CAMBRIA

ENVIRONMENTAL PROTECTION
99 FEB 19 PM 2:55

#229

February 15, 1999

Mr. Barney Chan
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway #250
Alameda, California 94502

Re: **Quarterly Monitoring Report - Fourth Quarter 1998**
Former Shell Service Station
2101 Park Boulevard
Oakland, California
WIC #204-5508-1206

- awaiting reply to request for a Tier 2 RBCA
- need to comment on the rules for bio-parameters (NO_3, $SO_4^=$, DO).

Dear Mr. Chan:

This Quarterly Monitoring Report describes the recently completed activities associated with ground water monitoring and sampling at the referenced site (Plates 1 and 2). This report was prepared to meet quarterly 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 fourth quarter of 1998 are summarized below:

- Blaine Tech Services Inc. (Blaine), of San Jose, California measured ground water levels in Wells S-1, S-2, and S-3 and collected ground water samples from Well S-3 on December 24, 1998. The samples were transported to Sequoia Analytical of Redwood City, California for chemical analysis.

- Ground water level measurement data were evaluated and used to prepare a ground water contour map (Plate 2). The ground water flow direction is to the south at an approximate hydraulic gradient of 0.034.

- The ground water sample from Well S-3 contained 3,700 ppb TPPH, 590 ppb TEPH, 320 ppb benzene, and 55 ppb MTBE

Quarterly Sampling

Monitoring Well S-3 was sampled and analyzed for Total Purgeable Petroleum Hydrocarbons quantitated as gasoline (TPPH) and Total Extractable Petroleum Hydrocarbons as Diesel

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

(TEPH) according to EPA Method 8015 (Modified), benzene, toluene, ethylbenzene, xylenes (BTEX), methyl-tertiary-butyl-ether (MTBE) according to EPA Method 8020, total dissolved solids by EPA Method 160.1, nitrates and sulfates by EPA Method 300.0.

Field monitoring data and chemical analytical data are presented in a summary table in Blaine's ground water monitoring report (Appendix A). A ground water contour/chemical concentration map is presented as Plate 2.

Quarterly monitoring, sampling, and reporting will continue on the established schedule for this site.

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

Sincerely,
Cambria Environmental Technology, Inc.

Aubrey K Cool
for:
Mike Prinz
Project Engineer

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

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

Attachments

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

Appendix A

Blaine Tech Services Inc - Ground Water Monitoring Report

cc Mr. Frank J. Schlessinger, Schlessinger & Associates (property owner)
Mr. Steve Makara, Goodyear Tire & Rubber Company (tenant)
Ms. Karen Petryna, Equiva Services LLC

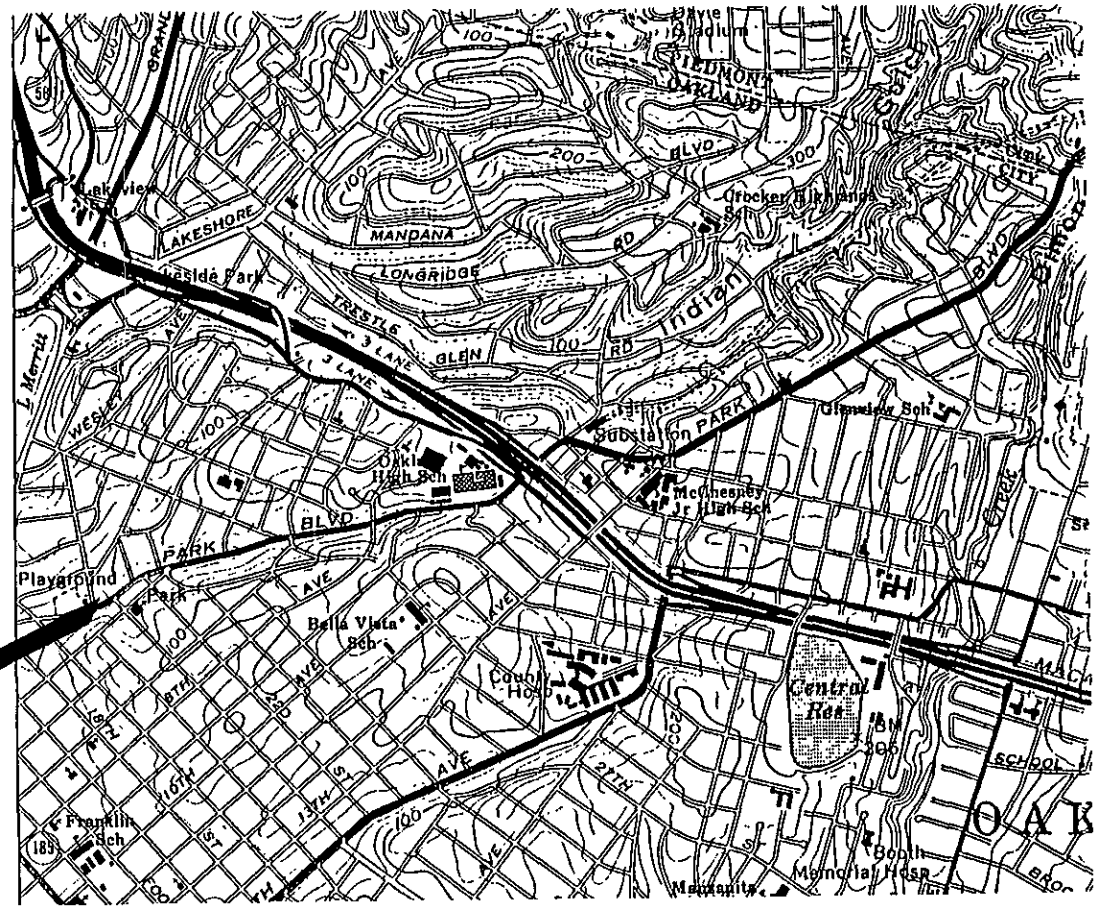

PLATE
1

VICINITY MAP
Former Shell Service Station
2101 Park Boulevard
Oakland, California

CAMBRIA
240-0865

Drawn By: GLV

Date: 2-24-95

Approved By: _____ Date: 2-12-99

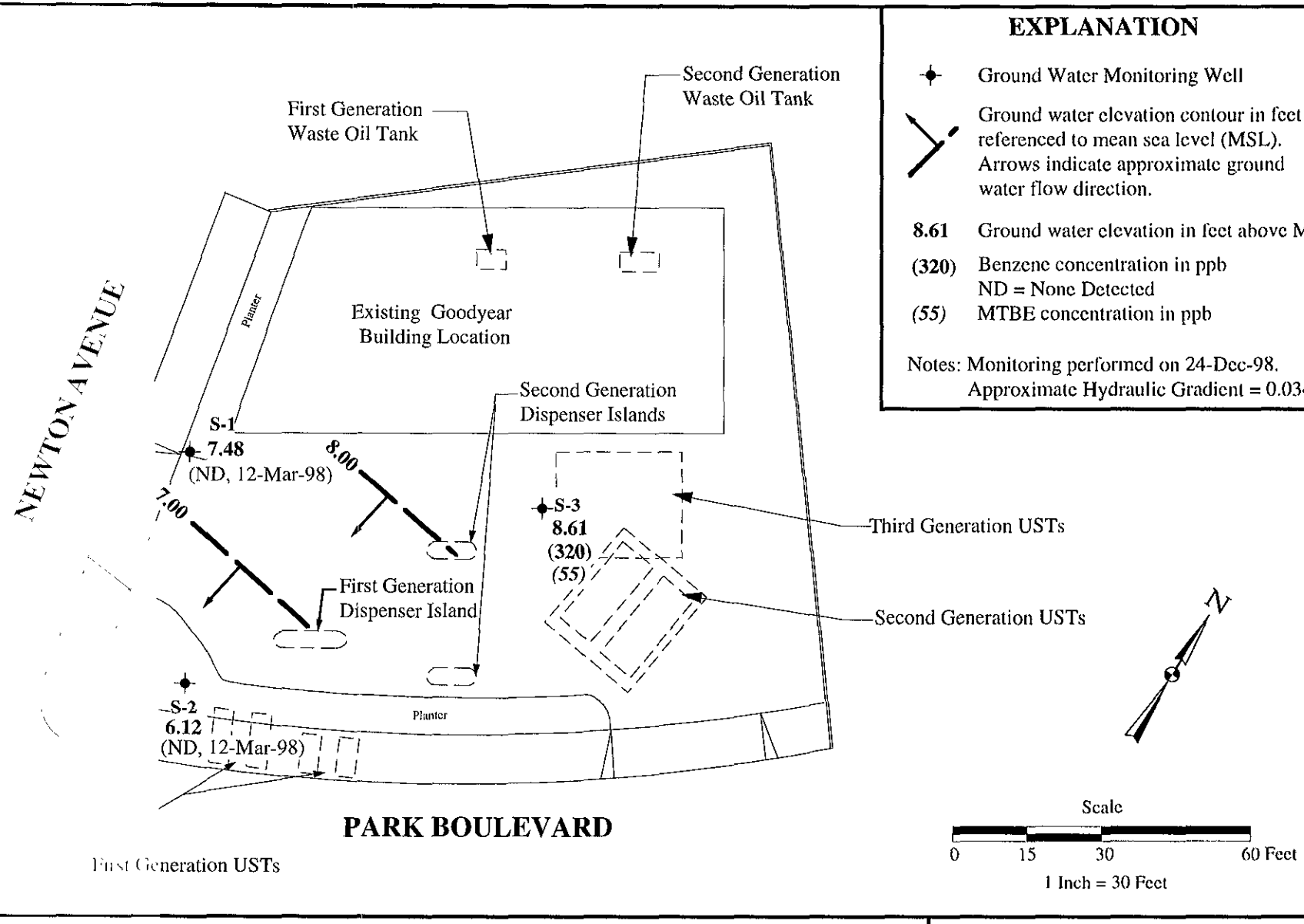

PLATE
2

GROUND WATER CONTOUR/CHEMICAL CONCENTRATION MAP
Former Shell Service Station
2101 Park Boulevard
Oakland, California

CAMBRIA
240-0865

Drawn By: MDP

Date: 10-Feb-99

Approved By: mh

Date: 2-12-99

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 4, 1999

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

Fourth Quarter 1998 Groundwater Monitoring at
SHELL -branded Service Station
2101 Park Blvd.
Oakland, CA

Monitoring performed on December 24, 1998

Groundwater Monitoring Report **981224-T-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 Shell Martinez Manufacturing Complex.

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/mt

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

cc: Joe Neely
Cambria Environmental Technology, Inc.
270 Perkings Street
Sonoma, CA 95476-0259

WELL CONCENTRATIONS
Shell-branded Service Station
2101 Park Avenue
Oakland, CA
Wic #204-5508-1206

Well ID	Date	TPHg (ug/L)	TPHd (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)
S-1	06/20/1995	160	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	11.93	4.67	7.26	NA	NA
S-1	09/12/1995	<50	250	3.0	<0.5	<0.5	<0.5	NA	NA	11.93	4.19	7.74	NA	NA
S-1	12/28/1995	70	160	1.1	<0.5	<0.5	1.3	NA	NA	11.93	5.30	6.63	NA	NA
S-1	03/25/1996	70	220	<0.5	<0.5	<0.5	<0.5	<2.0	NA	11.93	3.44	8.49	NA	NA
S-1	06/27/1996	<50	140	0.59	<0.50	<0.50	<0.50	<2.5	NA	11.93	3.15	8.78	NA	NA
S-1	09/26/1996	<50	190	<0.50	<0.50	<0.50	<0.50	<2.5	NA	11.93	3.90	8.03	NA	NA
S-1	12/10/1996	<50	84	<0.50	<0.50	<0.50	<0.50	<2.5	NA	11.93	2.46	9.47	NA	NA
S-1	03/10/1997	<50	200	<0.50	<0.50	<0.50	<0.50	<2.5	NA	11.93	2.93	9.00	NA	NA
S-1	06/26/1997	<50	99	<0.50	<0.50	<0.50	<0.50	<2.5	NA	11.93	3.91	8.02	NA	NA
S-1	09/30/1997	<50	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	11.93	4.00	7.93	NA	NA
S-1	12/15/1997	<50	99	<0.50	<0.50	<0.50	<0.50	<2.5	NA	11.93	2.83	9.10	NA	NA
S-1	03/12/1998	<50	100	<0.50	<0.50	<0.50	<0.50	<2.5	NA	11.93	1.73	10.20	NA	2.7
S-1	06/08/1998	NA	NA	NA	NA	NA	NA	NA	NA	11.93	6.05	5.88	NA	0.8
S-1	08/26/1998	NA	NA	NA	NA	NA	NA	NA	NA	11.93	3.61	8.32	NA	1.0
S-1	12/24/1998	NA	NA	NA	NA	NA	NA	NA	NA	11.93	4.45	7.48	NA	1.0
S-2	06/20/1995	180	NA	1.1	<0.5	<0.5	0.6	NA	NA	12.06	5.80	6.26	NA	NA
S-2	09/12/1995	190	NA	18	<0.5	1.2	0.6	NA	NA	12.06	5.78	6.28	NA	NA
S-2	12/28/1995	200	NA	11	1.0	1.0	4.0	NA	NA	12.06	4.02	8.04	NA	NA
S-2	03/25/1996	180	NA	12	0.8	1.4	1.0	<2.0	NA	12.06	5.56	6.50	NA	NA
S-2	06/27/1996	150	NA	7.7	0.79	0.93	0.5	<2.5	NA	12.06	6.00	6.06	NA	NA
S-2	09/26/1996	83	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	12.06	5.73	6.33	NA	NA
S-2	12/10/1996	78	NA	1.4	<0.50	0.57	<0.50	<2.5	NA	12.06	4.57	7.49	NA	NA
S-2	03/10/1997	61	NA	1.6	<0.50	<0.50	<0.50	<2.5	NA	12.06	5.38	6.68	NA	NA
S-2	06/26/1997	90	NA	1.5	<0.50	<0.50	<0.50	<2.5	NA	12.06	5.68	6.38	NA	NA
S-2	09/30/1997	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	12.06	5.75	6.31	NA	NA
S-2	12/15/1997	<50	NA	4.1	<0.50	<0.50	<0.50	<2.5	NA	12.06	5.35	6.71	NA	NA
S-2	03/12/1998	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	12.06	4.71	7.35	NA	4.3
S-2	06/08/1998	NA	NA	NA	NA	NA	NA	NA	NA	12.06	8.41	3.65	NA	2.2
S-2	08/26/1998	NA	NA	NA	NA	NA	NA	NA	NA	12.06	5.23	6.83	NA	1.8
S-2	12/24/1998	NA	NA	NA	NA	NA	NA	NA	NA	12.06	5.94	6.12	NA	1.4

WELL CONCENTRATIONS
Shell-branded Service Station
2101 Park Avenue
Oakland, CA
Wic #204-5508-1206

Well ID	Date	TPHg (ug/L)	TPHd (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)
S 2 (D)	03/10/1997	77	NA	2.0	<0.50	0.69	<0.50	<2.5	NA	12.06	NA	NA	NA	NA
S 2 (D)	06 26/1997	<50	99	<0.50	<0.50	<0.50	<0.50	<2 5	NA	12.06	3 91	8.02	NA	NA
S 2 (D)	09/30/1997	<50	NA	<0.50	<0.50	<0.50	<0.50	<2 5	NA	12.06	5.75	6.31	NA	NA
S-3	06/20/1995	5500	NA	240	34	120	840	NA	NA	13.54	4.90	8.64	NA	NA
S 3	09/12/1995	5200	NA	690	14	290	280	NA	NA	13.54	5.37	8.17	NA	NA
S 3	12/28/1995	13000	NA	670	34	960	1400	NA	NA	13.54	3.90	9.64	NA	NA
S 3	03/25/1996	7300	NA	560	65	540	820	<200	NA	13.54	4.30	9.24	NA	NA
S-3	06/27/1996	17000	NA	1100	83	1200	2700	<250	NA	13.54	5.00	8.54	NA	NA
S 3	09/26/1996	8900	NA	920	43	400	1100	<125	NA	13.54	5.23	8.31	NA	NA
S-3	12/10/1996	6100	NA	470	25	290	640	<100	NA	13.54	3.88	9.66	NA	NA
S 3	03/10/1997	7000	NA	720	29	340	620	110	NA	13.54	4.10	9.44	NA	NA
S 3	06/26/1997	11000	NA	1100	63	470	1300	150	NA	13.54	5.23	8.31	NA	NA
S 3	09/30/1997	25000	NA	970	170	1200	4600	<50	NA	13.54	5.36	8.18	NA	NA
S-3	09/30/1997	25000	NA	970	170	1200	4600	<50	NA	13.54	5.36	8.18	NA	NA
S 3	12/15/1997	9800	NA	840	55	420	1100	350	NA	13.54	3.81	9.73	NA	NA
S 3	03/12/1998	2800	NA	260	21	140	600	<12	NA	13.54	4.79	8.75	NA	4.8
S 3	06/08/1998	2500	420	220	23	170	600	<20	NA	13.54	5 60	7.94	NA	NA
S-3	06/17/1998	NA	NA	NA	NA	NA	NA	NA	NA	13.54	3.49	10.05	NA	NA
S-3	08/26/1998	4000	600	520	56	270	910	<50	NA	13.54	4 89	8.65	NA	1.9
S-3	12/24/1998	3700	590	320	32	210	650	55	NA	13.54	4.93	8.61	NA	1.2
S 3 (D)	06/20/1995	6300	NA	270	37	120	1100	NA	NA	13.54	NA	NA	NA	NA
S 3 (D)	09/12/1995	4700	NA	620	13	260	240	NA	NA	13.54	NA	NA	NA	NA
S-3 (D)	12/28/1995	13000	NA	800	34	1000	1600	NA	NA	13.54	NA	NA	NA	NA
S 3 (D)	03/25/1996	7400	NA	580	19	620	670	<20	NA	13.54	NA	NA	NA	NA
S 3 (D)	06/27/1996	1903	NA	13	1.0	14	34	7.2	NA	13.54	NA	NA	NA	NA
S 3 (D)	09/26/1996	9800	NA	960	41	450	1300	120	<16 a	13.54	NA	NA	NA	NA
S-3 (D)	12/10/1996	7700	NA	550	33	380	880	120	NA	13.54	NA	NA	NA	NA
S-3 (D)	06/26/1997	12000	NA	1100	62	480	1400	<100	NA	13.54	NA	NA	NA	NA
S 3 (D)	12/15/1997	9800	NA	850	56	420	1100	360	<20	13.54	NA	NA	NA	NA
S 3 (D)	03/12/1998	2100	NA	200	15	110	450	<12	NA	13.54	NA	NA	NA	NA
S 3 (D)	06/08/1998	3200	NA	270	30	220	740	76	NA	13.54	NA	NA	NA	NA
S-3 (D)	08/26/1998	4100	500	550	65	320	1100	<2.5	NA	13.54	NA	NA	NA	NA

WELL CONCENTRATIONS
Shell-branded Service Station
2101 Park Avenue
Oakland, CA
Wic #204-5508-1206

Well ID	Date	TPHg (ug/L)	TPHd (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)

Abbreviations

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

Note

(a) = The MTBE was analyzed by EPA method 8260 one day past hold time. The MTBE value did not confirm therefore, all MTBE results at this site should be considered estimated.

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

Project: Shell 2101 Park Blvd

Enclosed are the results from samples received at Sequoia Analytical on December 28, 1998. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9812G05 -01	LIQUID, S-3	12/24/98	TPHD_W Extractable TPH
9812G05 -01	LIQUID, S-3	12/24/98	Sulfate
9812G05 -01	LIQUID, S-3	12/24/98	Total Dissolved Solids
9812G05 -01	LIQUID, S-3	12/24/98	TPPH/BTEX/MTBE (Concord)
9812G05 -01	LIQUID, S-3	12/24/98	Nitrate as Nitrate

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

Peggy Penner
Project Manager

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 Proj. ID: Shell 2101 Park Blvd

Lab Proj. ID: 9812G05

Sampled: 12/24/98
Received: 12/28/98
Analyzed: see below

Reported: 01/11/99

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9812G05-01				
Sample Desc : **LIQUID,S-3**				
Nitrate as Nitrate	mg/L	12/30/98	1.0	N.D.
Sulfate	**mg/L**	**12/30/98**	**1.0**	**8.0**
Total Dissolved Solids	**mg/L**	**12/31/98**	**20**	**1100**

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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	Client Proj. ID: Shell 2101 Park Blvd	Sampled: 12/24/98
1680 Rogers Avenue	Sample Descript: S-3	Received: 12/28/98
San Jose, CA 95112	Matrix: LIQUID	Extracted: 01/05/99
	Analysis Method: EPA 8015 Mod	Analyzed: 01/07/99
Attention: Fran Thie	Lab Number: 9812G05-01	Reported: 01/11/99

QC Batch Number: GC0105990HBPEXA
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	**50**	**590**
Chromatogram Pattern:		
Unidentified HC		**C9-C24**

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	100

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Renner
Project Manager

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	Client Proj. ID: Shell 2101 Park Blvd	Sampled: 12/24/98
1680 Rogers Avenue	Sample Descript: S-3	Received: 12/28/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/06/99
Attention: Fran Thie	Lab Number: 9812G05-01	Reported: 01/11/99

QC Batch Number: GC010699BTEX09A
Instrument ID: GCHP9

Total Purgeable Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**1000**	**3700**
Methyl t-Butyl Ether	**50**	**55**
Benzene	**10**	**320**
Toluene	**10**	**32**
Ethyl Benzene	**10**	**210**
Xylenes (Total)	**10**	**650**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	99

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

SEQUOIA ANALYTICAL - ELAP #1271

Peggy Penner
Project Manager

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 Ave.
San Jose, CA 95112
Attention: Fran Thie

Client Project ID: Shell 2101 Park Blvd.

QC Sample Group: 9812G05-01

Reported: Jan 11, 1999

QUALITY CONTROL DATA REPORT

Matrix:	Liquid	
Method:	EPA 300.0	
Analyst:	G. Fish	
ANALYTE	*Sulfate*	*Nitrate*
QC Batch #:	IN1230983000ACB	
Sample No.:	9812G89-4	
Date Prepared:	12/30/98	12/30/98
Date Analyzed:	12/30/98	12/30/98
Instrument I.D.#:	INAC1	INAC1
Sample Conc., mg/L:	51	N.D.
Conc. Spiked, mg/L:	100	100
Matrix Spike, mg/L:	150	93
% Recovery:	99	93
Matrix pike Duplicate, mg/L:	150	93
% Recovery:	99	93
elative % Difference:	0.0	0.0
RPD Control Limits:		

LCS Batch#:	LCS1230983000ACB	
Date Prepared:	12/30/98	12/30/98
Date Analyzed:	12/30/98	12/30/98
Instrument I.D.#:	INAC1	INAC1
Conc. Spiked, mg/L:	10	10
LCS Recovery, mg/L:	9.3	9.2
LCS % Recovery:	93	92

Percent Recovery Control Limits.

MS MSD	75-125	75-125
LCS	90-110	90-110

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

SEQUOIA ANALYTICAL

Peggy Penner
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 Ave.
San Jose, CA 95112
Attention: Fran Thie

Client Project ID: Shell 2101 Park Blvd.

QC Sample Group: 9812G05-01

Reported: Jan 11, 1999

QUALITY CONTROL DATA REPORT

Matrix:	Liquid
Method:	EPA 8015A
Analyst:	A. PORTER
ANALYTE	Diesel

QC Batch #: GC0105990HBPEXA

Sample No.:	9812G76-03
Date Prepared:	1/5/99
Date Analyzed:	1/6/99
Instrument I.D.#:	GCHP5B
Sample Conc., ug/L:	N.D.
Conc. Spiked, ug/L:	1000
Matrix Spike, ug/L:	650
% Recovery:	65
Matrix pike Duplicate, ug/L:	780
% Recovery:	78
elative % Difference:	18
RPD Control Limits:	0-50

LCS Batch#: BLK010599AS

Date Prepared:	1/5/99
Date Analyzed:	1/6/99
Instrument I.D.#:	GCHP5B
Conc. Spiked, ug/L:	1000
Recovery, ug/L:	760
LCS % Recovery:	76

Percent Recovery Control Limits

MS/MSD	50-150
LCS	60-140

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

SEQUOIA ANALYTICAL

Peggy Penner
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 with n 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 Ave.
San Jose, CA 95112
Attention: Fran Thie

Client Project ID: Shell 2101 Park Blvd.

QC Sample Group: 9812G05-01

Reported: Jan 11, 1999

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 160.1
Analyst: M.VU

ANALYTE Total Dissolved Solids

QC Batch #: IN123198160100A

Sample No.: 9812G05-01B
Date Prepared: 12/31/98
Date Analyzed: 1/1/99

Sample Conc., mg/L:	1100
Conc. Spiked, mg/L:	500
Matrix Spike, mg/L:	1600
% Recovery:	108
Matrix pike Duplicate, mg/L:	1600
% Recovery:	95
elative % Difference:	13
RPD Control Limits:	0-20

LCS Batch#: LCS123198

Date Prepared: 12/31/98
Date Analyzed: 1/1/99

Conc. Spiked, mg/L:	500
LCS Recovery, mg/L:	480
LCS % Recovery:	95

Percent Recovery Control Limits:

MS,MSD	75-125
LCS	80-120

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

SEQUOIA ANALYTICAL

Peggy Penner
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, Inc.
1680 Rogers Ave.
San Jose, CA 95112
Attention: Fran Thie

Client Project ID: Shell 2101 Park Blvd.
Matrix: Liquid
Work Order #: 9812G05 -01

Reported: Jan 12, 1999

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	BTEX as TPH
QC Batch#:	GC010699802009A	GC010699802009A	GC010699802009A	GC010699802009A	GC010699802009A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	C. Westwater	C. Westwater	C. Westwater	C. Westwater	C. Westwater
MS/MSD #:	8122258	8122258	8122258	8122258	8122258
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/6/99	1/6/99	1/6/99	1/6/99	1/6/99
Analyzed Date:	1/6/99	1/6/99	1/6/99	1/6/99	1/6/99
Instrument I.D.#:	HP9	HP9	HP9	HP9	HP9
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	330 µg/L
Result:	20	21	21	65	310
MS % Recovery:	100	105	105	108	94
Dup. Result:	20	21	22	66	310
MSD % Recov.:	100	105	110	110	94
RPD:	0.0	0.0	4.7	1.5	0.0
RPD Limit:	0-20	0-20	0-20	0-20	0-50
LCS #:	LCS010699	LCS010699	LCS010699	LCS010699	LCS010699
Prepared Date:	1/6/99	1/6/99	1/6/99	1/6/99	1/6/99
Analyzed Date:	1/6/99	1/6/99	1/6/99	1/6/99	1/6/99
Instrument I.D.#:	HP9	HP9	HP9	HP9	HP9
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	330 µg/L
LCS Result:	20	21	22	68	320
LCS % Recov.:	100	105	110	113	97
MS/MSD Control Limits	60-140	60-140	60-140	60-140	
LCS Control Limits	70-130	70-130	70-130	70-130	50-150

SEQUOIA ANALYTICAL
Elap #1271

Peggy Penner
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.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

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	Client Proj. ID: Shell 2101 Park Blvd	Received: 12/28/98
1680 Rogers Avenue		
San Jose, CA 95112	Lab Proj. ID: 9812G05	Reported: 01/11/99
Attention: Fran Thie		

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 9 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Peggy Renner
Project Manager

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 981224-T2

Date: 12/24/98
Page 1 of 1

Site Address: 2101 Park Blvd., Oakland, CA

WIC#: 204-5508-1206

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

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

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

Comments:

Sampled by: John Ramel

981260r

Printed Name:

LAB: Sequoia

CHECK ONE (1) BOX ONLY	CT/DT
G.W. Monitoring [X]	4441
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 [X] (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	Nitrate, Sulfate, TDS		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-3	12/24			X		6		X				X	X						01	

29 1 04

Relinquished By (signature):	Printed Name:	Date:	Time:	Received (signature):	Printed Name:	Date:	Time:
John Ramel	John Ramel	12/24/98	1100		LANCE A. DAVIDSON	12-28-98	1015
	LANCE A. DAVIDSON	12.29.98					
				Anna D.	Anna D.	12/29/98	1704

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

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 981224-T2

Date: 12/24/98
Page 1 of 1

Site Address: 2101 Park Blvd., Oakland, CA

WIC#: 204-5508-1206

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

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

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

Comments:

Sampled by: John Raniel

9812 Gov

Printed Name:

LAB: Sequoia

CHECK ONE (1) BOX ONLY		CT/DT
G.W. Monitoring	X	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	X (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	Nitrate, Sulfate, TDS		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-3	12/24			X		6		X				X	X						01	

Relinquished By (signature):	Printed Name:	Date:	Received (signature):	Printed Name:	Date:
John Raniel	John Raniel	12/28/98 Time: 4:20	[signature]	LANCE A. DAVIDSON	12-29-98 Time: 9:25
Relinquished By (signature): [signature]	Printed Name: LANCE A. DAVIDSON	Date: 12-28-98 Time:	Received (signature):	Printed Name:	Date: Time:
Relinquished By (signature):	Printed Name:	Date: Time:	Received (signature):	Printed Name: [signature]	Date: 12/28/... Time: 1257

28 12 51

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

Shell Oil Chn of Custody