Robinson

MMC0742
Reported:
04/07/03 16:12

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MMC0742-01	Water	03/20/03 13:30	03/21/03 10:40
MW-3	MMC0742-02	Water	03/20/03 12:25	03/21/03 10:40
MW-4	MMC0742-03	Water	03/20/03 11:25	03/21/03 10:40
MW-5	MMC0742-04	Water	03/20/03 11:45	03/21/03 10:40
MW-6	MMC0742-05	Water	03/20/03 12:05	03/21/03 10:40
MW-7	MMC0742-06	Water	03/20/03 12:45	03/21/03 10:40
RW-1	MMC0742-07	Water	03/20/03 13:05	03/21/03 10:40

There were no custody seals that were received with this project.



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

Project: ARCO #4494, Oakland, Ca
Project Number: ARCO #4494, Oakland, CA
Project Manager: Scott Robinson

MMC0742
Reported:
04/07/03 16:12

**Total Purgeable Hydrocarbons (C6-C10) and Volatile Organic Compounds by EPA method 8260B
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MMC0742-01) Water Sampled: 03/20/03 13:30 Received: 03/21/03 10:40									
Benzene	ND	5.0	ug/l	10	3D02035	04/02/03	04/03/03	EPA 8260B	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	1100	500	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>94.8 %</i>	<i>78-129</i>		"	"	"	"	
MW-3 (MMC0742-02) Water Sampled: 03/20/03 12:25 Received: 03/21/03 10:40									
Benzene	ND	0.50	ug/l	1	3D02036	04/02/03	04/03/03	EPA 8260B	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>106 %</i>	<i>78-129</i>		"	"	"	"	
MW-4 (MMC0742-03) Water Sampled: 03/20/03 11:25 Received: 03/21/03 10:40									
Benzene	ND	0.50	ug/l	1	3D02036	04/02/03	04/03/03	EPA 8260B	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	0.50	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>109 %</i>	<i>78-129</i>		"	"	"	"	
MW-5 (MMC0742-04) Water Sampled: 03/20/03 11:45 Received: 03/21/03 10:40									
Benzene	ND	0.50	ug/l	1	3D02036	04/02/03	04/03/03	EPA 8260B	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>119 %</i>	<i>78-129</i>		"	"	"	"	



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

Project: ARCO #4494, Oakland, Ca
Project Number: ARCO #4494, Oakland, CA
Project Manager: Scott Robinson

MMC0742
Reported:
04/07/03 16:12

Total Purgeable Hydrocarbons (C6-C10) and Volatile Organic Compounds by EPA method 8260B
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6 (MMC0742-05) Water Sampled: 03/20/03 12:05 Received: 03/21/03 10:40									
Benzene	ND	0.50	ug/l	1	3D02036	04/02/03	04/03/03	EPA 8260B	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		113 %	78-129		"	"	"	"	
MW-7 (MMC0742-06) Water Sampled: 03/20/03 12:45 Received: 03/21/03 10:40									
Benzene	ND	0.50	ug/l	1	3D03007	04/03/03	04/03/03	EPA 8260B	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96.8 %	78-129		"	"	"	"	
RW-1 (MMC0742-07) Water Sampled: 03/20/03 13:05 Received: 03/21/03 10:40									
Benzene	ND	0.50	ug/l	1	3D02036	04/02/03	04/03/03	EPA 8260B	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		110 %	78-129		"	"	"	"	



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MMC0742
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04/07/03 16:12

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MMC0742-01) Water Sampled: 03/20/03 13:30 Received: 03/21/03 10:40									
Ethanol	ND	1000	ug/l	10	3D02035	04/02/03	04/03/03	EPA 8260B	
tert-Butyl alcohol	640	200	"	"	"	"	"	"	
Methyl tert-butyl ether	780	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		94.8 %	78-129		"	"	"	"	
MW-3 (MMC0742-02) Water Sampled: 03/20/03 12:25 Received: 03/21/03 10:40									
Ethanol	ND	100	ug/l	1	3D02036	04/02/03	04/03/03	EPA 8260B	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Methyl tert-butyl ether	6.1	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	1.1	0.50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		106 %	78-129		"	"	"	"	
MW-4 (MMC0742-03) Water Sampled: 03/20/03 11:25 Received: 03/21/03 10:40									
Ethanol	ND	100	ug/l	1	3D02036	04/02/03	04/03/03	EPA 8260B	
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	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		109 %	78-129		"	"	"	"	



