5510 4854 US

CAMBRIA

February 28, 1999

Ms. Jennifer Eberle
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway #250
Alameda, CA 94502-6577

Re: **Quarterly Monitoring Report - First Quarter 1999**
Former Shell Service Station
461 8th Street
Oakland, California
WIC #204-5508-6205

Dear Ms. Eberle:

This Quarterly Monitoring Report describes the recently completed activities associated with ground water monitoring and sampling at the referenced site (Plate 1). This report was prepared to meet reporting guidelines issued by the Regional Water Quality Control Board, San Francisco Bay Region and the Alameda County Health Care Services Agency (ACHCSA).

Quarterly Monitoring & Sampling Summary

Ground water monitoring and sampling for the first quarter of 1999 are summarized below:

- Blaine Tech Services, Inc. (Blaine) of San Jose, California measured ground water depths in and collected ground water samples from Wells S-4 through S-6 and S-8 through S-10 on January 28, 1999. The samples were transported to Sequoia Analytical of Redwood City, California for chemical analysis.

- Approximately 100 gallons and 150 gallons of water were purged from Wells S-5 and S-6, respectively, although no separate phase product (SP) was observed in either well during the fourth and first quarter purging events.

- Cambria Environmental Technology, Inc. (Cambria) evaluated water-level measurement data and prepared a ground water contour map (Plate 2). Cambria determined the ground water flow direction to be to the south at an approximate hydraulic gradient of 0.006.

- TPHg concentrations in ground water samples collected from the wells ranged from ND to 120,000 ppb, benzene concentrations ranged from ND to 13,000 ppb, and MTBE concentrations ranged from ND to 3,700 ppb. A chemical concentration map was prepared and is presented on Plate 2.

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

Cambria Environmental Technology, Inc.

270 Perkins Street
P.O. Box 259
Sonoma, CA 95476
Tel (707)935-4850
Fax (707)935-6649

CAMBRIA

Quarterly Sampling

Monitoring Wells S-4 through S-6, and S-8 through S-10 were sampled and analyzed for total petroleum hydrocarbons as gasoline (TPHg) according to EPA Method 8015 (Modified) and benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl-tertiary-butyl-ether (MTBE) according to EPA Method 8020.

SP and ground water are purged from Wells S-5 and S-6 on a quarterly basis. SP removal data are summarized in Table 1. Field monitoring data and chemical analytical data are presented in a summary table in Blaine's ground water monitoring report (Appendix A).

As requested in the ACHCSA's December 3, 1998 letter, **Blaine will now sample Wells S-5, S-6, and S-8** on a quarterly basis. The remaining wells will continue to be sampled semi-annually.

If you have any questions regarding the contents of this document, please call Joe Neely at (707) 935-4854.

Sincerely,
Cambria Environmental Technology, Inc.

J. Neely for

Aubrey K. Cool
Staff Geologist

Diane M. Lundquist, P.E.
Principal Engineer
C46725

REGISTERED PROFESSIONAL ENGINEER
DIANE M. LUNDQUIST
No. C46725
CIVIL
STATE OF CALIFORNIA

Reasons Shell should continue investigation

1) MTBE was not used in CA until 1990, primarily in the winter months, and since 1994 for the entire year.

2) 2 additional water samples would One on property line of Chevron @ 7th & Broadway, other at 7th between Washington & Broadway

Attachments

Table 1. Separate Phase Hydrocarbon Recovery

Plate 1. Vicinity Map
Plate 2. Ground Water Contour/Chemical Concentration Map

Appendix A

Blaine Tech Services Inc. - Ground Water Monitoring Report

cc: Ms. Karen Petryna, Equiva Services LLC
Mr. Rory Campbell, Hanson, Bridgett, Marcus, Vlahos & Rudy (counsel for property owner)
R. Casteel & Co., P.O. Box 6839, Moraga, CA 94570 (property owner)
Mr. Leroy Griffin, City of Oakland Fire Department

