CAMBRIA

#229

ENVIRONMENTAL PROTECTION

98 NOV 16 PM 4:28

November 15, 1998

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

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

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 third 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 August 26, 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 0.03.

- The ground water sample from Well S-3 contained 4,000 ppb TPPH, 520 ppb benzene, and no detectable MTBE

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

Cambria
Environmental
Technology, Inc

520 Petaluma Street
P.O. Box 69
Sonoma, CA 95476
Tel (707)933-1650
Fax (707)933-1669

CAMBRIA

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 (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. Additionally, a duplicate sample was collected and analyzed for quality control purposes.

Field monitoring data and chemical analytical data have been included in Table 1. A ground water contour/chemical concentration map is presented as Plate 2. Blaine's ground water monitoring report is presented in Appendix A.

Quarterly monitoring, sampling, and reporting will continue on the revised schedule for the next quarter.

If you have any questions regarding the contents of this document, please call.

Sincerely,
Cambria Environmental Technology, Inc.

Darren Croteau
Staff Geologist

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

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

Attachments

Table 1. Well Concentrations

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
Mr. Steve Makara, Goodyear Tire & Rubber Company
Ms. Karen Petryna, Equiva Services LLC

TABLE 1

WELL CONCENTRATIONS
Former Shell Service Station
2101 Park Boulevard
Oakland, California
WIC #204-5508-1206

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	O & G by 5520 B (ug/L)	O & G by 5520 B/F (ug/L)	dO (ppm)	dO Method	Comments
S-1	Top casing elevation (ft):			**11.93**											
20-Jun-95	4.67	7.26	0.00	160	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	
12-Sep-95	4.19	7.74	0.00	<50	250	3.0	<0.5	<0.5	<0.5	NA	<5000	<5000	NA	NA	
28-Dec-95	5.30	6.63	0.00	70	160	1.1	<0.5	<0.5	1.3	NA	<5000	<5000	NA	NA	
25-Mar-96	3.44	8.49	0.00	70	220	<0.5	<0.5	<0.5	<0.5	<2.0	NA	NA	NA	NA	
27-Jun-96	3.15	8.78	0.00	<50	140	0.59	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	
26-Sep-96	3.90	8.03	0.00	<50	190	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	
10-Dec-96	2.46	9.47	0.00	<50	84	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	
10-Mar-97	2.93	9.00	0.00	<50	200	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	
26-Jun-97	3.91	8.02	0.00	<50	99	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	
30-Sep-97	4.00	7.93	0.00	<50	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	
15-Dec-97	2.83	9.10	0.00	<50	99	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	
12-Mar-98	1.73	10.20	0.00	<50	100	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	2.7	YSI Meter	ORC installation 3-Mar-98 Nitrate: 5.9 ppm
08-Jun-98	6.05	5.88	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.8	NA	
26-Aug-98	3.61	8.32	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
S-2	Top casing elevation (ft):			**12.06**											
20-Jun-95	5.80	6.26	0.00	180	NA	1.1	<0.5	<0.5	0.6	NA	NA	NA	NA	NA	
12-Sep-95	5.78	6.28	0.00	190	NA	18	<0.5	1.2	0.6	NA	NA	NA	NA	NA	
28-Dec-95	4.02	8.04	0.00	200	NA	11	1.0	1.0	4.0	NA	NA	NA	NA	NA	
25-Mar-96	5.56	6.50	0.00	180	NA	12	0.8	1.4	1.0	<2.0	NA	NA	NA	NA	
27-Jun-96	6.00	6.06	0.00	150	NA	7.7	0.79	0.93	0.5	<2.5	NA	NA	NA	NA	
26-Sep-96	5.73	6.33	0.00	83	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	
10-Dec-96	4.57	7.49	0.00	78	NA	1.4	<0.50	0.57	<0.50	<2.5	NA	NA	NA	NA	
10-Mar-97	5.38	6.68	0.00	61	NA	1.6	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	
26-Jun-97	5.68	6.38	0.00	90	NA	1.5	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	
30-Sep-97	5.75	6.31	0.00	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	
15-Dec-97	5.35	6.71	0.00	<50	NA	4.1	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	
12-Mar-98	4.71	7.35	0.00	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	4.3	YSI Meter	ORC installation 3-Mar-98 Nitrate: 16 ppm
08-Jun-98	8.41	3.65	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.2	NA	
26-Aug-98	5.23	6.83	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

