

# 113 / 415

# C A M B R I A

February 13, 2002

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

FEB 19 2002

**Re: Fourth Quarter 2001 Monitoring Report**  
Shell-branded Service Station  
4411 Foothill Boulevard  
Oakland, California  
Incident #98995746  
Cambria Project #244-0897-002



Dear Mr. Chan:

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

## FOURTH QUARTER 2001 ACTIVITIES

**Groundwater Monitoring:** Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged and sampled all on-site wells, replaced oxygen releasing compound (ORC) socks in wells S-1, S-2, and BW-A, calculated groundwater elevations, and compiled the gasoline constituents analytical data. Cambria prepared a vicinity/area well survey map (Figure 1) and a groundwater elevation contour map (Figure 2), and compiled the bio-attenuation parameters data (Table 1). Blaine's report, presenting the laboratory report and supporting field documents, is included as Attachment A.

Due to impending construction at the Shell-branded site, joint sampling and gauging of the Shell-branded site and the adjacent Chevron site was not coordinated with Gettler Ryan Inc. in the third quarter 2001. The adjacent BP Oil Company site is gauged and sampled annually only in the first quarter.

**Dual-Phase Vacuum Extraction (DVE):** Due to the site demolition, planned remedial efforts, and the lack of DVE effectiveness in decreasing methyl tert butyl ether concentrations in well S-2, Cambria terminated all DVE operations at the site, with Alameda County Health Care Services Agency (ACHCSA), approval on October 18, 2001.

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

**Corrective Action Plan (CAP):** On November 12, 2001, Cambria submitted a CAP to the ACHCSA to be implemented in conjunction with the impending site demolition and fueling facility removal. The ACHCSA approved the CAP in a letter dated November 11, 2001. ?

**Site Demolition and Fueling Facility Removal:** In December 2001 and January 2002, Paradiso Mechanical of San Leandro, California removed underground storage tanks (USTs), product dispensers, product piping, and all other site features.

*request copy of tank  
closure report.*

**ANTICIPATED FIRST QUARTER 2002 ACTIVITIES**



**Site Remedial Activities:** In January 2002, Cambria supervised the removal of 2,549 tons of soil beneath and around the USTs and product dispenser islands. Also under Cambria's supervision, Phillips Services Corporation extracted approximately 16,000 gallons of groundwater from the open UST pit. Once over-excavation activities ceased and Cambria collected confirmation samples, ORC powder was spread throughout the excavation bottom to assist in biological degradation of residual contaminants of concern in soil and groundwater. Following site remedial activities, clean imported backfill was placed in the pits and compacted.

**UST Closure Report:** Cambria will prepare a report providing details of the UST and fuel facility removal, and corrective actions taken.

**Groundwater Monitoring:** Blaine will gauge and sample all wells, change ORC socks in wells S-1 and S-2, and tabulate the data. Cambria will prepare a monitoring report.

**CLOSING**

We appreciate the opportunity to work with you on this project. Please call James Loetterle at (510) 420-3336 if you have any questions or comments.

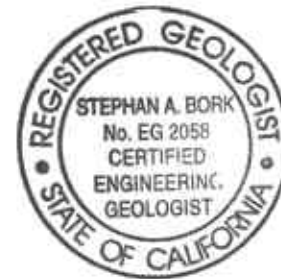
Sincerely,  
**Cambria Environmental Technology, Inc**



James Loetterle  
Project Geologist



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



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

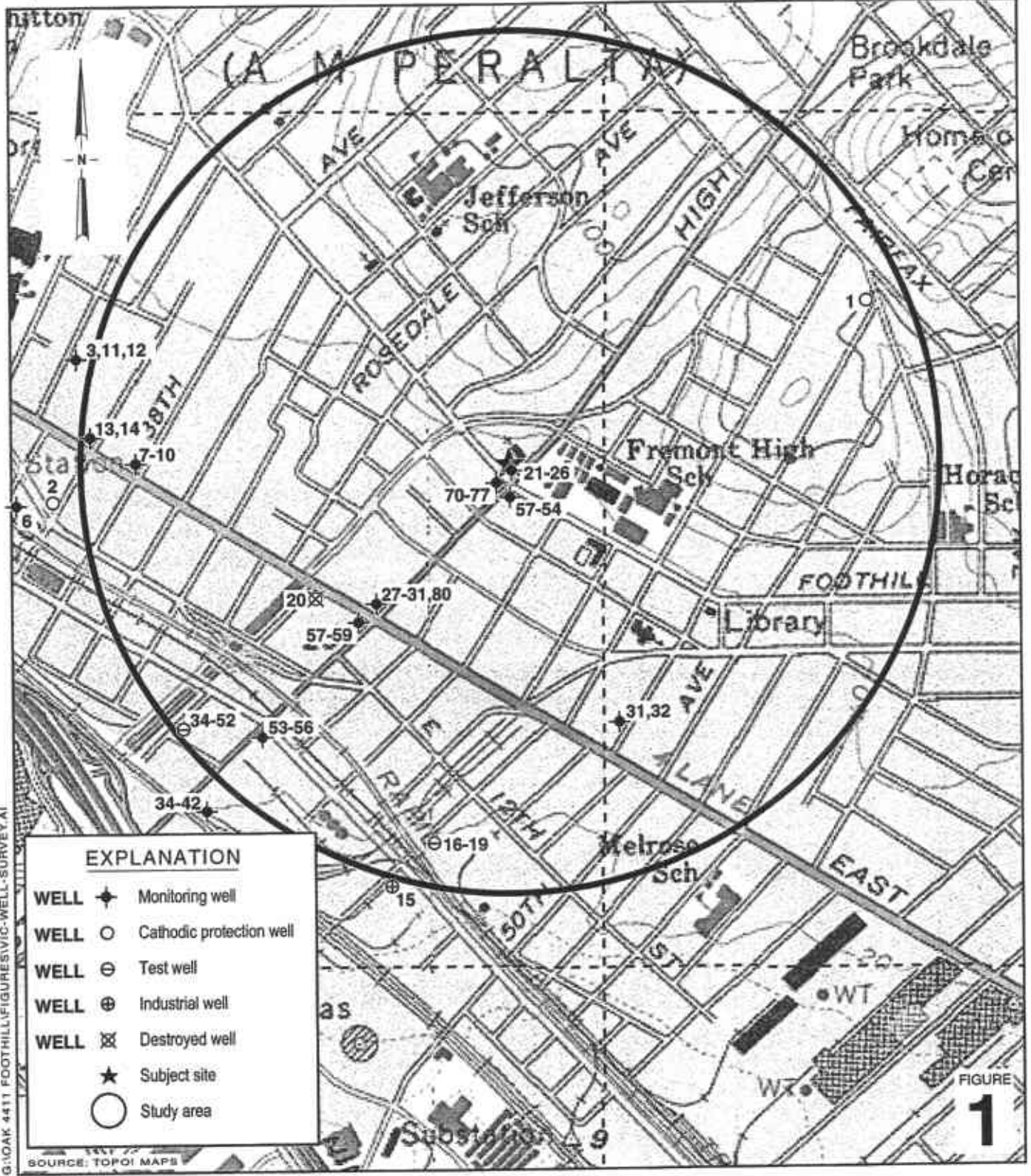
Tables: 1 - Groundwater Analytical Data – Bioattenuation Parameters

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Karen Petryna, Equiva Services LLC, P.O. Box 7869, Burbank, California 91510-7869  
Walter G. & Jeanette P Watters, 101 Jasmine Creek Dr., Corona Del Mar, CA 92665  
J.T. & Elizabeth G. Watters, 600 Caldwell Road, Oakland, CA 94611  
Tom Bauhs, Chevron Texaco, 6001 Bollinger Canyon Road, San Ramon, CA 94583

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*Oakland School District - Gibbs (Levine + Friele)*



G:\OAK 4411 FOOTHILL\FIGURES\VIC-SURVEY.A1

SOURCE: TOPOI MAPS

**Shell-branded Service Station**  
 4411 Foothill Boulevard  
 Oakland, California  
 Incident #98995746



C A M B R I A

**Vicinity / Area Well  
 Survey Map**

(1/2-Mile Radius)



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**Table 1. Groundwater Analytical Data - Bioattenuation Parameters - Shell-branded Service Station Incident #98995746, 4411 Foothill Boulevard, Oakland, California**

