CAMBRIA #113

ENVIRONMENTAL PROTECTION

99 AUG 27 PM 2:03

August 25, 1999

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

Re: **First Quarter 1999 Monitoring Report**
Shell-branded Service Station
4411 Foothill Boulevard
Oakland, California
Incident #98995746
Cambria Project #241-0897-002

Dear Mr. Chan:

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

FIRST QUARTER 1999 ACTIVITIES

Ground Water Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged and sampled all wells. Blaine calculated ground water elevations and compiled the analytical data. Cambria prepared a ground water elevation contour map (Figure 1). The Blaine report, presenting the laboratory report, is included as Attachment A.

Investigation and Remediation Workplans: In response to the Alemeda County Health Care Services Agency (ACHCSA) letter to Equiva dated December 7, 1998, Cambria submitted a work plan proposing additional investigation and remediation dated January 11, 1999. Subsequently, Cambria submitted a work plan addendum dated March 18, 1999 addressing questions raised by the ACHCSA in a phone conversation with Cambria on February 1, 1999.

Oakland, CA
Sonoma, CA
Portland, OR
Seattle, WA

Cambria Environmental Technology, Inc.

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

ANTICIPATED SECOND QUARTER 1999 ACTIVITIES

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

Investigation and Remediation Workplans: The ACHCSA responded to both the January 11, 1999 and March 18, 1999 work plans in a letter to Equiva dated April 30, 1999. Additional information regarding oxygen release compounds (ORC) was requested in the April 30, 1999 letter. Cambria provided a response letter dated June 15, 1999. As a result, Cambria's work plan for remediation with ORC and the installation of one additional monitoring well was accepted by the ACHCSA in a June 18, 1999 letter to Equiva.

ANTICIPATED THIRD QUARTER 1999 ACTIVITIES

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

Work Plan Implemenatation: Cambria will coordinate installation of ORC socks in wells S-1, S-2, and backfill well BW-A. Cambria will insure BW-A is purged of stagnate water utilizing a vacuum truck prior to installing ORC. In addition to installing ORC, Cambria will begin permitting and scheduling for the installation of proposed well S-4.

CLOSING

We appreciate the opportunity to work with you on this project. Please call Darryk Ataide at (510) 420-3339 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc

Darryk Ataide, REA I
Project Manager

Ailsa S. Le May, R.G.
Senior Geologist

Figure: 1 - Ground Water Elevation Contour Map

Table: 1 - Ground Water Analytical Data - Bioattenuation Parameters

Attachment: A - Blaine Ground Water Monitoring Report and Field Notes

cc: Karen Petryna, Equiva Services LLC, P.O. Box 6249, Carson, California 90749

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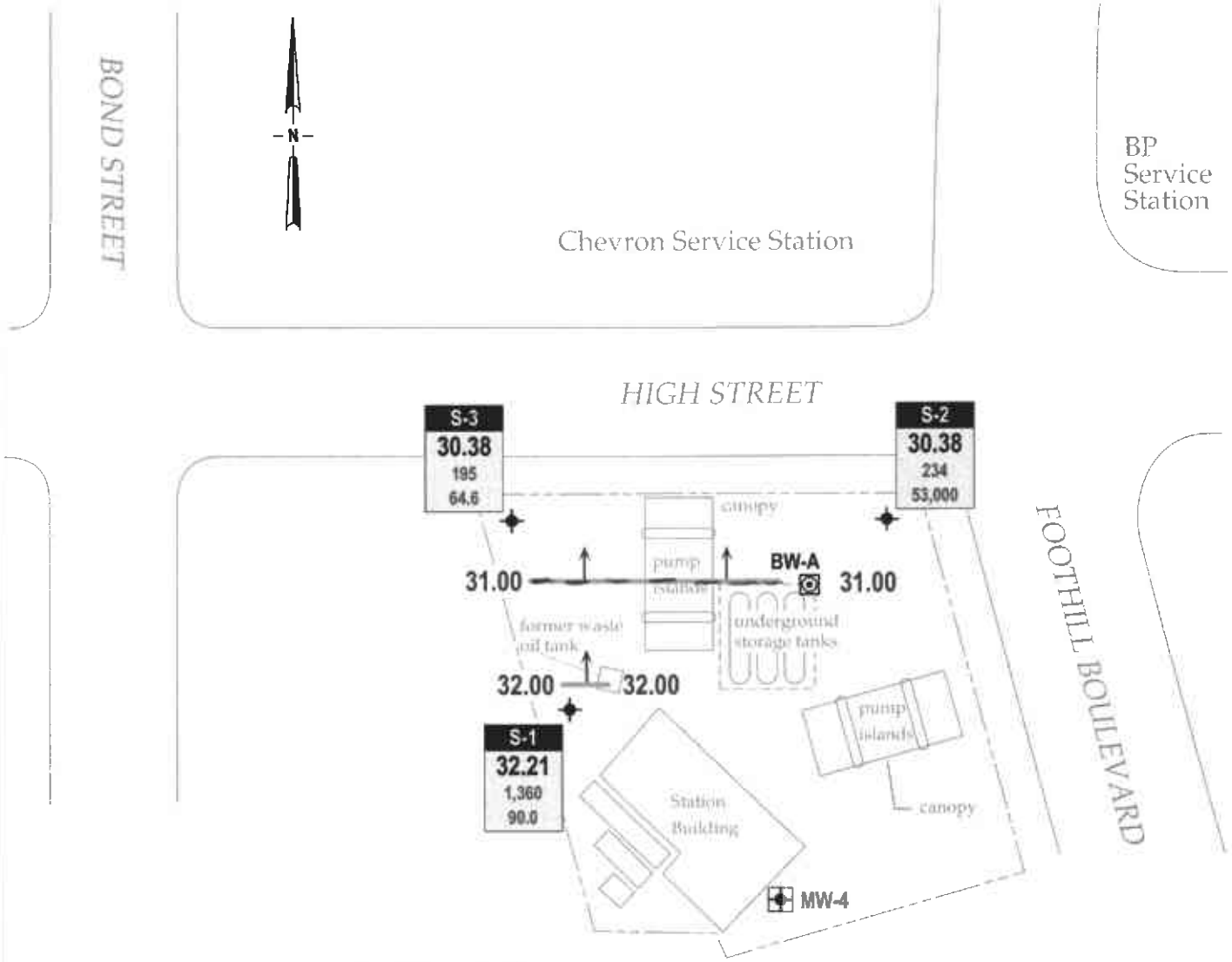

EXPLANATION

MW-1 ✦	Monitoring well location
BW-A ⊙	Tank backfill well location
MW-4 ✦	Proposed monitoring well location
→	Ground water flow direction
— XX.XX	Ground water elevation contour, in feet above mean sea level (msl), dashed where inferred

Well	Well designation
ELEV	Ground water elevation (msl)
Benzene MTBE	Benzene and MTBE concentrations are in parts per billion (ppb)

0 20 40
Scale (ft)

FIGURE 1

G:\OAK4411\FIGURES\1QM99-MP.AI

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

CAMBRIA

Ground Water Elevation Contour Map

March 30, 1999

Table 1. **Ground Water 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 Nitrate	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**	
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**	
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
	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**	
Ideal Aerobic Degradation Relationship:					Direct	Inverse	Inverse	Inverse	Direct	
Observed Relationship:					Inconclusive	Inconclusive	Moderately inverse	Moderately inverse	Inconclusive	

Table 1. **Ground Water 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 Nitrate	Sulfate	DO	ORP (millivolts)	Notes
				←		(Concentrations in ppm)		→		

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

ATTACHMENT A

Blaine Ground Water Monitoring Report
and Field Notes

BLAINE
TECH SERVICES INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
(408) 573-7771 FAX
(408) 573-0555 PHONE

June 24, 1999

Karen Petryna
Equiva Services LLC
P.O. Box 6249
Carson, CA 90749-6249

First Quarter 1999 Groundwater Monitoring at
Shell-branded Service Station
4411 Foothill Blvd.
Oakland, CA

Monitoring performed on March 30 & 31, 1999

Groundwater Monitoring Report **990330-R-2**

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, apprioriate 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/ld

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

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	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
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-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
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

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	09/17/1997	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	<5000	NA	369	<50	<50	<50	14,300	NA	38.79	9.84	28.95	2.0/1.8
S-2	03/30/1999	<2000	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-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
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

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4411 Foothill Boulevard
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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
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

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015

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)

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
msl = Mean sea level
ft = Feet
<n = Below detection limit
D = Duplicate sample
#/# = Pre-purge / Post-purge

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.

Sequoia Analytical

1551 Industrial Road
San Carlos, CA 94070-4111
(650) 232-9600
FAX (650) 232-9612

May 12, 1999

Fran Thie
Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

RE: Shell(1)/L904006

Dear Fran Thie:

Enclosed are the results of analyses for sample(s) received by the laboratory on March 31, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Gregory
Project Manager D.M.