URS Corporation
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Project: ARCO #4494, Oakland, Ca
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MMC0742
Reported:
04/07/03 16:12

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5 (MMC0742-04) Water Sampled: 03/20/03 11:45 Received: 03/21/03 10:40									
Ethanol	ND	100	ug/l	1	3D02036	04/02/03	04/03/03	EPA 8260B	
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	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		119 %	78-129		"	"	"	"	
MW-6 (MMC0742-05) Water Sampled: 03/20/03 12:05 Received: 03/21/03 10:40									
Ethanol	ND	100	ug/l	1	3D02036	04/02/03	04/03/03	EPA 8260B	
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	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		113 %	78-129		"	"	"	"	
MW-7 (MMC0742-06) Water Sampled: 03/20/03 12:45 Received: 03/21/03 10:40									
Ethanol	ND	100	ug/l	1	3D03007	04/03/03	04/03/03	EPA 8260B	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Methyl tert-butyl ether	32	0.50	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	0.62	0.50	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96.8 %	78-129		"	"	"	"	



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

Project: ARCO #4494, Oakland, Ca
Project Number: ARCO #4494, Oakland, CA
Project Manager: Scott Robinson

MMC0742
Reported:
04/07/03 16:12

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
RW-1 (MMC0742-07) Water Sampled: 03/20/03 13:05 Received: 03/21/03 10:40									
Ethanol	ND	100	ug/l	1	3D02036	04/02/03	04/03/03	EPA 8260B	
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	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		110 %		78-129	"	"	"	"	



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

Project: ARCO #4494, Oakland, Ca
Project Number: ARCO #4494, Oakland, CA
Project Manager: Scott Robinson

MMC0742
Reported:
04/07/03 16:12

Total Purgeable Hydrocarbons (C6-C10) and 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 3D02035 - EPA 5030B P/T										
Blank (3D02035-BLK1) Prepared & Analyzed: 04/02/03										
Benzene	ND	0.50	ug/l							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C6-C10)	ND	50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.77		"	5.00		95.4	78-129			
Laboratory Control Sample (3D02035-BS1) Prepared & Analyzed: 04/02/03										
Benzene	10.4	0.50	ug/l	10.0		104	78-124			
Toluene	10.0	0.50	"	10.0		100	78-129			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.55		"	5.00		91.0	78-129			
Laboratory Control Sample (3D02035-BS2) Prepared & Analyzed: 04/02/03										
Benzene	5.71	0.50	ug/l	5.44		105	78-124			
Toluene	33.6	0.50	"	32.8		102	78-129			
Gasoline Range Organics (C6-C10)	373	50	"	440		84.8	70-113			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.61		"	5.00		92.2	78-129			
Matrix Spike (3D02035-MS1) Source: MMC0739-11 Prepared: 04/02/03 Analyzed: 04/03/03										
Benzene	326	25	ug/l	272	58	98.5	78-124			
Toluene	1620	25	"	1640	ND	98.8	78-129			
Gasoline Range Organics (C6-C10)	19100	2500	"	22000	1600	79.5	70-113			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.60		"	5.00		92.0	78-129			
Matrix Spike Dup (3D02035-MSD1) Source: MMC0739-11 Prepared: 04/02/03 Analyzed: 04/03/03										
Benzene	350	25	ug/l	272	58	107	78-124	7.10	12	
Toluene	1720	25	"	1640	ND	105	78-129	5.99	10	
Gasoline Range Organics (C6-C10)	20000	2500	"	22000	1600	83.6	70-113	4.60	9	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.56		"	5.00		91.2	78-129			

Sequoia Analytical - Morgan Hill

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

Project: ARCO #4494, Oakland, Ca
Project Number: ARCO #4494, Oakland, CA
Project Manager: Scott Robinson

MMC0742
Reported:
04/07/03 16:12

Total Purgeable Hydrocarbons (C6-C10) and Volatile Organic Compounds by EPA method 8260B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3D02035 - EPA 5030B P/T

Matrix Spike Dup (3D02035-MSD1) Source: MMC0739-11 Prepared: 04/02/03 Analyzed: 04/03/03