TABLE 1

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2101 Park Boulevard
Oakland, California
WIC #204-5508-1206

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	O & G by 5520 B (ug/L)	O & G by 5520 B/F (ug/L)	dO (ppm)	dO Method	Comments
S-2 (DUP)															
10-Mar-97	NA	NA	NA	77	NA	2.0	<0.50	0.69	<0.50	<2.5	NA	NA	NA	NA	
26-Jun-97	3 91	8 02	0.00	<50	99	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	
30-Sep 97	5 75	6 31	0.00	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	
S-3	Top casing elevation (ft):			**13.54**											
20-Jun-95	4 90	8 64	0.00	5500	NA	240	34	120	840	NA	NA	NA	NA	NA	
12-Sep-95	5 37	8 17	0.00	5200	NA	690	14	290	280	NA	NA	NA	NA	NA	
28-Dec-95	3 90	9 64	0.00	13000	NA	670	34	960	1400	NA	NA	NA	NA	NA	
25-Mar-96	4 30	9 24	0.00	7300	NA	560	65	540	820	<200	NA	NA	NA	NA	
27-Jun-96	5 00	8 54	0.00	17000	NA	1100	83	1200	2700	<250	NA	NA	NA	NA	
26-Sep-96	5 23	8 31	0.00	8900	NA	920	43	400	1100	<125	NA	NA	NA	NA	
10-Dec-96	3 88	9 66	0.00	6100	NA	470	25	290	640	<100	NA	NA	NA	NA	
10-Mar-97	4 10	9 44	0.00	7000	NA	720	29	340	620	110	NA	NA	NA	NA	
26-Jun 97	5 23	8 31	0.00	11000	NA	1100	63	470	1300	150	NA	NA	NA	NA	
30-Sep-97	5 36	8 18	0.00	25000	NA	970	170	1200	4600	<50	NA	NA	NA	NA	
30-Sep-97	5 36	8 18	0.00	25000	NA	970	170	1200	4600	<50	NA	NA	NA	NA	
15-Dec-97	3 81	9 73	0.00	9800	NA	840	55	420	1100	350	NA	NA	NA	NA	
12-Mar-98	4 79	8 75	0.00	2800	NA	260	21	140	600	<12	NA	NA	4.8	YSI Meter	Nitrate: 7.9 ppm
08-Jun-98	5 60	7 94	0.00	2500	420	220	23	170	600	<20	NA	NA	NA	NA	Alkalinity: Total 730 ppm, Ferrous Iron 0.85 ppm, Nitrate <1.0, Sulfate 21 ppm. TDS 800 ppm.
17-Jun-98	3 49	10 05	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
26-Aug-98	4 89	8 65	0.00	4000	600	520	56	270	910	<50	NA	NA	1.7	YSI Meter	Nitrate <1.0 ppm, Sulfate 3.9 ppm, TDS 940 ppm.
						1740/4 ≈ 440									
S-3 (DUP)															
20-Jun-95	NA	NA	NA	6300	NA	270	37	120	1100	NA	NA	NA	NA	NA	
12-Sep-95	NA	NA	NA	4700	NA	620	13	260	240	NA	NA	NA	NA	NA	
28-Dec-95	NA	NA	NA	13000	NA	800	34	1000	1600	NA	NA	NA	NA	NA	
25-Mar-96	NA	NA	NA	7400	NA	580	19	620	670	<20	NA	NA	NA	NA	
27-Jun 96	NA	NA	NA	1903	NA	13	1.0	14	34	7.2	NA	NA	NA	NA	
26-Sep-96	NA	NA	NA	9800	NA	960	41	450	1300	120	NA	NA	NA	NA	MTBE by 8260: <16 ppb (a)
10-Dec-96	NA	NA	NA	7700	NA	550	33	380	880	120	NA	NA	NA	NA	

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Former Shell Service Station
2101 Park Boulevard
Oakland, California
WIC #204-5508-1206