Well ID	Date	Depth to Water (feet)	Benzene (ppb)	←————— (Concentrations in ppm) —————→				DO	ORP (millivolts)	Notes
				Motor Oil	Ferrous Iron	Nitrate as Nitrogen	Sulfate as sulfate			
S-1	03/16/98	6.00	250	---	1.9	<1.0	b <1.0	5.3/3.7	158/155	
	06/23/98	6.31	280	---	2.0	<1.0	5.9	3.8/2.4	117/94	
	09/01/98	9.17	370	---	4.5	<1.0	12	1.4/2.6	-85/-51	
	12/30/98	8.99	174	0.334	4.1	<1.0	6.2	1.6/2.0	-25/-62	
	03/30/99	6.10	1,360	0.279	0.880	0.115	6.10	1.2/1.8	-56/-39	
	06/14/99	7.94	135	---	1.30	<1.00	5.70	1.4/2.1	-72/-24	
	09/30/99	10.04	189	<0.500	1.20	5.41	<5.00	4.3/2.0	-350/-70	
	12/22/99	9.42	50.2	<0.500	0.0670	<1.00	12.1	1.80/2.30	-49/-142	
	03/09/00	6.21	21.2	---	0.12	<0.10	5.3	2.0/2.9	-81/-190	a
	06/20/00	9.18	26.0	<0.500	0.451	<1.00	14.8	2.0/2.4	-37/12	
	09/05/00	10.14	43.5	0.546	0.0291	<1.00	9.72	0.6/0.3	35/-70	
	12/04/00	10.10	5.34	---	0.0257	<1.00	10.2	8.6/9.8	-149/-204	
	03/08/01	5.84	49.6	---	0.559	0.52	7.91	NA/2.7	NA/-8	
	06/07/01	8.80	120.0	---	0.15	<0.05	7.7	6.2/2.2	167/150	
	09/28/01	10.25	1.8	---	<0.10	0.86	10.0	7.8/8.9	-45/-15	
11/19/01	9.87	14	---	<250	260	16,000	7.7/7.3	165/15		
S-2	03/16/98	7.97	830	---	1.7	<1.0	17	7.0/4.3	147/149	
	06/23/98	8.20	46	---	4.3	<1.0	5.7	4.2/3.8	128/134	
	06/23/98	8.20	49	---	3.7	<1.0	5.4	4.2/3.8	128/134	duplicate
	09/01/98	9.85	170	---	4.1	<1.0	7.8	1.9/1.6	-26/-11	
	12/30/98	9.84	369	---	1.9	<1.0	10	2.0/1.8	-54/-36	
	03/30/99	8.41	234	---	<0.100	<0.100	8.51	2.1/1.8	-10/-08	
	06/14/99	9.80	175	---	1.40	<1.00	5.20	2.4/2.1	-121/-113	
	09/30/99	10.58	135	<0.500	0.260	5.36	14.0	5.1/4.8	-172/-42	
	12/22/99	10.13	55.8	<0.500	0.0540	<1.00	24.3	9.60/5.20	-90/-46	
	03/09/00	7.88	1,190	---	0.019	<0.10	6.3	7.6/5.0	58/504	
	06/20/00	10.27	348	<0.500	0.499	<1.00	11.6	1.9/2.2	7/21	
	09/05/00	10.19	106	<0.500	0.885	<1.00	9.36	0.5/1.6	-30/-50	
	12/04/00	10.30	4.37	---	0.116	<1.00	15.9	10.6/9.4	68/505	
	03/08/01	8.57	318	---	0.267	<0.5	11.2	NA/2.7	NA/112	
	06/07/01	9.39	450	---	0.6	<0.05	11	1.1/2.0	110/97	
09/28/01	10.34	140	---	<0.10	<0.10	17	11.0/4.5	175/37		
11/19/01	9.90	71	---	<250	<200	12,000	5.0/3.1	-28/-24		

**Table 1. Groundwater Analytical Data - Bioattenuation Parameters - Shell-branded Service Station Incident #98995746, 4411 Foothill Boulevard, Oakland, California**

Well ID	Date	Depth to Water (feet)	Benzene (ppb)	←————— (Concentrations in ppm) —————→				DO	ORP (millivolts)	Notes
				Motor Oil	Ferrous Iron	Nitrate as Nitrogen	Sulfate as sulfate			
S-3	03/16/98	5.75	840	---	3.8	<1.0	12	3.0/3.4	153/142	
	06/23/98	5.98	90	---	2.0	<1.0	8.9	4.2/2.0	119/121	
	09/01/98	8.98	480	---	2.7	<1.0	7.3	1.9/2.8	57/35	
	09/01/98	8.98	420	---	2.2	<1.0	7.2	1.9/2.8	57/35	duplicate
	12/30/98	9.11	240	---	5.2	<1.0	5.9	1.8/1.6	75/54	
	03/30/99	6.95	195	---	<0.100	0.689	17.5	1.3/1.5	72/61	
	06/14/99	8.85	37.4	---	4.10	<1.00	15.0	1.6/1.2	-118/-108	
	09/30/99	9.66	226	<0.500	0.440	5.89	7.69	3.5/2.8	-140/-70	
	12/22/99	9.50	207	<0.500	1.30	<1.00	5.65	0.98/0.80	16/-57	
	03/09/00	6.25	84.5	---	0.046	4.9	16	1.0/1.4	-163/-110	a
	06/20/00	9.67	117	<0.500	0.639	6.92	19.8	1.8/2.0	-102/-92	
	09/05/00	9.49	127	<0.500	2.53	<1.00	5.36	1.1/1.9	-24/-47	
	12/04/00	9.23	217	---	2.77	<1.00	<5.00	1.1/1.5	-175/-159	
	03/08/01	8.17	465	---	1.92	<0.5	5.01	1.1/NA	-22/-48	
	06/07/01	8.78	230	---	1.4	<0.05	<2.0	0.8/0.9	162/104	
	09/28/01	9.93	400	---	<0.10	0.36	0.74	3.7/2.9	194/32	
11/19/01	9.33	160	---	<b>2,100</b>	<b>&lt;200</b>	<b>&lt;1,000</b>	<b>2.9/1.9</b>	<b>-32/-28</b>		
S-4	03/31/00	8.92	4,570	---	3.23	<1.00	<5.00	1.8/1.2	-25/-37	
	06/20/00	8.77	4,590	<0.500	0.814	<1.00	11.2	2.7/2.9	3/-78	
	09/05/00	10.57	841	<0.500	5.62	<1.00	15.9	1.3/0.3	-90/-74	
	12/04/00	10.67	949	---	6.47	<1.00	14.1	1.1/1.0	-224/-202	
	03/08/01	8.44	5,210	---	6.58	<0.5	<5	1.0/0.9	-103/-99	
	06/07/01	10.57	2,500	---	8.8	<0.05	3.5	0.7/0.6	77/25	
	09/28/01	11.27	790	---	3.9	<0.10	15.0	3.8/3.9	68/2	
	11/19/01	10.83	230	---	<b>2,700</b>	<b>&lt;200</b>	<b>13,000</b>	<b>3.6/1.6</b>	<b>-51/-59</b>	

Ideal Aerobic Degradation Relationship:  
Observed Relationship:

Direct	Inverse	Inverse	Inverse	Direct
Inconclusive	Inverse	Moderately inverse	Moderately inverse	Inconclusive

**Table 1. Groundwater Analytical Data - Bioattenuation Parameters - Shell-branded Service Station Incident #98995746, 4411 Foothill Boulevard, Oakland, California**

Well ID	Date	Depth to Water (feet)	Benzene (ppb)	Motor Oil	Ferrous Iron	Nitrate as Nitrogen	Sulfate as sulfate	DO	ORP (millivolts)	Notes
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**Abbreviations and Notes:**

Benzene analyzed by EPA Method 8020 or 8260

Motor Oil = Extractable hydrocarbons as motor oil by modified EPA Method 8015

DO = Dissolved oxygen (pre-purge / post-purge)

ORP = Oxidation reduction potential (pre-purge / post-purge)

ppb = Parts per billion

ppm = Parts per million

<n = Below detection limit of n units

Ferrous iron by modified EPA Method 200.7

Nitrate as nitrogen and sulfate as sulfate by EPA Method 300.0

a = TPHg result was generated out of hold time



**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

December 21, 2001

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

Fourth Quarter 2001 Groundwater Monitoring at  
Shell-branded Service Station  
4411 Foothill Boulevard  
Oakland, CA

Monitoring performed on November 19, 2001

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Groundwater Monitoring Report **011119-MN-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/mrb

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

cc: Anni Kreml  
Cambria Environmental Technology, Inc.  
1144 65<sup>th</sup> Street, Ste. C  
Oakland, CA 94608-2411

