CAMBRIA

ENVIRONMENTAL PROT

98 NOV 31 AM 9:37

November 20, 1998

Mr. Barney Chan
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Third Quarter 1998 Monitoring Report**
Shell-branded Service Station
4411 Foothill Boulevard
Oakland, California
WIC #204-5508-3400
Cambria Project #24-314-398

Dear Mr. Chan:

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

THIRD QUARTER 1998 ACTIVITIES

Ground Water Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged and sampled the site wells. Cambria calculated ground water elevations, compiled the analytical data (Tables 1 and 2) and prepared a ground water elevation contour map (Figure 1). The Blaine report is included as Attachment A.

1998 Equipment Upgrades: This Shell-branded service station was recently upgraded by Paradiso Mechanical of San Leandro, California (Paradiso). Paradiso added secondary containment to the gasoline turbines and dispensers. Details of sampling activities and analytical results will be presented in an upcoming report.

ANTICIPATED FOURTH QUARTER 1998 ACTIVITIES

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

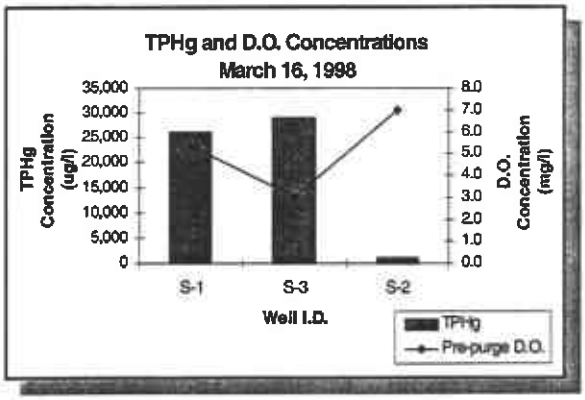
Oakland, CA
Sonoma, CA
Portland, OR
Seattle, WA

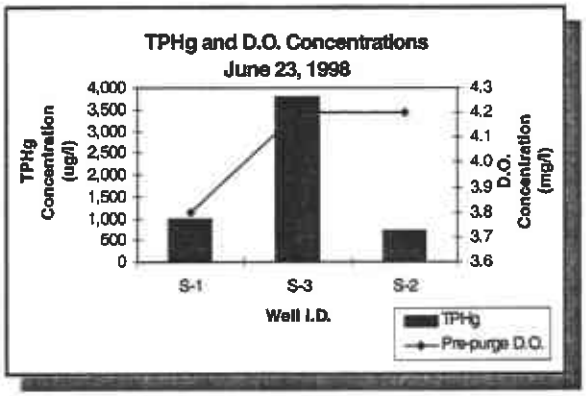
Cambria Environmental Technology, Inc.

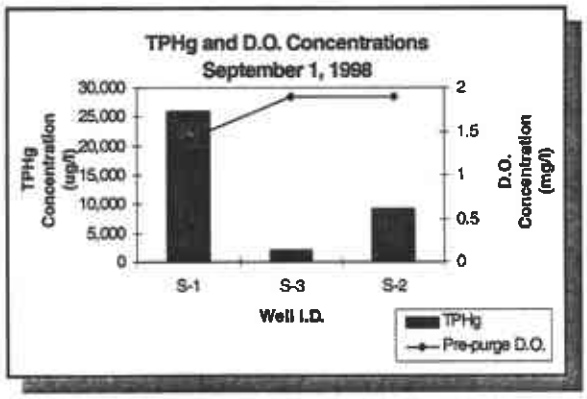
1144 65th Street
Suite B
Oakland, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

DISCUSSION

The ground water samples were analyzed for the bioattenuation parameters dissolved oxygen (DO), oxidation-reduction potential (ORP), nitrate, sulfate, and ferrous iron. In general, the expected relationships between hydrocarbon and bioparameter concentrations are as follows: active biodegradation is indicated by *inverse* relationships between hydrocarbon concentrations and DO, nitrate, and sulfate concentrations, and *direct* relationships between ~~hydrocarbon concentrations~~ and alkalinity and ferrous iron concentrations. The adjacent figures show total petroleum hydrocarbon as gasoline (TPHg) concentrations and pre-purge DO concentrations detected in the wells arranged from the upgradient well S-1 through the downgradient well S-2 for the first, second and third quarters of 1998.