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	O & G by 5520 B (ug/L)	O & G by 5520 B/F (ug/L)	dO (ppm)	dO Method	Comments
26-Jun-97	NA	NA	NA	12000	NA	1100	62	480	1400	<100	NA	NA	NA	NA	
15-Dec-97	NA	NA	NA	9800	NA	850	56	420	1100	360	NA	NA	NA	NA	MTBE by 8260: <20 ppb
12-Mar-98	NA	NA	NA	2100	NA	200	15	110	450	<12	NA	NA	NA	NA	Nitrate: 8.9 ppm
08-Jun-98	NA	NA	NA	3200	NA	270	30	220	740	76	NA	NA	NA	NA	
26-Aug-98	NA	NA	NA	4100	500	550	65	320	1100	<2.5	NA	NA	NA	NA	Nitrate <1.0 ppm, Sulfate 5.5 ppm, TDS 1100 ppm.

Abbreviations
TPPH = Total Purgeable Petroleum Hydrocarbons carbon range C6 to C12 by EPA Method 8015 (Modified)
(previously reported as Total Petroleum Hydrocarbons as Gasoline)
TEPH = Total Extractable Petroleum Hydrocarbons carbon range C9 to C24 by EPA Method 8015 (Modified)
(previously reported as Total Petroleum Hydrocarbons as Diesel)
O&G = Oil and Grease
BTEX = benzene, toluene, ethylbenzene, xylenes by EPA Method 8020
MTBE = methyl-tertiary-butyl ether by EPA Method 8020
NA = Not analyzed or not available
<x = Not detected at detection limit of x
(DUP) = Duplicate sample
TDS = Total dissolved Solids

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.
All wells surveyed to Mean Sea Level