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**4411 Foothill Boulevard**  
**Oakland, CA**  
**Wic #204-5508-3400**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOB (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
S-1	12/18/1992	41,000	NA	3,100	1,100	1,200	8,700	NA	NA	38.31	9.06	NA	NA
S-1	05/26/1993	39,000	6,000	1,300	4,700	1,500	7,800	NA	NA	38.31	NA	NA	NA
S-1	05/28/1993	NA	NA	NA	NA	NA	NA	NA	NA	38.31	12.13	26.18	NA
S-1	06/03/1993	NA	NA	NA	NA	NA	NA	NA	NA	38.31	8.89	29.42	NA
S-1	06/08/1993	NA	NA	NA	NA	NA	NA	NA	NA	38.31	8.80	29.51	NA
S-1	09/21/1993	34,000	5,900	480	5,000	3,800	18,000	NA	NA	38.31	10.40	27.91	NA
S-1	12/14/1993	25,000	13,000	1,100	5,000	2,200	11,000	NA	NA	38.31	9.66	28.65	NA
S-1	03/17/1994	57,000	1,600	1,300	5,400	2,100	11,000	NA	NA	38.31	8.20	30.11	NA
S-1	06/16/1994	57,000	3,000	1,600	6,000	2,000	13,000	NA	NA	38.31	9.41	28.90	NA
S-1	09/22/1994	39,000	ND	1,300	2,100	1,500	7,100	NA	NA	38.31	11.13	27.18	NA
S-1 a	12/15/1994	30,000	3,100	1,100	4,700	1,600	10,000	NA	NA	38.31	7.15	31.16	NA
S-1 a, b	03/30/1995	30,000	3,100	1,400	4,000	1,500	11,000	NA	NA	38.31	6.09	32.22	NA
S-1	06/20/1995	28,000	2,100	1,100	2,300	1,100	8,300	NA	NA	38.31	7.30	31.01	NA
S-1	09/20/1995	40,000	2,600	840	3,600	1,300	8,600	NA	NA	38.31	10.02	28.29	NA
S-1 a	12/06/1995	38,000	6,400	920	3,200	1,500	9,400	NA	NA	38.31	11.64	26.67	NA
S-1	03/21/1996	48,000	NA	700	4,200	1,100	8,600	NA	NA	38.31	6.87	31.44	NA
S-1	09/06/1996	41,000	4,100	830	2,600	2,100	12,000	<250	NA	38.31	10.50	27.81	NA
S-1	12/19/1996	40,000	2,500	540	3,100	1,900	9,800	920	NA	38.31	8.24	30.07	NA
S-1	03/17/1997	42,000	4,700	610	2,700	1,700	11,000	3,500	NA	38.31	7.26	31.05	NA
S-1	06/11/1997	28,000	4,000	540	960	1,300	5,300	220	NA	38.31	10.69	27.62	NA
S-1 (D)	06/11/1997	30,000	3,900	580	1,000	1,400	5,400	<125	NA	38.31	10.69	27.62	NA
S-1	09/17/1997	27,000	4,400	310	1,200	1,900	9,000	170	NA	38.31	10.26	28.05	NA
S-1 (D)	09/17/1997	27,000	4,400	270	1,200	1,900	9,000	170	NA	38.31	10.26	28.05	NA
S-1	12/11/1997	21,000	3,400	350	820	1,500	6,500	<125	NA	38.31	6.96	31.35	NA
S-1	03/16/1998	25,000	2,500	250	820	670	5,000	<125	NA	38.31	6.00	32.31	NA
S-1 (D)	03/16/1998	26,000	NA	250	840	720	5,100	<125	NA	38.31	6.00	32.31	5.3/3.7
S-1	06/23/1998	<1,000	230	280	14	23	15	6,100	7,800	38.31	6.31	32.00	3.8/2.4
S-1	09/01/1998	26,000	2,300	370	620	1,300	33	1,400	120	38.31	9.17	29.14	1.4/2.6

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**4411 Foothill Boulevard**  
**Oakland, CA**  
**Wic #204-5508-3400**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOB (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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S-1	12/30/1998	29,900	1,970	174	732	1,680	5,740	182	NA	38.31	8.99	29.32	1.6/2.0
S-1	03/30/1999	14,200	1,150	1,360	260	1,070	3,580	<500	90.0	38.31	6.10	32.21	1.2/1.8
S-1	03/31/1999	NA	NA	NA	NA	NA	NA	NA	NA	38.31	7.84	30.47	NA
S-1	06/14/1999	20,200	4,280	135	407	825	5,000	705	NA	38.31	7.94	30.37	1.4/2.1
S-1	09/30/1999	18,300	3,120	189	531	1,250	4,740	322	NA	38.31	10.04	28.27	4.3/2.0
S-1	12/22/1999	2,450	444a	50.2	97.5	139	458	133	NA	38.31	9.42	28.89	1.8/2.3
S-1	03/09/2000	1,230d	1,200a	21.2d	115d	116d	411d	45.1d	NA	38.30	6.21	32.09	2.0/2.9
S-1	06/20/2000	755	352a	26.0	48.4	43.1	230	71.5	NA	38.30	9.18	29.12	2.0/2.4
S-1	09/05/2000	2,980	783a	43.5	117	168	871	192	NA	38.30	10.14	28.16	0.6/0.3
S-1	12/04/2000	399	238a	5.34	14.6	36.2	106	24.9	NA	38.30	10.10	28.20	8.6/9.8
S-1	12/12/2000	NA	NA	NA	NA	NA	NA	NA	NA	38.30	9.22	29.08	NA
S-1	03/08/2001	2,940	1,390a	49.6	52.9	21.8	749	87.6	NA	38.30	5.84	32.46	2.7e
S-1	06/07/2001	10,000	1,400	120	370	680	2,400	150	NA	38.30	8.80	29.50	6.2/2.2
S-1	09/13/2001	240	<200	1.8	8.9	16	53	NA	17	38.30	10.25	28.05	7.8/8.9
S-1	11/19/2001	1,400	<300	14	42	110	260	NA	27	38.30	9.87	28.43	7.7/7.3

S-2	05/28/1993	NA	NA	NA	NA	NA	NA	NA	NA	38.79	9.51	29.28	NA
S-2	06/03/1993	NA	NA	NA	NA	NA	NA	NA	NA	38.79	9.51	29.28	NA
S-2	06/08/1993	NA	NA	NA	NA	NA	NA	NA	NA	38.79	9.57	29.22	NA
S-2	06/29/1993	1,300	NA	290	35	38	130	NA	NA	38.79	NA	NA	NA
S-2	09/21/1993	3,300	NA	870	24	190	120	NA	NA	38.79	10.54	28.25	NA
S-2	12/14/1993	1,300	NA	400	16	36	27	NA	NA	38.79	9.76	29.03	NA
S-2	03/17/1994	4,500	NA	610	27	92	110	NA	NA	38.79	9.92	28.87	NA
S-2 (D)	03/17/1994	4,000	NA	610	26	93	120	NA	NA	38.79	9.92	28.87	NA
S-2	06/16/1994	2,800	NA	690	45	97	140	NA	NA	38.79	10.11	28.68	NA
S-2	09/22/1994	4,000	NA	630	94	64	230	NA	NA	38.79	10.51	28.28	NA
S-2	12/15/1994	1,600	NA	450	300	67	130	NA	NA	38.79	9.12	29.67	NA
S-2 b	03/30/1995	8,200	NA	2,800	190	240	700	NA	NA	38.79	7.86	30.93	NA
S-2	06/20/1995	9,600	NA	2,600	160	170	500	NA	NA	38.79	9.51	29.28	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**4411 Foothill Boulevard**  
**Oakland, CA**  
**Wic #204-5508-3400**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOB (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
S-2	09/20/1995	4,200	NA	920	45	98	140	NA	NA	38.79	10.06	28.73	NA
S-2	12/06/1995	<5,000	NA	790	67	64	130	NA	NA	38.79	10.52	28.27	NA
S-2	03/21/1996	3,700	NA	850	45	96	170	NA	NA	38.79	8.60	30.19	NA
S-2	09/06/1996	2,400	NA	500	33	39	84	490	NA	38.79	10.50	28.29	NA
S-2	12/19/1996	1,200	NA	330	15	24	31	430	NA	38.79	9.40	29.39	NA
S-2	03/17/1997	4,100	NA	780	42	110	120	2,200	NA	38.79	9.82	28.97	NA
S-2	06/11/1997	760	NA	120	<5.0	7.0	7.6	900	NA	38.79	10.18	28.61	NA
S-2	09/17/1997	1,500	NA	230	8.6	40	27	480	NA	38.79	9.90	28.89	NA
S-2	12/11/1997	1,300	NA	240	15	33	57	280	NA	38.79	8.27	30.52	NA
S-2	03/16/1998	1,100	NA	830	48	<10	<10	4,700	4,800	38.79	7.97	30.82	7.0/4.3
S-2	06/23/1998	720	NA	46	6.8	50	68	50	8.8	38.79	8.20	30.59	4.2/3.8
S-2 (D)	06/23/1998	810	NA	49	7.1	50	70	49	8.8	38.79	8.20	30.59	4.2/3.8
S-2	09/01/1998	<2,000	NA	170	<20	<20	<20	9,300	12,000	38.79	9.85	28.94	1.9/1.6
S-2	12/30/1998	<5,000	NA	369	<50	<50	<50	14,300	NA	38.79	9.84	28.95	2.0/1.8
S-2	03/30/1999	<2,000	NA	234	<20.0	27.4	36.9	49,200	53,000	38.79	8.41	30.38	2.1/1.8
S-2	03/31/1999	NA	NA	NA	NA	NA	NA	NA	NA	38.79	8.67	30.12	NA
S-2	06/14/1999	<1,000	NA	175	<10.0	<10.0	11.1	67,500	NA	38.79	9.80	28.99	NA
S-2	09/30/1999	678	177a	135	8.22	14.9	25.8	17,100	17,000c	38.79	10.58	28.21	5.1/4.8
S-2	12/22/1999	316	142a	55.8	10.1	5.26	10.4	9,410	8,810	38.79	10.13	28.66	9.6/5.2
S-2	03/09/2000	2,670	630a	1,190d	62.7	84.1	125	29,200d	31,400c	38.78	7.88	30.90	7.6/5.0
S-2	06/20/2000	<5,000	401a	348	<50.0	50.4	127	35,800	33,900c	38.78	10.27	28.51	1.9/2.2
S-2	09/05/2000	<5,000	373a	106	<50.0	<50.0	<50.0	25,800	37,100c	38.78	10.19	28.59	0.5/1.6
S-2	12/04/2000	<250	1,730a	4.37	<2.50	<2.50	<2.50	4,500	5,130c	38.78	10.30	28.48	10.6/9.4
S-2	12/12/2000	NA	NA	NA	NA	NA	NA	NA	NA	38.78	9.66	29.12	NA
S-2	03/08/2001	<2,500	<51.3	318	45.7	53.5	88.5	15,500	17,500	38.78	8.57	30.21	2.7e
S-2	06/07/2001	18,000	11,000	450	170	390	2,200	13,000	18,000	38.78	9.39	29.39	1.1/2.0
S-2	09/13/2001	13,000	<5,000	140	110	350	1,400	NA	9,200	38.78	10.34	28.44	11.0/4.5
S-2	11/19/2001	15,000	8,700	71	27	86	330	NA	7,500	38.78	9.90	28.88	5.0/3.1