During aerobic biodegradation, DO concentrations are reduced as aerobic respiration occurs. DO is the most thermodynamically favored electron acceptor used in aerobic biodegradation of petroleum hydrocarbons. Active aerobic biodegradation of benzene, toluene, ethylbenzene, and xlyenes (BTEX) requires at least 1 milligram per liter (mg/l) DO in ground water. DO concentrations can be as high as 8 to 13 mg/l in oxygen-saturated ground water that is free of hydrocarbons. In first quarter 1998, the general inverse relationships between DO and hydrocarbon concentrations and elevated DO concentrations indicate the occurrence of active aerobic degradation.

The inverse relationship of DO and hydrocarbon concentrations is not as evident in second and third quarters 1998. Cambria will further evaluate the relationship between DO and hydrocarbon concentrations in fourth quarter 1998.

CLOSING

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

Sincerely,
Cambria Environmental Technology, Inc.

Darryk Ataide
Project Environmental Scientist

Diane M. Lundquist, P.E.
Principal Engineer

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

Attachment: A - Blaine Ground Water Monitoring Report

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

G:\OAK4411\QM3Q98.WPD

Shell-branded Service Station
4411 Foothill Boulevard
Oakland, California
WIC #204-5508-3400

CAMBRIA

Ground Water Elevation Contours
September 1, 1998

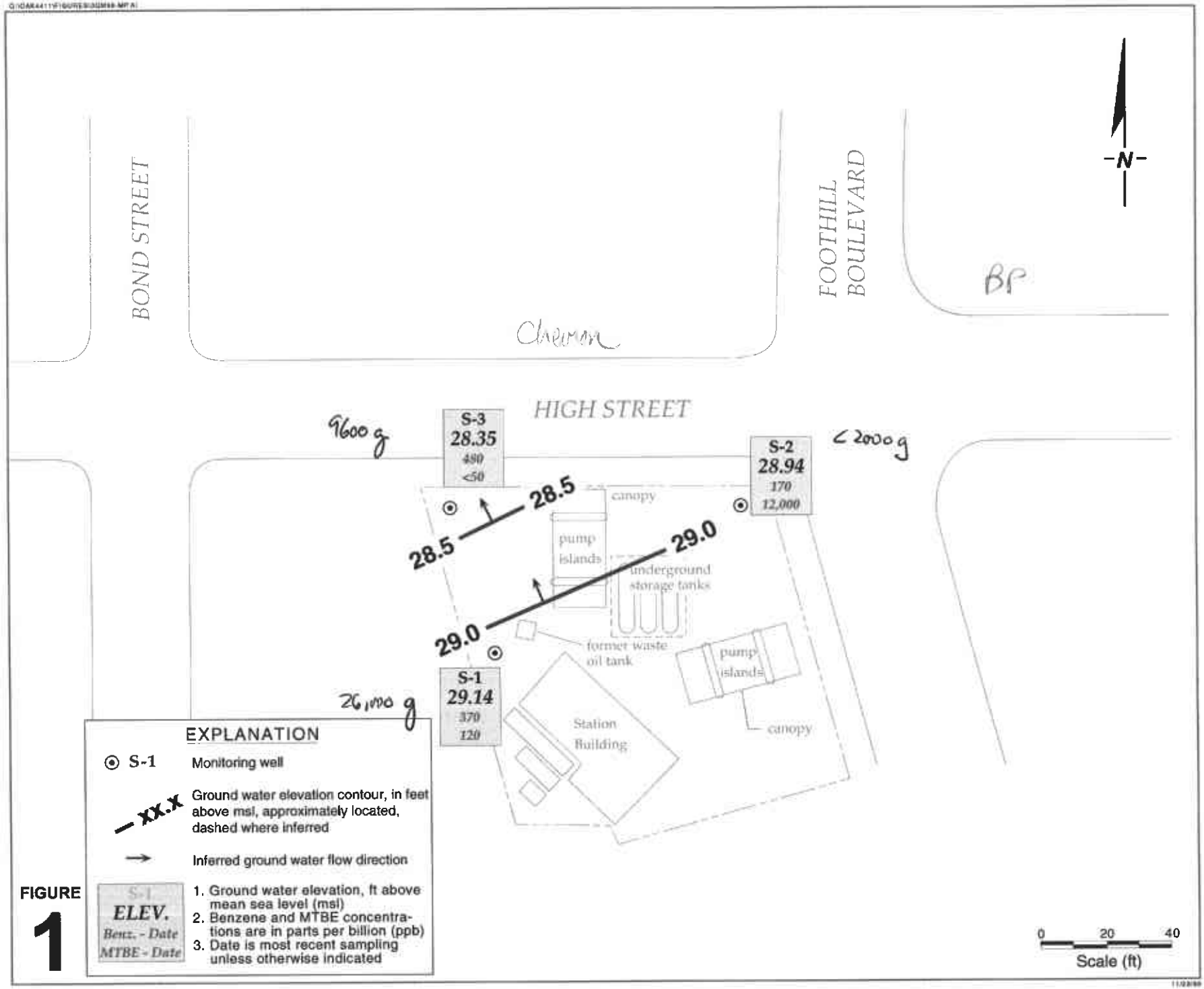


FIGURE 1

Table 1. **Ground Water Elevations and Analytical Data - Hydrocarbon Compounds** - Shell-branded Service Station WIC# 204-5508-3400, 4411 Foothill Boulevard, Oakland, California

Well ID	Date	Depth to Water (feet)	Ground Water Elevation (ft-msl)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	TPHd	TPHmo	MTBE	Notes
				← (Concentrations in µg/L) →								