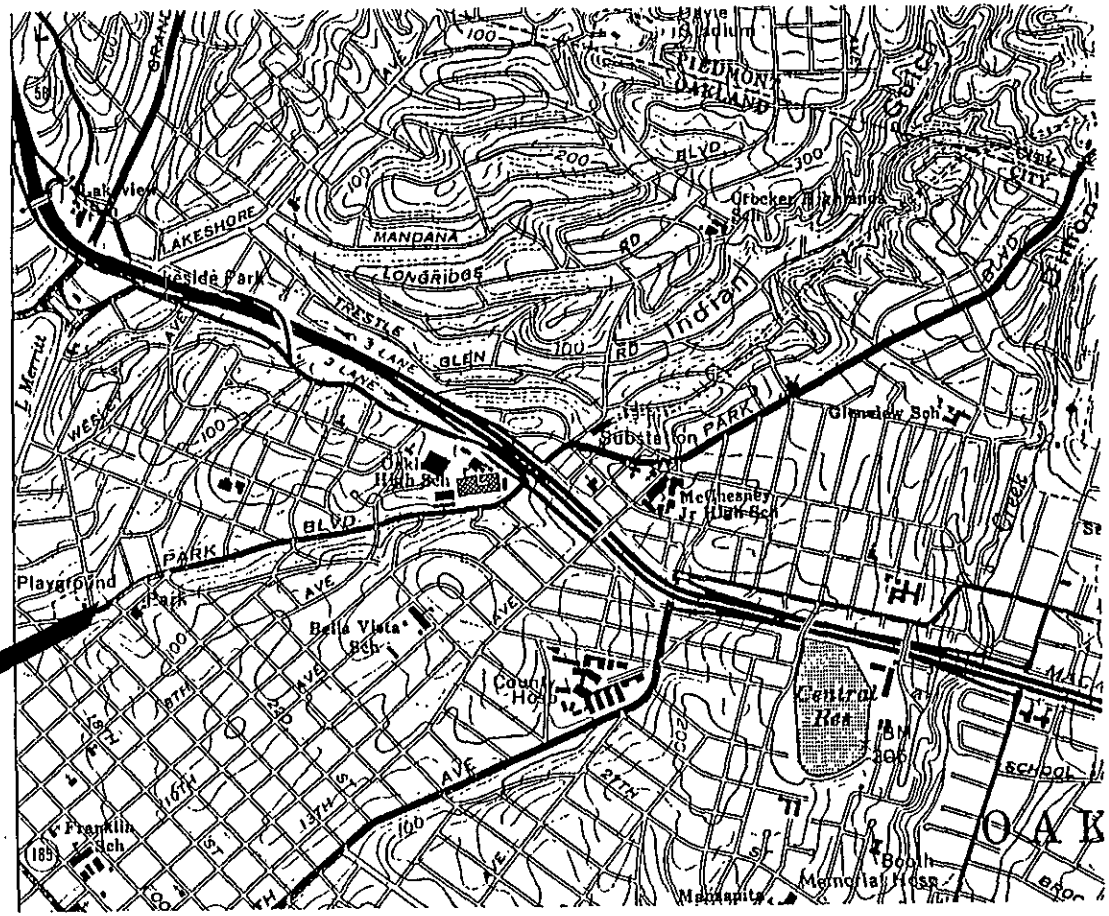


PLATE
1

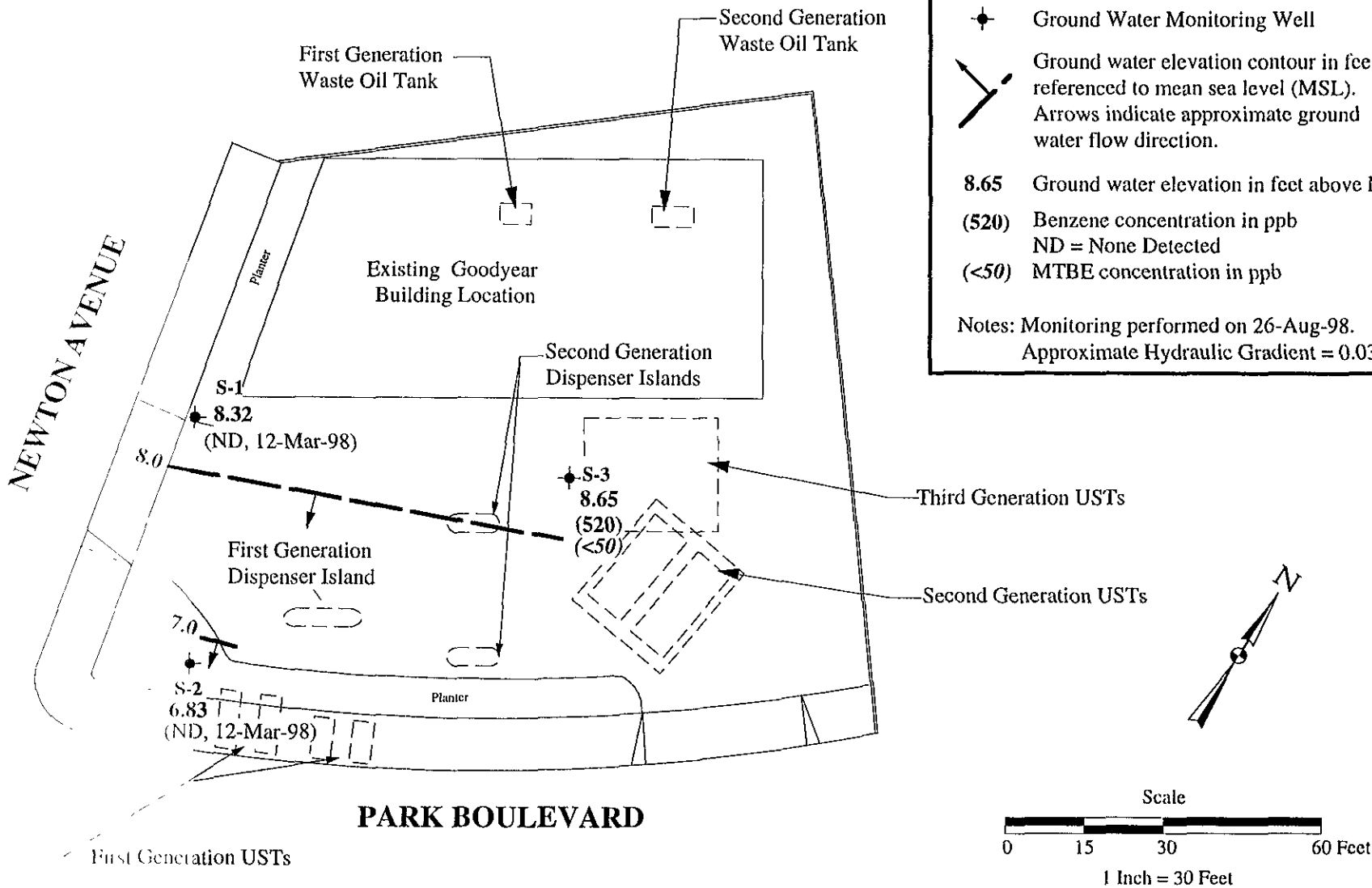
VICINITY MAP
Former Shell Service Station
2101 Park Boulevard
Oakland, California