Batch 3D02036 - EPA 5035

Blank (3D02036-BLK1) Prepared & Analyzed: 04/02/03

Benzene	ND	0.50	ug/l							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C6-C10)	ND	50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.39		"	5.00		108	78-129			

Laboratory Control Sample (3D02036-BS1) Prepared & Analyzed: 04/02/03

Benzene	9.52	0.50	ug/l	10.0		95.2	78-124			
Toluene	9.30	0.50	"	10.0		93.0	78-129			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.75		"	5.00		95.0	78-129			

Laboratory Control Sample (3D02036-BS2) Prepared & Analyzed: 04/02/03

Benzene	5.07	0.50	ug/l	5.44		93.2	78-124			
Toluene	26.1	0.50	"	32.8		79.6	78-129			
Gasoline Range Organics (C6-C10)	423	50	"	440		96.1	70-113			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.08		"	5.00		102	78-129			

Laboratory Control Sample Dup (3D02036-BSD1) Prepared & Analyzed: 04/02/03

Benzene	9.70	0.50	ug/l	10.0		97.0	78-124	1.87	12	
Toluene	8.64	0.50	"	10.0		86.4	78-129	7.36	10	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.11		"	5.00		102	78-129			



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04/07/03 16:12

Total Purgeable Hydrocarbons (C6-C10) and Volatile Organic Compounds by EPA method 8260B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3D02036 - EPA 5035

Matrix Spike (3D02036-MS1)		Source: MMC0742-02		Prepared: 04/02/03		Analyzed: 04/03/03	
Benzene	5.03	0.50	ug/l	5.44	ND	92.5	78-124
Toluene	26.3	0.50	"	32.8	0.24	79.5	78-129
Gasoline Range Organics (C6-C10)	418	50	"	440	19	90.7	70-113
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.28		"	5.00		106	78-129

Matrix Spike Dup (3D02036-MSD1)		Source: MMC0742-02		Prepared: 04/02/03		Analyzed: 04/03/03				
Benzene	4.72	0.50	ug/l	5.44	ND	86.8	78-124	6.36	12	
Toluene	22.3	0.50	"	32.8	0.24	67.3	78-129	16.5	10	QM-07
Gasoline Range Organics (C6-C10)	343	50	"	440	19	73.6	70-113	19.7	9	QR-02
<i>Surrogate: 1,2-Dichloroethane-d4</i>	6.08		"	5.00		122	78-129			

Batch 3D03007 - EPA 5030B P/T

Blank (3D03007-BLK1)		Prepared & Analyzed: 04/03/03								
Benzene	ND	0.50	ug/l							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C6-C10)	ND	50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.75		"	5.00		95.0	78-129			

Laboratory Control Sample (3D03007-BS1)		Prepared & Analyzed: 04/03/03								
Benzene	9.29	0.50	ug/l	10.0		92.9	78-124			
Toluene	8.88	0.50	"	10.0		88.8	78-129			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.72		"	5.00		94.4	78-129			

Laboratory Control Sample (3D03007-BS2)		Prepared & Analyzed: 04/03/03								
Benzene	4.99	0.50	ug/l	5.44		91.7	78-124			
Toluene	30.0	0.50	"	32.8		91.5	78-129			
Gasoline Range Organics (C6-C10)	322	50	"	440		73.2	70-113			

Sequoia Analytical - Morgan Hill

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MMC0742
Reported:
04/07/03 16:12

Total Purgeable Hydrocarbons (C6-C10) and Volatile Organic Compounds by EPA method 8260B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3D03007 - EPA 5030B P/T

Laboratory Control Sample (3D03007-BS2)

Prepared & Analyzed: 04/03/03

Surrogate: 1,2-Dichloroethane-d4 4.51 ug/l 5.00 90.2 78-129

Matrix Spike (3D03007-MS1)

Source: MMC0869-03

Prepared & Analyzed: 04/03/03

Benzene	2640	5.0	ug/l	54.4	3700	NR	78-124			E, QM-4X
Toluene	323	5.0	"	328	14	94.2	78-129			
Gasoline Range Organics (C6-C10)	10500	500	"	4400	10000	11.4	70-113			QM-07