S-1	12/18/92	9.06	---	41,000	3,100	1,100	1,200	8,700	---	9,400	---	a
TOB = 38.31	05/26/93	---	---	39,000	1,300	4,700	1,500	7,800	6,000	370	---	
	05/28/93	12.13	26.18	---	---	---	---	---	---	---	---	
	06/03/93	8.89	29.42	---	---	---	---	---	---	---	---	
	06/08/93	8.80	29.51	---	---	---	---	---	---	---	---	
	09/21/93	10.40	27.91	34,000	480	5,000	3,800	18,000	5,900	ND	---	
	12/14/93	9.66	28.65	25,000	1,100	5,000	2,200	11,000	13,000	ND	---	
	03/17/94	8.20	30.11	57,000	1,300	5,400	2,100	11,000	1,600	2,300	---	
	06/16/94	9.41	28.90	57,000	1,600	6,000	2,000	13,000	3,000	210	---	
	09/22/94	11.13	27.18	39,000	1,300	2,100	1,500	7,100	ND	ND	---	
	12/15/94	7.15	31.16	30,000	1,100	4,700	1,600	10,000	3,100	ND	---	b
	03/30/95	6.09	32.22	30,000	1,400	4,000	1,500	11,000	3,100	ND	---	b, c
	06/20/95	7.30	31.01	28,000	1,100	2,300	1,100	8,300	2,100	NC	---	
	09/20/95	10.02	28.29	40,000	840	3,600	1,300	8,600	2,600	NC	---	
	12/06/95	11.64	26.67	38,000	920	3,200	1,500	9,400	6,400	ND	---	b
	03/21/96	6.87	31.44	48,000	700	4,200	1,100	8,600	---	---	---	
	09/06/96	10.50	27.81	41,000	830	2,600	2,100	12,000	4,100	<1,000	<250	
	12/19/96	8.24	30.07	40,000	540	3,100	1,900	9,800	2,500	<500	920	
	03/17/97	7.26	31.05	42,000	610	2,700	1,700	11,000	4,700	<1,000	3,500	
	06/11/97	10.69	27.62	28,000	540	960	1,300	5,300	4,000	<1,000	220	
	06/11/97	10.69	27.62	30,000	580	1,000	1,400	5,400	3,900	<1,000	<125	duplicate
	09/17/97	10.26	28.05	27,000	310	1,200	1,900	9,000	4,400	<1,000	170	
	09/17/97	10.26	28.05	27,000	270	1,200	1,900	9,000	4,400	<1,000	170	duplicate
	12/11/97	6.96	31.35	21,000	350	820	1,500	6,500	3,400	<1,000	<125	
	03/16/98	6.00	32.31	25,000	250	820	670	5,000	2,500	510	<125	
	03/16/98	6.00	32.31	26,000	250	840	720	5,100	---	---	<125	duplicate
?	06/23/98	6.31	32.00	<1,000	280	14	23	15	230	<500	6,100(7,800)	
	09/01/98	**9.17**	**29.14**	**26,000**	**370**	**620**	**1,300**	**33**	**2,300**	**<500**	**1,400(120)**	