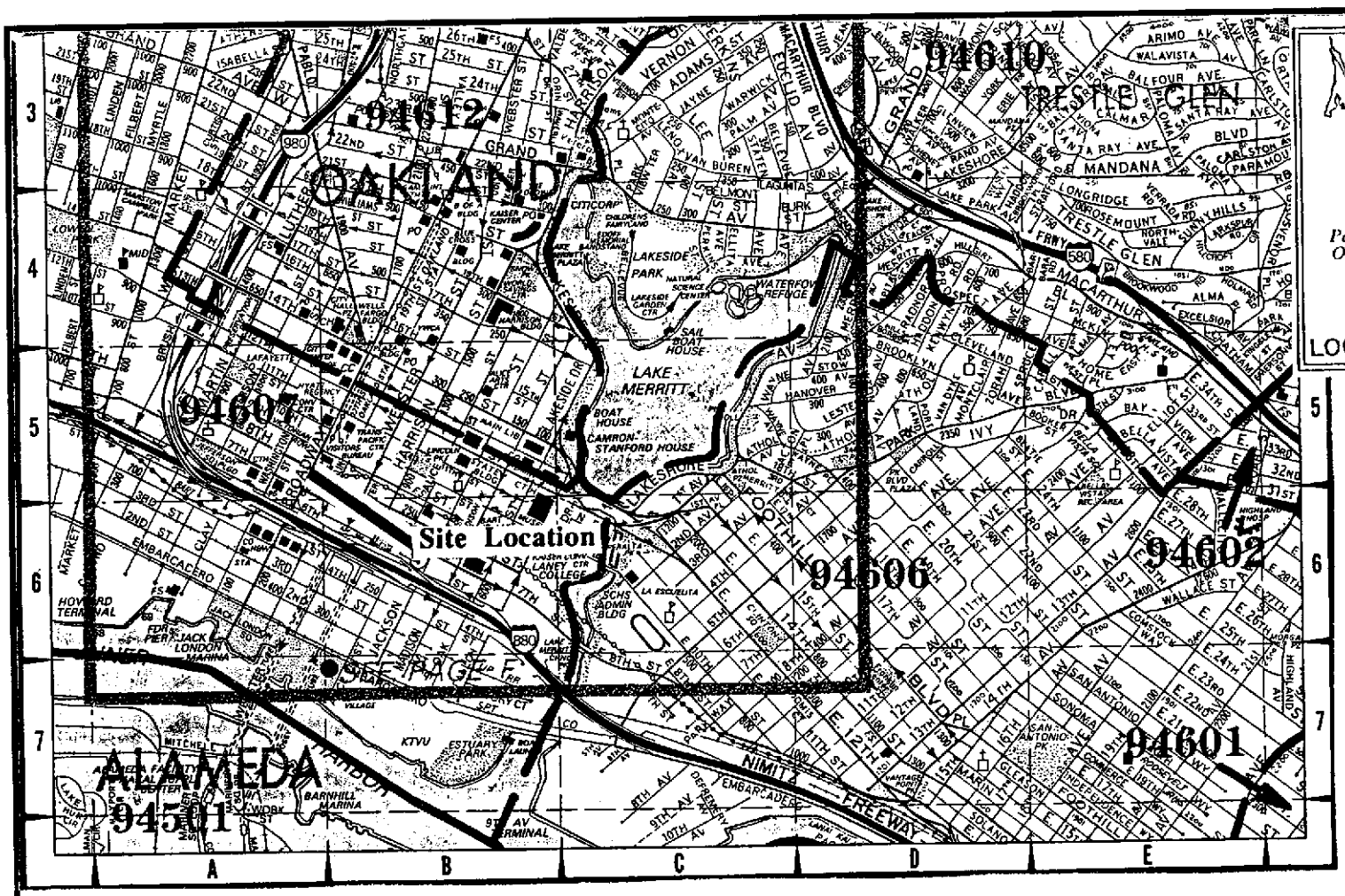
TABLE 1

SEPARATE PHASE HYDROCARBON RECOVERY
Former Shell Service Station
461 8th Street
Oakland, California
WIC# 204-5508-6205

Mont. Date	Well S-5		Well S-6		Recovery To Date (gal)
	Product Thickness (feet)	Volume Removed (gal)	Product Thickness (feet)	Volume Removed (gal)	
13-May-93	0.27	0	0.27	0	0
22-Jul-93	0.25	200	0.25	0	200
20-Oct-93	0.23	200	0.23	0	400
25-Jan-94	0.18	150	0.18	0	550
25-Apr-94	0.35	36	0.35	0	586
26-May-94	0.35	130	0.35	na	716
16-Jun-94	0.32	50	0.32	na	766
21-Jul-94	0.47	50	0.47	0	816
25-Aug-94	0.44	80	0.44	na	896
22-Sep-94	0.15	45	0.15	na	941
24-Oct-94	0.56	40	0.56	0	981
29-Nov-94	1.13	85	1.13	na	1066
22-Dec-94	0.99	0	0.99	0	1066
3-Jan-95	1.21	40	1.21	na	1106
22-Feb-95	0.60	60	0.60	na	1166
31-Mar-95	0.02	40	0.02	na	1206
20-Apr-95	0.33	60	0.33	0	1266
26-May-95	0.28	50	0.28	na	1316
30-Jun-95	0.02	60	0.02	na	1376
4-Oct-95	0.00	0	0.00	0	1376
3-Jan-96	0.83	0	0.83	0	1376
11-Apr-96	0.67	0	0.67	0	1376
11-Jul-96	0.90	0	0.90	0	1376
2-Oct-96	0.64	0	0.64	0	1376
22-Jan-97	0.16	0	0.16	0	1376
21-Jul-97	0.05	75	0.00	0	1451
29-Oct-97	0.03	60	0.00	40	1551
22-Jan-98	0.04	60	0.00	60	1671
1-May-98	0.06	50	0.00	200	1921
8-Jul-98	0.00	100	0.00	150	2171
26-Oct-98	0.00	100	0.00	100	2371
28-Jan-99	0.00	100	0.00	150	2621

Notes:
1. "Volume Removed" and "Recovery to Date" refer to the volume of liquid removed by a vacuum truck. This liquid includes ground water and separate phase hydrocarbons if present.