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**4411 Foothill Boulevard**  
**Oakland, CA**  
**Wic #204-5508-3400**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOB (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
S-3	05/28/1993	NA	NA	NA	NA	NA	NA	NA	NA	37.33	8.45	28.88	NA
S-3	06/03/1993	NA	NA	NA	NA	NA	NA	NA	NA	37.33	8.36	28.97	NA
S-3	01/19/1990	NA	NA	NA	NA	NA	NA	NA	NA	37.33	8.41	28.92	NA
S-3	06/29/1993	29,000	NA	1,500	1,800	950	6,200	NA	NA	37.33	NA	NA	NA
S-3	09/21/1993	15,000	NA	900	2,200	2,600	11,000	NA	NA	37.33	10.08	27.25	NA
S-3	12/94/1993	20,000	NA	1,100	2,400	1,800	8,500	NA	NA	37.33	8.80	28.53	NA
S-3	03/17/1994	14,000	NA	580	190	750	1,700	NA	NA	37.33	8.34	28.99	NA
S-3	06/16/1994	20,000	NA	700	690	1,400	4,100	NA	NA	37.33	9.12	28.21	NA
S-3 (D)	06/16/1994	19,000	NA	680	560	1,300	3,700	NA	NA	37.33	NA	NA	NA
S-3	09/22/1994	24,000	NA	630	1,100	1,400	5,700	NA	NA	37.33	10.27	27.06	NA
S-3 (D)	09/22/1994	25,000	NA	720	1,100	1,500	6,100	NA	NA	37.33	NA	NA	NA
S-3	12/15/1994	18,000	NA	520	800	1,100	4,200	NA	NA	37.33	7.81	29.52	NA
S-3 (D)	12/15/1994	23,000	NA	1,000	1,900	2,000	8,600	NA	NA	37.33	NA	NA	NA
S-3 b	03/30/1995	8,800	NA	360	730	700	3,700	NA	NA	37.33	7.06	30.27	NA
S-3 (D)	03/30/1995	7,600	NA	330	570	600	2,600	NA	NA	37.33	NA	NA	NA
S-3	06/20/1995	9,600	NA	510	170	960	1,700	NA	NA	37.33	8.15	29.18	NA
S-3 (D)	06/20/1995	9,800	NA	500	170	950	1,700	NA	NA	37.33	NA	NA	NA
S-3	09/20/1995	21,000	NA	400	560	1,300	4,600	NA	NA	37.33	9.32	28.01	NA
S-3	12/06/1995	24,000	NA	630	1,400	1,400	6,000	NA	NA	37.33	10.53	26.80	NA
S-3 (D)	12/06/1995	22,000	NA	630	1,200	1,400	5,500	NA	NA	37.33	NA	NA	NA
S-3	03/21/1996	9,100	NA	290	110	490	1,600	NA	NA	37.33	7.32	30.01	NA
S-3 (D)	03/21/1996	11,000	NA	310	250	540	2,100	NA	NA	37.33	NA	NA	NA
S-3	09/06/1996	15,000	NA	440	300	1,100	3,000	500	NA	37.33	10.10	27.23	NA
S-3 (D)	09/06/1996	11,000	NA	490	170	820	1,500	700	NA	37.33	NA	NA	NA
S-3	12/19/1996	12,000	NA	600	380	850	2,500	380	NA	37.33	8.36	28.97	NA
S-3 (D)	12/19/1996	12,000	NA	590	380	830	2,500	540	NA	37.33	8.36	28.97	NA
S-3	03/17/1997	12,000	NA	520	140	740	1,400	320	NA	37.33	8.57	28.76	NA
S-3 (D)	03/17/1997	9,600	NA	500	100	680	1,100	<250	NA	37.33	8.57	28.76	NA
S-3	06/11/1997	9,600	NA	510	94	740	1,100	410	NA	37.33	9.26	28.07	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**4411 Foothill Boulevard**  
**Oakland, CA**  
**Wic #204-5508-3400**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOB (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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S-3	09/17/1997	21,000	NA	140	560	1,800	7,200	130	NA	37.33	9.62	27.71	NA
S-3	12/11/1997	24,000	NA	530	970	1,600	6,900	950	NA	37.33	7.34	29.99	NA
S-3 (D)	12/11/1997	29,000	NA	520	1,000	1,600	7,300	970	NA	37.33	7.34	29.99	NA
S-3	03/16/1998	29,000	NA	840	810	1,700	6,000	<250	NA	37.33	5.75	31.58	3.0/3.4
S-3	06/23/1998	3,800	NA	90	220	240	1,400	<50	NA	37.33	5.98	31.35	4.2/2.0
S-3	09/01/1998	9,600	NA	480	120	870	1,800	490	<50	37.33	8.98	28.35	1.9/2.8
S-3 (D)	09/01/1998	9,200	NA	420	110	800	1,700	110	<50	37.33	8.98	28.35	1.9/2.8
S-3	12/30/1998	7,660	NA	240	103	410	834	64.9	NA	37.33	9.11	28.22	1.8/1.6
S-3	03/30/1999	2,070	NA	195	10.0	<5.00	48.6	354	64.6	37.33	6.95	30.38	1.3/1.5
S-3	03/31/1999	NA	NA	NA	NA	NA	NA	NA	NA	37.33	7.48	29.85	NA
S-3	06/14/1999	1,250	NA	37.4	17.4	110	109	118	NA	37.33	8.85	28.48	NA
S-3	09/30/1999	8,270	2,020a	226	113	686	1,440	184	NA	37.33	9.66	27.67	3.5/2.8
S-3	12/22/1999	9,530	2,270a	207	132	603	1,450	616	NA	37.33	9.50	27.83	0.98/0.8
S-3	03/09/2000	2,290d	1,600a	84.5d	17.0d	104d	105d	29.3d	NA	37.30	6.25	31.05	1.0/1.4
S-3	06/20/2000	5,570	2,900a	117	41.6	395	393	354	NA	37.30	9.67	27.63	1.8/2.0
S-3	09/05/2000	6,930	1,600a	127	85.5	354	535	509	NA	37.30	9.49	27.81	1.1/1.9
S-3	12/04/2000	8,390	1,460a	217	82.4	471	952	436	NA	37.30	9.23	28.07	1.1/1.5
S-3	12/12/2000	NA	NA	NA	NA	NA	NA	NA	NA	37.30	9.23	28.07	NA
S-3	03/08/2001	19,400	1,720a	465	772	1,230	3,830	160	NA	37.30	8.17	29.13	1.1f
S-3	06/07/2001	12,000	1,400	230	110	900	1,100	120	NA	37.30	8.78	28.52	0.8/0.9
S-3	09/13/2001	32,000	<2,000	400	880	2,000	7,000	NA	<100	37.30	9.93	27.37	3.7/2.9
S-3	11/19/2001	26,000	<2,000	160	210	990	4,100	NA	<50	37.30	9.33	27.97	2.9/1.9