Table 1. **Ground Water Elevations and Analytical Data - Hydrocarbon Compounds -** Shell-branded Service Station WIC# 204-5508-3400, 4411 Foothill Boulevard, Oakland, California

Well ID	Date	Depth to Water (feet)	Ground Water Elevation (ft-msl)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	TPHd	TPHmo	MTBE	Notes
				← (Concentrations in µg/L) →								
S-2	05/28/93	9.51	29.28	---	---	---	---	---	---	---	---	
TOB = 38.79	06/03/93	9.51	29.28	---	---	---	---	---	---	---	---	
	06/08/93	9.57	29.22	---	---	---	---	---	---	---	---	
	06/29/93	---	---	1,300	290	35	38	130	---	---	---	
	09/21/93	10.54	28.25	3,300	870	24	190	120	---	---	---	
	12/14/93	9.76	29.03	1,300	400	16	36	27	---	---	---	
	03/17/94	9.92	28.87	4,500	610	27	92	110	---	---	---	
	03/17/94	9.92	28.87	4,000	610	26	93	120	---	---	---	duplicate
	06/16/94	10.11	28.68	2,800	690	45	97	140	---	---	---	
	09/22/94	10.51	28.28	4,000	630	94	64	230	---	---	---	
	12/15/94	9.12	29.67	1,600	450	300	67	130	---	---	---	
	03/30/95	7.86	30.93	8,200	2,800	190	240	700	---	---	---	c
	06/20/95	9.51	29.28	9,600	2,600	160	170	500	---	---	---	
	09/20/95	10.06	28.73	4,200	920	45	98	140	---	NC	---	
	12/06/95	10.52	28.27	<5,000	790	67	64	130	---	---	---	
	03/21/96	8.60	30.19	3,700	850	45	96	170	---	---	---	
	09/06/96	10.50	28.29	2,400	500	33	39	84	---	---	490	
	12/19/96	9.40	29.39	1,200	330	15	24	31	---	---	430	
	03/17/97	9.82	28.97	4,100	780	42	110	120	---	---	2,200	
	06/11/97	10.18	28.61	760	120	<5.0	7.0	7.6	---	---	900	
	09/17/97	9.90	28.89	1,500	230	8.6	40	27	---	---	480	
	12/11/97	8.27	30.52	1,300	240	15	33	57	---	---	280	
	03/16/98	7.97	30.82	1,100	830	48	<10	<10	---	---	4,700(4,800)	
	06/23/98	8.20	30.59	720	46	6.8	50	68	---	---	50(8.8)	
	06/23/98	8.20	30.59	810	49	7.1	50	70	---	---	49(8.8)	duplicate
	09/01/98	**9.85**	**28.94**	**<2,000**	**170**	**<20**	**<20**	**<20**	**---**	**---**	**9,300(12,000)**	
S-3	05/28/93	8.45	28.88	---	---	---	---	---	---	---	---	
TOB = 37.33	06/03/93	8.36	28.97	---	---	---	---	---	---	---	---	
	06/08/93	8.41	28.92	---	---	---	---	---	---	---	---	

Table 1. **Ground Water Elevations and Analytical Data - Hydrocarbon Compounds -** Shell-branded Service Station WIC# 204-5508-3400, 4411 Foothill Boulevard, Oakland, California