2. Product recovery booms were installed from 3Q95 to 4Q96.



Base Map: 1993 Thomas Guide

PLATE

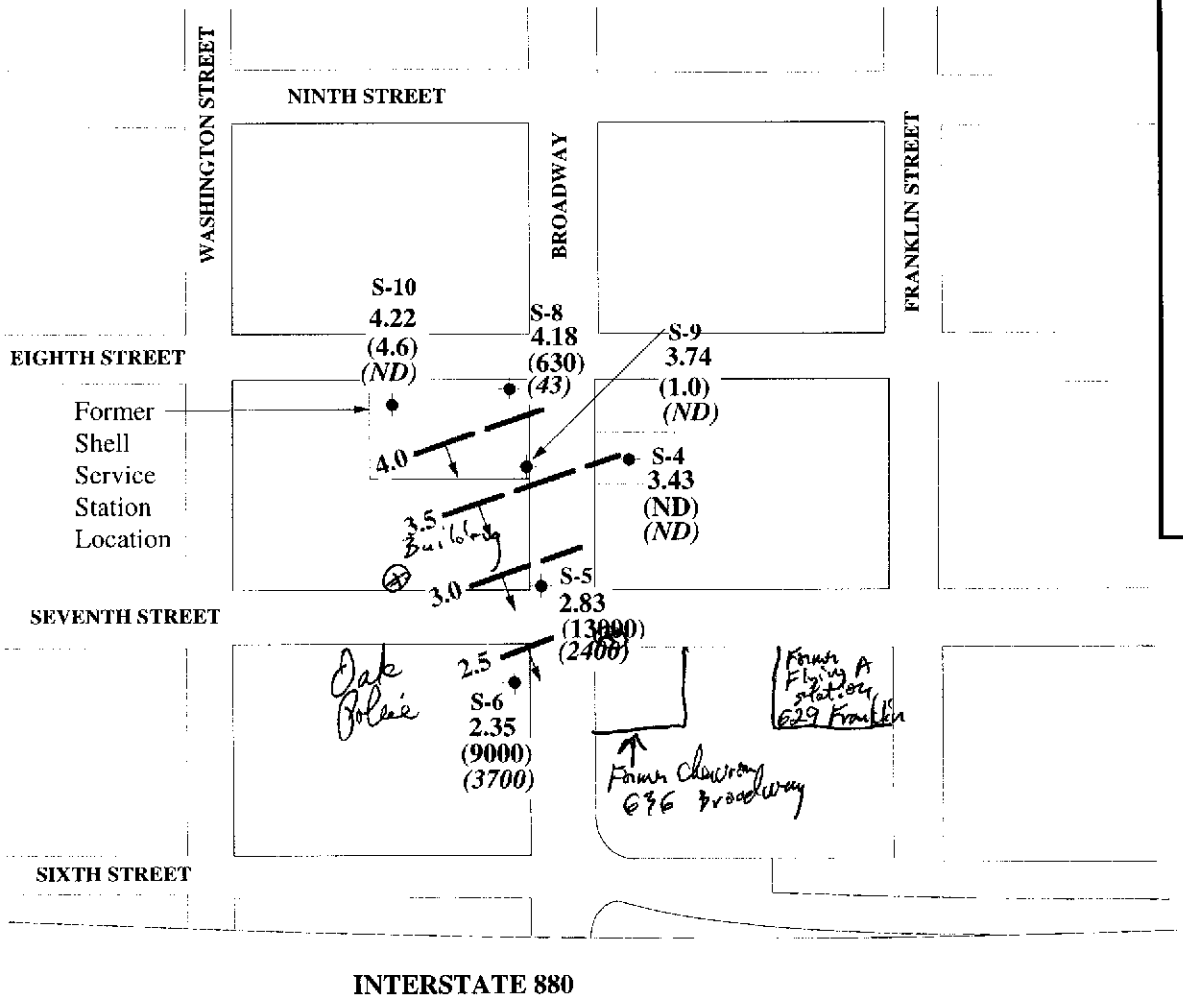
1

VICINITY MAP
Former Shell Service Station
461 8th Street
Oakland, California

CAMBRIA
240-1501

Drawn By: JWN Date: 10/3/94

Approved By: _____ Date: 2-26-99



EXPLANATION

- Ground water monitoring well
- Ground water elevation contour in feet referenced to mean sea level (MSL). Arrows indicate approximate ground water flow direction.
- **4.18** Ground water elevation in feet MSL
- **(630)** Benzene concentration in ppb ND = Not Detected
- ***(43)*** MTBE concentration in ppb
- **<x** Not detected at detection limit of x

Notes: Quarterly monitoring performed on 28-Jan-99
Approximate hydraulic gradient = 0.006

N

0 200

Scale in Feet

Note: Base Map taken from GeoStrategies Inc. Report dated 10-4-93.

PLATE 2

GROUND WATER CONTOUR/CHEMICAL CONCENTRATION MAP
Former Shell Service Station
461 8th Street
Oakland, California

CAMBRIA
240-1501

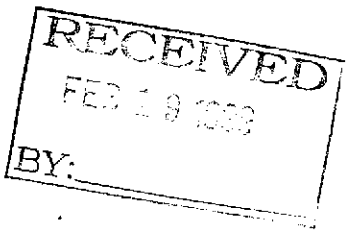
Drawn By: AKC | Date: 26-Feb-99 | Approved By: mh | Date: 2-26-99

Appendix A

Blaine Tech Services Inc.
Ground Water Monitoring Report

BLAINE
TECH SERVICES INC.

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



February 17, 1999

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

First Quarter 1999 Groundwater Monitoring at
Shell-branded Service Station
461 8th Street
Oakland, CA

Monitoring performed on January 28, 1999

Groundwater Monitoring Report **990128-P-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,

Ann Rember for: Deidre Kerwin

Deidre Kerwin
Operations Manager

DK/ew

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

cc: Cambria Environmental Technology, Inc.
P.O. Box 259
Sonoma, CA 95476-0259
Attn: Joe Neely

WELL CONCENTRATIONS
Shell-branded Service Station
461 8th Street
Oakland, CA
Wic #204-5508-6200

Well ID	Date	TPHg (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)	SPH Thickness (ft.)
S-4	10/26/1988	130	3.8	13	4.0	30	NA	NA	93.51 (TOC)	NA	NA	NA
S-4	02/14/1989	<50	0.5	<1	<1	3.0	NA	NA	93.51 (TOC)	12.82	80.69	0.00
S-4	05/01/1989	Well dry	NA	NA	NA	NA	NA	NA	93.51 (TOC)	16.48	77.03	0.00
S-4	07/27/1989	Well dry	NA	NA	NA	NA	NA	NA	93.51 (TOC)	15.84	77.67	0.00
S-4	10/05/1989	Well dry	NA	NA	NA	NA	NA	NA	93.51 (TOC)	15.98	77.53	0.00
S-4	01/09/1990	Well dry	NA	NA	NA	NA	NA	NA	93.51 (TOC)	15.86	77.65	0.00
S-4	04/30/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	93.51 (TOC)	14.48	79.03	0.00
S-4	07/31/1990	Well dry	NA	NA	NA	NA	NA	NA	93.51 (TOC)	NA	NA	NA
S-4	10/30/1990	Well dry	NA	NA	NA	NA	NA	NA	93.51 (TOC)	NA	NA	NA
S-4	05/06/1991	Well dry	NA	NA	NA	NA	NA	NA	93.51 (TOC)	15.23	78.28	0.00
S-4	06/27/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	93.51 (TOC)	13.54	79.97	0.00
S-4	09/24/1991	Well dry	NA	NA	NA	NA	NA	NA	93.51 (TOC)	15.85	77.66	0.00
S-4	11/07/1991	Well dry	NA	NA	NA	NA	NA	NA	93.51 (TOC)	15.60	77.91	0.00
S-4	02/13/1992	<50	<0.5	<0.5	<0.5	3.0	NA	NA	93.51 (TOC)	14.27	79.24	0.00
S-4	05/11/1992	Well dry	NA	NA	NA	NA	NA	NA	93.51 (TOC)	NA	NA	NA
S-4	12/03/1992	Well inaccessible		NA	NA	NA	NA	NA	93.51 (TOC)	NA	NA	NA
S-4	05/13/1993	Well inaccessible		NA	NA	NA	NA	NA	93.51 (TOC)	14.81	78.70	0.00
S-4	07/22/1993	Well inaccessible		NA	NA	NA	NA	NA	93.51 (TOC)	14.42	79.09	0.00
S-4	10/20/1993	Well inaccessible		NA	NA	NA	NA	NA	93.51 (TOC)	NA	NA	NA
S-4	01/25/1994	Well inaccessible		NA	NA	NA	NA	NA	93.51 (TOC)	14.60	78.91	0.00
S-4	04/25/1994	Well inaccessible		NA	NA	NA	NA	NA	93.51 (TOC)	14.39	79.12	0.00
S-4	07/21/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	93.51 (TOC)	22.29	71.22	0.00
S-4	10/24/1994	<500	<0.3	<0.3	<0.3	<0.6	NA	NA	93.51 (TOC)	22.72	70.79	0.00
S-4	12/22/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	25.77*	22.25	3.52	0.00
S-4	04/20/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	25.77	21.16	4.61	0.00
S-4	10/04/1995	<50	1.2	0.7	<0.5	<0.5	NA	NA	25.77	22.25	3.52	0.00
S-4	01/03/1996	<50	0.6	<0.5	<0.5	1.7	NA	NA	25.77	23.28	2.49	0.00

WELL CONCENTRATIONS
Shell-branded Service Station
461 8th Street
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Wic #204-5508-6200