S-4	03/29/2000	NA	NA	NA	NA	NA	NA	NA	NA	39.06	8.37	30.69	NA
S-4	03/31/2000	20,900	5,780a	4,570	272	595	997	4,490	4,450c	39.06	8.92	30.14	1.8/1.2
S-4	06/20/2000	19,500	244a	4,590	309	723	1,290	3,740	NA	39.06	8.77	30.29	2.7/2.9
S-4	09/05/2000	5,760	1,670a	841	54.2	162	115	1,040	NA	39.06	10.57	28.49	1.3/0.3
S-4	12/04/2000	3,990	1,050a	949	<10.0	118	48.3	1,120	NA	39.06	10.67	28.39	1.1/1.0
S-4	12/12/2000	NA	NA	NA	NA	NA	NA	NA	NA	39.06	10.64	28.42	NA



**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**4411 Foothill Boulevard**  
**Oakland, CA**  
**Wic #204-5508-3400**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOB (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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S-4	03/08/2001	20,100	5,840a	5,210	105	381	281	2,520	NA	39.06	8.44	30.62	1.0/0.9
S-4	06/07/2001	11,000	3,500	2,500	86	370	170	2,000	NA	39.06	10.57	28.49	0.7/0.6
S-4	09/13/2001	4,200	<800	790	14	110	48	NA	690	39.06	11.27	27.79	3.8/3.9
S-4	11/19/2001	2,300	<600	230	4.1	21	22	NA	590	39.06	10.83	28.23	3.6/1.6

BW-A	09/30/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.55	NA	2.3
BW-A	12/22/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.52	NA	2.2
BW-A	03/09/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.99	NA	1.5
BW-A	06/20/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.69	NA	2.4
BW-A	09/05/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.43	NA	1.0
BW-A	12/04/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.96	NA	1.3
BW-A	12/12/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.71	NA	NA
BW-A	03/08/2001	<2,500	1,370a	46.6	<25.0	<25.0	<25.0	10,600	11,700	NA	6.38	NA	0.9/1.4
BW-A	06/07/2001	1,100	960	<10	<10	<10	17	7,200	NA	NA	9.82	NA	3.6/0.8
BW-A	09/13/2001	<2,000	460	<20	<20	<20	<50	NA	13,000	NA	10.49	NA	3.3/1.7
BW-A	11/19/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.89	NA	NA

**WELL CONCENTRATIONS**  
**Shell-branded Service Station**  
**4411 Foothill Boulevard**  
**Oakland, CA**  
**Wic #204-5508-3400**

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOB (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 September 13, 2001 analyzed by EPA Method 8015.

TEPH = Total petroleum hydrocarbons as diesel by modified EPA Method 8015.

BTEX = benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to September 13, 2001 analyzed by EPA Method 8020.

MTBE = methyl-tertiary-butyl ether

TOB = Top of Box Elevation

GW = Groundwater

DO = Dissolved Oxygen

ug/L = parts per billion

ppm = parts per million

msl = Mean sea level

ft = Feet

<n = Below detection limit

D = Duplicate sample

n/n = Pre-purge / Post-purge

NA = Not applicable

Notes:

a = Chromatogram pattern indicates an unidentified hydrocarbon.

b = National Environmental Testing, Inc. (NET), analyzed within hold time but further dilutions were required and analyzed out of hold time.

NET suggests that these should be considered minimum concentrations.

c = Sample analyzed outside the EPA recommended holding times.

d = Result reported was generated out of hold time.

e = Post-purge DO reading.

f = Pre-purge DO reading.

Wells S-1 through S-4 surveyed February 3, 2000 by Virgil Chavez Land Surveying of Vallejo, California.



Report Number : 23440

Date : 11/30/2001

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

Subject : 4 Water Samples  
Project Name : 4411 Foothill Boulevard, Oakland  
Project Number : 011119-MN1  
P.O. Number : 98995746

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,

A handwritten signature in black ink that reads "Joel Kiff". The signature is written in a cursive style with a large initial "J".

Joel Kiff



Report Number : 23440

Date : 11/30/2001

Subject : 4 Water Samples  
Project Name : 4411 Foothill Boulevard, Oakland  
Project Number : 011119-MN1  
P.O. Number : 98995746

## Case Narrative

The Method Reporting Limit for TPH as Diesel has been increased due to interference from Gasoline-Range Hydrocarbons for the following samples :

S-1  
S-3  
S-4

Approved By:  Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 916-297-4800



Report Number : 23440

Date : 11/30/2001

Project Name : 4411 Foothill Boulevard, Oakland

Project Number : 011119-MN1

Sample : S-1

Matrix : Water

Lab Number : 23440-01

Sample Date :11/19/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	14	0.50	ug/L	EPA 8260B	11/20/2001
Toluene	42	0.50	ug/L	EPA 8260B	11/20/2001
Ethylbenzene	110	0.50	ug/L	EPA 8260B	11/20/2001
Total Xylenes	260	0.50	ug/L	EPA 8260B	11/20/2001
Methyl-t-butyl ether (MTBE)	27	5.0	ug/L	EPA 8260B	11/20/2001
TPH as Gasoline	1400	50	ug/L	EPA 8260B	11/20/2001
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	11/20/2001
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	11/20/2001
TPH as Diesel	< 300	300	ug/L	M EPA 8015	11/27/2001

Approved By:  Joel Kiff



Report Number : 23440

Date : 11/30/2001

Project Name : **4411 Foothill Boulevard, Oakland**

Project Number : **011119-MN1**

Sample : **S-2**

Matrix : Water

Lab Number : 23440-02

Sample Date :11/19/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	<b>71</b>	10	ug/L	EPA 8260B	11/28/2001
<b>Toluene</b>	<b>27</b>	10	ug/L	EPA 8260B	11/28/2001
<b>Ethylbenzene</b>	<b>86</b>	10	ug/L	EPA 8260B	11/28/2001
<b>Total Xylenes</b>	<b>330</b>	10	ug/L	EPA 8260B	11/28/2001
<b>Methyl-t-butyl ether (MTBE)</b>	<b>7500</b>	100	ug/L	EPA 8260B	11/28/2001
<b>TPH as Gasoline</b>	<b>15000</b>	1000	ug/L	EPA 8260B	11/28/2001
Toluene - d8 (Surr)	98.5		% Recovery	EPA 8260B	11/28/2001
4-Bromofluorobenzene (Surr)	115		% Recovery	EPA 8260B	11/28/2001
<b>TPH as Diesel</b>	<b>8700</b>	50	ug/L	M EPA 8015	11/27/2001

Approved By:  Joel Kiff



Report Number : 23440

Date : 11/30/2001

Project Name : 4411 Foothill Boulevard, Oakland

Project Number : 011119-MN1

Sample : S-3

Matrix : Water

Lab Number : 23440-03

Sample Date : 11/19/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	160	5.0	ug/L	EPA 8260B	11/27/2001
Toluene	210	5.0	ug/L	EPA 8260B	11/27/2001
Ethylbenzene	990	5.0	ug/L	EPA 8260B	11/27/2001
Total Xylenes	4100	5.0	ug/L	EPA 8260B	11/27/2001
Methyl-t-butyl ether (MTBE)	< 50	50	ug/L	EPA 8260B	11/27/2001
TPH as Gasoline	26000	500	ug/L	EPA 8260B	11/27/2001
Toluene - d8 (Surr)	96.2		% Recovery	EPA 8260B	11/27/2001
4-Bromofluorobenzene (Surr)	110		% Recovery	EPA 8260B	11/27/2001
TPH as Diesel	< 2000	2000	ug/L	M EPA 8015	11/27/2001