Surrogate: 1,2-Dichloroethane-d4 4.57 " 5.00 91.4 78-129

Matrix Spike Dup (3D03007-MSD1)

Source: MMC0869-03

Prepared & Analyzed: 04/03/03

Benzene	2540	5.0	ug/l	54.4	3700	NR	78-124	3.86	12	E, QM-4X
Toluene	328	5.0	"	328	14	95.7	78-129	1.54	10	
Gasoline Range Organics (C6-C10)	10300	500	"	4400	10000	6.82	70-113	1.92	9	QM-07

Surrogate: 1,2-Dichloroethane-d4 4.44 " 5.00 88.8 78-129



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04/07/03 16:12

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3D02035 - EPA 5030B P/T

Blank (3D02035-BLK1)

Prepared & Analyzed: 04/02/03

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	"							

Surrogate: 1,2-Dichloroethane-d4 4.77 " 5.00 95.4 78-129

Laboratory Control Sample (3D02035-BS1)

Prepared & Analyzed: 04/02/03

Methyl tert-butyl ether	9.41	0.50	ug/l	10.0		94.1	63-137			
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Surrogate: 1,2-Dichloroethane-d4 4.55 " 5.00 91.0 78-129

Laboratory Control Sample (3D02035-BS2)

Prepared & Analyzed: 04/02/03

Methyl tert-butyl ether	8.34	0.50	ug/l	9.04		92.3	63-137			
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Surrogate: 1,2-Dichloroethane-d4 4.61 " 5.00 92.2 78-129

Matrix Spike (3D02035-MS1)

Source: MMC0739-11

Prepared: 04/02/03 Analyzed: 04/03/03

Methyl tert-butyl ether	1360	25	ug/l	452	1000	79.6	63-137			
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Surrogate: 1,2-Dichloroethane-d4 4.60 " 5.00 92.0 78-129

Matrix Spike Dup (3D02035-MSD1)

Source: MMC0739-11

Prepared: 04/02/03 Analyzed: 04/03/03

Methyl tert-butyl ether	1390	25	ug/l	452	1000	86.3	63-137	2.18	13	
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Surrogate: 1,2-Dichloroethane-d4 4.56 " 5.00 91.2 78-129

Batch 3D02036 - EPA 5035

Blank (3D02036-BLK1)

Prepared & Analyzed: 04/02/03

Ethanol	ND	100	ug/l							
tert-Butyl alcohol	ND	20	"							
Methyl tert-butyl ether	ND	0.50	"							

Sequoia Analytical - Morgan Hill

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MMC0742
Reported:
04/07/03 16:12

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Notes
Batch 3D02036 - EPA 5035										
Blank (3D02036-BLK1) Prepared & Analyzed: 04/02/03										
Di-isopropyl ether	ND	0.50	ug/l							
Ethyl tert-butyl ether	ND	0.50	"							
tert-Amyl methyl ether	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.39		"	5.00		108	78-129			
Laboratory Control Sample (3D02036-BS1) Prepared & Analyzed: 04/02/03										
Methyl tert-butyl ether	8.86	0.50	ug/l	10.0		88.6	63-137			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.75		"	5.00		95.0	78-129			
Laboratory Control Sample (3D02036-BS2) Prepared & Analyzed: 04/02/03										
Methyl tert-butyl ether	8.09	0.50	ug/l	9.04		89.5	63-137			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.08		"	5.00		102	78-129			
Laboratory Control Sample Dup (3D02036-BSD1) Prepared & Analyzed: 04/02/03										
Methyl tert-butyl ether	10.1	0.50	ug/l	10.0		101	63-137	13.1	13	QR-02
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.11		"	5.00		102	78-129			
Matrix Spike (3D02036-MS1) Source: MMC0742-02 Prepared: 04/02/03 Analyzed: 04/03/03										
Methyl tert-butyl ether	13.7	0.50	ug/l	9.04	6.1	84.1	63-137			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.28		"	5.00		106	78-129			
Matrix Spike Dup (3D02036-MSD1) Source: MMC0742-02 Prepared: 04/02/03 Analyzed: 04/03/03										
Methyl tert-butyl ether	17.2	0.50	ug/l	9.04	6.1	123	63-137	22.7	13	QR-02
<i>Surrogate: 1,2-Dichloroethane-d4</i>	6.08		"	5.00		122	78-129			