CAMBRIA
240-0865

Drawn By: GLV

Date: 2-24-95

Approved By: _____ Date: 11-9-98



EXPLANATION

- Ground Water Monitoring Well
- Ground water elevation contour in feet referenced to mean sea level (MSL). Arrows indicate approximate ground water flow direction.
- **8.65** Ground water elevation in feet above MSL
- **(520)** Benzene concentration in ppb
  ND = None Detected
- ***(<50)*** MTBE concentration in ppb

Notes: Monitoring performed on 26-Aug-98.
Approximate Hydraulic Gradient = 0.03

PLATE **2**

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

CAMBRIA
240-0865

Drawn By DRC

Date: 26-Oct-98

Approved By: _____ Date: 1.9.95

Appendix A

Blaine Tech Services Inc.
Ground Water Monitoring Report

BLAINE
TECH SERVICES inc

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

September 17, 1998

Equilon Enterprises, L.L.C.
P.O. Box 8080
Martinez, CA 94553

Attn: Karen Petryna

Shell WIC #204-5508-1206
2101 Park Blvd.
Oakland, California

3rd Quarter 1998

Groundwater Monitoring Report 980826-Y-1

Blaine Tech Services, Inc. performs environmental monitoring and documentation as an independent third party. Copies of our Monitoring Report along with the laboratory's Certified Analytical 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,

Francis Thie

attachments: Table of Well Gauging Data
Chain of Custody
Field Data Sheets
Certified Analytical Report

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 (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
S 1	08/26/98	TOC	--	NONE	--	--	3.61	15.78
S-2	08/26/98	TOC	--	NONE	--	--	5.23	17.11
S 3	08/26/98	TOC	--	NONE	--	--	4.89	16.53

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 980826 Y7

Date:
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 Jose, CA 95112

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

Comments:

Sampled by:

Printed Name: BROOKS TAYLOR

LAB: STL

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 [ ]
- 15 days [X] (Normal)
- Other [ ]

NOTE: Notify Lab as soon as possible of 24/48 hr. TAT.

UST AGENCY: 980877

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	SULFATES	TDS	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S 3 SW	8/26	01		X	7			X				X	X	X	X					
DUP SW	8/26	02		X	7			X				X	X	X	X					

Relinquished By (signature): | Printed Name: | Date: 8/27/98 Time: 12:10
Received (signature): | Printed Name: | Date: 8/27/98 Time: 12:10

Relinquished By (signature): | Printed Name: | Date: 8/27/98 Time:
Received (signature): | Printed Name: | Date: Time:

Relinquished By (signature): | Printed Name: | Date: Time:
Received (signature): | Printed Name: DAWNS | Date: 8/27 Time: 1332

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

32

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 August 27, 1998.
The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9808G77 -01	LIQUID, S-3	08/26/98	TPHD_W Extractable TPH
9808G77 -01	LIQUID, S-3	08/26/98	Nitrate as Nitrate
9808G77 -01	LIQUID, S-3	08/26/98	Sulfate
9808G77 -01	LIQUID, S-3	08/26/98	Total Dissolved Solids
9808G77 -01	LIQUID, S-3	08/26/98	TPPH/BTEX/MTBE (Concord)
9808G77 -02	LIQUID, Dup	08/26/98	TPHD_W Extractable TPH
9808G77 -02	LIQUID, Dup	08/26/98	Nitrate as Nitrate
9808G77 -02	LIQUID, Dup	08/26/98	Sulfate
9808G77 -02	LIQUID, Dup	08/26/98	Total Dissolved Solids
9808G77 -02	LIQUID, Dup	08/26/98	TPPH/BTEX/MTBE (Concord)