Well ID	Date	TPHg (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)	SPH Thickness (ft.)
S-4	04/11/1996	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	25.77	21.58	4.19	0.00
S-4	07/11/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	25.77	21.60	4.17	0.00
S-4	10/02/1996	<50	<0.50	<0.50	<0.50	<0.50	2.6	NA	25.77	22.46	3.31	0.00
S-4	01/22/1997	<50	0.73	<0.50	<0.50	0.63	<2.5	NA	25.77	20.06	5.71	0.00
S-4	07/21/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	25.77	22.10	3.67	0.00
S-4	01/22/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	25.77	20.50	5.27	0.00
S-4	07/08/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	25.77	20.86	4.91	0.00
S-4	10/26/1998	NA	NA	NA	NA	NA	NA	NA	25.77	21.41	4.36	0.00
S-4	01/28/1999	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	25.77	22.34	3.43	0.00
S-5	04/16/1987	130000	15000	16000	NA	14000a	NA	NA	99.36 (TOC)	NA	NA	NA
S-5	10/26/1988	110000	20000	25000	2300	10000	NA	NA	99.36 (TOC)	NA	NA	NA
S-5	02/14/1989	94000	16000	21000	1800	10000	NA	NA	99.36 (TOC)	19.87	79.49	0.00
S-5	05/01/1989	120000	29000	35000	3100	15000	NA	NA	99.36 (TOC)	21.23	78.13	0.00
S-5	07/27/1989	110000	20000	29000	2400	14000	NA	NA	99.36 (TOC)	20.41	78.95	0.00
S-5	10/05/1989	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	20.43	78.94	0.01
S-5	01/09/1990	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	21.16	78.21	0.01
S-5	04/30/1990	100000	13000	22000	2100	11000	NA	NA	99.36 (TOC)	20.96	78.40	0.00
S-5	07/31/1990	53000	8300	14000	1200	7400	NA	NA	99.36 (TOC)	20.88	78.48	0.00
S-5	10/30/1990	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	21.96	77.42	0.03
S-5	05/06/1991	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	23.00	76.46	0.13
S-5	06/27/1991	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	20.53	78.85	0.03
S-5	09/24/1991	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	21.40	78.01	0.06
S-5	11/07/1991	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	21.33	78.23	0.25
S-5	02/13/1992	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	22.52	77.09	0.31
S-5	05/11/1992	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	22.46	77.36	0.58
S-5	12/03/1992	Well inaccessible		NA	NA	NA	NA	NA	99.36 (TOC)	NA	NA	NA

WELL CONCENTRATIONS
Shell-branded Service Station
461 8th Street
Oakland, CA
Wic #204-5508-6200

Well ID	Date	TPHg (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)	SPH Thickness (ft.)
S-5	05/13/1993	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	22.22	77.36	0.27
S-5	07/22/1993	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	21.68	77.88	0.25
S-5	10/20/1993	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	20.51	79.03	0.23
S-5	01/25/1994	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	21.93	77.57	0.18
S-5	04/25/1994	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	21.97	77.67	0.35
S-5	05/26/1994	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	20.84	78.80	0.35
S-5	06/10/1994	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	21.01	78.61	0.32
S-5	07/21/1994	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	22.18	77.56	0.47
S-5	08/25/1994	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	22.01	77.70	0.44
S-5	09/22/1994	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	22.00	77.48	0.15
S-5	10/24/1994	NA	NA	NA	NA	NA	NA	NA	99.36 (TOC)	22.28	77.53	0.56
S-5	12/22/1994	NA	NA	NA	NA	NA	NA	NA	22.94*	22.88	0.85	0.99
S-5	04/20/1995	NA	NA	NA	NA	NA	NA	NA	22.94	21.66	1.54	0.33
S-5	10/04/1995	NA	NA	NA	NA	NA	NA	NA	22.94	22.18	0.76	0.00
S-5	01/03/1996	NA	NA	NA	NA	NA	NA	NA	22.94	22.80	0.80	0.83
S-5	04/11/1996	NA	NA	NA	NA	NA	NA	NA	22.94	21.15	2.33	0.67
S-5	07/11/1996	NA	NA	NA	NA	NA	NA	NA	22.94	22.62	1.04	0.90
S-5	10/02/1996	NA	NA	NA	NA	NA	NA	NA	22.94	23.07	0.38	0.64
S-5	01/22/1997	NA	NA	NA	NA	NA	NA	NA	22.94	20.83	2.24	0.16
S-5	07/21/1997	NA	NA	NA	NA	NA	NA	NA	22.94	21.16	1.82	0.05
S-5	01/22/1998	NA	NA	NA	NA	NA	NA	NA	22.94	20.04	2.93	0.04
S-5	07/08/1998	220	14	40	5.8	34	3.3	NA	22.94	18.61	4.33	0.00
S-5	10/26/1998	NA	NA	NA	NA	NA	NA	NA	22.94	17.31	5.63	0.00
S-5	01/28/1999	51000	13000	1200	1200	2400	2400	NA	22.94	20.11	2.83	0.00

WELL CONCENTRATIONS
Shell-branded Service Station
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Well ID	Date	TPHg (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)	SPH Thickness (ft.)
S-6	04/16/1987	81000	16000	9000	NA	6400a	NA	NA	100.58 (TOC)	NA	NA	0.00
S-6	10/26/1988	110000	29000	18000	2500	8200	NA	NA	100.58 (TOC)	NA	NA	0.00
S-6	02/14/1989	54000	18000	4500	1400	4000	NA	NA	100.58 (TOC)	20.87	79.71	0.00
S-6	05/01/1989	93000	43000	9900	3000	8000	NA	NA	100.58 (TOC)	20.49	80.09	0.00
S-6	07/27/1989	52000	20000	3200	1700	5500	NA	NA	100.58 (TOC)	21.01	79.57	0.00
S-6	10/05/1989	55000	20000	2900	1600	5500	NA	NA	100.58 (TOC)	21.24	79.34	0.00
S-6	01/09/1990	76000	35000	9100	2300	8600	NA	NA	100.58 (TOC)	22.62	77.96	SHEEN
S-6	04/30/1990	39000	13000	2300	900	2800	NA	NA	100.58 (TOC)	22.10	78.48	0.00
S-6	07/31/1990	48000	20000	4600	1500	4900	NA	NA	100.58 (TOC)	22.00	78.58	0.00
S-6	10/30/1990	27000	7400	900	600	1400	NA	NA	100.58 (TOC)	22.14	78.44	0.00
S-6	05/06/1991	35000	3900	2700	2300	3500	NA	NA	100.58 (TOC)	22.40	78.18	0.00
S-6	06/27/1991	51000	19000	5600	1700	6300	NA	NA	100.58 (TOC)	21.21	79.37	0.00
S-6	09/24/1991	42000	14000	4300	1200	4000	NA	NA	100.58 (TOC)	22.26	78.32	0.00
S-6	11/07/1991	39000	11000	2000	800	2300	NA	NA	100.58 (TOC)	22.35	78.23	0.00
S-6	02/13/1992	64000	21000	6200	1600	5100	NA	NA	100.58 (TOC)	22.28	78.30	0.00
S-6	05/11/1992	57000	22000	7600	2200	7700	NA	NA	100.58 (TOC)	22.10	78.48	0.00
S-6	12/03/1992	110000	26000	9400	2100	8700	NA	NA	100.58 (TOC)	22.14	78.44	0.00
S-6	05/13/1993	58000	21000	6800	2500	9800	NA	NA	100.58 (TOC)	22.16	78.42	0.00
S-6	07/22/1993	70000	31000	14000	3000	13000	NA	NA	100.58 (TOC)	21.64	78.94	0.00
S-6	10/20/1993	48000	28000	9800	3200	12000	NA	NA	100.58 (TOC)	21.62	78.96	0.00
S-6	01/25/1994	70000	23000	7500	2500	8000	NA	NA	100.58 (TOC)	21.80	78.78	0.00
S-6	04/25/1994	61000	16000	4000	1800	5100	NA	NA	100.58 (TOC)	21.68	78.90	0.00
S-6	07/21/1994	44000	8200	3600	1400	3900	NA	NA	100.58 (TOC)	21.78	78.80	0.00
S-6	10/24/1994	2936	1184	440.6	163	648.4	NA	NA	100.58 (TOC)	22.06	78.52	0.00
S-6	12/22/1994	32000	7000	2900	790	2400	NA	NA	22.08*	21.91	0.17	0.00
S-6	04/20/1995	56000	15000	3800	1900	4900	NA	NA	22.08	21.38	0.70	0.00
S-6	10/04/1995	49000	8400	4700	1800	4800	NA	NA	22.08	21.80	0.28	0.00

WELL CONCENTRATIONS
Shell-branded Service Station
461 8th Street
Oakland, CA
Wic #204-5508-6200

Well ID	Date	TPHg (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)	SPH Thickness (ft.)
S-6	01/03/1996	52000	9100	7100	1800	5800	NA	NA	22.08	21.70	0.38	0.00
S-6	04/11/1996	59000	11000	7100	2100	6400	<500	NA	22.08	21.62	0.46	0.00
S-6	07/11/1996	72000	18000	6600	2500	8400	<1000	NA	22.08	21.65	2.78	0.00
S-6	10/02/1996	57000	11000	6500	1500	5100	<500	NA	22.08	21.80	2.63	0.00
S-6	01/22/1997	67000	15000	5000	1800	5400	<1000	NA	22.08	19.95	2.13	0.00
S-6	07/21/1997	61000	15000	2100	1100	3500`	1900	NA	22.08	20.61	1.47	0.00
S-6	01/22/1998	46000	14000	3200	1300	3400	<500	NA	22.08	19.82	2.26	0.00
S-6	07/08/1998	74000	26000	7500	2200	6200	<1000	NA	22.08	18.20	3.88	0.00
S-6	10/26/1998	NA	NA	NA	NA	NA	NA	NA	22.08	18.81	3.27	0.00
S-6	01/28/1999	120000	9000	14000	2700	14000	3700	NA	22.08	19.73	2.35	0.00
S-6 (D)	07/21/1994	32000	7800	3400	1300	3700	NA	NA	22.08	NA	NA	NA
S-6 (D)	10/24/1994	2968	770.8	325.3	144	622	NA	NA	22.08	NA	NA	NA
S-6 (D)	12/22/1994	32000	8000	3800	1100	3400	NA	NA	22.08	NA	NA	NA
S-6 (D)	04/20/1995	49000	13000	3500	1800	4700	NA	NA	22.08	NA	NA	NA
S-6 (D)	10/04/1995	41000	8400	4100	1400	4400	NA	NA	22.08	NA	NA	NA
S-6 (D)	04/11/1996	59000	11000	6800	1900	6400	<500	NA	22.08	NA	NA	NA
S-6 (D)	01/22/1997	63000	15000	4800	1800	5200	<1000	NA	22.08	NA	NA	NA
S-8	12/22/1994	600	120	32	5.2	34	NA	NA	27.21	24.87	2.34	0.00
S-8	04/20/1995	460	180	23	5.2	21	NA	NA	27.21	23.90	3.31	0.00
S-8	10/04/1995	830	210	38	11	42	NA	NA	27.21	24.48	2.73	0.00
S-8	01/03/1996	350	61	12	2.5	12	NA	NA	27.21	24.62	2.59	0.00
S-8	04/11/1996	570	140	37	12	47	<6.2	NA	27.21	24.32	2.89	0.00
S-8	07/11/1996	980	98	32	9.1	160	<12	NA	27.21	24.10	3.11	0.00
S-8	10/02/1996	280	62	13	3.3	25	15	NA	27.21	25.38	1.83	0.00
S-8	01/22/1997	400	90	13	4.9	25	12	NA	27.21	23.91	3.30	0.00

WELL CONCENTRATIONS
Shell-branded Service Station
461 8th Street
Oakland, CA
Wic #204-5508-6200

Well ID	Date	TPHg (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)	SPH Thickness (ft.)
S-8	07/21/1997	2900	380	110	26	260	85	NA	27.21	23.62	3.59	0.00
S-8	01/22/1998	3800	790	140	42	330	160	NA	27.21	23.52	3.69	0.00
S-8	07/08/1998	3600	1800	<25	<25	<25	<125	NA	27.21	21.52	5.69	0.00
S-8	10/26/1998	NA	NA	NA	NA	NA	NA	NA	27.21	22.01	5.20	0.00
S-8	01/28/1999	2000	630	6.2	24	51	43	NA	27.21	23.03	4.18	0.00
S-8 (D)	01/03/1996	340	54	12	2.4	12	NA	NA	27.21	NA	NA	NA
S-8 (D)	10/02/1996	490	110	24	7.0	45	22	<2.0	27.21	NA	NA	NA
S-8 (D)	07/21/1997	3200	420	120	32	300	130	NA	27.21	NA	NA	NA
S-8 (D)	01/22/1998	3500	780	120	33	300	160	NA	27.21	NA	NA	NA
S-8 (D)	07/08/1998	4000	1800	<25	<25	31	<125	NA	27.21	NA	NA	NA
S-9	12/22/1994	2600	400	150	42	310	NA	NA	26.06	24.37	1.69	0.00
S-9	04/20/1995	1900	400	130	51	200	NA	NA	26.06	23.49	2.57	0.00
S-9	10/04/1995	3200	590	260	68	280	NA	NA	26.06	24.01	2.05	0.00
S-9	01/03/1996	Well inaccessible		NA	NA	NA	NA	NA	26.06	NA	NA	NA
S-9	04/11/1996	2100	440	1500	42	210	<25	NA	26.06	23.61	2.45	0.00
S-9	07/11/1996	5200	940	450	120	520	<50	NA	26.06	23.78	2.28	0.00
S-9	10/02/1996	3000	680	220	56	270	<62	NA	26.06	24.31	1.75	0.00
S-9	01/22/1997	1500	230	71	36	130	<12	NA	26.06	23.08	2.98	0.00
S-9	07/21/1997	3400	590	57	19	210	96	NA	26.06	22.83	3.23	0.00
S-9	01/22/1998	2600	300	46	<10	270	62	NA	26.06	21.96	4.10	0.00
S-9	07/08/1998	820	150	6.2	8	57	<10	NA	26.06	20.85	5.21	0.00
S-9	10/26/1998	NA	NA	NA	NA	NA	NA	NA	26.06	21.39	4.67	0.00
S-9	01/28/1999	<50	1.0	<0.50	<0.50	<0.50	<2.5	NA	26.06	22.32	3.74	0.00
S-9 (D)	07/11/1996	4800	890	430	110	500	<50	NA	26.06	NA	NA	NA

WELL CONCENTRATIONS
Shell-branded Service Station
461 8th Street
Oakland, CA
Wic #204-5508-6200

Well ID	Date	TPHg (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)	SPH Thickness (ft.)
S-10	12/22/1994	420	27	8.0	18	45	NA	NA	28.04	25.84	2.20	0.00
S-10	04/20/1995	820	49	3.7	97	52	NA	NA	28.04	24.92	3.12	0.00
S-10	10/04/1995	240	6.5	1.1	16	12	NA	NA	28.04	25.47	2.57	0.00
S-10	01/03/1996	1100	27	4.9	110	70	NA	NA	28.04	25.60	2.44	0.00
S-10	04/11/1996	530	19	1.6	82	52	<5.0	NA	28.04	25.27	2.77	0.00
S-10	07/11/1996	570	16	3.2	53	53	<2.5	NA	28.04	25.46	2.58	0.00
S-10	10/02/1996	270	8.2	0.77	24	23	3.3	NA	28.04	25.81	2.23	0.00
S-10	01/22/1997	160	4.8	0.73	16	11	<2.5	NA	28.04	24.74	3.30	0.00
S-10	07/21/1997	530	5.7	0.70	29	69	<2.5	NA	28.04	24.50	3.54	0.00
S-10	01/22/1998	1500	15	<5.0	88	130	<25	NA	28.04	24.44	3.60	0.00
S-10	07/08/1998	530	4.8	1.1	47	51	<2.5	NA	28.04	22.36	5.68	0.00
S-10	10/26/1998	NA	NA	NA	NA	NA	NA	NA	28.04	22.81	5.23	0.00
S-10	01/28/1999	630	4.6	0.98	<0.50	59	<2.5	NA	28.04	23.82	4.22	0.00

WELL CONCENTRATIONS
Shell-branded Service Station
461 8th Street
Oakland, CA
Wic #204-5508-6200

Well ID	Date	TPHg (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)	SPH Thickness (ft.)

Abbreviations:
TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
BTEX = benzene, toluene, ethylbenzene, xylenes by EPA Method 8020
MTBE = methyl-tertiary-butyl ether
TOC = Top of Casing Elevation
TOB = Top of Wellbox Elevation
SPH = Separate-Phase Hydrocarbons
GW = Groundwater
ug/L = parts per billion
msl = Mean sea level
ft = Feet
<n = Below detection limit
D = Duplicate sample

Notes:
* = Prior to December 22, 1994, well elevations taken from Top of Casing.
a = Ethylbenzene and xylenes combined

Sequoia Analytical

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

Project: Shell 461 8th Street, Oakland

Enclosed are the results from samples received at Sequoia Analytical on January 29, 1999. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9901F34 -01	LIQUID, S-4	01/28/99	Purgeable TPH/BTEX/MTBE
9901F34 -02	LIQUID, S-5	01/28/99	Purgeable TPH/BTEX/MTBE
9901F34 -03	LIQUID, S-6	01/28/99	Purgeable TPH/BTEX/MTBE
9901F34 -04	LIQUID, S-8	01/28/99	Purgeable TPH/BTEX/MTBE
9901F34 -05	LIQUID, S-9	01/28/99	Purgeable TPH/BTEX/MTBE
9901F34 -06	LIQUID, S-10	01/28/99	Purgeable TPH/BTEX/MTBE

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Project Manager

Sequoia Analytical

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Blaine Tech Services	Client Proj. ID: Shell 461 8th Street, Oakland	Sampled: 01/28/99
1680 Rogers Avenue	Sample Descript: S-4	Received: 01/29/99
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 02/02/99
Attention: Fran Thie	Lab Number: 9901F34-01	Reported: 02/11/99

QC Batch Number: GC020299BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	98

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager

Sequoia Analytical

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Blaine Tech Services	Client Proj. ID: Shell 461 8th Street, Oakland	Sampled: 01/28/99
1680 Rogers Avenue	Sample Descript: S-5	Received: 01/29/99
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 02/02/99
Attention: Fran Thie	Lab Number: 9901F34-02	Reported: 02/11/99

QC Batch Number: GC020299BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10000	51000
Methyl t-Butyl Ether	500	2400
Benzene	100	13000
Toluene	100	1200
Ethyl Benzene	100	1200
Xylenes (Total)	100	2400
Chromatogram Pattern:		GAS

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	110

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager

Sequoia Analytical

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Blaine Tech Services	Client Proj. ID: Shell 461 8th Street, Oakland	Sampled: 01/28/99
1680 Rogers Avenue	Sample Descript: S-6	Received: 01/29/99
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 02/03/99
Attention: Fran Thie	Lab Number: 9901F34-03	Reported: 02/11/99

QC Batch Number: GC020399BTEX30A
Instrument ID: GCHP30

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**25000**	**120000**
Methyl t-Butyl Ether	**1250**	**3700**
Benzene	**250**	**9000**
Toluene	**250**	**14000**
Ethyl Benzene	**250**	**2700**
Xylenes (Total)	**250**	**14000**
Chromatogram Pattern:		**GAS**

Surrogates	**Control Limits %**		**% Recovery**
Trifluorotoluene	70	130	78

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager

Sequoia Analytical

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Blaine Tech Services	Client Proj. ID: Shell 461 8th Street, Oakland	Sampled: 01/28/99
1680 Rogers Avenue	Sample Descript: S-8	Received: 01/29/99
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 02/03/99
Attention: Fran Thie	Lab Number: 9901F34-04	Reported: 02/11/99

QC Batch Number: GC020399BTEX30A
Instrument ID: GCHP30

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**500**	**2000**
Methyl t-Butyl Ether	**25**	**43**
Benzene	**5.0**	**630**
Toluene	**5.0**	**6.2**
Ethyl Benzene	**5.0**	**24**
Xylenes (Total)	**5.0**	**51**
Chromatogram Pattern:		
Unidentified HC		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	81

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager

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Blaine Tech Services	Client Proj. ID: Shell 461 8th Street, Oakland	Sampled: 01/28/99
1680 Rogers Avenue	Sample Descript: S-9	Received: 01/29/99
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 02/02/99
Attention: Fran Thie	Lab Number: 9901F34-05	Reported: 02/11/99

QC Batch Number: GC020299BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	**0.50**	**1.0**
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	86

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager

Sequoia Analytical

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

Blaine Tech Services	Client Proj. ID: Shell 461 8th Street, Oakland	Sampled: 01/28/99
1680 Rogers Avenue	Sample Descript: S-10	Received: 01/29/99
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 02/02/99
Attention: Fran Thie	Lab Number: 9901F34-06	Reported: 02/11/99

QC Batch Number: GC020299BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**630**
Methyl t-Butyl Ether	2.5	N.D.
Benzene	**0.50**	**4.6**
Toluene	**0.50**	**0.98**
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	**0.50**	**59**
Chromatogram Pattern:		**GAS**

Surrogates	**Control Limits %**		**% Recovery**
Trifluorotoluene	70	130	93

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager

Sequoia Analytical

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

Client Project ID: Shell 461 8th Street, Oakland

QC Sample Group: 9901F34-01,02,05,06

Reported: Feb 11, 1999

QUALITY CONTROL DATA REPORT

Matrix:	Liquid			
Method:	EPA 8020			
Analyst:	BTF			
ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
QC Batch #:	GC020299BTEX03A			
Sample No.:	GW9901E40-07MS			
Date Prepared:	2/2/99	2/2/99	2/2/99	2/2/99
Date Analyzed:	2/2/99	2/2/99	2/2/99	2/2/99
Instrument I.D.#:	GCHP03	GCHP03	GCHP03	GCHP03
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	10	10	10	30
Matrix Spike, ug/L:	9.1	9.5	9.4	29
% Recovery:	91	95	94	96
Matrix Spike Duplicate, ug/L:	9.2	9.4	9.4	28
% Recovery:	92	94	94	93
Relative % Difference:	1.1	1.1	0.0	3.2
RPD Control Limits:	0-25	0-25	0-25	0-25

LCS Batch#:	GWLCS020299A			
Date Prepared:	2/2/99	2/2/99	2/2/99	2/2/99
Date Analyzed:	2/2/99	2/2/99	2/2/99	2/2/99
Instrument I.D.#:	GCHP03	GCHP03	GCHP03	GCHP03
Conc. Spiked, ug/L:	10	10	10	30
LCS Recovery, ug/L:	9.2	9.3	9.5	28
LCS % Recovery:	92	93	95	93

Percent Recovery Control Limits:

MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Kayvan Kimyai
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

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

Client Project ID: Shell 461 8th Street, Oakland

QC Sample Group: 9901F34-03,04

Reported: Feb 11, 1999

QUALITY CONTROL DATA REPORT

Matrix:	Liquid
Method:	EPA 8015
Analyst:	BTF
ANALYTE	Gasoline

QC Batch #: GC020399BTEX30A

Sample No.:	GW9902094-2MS
Date Prepared:	2/3/99
Date Analyzed:	2/3/99
Instrument I.D.#:	GCHP30
Sample Conc., ug/L:	N.D.
Conc. Spiked, ug/L:	250
Matrix Spike, ug/L:	230
% Recovery:	92
Matrix Spike Duplicate, ug/L:	230
% Recovery:	93
Relative % Difference:	1.1
RPD Control Limits:	0-25

LCS Batch#: GWLCS020399A

Date Prepared:	2/3/99
Date Analyzed:	2/3/99
Instrument I.D.#:	GCHP30
Conc. Spiked, ug/L:	250
LCS Recovery, ug/L:	250
LCS % Recovery:	100

Percent Recovery Control Limits:

MS/MSD	60-140
LCS	70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Kayvan Kimyai
Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

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Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112 Attention: Fran Thie	Client Proj. ID: Shell 461 8th Street, Oakland Lab Proj. ID: 9901F34	Received: 01/29/99 Reported: 02/11/99

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 8 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

Sample ID 9901F34, Sample #2 was diluted 200 fold
Sample ID 9901F34, Sample #3 was diluted 500 fold
Sample ID 9901F34, Sample #4 was diluted 10 fold

SEQUOIA ANALYTICAL

Project Manager

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 990128-P2

Date: 1-28-99
Page 1 of 1

Site Address: 461 8th Street, Oakland, CA

WIC#: 204-5508-6200

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: ~~9901020~~ 9901F34

Sampled by: [signature]

Printed Name: Paul Sanna

LAB: Sequoia

Analysis Required

CHECK ONE (1) BOX ONLY		CT/DT
G.W. Monitoring	XX	4461
Site Investigation	☐	4441
Soil Classify/Disposal	☐	4442
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 ☐
- 16 days XX (Normal)
- Other ☐ ____

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

UST AGENCY: ____

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			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-4 ✓	1/28			X		3						X							01	
S-5 ✓	↓			↓		↓						↓							02	
S-6 ✓	↓			↓		↓						↓							03	
S-8 ✓	↓			↓		↓						↓							04	
S-9 ✓	↓			↓		↓						↓							05	
S-10 ✓	↓			↓		↓						↓							06	

29 2 48

Relinquished By (signature):	Printed Name:	Date/Time:	Received (signature):	Printed Name:	Date/Time:
[signature]	Paul Sanna	Date: 1.29.99 Time: 1155	[signature]	LANCE DAVIDSON	Date: 1.29.99 Time: 1155
[signature]	LANCE A. DAVIDSON	Date: 1.29.99 Time:	Received (signature):	Printed Name:	Date: Time:
		Date: Time:	W Jones	Jones	Date: 1-29 Time: 1448

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

BLAINE
TECH SERVICES INC.

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

December 2, 1998

Equiva Services, L.L.C.
P.O. Box 6249
Carson, CA 90749-6249

Attn: Karen Petryna

Shell WIC #204-5508-6200
461 8th Street
Oakland, California

4th Quarter 1998

Groundwater Monitoring Report 981026-K-1

Blaine Tech Services, Inc. performs environmental monitoring and documentation as an independent third party. Copies of our Groundwater Monitoring Report are forwarded to the consultant overseeing work at this site. Submission of the assembled documents to interested regulatory agencies will be made by the designated consultant.