Batch 3D03007 - EPA 5030B P/T

Blank (3D03007-BLK1)

Prepared & Analyzed: 04/03/03

Sequoia Analytical - Morgan Hill

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MMC0742
Reported:
04/07/03 16:12

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 3D03007 - EPA 5030B P/T									
Blank (3D03007-BLK1)					Prepared & Analyzed: 04/03/03				
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	"						
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.75		"	5.00		95.0	78-129		
Laboratory Control Sample (3D03007-BS1)					Prepared & Analyzed: 04/03/03				
Methyl tert-butyl ether	8.27	0.50	ug/l	10.0		82.7	63-137		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.72		"	5.00		94.4	78-129		
Laboratory Control Sample (3D03007-BS2)					Prepared & Analyzed: 04/03/03				
Methyl tert-butyl ether	7.12	0.50	ug/l	9.04		78.8	63-137		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.51		"	5.00		90.2	78-129		
Matrix Spike (3D03007-MS1)					Source: MMC0869-03 Prepared & Analyzed: 04/03/03				
Methyl tert-butyl ether	396	5.0	ug/l	90.4	300	106	63-137		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.57		"	5.00		91.4	78-129		
Matrix Spike Dup (3D03007-MSD1)					Source: MMC0869-03 Prepared & Analyzed: 04/03/03				
Methyl tert-butyl ether	400	5.0	ug/l	90.4	300	111	63-137	1.01	13
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.44		"	5.00		88.8	78-129		



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04/07/03 16:12

Notes and Definitions

- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
- QM-07 The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- QM-4X The spike recovery was outside of control limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
- 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



Chain of Custody Record

Project Name: 05-20 030320-MTZ

BP BU/GEM CO Portfolio: _____

BP Laboratory Contract Number: _____

Date: 3-20-09

Requested Due Date (mm/dd/yy): _____

On-site Time: <u>1015</u>	Temp: <u>68°</u>
Off-site Time: <u>1400</u>	Temp: <u>70°</u>
Sky Conditions: <u>Clear</u>	
Meteorological Events: _____	
Wind Speed: _____	Direction: _____

Send To: _____	BP/GEM Facility No.: _____	Consultant/Contractor: <u>URS</u>
Lab Name: <u>SEQUOIA</u>	BP/GEM Facility Address: <u>566 HEGENBERGER, OAKLAND, CA</u>	Address: <u>600 12th St., Ste. 200</u>
Lab Address: <u>885 Jarvis Dr. Morgan Hill, CA 95037</u>	Site ID No. <u>ARCO 4494</u>	<u>Oakland, CA 94609-4014</u>
	Site Lat/Long: _____	e-mail EDD: <u>syed_rehan@urscorp.com</u>
	California Global ID #: <u>T0600100104</u>	Consultant/Contractor Project No.: <u>15-00004494.01 00427</u>
Lab PM: <u>Lalonya Peil</u>	BP/GEM PM Contact: <u>PAUL SUPPLE</u>	Consultant Tele/Fax: <u>510-874-1735/510-874-3268</u>
Tele/Fax: <u>408-776-9600 / 408-782-6308</u>	Address: _____	Consultant/Contractor PM: <u>Scott Robinson</u>
Report Type & QC Level: <u>Send BDF Reports</u>		Invoice to: Consultant/Contractor or <u>BP/GEM</u> (circle one)
BP/GEM Account No.: _____	Tele/Fax: _____	BP/GEM Work Release No: <u>INTRIM -50443</u>

Item No.	Sample Description	Time	Matrix				Laboratory No.	No. of containers	Preservatives				Requested Analysis				Sample Point Lat/Long and Comments		
			Soil/Solid	Water/Liquid	Sediments	Air			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	TPH-G/BTEX (2015-1993) (8260)	TPH-D (8015)	MTBE (8021)	MTBE, TAME, ETBE, DPE, TBA (8260)		1,2-DCA & EDB (8260)	Ethanol (8260)
1	MW-1	1330		Y			MML0712	01	3				Y	X					
2	MW-3	1225		Y				02	3				Y	X					
3	MW-4	1125		Y				03	3				Y	X					
4	MW-5	1145		X				04	3				X	X					
5	MW-6	1205		Y				05	3				X	X					
6	MW-7	1245		X				06	3				X	X					
7	RW-1	1305		Y				07	3				X	X					
8																			
9																			
10																			

Sampler's Name: <u>Michael Toll</u>	Relinquished By / Affiliation: <u>[Signature] / BTS</u>	Date: <u>3/21/09</u>	Time: <u>1009</u>	Accepted By / Affiliation: <u>[Signature]</u>	Date: <u>3/21/09</u>	Time: <u>1040</u>
Sampler's Company: <u>BTS</u>						
Shipment Date: _____						
Shipment Method: _____						
Shipment Tracking No: _____						

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

Seals in Place Yes No Temperature Blank Yes No Cooler Temperature on Receipt 5 °F/C Trip Blank Yes No

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: BP
 REC. BY (PRINT) [Signature]
 WORKORDER: RAMC0742

DATE REC'D AT LAB: 3/21/03
 TIME REC'D AT LAB: 10:50
 DATE LOGGED IN: 3-23-03

Drinking water for regulatory purposes: YES NO
 Wastewater 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 / <input checked="" type="radio"/> Absent Intact / Broken*	01		MW-1	(3) VOLS	HCL	L	3/21/03	
2. Chain-of-Custody <input checked="" type="radio"/> Present / Absent*	2		-3	same	↓	↓	↓	
3. Traffic Reports or Packing List: Present / <input checked="" type="radio"/> Absent	3		-4		↓	↓	↓	
4. Airbill: Airbill / Sticker Present / <input checked="" type="radio"/> Absent	4		-5		↓	↓	↓	
5. Airbill #:	5		-6		↓	↓	↓	
6. Sample Labels: <input checked="" type="radio"/> Present / Absent	6		-7		↓	↓	↓	
7. Sample IDs: <input checked="" type="radio"/> Listed / Not Listed on Chain-of-Custody	7		RW-1		↓	↓	↓	
8. Sample Condition: <input checked="" type="radio"/> Intact / Broken* / Leaking*								
9. Does information on custody reports, traffic reports and sample labels agree? <input checked="" type="radio"/> Yes / No*								
10. Sample received within hold time: <input checked="" type="radio"/> Yes / No*								
11. Proper Preservatives used: <input checked="" type="radio"/> Yes / No*								
12. Temp Rec. at Lab: Is temp 4 +/- 2°C? <input checked="" type="radio"/> Yes / No**								

(Acceptance range for samples requiring thermal pres.)
 **Exception (if any): Metals / DFF (Direct From Field) or Problem COC

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

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>030320-MW2</u>	Station # <u>4494</u>
Sampler: <u>M. TOLL</u>	Date: <u>03-20-03</u>
Well I.D.: <u>MW-1</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>23.04</u>	Depth to Water: <u>6.91</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

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

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

<u>10.5</u>	x	<u>3</u>	=	<u>31.5</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or μ S)	Gals. Removed	Observations
1320	68.6	9.0	6429	10.5	
			Dewatered	13	
1330	67.3	8.5	6321	—	DTRU = 17.97

Did well dewater? <u>Yes</u> No	Gallons actually evacuated: <u>13</u>
Sampling Time: <u>1330</u>	Sampling Date: <u>03-20-03</u>
Sample I.D.: <u>MW-1</u>	Laboratory: Pace <u>Sequoia</u> Other _____
Analyzed for: <u>TPH-G BTEX</u> MTBE TPH-D Other: <u>Oxy. & Ethanol by 8260</u>	
D.O. (if req'd):	Pre-purge: _____ mg/L
	Post-purge: <u>2.2</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV
	Post-purge: _____ mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>030320-MTZ</u>	Station # <u>4494</u>
Sampler: <u>M. TOLL</u>	Date: <u>03-20-03</u>
Well I.D.: <u>MW-4</u>	Well Diameter: 2 3 <u>4</u> 6 8 <u> </u>
Total Well Depth: <u>10.102</u>	Depth to Water: <u>8.95</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

Purge Method: <u>Bailer</u> Disposable Bailer Middleburg Electric Submersible Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> Disposable Bailer Extraction Port Other: _____
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Top of Screen: 7' If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

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

Time	Temp (°F)	pH	Conductivity (mS or μ S)	Gals. Removed	Observations
1125	64.4	7.8	1760	—	

Did well dewater? Yes <u>(No)</u>	Gallons actually evacuated: <u>—</u>
Sampling Time: <u>1125</u>	Sampling Date: <u>03-20-03</u>
Sample I.D.: <u>MW-4</u>	Laboratory: Pace <u>Sequoia</u> Other _____
Analyzed for: <u>TPH-G ORTEX</u> MTBE TPH-D Other: <u>Oxy. & Ethanol by 8260</u>	
D.O. (if req'd):	Pre-purge: _____ mg/L <u>Post-purge:</u> <u>4.8</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV Post-purge: _____ mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>030320-MTZ</u>	Station # <u>4494</u>
Sampler: <u>M. TOU</u>	Date: <u>03-20-03</u>
Well I.D.: <u>MW-5</u>	Well Diameter: <u>2</u> 3 4 6 8 _____
Total Well Depth: <u>16.82</u>	Depth to Water: <u>6.40</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

Purge Method: <u>Bailer</u> <u>Disposable Bailer</u> Middleburg Electric Submersible Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> <u>Disposable Bailer</u> Extraction Port Other: _____
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Top of Screen: _____ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

<u>1.7</u>	x	<u>3</u>	=	<u>5.1</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (µS or µS)	Gals. Removed	Observations
1132	65.6	7.1	13.73	1.7	Sulphur odor
1135	65.5	7.1	12.99	3.4	"
1138	65.6	7.1	12.12	5.1	"

Did well dewater? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>5.1</u>
Sampling Time: <u>1145</u>	Sampling Date: <u>03-20-03</u>
Sample I.D.: <u>MW-5</u>	Laboratory: Pace <u>Sequoia</u> Other _____

Analyzed for: <u>TPH-G</u> <u>BTX</u> MTBE TPH-D Other: <u>Oxy. & Ethanol by 8260</u>
D.O. (if req'd): Pre-purge: _____ mg/L Post-purge: <u>2.7</u> mg/L
O.R.P. (if req'd): Pre-purge: _____ mV Post-purge: _____ mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>030320-MW2</u>	Station # <u>4494</u>
Sampler: <u>M. TOU</u>	Date: <u>03-20-03</u>
Well I.D.: <u>MW-6</u>	Well Diameter: <u>2</u> 3 4 6 8 _____
Total Well Depth: <u>18.07</u>	Depth to Water: <u>6.18</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

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

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

<u>1.9</u>	x	<u>3</u>	=	<u>5.7</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or μ S)	Gals. Removed	Observations
<u>1151</u>	<u>67.4</u>	<u>7.1</u>	<u>6233</u>	<u>1.9</u>	
<u>1154</u>	<u>68.0</u>	<u>7.0</u>	<u>6133</u>	<u>3.8</u>	
<u>1157</u>	<u>68.2</u>	<u>7.0</u>	<u>6119</u>	<u>5.7</u>	

Did well dewater? Yes No Gallons actually evacuated: 5.7

Sampling Time: 1205 Sampling Date: 03-20-03

Sample I.D.: MW-6 Laboratory: Pace Sequoia Other _____

Analyzed for: TPH-G BTEX MTBE TPH-D Other: Oxy. & Ethanol by 8260

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	<u>2.2</u>	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>030320-MT2</u>	Station # <u>4494</u>
Sampler: <u>M. TOI</u>	Date: <u>03-20-03</u>
Well I.D.: <u>RW-1</u>	Well Diameter: <u>Ø 3 4 6 8</u> _____
Total Well Depth: <u>11.30</u>	Depth to Water: <u>8.08</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

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

Purge Method: <u>Bailer</u> <u>Disposable Bailer</u> Middleburg Electric Submersible Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> <u>Disposable Bailer</u> Extraction Port Other: _____
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Top of Screen: _____ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

<u>0.5</u>	x	<u>3</u>	=	<u>1.5</u>	Gals.
I Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (ms or µS)	Gals. Removed	Observations
<u>1300</u>	<u>63.0</u>	<u>7.3</u>	<u>20.86</u>	<u>0.5</u>	
<u>1301</u>	<u>61.4</u>	<u>7.3</u>	<u>16.84</u>	<u>1.0</u>	
<u>1302</u>	<u>61.3</u>	<u>7.3</u>	<u>16.00</u>	<u>1.5</u>	

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>1.5</u>
Sampling Time: <u>1305</u>	Sampling Date: <u>03-20-03</u>
Sample I.D.: <u>RW-1</u>	Laboratory: Pace <u>Sequoia</u> Other _____
Analyzed for: <u>TPH-G</u> <u>BTX</u> MTBE TPH-D Other: <u>Oxy. & Ethanol by 8260</u>	
D.O. (if req'd):	Pre-purge: _____ mg/L
	Post-purge: <u>1.9</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV
	Post-purge: _____ mV



Chain of Custody Record

Project Name: 030320-MTZ
 BP BU/GEM CO Portfolio: _____
 BP Laboratory Contract Number: _____
 Date: 5-20-03 Requested Due Date (mm/dd/yy): _____

On-site Time: <u>1015</u>	Temp: <u>68°</u>
Off-site Time: <u>1410</u>	Temp: <u>70°</u>
Sky Conditions: <u>Clear</u>	
Meteorological Events:	
Wind Speed:	Direction:

Send To:	BP/GEM Facility No.:	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. Morgan Hill, CA 95037	Site ID No. ARCO 4494	Oakland, CA 94609-4014
	Site Lat/Long:	e-mail EDD: syed_rehan@urscorp.com
	California Global ID #: T0600100104	Consultant/Contractor Project No.: J5-00004494.01 00427
Lab PM: Lalonya Pelt	BP/GEM PM Contact: PAUL SUPPLE	Consultant Tele/Fax: 510-874-1735/510-874-3268
Tele/Fax: 408-776-9600 / 408-782-6308	Address:	Consultant/Contractor PM: Scott Robinson
Report Type & QC Level: Send EDF Reports		Invoice to: Consultant/Contractor or <u>BP/GEM</u> (circle one)
BP/GEM Account No.:	Tele/Fax:	BP/GEM Work Release No: INTRIM -50443

em No.	Sample Description	Time	Matrix				Laboratory No.	No. of containers	Preservatives				Requested Analysis				Sample Point Lat/Long and Comments
			Soil/Solid	Water/Liquid	Sediments	Air			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	TPH-G / BTEX (8015, 8016, 8017)	TPH-D (8015) MTBE (8021)	MTBE, TAME, ETBE DIPE, TBA (8260)	1,2-DCA & EDB (8260)	
1	MW-1	1330		X			3					X			X		
2	MW-3	1225		X			3					X			X		
3	MW-4	1125		X			3					X			X		
4	MW-5	1145		X			3					X			X		
5	MW-6	1205		X			3					X			X		
6	MW-7	1245		X			3					X			X		
7	RW-1	1305		X			3					X			X		
8																	
9																	
10																	

Relinquished By / Affiliation: <u>Michael Toll</u>	Date: <u>3/21/03</u>	Time: <u>1009</u>	Accepted By / Affiliation: <u>[Signature]</u>	Date: <u>5/21/03</u>	Time: <u>1009</u>
Relinquished By / Affiliation: <u>[Signature] / BTS</u>					
Relinquishment Date:					
Relinquishment Method:					
Relinquishment Tracking No.:					

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

Study Seals In Place Yes No Temperature Blank Yes No Cooler Temperature on Receipt 0 F/C Trip Blank Yes No

WELLHEAD INSPECTION CHECKLIST

Client A494 Date 03-20-03

Site Address 5166 Hagenburger Rd., Dakeland

Job Number 030320-MT2 Technician W. T. Oll

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-1								✓
MW-2								
MW-3								✓
MW-4	✓							
MW-5								✓
MW-6								✓
MW-7								✓
RW-1								✓

NW

NW

NOTES: _____

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:

Station #

4494

Station Address

5660 Hegenburger Rd., Oakland

Total Gallons Collected From Groundwater Monitoring Wells:

35.5

added equip. 4.5
rinse water

any other adjustments

TOTAL GALS. RECOVERED 40

loaded onto BTS vehicle # 51

BTS event # 030320-MTL time date 03/20/03

signature [Signature]

REC'D AT BTS time date 03/20/03

unloaded by signature [Signature]