Sequoia Analytical

1551 Industrial Road
San Carlos, CA 94070-4111
(650) 232-9600
FAX (650) 232-9612

Blaine Tech Services	Project:	Shell(1)	Sampled:	3/30/99
1680 Rogers Avenue	Project Number:	Shell 4411 Foothill Blvd., Oakland	Received:	3/31/99
San Jose, CA 95112	Project Manager:	Fran Thie	Reported:	5/12/99

ANALYTICAL REPORT FOR L904006

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
S-1	L904006-01	Water	3/30/99
S-2	L904006-02	Water	3/30/99
S-3	L904006-03	Water	3/30/99

Sequoia Analytical

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San Carlos, CA 94070-4111
(650) 232-9600
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Blaine Tech Services	Project:	Shell(1)	Sampled: 3/30/99
1680 Rogers Avenue	Project Number:	Shell 4411 Foothill Blvd., Oakland	Received: 3/31/99
San Jose, CA 95112	Project Manager:	Fran Thie	Reported: 5/12/99

Sample Description: **S-1**
Laboratory Sample Number: **L904006-01**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9040055	4/10/99	4/10/99		5000	**14200**	ug/l	1
Benzene	"	"	"		50.0	**1360**	"	
Toluene	"	"	"		50.0	**260**	"	
Ethylbenzene	"	"	"		50.0	**1070**	"	
Xylenes (total)	"	"	"		50.0	**3580**	"	
Methyl tert-butyl ether	"	"	"		500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*95.8*	%	
MTBE by EPA Method 8260A								
Methyl tert-butyl ether	9040021	4/5/99	4/5/99		25.0	**90.0**	ug/l	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	*76.0-114*		*101*	%	

Sequoia Analytical

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San Carlos, CA 94070-4111
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Blaine Tech Services	Project:	Shell(1)	Sampled: 3/30/99
1680 Rogers Avenue	Project Number:	Shell 4411 Foothill Blvd., Oakland	Received: 3/31/99
San Jose, CA 95112	Project Manager:	Fran Thie	Reported: 5/12/99

Sample Description: **S-2**
Laboratory Sample Number: **L904006-02**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
			Sequoia Analytical - San Carlos					
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9040055	4/10/99	4/10/99		2000	ND	ug/l	
Benzene	"	"	"		20.0	**234**	"	
Toluene	"	"	"		20.0	ND	"	
Ethylbenzene	"	"	"		20.0	**27.4**	"	
Xylenes (total)	"	"	"		20.0	**36.9**	"	
Methyl tert-butyl ether	"	"	"		5000	**49200**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*96.5*	%	
MTBE by EPA Method 8260A								
Methyl tert-butyl ether	9040046	4/9/99	4/9/99		1000	**53000**	ug/l	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	*76.0-114*		*105*	%	

Sequoia Analytical

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Blaine Tech Services	Project:	Shell(1)	Sampled: 3/30/99
1680 Rogers Avenue	Project Number:	Shell 4411 Foothill Blvd., Oakland	Received: 3/31/99
San Jose, CA 95112	Project Manager:	Fran Thie	Reported: 5/12/99

Sample Description: S-3
Laboratory Sample Number: L904006-03

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9040055	4/10/99	4/10/99		500	**2070**	ug/l	1
Benzene	"	"	"		5.00	**195**	"	
Toluene	"	"	"		5.00	**10.0**	"	
Ethylbenzene	"	"	"		5.00	ND	"	
Xylenes (total)	"	"	"		5.00	**48.6**	"	
Methyl tert-butyl ether	"	"	"		50.0	**354**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*70.0-130*		*107*	%	
MTBE by EPA Method 8260A								
Methyl tert-butyl ether	9040021	4/5/99	4/5/99		20.0	**64.6**	ug/l	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	*76.0-114*		*101*	%	

Sequoia Analytical

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Blaine Tech Services	Project:	Shell(1)	Sampled: 3/30/99
1680 Rogers Avenue	Project Number:	Shell 4411 Foothill Blvd., Oakland	Received: 3/31/99
San Jose, CA 95112	Project Manager:	Fran Thie	Reported: 5/12/99

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 9040055	**Date Prepared: 4/10/99**					**Extraction Method: EPA 5030B [P/T]**				
Blank	**9040055-BLK1**									
Purgeable Hydrocarbons as Gasoline	4/10/99			**ND**	ug/l	**50.0**				
Benzene	"			**ND**	"	**0.500**				
Toluene	"			**ND**	"	**0.500**				
Ethylbenzene	"			**ND**	"	**0.500**				
Xylenes (total)	"			**ND**	"	**0.500**				
Methyl tert-butyl ether	"			**ND**	"	**5.00**				
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*8.33*	"	*70.0-130*	*83.3*			
LCS	**9040055-BS1**									
Purgeable Hydrocarbons as Gasoline	4/10/99	250		231	ug/l	70.0-130	92.4			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*12.1*	"	*70.0-130*	*121*			
Matrix Spike	**9040055-MS1**		**L904043-04**							
Purgeable Hydrocarbons as Gasoline	4/10/99	250	ND	296	ug/l	60.0-140	**118**			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*12.5*	"	*70.0-130*	*125*			
Matrix Spike Dup	**9040055-MSD1**		**L904043-04**							
Purgeable Hydrocarbons as Gasoline	4/10/99	250	ND	242	ug/l	60.0-140	**96.8**	25.0	**19.7**	
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*10.9*	"	*70.0-130*	*109*			

Sequoia Analytical

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San Carlos, CA 94070-4111
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Blaine Tech Services	Project:	Shell(1)	Sampled: 3/30/99
1680 Rogers Avenue	Project Number:	Shell 4411 Foothill Blvd., Oakland	Received: 3/31/99
San Jose, CA 95112	Project Manager:	Fran Thie	Reported: 5/12/99

MTBE by EPA Method 8260A/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 9040021	**Date Prepared: 4/5/99**					**Extraction Method: EPA 5030B [P/T]**				
Blank	**9040021-BLK1**									
Methyl tert-butyl ether	4/5/99			**ND**	ug/l	**2.00**				
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*53.0*	"	*76.0-114*	*106*			
Blank	**9040021-BLK2**									
Methyl tert-butyl ether	4/6/99			**ND**	ug/l	**2.00**				
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*51.3*	"	*76.0-114*	*103*			
LCS	**9040021-BS1**									
Methyl tert-butyl ether	4/5/99	50.0		49.3	ug/l	70.0-130	98.6			
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*52.1*	"	*76.0-114*	*104*			
LCS	**9040021-BS2**									
Methyl tert-butyl ether	4/6/99	50.0		48.4	ug/l	70.0-130	96.8			
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*52.6*	"	*76.0-114*	*105*			
Matrix Spike	**9040021-MS1**		**L904038-01**							
Methyl tert-butyl ether	4/5/99	50.0	ND	52.5	ug/l	60.0-140	**105**			
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*52.8*	"	*76.0-114*	*106*			
Matrix Spike Dup	**9040021-MSD1**		**L904038-01**							
Methyl tert-butyl ether	4/5/99	50.0	ND	50.4	ug/l	60.0-140	**101**	25.0	**3.88**	
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*53.5*	"	*76.0-114*	*107*			
Batch: 9040046	**Date Prepared: 4/9/99**					**Extraction Method: EPA 5030B [P/T]**				
Blank	**9040046-BLK1**									
Methyl tert-butyl ether	4/8/99			**ND**	ug/l	**2.00**				
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*52.0*	"	*76.0-114*	*104*			
LCS	**9040046-BS1**									
Methyl tert-butyl ether	4/8/99	50.0		52.2	ug/l	70.0-130	104			
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*53.4*	"	*76.0-114*	*107*			
Matrix Spike	**9040046-MS1**		**L904085-02**							
Methyl tert-butyl ether	4/8/99	50.0	ND	49.4	ug/l	60.0-140	**98.8**			
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*52.7*	"	*76.0-114*	*105*			
Matrix Spike Dup	**9040046-MSD1**		**L904085-02**							
Methyl tert-butyl ether	4/8/99	50.0	ND	48.3	ug/l	60.0-140	**96.6**	25.0	**2.25**	
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*51.6*	"	*76.0-114*	*103*			

Sequoia Analytical

1551 Industrial Road
San Carlos, CA 94070-4111
(650) 232-9600
FAX (650) 232-9612

Blaine Tech Services	Project:	Shell(1)	Sampled:	3/30/99
1680 Rogers Avenue	Project Number:	Shell 4411 Foothill Blvd., Oakland	Received:	3/31/99
San Jose, CA 95112	Project Manager:	Fran Thie	Reported:	5/12/99

Notes and Definitions

#	Note
1	Chromatogram Pattern: C6-C12
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
Recov.	Recovery
RPD	Relative Percent Difference
NOTE:	Diesel/Motor Oil, Ferrous Iron,Nitrate,Sulfate were subcontracted to Sequoia Petaluma. Hard copy attached.

(TUE) 06:54 BLAINE TECH SERVICES, INC TEL:408 573 7771 P. 002

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 990330 R-2

Date: 3-30-99
Page 1 of 1

Site Address: 4411 Foothill Blvd., Oakland, CA

WIC#: 204-5508-3400

Shell Engineer: Alex Perez
Phone No.: (510) 675-6168
Fax #: 675-6172

Consultant Name & Address: Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112

Consultant Contact: Fran Thie
Phone No.: (408) 573-0555
Fax #: 573-7771

Comments:

Sampled by: [signature]

Printed Name: Jim Rose

LAB: Sequoia

CHECK ONE (1) BOX ONLY — CT/DT:
- [X] G.W. Monitoring 4461
- [ ] Site Investigation 4441
- [ ] Soil Classify/Disposal 4443
- [ ] Water Classify/Disposal 4443
- [ ] Soil/Air Rem. or Sys. O & M 4452
- [ ] Water Rem. or Sys. O & M 4453
- [ ] Other

TURN AROUND TIME:
- [ ] 24 hours
- [ ] 48 hours
- [X] 15 days (Normal)
- [ ] Other

NOTE: Notify lab as soon as Possible of 24/48 hrs. TAT.

UST AGENCY:

Analysis Required

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	MTBE by 8020	Nitrate	Sulfate	Ferrous Iron	Motor oil	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-1	3/30/99			w		9		X				X	X	X	X	X	X		"Confirm MTBE	
S-2	3/30/99			w		6						X	X	X	X	X			by 8260"	
S-3	3/30/99			w		6						X	X	X	X	X				
																			Revised COC	
																			AP 4/6/99	

Relinquished By (signature):	Printed Name:	Date/Time:	Received (signature):	Printed Name:	Date/Time:
[signature]	J. Rose	Date: 3/31/99 Time: 11:15	[signature]	JOHN FRICK	Date: 3/31/99 Time: 1115
Relinquished By (signature):	Printed Name:	Date: Time:	Received (signature):	Printed Name:	Date: Time:
Relinquished By (signature):	Printed Name:	Date: Time:	Received (signature):	Printed Name:	Date: Time:

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS

Sequoia
Analytical

1455 McDowell Blvd. North, Ste. D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342

May 11, 1999

Mike Gregory
Sequoia San Carlos
1551 Industial Blvd.
San Carlos, CA 94070

RE: Subbed in/P904087

Dear Mike Gregory

Enclosed are the results of analyses for sample(s) received by the laboratory on April 2, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Matt Sakai
Project Manager

CA ELAP Certificate Number 2245

Sequoia Analytical

1455 McDowell Blvd. North, Ste. D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342

Sequoia San Carlos	Project:	Subbed in	Sampled:	3/30/99
1551 Industial Blvd.	Project Number:	L904006	Received:	4/2/99
San Carlos, CA 94070	Project Manager:	Mike Gregory	Reported:	5/11/99

ANALYTICAL REPORT FOR P904087

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
S-1/L904006-01	P904087-01	Water	3/30/99
S-2/L904006-02	P904087-02	Water	3/30/99
S-3/L904006-03	P904087-03	Water	3/30/99

Sequoia Analytical

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Petaluma, CA 94954
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FAX (707) 792-0342

Sequoia San Carlos	Project:	Subbed in	Sampled: 3/30/99
1551 Industial Blvd.	Project Number:	L904006	Received: 4/2/99
San Carlos, CA 94070	Project Manager:	Mike Gregory	Reported: 5/11/99

Total Petroleum Hydrocarbons as Diesel & others by EPA 8015M
Sequoia Analytical - Petaluma

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
S-1/L904006-01			**P904087-01**				**Water**	
Diesel	9040252	4/12/99	5/3/99		0.0500	**1.15**	mg/l	1
Motor Oil	"	"	"		0.250	**0.279**	"	2
Surrogate: o-Terphenyl	"	"	"	*50.0-150*		*83.0*	*%*	

Sequoia Analytical

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Petaluma, CA 94954
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Sequoia San Carlos	Project:	Subbed in	Sampled: 3/30/99
1551 Industial Blvd.	Project Number:	L904006	Received: 4/2/99
San Carlos, CA 94070	Project Manager:	Mike Gregory	Reported: 5/11/99

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

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
S-1/L904006-01			**P904087-01**				**Water**	
Nitrate/Nitrite as N	9040161	4/7/99	4/7/99	EPA 353.2	0.100	**0.115**	mg/l	
Ferrous Iron	9040126	4/6/99	4/6/99	SM 3500 Fe D#4	0.100	**0.880**	"	3
S-2/L904006-02			**P904087-02**				**Water**	
Nitrate/Nitrite as N	9040161	4/7/99	4/7/99	EPA 353.2	0.100	ND	mg/l	
Ferrous Iron	9040126	4/6/99	4/6/99	SM 3500 Fe D#4	0.100	ND	"	3
S-3/L904006-03			**P904087-03**				**Water**	
Nitrate/Nitrite as N	9040161	4/7/99	4/7/99	EPA 353.2	0.100	**0.689**	mg/l	
Ferrous Iron	9040126	4/6/99	4/6/99	SM 3500 Fe D#4	0.100	ND	"	3

Sequoia Analytical

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Petaluma, CA 94954
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Sequoia San Carlos	Project:	Subbed in	Sampled: 3/30/99
1551 Industial Blvd.	Project Number:	L904006	Received: 4/2/99
San Carlos, CA 94070	Project Manager:	Mike Gregory	Reported: 5/11/99

Anions by EPA Method 300.0
Sequoia Analytical - Petaluma

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
S-1/L904006-01			**P904087-01**				**Water**	
Sulfate as SO4	9040164	4/7/99	4/7/99	EPA 300.0	5.00	**6.10**	mg/l	
S-2/L904006-02			**P904087-02**				**Water**	
Sulfate as SO4	9040164	4/7/99	4/7/99	EPA 300.0	1.00	**8.51**	mg/l	
S-3/L904006-03			**P904087-03**				**Water**	
Sulfate as SO4	9040164	4/7/99	4/7/99	EPA 300.0	5.00	**17.5**	mg/l	

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Sequoia San Carlos	Project:	Subbed in	Sampled: 3/30/99
1551 Industial Blvd.	Project Number:	L904006	Received: 4/2/99
San Carlos, CA 94070	Project Manager:	Mike Gregory	Reported: 5/11/99

Total Petroleum Hydrocarbons as Diesel & others by EPA 8015M/Quality Control
Sequoia Analytical - Petaluma

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 9040252	**Date Prepared: 4/12/99**					**Extraction Method: EPA 3520B**				
Blank	**9040252-BLK1**									
Diesel	5/3/99			**ND**	mg/l	**0.0500**				
Motor Oil	"			**ND**	"	**0.250**				
Surrogate: o-Terphenyl	"	*0.100*		*0.0745*	"	*50.0-150*	*74.5*			
LCS	**9040252-BS1**									
Diesel	4/22/99	1.00		0.852	mg/l	50.0-150	85.2			
Surrogate: o-Terphenyl	"	*0.100*		*0.109*	"	*50.0-150*	*109*			
LCS Dup	**9040252-BSD1**									
Diesel	4/22/99	1.00		0.722	mg/l	50.0-150	72.2	20.0	16.5	
Surrogate: o-Terphenyl	"	*0.100*		*0.104*	"	*50.0-150*	*104*			

Sequoia Analytical

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Petaluma, CA 94954
(707) 792-1865
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Sequoia San Carlos	Project:	Subbed in	Sampled: 3/30/99
1551 Industial Blvd.	Project Number:	L904006	Received: 4/2/99
San Carlos, CA 94070	Project Manager:	Mike Gregory	Reported: 5/11/99

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

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 9040126	**Date Prepared: 4/6/99**					**Extraction Method: General Preparation**				
Blank	**9040126-BLK1**									
Ferrous Iron	4/6/99			**ND**	mg/l	**0.100**				
LCS	**9040126-BS1**									
Ferrous Iron	4/6/99	0.600		0.640	mg/l	80.0-120	107			
Matrix Spike	**9040126-MS1**		**P904089-07**							
Ferrous Iron	4/6/99	0.600	ND	0.679	mg/l	75.0-125	**113**			
Matrix Spike Dup	**9040126-MSD1**		**P904089-07**							
Ferrous Iron	4/6/99	0.600	ND	0.632	mg/l	75.0-125	**105**	20.0	**7.34**	
Batch: 9040161	**Date Prepared: 4/7/99**					**Extraction Method: General Preparation**				
Blank	**9040161-BLK1**									
Nitrate/Nitrite as N	4/7/99			**ND**	mg/l	**0.100**				
LCS	**9040161-BS1**									
Nitrate/Nitrite as N	4/7/99	2.00		2.02	mg/l	80.0-120	101			
Matrix Spike	**9040161-MS1**		**P904087-01**							
Nitrate/Nitrite as N	4/7/99	2.00	0.115	2.57	mg/l	75.0-125	**123**			
Matrix Spike Dup	**9040161-MSD1**		**P904087-01**							
Nitrate/Nitrite as N	4/7/99	2.00	0.115	2.00	mg/l	75.0-125	**94.3**	20.0	**26.4**	

Sequoia Analytical

1455 McDowell Blvd. North, Ste. D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342

Sequoia San Carlos	Project:	Subbed in	Sampled: 3/30/99
1551 Industial Blvd.	Project Number:	L904006	Received: 4/2/99
San Carlos, CA 94070	Project Manager:	Mike Gregory	Reported: 5/11/99

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

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 9040164	**Date Prepared: 4/7/99**					**Extraction Method: General Preparation**				
Blank	**9040164-BLK1**									
Sulfate as SO4	4/7/99			**ND**	mg/l	**1.00**				
LCS	**9040164-BS1**									
Sulfate as SO4	4/7/99	15.0		14.6	mg/l	80.0-120	97.3			
Matrix Spike	**9040164-MS1**		**P904087-01**							
Sulfate as SO4	4/7/99	37.5	6.10	43.2	mg/l	75.0-125	**98.9**			
Matrix Spike Dup	**9040164-MSD1**		**P904087-01**							
Sulfate as SO4	4/7/99	37.5	6.10	43.2	mg/l	75.0-125	**98.9**	20.0	**0**	

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Sequoia San Carlos	Project:	Subbed in	Sampled:	3/30/99
1551 Industial Blvd.	Project Number:	L904006	Received:	4/2/99
San Carlos, CA 94070	Project Manager:	Mike Gregory	Reported:	5/11/99

Notes and Definitions

#	Note
1	Results in the diesel organics range are primarily due to overlap from a gasoline range product.
2	Non- motor oil hydrocarbons.
3	This sample was filtered and preserved before receipt.
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
Recov.	Recovery
RPD	Relative Percent Difference

Sequoia Analytical

1551 Industrial Road
San Carlos, CA 94070-4111
(650) 232-9600
FAX (650) 232-9612

Blaine Tech Services	Project:	Shell(1)	Sampled: 3/30/99
1680 Rogers Avenue	Project Number:	Shell 4411 Foothill Blvd., Oakland	Received: 3/31/99
San Jose, CA 95112	Project Manager:	Fran Thie	Reported: 5/12/99

Notes and Definitions

#	Note
1	Chromatogram Pattern: C6-C12
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
Recov.	Recovery
RPD	Relative Percent Difference
NOTE:	Diesel/Motor Oil, Ferrous Iron,Nitrate,Sulfate were subcontracted to Sequoia Petaluma. Hard copy attached.

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 990330-R-2

Date: 3-30-99
Page 1 of 1

Site Address: 4411 Foothill Blvd., Oakland, CA

WIC#: 204-5508-3400

Shell Engineer: Alex Perez
Phone No.: (510) 675-6168
Fax #: 675-6177

Consultant Name & Address: Blaine Tech Services, Inc.
1680 Rogers Ave., San Jose, CA 95112

Consultant Contact: Fran Thie
Phone No.: (408) 573-0555
Fax #: 573-7771

Comments:

Sampled by: [signature]
Printed Name: S. Rosa

LAB: Sequoia

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring	☒ 4461	24 hours ☐
Site Investigation	☐ 4441	48 hours ☐
Soil Classify/Disposal	☐ 4442	15 days ☒ (Normal)
Water Classify/Disposal	☐ 4443	Other ☐
Soil/Air Rem. or Sys. O & M	☐ 4452	NOTE: Notify lab as soon as Possible of 24/48 hrs. TAT.
Water Rem. or Sys. O & M	☐ 4453	
Other	☐	

UST AGENCY:

Analysis Required

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	MTBE by 8020	Nitrate	Sulfate	Ferrous Iron	Motor oil	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-1	3/30/99			w		9		X				X	X	X	X	X	X		"Confirm MTBE	
S-2	3/30/99			w		6						X	X	X	X	X			by 8260"	
S-3	3/30/99			w		6						X	X	X	X	X				
																			Revised COC	
																			AP 4/6/99	

Relinquished By (signature):	Printed Name:	Date / Time:	Received (signature):	Printed Name:	Date / Time:
[signature]	S. Rosa	Date: 3/31/99 Time: 11:15	[signature]	JOHN FERRIS	Date: 3/31/99 Time: 11:15
		Date: Time:			Date: Time:
		Date: Time:			Date: Time:

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS

WELL GAUGING DATA

Project # 990330L-2 Date 3-30-99 Client Shell

Site 4411 Foothill Blvd. Oakland, CA

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	
S-1	4	Odor				6.10	24.48	TOB	
S-2	4					8.41	22.03		
S-3	4					6.95	19.98		

EQUIVA WELL MONITORING DATA SHEET

Project #: 990330 R-2	Job # 204-5508-3400
Sampler: JR	Date: 3-30-99
Well I.D.: S-1	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 24.48	Depth to Water: 6.10
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius^2 * 0.163

Purge Method: Bailer / Middleburg / Electric Submersible ✓ / Extraction Pump / Other: ___

Sampling Method: Bailer ✓ / Extraction Port / Other: ___

1 Case Volume (Gals.)	x Specified Volumes	= Calculated Volume
11.9	3	35.7 Gals.

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
16:15	59.6	6.7	550	121	12	odor Heavy
16:20	61.4	6.8	550	72	24	/
16:25	61.5	6.8	600	31	36	/

Did well dewater? Yes (No)		Gallons actually evacuated: 36	
Sampling Time: 16:35		Sampling Date: 3-30-99	
Sample I.D.: S-1		Laboratory: (Sequoia) BC Other ___	
Analyzed for: (TPH-G BTEX MTBE TPH-D)		Other: Nitrate, Sulfate, Ferrous Iron, Motor oil	
D.O. (if req'd):	Pre-purge: 1.2 mg/L	Post-purge:	1.8 mg/L
O.R.P. (if req'd):	Pre-purge: -56 mV	Post-purge:	-39 mV

EQUIVA WELL MONITORING DATA SHEET

Project #: 990330 R-2	Job # 204-5508-3400
Sampler: JR	Date: 3-30-99
Well I.D.: S-2	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 22.03	Depth to Water: 8.41
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius^2 * 0.163

Purge Method: Bailer / Middleburg / Electric Submersible X / Extraction Pump / Other: ___

Sampling Method: Bailer X / Extraction Port / Other: ___

8.8 (1 Case Volume (Gals.)) X 3 (Specified Volumes) = 26.4 Gals. (Calculated Volume)

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
15:15	62.8	6.6	1100	72	9	mild odor
15:19	63.5	6.7	1200	49	18	/
15:23	63.1	6.6	1200	11	27	/

Did well dewater? Yes (No)		Gallons actually evacuated: 27	
Sampling Time: 15:30		Sampling Date: 3-30-99	
Sample I.D.: S-2		Laboratory: (Sequoia) BC Other___	
Analyzed for: (TPH-G BTEX MTBE) TPH-D		Other: Nitrate, Sulfate, Ferrous Iron	
D.O. (if req'd):	Pre-purge: 2.1 mg/L	Post-purge:	1.8 mg/L
O.R.P. (if req'd):	Pre-purge: -10 mV	Post-purge:	-08 mV

EQUIVA WELL MONITORING DATA SHEET

Project #: 990330 R-2	Job # 204-5508-3400
Sampler: JR	Date: 3-30-99
Well I.D.: S-3	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 19.98	Depth to Water: 6.95
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius^2 * 0.163

Purge Method: Bailer / Middleburg / Electric Submersible ✓ / Extraction Pump / Other: ___

Sampling Method: Bailer ✓ / Extraction Port / Other: ___

6.4 (1-Case Volume (Gals.)) x 3 (Specified Volumes) = 25.2 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
15:45	60.0	7.0	550	53	8.5	
15:49	59.6	7.0	600	27	17	
15:55	59.8	7.0	600	9	26	

Did well dewater? Yes (No)	Gallons actually evacuated: 26
Sampling Time: 16:00	Sampling Date: 3-30-99
Sample I.D.: S-3	Laboratory: (Sequoia) BC Other ___
Analyzed for: (TPH-G BTEX MTBE) TPH-D	Other: Nitrate, Sulfate, Ferrous Iron

D.O. (if req'd):	Pre-purge:	1.3 mg/L	Post-purge:	1.5	mg/L
O.R.P. (if req'd):	Pre-purge:	72 mV	Post-purge:	61	mV

WELL GAUGING DATA

Project # 990331-XZ Date 3-31-99 Client Shell

Site 4411 Foothill Oakland Ca.

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	
S-1						7.84	24.48	TOB	
S-2						8.67	22.03	↓	
S-3						7.48	19.98	↓	