CAMBRIA

June 26, 2001

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

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Re: **First Quarter 2001 Monitoring Report and Letter Response**
Shell-branded Service Station
4411 Foothill Boulevard
Oakland, California
Incident #98995746
Cambria Project #243-0897-002

May want to add S-4 to DPE program

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.

FIRST QUARTER 2001 ACTIVITIES

Groundwater Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged and sampled all on-site wells, calculated groundwater elevations, and compiled the gasoline constituents analytical data. Cambria prepared a groundwater elevation contour map (Figure 1) and compiled the bioattenuation parameters data (Table 1). Blaine's report, presenting the laboratory report and supporting field documents, is included as Attachment A.

Joint sampling of the Shell-branded site, the adjacent Chevron site, and the adjacent BP Oil Company site was coordinated with Gettler Ryan Inc. in the first quarter 2001.

RESPONSE TO DECEMBER 11, 2000 AGENCY LETTER

In a letter dated December 11, 2000, the Alameda County Health Care Services Agency requested that we confirm absence of basements in the vicinity, and address the potential for nearby utilities to effect groundwater flow and the fate of contaminants given any preferential groundwater migration.

Oakland, CA
San Ramon, CA
Sonoma, CA

Cambria Environmental Technology, Inc.

1144 65th Street
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Tel (510) 420-0700
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Area Reconnaissance: On March 30, 2000, Cambria performed an area reconnaissance to determine whether or not there are any basements in commercial buildings or residences immediately downgradient of the site. Houses, apartment buildings, backyards, parking lots, supermarkets and gas stations were identified during a walk (Figure 1). Ground-level windows and elevated construction of residences were perceived as possible evidence of basements. The areas designated as gas stations, parking lots, or supermarkets probably do not have basements. Apartment buildings and houses noted in Figure 1 probably contain basements.

Dilution Attenuation Factor (DAF): City utility maps indicate that sanitary sewer and storm drain lines run beneath High Street parallel to the northwest property line. Although the precise location and depth of the lines are unknown, as are the composition and backfill of the piping, Cambria can estimate the mass transport of contaminants of concern within the utility corridors using conservative assumptions about the utility construction and location. For this assessment, we have used a protocol established by the San Francisco Regional Water Quality Control Board for a similar situation at the San Francisco International Airport (SFIA) (staff comments dated July 16, 1998, signed by Mr. Steven Morse, Chief of the Toxics Cleanup Division, addressed to the SFIA Consolidated Tenant Group).

This simplified procedure assumes that utility backfill materials are more permeable than the native soils surrounding the utilities and that the higher-permeability backfill intercepts and then redirects hydrocarbon-impacted groundwater downgradient to a discharge point. The calculations assume that the entire width of the plume is intercepted by the utility and that the impacted groundwater plume will be diluted by recharged clean groundwater in increments equal to the distance it travels within the utility corridor. The protocol developed for SFIA assumes that the DAF is directly proportional to the distance between the downgradient edge of the plume and the discharge point, in increments of the plume width. In other words, if the plume is 100-ft wide across the intercepting trench and the distance to the discharge point is 1,000 ft, the DAF is equal to 10.

The recent average benzene concentration in groundwater from wells S-2, S-3 and C-7 at the northwest side of the site (the closest point at which a utility might be located) is 274 parts per billion (ppb), and the plume width at this point is conservatively estimated at 350 ft. Using this plume characteristic and a distance of 9,400 ft between the downgradient edge of the plume and the closest downgradient discharge point, the San Francisco Bay, the DAF prior to discharge at the San Francisco Bay is 27, producing a final discharge concentration of 10 ppb benzene. This is below the SFIA Order No. 95-136 saltwater ecological protection zone Tier 1 standard of 71 ppb benzene. The estimated discharge concentration of benzene is very conservative given the characteristics of benzene to naturally degrade and to sorb to naturally occurring carbon in soil.

The recent average methyl tert-butyl ether (MTBE) concentration in groundwater from wells S-2, S-3 and C-7 at the northwest side of the site is 5,890 ppb, and the plume width at this point is conservatively estimated at 350 ft. Using this plume characteristic and the same distance of 9,400 ft to the San Francisco Bay, the DAF prior to discharge at the San Francisco Bay is 27, producing a final discharge concentration of 218 ppb. Although no saltwater aquatic maximum contaminant level (MCL) has been established for MTBE, MCLs for chronic exposure would likely be greater than 1,000 ppb. Therefore, these calculations suggest that potential transport of contaminated groundwater through utility backfill would not pose a significant impact to the Bay.

RESPONSE TO APRIL 3, 2001 AGENCY LETTER

The Alameda County Health Care Services Agency (ACHCSA) sent a letter dated April 3, 2001 to Equiva. Presented below are responses to the five comments made by the ACHCSA in the letter. The ACHCSA comments are bolded and italicized.

- ***Please provide an interpretation of the results found from your monitoring events. Significant changes in concentrations are observed, however no explanation is given. What is happening in respect to the MTBE plume? Bio-parameters are being tested during each monitoring event, but no evaluation is being offered. In respect to the dissolved oxygen and oxidation-reduction potential readings, no evaluation regarding the effectiveness or life-span of the ORC socks is mentioned.***

  Concentrations of total petroleum hydrocarbons as gasoline (TPHg) in groundwater have remained relatively stable in wells S-1 and S-2 from 1992 to 1998; however, concentrations in well S-3 during that period have risen from 9,600 ppb to 29,000 ppb. Presently, TPHg is not detected in S-2, and TPHg concentrations in S-1 and S-3 have remained stable. TPHg has been stable in S-4 at approximately 20,000 ppb since the well was first sampled in March 2000.

  Benzene concentrations in groundwater from S-1, S-2 and S-3 have been stable to decreasing from 1992 to 1999. Presently, concentrations of benzene are essentially stable in wells S-1 through S-4.

  Groundwater concentrations of MTBE between 1996 and 1998 have fluctuated up to 6,100 ppb in S-1 and up to 14,300 ppb in S-2. MTBE concentrations in S-3 were stable at concentrations less than 1, 000 ppb. Since 1998, MTBE concentrations decreased to less than 100 ppb in S-1, remained elevated but stable in S-2, and remained stable in S-3.

Bio-attenuation parameters have been measured in groundwater samples to determine the status of and trends in aerobic degradation of the site hydrocarbons in groundwater. In an oxygen-rich environment, dissolved or molecular oxygen serves as an electron receptor during catalysis of hydrocarbons by naturally-occurring micro-organisms (aerobic respiration). In the absence or near absence of dissolved oxygen (DO), other molecules such as nitrate, ferric iron, and sulfate may serve as electron receptors (anaerobic respiration). A more complete discussion of the chemistry involved in biologic degradation of hydrocarbons is given in the American Society for Testing and Materials, *Standard Guide for Remediation of Ground Water by Natural Attenuation at Petroleum Release Sites*, Designation E 1943-98.

In typical reducing environments, an inverse relationship between benzene, toluene, ethylbenzene and xylenes (BTEX) concentrations and concentrations of oxygen, nitrate, and sulfate, and a direct relationship between BTEX and ferrous iron concentrations are expected. The observed relationships between measured BTEX concentrations and the bioparameters is indicated on Table 1. In general, the evidence indicates that biological degradation of BTEX is occurring in groundwater at the site.

Oxygen-releasing compound (ORC) socks are typically effective over a six-month period, although lessened effectiveness toward the end of that period is expected. The ORC socks have been changed in site wells every quarter to maintain a high oxygen-release rate. Graphs of MTBE and benzene concentrations versus time with DO concentrations for wells S-1 through S-4 are shown in figures 2 through 5. The DO released from the ORC socks may be contributing to decreased concentrations of MTBE and benzene in wells S-1, and S-4. However in wells S-2 and S-3, no dissolved-oxygen influence is readily discernable from the fluctuating MTBE and benzene concentrations.

- ***We understand that monthly dual-vacuum extraction will be implemented from well S-2 and well BW-A for a period of six months. Therefore, it is assumed that groundwater will be sampled and tested from BW-A to estimate the amount of TPH and MTBE removed.***

Groundwater has been sampled and tested from BW-A beginning the first quarter 2001. The amount of TPH and MTBE removed will be estimated with subsequent groundwater samples from BW-A

- ***No contour lines are shown for this site on Figure 1, the area's gradient map. Why weren't they shown?***

In the fourth quarter 2000 groundwater elevation map, Cambria chose a groundwater elevation contour interval of five ft to best display the calculated gradient direction across the larger area represented by the sampling points. The groundwater elevations for the

Shell-branded site wells fell between the contour interval chosen. The groundwater gradient direction for the larger area adequately represents the onsite gradient direction. The groundwater elevation map in this report (Figure 1) includes a rose diagram of historical calculated gradient directions.

- ***It was noted that on 12/12/2000, the depth to water measurement was done for a second time that month, just after the 12/4/200 sampling event. What is the reason for this?***

  During the 12/4/2000 quarterly monitoring event, the wells were not gauged with the ORCs in place. When the new ORCs were installed on 12/12/2000, the wells were regauged.

- ***It was also noted that the sample from well S-2 was run for MTBE beyond the acceptable hold time. What is the effect of this in the reported results? How did this happen with this sample and not any other?***

  Due to lab oversight, the sample from well S-2 was run for MTBE beyond the acceptable hold time. This sample may have volatilized more oxygenates than normal, therefore the reported concentration of MTBE may be lower than what was actually in the well at that time.

ANTICIPATED SECOND QUARTER 2001 ACTIVITIES

Groundwater Monitoring: Blaine will gauge and sample all wells and tabulate the data. Cambria will prepare a monitoring report. Cambria will continue to coordinate jointly with adjacent sites.

Dual-Phase Vacuum Extraction (DVE): On April 30, 2001 Advanced Cleanup Technologies Inc. of Benicia, California conducted an eight-hour mobile DVE event at the site using a vacuum truck. 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. Mobile DVE uses a vacuum truck to create the vacuum and contain extracted fluids.

The DVE was performed on well S-2 and tank backfill BW-A. Cambria plans to perform monthly DVE from well S-2 and the horizontal groundwater extraction well from April to September 2001. The next quarterly monitoring report will evaluate and discuss the radius of influence of groundwater and vapor extraction and the DVE program's effectiveness.

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
Staff Geologist

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

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

Figures: 1 - Groundwater Elevation Contour Map
2 - MTBE and Benzene Concentrations vs. Time with D.O. Concentrations – Well S-1
3 - MTBE and Benzene Concentrations vs. Time with D.O. Concentrations – Well S-2
4 - MTBE and Benzene Concentrations vs. Time with D.O. Concentrations – Well S-3
5 - MTBE and Benzene Concentrations vs. Time with D.O. Concentrations – Well S-4

Table: 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

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06/21/01

Groundwater Elevation Contour Map

March 8, 2001

EAST 17TH STREET

BOND STREET

FOOTHILL BOULEVARD

HIGH STREET

backyards (no basement)

vacant lot (no basement)

apartments (basement)

house (basement)

pump islands

Chevron Service Station #9 0076
(1265 Foothill Boulevard)

underground storage tanks

Albertsons Supermarket (no basement)

house - 4326 Bond St. (basement)

Fremont High School

Well	ELEV	Benzene	MTBE
MW-1	30.91	<0.5 - 12/19/96	<10 - 12/19/96
MW-2	30.91	<0.5 - 12/19/96	<10 - 12/19/96
MW-3	29.72*	<0.5	7.7
MW-4	29.07*	<0.5 - 12/19/96	<10 - 12/19/96
MW-5	NA	12,000 - 3/9/00	<5.0 - 3/9/00
MW-6	30.78	<0.5 - 12/19/96	<10 - 12/19/96
MW-7	31.95	1.2 - 12/19/96	<10 - 12/19/96
MW-8	29.77	<0.5 - 12/19/96	<10 - 12/19/96
MW-9	31.52	<0.5 - 12/19/96	<10 - 12/19/96
C-1	30.45*	1,040	1,470
C-2	20.53	3,930	1,660
C-3	20.70	6,873	3,34
C-4	19.87	2,260	718
C-5	20.97	<0.500	5.15
C-6	11.56	228	46.2
C-7	9.76	39.2	10.3
C-8	8.58	<0.500	<2.50
C-9	4.93	<0.500	<2.50
S-1	32.46*	49.6	87.6
S-2	30.21	316	(17,500)
S-3	29.13	465	160
S-4	30.62	5,210	2,520
BW-A	NS	46.6	(11,700)

30.00 25.00 20.00 15.00 10.00 5.00 5.00

0 25 50 100 200
SCALE 1:50 FEET

N

W E

S

Groundwater Gradient Direction
(12/30/98 to 03/08/01)

EXPLANATION

- S-1 — Monitoring well location
- BW-A — Tank backfill well location
- MW-3 — Recovery well
- NA — Not available
- NS — Not surveyed
- * — Data anomalous, not used for contouring
- → — Groundwater flow direction
- XX.XX — Groundwater elevation contour, in feet above mean sea level (msl), approximately located; dashed where inferred

Well
ELEV
Benzene
MTBE

- Well designation
- Groundwater elevation, in feet above msl
- Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8020; MTBE results in parentheses are analyzed by EPA Method 8260

Basement presence based on field observations

FIGURE
1

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

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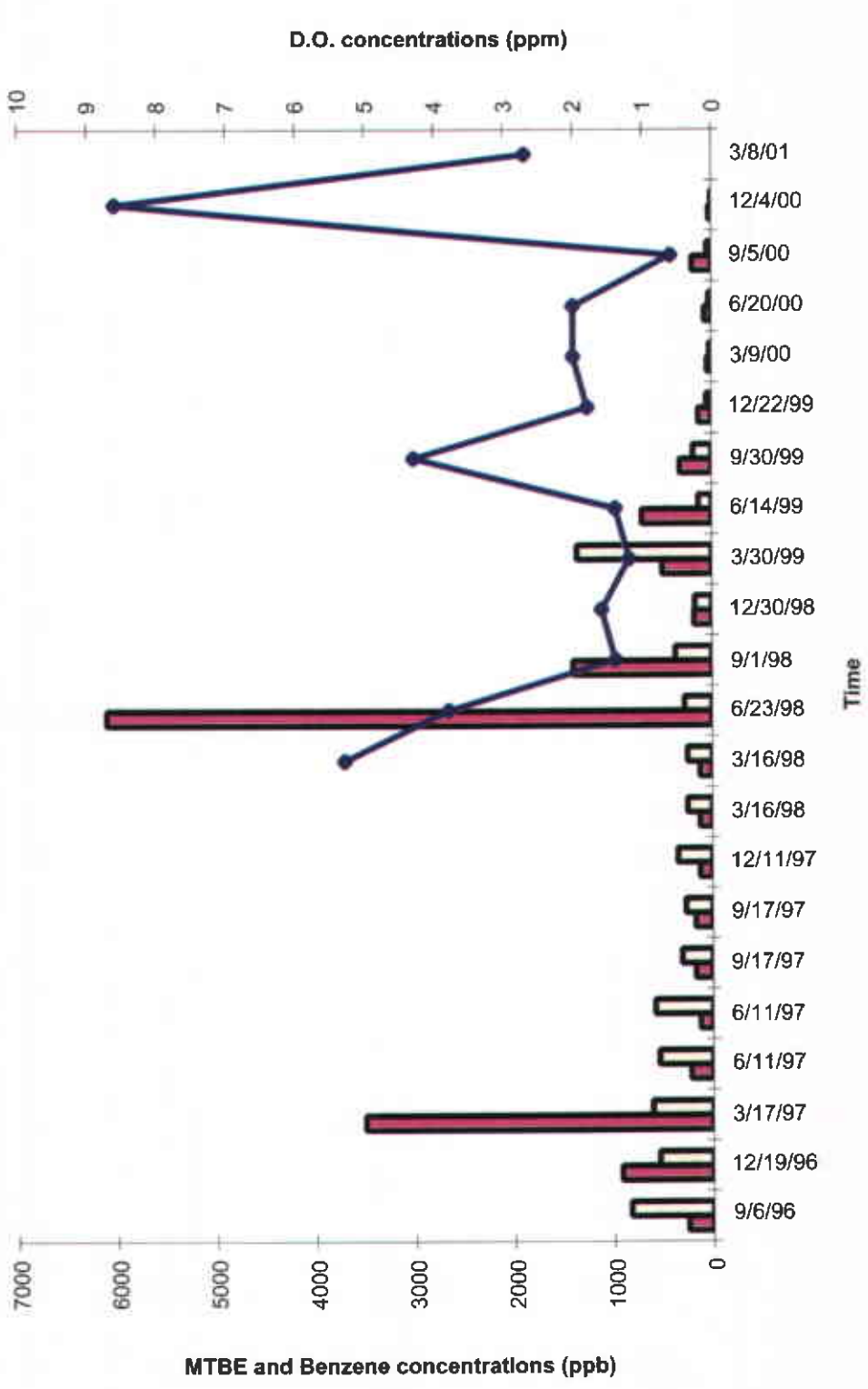
06/21/01



G:\OAKLAND\4411FOOTHILL\FIGURES\1QM01-MTBE1.AI

FIGURE

2

Shell-branded Service Station

4411 Foothill Boulevard

Oakland, California

Incident #98995746

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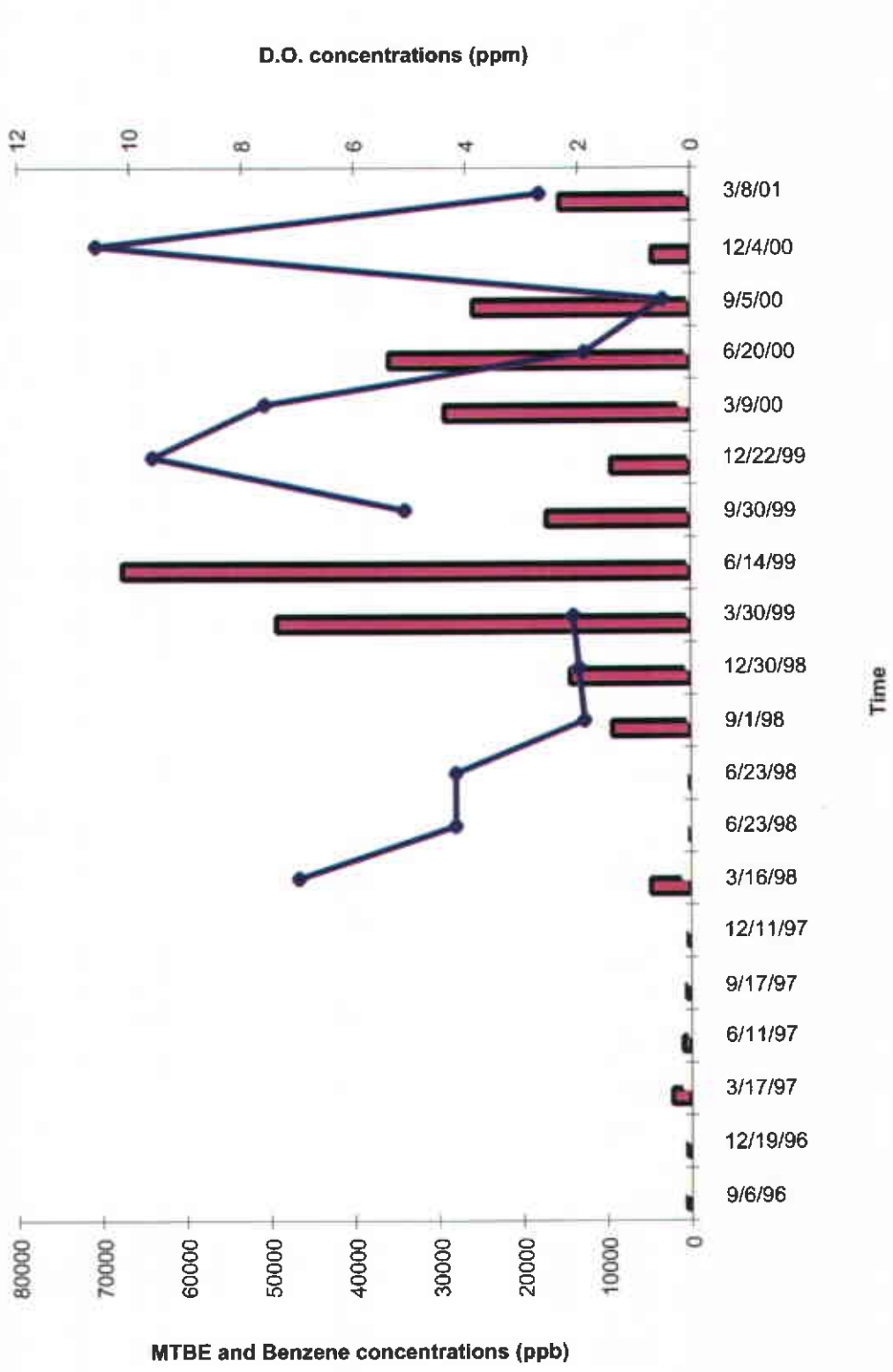
MTBE and Benzene Concentrations vs. Time with D.O. Concentrations

Well S-1

06/21/01



FIGURE

3

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Shell-branded Service Station

4411 Foothill Boulevard
Oakland, California
Incident #98995746

CAMBRIA

MTBE and Benzene Concentrations vs. Time with D.O. Concentrations

Well S-2

06/21/01

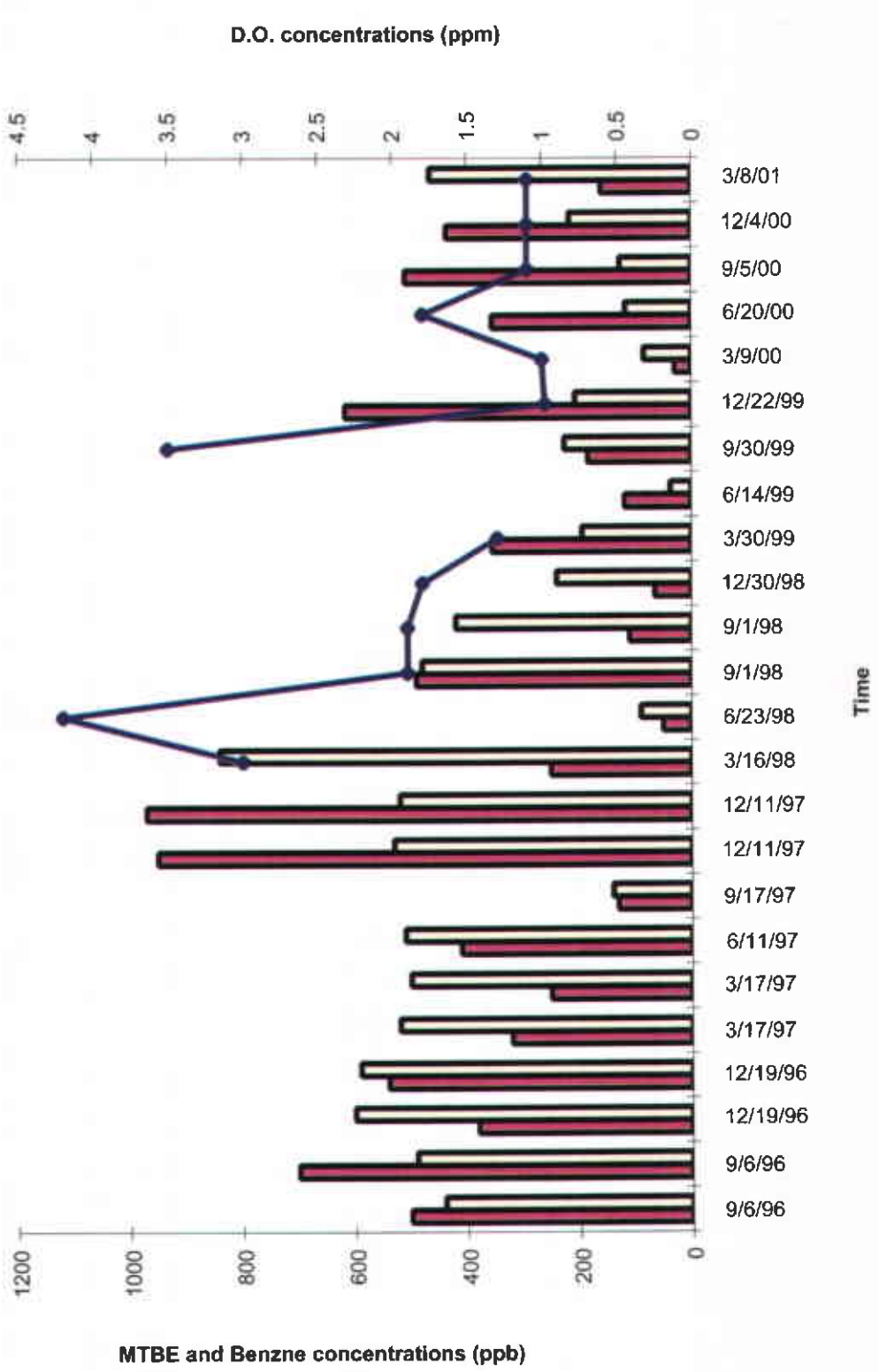

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FIGURE

4

Shell-branded Service Station

4411 Foothill Boulevard

Oakland, California

Incident #98995746

CAMBRIA

MTBE and Benzene Concentrations vs. Time with D.O. Concentrations

Well S-3

06/21/01

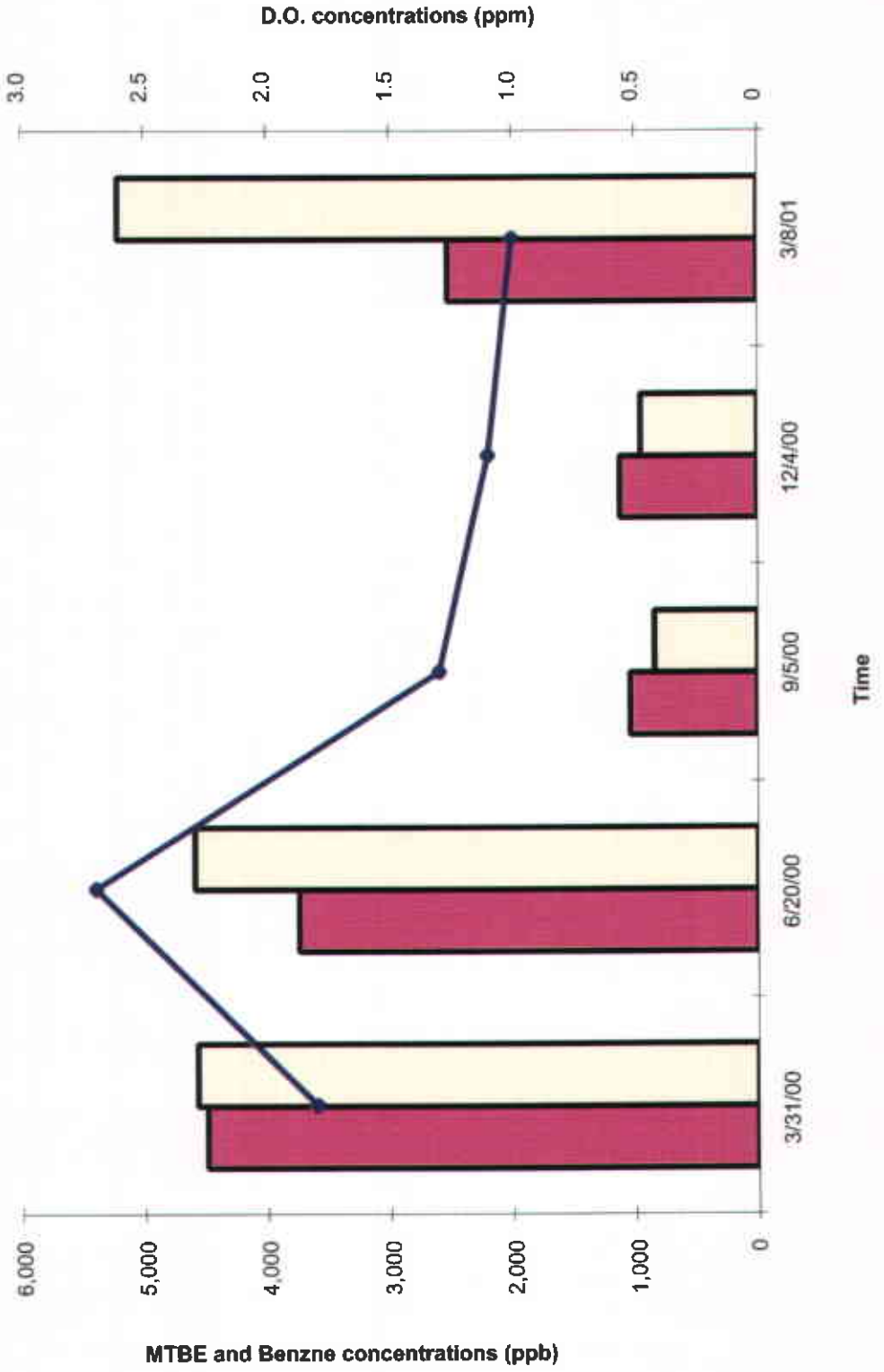

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FIGURE

5

Shell-branded Service Station

4411 Foothill Boulevard

Oakland, California

Incident #98995746

CAMBRIA

MTBE and Benzene Concentrations vs. Time with D.O. Concentrations

Well S-4

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)	TPHg (ppb)	Motor Oil	Ferrous Iron	Nitrate as Nitrogen	Sulfate	DO	ORP (millivolts)	Notes
				← (Concentrations in ppm) →						
S-1	03/16/98	6.00	26,000	---	1.9	<1.0	<1.0	5.3/3.7	158/155	
	06/23/98	6.31	<1,000	---	2.0	<1.0	5.9	3.8/2.4	117/94	
	09/01/98	9.17	26,000	---	4.5	<1.0	12	1.4/2.6	-85/-51	
	12/30/98	8.99	29,900	0.334	4.1	<1.0	6.2	1.6/2.0	-25/-62	
	03/30/99	6.10	14,200	0.279	0.880	0.115	6.10	1.2/1.8	-56/-39	
	06/14/99	7.94	20,200	---	1.30	<1.00	5.70	1.4/2.1	-72/-24	
	09/30/99	10.04	18,300	<0.500	1.20	5.41	<5.00	4.3/2.0	-350/-70	
	12/22/99	9.42	2,450	<0.500	0.0670	<1.00	12.1	1.80/2.30	-49/-142	
	03/09/00	6.21	1,230	---	0.12	<0.10	5.3	2.0/2.9	-81/-190	a
	06/20/00	9.18	755	<0.500	0.451	<1.00	14.8	2.0/2.4	-37/12	
	09/05/00	10.14	2,980	0.546	0.0291	<1.00	9.72	0.6/0.3	35/-70	
	12/04/00	10.10	399	---	0.0257	<1.00	10.2	8.6/9.8	-149/-204	
	03/08/01	**5.84**	**2,940**		**0.559**	**0.52**	**7.91**	**NA/2.7**	**NA/-8**	
S-2	03/16/98	7.97	1,100	---	1.7	<1.0	17	7.0/4.3	147/149	
	06/23/98	8.20	720	---	4.3	<1.0	5.7	4.2/3.8	128/134	
	06/23/98	8.20	810	---	3.7	<1.0	5.4	4.2/3.8	128/134	duplicate
	09/01/98	9.85	<2,000	---	4.1	<1.0	7.8	1.9/1.6	-26/-11	
	12/30/98	9.84	<5,000	---	1.9	<1.0	10	2.0/1.8	-54/-36	
	03/30/99	8.41	<2,000	---	<0.100	<0.100	8.51	2.1/1.8	-10/-08	
	06/14/99	9.80	<1,000	---	1.40	<1.00	5.20	2.4/2.1	-121/-113	
	09/30/99	10.58	678	<0.500	0.260	5.36	14.0	5.1/4.8	-172/-42	
	12/22/99	10.13	316	<0.500	0.0540	<1.00	24.3	9.60/5.20	-90/-46	
	03/09/00	7.88	2,670	---	0.019	<0.10	6.3	7.6/5.0	58/504	
	06/20/00	10.27	<5,000	<0.500	0.499	<1.00	11.6	1.9/2.2	7/21	
	09/05/00	10.19	<5,000	<0.500	0.885	<1.00	9.36	0.5/1.6	-30/-50	
	12/04/00	10.30	<250	---	0.116	<1.00	15.9	10.6/9.4	68/505	
	03/08/01	**8.57**	**<2,500**		**0.267**	**<0.5**	**11.2**	**NA/2.7**	**NA/112**	
S-3	03/16/98	5.75	29,000	---	3.8	<1.0	12	3.0/3.4	153/142	
	06/23/98	5.98	3,800	---	2.0	<1.0	8.9	4.2/2.0	119/121	
	09/01/98	8.98	9,600	---	2.7	<1.0	7.3	1.9/2.8	57/35	
	09/01/98	8.98	9,200	---	2.2	<1.0	7.2	1.9/2.8	57/35	duplicate

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)	TPHg (ppb)	Motor Oil	Ferrous Iron	Nitrate as Nitrogen (Concentrations in ppm)	Sulfate	DO	ORP (millivolts)	Notes
	12/30/98	9.11	7,660	---	5.2	<1.0	5.9	1.8/1.6	75/54	
	03/30/99	6.95	2,070	---	<0.100	0.689	17.5	1.3/1.5	72/61	
	06/14/99	8.85	1,250	---	4.10	<1.00	15.0	1.6/1.2	-118/-108	
	09/30/99	9.66	8,270	<0.500	0.440	5.89	7.69	3.5/2.8	-140/-70	
	12/22/99	9.50	9,530	<0.500	1.30	<1.00	5.65	0.98/0.80	16/-57	
	03/09/00	6.25	2,290	---	0.046	4.9	16	1.0/1.4	-163/-110	a
	06/20/00	9.67	5,570	<0.500	0.639	6.92	19.8	1.8/2.0	-102/-92	
	09/05/00	9.49	6,930	<0.500	2.53	<1.00	5.36	1.1/1.9	-24/-47	
	12/04/00	9.23	8,390	---	2.77	<1.00	<5.00	1.1/15	-175/-159	
	03/08/01	**8.17**	**19,400**		**1.92**	**<0.5**	**5.01**	**1.1/NA**	**-22/-48**	
S-4	03/31/00	8.92	20,900	---	3.23	<1.00	<5.00	1.8/1.2	-25/-37	
	06/20/00	8.77	19,500	<0.500	0.814	<1.00	11.2	2.7/2.9	3/-78	
	09/05/00	10.57	5,760	<0.500	5.62	<1.00	15.9	1.3/0.3	-90/-74	
	12/04/00	10.67	3,990	---	6.47	<1.00	14.1	1.1/1.0	-224/-202	
	03/08/01	**8.44**	**20,100**		**6.58**	**<0.5**	**<5**	**1.0/0.9**	**-103/-99**	
Ideal Aerobic Degradation Relationship:					Direct	Inverse	Inverse	Inverse	Direct	
Observed Relationship:					Inconclusive	Inverse	Moderately inverse	Moderately inverse	Inconclusive	

Abbreviations and Notes:

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
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 nitrate and sulfate by EPA Method 300.0
NA = Not available

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

April 9, 2001

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

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

Monitoring performed on March 8, 2001

Groundwater Monitoring Report **010308-A-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. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. concentrates on objective data collection and does not participate in the interpretation of analytical results, the definition of geological or hydrological conditions, the formulation of recommendations, or the marketing of remedial systems.

Please call if you have any questions.

Yours truly,

Deidre Kerwin
Operations Manager

DK/jt

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

cc: Anni Kreml
Cambria Environmental Technology, Inc.
1144 65th 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	06/2019/95	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
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

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	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-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
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

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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-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	01/19/1900	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

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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
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

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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-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
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**
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**

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Abbreviations:
TPPH = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
TEPH = Total petroleum hydrocarbons as diesel by modified EPA Method 8015
BTEX = benzene, toluene, ethylbenzene, xylenes 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.

Sequoia Analytical

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March 22 , 2001

Nick Sudano
Blaine Tech Services, Inc.
1680 Rogers Ave.
San Jose, CA 95112
RE: Equiva / P103219

Enclosed are the results of analyses for samples received by the laboratory on 03/08/01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Angelee Cari
Client Services Representative

CA ELAP Certificate Number 2374

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Blaine Tech Services, Inc.	Project: Equiva	
1680 Rogers Ave.	Project Number: 4411 Foothill Blvd. Oakland	**Reported:**
San Jose CA, 95112	Project Manager: Nick Sudano	03/22/01 15:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-1	P103219-01	Water	03/08/01 09:40	03/08/01 17:10
S-2	P103219-02	Water	03/08/01 09:03	03/08/01 17:10
S-3	P103219-03	Water	03/08/01 10:48	03/08/01 17:10
S-4	P103219-04	Water	03/08/01 10:10	03/08/01 17:10
BW-A	P103219-05	Water	03/08/01 11:25	03/08/01 17:10

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Blaine Tech Services, Inc.	Project: Equiva	
1680 Rogers Ave.	Project Number: 4411 Foothill Blvd. Oakland	**Reported:**
San Jose CA, 95112	Project Manager: Nick Sudano	03/22/01 15:57

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-1 (P103219-01) Water Sampled: 03/08/01 09:40 Received: 03/08/01 17:10									
Gasoline	**2940**	250	ug/l	5	1030300	03/13/01	03/13/01	EPA 8015M/8020M	
Benzene	**49.6**	2.50	"	"	"	"	"	"	
Toluene	**52.9**	2.50	"	"	"	"	"	"	
Ethylbenzene	**21.8**	2.50	"	"	"	"	"	"	
Xylenes (total)	**749**	2.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**87.6**	12.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*103 %*	*65-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*98.0 %*	*65-135*		"	"	"	"	
S-2 (P103219-02) Water Sampled: 03/08/01 09:03 Received: 03/08/01 17:10									
Gasoline	ND	2500	ug/l	50	1030300	03/13/01	03/13/01	EPA 8015M/8020M	
Benzene	**318**	25.0	"	"	"	"	"	"	
Toluene	**45.7**	25.0	"	"	"	"	"	"	
Ethylbenzene	**53.5**	25.0	"	"	"	"	"	"	
Xylenes (total)	**88.5**	25.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**15500**	125	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*100 %*	*65-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*100 %*	*65-135*		"	"	"	"	
S-3 (P103219-03) Water Sampled: 03/08/01 10:48 Received: 03/08/01 17:10									
Gasoline	**19400**	500	ug/l	10	1030300	03/13/01	03/13/01	EPA 8015M/8020M	
Benzene	**465**	5.00	"	"	"	"	"	"	
Toluene	**772**	5.00	"	"	"	"	"	"	
Ethylbenzene	**1230**	5.00	"	"	"	"	"	"	
Xylenes (total)	**3830**	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	**160**	25.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*109 %*	*65-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96.3 %*	*65-135*		"	"	"	"	

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Blaine Tech Services, Inc.	Project: Equiva	
1680 Rogers Ave.	Project Number: 4411 Foothill Blvd. Oakland	**Reported:**
San Jose CA, 95112	Project Manager: Nick Sudano	03/22/01 15:57

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-4 (P103219-04) Water Sampled: 03/08/01 10:10 Received: 03/08/01 17:10									
Gasoline	**20100**	1000	ug/l	20	1030300	03/13/01	03/13/01	EPA 8015M/8020M	
Benzene	**5210**	10.0	"	"	"	"	"	"	
Toluene	**105**	10.0	"	"	"	"	"	"	
Ethylbenzene	**381**	10.0	"	"	"	"	"	"	
Xylenes (total)	**281**	10.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**2520**	50.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*105 %*	*65-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.7 %*	*65-135*		"	"	"	"	
BW-A (P103219-05) Water Sampled: 03/08/01 11:25 Received: 03/08/01 17:10									
Gasoline	ND	2500	ug/l	50	1030300	03/13/01	03/13/01	EPA 8015M/8020M	
Benzene	**46.6**	25.0	"	"	"	"	"	"	
Toluene	ND	25.0	"	"	"	"	"	"	
Ethylbenzene	ND	25.0	"	"	"	"	"	"	
Xylenes (total)	ND	25.0	"	"	"	"	"	"	
Methyl tert-butyl ether	**10600**	125	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*103 %*	*65-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99.7 %*	*65-135*		"	"	"	"	

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1680 Rogers Ave.	Project Number: 4411 Foothill Blvd. Oakland	**Reported:**
San Jose CA, 95112	Project Manager: Nick Sudano	03/22/01 15:57

Total Petroleum Hydrocarbons as Diesel & others by EPA 8015M

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-1 (P103219-01) Water Sampled: 03/08/01 09:40 Received: 03/08/01 17:10									
Diesel (C10-C24)	**1390**	51.3	ug/l	1	1030285	03/12/01	03/14/01	EPA 8015M-SVOA	HC-12
Surrogate: o-Terphenyl		*102 %*	*50-150*		"	"	"	"	
S-2 (P103219-02) Water Sampled: 03/08/01 09:03 Received: 03/08/01 17:10									
Diesel (C10-C24)	ND	51.3	ug/l	1	1030285	03/12/01	03/14/01	EPA 8015M-SVOA	
Surrogate: o-Terphenyl		*90.6 %*	*50-150*		"	"	"	"	
S-3 (P103219-03) Water Sampled: 03/08/01 10:48 Received: 03/08/01 17:10									
Diesel (C10-C24)	**1720**	51.3	ug/l	1	1030285	03/12/01	03/14/01	EPA 8015M-SVOA	HC-12
Surrogate: o-Terphenyl		*94.1 %*	*50-150*		"	"	"	"	
S-4 (P103219-04) Water Sampled: 03/08/01 10:10 Received: 03/08/01 17:10									
Diesel (C10-C24)	**5840**	50.0	ug/l	1	1030285	03/12/01	03/14/01	EPA 8015M-SVOA	HC-12
Surrogate: o-Terphenyl		*102 %*	*50-150*		"	"	"	"	
BW-A (P103219-05) Water Sampled: 03/08/01 11:25 Received: 03/08/01 17:10									
Diesel (C10-C24)	**1370**	52.6	ug/l	1	1030285	03/12/01	03/14/01	EPA 8015M-SVOA	HC-12
Surrogate: o-Terphenyl		*101 %*	*50-150*		"	"	"	"	

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1680 Rogers Ave.	Project Number: 4411 Foothill Blvd. Oakland	**Reported:**
San Jose CA, 95112	Project Manager: Nick Sudano	03/22/01 15:57

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-2 (P103219-02) Water Sampled: 03/08/01 09:03 Received: 03/08/01 17:10									
Methyl tert-butyl ether	**17500**	200	ug/l	400	1030400	03/15/01	03/16/01	EPA 8260B	
Surrogate: Dibromofluoromethane		*106 %*	*88-118*		"	"	"	"	
BW-A (P103219-05) Water Sampled: 03/08/01 11:25 Received: 03/08/01 17:10									
Methyl tert-butyl ether	**11700**	200	ug/l	400	1030400	03/16/01	03/16/01	EPA 8260B	
Surrogate: Dibromofluoromethane		*99.2 %*	*88-118*		"	"	"	"	

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Blaine Tech Services, Inc.	Project: Equiva	
1680 Rogers Ave.	Project Number: 4411 Foothill Blvd. Oakland	**Reported:**
San Jose CA, 95112	Project Manager: Nick Sudano	03/22/01 15:57

Conventional Chemistry Parameters by APHA/EPA Methods

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-1 (P103219-01) Water	**Sampled: 03/08/01 09:40**	**Received: 03/08/01 17:10**							
Ferrous Iron	**559**	100	ug/l	1	1030258	03/08/01	03/08/01	SM 3500 Fe D#4	
S-2 (P103219-02) Water	**Sampled: 03/08/01 09:03**	**Received: 03/08/01 17:10**							
Ferrous Iron	**267**	100	ug/l	1	1030258	03/08/01	03/08/01	SM 3500 Fe D#4	
S-3 (P103219-03) Water	**Sampled: 03/08/01 10:48**	**Received: 03/08/01 17:10**							
Ferrous Iron	**1920**	100	ug/l	1	1030258	03/08/01	03/08/01	SM 3500 Fe D#4	
S-4 (P103219-04) Water	**Sampled: 03/08/01 10:10**	**Received: 03/08/01 17:10**							
Ferrous Iron	**6580**	100	ug/l	1	1030258	03/08/01	03/08/01	SM 3500 Fe D#4	

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1680 Rogers Ave.	Project Number: 4411 Foothill Blvd. Oakland	**Reported:**
San Jose CA, 95112	Project Manager: Nick Sudano	03/22/01 15:57

Anions by EPA Method 300.0

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-1 (P103219-01) Water	**Sampled: 03/08/01 09:40**	**Received: 03/08/01 17:10**							
Nitrate as N	**520**	500	ug/l	5	1030242	03/09/01	03/09/01	EPA 300.0	
Sulfate as SO4	**7910**	5000	"	"	"	"	"	"	
S-2 (P103219-02) Water	**Sampled: 03/08/01 09:03**	**Received: 03/08/01 17:10**							
Nitrate as N	ND	500	ug/l	5	1030242	03/09/01	03/09/01	EPA 300.0	
Sulfate as SO4	**11200**	5000	"	"	"	"	"	"	
S-3 (P103219-03) Water	**Sampled: 03/08/01 10:48**	**Received: 03/08/01 17:10**							
Nitrate as N	ND	500	ug/l	5	1030242	03/09/01	03/09/01	EPA 300.0	
Sulfate as SO4	**5010**	5000	"	"	"	"	"	"	
S-4 (P103219-04) Water	**Sampled: 03/08/01 10:10**	**Received: 03/08/01 17:10**							
Nitrate as N	ND	500	ug/l	5	1030242	03/09/01	03/09/01	EPA 300.0	
Sulfate as SO4	ND	5000	"	"	"	"	"	"	

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1680 Rogers Ave.	Project Number: 4411 Foothill Blvd. Oakland	**Reported:**
San Jose CA, 95112	Project Manager: Nick Sudano	03/22/01 15:57

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1030300 - EPA 5030, waters										
Blank (1030300-BLK1)				Prepared & Analyzed: 03/13/01						
Gasoline	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
Surrogate: a,a,a-Trifluorotoluene	*295*		"	*300*		*98.3*	*65-135*			
Surrogate: 4-Bromofluorobenzene	*288*		"	*300*		*96.0*	*65-135*			
LCS (1030300-BS1)				Prepared & Analyzed: 03/13/01						
Gasoline	2400	50.0	ug/l	2750		87.3	65-135			
Benzene	36.2	0.500	"	32.0		113	65-135			
Toluene	193	0.500	"	193		100	65-135			
Ethylbenzene	41.6	0.500	"	46.0		90.4	65-135			
Xylenes (total)	212	0.500	"	231		91.8	65-135			
Methyl tert-butyl ether	58.4	2.50	"	52.0		112	65-135			
Surrogate: a,a,a-Trifluorotoluene	*335*		"	*300*		*112*	*65-135*			
Surrogate: 4-Bromofluorobenzene	*304*		"	*300*		*101*	*65-135*			
Matrix Spike (1030300-MS1)	**Source: P103179-01**			Prepared & Analyzed: 03/13/01						
Gasoline	2610	50.0	ug/l	2750	ND	94.9	65-135			
Benzene	37.7	0.500	"	32.0	ND	118	65-135			
Toluene	204	0.500	"	193	ND	106	65-135			
Ethylbenzene	43.7	0.500	"	46.0	ND	95.0	65-135			
Xylenes (total)	222	0.500	"	231	ND	95.9	65-135			
Methyl tert-butyl ether	102	2.50	"	52.0	39.7	120	65-135			
Surrogate: a,a,a-Trifluorotoluene	*340*		"	*300*		*113*	*65-135*			
Surrogate: 4-Bromofluorobenzene	*313*		"	*300*		*104*	*65-135*			

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Blaine Tech Services, Inc.	Project: Equiva	
1680 Rogers Ave.	Project Number: 4411 Foothill Blvd. Oakland	**Reported:**
San Jose CA, 95112	Project Manager: Nick Sudano	03/22/01 15:57

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1030300 - EPA 5030, waters										
Matrix Spike Dup (1030300-MSD1)	**Source: P103179-01**			Prepared & Analyzed: 03/13/01						
Gasoline	2510	50.0	ug/l	2750	ND	91.3	65-135	3.91	20	
Benzene	36.6	0.500	"	32.0	ND	114	65-135	2.96	20	
Toluene	200	0.500	"	193	ND	103	65-135	1.98	20	
Ethylbenzene	42.6	0.500	"	46.0	ND	92.6	65-135	2.55	20	
Xylenes (total)	218	0.500	"	231	ND	94.2	65-135	1.82	20	
Methyl tert-butyl ether	97.4	2.50	"	52.0	39.7	111	65-135	4.61	20	
Surrogate: a,a,a-Trifluorotoluene	*338*		"	*300*		*113*	*65-135*			
Surrogate: 4-Bromofluorobenzene	*306*		"	*300*		*102*	*65-135*			

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1680 Rogers Ave.	Project Number: 4411 Foothill Blvd. Oakland	**Reported:**
San Jose CA, 95112	Project Manager: Nick Sudano	03/22/01 15:57

Total Petroleum Hydrocarbons as Diesel & others by EPA 8015M - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1030285 - EPA 3510B										
Blank (1030285-BLK1)				Prepared: 03/12/01 Analyzed: 03/14/01						
Diesel (C10-C24)	ND	50.0	ug/l							
Surrogate: o-Terphenyl	*91.1*		"	*100*		*91.1*	*50-150*			
LCS (1030285-BS1)				Prepared: 03/12/01 Analyzed: 03/14/01						
Diesel (C10-C24)	914	50.0	ug/l	1000		91.4	50-150			
Surrogate: o-Terphenyl	*108*		"	*100*		*108*	*50-150*			
LCS Dup (1030285-BSD1)				Prepared: 03/12/01 Analyzed: 03/14/01						
Diesel (C10-C24)	863	50.0	ug/l	1000		86.3	50-150	5.74	20	
Surrogate: o-Terphenyl	*103*		"	*100*		*103*	*50-150*			

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Blaine Tech Services, Inc.	Project: Equiva	
1680 Rogers Ave.	Project Number: 4411 Foothill Blvd. Oakland	**Reported:**
San Jose CA, 95112	Project Manager: Nick Sudano	03/22/01 15:57

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1030400 - EPA 5030 waters										
Blank (1030400-BLK1)				Prepared & Analyzed: 03/15/01						
Methyl tert-butyl ether	ND	0.500	ug/l							
Surrogate: Dibromofluoromethane	*5.15*		"	*5.00*		*103*	*88-118*			
Blank (1030400-BLK2)				Prepared & Analyzed: 03/16/01						
Methyl tert-butyl ether	ND	0.500	ug/l							
Surrogate: Dibromofluoromethane	*5.01*		"	*5.00*		*100*	*88-118*			
LCS (1030400-BS1)				Prepared & Analyzed: 03/15/01						
Methyl tert-butyl ether	4.93	0.500	ug/l	5.00		98.6	79-118			
Surrogate: Dibromofluoromethane	*5.17*		"	*5.00*		*103*	*88-118*			
LCS (1030400-BS2)				Prepared & Analyzed: 03/16/01						
Methyl tert-butyl ether	4.68	0.500	ug/l	5.00		93.6	79-118			
Surrogate: Dibromofluoromethane	*5.14*		"	*5.00*		*103*	*88-118*			
Matrix Spike (1030400-MS1)		**Source: P103256-20**		Prepared & Analyzed: 03/15/01						
Methyl tert-butyl ether	4.68	0.500	ug/l	5.00	ND	93.6	79-118			
Surrogate: Dibromofluoromethane	*5.28*		"	*5.00*		*106*	*88-118*			
Matrix Spike Dup (1030400-MSD1)		**Source: P103256-20**		Prepared & Analyzed: 03/15/01						
Methyl tert-butyl ether	5.10	0.500	ug/l	5.00	ND	102	79-118	8.59	20	
Surrogate: Dibromofluoromethane	*5.26*		"	*5.00*		*105*	*88-118*			

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Sequoia Analytical

1455 McDowell Blvd. North, Ste. D
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(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

Blaine Tech Services, Inc.	Project: Equiva	
1680 Rogers Ave.	Project Number: 4411 Foothill Blvd. Oakland	**Reported:**
San Jose CA, 95112	Project Manager: Nick Sudano	03/22/01 15:57

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1030258 - General Preparation										
Blank (1030258-BLK1)				Prepared & Analyzed: 03/08/01						
Ferrous Iron	ND	100	ug/l							
LCS (1030258-BS1)				Prepared & Analyzed: 03/08/01						
Ferrous Iron	949	100	ug/l	800		119	80-120			
Matrix Spike (1030258-MS1)	Source: P103219-01			Prepared & Analyzed: 03/08/01						
Ferrous Iron	486	100	ug/l	800	559	NR	75-125			QM-05
Matrix Spike Dup (1030258-MSD1)	Source: P103219-01			Prepared & Analyzed: 03/08/01						
Ferrous Iron	480	100	ug/l	800	559	NR	75-125	1.24	20	QM-05

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Blaine Tech Services, Inc.	Project: Equiva	
1680 Rogers Ave.	Project Number: 4411 Foothill Blvd. Oakland	**Reported:**
San Jose CA, 95112	Project Manager: Nick Sudano	03/22/01 15:57

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1030242 - General Preparation										
Blank (1030242-BLK1)				Prepared & Analyzed: 03/09/01						
Nitrate as N	ND	100	ug/l							
Sulfate as SO4	ND	1000	"							
LCS (1030242-BS1)				Prepared & Analyzed: 03/09/01						
Nitrate as N	10900	100	ug/l	10000		109	90-110			
Sulfate as SO4	10400	1000	"	10000		104	90-110			
Matrix Spike (1030242-MS1)		**Source: P103183-02**		Prepared & Analyzed: 03/09/01						
Nitrate as N	33900	500	ug/l	25000	3060	123	80-120			QM-07
Sulfate as SO4	ND	5000	"	25000	ND		80-120			A-02
Matrix Spike Dup (1030242-MSD1)		**Source: P103183-02**		Prepared & Analyzed: 03/09/01						
Nitrate as N	34500	500	ug/l	25000	3060	126	80-120	1.75	20	QM-07
Sulfate as SO4	ND	5000	"	25000	ND		80-120		20	A-02

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1680 Rogers Ave.	Project Number: 4411 Foothill Blvd. Oakland	**Reported:**
San Jose CA, 95112	Project Manager: Nick Sudano	03/22/01 15:57

Notes and Definitions

A-02	Matrix sample preserved with H2SO4. No sulfate value could be determined for the spike recovery.
HC-12	Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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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LAB: Sequoia

EQUIVA Services LLC Chain Of Custody Record

Lab Identification (if necessary):
Address:
City, State, Zip:

Equiva Project Manager to be invoiced: Karen Petryna

- [x] SCIENCE & ENGINEERING
- [ ] TECHNICAL SERVICES
- [ ] CRMT HOUSTON

INCIDENT NUMBER (S&E ONLY): 9 8 9 9 5 7 4 6

SAP or CRMT NUMBER (TS/CRMT):

DATE: 3/8/01

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
EMAIL: nsudano@blainetech.com

SITE ADDRESS (Street and City): 4411 Foothill Boulevard, Oakland
PROJECT CONTACT (Report to): Nick Sudano
CONSULTANT PROJECT NO.: BTS# 010308-A1
SAMPLER NAME(S) (Print): Oscar Angulo / Oscar Angulo
LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS): [x] 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°

For BW-A Confirm Any Detected MTBE w/ 8260

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable (8015m)	BTEX (8021B)	MTBE (8021B)	MTBE (8260B)	TPH - Diesel, Extractable (8015m)	Oxygenates (5) by (8260B)	Ethanol, Methanol (8015B)	Nitrate, Sulfate, & Ferrous Iron	MTBE (8260B) Confirmation, See Note
	S-1	3/8	940	W	6	X	X	X		X			X	X
	S-2	↓	903	↓	↓	X	X	X		X			X	X
	S-3		1048			X	X	X		X			X	X
	S-4		1010			X	X	X		X			X	X
	BW-A	↓	1125	↓	↓	X	X	X		X			X (No)	X

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

COOLER CUSTODY SEALS INTACT [ ]
NOT INTACT [ ]
COOLER TEMPERATURE 4.9 °C

Relinquished by (Signature)	Received by (Signature)	Date	Time
O. Angulo	[signature]	3/8/01	1200
Relinquished by (Signature)	Received by (Signature)	Date	Time
Relinquished by (Signature)	Received by (Signature)	Date	Time

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

10/16/00 Revision

WELL GAUGING DATA

Project # 010308-A1 Date 3/8/01 Client Equiva

Site 4A11 Foothill Blvd. Oakland 98995746

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
S-1	4					5.84	24.58	
S-2	4					8.57	22.39	
S-3	4					8.17	20.47	
S-4	4					8.44	20.19	
BW-A	4					6.38	12.32	

EQUIVA WELL MONITORING DATA SHEET

BTS #: 010308-A1	Site: 98995796
Sampler: CA	Date: 3/8/01
Well I.D.: S-1	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 24.58	Depth to Water: 5.84
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: _____

12 (Gals.) X 3 = 36 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
932	63.2	9.2	877	37	12	
939	69.7	8.3	845	20	24	
936	65.0	8.4	850	17	36	

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

Sampling Time: 940 Sampling Date: 3/8/01

Sample I.D.: S-1 Laboratory: (Sequoia) Columbia Other_____

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): mg/L (Post-purge): 2.7 mg/L

O.R.P. (if req'd): (Pre-purge): mV (Post-purge): -8 mV

EQUIVA WELL MONITORING DATA SHEET

BTS #: 010308-M1	Site: 98995796
Sampler: CA	Date: 3/8/01
Well I.D.: S-2	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 22.39	Depth to Water: 8.57
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: _____

8.9 (Gals.) X 3 = 25.8 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
855	66.0	6.6	1538	>200	9	
856	67.6	6.8	1372	>200	18	
858	68.0	6.8	1331	138	26	

Did well dewater? Yes (No) Gallons actually evacuated: 26

Sampling Time: 903 Sampling Date: 3/8/01

Sample I.D.: S-2 Laboratory: (Sequoia) Columbia Other_____

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):	mg/L	(Post-purge):	2.7	mg/L
O.R.P. (if req'd):	(Pre-purge):	mV	(Post-purge):	112	mV

EQUIVA WELL MONITORING DATA SHEET

BTS #: 010308-M1	Site: 98995796
Sampler: CA	Date: 3/8/01
Well I.D.: S-3	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 20.97	Depth to Water: 8.17
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: ___

7.9 (Gals.) X 3 = 23.7 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
1041	69.3	6.8	646	63	8	Odor
1042	69.6	6.8	615	50	16	
1043	69.8	6.8	603	43	24	

Did well dewater? Yes (No) Gallons actually evacuated: 24

Sampling Time: 1048 Sampling Date: 3/8/01

Sample I.D.: S-3 Laboratory: (Sequoia) Columbia Other ___

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:	1.1 mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	-22 mV	Post-purge:	-98 mV

EQUIVA WELL MONITORING DATA SHEET

BTS #: 010308-M1	Site: 98995796
Sampler: CA	Date: 3/8/01
Well I.D.: S-4	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 20.29	Depth to Water: 8.14
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: _____

7.6 (Gals.) X 3 = 22.8 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
1002	61.6	7.0	1493	40	8	
1004	63.0	6.9	1536	83	16	
1006	63.9	6.9	1500	102	23	
						No odor

Did well dewater? Yes (No) Gallons actually evacuated: 23

Sampling Time: 1010 Sampling Date: 3/8/01

Sample I.D.: S-4 Laboratory: (Sequoia) Columbia Other_____

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):	1.0 mg/L	(Post-purge):	0.9	mg/L
O.R.P. (if req'd):	(Pre-purge):	-103 mV	(Post-purge):	-99	mV

JUN 2 9 2001

EQUIVA WELL MONITORING DATA SHEET

BTS #: 010308-A1	Site: 98995796
Sampler: CA	Date: 3/8/01
Well I.D.: ~~S~~ BW-A	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 12.32	Depth to Water: 6.38
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 Y
Waterra
Peristaltic
Extraction Pump
Other_____

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

3.0 (Gals.) X 3 = 11.4 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
1118	62.8	6.9	672	94	4.0	
1119	64.7	6.8	929	99	8.0	
1120	64.9	6.9	903	103	12.0	

Did well dewater? Yes (No) Gallons actually evacuated: 12

Sampling Time: 1125 Sampling Date: 3/8/01

Sample I.D.: ~~S~~ BW-A Laboratory: (Sequoia) Columbia Other_____

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: 0.9 mg/L	Post-purge: 1.4 mg/L		
O.R.P. (if req'd):	Pre-purge: mV	Post-purge: -96 mV		