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: 9808G77

Sampled: 08/26/98
Received: 08/27/98
Analyzed: see below

Reported: 09/10/98

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9808G77-01				
Sample Desc : **LIQUID,S-3**				
Nitrate as Nitrate	mg/L	08/28/98	1.0	N.D.
Sulfate	**mg/L**	**08/28/98**	**1.0**	**3.9**
Total Dissolved Solids	**mg/L**	**09/04/98**	**20**	**940**
Lab No: 9808G77-02				
Sample Desc : **LIQUID,Dup**				
Nitrate as Nitrate	mg/L	08/28/98	1.0	N.D.
Sulfate	**mg/L**	**08/28/98**	**1.0**	**5.5**
Total Dissolved Solids	**mg/L**	**09/04/98**	**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: 08/26/98
1680 Rogers Avenue	Sample Descript: S-3	Received: 08/27/98
San Jose, CA 95112	Matrix: LIQUID	Extracted: 09/02/98
	Analysis Method: EPA 8015 Mod	Analyzed: 09/05/98
Attention: Fran Thie	*Lab Number: 9808G77-01*	*Reported: 09/10/98*

QC Batch Number: GC0902980HBPEXC
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	600
Chromatogram Pattern:		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	104

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
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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: 08/26/98
1680 Rogers Avenue	Sample Descript: S-3	Received: 08/27/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/08/98
Attention: Fran Thie	Lab Number: 9808G77-01	Reported: 09/10/98

QC Batch Number: GC090898BTEX02A
Instrument ID: GCHP2

Total Purgeable Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**1000**	**4000**
Methyl t-Butyl Ether	50	N.D.
Benzene	**10**	**520**
Toluene	**10**	**56**
Ethyl Benzene	**10**	**270**
Xylenes (Total)	**10**	**910**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	131 Q

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

SEQUOIA ANALYTICAL - ELAP #1271

Peggy Penner
Project Manager

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Blaine Tech Services	Client Proj. ID: Shell 2101 Park Blvd.	Sampled: 08/26/98
1680 Rogers Avenue	Sample Descript: Dup	Received: 08/27/98
San Jose, CA 95112	Matrix: LIQUID	Extracted: 09/02/98
	Analysis Method: EPA 8015 Mod	Analyzed: 09/03/98
Attention: Fran Thie	Lab Number: 9808G77-02	Reported: 09/10/98

QC Batch Number: GC0902980HBPEXC
Instrument ID: GCHP5B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	**50**	**500**
Chromatogram Pattern:		**C9-C24**

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	80

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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Blaine Tech Services	Client Proj. ID: Shell 2101 Park Blvd.	Sampled: 08/26/98
1680 Rogers Avenue	Sample Descript: Dup	Received: 08/27/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/08/98
Attention: Fran Thie	Lab Number: 9808G77-02	Reported: 09/10/98

QC Batch Number: GC090898BTEX02A
Instrument ID: GCHP2

Total Purgeable Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**4100**
Methyl t-Butyl Ether	2.5	N.D.
Benzene	**0.50**	**550**
Toluene	**0.50**	**65**
Ethyl Benzene	**0.50**	**320**
Xylenes (Total)	**0.50**	**1100**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	133 Q

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

SEQUOIA ANALYTICAL - ELAP #1271

Peggy Penner
Project Manager

Sequoia Analytical

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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 #: 9808G77 -01-02
Reported: Sep 11, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	BTEX as TPH
QC Batch#:	GC090898802002A	GC090898802002A	GC090898802002A	GC090898802002A	GC090898802002A
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:	J. Minkel	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD #:	8082096	8082096	8082096	8082096	8082096
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/8/98	9/8/98	9/8/98	9/8/98	9/8/98
Analyzed Date:	9/8/98	9/8/98	9/8/98	9/8/98	9/8/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	310 µg/L
Result:	18	19	19	57	340
MS % Recovery:	90	95	95	95	110
Dup. Result:	18	19	20	57	340
MSD % Recov.:	90	95	100	95	110
RPD:	0.0	0.0	5.1	0.0	0.0
RPD Limit:	0-20	0-20	0-20	0-20	0-50