Groundwater monitoring at this site was performed in accordance with Standard Operating Procedures provided to the interested regulatory agencies. If you have any questions about the work performed at this site please call me at (408) 573-0555 ext. 201.

Yours truly,

Dede Kern for

Francis Thie

attachments: Table of Well Gauging Data
Field Data Sheets

cc: Cambria Environmental Technology, Inc.
P.O. Box 259
Sonoma, CA 95476-0259
Attn: Joe Neely

(Any professional evaluations or recommendations will be made by the consultant under separate cover.)

TABLE OF WELL GAUGING DATA

WELL I.D.	DATA COLLECTION DATE	MEASUREMENT REFERENCED TO	QUALITATIVE OBSERVATIONS (sheen)	DEPTH TO FIRST IMMISCIBLES LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLES LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (gal.)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
S-4	10/26/98	TOB	--	NONE	--	--	21.41	29.03
S-5	10/26/98	TOB	ODOR	NONE	--	--	17.31	41.20
S-6	10/26/98	TOB	ODOR	NONE	--	--	18.81	36.64
S-8	10/26/98	TOB	ODOR	NONE	--	--	22.01	29.36
S-9	10/26/98	TOB	--	NONE	--	--	21.39	30.20
S-10	10/26/98	TOB	--	NONE	--	--	22.81	36.67

WELL GAUGING DATA

Project # 981026-141 Date 10/26/98 Client Shell

Site 411 8th St. 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	
B-4	4					21.41	29.03	TOB	
* B-5	4	odor				17.31	30.20		
* B-6	4	odor				18.81	30.64		
B-8	4	odor				22.01	29.36		
B-9	4					21.39	30.20		
B-10	4					22.81	30.67	↓	
		* no water-table FP w/interface probe							

SHELL WELL MONITORING DATA SHEET

Project #: 981026-K1	WIC #: 204-5508-6200
Sampler: Mark	Date: 10/26/98
Well I.D.: S-3	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 17.31	Depth to Water: 11.20
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	radius² * 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 Gals.

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
915	Stop well for quarterly gauging					
[illegible] SSS pumped 100 gallons						
1000			DTW=37.21			
					[illegible]	
		cracked casing				

Did well dewater? Yes No	Gallons actually evacuated:
Sampling Time:	Sampling Date:
Sample I.D.:	Laboratory: Sequoia Crosby
Analyzed for: TPH-G BTEX MTBE TPH-D	Other:
Equipment Blank I.D.: @ Time	Duplicate I.D.:
Analyzed for: TPH-G BTEX MTBE TPH-D	Other:
D.O. (if req'd): Pre-purge: mg/L	Post-purge: mg/L

SHELL WELL MONITORING DATA SHEET

Project #: 981026-K1	WIC #: 204-8508-6200
Sampler: Mark	Date: 10/26/98
Well I.D.: S-6	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 26.64	Depth to Water: 18.81
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	radius² * 0.163

Purge Method: Bailer / Middleburg / Electric Submersible / Extraction Pump / Other: _____

Sampling Method: Bailer / Extraction Port / Other: _____

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
10:00	Start well for quarterly sampling					
	555 pumped 50 gallons					
10:30	Finished purging Start = 28.74					

Did well dewater? Yes (No)		Gallons actually evacuated:	
Sampling Time:		Sampling Date: 10/26/98	
Sample I.D.: S-6		Laboratory: (Sequoia) Crosby	
Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D		Other:	
Equipment Blank I.D.:	@ Time	Duplicate I.D.:	
Analyzed for: TPH-G BTEX MTBE TPH-D		Other:	
D.O. (if req'd):	Pre-purge:	mg/L	Post-purge: mg/L

WELL HEAD INSPECTION CHECKLIST AND REPAIR ORDER

Client Shell WIC#204-5508-6200 Inspection date: 10/26/98

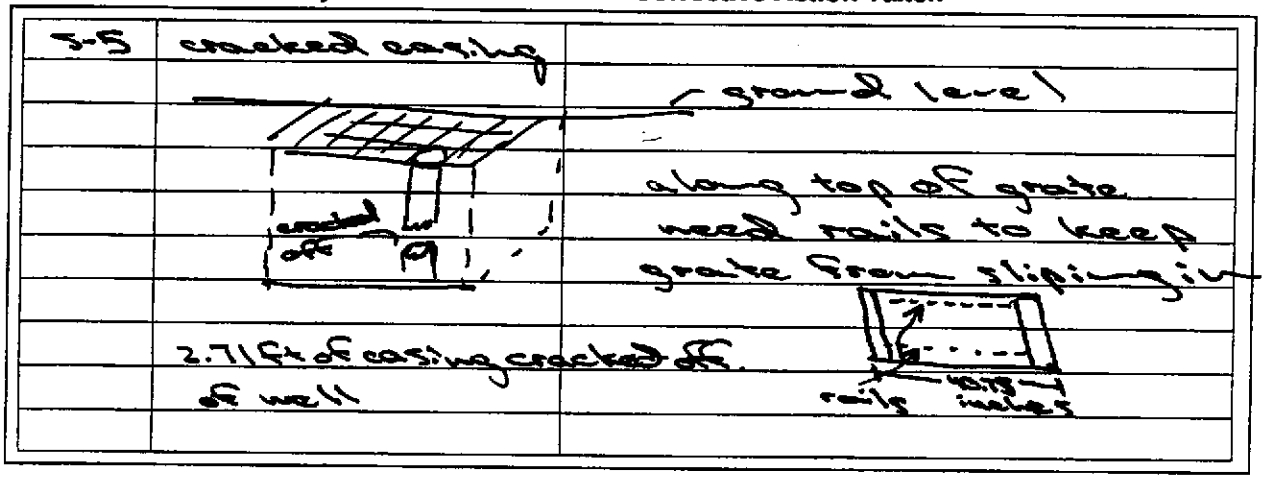
Site address 461 8TH STREET OAKLAND Inspected by: MS

BTS Event # 981026-K1

1. Lid on the box? Yes No	5. Water standing in the well box?	7. Can cap be pulled loose?
2. Lid whole?	5a. Standing above well top?	8. Can cap seal out water?
3. Lid secure?	5b. Standing below well top?	9. Padlock present?
4. Lid seal intact?	5c. Water even with top of well cap?	10. Padlock found locked?
	6. Well cap/plug present?	11. Padlock functional?

☐ Check box if *no deficiences* were found. Note below deficiencies you were able to correct.

Well I.D.	Deficiency	Corrective Action Taken
S-5	cracked casing	



Note below all deficiences that could not be corrected and *still need to be corrected.*

Well I.D.	Persisting Deficiency	BTS Office assigns or defers Correction to:	Date assigned	Date corrected

Office review and assignments made by _____ date _____