Approved By:  Joel Kiff



Report Number : 23440

Date : 11/30/2001

Project Name : 4411 Foothill Boulevard, Oakland

Project Number : 011119-MN1

Sample : S-4

Matrix : Water

Lab Number : 23440-04

Sample Date :11/19/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	<b>230</b>	2.0	ug/L	EPA 8260B	11/26/2001
<b>Toluene</b>	<b>4.1</b>	2.0	ug/L	EPA 8260B	11/26/2001
<b>Ethylbenzene</b>	<b>21</b>	2.0	ug/L	EPA 8260B	11/26/2001
<b>Total Xylenes</b>	<b>22</b>	2.0	ug/L	EPA 8260B	11/26/2001
<b>Methyl-t-butyl ether (MTBE)</b>	<b>590</b>	20	ug/L	EPA 8260B	11/26/2001
<b>TPH as Gasoline</b>	<b>2300</b>	200	ug/L	EPA 8260B	11/26/2001
Toluene - d8 (Surr)	97.9		% Recovery	EPA 8260B	11/26/2001
4-Bromofluorobenzene (Surr)	109		% Recovery	EPA 8260B	11/26/2001
<b>TPH as Diesel</b>	<b>&lt; 600</b>	600	ug/L	M EPA 8015	11/27/2001

Approved By:  Joel Kiff



Report Number : 23440

Date : 11/30/2001

Project Name : **4411 Foothill Boulevard,**

Project Number : **011119-MN1**

23440 Quality Control Data - Method Blank

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>TPH as Diesel</b>	<b>&lt; 50</b>	50	ug/L	M EPA 8015	11/26/2001

Approved By:  Joel Kiff

Report Number : 23440

Date : 11/30/2001

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Project Name : **4411 Foothill Boulevard,**

Project Number : **011119-MN1**

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 Recov. Limit	Relative Percent Diff. Limit
Spike Recovery Data														
TPH as Diesel	Blank	<50	1000	1000	923	923	ug/L	M EPA 8015	11/26/2009	92.3	92.3	0.00	70-130	25

KIFF ANALYTICAL, LLC

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

Approved By: Joel Kiff

Report Number : 23440

Date : 11/30/2001

Project Name : **4411 Foothill Boulevard,**

Project Number : **011119-MN1**

23440 Quality Control Data - Method Blank

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	< 0.50	0.50	ug/L	EPA 8260B	11/21/2001
<b>Toluene</b>	< 0.50	0.50	ug/L	EPA 8260B	11/21/2001
<b>Ethylbenzene</b>	< 0.50	0.50	ug/L	EPA 8260B	11/21/2001
<b>Total Xylenes</b>	< 0.50	0.50	ug/L	EPA 8260B	11/21/2001
<b>Methyl-t-butyl ether (MTBE)</b>	< 5.0	5.0	ug/L	EPA 8260B	11/21/2001
<b>TPH as Gasoline</b>	< 50	50	ug/L	EPA 8260B	11/21/2001
Toluene - d8 (Surr)	106		% Recovery	EPA 8260B	11/21/2001
4-Bromofluorobenzene (Surr)	108		% Recovery	EPA 8260B	11/21/2001

Approved By:  Joel Kiff

Report Number : 23440

Date : 11/30/2001

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : 4411 Foothill Boulevard,

Project Number : 011119-MN1

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	23456-03	<0.50	19.3	19.1	19.0	18.7	ug/L	EPA 8260B	11/20/200	98.3	98.0	0.229	70-130	25
Toluene	23456-03	<0.50	19.3	19.1	17.5	17.5	ug/L	EPA 8260B	11/20/200	90.8	91.9	1.20	70-130	25
Tert-Butanol	23456-03	2200	96.6	95.3	2100	2060	ug/L	EPA 8260B	11/20/200	0.00	0.00	0.00	70-130	25
Methyl-t-Butyl Ether	23456-03	<0.50	19.3	19.1	20.4	21.2	ug/L	EPA 8260B	11/20/200	106	112	5.25	70-130	25

KIFF ANALYTICAL, LLC

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

Approved By:  Joel Kiff

Report Number : 23440

Date : 11/30/2001

QC Report : Laboratory Control Sample (LCS)

Project Name : 4411 Foothill Boulevard,

Project Number : 011119-MN1

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	11/20/200	93.6	70-130
Toluene	40.0	ug/L	EPA 8260B	11/20/200	96.1	70-130
Tert-Butanol	200	ug/L	EPA 8260B	11/20/200	84.1	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	11/20/200	99.9	70-130

KIFF ANALYTICAL, LLC

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

Approved By:   
Joel Kiff

Report Number : 23440

Date : 11/30/2001

Project Name : **4411 Foothill Boulevard,**

Project Number : **011119-MN1**

23440 Quality Control Data - Method Blank

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
<b>Benzene</b>	< 0.50	0.50	ug/L	EPA 8260B	11/20/2001
<b>Toluene</b>	< 0.50	0.50	ug/L	EPA 8260B	11/20/2001
<b>Ethylbenzene</b>	< 0.50	0.50	ug/L	EPA 8260B	11/20/2001
<b>Total Xylenes</b>	< 0.50	0.50	ug/L	EPA 8260B	11/20/2001
<b>Methyl-t-butyl ether (MTBE)</b>	< 5.0	5.0	ug/L	EPA 8260B	11/20/2001
<b>TPH as Gasoline</b>	< 50	50	ug/L	EPA 8260B	11/20/2001
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	11/20/2001
4-Bromofluorobenzene (Surr)	99.3		% Recovery	EPA 8260B	11/20/2001

Approved By:  Joel Kiff

Report Number : 23440

Date : 11/30/2001

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Project Name : **4411 Foothill Boulevard,**

Project Number : **011119-MN1**

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	23454-01	<0.50	40.0	40.0	38.4	35.0	ug/L	EPA 8260B	11/20/200	96.0	87.6	9.20	70-130	25
Toluene	23454-01	<0.50	40.0	40.0	34.0	28.4	ug/L	EPA 8260B	11/20/200	85.0	71.0	17.8	70-130	25
Tert-Butanol	23454-01	<5.0	200	200	191	196	ug/L	EPA 8260B	11/20/200	95.4	97.8	2.50	70-130	25
Methyl-t-Butyl Ether	23454-01	<0.50	40.0	40.0	42.8	42.5	ug/L	EPA 8260B	11/20/200	107	106	0.797	70-130	25

KIFF ANALYTICAL, LLC

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

Approved By:  Joel Kiff

Report Number : 23440

Date : 11/30/2001

QC Report : Laboratory Control Sample (LCS)

Project Name : 4411 Foothill Boulevard,

Project Number : 011119-MN1

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	11/20/200	98.8	70-130
Toluene	40.0	ug/L	EPA 8260B	11/20/200	99.9	70-130
Tert-Butanol	200	ug/L	EPA 8260B	11/20/200	94.9	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	11/20/200	102	70-130

KIFF ANALYTICAL, LLC

Approved By:  Joel Kiff

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





**Sequoia  
Analytical**

---

1455 McDowell Blvd. North, Ste. D  
Petaluma, CA 94954  
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FAX (707) 792-0342  
[www.sequoialabs.com](http://www.sequoialabs.com)

November 28 , 2001

Joel Kiff  
Kiff Analytical  
720 Olive Drive, Suite D  
Davis, CA 95616  
RE: General / P111426

Enclosed are the results of analyses for samples received by the laboratory on 11/19/01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Angelee Cari".