LCS #:	LCS090898	LCS090898	LCS090898	LCS090898	LCS090898
Prepared Date:	9/8/98	9/8/98	9/8/98	9/8/98	9/8/98
Analyzed Date:	9/8/98	9/8/98	9/8/98	9/8/98	9/8/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	310 µg/L
LCS Result:	20	21	22	64	330
LCS % Recov.:	100	105	110	107	106

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

SEQUOIA ANALYTICAL
Elap #1271

Reggy Renner
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

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

Client Project ID: Shell 2101 Park Blvd.

QC Sample Group: 9808G77-01-02

Reported: Sep 10, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Liquid
Method:	EPA 8015A
Analyst:	GWARDLE
ANALYTE	Diesel

QC Batch #: GC0902980HBPEXC

Sample No.:	9808G77-2
Date Prepared:	9/2/98
Date Analyzed:	9/3/98
Instrument I.D.#:	GCHP5B
Sample Conc., ug/L:	500
Conc. Spiked, ug/L:	1000
Matrix Spike, ug/L:	1200
% Recovery:	70
Matrix pike Duplicate, ug/L:	1200
% Recovery:	70
elative % Difference:	0.0
RPD Control Limits:	0-50

LCS Batch#: BLK090298CS

Date Prepared:	9/2/98
Date Analyzed:	9/3/98
Instrument I.D.#:	GCHP5B
Conc. Spiked, ug/L:	1000
Recovery, ug/L:	780
LCS % Recovery:	78

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

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

Client Project ID: Shell 2101 Park Blvd.

QC Sample Group: 9808G77-01-02

Reported: Sep 10, 1998

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 160.1
Analyst: RDave

ANALYTE Total Dissolved Solids

QC Batch #: IN090498160100A

Sample No.: 9809067-03C
Date Prepared: 9/4/98
Date Analyzed: 9/8/98

Sample Conc., mg/L: 180
Conc. Spiked, mg/L: 500

Matrix Spike, mg/L: 550
% Recovery: 75

Matrix pike Duplicate, mg/L: 480
% Recovery: 61

elative % Difference: 21

RPD Control Limits: 0-20

LCS Batch#: LCS090498

Date Prepared: 9/4/98
Date Analyzed: 9/8/98

Conc. Spiked, mg/L: 500

LCS Recovery, mg/L: 500
LCS % Recovery: 99

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

Reggy Penner
Project Manager

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

Client Project ID: Shell 2101 Park Blvd.

QC Sample Group: 9808G77-01-02

Reported: Sep 10, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Liquid	
Method:	EPA 300.0	
Analyst:	G. Fish	
ANALYTE	Sulfate	Nitrate
QC Batch #:	IN0828983000ACB	
Sample No.:	9808G77-1	
Date Prepared:	8/28/98	8/28/98
Date Analyzed:	8/28/98	8/28/98
Instrument I.D.#:	INAC1	INAC1
Sample Conc., mg/L:	3.9	N.D.
Conc. Spiked, mg/L:	100	
Matrix Spike, mg/L:	94	91
% Recovery:	90	#DIV/0!
		#DIV/0!
Matrix pike Duplicate, mg/L:	92	91
% Recovery:	88	#DIV/0!
		#DIV/0!
		#DIV/0!
elative % Difference:	2.2	#DIV/0!
RPD Control Limits:		

LCS Batch#:	LCS0828983000ACA	
Date Prepared:	8/28/98	8/28/98
Date Analyzed:	8/28/98	8/28/98
Instrument I.D.#:	INAC1	INAC1
Conc. Spiked, mg/L:	10	10
LCS Recovery, mg/L:	9.1	9.4
LCS % Recovery:	91	94

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

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Project Manager

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Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112 Attention: Fran Thie	Client Proj. ID: Shell 2101 Park Blvd. Lab Proj. ID: 9808G77	Received: 08/27/98 Reported: 09/10/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 11 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager