CAMBRIA

3769

September 19, 2001

Like other Shell sites, elevated MTBE. FP in MW3.

Barney Chan
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Third Quarter 2001 Monitoring Report and Agency Response**
Shell-branded Service Station
4255 MacArthur Boulevard
Oakland, California
Incident #98995758
Cambria Project #243-0524-002

SEP 2 4 2001

Dear Mr. Chan:

On behalf of Equiva Services LLC (Equiva), Cambria Environmental Technology, Inc. (Cambria) is submitting this groundwater monitoring report in accordance with the reporting requirements of 23 CCR 2652d.

HYDROCARBON REMOVAL SUMMARY

Groundwater Extraction (GWE): Monthly GWE using a vacuum truck was conducted at the site from April 1999 through February 2000 and began again in November 2000. Mobile GWE vacuum operations consist of lowering dedicated stingers into selected monitoring wells and extracting fluids using a vacuum truck. The volume of extracted fluid is recorded and used to calculate the quantity of aqueous-phase hydrocarbon removed from the subsurface. To date, an estimated 10.2 pounds of liquid-phase hydrocarbons and 20.3 pounds of liquid-phase methyl tert butyl ether (MTBE) have been removed from the site.

Dual Phase Vapor Extraction (DVE): From November 2000 to June 2001, hydrocarbon removal efforts were augmented by DVE. DVE is the process of applying high vacuum through an airtight well seal to simultaneously extract soil vapors from the vadose zone and enhance groundwater extraction from the saturated zone. A vacuum truck is used to create the vacuum and contain extracted fluids. An estimated 2.29 pounds of vapor-phase hydrocarbon were removed by the system.

Oakland, CA
San Ramon, CA
Sonoma, CA

Cambria Environmental Technology, Inc.

1144 65th Street
Suite B
Oakland, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

Separate Phase Hydrocarbons (SPH): SPH have not been observed at the site since the fourth quarter of 1999. Prior to that time, an estimated total of 21.80 pounds of SPH was removed from monitoring wells by manual bailing.

The table below summarizes the aqueous-, separate-, and vapor-phase hydrocarbon removal data for the site.

Mass Removal	Cumulative MTBE (lbs)	Cumulative Hydrocarbons (lbs)
Aqueous-Phase	20.3	9.81
Separate-Phase	-	21.80
Vapor-Phase	0.057	1.29
Total	20.357	32.9

AGENCY RESPONSE

As indicated in our August 14, 2001 response to the Alameda County Health Care Services Agency (ACHCSA) letter dated July 16, 2001, Cambria reviewed ACHCSA files for the Unocal service station located at 4276 MacArthur Boulevard (upgradient of the site). According to a second quarter 2001 summary report, Unocal will be installing three offsite groundwater monitoring wells, two of which are along the upgradient boundary of the site. Cambria believes that these new wells will provide sufficient information to evaluate whether the recent release at the Unocal service station represents an offsite source of contamination. Therefore, Equiva will not install any wells upgradient of the Shell-branded site.

THIRD QUARTER 2001 ACTIVITIES

Groundwater Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, gauged and sampled the site wells, calculated groundwater elevations and compiled the gasoline constituents analytical data. Cambria prepared a groundwater elevation contour map (Figure 1). Bioattenuation

parameters, monitored annually in the third quarter, are presented in Table 1. Blaine's report, presenting the laboratory report and supporting field documents, is included as Attachment A.

GWE: During this quarter, Advanced Cleanup Technologies Inc. of Benicia, California conducted three, mobile GWE events using tank backfill well TB-2. Mass-removal data for the site is presented in Table 2. Approximately 0.717 pounds of hydrocarbons and approximately 0.671 pounds of MTBE were removed by GWE this quarter.

ANTICIPATED FOURTH QUARTER 2001 ACTIVITIES

Groundwater Monitoring: Blaine will gauge and sample all wells and tabulate the data. Cambria will prepare a monitoring report.

GWE: Monthly GWE will be performed using tank backfill well TB-2

Downgradient Monitoring Well Installation: Cambria will install a downgradient monitoring well within the California Department of Transportation (CalTrans) right-of-way as shown in Figure 1. Drilling is tentatively scheduled for September 27, 2001, pending receipt of a CalTrans encroachment permit.

CLOSING

We appreciate the opportunity to work with you on this project. Please call Melody Munz at (510) 420-3324 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc

Stephan A. Bork
for: Melody Munz
Project Engineer

Stephan A. Bork, C.E.G., C.HG.
Associate Hydrogeologist

REGISTERED GEOLOGIST
STEPHAN A. BORK
No. EG 2058
CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

Figure: 1 - Groundwater Elevation Contour Map

Tables: 1 - Groundwater Analytical Data - Bioattenuation Parameters
2 - Groundwater Extraction - Mass Removal Data

Attachments: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Karen Petryna, Equiva Services LLC, P.O. Box 7869, Burbank, California 91510-7869
Roland C. Malone, Jr., PO Box 2744, Castro Valley, CA 94546

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09/14/01

Groundwater Elevation Contour Map

July 24, 2001

restaurant
foot clinic
church structures
trailer park
parking
pharmacy
UNOCAL 76
MACARTHUR BOULEVARD
HIGHWAY 580
580 onramp
steep embankment
HIGH STREET
Shell-branded Service Station
garage building
pump island
USTs
vacant lot
liquor deli
parking
Robert's Tires
former Chevron service station
residential/ offices
cleaners yogurt
video
Subway
Alameda Co. building

MW-5
SB-1
SB-2
MW-4 153.99 3.8 1,700
MW-2 159.24 3,000 41,000
MW-3 160.18 5,600 12,000
TB-1
TB-2 NS 630 11,000
MW-1 167.79 4.0 <5.0
* TPHg = 220,000 ppb

155.00
160.00
165.00

Groundwater Gradient Direction
(07/99 - 07/01)

0 20 40 80
SCALE : 1" = 40'

EXPLANATION

- MW-1 — Monitoring and tank backfill well locations
- MW-5 — Proposed downgradient monitoring well location
- SB-1 — Cambria soil boring location (12/98)
- NS — Not surveyed
- * — Data anomalous, not used for contouring
- XXX — Groundwater elevation contour, in feet above mean sea level (msl), approximately located, dashed where inferred
- Inferred groundwater flow direction
- Well — Well designation
- ELEV — Groundwater elevation, in feet above msl
- Benzene / MTBE — Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8260.

FIGURE 1

Shell-branded Service Station
4255 MacArthur Boulevard
Oakland, California
Incident #98995758

CAMBRIA

G:\OAKLAND4255MACARTHUR\FIGURES\3QM01-MP.AI

Table 1. **Groundwater Analytical Data - Bioattenuation Parameters** - Shell-branded Service Station, Incident #98995758, 4255 MacArthur Boulevard, Oakland, California

Well ID	Date	ORP (mV)	DO	Total Alkalinity	Ferrous Iron	Nitrate as Nitrate	Sulfate	Notes
			← (Concentrations in mg/L) →					
MW-1	07/17/98	---	0.8	460	1.6	<1.0	12	
	07/23/99	---	1.0	480	0.790	7.49	28.6	
	07/26/00	-140	13.2	92.9	<0.0100	7.80	387	
	07/24/01	**43**	**>20**	**530**	**<0.10**	**6.6**	**35**	**DO reading off-scale**
MW-2	07/17/98	---	---	---	---	---	---	SPH
	07/23/99	---	1.4	440	26.0	<1.00	3.24	
	07/26/00	113	2.2	26.5	3.74	7.59	399	
	07/24/01	**53**	**0.2**	**510**	**0.22**	**0.35**	**1.0**	
MW-3	07/17/98	---	1.3	860	5.3	<1.0	6.5	
	07/17/98	---	1.3	860	5.4	<1.0	5.8	duplicate
	07/23/99	---	1.3	920	76.0	<1.00	4.23	
	07/26/00	-70	0.9	440	4.04	<1.00	355	
	07/24/01	**29**	**0.4**	**940**	**<0.10**	**0.73**	**3.4**	
MW-4	07/17/98	---	1.4	630	2.8	<1.0	13	
	07/23/99	---	0.9	620	46.0	7.41	6.03	
	07/26/00	-137	1.4	228	0.223	6.30	372	
	07/24/01	**106**	**0.5**	**650**	**0.14**	**0.91**	**4.9**	
TB-2	**07/24/01**	**-51**	**0.4**	**530**	**<0.10**	**2.7**	**1.5**	

Table 1. **Groundwater Analytical Data - Bioattenuation Parameters** - Shell-branded Service Station, Incident #98995758, 4255 MacArthur Boulevard, Oakland, California

Well ID	Date	ORP (mV)	DO	Total Alkalinity	Ferrous Iron	Nitrate as Nitrate	Sulfate	Notes
			← (Concentrations in mg/L) →					

Abbreviations &Notes:

ORP = Oxidation reduction potential, measured pre-purge
mV = Millivolts
DO = Dissolved oxygen, measured pre-purge
mg/L = Milligrams per liter
SPH = Separate-phase hydrocarbons in well; not sampled
--- = Not analyzed / Not available
<n = Below detection limit of n mg/L
Total alkalinity by EPA Method 310.2, concentrations in mg CaCO3/L
Ferrous iron by EPA Method 200.7
Nitrate as nitrate and sulfate by EPA Method 300.0

Table 2: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995758, 4255 MacArthur Boulevard, Oakland, CA

					TPPH			Benzene			MTBE		
Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH Concentration (ppb)	TPPH Removed (lb)	TPPH Removed To Date (lb)	Benzene Concentration (ppb)	Benzene Removed (lb)	Benzene Removed to Date (lb)	MTBE Concentration (ppb)	MTBE Removed (lb)	MTBE Removed To Date (lb)
04/23/99	MW-2	200	200	04/13/98	180,000	0.30040	0.30040	2,800	0.00467	0.00467	71,000	0.11849	0.11849
05/24/99	MW-2	200	400	04/13/98	180,000	0.30040	0.60079	2,800	0.00467	0.00935	71,000	0.11849	0.23698
06/28/99	MW-2	200	600	04/13/98	180,000	0.30040	0.90119	2,800	0.00467	0.01402	71,000	0.11849	0.35547
07/30/99	MW-2	200	800	07/23/99	65,800	0.10981	1.01100	6,500	0.01085	0.02487	46,600	0.07777	0.43324
08/24/99	MW-2	100	900	07/23/99	65,800	0.05491	1.06591	6,500	0.00542	0.03029	46,600	0.03888	0.47212
10/29/99	MW-2	100	1,000	07/23/99	65,800	0.05491	1.12081	6,500	0.00542	0.03571	46,600	0.03888	0.51101
11/30/99	MW-2	100	1,100	07/23/99	65,800	0.05491	1.17572	6,500	0.00542	0.04114	46,600	0.03888	0.54989
02/02/00	MW-2	200	1,300	01/17/00	46,000	0.07677	1.25249	6,000	0.01001	0.05115	**31,000**	0.05174	0.60163
11/16/00	MW-2	150	1,450	10/12/00	63,200	0.07910	1.33159	5,840	0.00731	0.05846	**66,600**	0.08336	0.68499
02/23/01	MW-2	200	1,650	01/15/01	59,700	0.09963	1.43122	2,630	0.00439	0.06285	**5,080**	0.00848	0.69347
03/14/01	MW-2	300	1,950	01/15/01	59,700	0.14945	1.58067	2,630	0.00658	0.06943	**5,080**	0.01272	0.70618
04/20/01*	MW-2	200	2,150	04/09/01	56,900	0.09496	1.67563	1,860	0.00310	0.07254	**46,600**	0.07777	0.78395
05/30/01	MW-2	200	2,350	04/09/01	56,900	0.09496	1.77059	1,860	0.00310	0.07564	**46,600**	0.07777	0.86172
06/12/01	MW-2	100	2,450	04/09/01	56,900	0.04748	1.81807	1,860	0.00155	0.07719	**46,600**	0.03888	0.90061
05/30/01	MW-3	50	50	04/09/01	33,800	0.01410	0.01410	7,100	0.00296	0.00296	13,000	0.00542	0.00542
06/12/01	MW-3	50	100	04/09/01	33,800	0.01410	0.02820	7,100	0.00296	0.00592	13,000	0.00542	0.01085
04/23/99	TB-2	4,800	4,800	08/24/99	6,240	0.24993	0.01602	400	0.01602	0.01602	86,100	3.44856	3.44856
05/24/99	TB-2	4,800	9,600	08/24/99	6,240	0.24993	0.26595	400	0.01602	0.03204	86,100	3.44856	6.89711
06/28/99	TB-2	4,800	14,400	08/24/99	6,240	0.24993	0.51588	400	0.01602	0.04806	86,100	3.44856	10.34567
07/30/99	TB-2	4,800	19,200	08/24/99	6,240	0.24993	0.76581	400	0.01602	0.06408	86,100	3.44856	13.79422
08/24/99	TB-2	2,400	21,600	08/24/99	6,240	0.12497	0.89078	400	0.00801	0.07210	86,100	1.72428	15.51850
10/29/99	TB-2	2,255	23,855	10/29/99	7,460	0.14037	1.03115	656	0.01234	0.08444	442	0.00832	15.52682
11/30/99	TB-2	3,800	27,655	10/29/99	7,460	0.23655	1.26769	656	0.02080	0.10524	442	0.01402	15.54083

Table 2: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995758, 4255 MacArthur Boulevard, Oakland, CA

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH Concentration (ppb)	TPPH Removed (lb)	TPPH Removed To Date (lb)	Benzene Concentration (ppb)	Benzene Removed (lb)	Benzene Removed to Date (lb)	MTBE Concentration (ppb)	MTBE Removed (lb)	MTBE Removed To Date (lb)
					TPPH			**Benzene**			**MTBE**		
02/02/00	TB-2	4,500	32,155	01/31/00	2,070	0.07773	1.34542	108	0.00406	0.10930	6,550	0.24595	15.78678
11/16/00	TB-2	974	33,129	11/16/00	107,000	0.86963	2.21505	3,390	0.02755	0.13685	16,800	0.13654	15.92332
02/23/01	TB-2	2,506	35,635	02/23/01	80,600	1.68542	3.90048	2,410	0.05040	0.18724	38,100	0.79671	16.72003
03/14/01	TB-2	1,075	36,710	02/23/01	80,600	0.72300	4.62347	2,410	0.02162	0.20886	38,100	0.34176	17.06179
04/20/01*	TB-2	1,760	38,470	04/09/01	46,600	0.68437	5.30784	1,240	0.01821	0.22707	31,300	0.45967	17.52147
05/30/01	TB-2	2,100	40,570	04/09/01	46,600	0.81658	6.12442	1,240	0.02173	0.24880	31,300	0.54847	18.06994
06/12/01	TB-2	2,400	42,970	04/09/01	46,600	0.93323	7.05766	1,240	0.02483	0.27363	31,300	0.62683	18.69677
08/07/01	TB-2	2,510	43,080	07/24/01	11,000	0.23039	7.28804	630	0.01319	0.28683	**11,000**	0.23039	18.92716
08/21/01	TB-2	2,700	45,670	07/24/01	11,000	0.24783	7.53587	630	.0.01419	0.30102	**11,000**	0.24783	19.17499
09/05/01	TB-2	2,100	45,180	07/24/01	11,000	0.19275	7.72863	630	0.01104	0.31206	**11,000**	0.19275	19.36774
Total Gallons Extracted:			**52,830**		**Total Pounds Removed:**		**9.80881**			**0.39518**			**20.27919**
					Total Gallons Removed:		**1.60800**			**0.05413**			**3.27084**

Abbreviations & Notes:

TPPH = Total purgeable hydrocarbons as gasoline, analyzed by EPA Method 8015
MtBE = Methyl tert-butyl ether by EPA Method 8020; MTBE results in bold are analyzed by EPA Method 8260
µg/L = Micrograms per liter
ppb = Parts per billion, equivalent to µg/L
lb = Pound
L = Liter
gal = Gallon
g = Gram
* = Purge volume estimated
Mass removed based on the formula: volume extracted (gal) x Concentration (µg/L) x (g/10^6µg) x (pound/453.6g) x (3.785 L/gal)
Volume removal data based on the formula: density (in gms/cc) x 9.339 (ccxlbs/gmsxgals)
Benzene analyzed by EPA Method 8020

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

August 9, 2001

Karen Petryna
Equiva Services LLC
P.O. Box 7869
Burbank, CA 91510-7869

Third Quarter 2001 Groundwater Monitoring at
Shell-branded Service Station
4255 MacArthur Boulevard
Oakland, CA

Monitoring performed on July 24, 2001

Groundwater Monitoring Report **010724-B-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,

Nick Sudano
Project Coordinator

NS/jt

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

cc: Anni Kreml
Cambria Environmental Technology, Inc.
1144 65th Street, Suite C
Oakland, CA 94608-2411

WELL CONCENTRATIONS
Shell-branded Service Station
4255 MacArthur Boulevard
Oakland, CA
Wic #204-5510-0600

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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)	ORP Reading (mV)
MW-1	11/17/1993	410	21	11	7.9	47	NA	NA	175.79	8.59	NA	167.20	NA	NA	NA
MW-1	01/20/1994	1,200	180	19	48	47	NA	NA	175.79	8.22	NA	167.57	NA	NA	NA
MW-1	04/25/1994	3,100	610	<10	130	27	NA	NA	175.79	7.63	NA	168.16	NA	NA	NA
MW-1	07/07/1994	2,400	1,000	10	250	20	NA	NA	175.79	8.31	NA	167.48	NA	NA	NA
MW-1	10/27/1994	2,200	500	3.1	72	1.8	NA	NA	175.79	8.84	NA	166.95	NA	NA	NA
MW-1	11/17/1994	NA	NA	NA	NA	NA	NA	NA	175.79	7.60	NA	168.19	NA	NA	NA
MW-1	11/28/1994	NA	NA	NA	NA	NA	NA	NA	175.79	7.56	NA	168.23	NA	NA	NA
MW-1	01/13/1995	570	75	2.5	6.7	11	NA	NA	175.79	7.11	NA	168.68	NA	NA	NA
MW-1	04/12/1995	1,800	480	<5.0	79	<5.0	NA	NA	175.79	7.08	NA	168.71	NA	NA	NA
MW-1	07/25/1995	120	15	1.1	2.1	2.9	NA	NA	175.79	7.73	NA	168.06	NA	NA	NA
MW-1 (D)	07/25/1995	300	88	2.4	11	6.5	NA	NA	175.79	7.73	NA	168.06	NA	NA	NA
MW-1	10/18/1995	130	9.5	0.8	1.3	1.7	NA	NA	175.79	8.42	NA	167.37	NA	NA	NA
MW-1 (D)	10/18/1995	120	11	0.8	1.4	1.8	NA	NA	175.79	8.42	NA	167.37	NA	NA	NA
MW-1	01/17/1996	250	22	0.9	1.6	2.3	NA	NA	175.79	7.83	NA	167.96	NA	NA	NA
MW-1	04/25/1996	<50	4.6	<0.5	<0.5	0.6	500b	NA	175.79	7.35	NA	168.44	NA	NA	NA
MW-1	07/17/1996	<250	15	<2.5	<2.5	<2.5	540	NA	175.79	7.70	NA	168.09	NA	NA	NA
MW-1	10/01/1996	1,200	500	12	57	82	1,900	NA	175.79	8.07	NA	167.72	NA	NA	NA
MW-1	01/22/1997	640	170	4.3	33	33	1,200	NA	175.79	7.21	NA	168.58	NA	NA	NA
MW-1	04/08/1997	<200	34	<2.0	3.3	4.3	950	NA	175.79	7.75	NA	168.04	NA	NA	NA
MW-1 (D)	04/08/1997	<200	66	<2.0	6.4	8	740	NA	175.79	7.75	NA	168.04	NA	NA	NA
MW-1	07/08/1997	190	49	1.2	5.8	8.6	560	NA	175.79	8.01	NA	167.78	NA	NA	NA
MW-1	10/08/1997	<100	7	<1.0	<1.0	<1.0	620	NA	175.79	8.10	NA	167.69	NA	NA	NA
MW-1	01/09/1998	970	390	12	48	71	1,200	NA	175.79	7.14	NA	168.65	NA	NA	NA
MW-1	04/13/1998	<50	136	<0.50	1.5	1.8	170	NA	175.79	6.78	NA	169.01	NA	NA	NA
MW-1	07/17/1998	2,500	750	11	88	67	150	NA	175.79	7.28	NA	168.51	NA	NA	NA
MW-1	10/02/1998	8,000	970	36	270	440	35	NA	175.79	7.77	NA	168.02	NA	NA	NA

WELL CONCENTRATIONS
Shell-branded Service Station
4255 MacArthur Boulevard
Oakland, CA
Wic #204-5510-0600

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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)	ORP Reading (mV)
MW-1	02/03/1999	210	56	0.82	<0.50	3.2	220	NA	175.79	7.45	NA	168.34	NA	1.4	NA
MW-1	04/29/1999	<50	4.5	<0.50	0.56	<0.50	140	196	175.79	7.58	NA	168.21	NA	1.2	140
MW-1	07/23/1999	<50.0	<0.500	<0.500	<0.500	<0.500	120	111*	175.79	8.51	NA	167.28	NA	1.0	NA
MW-1	11/01/1999	<50.0	<0.500	<0.500	<0.500	<0.500	2.90	NA	175.79	8.30	NA	167.49	NA	1.4	-71
MW-1	01/17/2000	<50	<0.50	<0.50	<0.50	<0.50	3.30	NA	175.79	8.04	NA	167.75	NA	16.9	64
MW-1	04/17/2000	<50.0	1.08	<0.500	<0.500	<0.500	<2.50	NA	175.79	8.00	NA	167.79	NA	1.8	112
MW-1	07/26/2000	125	54.3	2.16	5.45	9.86	33.1	NA	175.79	7.52	NA	168.27	NA	13.2	-140
MW-1	10/12/2000	101	40.7	2.68	3.00	5.18	25.0	NA	175.79	7.71	NA	168.08	NA	>20	534
MW-1	01/15/2001	<50.0	0.633	<0.500	0.505	1.74	<2.50	NA	175.79	7.33	NA	168.46	NA	16.9	-127
MW-1	04/09/2001	<50.0	<0.500	<0.500	<0.500	0.927	<2.50	NA	175.79	7.68	NA	168.11	NA	12.8	-117
MW-1	**07/24/2001**	**<50**	**4.0**	**0.65**	**0.53**	**1.3**	**NA**	**<5.0**	**175.79**	**8.00**	**NA**	**167.79**	**NA**	**>20**	**43**
MW-2	11/17/1993	31,000	9,400	4,600	1,000	3,900	NA	NA	170.91	12.31	NA	158.60	NA	NA	NA
MW-2	01/20/1994	40,000	6,900	5,600	780	4,100	NA	NA	170.91	11.48	NA	159.43	NA	NA	NA
MW-2 (D)	01/20/1994	41,000	7,200	6,200	900	4,800	NA	NA	170.91	11.48	NA	159.43	NA	NA	NA
MW-2	04/25/1994	60,000	9,300	6,100	1,400	6,200	NA	NA	170.91	10.84	NA	160.07	NA	NA	NA
MW-2	07/07/1994	280,000a	40,000	26,000	8,100	32,000	NA	NA	170.91	11.89	NA	159.02	NA	NA	NA
MW-2 (D)	07/07/1994	53,000	13,000	6,600	2,000	8,400	NA	NA	170.91	11.89	NA	159.02	NA	NA	NA
MW-2	10/27/1994	130,000	14,000	12,000	2,400	13,000	NA	NA	170.91	12.89	NA	158.02	NA	NA	NA
MW-2 (D)	10/27/1994	390,000	8,800	7,000	1,700	11,000	NA	NA	170.91	12.89	NA	158.02	NA	NA	NA
MW-2	11/17/1994	NA	NA	NA	NA	NA	NA	NA	170.91	9.11	NA	161.80	NA	NA	NA
MW-2	11/28/1994	NA	NA	NA	NA	NA	NA	NA	170.91	9.22	NA	161.69	NA	NA	NA
MW-2	01/13/1995	75,000	5,900	12,000	3,100	17,000	NA	NA	170.91	8.10	NA	162.81	NA	NA	NA
MW-2	04/12/1995	100,000	8,500	11,000	2,400	12,000	NA	NA	170.91	10.12	NA	160.79	NA	NA	NA
MW-2 (D)	04/12/1995	80,000	4,200	9,300	2,500	12,000	NA	NA	170.91	10.12	NA	160.79	NA	NA	NA
MW-2	07/25/1995	NA	NA	NA	NA	NA	NA	NA	170.91	11.53	NA	159.80	0.52	NA	NA

WELL CONCENTRATIONS
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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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)	ORP Reading (mV)
MW-2	10/18/1995	NA	NA	NA	NA	NA	NA	NA	170.91	14.02	NA	156.99	0.13	NA	NA
MW-2	01/17/1996	NA	NA	NA	NA	NA	NA	NA	170.91	10.27	NA	160.78	0.17	NA	NA
MW-2	04/25/1996	NA	NA	NA	NA	NA	NA	NA	170.91	11.68	NA	159.25	0.03	NA	NA
MW-2	07/17/1996	NA	NA	NA	NA	NA	NA	NA	170.91	12.78	NA	158.81	0.48	NA	NA
MW-2	10/01/1996	NA	NA	NA	NA	NA	NA	NA	170.91	14.21	NA	156.70	0.28	NA	NA
MW-2	01/22/1997	NA	NA	NA	NA	NA	NA	NA	170.91	10.92	NA	160.08	0.11	NA	NA
MW-2	04/08/1997	NA	NA	NA	NA	NA	NA	NA	170.91	14.12	NA	156.95	0.20	NA	NA
MW-2	07/08/1997	NA	NA	NA	NA	NA	NA	NA	170.91	14.98	NA	156.08	0.19	NA	NA
MW-2	10/08/1997	NA	NA	NA	NA	NA	NA	NA	170.91	12.97	NA	157.98	0.05	NA	NA
MW-2	01/08/1998	NA	NA	NA	NA	NA	NA	NA	170.91	12.54	NA	158.43	0.08	NA	NA
MW-2	04/13/1998	180,000	2,800	5,200	2,400	13,000	71,000	NA	170.91	10.05	NA	160.86	NA	NA	NA
MW-2	07/17/1998	NA	NA	NA	NA	NA	NA	NA	170.91	11.75	NA	159.24	0.10	NA	NA
MW-2	10/02/1998	NA	NA	NA	NA	NA	NA	NA	170.91	16.78	NA	154.22	0.11	NA	NA
MW-2	02/03/1999	NA	NA	NA	NA	NA	NA	NA	170.91	9.90	9.82	161.07	0.08	NA	NA
MW-2	04/29/1999	NA	NA	NA	NA	NA	NA	NA	170.91	9.86	9.81	161.09	0.05	NA	NA
MW-2	07/23/1999	65,800	6,500	4,480	1,960	8,960	46,600	58,500*	170.91	14.45	NA	156.46	NA	1.4	NA
MW-2	11/01/1999	NA	NA	NA	NA	NA	NA	NA	170.91	11.84	11.81	159.09	0.03	NA	NA
MW-2	01/17/2000	46,000	6,000	2,400	1,500	5,500	50,000	31,000	170.91	11.00	NA	159.91	NA	1.3	-54
MW-2	04/17/2000	96,300	8,150	10,200	2,820	14,900	112,000	108,000	170.91	11.06	NA	159.85	NA	2.6	125
MW-2	07/26/2000	72,400	8,680	5,620	2,810	13,400	66,200	46,300	170.91	12.82	NA	158.09	NA	2.2	113
MW-2	10/12/2000	63,200	5,840	4,180	2,310	11,100	61,200	66,600	170.91	11.32	NA	159.59	NA	0.4	55
MW-2	01/15/2001	59,700	2,630	4,800	2,050	11,500	44,400	5,080	170.91	10.19	NA	160.72	NA	1.1	-22
MW-2	04/09/2001	56,900	1,860	2,550	1,810	9,720	40,000	46,600	170.91	11.15	NA	159.76	NA	1.0	-55
MW-2	**07/24/2001**	**84,000**	**3,000**	**4,600**	**2,500**	**13,000**	**NA**	**41,000**	**170.91**	**11.67**	**NA**	**159.24**	**NA**	**0.2**	**53**
MW-3	11/17/1993	18,000	5,400	660	720	2,200	NA	NA	174.61	15.40	NA	159.21	NA	NA	NA

WELL CONCENTRATIONS
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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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)	ORP Reading (mV)
MW-3	01/20/1994	55,000	13,000	2,600	2,200	6,500	NA	NA	174.61	14.61	NA	160.00	NA	NA	NA
MW-3	04/25/1994	96,000	11,000	1,600	3,100	9,900	NA	NA	174.61	13.12	NA	161.49	NA	NA	NA
MW-3 (D)	04/25/1994	78,000	12,000	1,900	2,600	7,300	NA	NA	174.61	13.12	NA	161.49	NA	NA	NA
MW-3	07/07/1994	NA	NA	NA	NA	NA	NA	NA	174.61	14.54	NA	160.07	0.02	NA	NA
MW-3	10/27/1994	NA	NA	NA	NA	NA	NA	NA	174.61	15.62	NA	159.03	0.05	NA	NA
MW-3	11/17/1994	NA	NA	NA	NA	NA	NA	NA	174.61	13.83	NA	160.78	NA	NA	NA
MW-3	11/28/1994	NA	NA	NA	NA	NA	NA	NA	174.61	14.02	NA	160.59	NA	NA	NA
MW-3	01/13/1995	180,000	3,200	2,700	1,700	5,200	NA	NA	174.61	12.13	NA	162.48	NA	NA	NA
MW-3 (D)	01/13/1995	23,000	4,000	690	960	3,000	NA	NA	174.61	12.13	NA	162.48	NA	NA	NA
MW-3	04/12/1995	56,000	8,700	1,500	2,100	6,300	NA	NA	174.61	12.96	NA	161.65	NA	NA	NA
MW-3	07/25/1995	NA	NA	NA	NA	NA	NA	NA	174.61	14.28	NA	160.38	0.06	NA	NA
MW-3	10/18/1995	NA	NA	NA	NA	NA	NA	NA	174.61	15.88	NA	158.77	0.05	NA	NA
MW-3	01/17/1996	NA	NA	NA	NA	NA	NA	NA	174.61	13.86	NA	160.94	0.24	NA	NA
MW-3	04/25/1996	NA	NA	NA	NA	NA	NA	NA	174.61	13.82	NA	160.81	0.02	NA	NA
MW-3	07/17/1996	NA	NA	NA	NA	NA	NA	NA	174.61	16.11	NA	158.52	0.03	NA	NA
MW-3	10/01/1996	46,000	7,300	530	1,700	3,900	3,200	NA	174.61	16.56	NA	158.05	NA	NA	NA
MW-3 (D)	10/01/1996	47,000	7,100	530	1,700	4,000	2,900	NA	174.61	16.56	NA	158.05	NA	NA	NA
MW-3	01/22/1997	82,000	5,200	1,300	2,800	8,900	1,100	NA	174.61	13.07	NA	161.54	NA	NA	NA
MW-3 (D)	01/22/1997	61,000	8,400	1,100	2,300	7,000	2,700	NA	174.61	13.07	NA	161.54	NA	NA	NA
MW-3	04/08/1997	NA	NA	NA	NA	NA	NA	NA	174.61	17.09	NA	157.54	0.03	NA	NA
MW-3	07/08/1997	56,000	8,800	580	2,000	4,900	2,800	NA	174.61	15.85	NA	158.76	NA	NA	NA
MW-3	10/08/1997	48,000	8,000	590	1,700	3,400	5,100	NA	174.61	16.22	NA	158.39	NA	NA	NA
MW-3	01/08/1998	47,000	9,400	810	2,300	4,700	6,300	NA	174.61	13.80	NA	160.81	NA	NA	NA
MW-3 (D)	01/08/1998	48,000	8,100	750	2,000	4,100	5,800	NA	174.61	13.80	NA	160.81	NA	NA	NA
MW-3	04/13/1998	32,000	6,800	540	1,400	3,400	4,000	NA	174.61	12.97	NA	161.64	NA	NA	NA
MW-3 (D)	04/13/1998	36,000	7,300	660	1,600	3,700	4,000	NA	174.61	12.97	NA	161.64	NA	NA	NA

WELL CONCENTRATIONS
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4255 MacArthur Boulevard
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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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)	ORP Reading (mV)
MW-3	07/17/1998	71,000	11,000	590	2,200	6,900	3,900	NA	174.61	11.51	NA	163.10	NA	NA	NA
MW-3 (D)	07/17/1998	76,000	12,000	700	2,600	8,000	3,000	NA	174.61	11.51	NA	163.10	NA	NA	NA
MW-3	10/02/1998	66,000	8,900	510	2,000	4,900	4,600	NA	174.61	16.50	NA	158.11	NA	NA	NA
MW-3 (D)	10/02/1998	59,000	9,400	460	2,000	4,900	4,700	NA	174.61	16.50	NA	158.11	NA	NA	NA
MW-3	02/03/1999	36,000	6,800	300	1,600	2,900	18,000	NA	174.61	15.21	NA	159.40	NA	1.3	NA
MW-3	04/29/1999	45,000	8,100	580	2,200	5,800	4,700	5,150	174.61	15.43	NA	159.18	NA	1.5	-68
MW-3	07/23/1999	29,400	3,540	215	810	3,800	4,720	6,950*	174.61	14.95	NA	159.66	NA	1.3	NA
MW-3	11/01/1999	20,000	4,190	294	1,060	1,740	5,540	8,590	174.61	14.66	NA	159.95	NA	0.6	-110
MW-3	01/17/2000	17,000	3,900	89	1,100	1,200	7,900	NA	174.61	13.94	NA	160.67	NA	1.3	-40
MW-3	04/17/2000	28,100	5,240	247	1,540	2,750	16,600	NA	174.61	14.00	NA	160.61	NA	1.1	-86
MW-3	07/26/2000	24,300	6,680	159	1,610	1,640	17,100	NA	174.61	13.72	NA	160.89	NA	0.9	-70
MW-3	10/12/2000	14,300	2,630	86.7	241	1,360	16,300	NA	174.61	14.15	NA	160.46	NA	0.9	50
MW-3	01/15/2001	22,100	4,400	266	977	2,990	13,200	NA	174.61	13.05	NA	161.56	NA	1.3	-40
MW-3	04/09/2001	33,800	7,100	147	1,700	2,660	13,000	NA	174.61	13.59	NA	161.02	NA	0.6	-56
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MW-4	11/17/1994	NA	NA	NA	NA	NA	NA	NA	164.06	6.62	NA	157.44	NA	NA	NA
MW-4	11/28/1994	2,900	200	17	76	260	NA	NA	164.06	6.11	NA	157.95	NA	NA	NA
MW-4	01/13/1995	1,900	130	5.6	13	40	NA	NA	164.06	6.05	NA	158.01	NA	NA	NA
MW-4	04/12/1995	680	150	<2.0	10	13	NA	NA	164.06	6.31	NA	157.75	NA	NA	NA
MW-4	07/25/1995	340	100	0.8	8.8	3	NA	NA	164.06	7.36	NA	156.70	NA	NA	NA
MW-4	10/18/1995	150	31	<0.5	3.5	0.8	NA	NA	164.06	8.54	NA	155.52	NA	NA	NA
MW-4	01/17/1996	290	14	<0.5	1.8	0.8	NA	NA	164.06	8.48	NA	155.58	NA	NA	NA
MW-4	04/25/1996	<500	65	<5	<5	<5	1,700	NA	164.06	7.40	NA	156.66	NA	NA	NA
MW-4 (D)	04/25/1996	<500	66	<5	8.7	<5	1,500	NA	164.06	7.40	NA	156.66	NA	NA	NA
MW-4	07/17/1996	<500	84	<5.0	6.5	<5.0	1,500	NA	164.06	7.75	NA	156.31	NA	NA	NA

WELL CONCENTRATIONS
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4255 MacArthur Boulevard
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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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)	ORP Reading (mV)
MW-4 (D)	07/17/1996	<500	54	<5.0	<5.0	<5.0	1,700	2,100	164.06	7.75	NA	156.31	NA	NA	NA
MW-4	10/01/1996	<500	1.9	<5.0	<5.0	<5.0	3,000	NA	164.06	8.82	NA	155.24	NA	NA	NA
MW-4	01/22/1997	580	130	<2.5	18	5.2	1,200	NA	164.06	7.51	NA	156.55	NA	NA	NA
MW-4	04/08/1997	770	200	7	26	55	1,500	8	164.06	7.18	NA	156.88	NA	NA	NA
MW-4	07/08/1997	570	78	<5.0	14	11	1,200	NA	164.06	9.00	NA	155.06	NA	NA	NA
MW-4 (D)	07/08/1997	640	81	<5.0	16	19	1,600	NA	164.06	9.00	NA	155.06	NA	NA	NA
MW-4	10/08/1997	<500	40	<5.0	7.4	5.4	1,400	NA	164.06	8.97	NA	155.09	NA	NA	NA
MW-4 (D)	10/08/1997	<500	36	<5.0	5.9	<5.0	1,400	NA	164.06	8.97	NA	155.09	NA	NA	NA
MW-4	01/08/1998	<1,000	55	<10	13	<10	2,000	NA	164.06	7.90	NA	156.16	NA	NA	NA
MW-4	04/13/1998	350	110	2.4	20	26	<2.5	NA	164.06	7.35	NA	156.71	NA	NA	NA
MW-4	07/17/1998	210	66	0.78	5.4	9.8	1,700	NA	164.06	6.95	NA	157.11	NA	NA	NA
MW-4	10/02/1998	<50	0.69	<0.50	<0.50	<0.50	2,900	NA	164.06	7.35	NA	156.71	NA	NA	NA
MW-4	02/03/1999	560	120	2.5	29	34	6,800	NA	164.06	7.71	NA	156.35	NA	0.9	NA
MW-4	04/29/1999	390	80	1.9	13	19	7,000	8,360	164.06	7.83	NA	156.23	NA	1.1	-125
MW-4	07/23/1999	460	93.6	8.40	25.2	28.8	3,760	6,000*	164.06	11.33	NA	152.73	NA	0.9	NA
MW-4	11/01/1999	77.3	0.520	<0.500	<0.500	<0.500	539	NA	164.06	10.66	NA	153.40	NA	2.8	3
MW-4	01/17/2000	160	27	<0.50	12	6.3	12,000	NA	164.06	10.15	NA	153.91	NA	3.9	-17
MW-4	04/17/2000	<500	26	6.38	9.35	10.4	9,070	NA	164.06	10.10	NA	153.96	NA	1.7	-129
MW-4	07/26/2000	<500	22.7	<5.00	7.59	6.96	7,660	NA	164.06	10.09	NA	153.97	NA	1.4	-137
MW-4	10/12/2000	172	19.8	<0.500	7.47	4.50	8,290	NA	164.06	9.35	NA	154.71	NA	3.5	529
MW-4	01/15/2001	53.6	1.50	<0.500	2.45	1.80	9,260	NA	164.06	8.77	NA	155.29	NA	2.3	53
MW-4	04/09/2001	<500	<5.00	<5.00	<5.00	5.52	10,300	NA	164.06	7.75	NA	156.31	NA	1.0	-133
MW-4	**07/24/2001**	**58**	**3.8**	**<0.50**	**3.2**	**2.9**	**NA**	**1,700**	**164.06**	**10.07**	**NA**	**153.99**	**NA**	**0.5**	**106**
TB-1	04/29/1999	NA	NA	NA	NA	NA	NA	NA	NA	6.00	NA	NA	NA	3.8	-132
TB-1	11/01/1999	NA	NA	NA	NA	NA	NA	NA	NA	12.65	NA	NA	NA	0.2	-165

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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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)	ORP Reading (mV)
TB-1	01/17/2000	NA	NA	NA	NA	NA	NA	NA	NA	7.72	NA	NA	NA	0.8	-178
TB-1	04/17/2000	NA	NA	NA	NA	NA	NA	NA	NA	7.65	NA	NA	NA	0.5	-152
TB-1	07/26/2000	NA	NA	NA	NA	NA	NA	NA	NA	5.13	NA	NA	NA	1.0	-124
TB-1	10/12/2000	NA	NA	NA	NA	NA	NA	NA	NA	5.20	NA	NA	NA	0.7	-73
TB-1	01/15/2001	NA	NA	NA	NA	NA	NA	NA	NA	5.09	NA	NA	NA	1.2	-118
TB-1	04/09/2001	NA	NA	NA	NA	NA	NA	NA	NA	4.96	NA	NA	NA	1.0	-72
TB-1	**07/24/2001**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**6.03**	**NA**	**NA**	**NA**	**1.4**	**31**
TB-2	04/29/1999	NA	NA	NA	NA	NA	NA	NA	NA	4.76	NA	NA	NA	4.2	-108
TB-2	11/01/1999	NA	NA	NA	NA	NA	NA	NA	NA	11.33	NA	NA	NA	0.5	-148
TB-2	01/17/2000	NA	NA	NA	NA	NA	NA	NA	NA	9.79	NA	NA	NA	0.7	-162
TB-2	04/17/2000	NA	NA	NA	NA	NA	NA	NA	NA	9.75	NA	NA	NA	0.9	-121
TB-2	07/26/2000	NA	NA	NA	NA	NA	NA	NA	NA	4.73	NA	NA	NA	0.9	-85
TB-2	10/12/2000	NA	NA	NA	NA	NA	NA	NA	NA	4.05	NA	NA	NA	0.6	-47
TB-2	01/15/2001	NA	NA	NA	NA	NA	NA	NA	NA	3.87	NA	NA	NA	0.7	-91
TB-2	04/09/2001	46,600	1,240	1,310	1,110	12,100	31,300	NA	NA	3.76	NA	NA	NA	0.8	-24
TB-2	**07/24/2001**	**11,000**	**630**	**<25**	**310**	**200**	**NA**	**11,000**	**NA**	**4.75**	**NA**	**NA**	**NA**	**0.4**	**-51**

WELL CONCENTRATIONS
Shell-branded Service Station
4255 MacArthur Boulevard
Oakland, CA
Wic #204-5510-0600

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.)	Depth to SPH (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)	ORP Reading (mV)

Abbreviations:
TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to April 4, 2001 analyzed by EPA Method 8015
BTEX = benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to April 4, 2001 analyzed by EPA Method 8020
MTBE = methyl-tertiary-butyl ether
TOC = Top of Casing Elevation
SPH = Separate-Phase Hydrocarbons
GW = Groundwater
ug/L = parts per billion
msl = Mean sea level
ft = Feet
<n = Below detection limit
D = Duplicate sample
NA = Not applicable
DO = Dissolved Oxygens
ppm = parts per million
ORP = Oxidation Reduction Potential
mV = millivolts

Notes:
* = Sample analyzed outside the EPA recommended holding time.
a = Ground water surface had a sheen when sampled
b = MTBE value is estimated by Sequoia Analytical of Redwood City, California

When separate-phase hydrocarbons are present, ground water elevation is adjusted using the relation:
Corrected ground water elevation = Top-of-casing elevation - depth to water + (0.8 x hydrocarbon thickness).

KIFF ANALYTICAL LLC

Report Number : 21408
Date : 8/1/01

Nick Sudano
Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112-1105

Subject : 5 Water Samples
Project Name : 4255 MacArthur Blvd., Oakland
Project Number : 010724-B1
P.O. Number : 98995758

Dear Mr. Sudano,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 21408

Date : 8/1/01

Project Name : **4255 MacArthur Blvd., Oakland**

Project Number : **010724-B1**

Sample : **MW-1** Matrix : Water Lab Number : 21408-01

Sample Date :7/24/01

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**4.0**	0.50	ug/L	EPA 8260B	7/29/01
Toluene	**0.65**	0.50	ug/L	EPA 8260B	7/29/01
Ethylbenzene	**0.53**	0.50	ug/L	EPA 8260B	7/29/01
Total Xylenes	**1.3**	0.50	ug/L	EPA 8260B	7/29/01
Methyl-t-butyl ether (MTBE)	**< 5.0**	5.0	ug/L	EPA 8260B	7/29/01
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	7/29/01
Toluene - d8 (Surr)	97.8		% Recovery	EPA 8260B	7/29/01
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	7/29/01

Sample : **MW-2** Matrix : Water Lab Number : 21408-02

Sample Date :7/24/01

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**3000**	50	ug/L	EPA 8260B	7/29/01
Toluene	**4600**	50	ug/L	EPA 8260B	7/29/01
Ethylbenzene	**2500**	50	ug/L	EPA 8260B	7/29/01
Total Xylenes	**13000**	50	ug/L	EPA 8260B	7/29/01
Methyl-t-butyl ether (MTBE)	**41000**	1000	ug/L	EPA 8260B	7/31/01
TPH as Gasoline	**84000**	5000	ug/L	EPA 8260B	7/29/01
Toluene - d8 (Surr)	99.4		% Recovery	EPA 8260B	7/29/01
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	7/29/01

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 21408

Date : 8/1/01

Project Name : **4255 MacArthur Blvd., Oakland**

Project Number : **010724-B1**

Sample : **MW-3** Matrix : Water Lab Number : 21408-03

Sample Date :7/24/01

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**5600**	25	ug/L	EPA 8260B	7/30/01
Toluene	**1900**	25	ug/L	EPA 8260B	7/30/01
Ethylbenzene	**4400**	25	ug/L	EPA 8260B	7/30/01
Total Xylenes	**19000**	25	ug/L	EPA 8260B	7/30/01
Methyl-t-butyl ether (MTBE)	**12000**	250	ug/L	EPA 8260B	7/30/01
TPH as Gasoline	**220000**	5000	ug/L	EPA 8260B	7/30/01
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	7/30/01
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	7/30/01

Sample : **MW-4** Matrix : Water Lab Number : 21408-04

Sample Date :7/24/01

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**3.8**	0.50	ug/L	EPA 8260B	7/29/01
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	7/29/01
Ethylbenzene	**3.2**	0.50	ug/L	EPA 8260B	7/29/01
Total Xylenes	**2.9**	0.50	ug/L	EPA 8260B	7/29/01
Methyl-t-butyl ether (MTBE)	**1700**	100	ug/L	EPA 8260B	7/30/01
TPH as Gasoline	**58**	50	ug/L	EPA 8260B	7/29/01
Toluene - d8 (Surr)	99.6		% Recovery	EPA 8260B	7/29/01
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	7/29/01

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 21408
Date : 8/1/01

Project Name : **4255 MacArthur Blvd., Oakland**
Project Number : **010724-B1**

Sample : **TB-2** Matrix : Water Lab Number : 21408-05
Sample Date :7/24/01

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**630**	25	ug/L	EPA 8260B	8/1/01
Toluene	**< 25**	25	ug/L	EPA 8260B	8/1/01
Ethylbenzene	**310**	25	ug/L	EPA 8260B	8/1/01
Total Xylenes	**200**	25	ug/L	EPA 8260B	8/1/01
Methyl-t-butyl ether (MTBE)	**11000**	250	ug/L	EPA 8260B	8/1/01
TPH as Gasoline	**11000**	5000	ug/L	EPA 8260B	8/1/01
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	8/1/01
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	8/1/01

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 21408

Date : 8/1/01

Project Name : **4255 MacArthur Blvd.,**

Project Number : **010724-B1**

21408 Quality Control Data - Method Blank

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	7/29/01
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	7/29/01
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	7/29/01
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	7/29/01
Methyl-t-butyl ether (MTBE)	**< 5.0**	5.0	ug/L	EPA 8260B	7/29/01
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	7/29/01
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	7/29/01
4-Bromofluorobenzene (Surr)	87.9		% Recovery	EPA 8260B	7/29/01

Approved By: Joel Kiff

Report Number : 21408

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 8/1/01

Project Name : **4255 MacArthur Blvd.,**

Project Number : **010724-B1**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Spike Recovery Data														
Benzene	21450-01	<0.50	19.7	19.9	21.1	20.3	ug/L	EPA 8260B	7/29/01	107	102	4.56	70-130	25
Toluene	21450-01	<0.50	19.7	19.9	20.8	20.2	ug/L	EPA 8260B	7/29/01	106	102	3.96	70-130	25
Tert-Butanol	21450-01	6.4	98.4	99.4	108	118	ug/L	EPA 8260B	7/29/01	103	112	8.09	70-130	25
Methyl-t-Butyl Ether	21450-01	97	19.7	19.9	120	122	ug/L	EPA 8260B	7/29/01	118	129	8.16	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 21408

Date : 8/1/01

QC Report : Laboratory Control Sample (LCS)

Project Name : **4255 MacArthur Blvd.,**

Project Number : **010724-B1**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	19.8	ug/L	EPA 8260B	7/29/01	112	70-130
Toluene	19.8	ug/L	EPA 8260B	7/29/01	110	70-130
Tert-Butanol	98.8	ug/L	EPA 8260B	7/29/01	117	70-130
Methyl-t-Butyl Ether	19.8	ug/L	EPA 8260B	7/29/01	105	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

LAB: Kiff

EQUIVA Services LLC Chain Of Custody Record 21408

Lab Identification (if necessary):

Address:

City, State, Zip:

Equiva Project Manager to be invoiced: Karen Petryna

☑ SCIENCE & ENGINEERING ☐ TECHNICAL SERVICES ☐ CRMT HOUSTON

INCIDENT NUMBER (S&E ONLY): 98995758

SAP or CRMT NUMBER (TS/CRMT):

DATE: 7-24-01

PAGE: 1 of 1

CONSULTANT COMPANY: Blaine Tech Services

ADDRESS: 1680 Rogers Avenue

CITY: San Jose, CA 95112

TELEPHONE: 408-573-0555 FAX: 408-573-7771 E-MAIL: nsudano@blainetech.com

SITE ADDRESS (Street and City): 4255 MacArthur Blvd., Oakland

PROJECT CONTACT (Report to): Nick Sudano

CONSULTANT PROJECT NO.: BTS # 010724-B1

SAMPLER NAME(S) (Print): Shaun O'Bryan

LAB USE ONLY

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

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: _____

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

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT C°

* NP AMBER Field Filtered for Ferrous iron analysis.

** Fax copy of C.o.c to Nick Sudano upon arrival to lab

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH- Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5 ppbRL)	Oxygenates (5) by (8260)	Ethanol (8260B)	Methanol	1,2-DCA	EDB (8260B)	TPH-Diesel, Extractable (8015m)	MTBE (8260B) Confirmation, See note	Total Alkalinity	Ferrous Iron	Nitrate as Nitrate	Sulfate	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
	MW-1	7-24-01	1140	W	6	X	X	X									X	X	X	X	-01
	MW-2		1356		6	X	X	X									X	X	X	X	-02
	MW-3		1254		6	X	X	X									X	X	X	X	-03
	MW-4		1205		6	X	X	X									X	X	X	X	-04
	TB-2		1336		6	X	X	X									X	X	X	X	-05

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) John Cerutti/Kiff Analytical	Date: 072401	Time: 1415

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

10/16/00 Revision

O&O Graphic (714) 898-9702

KIFF ANALYTICAL LLC

720 Olive Drive, Suite D
Davis, CA 95616
Lab: 530.297.4800
Fax: 530.297.4803

Lab No. ________ Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Manager: [illegible]	Phone No.: 530) 297-4800
Company/Address: [illegible]	FAX No.: 530) 297-4803
Project Number: BTS #[illegible] / P.O. No.: [illegible]	Email Address: ☐.pdf ☐.xls ☐.doc ☐other
Project Name/Location: 4255 [illegible] Blvd, Oakland	Sampler Signature:

Analysis Request

Sample Designation	Sampling Date	Sampling Time	Container: 40 ml VOA	SLEEVE	POLY	1 L AMBER	Method Preserved: HCl	HNO_3	ICE	NONE	Matrix: WATER (circled)	SOIL	BTEX (8021B)	BTEX/TPH Gas/MTBE (8021B/M8015)	TPH as Diesel (M8015)	TPH as Motor Oil (M8015)	TPH Gas/BTEX/MTBE (8260B)	5 Oxygenates/TPH Gas/BTEX (8260B)	7 Oxygenates/TPH Gas/BTEX (8260B)	5 Oxygenates (8260B)	7 Oxygenates (8260B)	Lead Scav. (1,2 DCA & 1,2 EDB - 8260B)	EPA 8260B (Full List)	Volatile Halocarbons (EPA 8260B)	Lead (7421/239.2) TOTAL (X) W.E.T. (X)	Total Alkalinity	Ferrous Iron	Sulfate / Nitrate as Nitrate	TAT 12 hr/24 hr/48 hr/72 hr/1 wk	For Lab Use Only
MW-1	7/24/06	1140			1	1					↓															X	X	X		
MW-2	↓	1350			1	1					↓															X	X	X		
MW-3	↓	1257			1	1					↓															X	X	X		
MW-4	↓	1205			1	1					↓															X	X	X		
TB-2	↓	1336			1	1					↓															X	X	X		

For Lab Use Only: 12 hr = Results by 8 a.m. of the next bus. day; 24 hr = Results by 5 p.m. of the next bus. day; 48 hr = Results by 5 p.m. of the 2nd bus. day; 72 hr = Results by 5 p.m. of the 3rd bus. day; 1 wk = Results by 5 p.m. of the 5th bus. day

Relinquished by:	Date	Time	Received by:	Remarks:
[illegible] Kiff Analytical	7/24/06	1510	[illegible]	
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date	Time	Received by Laboratory:	Bill to:

COC.fh8 (5/00)

Distribution: White - Lab, Yellow - File, Pink - Originator

Sequoia Analytical

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

9 August, 2001

Joel Kiff
Kiff Analytical
720 Olive Drive, Suite D
Davis, CA 95616

RE: -
Sequoia Report: MKG0462

Enclosed are the results of analyses for samples received by the laboratory on 07/24/01 18:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

for:
Wayne Stevenson
Client Services Manager

CA ELAP Certificate #1210

Sequoia Analytical

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

Kiff Analytical	Project: -	
720 Olive Drive, Suite D	Project Number: 4255 MacArthur Blvd, Oakland	**Reported:**
Davis CA, 95616	Project Manager: Joel Kiff	08/09/01 14:54

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MKG0462-01	Water	07/24/01 11:40	07/24/01 18:00
MW-2	MKG0462-02	Water	07/24/01 13:56	07/24/01 18:00
MW-3	MKG0462-03	Water	07/24/01 12:59	07/24/01 18:00
MW-4	MKG0462-04	Water	07/24/01 12:05	07/24/01 18:00
TB-2	MKG0462-05	Water	07/24/01 13:36	07/24/01 18:00

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Wayne Stevenson, Client Services Manager

Sequoia Analytical

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

Kiff Analytical
720 Olive Drive, Suite D
Davis CA, 95616

Project: -
Project Number: 4255 MacArthur Blvd, Oakland
Project Manager: Joel Kiff

Reported:
08/09/01 14:54

*** DEFAULT GENERAL METHOD ***

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MKG0462-01) Water Sampled: 07/24/01 11:40 Received: 07/24/01 18:00									
Ferrous Iron	ND	0.10	mg/l	1	1G31013	07/25/01	07/31/01	Hach Co. 8146	
MW-2 (MKG0462-02) Water Sampled: 07/24/01 13:56 Received: 07/24/01 18:00									
Ferrous Iron	**0.22**	0.10	mg/l	1	1G31013	07/25/01	07/31/01	Hach Co. 8146	
MW-3 (MKG0462-03) Water Sampled: 07/24/01 12:59 Received: 07/24/01 18:00									
Ferrous Iron	ND	0.10	mg/l	1	1G31013	07/25/01	07/31/01	Hach Co. 8146	
MW-4 (MKG0462-04) Water Sampled: 07/24/01 12:05 Received: 07/24/01 18:00									
Ferrous Iron	**0.14**	0.10	mg/l	1	1G31013	07/25/01	07/31/01	Hach Co. 8146	
TB-2 (MKG0462-05) Water Sampled: 07/24/01 13:36 Received: 07/24/01 18:00									
Ferrous Iron	ND	0.10	mg/l	1	1G31013	07/25/01	07/31/01	Hach Co. 8146	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sequoia Analytical

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
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Kiff Analytical 720 Olive Drive, Suite D Davis CA, 95616	Project: - Project Number: 4255 MacArthur Blvd, Oakland Project Manager: Joel Kiff	Reported: 08/09/01 14:54

Conventional Chemistry Parameters by APHA/EPA Methods

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MKG0462-01) Water Sampled: 07/24/01 11:40 Received: 07/24/01 18:00									
Total Alkalinity	530	5.0	mg/l	1	1G26023	07/26/01	07/26/01	SM 2320B	
MW-2 (MKG0462-02) Water Sampled: 07/24/01 13:56 Received: 07/24/01 18:00									
Total Alkalinity	510	5.0	mg/l	1	1G26023	07/26/01	07/26/01	SM 2320B	
MW-3 (MKG0462-03) Water Sampled: 07/24/01 12:59 Received: 07/24/01 18:00									
Total Alkalinity	940	5.0	mg/l	1	1G26023	07/26/01	07/26/01	SM 2320B	
MW-4 (MKG0462-04) Water Sampled: 07/24/01 12:05 Received: 07/24/01 18:00									
Total Alkalinity	650	5.0	mg/l	1	1G26023	07/26/01	07/26/01	SM 2320B	
TB-2 (MKG0462-05) Water Sampled: 07/24/01 13:36 Received: 07/24/01 18:00									
Total Alkalinity	530	5.0	mg/l	1	1G26023	07/26/01	07/26/01	SM 2320B	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sequoia Analytical

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
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Kiff Analytical
720 Olive Drive, Suite D
Davis CA, 95616

Project: -
Project Number: 4255 MacArthur Blvd, Oakland
Project Manager: Joel Kiff

Reported:
08/09/01 14:54

Anions by EPA Method 300.0

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MKG0462-01) Water Sampled: 07/24/01 11:40 Received: 07/24/01 18:00									
Nitrate as NO3	6.6	0.10	mg/l	1	1G27029	07/25/01	07/25/01	EPA 300.0	
Sulfate as SO4	35	5.0	"	10	"	"	"	"	
MW-2 (MKG0462-02) Water Sampled: 07/24/01 13:56 Received: 07/24/01 18:00									
Nitrate as NO3	0.35	0.10	mg/l	1	1G27029	07/25/01	07/25/01	EPA 300.0	
Sulfate as SO4	1.0	0.50	"	"	"	"	"	"	
MW-3 (MKG0462-03) Water Sampled: 07/24/01 12:59 Received: 07/24/01 18:00									
Nitrate as NO3	0.73	0.10	mg/l	1	1G27029	07/25/01	07/25/01	EPA 300.0	
Sulfate as SO4	3.4	0.50	"	"	"	"	"	"	
MW-4 (MKG0462-04) Water Sampled: 07/24/01 12:05 Received: 07/24/01 18:00									
Nitrate as NO3	0.91	0.10	mg/l	1	1G27029	07/25/01	07/25/01	EPA 300.0	
Sulfate as SO4	4.9	0.50	"	"	"	"	"	"	
TB-2 (MKG0462-05) Water Sampled: 07/24/01 13:36 Received: 07/24/01 18:00									
Nitrate as NO3	2.7	0.10	mg/l	1	1G27029	07/25/01	07/25/01	EPA 300.0	
Sulfate as SO4	1.5	0.50	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sequoia Analytical

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

Kiff Analytical	Project: -	
720 Olive Drive, Suite D	Project Number: 4255 MacArthur Blvd, Oakland	**Reported:**
Davis CA, 95616	Project Manager: Joel Kiff	08/09/01 14:54

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1G26023 - General Preparation										
Blank (1G26023-BLK1)				Prepared & Analyzed: 07/26/01						
Total Alkalinity	ND	5.0	mg/l							
LCS (1G26023-BS1)				Prepared & Analyzed: 07/26/01						
Total Alkalinity	98.0	5.0	mg/l	100		98.0	80-120			
Matrix Spike (1G26023-MS1)		Source: MKG0358-01		Prepared & Analyzed: 07/26/01						
Total Alkalinity	120	5.0	mg/l	100	22	98.0	75-125			
Matrix Spike Dup (1G26023-MSD1)		Source: MKG0358-01		Prepared & Analyzed: 07/26/01						
Total Alkalinity	118	5.0	mg/l	100	22	96.0	75-125	1.68	20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sequoia Analytical

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

Kiff Analytical	Project: -	
720 Olive Drive, Suite D	Project Number: 4255 MacArthur Blvd, Oakland	Reported:
Davis CA, 95616	Project Manager: Joel Kiff	08/09/01 14:54

Anions by EPA Method 300.0 - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1G27029 - General Preparation										
Blank (1G27029-BLK1)				Prepared & Analyzed: 07/25/01						
Nitrate as NO3	ND	0.10	mg/l							
Sulfate as SO4	ND	0.50	"							
LCS (1G27029-BS1)				Prepared & Analyzed: 07/25/01						
Nitrate as NO3	9.80	0.10	mg/l	10.0		98.0	90-110			
Sulfate as SO4	9.73	0.50	"	10.0		97.3	90-110			
Matrix Spike (1G27029-MS1)	Source: MKG0462-01			Prepared & Analyzed: 07/25/01						
Nitrate as NO3	103	1.0	mg/l	100	6.6	96.4	80-120			
Sulfate as SO4	133	5.0	"	100	35	98.0	80-120			
Matrix Spike Dup (1G27029-MSD1)	Source: MKG0462-01			Prepared & Analyzed: 07/25/01						
Nitrate as NO3	101	1.0	mg/l	100	6.6	94.4	80-120	1.96	20	
Sulfate as SO4	133	5.0	"	100	35	98.0	80-120	0.00	20	

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720 Olive Drive, Suite D	Project Number: 4255 MacArthur Blvd, Oakland	**Reported:**
Davis CA, 95616	Project Manager: Joel Kiff	08/09/01 14:54

Notes and Definitions

Q-02	The spike recovery for this quality control sample is outside of the established control limits due to interference from the sample matrix. However, the accuracy of the data was validated by a laboratory control sample which was within acceptance limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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KIFF ANALYTICAL LLC

720 Olive Drive, Suite D
Davis, CA 95616
Lab: 530.297.4800
Fax: 530.297.4803

MKG0462

Lab No. MKG0462 Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Manager: JOEL KIFF	Phone No.: (530) 297-4800
Company/Address: KIFF ANALYTICAL	FAX No.: (530) 297-4803
Project Number: BTS#010724-B1	P.O. No.: 21408
Project Name/Location: 4255 MAC ARTHUR BLVD. OAKLAND	Email Address: ☐.pdf ☐.xls ☐.doc ☐other
	Sampler Signature:

Sample Designation	Sampling Date	Sampling Time	Container (Type/Amount) 40 ml VOA	SLEEVE	PoLY	LL AMBER	Method Preserved HCl	HNO_3	ICE	NONE	Matrix WATER/SOIL	BTEX (8021B)	BTEX/TPH Gas/MTBE (8021B/M8015)	TPH as Diesel (M8015)	TPH as Motor Oil (M8015)	TPH Gas/BTEX/MTBE (8260B)	5 Oxygenates/TPH Gas/BTEX (8260B)	7 Oxygenates/TPH Gas/BTEX (8260B)	5 Oxygenates (8260B)	7 Oxygenates (8260B)	Lead Scav. (1,2 DCA & 1,2 EDB - 8260B)	EPA 8260B (Full List)	Volatile Halocarbons (EPA 8260B)	Lead (7421/239.2)	TOTAL (X) W.E.T. (X)	TOTAL ALKALINITY	FERROUS IRON	SULFATE / NITRATE as NITROGEN	TAT 12 hr/24 hr/48 hr/72 hr/1 wk	For Lab Use Only 12 hr = Results by 8 a.m. of the next bus. day; 24 hr = Results by 5 p.m. of the next bus. day; 48 hr = Results by 5 p.m. of the 2nd bus. day; 72 hr = Results by 5 p.m. of the 3rd bus. day; 1 wk = Results by 5 p.m. of the 5th bus. day
MW-1 01	7/24/01	1140			1	1																			X	X	X		
MW-2 02	↓	1356			1	1																			X	X	X		
MW-3 03		1259			1	1																			X	X	X		
MW-4 04		1205			1	1																			X	X	X		
TB-2 05	↓	1336			1	1					↓														X	X	X		

	Date	Time		Remarks:
Relinquished by: John Cook / Kiff Analytical	7/24/01	1510	Received by: Keri Cox	
Relinquished by: K. Cox	7/24/01	1600	Received by: WHP SEQ	
Relinquished by: WHP	7/24	1800	Received by Laboratory: GA 7/24/01 1800	Bill to:

White - Lab, Yellow - File, Pink - Originator

COC.fh8 (5/00)

WELL GAUGING DATA

Project # 010724-B1 Date 7/24/01 Client Equiva

Site 4255 McArthur Blvd - Oakland

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	DO	ORP
MW-1	4					8.00	23.32		>20	43
MW-2	4	Sheen in well				11.67	19.77		0.2	53
MW-3	4					14.43	21.94		0.4	29
MW-4	~~4~~ 2					~~11.67~~ 14.04	30.50		0.5	106
TB-1	4					6.03	13.43		1.4	31
TB-2	4					4.75	12.96		0.7	-51

* gauged w/ out ORC (Blockage)

** DO Reading off scale. Double checked w/ 2 meters.

EQUIVA WELL MONITORING DATA SHEET

BTS #: 010724-B1	Site: 98995758
Sampler: S. O'Bryan	Date: 7/24/01
Well I.D.: MW-1	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 23.32	Depth to Water: 8.00
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH

Purge Method: Bailer, Disposable Bailer, Middleburg, (Electric Submersible), Waterra, Peristaltic, Extraction Pump, Other_____

Sampling Method: (Bailer), (Disposable Bailer), Extraction Port, Dedicated Tubing, Other:_____

10 (Gals.) X 3 = 30 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1130	71.1	5.7	664	30	10	
1132	70.1	8.3	938	10	20	
1134	70.2	9.1	966	8	30	
1135	69.7	9.3	970	8	40	

Did well dewater? Yes (No) Gallons actually evacuated: 40

Sampling Time: 1140 Sampling Date: 7/24/01

Sample I.D.: MW-1 Laboratory: (Kiff) Sequoia Other_____

Analyzed for: (TPH-G) (BTEX) MTBE TPH-D Other: Total Alkalinity, Ferrous Iron, Nitrate Sulfate

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:	>20 mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	43 mV	Post-purge:	mV

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EQUIVA WELL MONITORING DATA SHEET

BTS #: 010724-BJ	Site: 9899 5758
Sampler: O'Bryan	Date: 7/24/01
Well I.D.: MW-2	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 19.71	Depth to Water: 11.67
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH

Purge Method: Bailer; Disposable Bailer; Middleburg; (Electric Submersible); Waterra; Peristaltic; Extraction Pump; Other_____

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

5.2 (Gals.) X 3 = 15.8 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1350	73.4	7.1	911	75	6	
1351	72.8	6.8	909	66	12	
1352	72.8	6.8	903	64	18	

Did well dewater? Yes (No) Gallons actually evacuated: 18

Sampling Time: 1356 Sampling Date: 7/24/01

Sample I.D.: mw-2 Laboratory: (Kiff) Sequoia Other_____

Analyzed for: (TPH-G BTEX MTBE) TPH-D Other: Total Alkalinity, Ferrous Iron, Nitrate, Sulfate

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:	0.2 mg/L	Post-purge:		mg/L
O.R.P. (if req'd):	Pre-purge:	53 mV	Post-purge:		mV

EQUIVA WELL MONITORING DATA SHEET

BTS #: 010724-BJ	Site: 9899 5758
Sampler: O'Bryan	Date: 7/24/01
Well I.D.: MW-3	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 21.94	Depth to Water: 14.43
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH

Purge Method: Bailer / Disposable Bailer / Middleburg / (Electric Submersible) / Waterra / Peristaltic / Extraction Pump / Other_____

Sampling Method: (Bailer) / Disposable Bailer / Extraction Port / Dedicated Tubing / Other:_____

4.9 (Gals.) X 3 = 14.7 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1250	76.1	8.3	1191	>200	5	
1251	74.4	7.11	1384	>200	10	
1252	74.2	7.1	1452	>200	15	
*upon sampling not measured w/ interface probe.				Product in well & in sample containes.		SPH was

Did well dewater? Yes (No) Gallons actually evacuated: 15

Sampling Time: 1259 Sampling Date: 7/24/01

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

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Other: Total Alkalinity, Ferrous Iron, Nitrate, Sulfate

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:	0.4 mg/L	Post-purge:		mg/L
O.R.P. (if req'd):	Pre-purge:	29 mV	Post-purge:		mV

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EQUIVA WELL MONITORING DATA SHEET

BTS #: 010724-B1	Site: 98995758
Sampler: O'Bryan	Date: 7/24/01
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth: 30.50	Depth to Water: 10.07
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH

Purge Method: (Bailer) Disposable Bailer ~~Middleburg~~ Electric Submersible | Waterra Peristaltic Extraction Pump Other_____ | Sampling Method: (Bailer) (Disposable Bailer) Extraction Port Dedicated Tubing Other: _____

1 Case Volume		Specified Volumes		Calculated Volume
3.3	(Gals.) X	3	=	9.9 Gals.

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1150	71.1	6.6	1166	55	3.5	
1154	72.2	7.0	1169	46	7	
1157	73.1	7.1	1168	33	10	

Did well dewater? Yes (No) Gallons actually evacuated: 10

Sampling Time: 1205 Sampling Date: 7/24/01

Sample I.D.: MW-4 Laboratory: (Kiff) Sequoia Other_____

Analyzed for: (TPH-G BTEX MTBE) TPH-D Other: Total Alkalinity, Ferrous Iron, Nitrate, Sulfate

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:	0.5	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	106	mV	Post-purge:	mV

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EQUIVA WELL MONITORING DATA SHEET

BTS #: 010724-B1	Site: 9899 5758
Sampler: O'Bryan	Date: 7/24/01
Well I.D.: TB-2	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 12.96	Depth to Water: 4.75
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH

Purge Method: Bailer / Disposable Bailer / Middleburg / (Electric Submersible) / Waterra / Peristaltic / Extraction Pump / Other ____

Sampling Method: ~~Bailer~~ / (Disposable Bailer) / Extraction Port / Dedicated Tubing / Other: ____

5.3 (Gals.) X 3 = 15.9 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1330	74.9	7.1	1402	720	6	
1331	77.4	6.8	1013	720	12	
1332	78.2	6.8	937	87	18	

Did well dewater? Yes (No) Gallons actually evacuated: 18

Sampling Time: 1336 Sampling Date: 7/24/01

Sample I.D.: ~~MW~~ TB-2 Laboratory: (Kiff) Sequoia Other ____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Other: Total Alkalinity, Ferrous Iron, Nitrate, Sulfate

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:	0.4 mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	-51 mV	Post-purge:	mV

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