Angelee Cari  
Client Services Representative

CA ELAP Certificate Number 2374



**Sequoia  
Analytical**

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

Project: General  
Project Number: 011119-MN1/4411 Foothill Blvd., Oakland  
Project Manager: Joel Kiff

Reported:  
11/28/01 11:53

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-1	P111426-01	Water	11/19/01 07:46	11/19/01 13:30
S-2	P111426-02	Water	11/19/01 08:35	11/19/01 13:30
S-3	P111426-03	Water	11/19/01 09:00	11/19/01 13:30
S-4	P111426-04	Water	11/19/01 08:11	11/19/01 13:30



# Sequoia Analytical

Kiff Analytical 720 Olive Drive, Suite D Davis CA, 95616	Project: General Project Number: 011119-MN1/4411 Foothill Blvd., Oakland Project Manager: Joel Kiff	Reported: 11/28/01 11:53
--	---	-----------------------------

## Conventional Chemistry Parameters by APHA/EPA Methods Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>S-1 (P111426-01) Water Sampled: 11/19/01 07:46 Received: 11/19/01 13:30</b>									
Ferrous Iron	ND	250	ug/l	2.5	1110552	11/19/01	11/19/01	SM 3500 Fe D#4	R-01
<b>S-2 (P111426-02) Water Sampled: 11/19/01 08:35 Received: 11/19/01 13:30</b>									
Ferrous Iron	ND	250	ug/l	2.5	1110552	11/19/01	11/19/01	SM 3500 Fe D#4	R-01
<b>S-3 (P111426-03) Water Sampled: 11/19/01 09:00 Received: 11/19/01 13:30</b>									
Ferrous Iron	2100	100	ug/l	1	1110552	11/19/01	11/19/01	SM 3500 Fe D#4	
<b>S-4 (P111426-04) Water Sampled: 11/19/01 08:11 Received: 11/19/01 13:30</b>									
Ferrous Iron	2700	100	ug/l	1	1110552	11/19/01	11/19/01	SM 3500 Fe D#4	



# Sequoia Analytical

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Kiff Analytical 720 Olive Drive, Suite D Davis CA, 95616	Project: General Project Number: 011119-MN1/4411 Foothill Blvd., Oakland Project Manager: Joel Kiff	Reported: 11/28/01 11:53
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## Anions by EPA Method 300.0 Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>S-1 (P111426-01) Water</b> Sampled: 11/19/01 07:46 Received: 11/19/01 13:30									
Nitrate as N	260	200	ug/l	1	1110501	11/19/01	11/19/01	EPA 300.0	
Sulfate as SO4	16000	1000	"	"	"	"	"	"	
<b>S-2 (P111426-02) Water</b> Sampled: 11/19/01 08:35 Received: 11/19/01 13:30									
Nitrate as N	ND	200	ug/l	1	1110501	11/19/01	11/19/01	EPA 300.0	
Sulfate as SO4	12000	1000	"	"	"	"	"	"	
<b>S-3 (P111426-03) Water</b> Sampled: 11/19/01 09:00 Received: 11/19/01 13:30									
Nitrate as N	ND	200	ug/l	1	1110501	11/19/01	11/19/01	EPA 300.0	
Sulfate as SO4	ND	1000	"	"	"	"	"	"	
<b>S-4 (P111426-04) Water</b> Sampled: 11/19/01 08:11 Received: 11/19/01 13:30									
Nitrate as N	ND	200	ug/l	1	1110501	11/19/01	11/19/01	EPA 300.0	
Sulfate as SO4	13000	1000	"	"	"	"	"	"	



# Sequoia Analytical

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<b>Kiff Analytical</b> 720 Olive Drive, Suite D Davis CA, 95616	<b>Project: General</b> Project Number: 011119-MN1/4411 Foothill Blvd., Oakland Project Manager: Joel Kiff	<b>Reported:</b> 11/28/01 11:53
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## Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	REC Limit	RPD	RPD Limit	Notes
<b>Batch 1110552 - General Preparation</b>										
<b>Blank (1110552-BLK1)</b> Prepared & Analyzed: 11/19/01										
Ferrous Iron	ND	100	ug/l							
<b>LCS (1110552-BS1)</b> Prepared & Analyzed: 11/19/01										
Ferrous Iron	882	100	ug/l	800		110	80-120			
<b>Matrix Spike (1110552-MS1)</b> Source: P111426-01 Prepared & Analyzed: 11/19/01										
Ferrous Iron	1960	100	ug/l	2000	ND	98.0	75-125			
<b>Matrix Spike Dup (1110552-MSD1)</b> Source: P111426-01 Prepared & Analyzed: 11/19/01										
Ferrous Iron	1880	100	ug/l	2000	ND	94.0	75-125	4.17	20	



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

Project: General  
 Project Number: 011119-MN1/4411 Foothill Blvd., Oakland  
 Project Manager: Joel Kiff

Reported:  
 11/28/01 11:53

## Anions by EPA Method 300.0 - Quality Control Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
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### Batch 1110501 - General Preparation

#### Blank (1110501-BLK1)

Prepared & Analyzed: 11/19/01

Nitrate as N	ND	200	ug/l							
Sulfate as SO4	ND	1000	"							

#### LCS (1110501-BS1)

Prepared & Analyzed: 11/19/01

Nitrate as N	10500	200	ug/l	10000		105	90-110			
Sulfate as SO4	10900	1000	"	10000		109	90-110			

#### Matrix Spike (1110501-MS1)

Source: P111426-01

Prepared & Analyzed: 11/19/01

Nitrate as N	10500	400	ug/l	10000	ND	102	80-120			
Sulfate as SO4	26700	2000	"	10000	16000	107	80-120			

#### Matrix Spike Dup (1110501-MSD1)

Source: P111426-01

Prepared & Analyzed: 11/19/01

Nitrate as N	10500	400	ug/l	10000	ND	106	80-120	3.74	20	
Sulfate as SO4	28700	2000	"	10000	16000	127	80-120	7.22	20	QM-07



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

Project: General  
Project Number: 011119-MN1/4411 Foothill Blvd., Oakland  
Project Manager: Joel Kiff

Reported:  
11/28/01 11:53

#### Notes and Definitions

- QM-07 The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.
- 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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 Davis, CA 95616  
 Lab: 530.297.4800  
 Fax: 530.297.4803

Lab No. \_\_\_\_\_ Page \_\_\_\_\_ of \_\_\_\_\_

NO. 718 P. 9/9

## Chain-of-Custody Record and Analysis Request

Project Manager: <b>Joel KIFF</b>		Phone No.:	
Company/Address:		FAX No.:	
Project Number: <b>61119-MNL</b>	P.O. No.:	Email Address:	
<b>23440</b>		<input type="checkbox"/> .pdf <input type="checkbox"/> .xls <input type="checkbox"/> .doc <input type="checkbox"/> other	
Project Name/Location: <b>4411 Foot Hill Boulevard</b>		Sampler Signature:	
<i>on Road</i>			

Sample Designation	Sampling		Container (Type/Amount)				Method Preserved				Matrix	Analysis Request												TAT	For Lab Use Only						
	Date	Time	40 ml VOA	SLEEVE	Pail/L	Amber	HCl	HNO <sub>3</sub>	ICE	NONE	WATER/SOIL	BTEX (8021B)	BTEX/TPH Gas/MTBE (8021B/MB015)	TPH as Diesel (MB015)	TPH as Motor Oil (MB015)	TPH Gas/BTEX/MTBE (8280B)	5 Oxygenates/TPH Gas/BTEX (8280B)	7 Oxygenates/TPH Gas/BTEX (8280B)	9 Oxygenates (8280B)	7 Oxygenates (8280B)	Lead Scav. (1,2 DCA & 1,2 EDB - 8280B)	EPA 8260B (Full List)	Volatile Halocarbons (EPA 8260B)	Lead (7421/238,2)	TOTAL (X) W.E.T. (X)	12 hr/24 hr/48 hr/72 hr/1 wk (1 wk only)					
S-1	11/9/01	746		X	X																										
S-2		835		X	X																										
S-3		900		X	X																										
S-4		811		X	X																										
COOLER CUSTODY SEALS INTACT			<input type="checkbox"/>																												
NOT INTACT			<input type="checkbox"/>																												
COOLER TEMPERATURE			9.9 °C																												

Relinquished by: <i>David Benson</i>	Date: <b>11/01/01</b>	Time: <b>12:30</b>	Received by: <i>Neil Linneman</i>
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by Laboratory:

Remarks:

Bill to:



LAB: KIFF

# EQUIVA Services LLC Chain Of Custody Record

Lab Identification (if necessary):

Address:

City, State, Zip:

**Equiva Project Manager to be invoiced:**  
**Karen Petryna**  
23440

SCIENCE & ENGINEERING  
 TECHNICAL SERVICES  
 CRMT HOUSTON

INCIDENT NUMBER (SEE ONLY)  
**9 8 9 9 5 7 4 6**

SAP CRMT NUMBER (SEE CRMT)

DATE: 11/24/01  
 PAGE: 1 of 1

SAMPLING COMPANY: <b>Blaine Tech Services</b>		LOG CODE: <b>BTSS</b>	SITE ADDRESS (Street and City): <b>4411 Foothill Boulevard, Oakland</b>		GLOBAL ID NO.: <b>T0600101065</b>
ADDRESS: <b>1680 Rogers Avenue, San Jose, CA 95112</b>			EDF DELIVERABLE TO (Responsible Party or Designer): <b>Anni Kreaml</b>	PHONE NO.: <b>510-420-3335</b>	CONSULTANT PROJECT NO.: <b>BTS# 01119-MN1</b>
PROJECT CONTACT (Hardcopy or PDF Report to): <b>Nick Sudano</b>			SAMPLER NAME(S) (Print): <b>Michael Ninkata</b>		LAB USE ONLY
TELEPHONE: <b>408-673-0655</b>	FAX: <b>408-673-7771</b>	EMAIL: <b>nsudano@blainetech.com</b>			

TURNDOWN 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°

*fax copy of COC to Nick Sudano upon arrival to Lab.*

## REQUESTED ANALYSIS

Field Sample Identification	SAMPLING		MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	1,2-DCA (8260B)	EDB (8260B)	TPH - Diesel, Extractable (8015m)	Nitrate	Sulfate	Ferrous Iron	MTBE (8260B) Confirmation, See Note	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
	DATE	TIME																	
S1	11/24	7:46	W	7	X	X	X							X	X	X	X		
S2		8:55			X	X	X							X	X	X	X		01
S3		9:00			X	X	X							X	X	X	X		02
S4		8:11			X	X	X							X	X	X	X		03
																			04

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: <u>11/24/01</u>	Time: <u>1203</u>
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) <i>David Bunn KIFF</i>	Date: <u>11/29/01</u>	Time: <u>1203</u>

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

# WELL GAUGING DATA

Project # 011119-MAL1

Date 6/19/01

Client Equiva

Site 4411 Football Blvd, Oakland 98995266

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: <u>POB</u> or TOC	
1 * S-1	4					9.87	24.58	}	ORC
3 * S-2	4					9.90	22.34		ORC
4 S-3	4					9.33	20.47		OR
2 S-4	4					10.83	20.19		
BSW-A	4					9.89	12.40		ORC
	*	Gauged w/ ORC in well							
	**	Gauged w/ Stinger in well							

## EQUIVA WELL MONITORING DATA SHEET

BTS #: 01119-MA11	Site: 98775266
Sampler: Molec W	Date: 4/19/01
Well I.D.: 8-1	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 24.58	Depth to Water: 7.87
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC <u>Grade</u>	D.O. Meter (if req'd): <u>YSI</u> HACH

**Purge Method:**

- |  |  |
|--|--|
| <input type="checkbox"/> Bailer<br><input type="checkbox"/> Disposable Bailer<br><input type="checkbox"/> Middleburg<br><input checked="" type="checkbox"/> Electric Submersible | <input type="checkbox"/> Waterra<br><input type="checkbox"/> Peristaltic<br><input type="checkbox"/> Extraction Pump<br><input type="checkbox"/> Other _____ |
|--|--|

**Sampling Method:**

- Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 Other: \_\_\_\_\_

9.5 (Gals.) X 3 = 28.5 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 <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
737	66.6	8.1	961	132	2.5	cloudy
939	66.7	8.9	922	74	19.0	Less Cloudy
741	67.4	8.9	913	51	28.5	"

Did well dewater? Yes   No      Gallons actually evacuated: 28.5

Sampling Time: 746      Sampling Date: 4/19/01

Sample I.D.: S-1      Laboratory: Sequoia Columbia Other Kiff

Analyzed for: TPH-G BTEX MTBE TPH-D Other: Nitrate, Sulfate, Ferrous, Iron

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: 7.7 mg/L      Post-purge: 7.3 mg/L

O.R.P. (if req'd): Pre-purge: 165 mV      Post-purge: 15 mV

## EQUIVA WELL MONITORING DATA SHEET

BTS #: 01119-MNI	Site: 9895286
Sampler: <i>Mulce A1</i>	Date: 4/19/07
Well I.D.: S-2	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 2234	Depth to Water: 9.90
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC <u>Grade</u>	D.O. Meter (if req'd): <u>YSI</u> HACH

Purge Method:

- |  |  |
|--|--|
| <input type="checkbox"/> Bailer<br><input type="checkbox"/> Disposable Bailer<br><input type="checkbox"/> Middleburg<br><input checked="" type="checkbox"/> Electric Submersible | <input type="checkbox"/> Waterra<br><input type="checkbox"/> Peristaltic<br><input type="checkbox"/> Extraction Pump<br><input type="checkbox"/> Other _____ |
|--|--|

Sampling Method:

- |   |              |
|---|--------------|
| <input checked="" type="checkbox"/> Bailer<br><input type="checkbox"/> Disposable Bailer<br><input type="checkbox"/> Extraction Port<br><input type="checkbox"/> Dedicated Tubing | Other: _____ |
|---|--------------|

8.1	(Gals.) X	3	=	24.3	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 <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
823	69.1	7.0	1280	7250	8.1	orange color, light sheen, odor
825	71.0	7.0	1217	91	16.2	less orange "
830	71.1	7.2	1227	111	24.3	" "

Did well dewater? Yes  No  Gallons actually evacuated: 24.3

Sampling Time: 835 Sampling Date: 4/19/07

Sample I.D.: S-2 Laboratory: Sequoia Columbia Other: Kiff

Analyzed for: TPH-G BTEX MTBE TPH-D Other: Nitrate Sulfate, Ferrous, Iron

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: 5.0 mg/L	Post-purge: 3.1 mg/L
O.R.P. (if req'd):	Pre-purge: -28 mV	Post-purge: -74 mV

## EQUIVA WELL MONITORING DATA SHEET

BTS #: 01119-MN1	Site: 98995746
Sampler: Molec w/	Date: 4/19/01
Well I.D.: 8-3	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 20.47	Depth to Water: 9.33
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC <u>Grade</u>	D.O. Meter (if req'd): <u>YSI</u> HACH

Purge Method:

- |  |  |
|--|--|
| <input type="checkbox"/> Bailer<br><input type="checkbox"/> Disposable Bailer<br><input type="checkbox"/> Middleburg<br><input checked="" type="checkbox"/> Electric Submersible | <input type="checkbox"/> Waterra<br><input type="checkbox"/> Peristaltic<br><input type="checkbox"/> Extraction Pump<br><input type="checkbox"/> Other _____ |
|--|--|

Sampling Method:

- |   |                                       |
|---|---------------------------------------|
| <input checked="" type="checkbox"/> Bailer<br><input type="checkbox"/> Disposable Bailer<br><input type="checkbox"/> Extraction Port<br><input type="checkbox"/> Dedicated Tubing | <input type="checkbox"/> Other: _____ |
|---|---------------------------------------|

7.25	(Gals.) X	3	=	21.75	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 <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
850	68.4	6.7	733	37	7.25	Odor, clear
852	69.5	6.6	692	29	14.5	" "
854	69.8	6.6	699	28	21.75	" "

Did well dewater? Yes <input type="checkbox"/> <u>No</u>	Gallons actually evacuated: 21.75	
Sampling Time: 900	Sampling Date: 4/19/01	
Sample I.D.: S-3	Laboratory: Sequoia Columbia Other <u>Kiff</u>	
Analyzed for: <u>TPH-G BTEX MTBE TPH-D</u>	Other: Nitrate, Sulfate, Ferrrous, Iron	
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: <u>2.9</u> mg/L	Post-purge: <u>1.9</u> mg/L
O.R.P. (if req'd):	Pre-purge: <u>-32</u> mV	Post-purge: <u>-28</u> mV

## EQUIVA WELL MONITORING DATA SHEET

BTS #: <u>01119-MNI</u>	Site: <u>98995746</u>
Sampler: <u>Mule W</u>	Date: <u>4/19/01</u>
Well I.D.: <u>8-4</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth: <u>20.19</u>	Depth to Water: <u>10.83</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC <u>Grade</u>	D.O. Meter (if req'd): <u>YSI</u> HACH

Purge Method:

- |  |  |
|--|--|
| <input type="checkbox"/> Bailer<br><input type="checkbox"/> Disposable Bailer<br><input type="checkbox"/> Middleburg<br><input checked="" type="checkbox"/> Electric Submersible | <input type="checkbox"/> Waterra<br><input type="checkbox"/> Peristaltic<br><input type="checkbox"/> Extraction Pump<br><input type="checkbox"/> Other _____ |
|--|--|

Sampling Method:

- Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

Other: \_\_\_\_\_

<u>6.1</u>	(Gals.) X	<u>3</u>	=	<u>18.3</u>	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 <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
803	65.7	6.7	1305	39	6.1	Clear
805	66.9	6.6	1338	36	12.2	"
806	67.5	6.5	1399	42	18.3	4

Did well dewater? Yes (NO) Gallons actually evacuated: 18.3

Sampling Time: 811 Sampling Date: 4/19/01

Sample I.D.: S-4 Laboratory: Sequoia Columbia Other Kiff

Analyzed for: TPH-G BTEX MTBE TPH-D Other: Nitrate Sulfate, Ferrous, Iron

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: <u>3.6</u> mg/L	Post-purge: <u>1.6</u> mg/L	
O.R.P. (if req'd):	Pre-purge: <u>-51</u> mV	Post-purge: <u>-59</u> mV	