Well ID	Date	Depth to Water (feet)	Ground Water Elevation (ft-msl)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	TPHd	TPHmo	MTBE	Notes
				← (Concentrations in µg/L) →								
	06/29/93	---	---	29,000	1,500	1,800	950	6,200	---	---	---	
	09/21/93	10.08	27.25	15,000	900	2,200	2,600	11,000	---	---	---	
	12/94/93	8.80	28.53	20,000	1,100	2,400	1,800	8,500	---	---	---	
	03/17/94	8.34	28.99	14,000	580	190	750	1,700	---	---	---	
	06/16/94	9.12	28.21	20,000	700	690	1,400	4,100	---	---	---	
	06/16/94	---	---	19,000	680	560	1,300	3,700	---	---	---	duplicate
	09/22/94	10.27	27.06	24,000	630	1,100	1,400	5,700	---	---	---	
	09/22/94	---	---	25,000	720	1,100	1,500	6,100	---	---	---	duplicate
	12/15/94	7.81	29.52	18,000	520	800	1,100	4,200	---	---	---	
	12/15/94	---	---	23,000	1,000	1,900	2,000	8,600	---	---	---	duplicate
	03/30/95	7.06	30.27	8,800	360	730	700	3,700	---	---	---	c
	03/30/95	---	---	7,600	330	570	600	2,600	---	---	---	duplicate
	06/20/95	8.15	29.18	9,600	510	170	960	1,700	---	---	---	
	06/20/95	---	---	9,800	500	170	950	1,700	---	---	---	duplicate
	09/20/95	9.32	28.01	21,000	400	560	1,300	4,600	---	---	---	
	12/06/95	10.53	26.80	24,000	630	1,400	1,400	6,000	---	---	---	
	12/06/95	---	---	22,000	630	1,200	1,400	5,500	---	---	---	duplicate
	03/21/96	7.32	30.01	9,100	290	110	490	1,600	---	---	---	
	03/21/96	---	---	11,000	310	250	540	2,100	---	---	---	duplicate
	09/06/96	10.10	27.23	15,000	440	300	1,100	3,000	---	---	500	
	09/06/96	---	---	11,000	490	170	820	1,500	---	---	700	duplicate
	12/19/96	8.36	28.97	12,000	600	380	850	2,500	---	---	380	
	12/19/96	8.36	28.97	12,000	590	380	830	2,500	---	---	540	duplicate
	03/17/97	8.57	28.76	12,000	520	140	740	1,400	---	---	320	
	03/17/97	8.57	28.76	9,600	500	100	680	1,100	---	---	<250	duplicate
	06/11/97	9.26	28.07	9,600	510	94	740	1,100	---	---	410	
	09/17/97	9.62	27.71	21,000	140	560	1,800	7,200	---	---	130	
	12/11/97	7.34	29.99	24,000	530	970	1,600	6,900	---	---	950	
	12/11/97	7.34	29.99	29,000	520	1,000	1,600	7,300	---	---	970	duplicate
	03/16/98	5.75	31.58	29,000	840	810	1,700	6,000	---	---	<250	

Table 1. Ground Water Elevations and Analytical Data - Hydrocarbon Compounds - Shell-branded Service Station WIC# 204-5508-3400, 4411 Foothill Boulevard, Oakland, California

Well ID	Date	Depth to Water (feet)	Ground Water Elevation (ft-msl)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	TPHd	TPHmo	MTBE	Notes
S-3				← (Concentrations in µg/L) →								
	06/23/98	5.98	31.35	3,800	90	220	240	1,400	---	---	<50	
	09/01/98	**8.98**	**28.35**	**9,600**	**480**	**120**	**870**	**1,800**	**---**	**---**	**490(<50)**	
	09/01/98	**8.98**	**28.35**	**9,200**	**420**	**110**	**800**	**1,700**	**---**	**---**	**110(<50)**	**duplicate**

Abbreviations:

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method 8015
TPHmo = Total petroleum hydrocarbons as motor oil by modified EPA Method 8015
MTBE = Methyl tert-butyl ether by EPA Method 8020. Result in parentheses indicates MTBE by EPA Method 8260
ft-msl = Feet above mean sea level
µg/L = Micrograms per liter
TOB = Top of box elevation (ft-msl)
ND = Not detected
NC = Not calculated; TPHmo included with TPHd analysis

Notes:

a = Phenolic and naphthalene compounds detected in well S-1 by EPA Method 8270
b = Laboratory noted that concentration appears to be a lighter hydrocarbon than diesel
c = National Environmental Testing, Inc. (NET), analyzed within hold time but further dilutions were required and analyzed out of hold time. NET suggests that these should be considered minimum concentrations
<n = Below detection limits of n µg/L
--- = Not measured and/or analyzed
Benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8020

Table 2. **Ground Water Analytical Data - Bioattenuation Parameters** - Shell-branded Service Station WIC# 204-5508-3400, 4411 Foothill Boulevard, Oakland, California

Well ID	Date	Depth to Water (feet)	TPHg (µg/L)	Ferrous Iron	Nitrate as Nitrate	Sulfate	DO	ORP (millivolts)	Notes
				← (Concentrations in mg/L) →					
S-1	03/16/98	6.00	26,000	1.9	<1.0	<1.0	5.3/3.7	158/155	
	06/23/98	6.31	<1,000	2.0	<1.0	5.9	3.8/2.4	117/94	
	09/01/98	**9.17**	**26,000**	**4.5**	**<1.0**	**12**	**1.4/2.6**	**-85/-51**	
S-2	03/16/98	7.97	1,100	1.7	<1.0	17	7.0/4.3	147/149	
	06/23/98	8.20	720	4.3	<1.0	5.7	4.2/3.8	128/134	
	06/23/98	8.20	810	3.7	<1.0	5.4	4.2/3.8	128/134	duplicate
	09/01/98	**9.85**	**<2,000**	**4.1**	**<1.0**	**7.8**	**1.9/1.6**	**-26/-11**	
S-3	03/16/98	5.75	29,000	3.8	<1.0	12	3.0/3.4	153/142	
	06/23/98	5.98	3,800	2.0	<1.0	8.9	4.2/2.0	119/121	
	09/01/98	**8.98**	**9,600**	**2.7**	**<1.0**	**7.3**	**1.9/2.8**	**57/35**	
	09/01/98	**8.98**	**9,200**	**2.2**	**<1.0**	**7.2**	**1.9/2.8**	**57/35**	**duplicate**
Ideal Aerobic Degradation Relationship:				Direct	Inverse	Inverse	Inverse	Direct	
Observed Relationship:				Inconclusive	Inconclusive	Moderately inverse	Moderately inverse	Inconclusive	

Abbreviations and Notes:

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
DO = Dissolved oxygen (pre-purge / post-purge)
ORP = Oxidation reduction potential (pre-purge / post-purge)
µg/L = Micrograms per liter
mg/L = Milligrams per liter
<n = Below detection limit of n units
Ferrous iron by modified EPA Method 200.7
Nitrate as nitrate and sulfate by EPA Method 300.0

ATTACHMENT A

Blaine Ground Water Monitoring Report

BLAINE
TECH SERVICES INC.

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

October 2, 1998

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

Attn: Karen Petryna

Shell WIC #204-5508-3400
4411 Foothill Blvd.
Oakland, California

3rd Quarter 1998

Groundwater Monitoring Report 980901-J-3

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.
1144 65th Street, Suite C
Oakland, CA 94608-2411
Attn: Aubrey Cool

(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	09/01/98	TOB	--	NONE	--	--	9.17	24.47
S-2	09/01/98	TOB	--	NONE	--	--	9.85	22.02
S-3*	09/01/98	TOB	--	NONE	--	--	8.98	20.03

* Sample DUP was a duplicate sample taken from well S-3.

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 980901-53

Date: 9/1/98
Page 1 of 1

Site Address: 4411 Foothill Blvd., Oakland, CA

WIC#: 204-5508-3400

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

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

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

Comments:

Sampled by: [signature]

Printed Name: Steve Smith

LAB: 9809123

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	MOTOR OIL	Ferrous Iron	~~Asbestos~~ Nitrate	~~Container Size~~ Sulfate	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-1		01		X		9		X				X	X	X	X	X				Confirm MTBE
S-2		02		X		6						X		X	X	X				by 8260 @
S-3		03		X		6						X		X	X	X				all wells.
EB		04		X		3						X								
DUP		05		X		6						X		X	X	X				

Relinquished By (signature):	Printed Name:	Date/Time:	Received (signature):	Printed Name:	Date/Time:
[signature]	Steve Smith	Date: Time:	[signature]	Charles Armstrong	Date: 9-2 Time: 9:09
[signature]	Charles Armstrong	Date: 9-2-98 Time:	Received (signature):	Printed Name:	Date: Time:
Relinquished By (signature):	Printed Name:	Date: Time:	[signature]	GERT	Date: 9/2/98 Time: 10:54

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

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

laine Tech Services
680 Rogers Avenue
an Jose, CA 95112
ttention: Fran Thie

roject: Shell 4411 Foothill Blvd

Enclosed are the results from samples received at Sequoia Analytical on September 2, 1998.
he requested analyses are listed below:

AMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
809123 -01	LIQUID, S-1	09/01/98	TPHD_W Extractable TPH
809123 -01	LIQUID, S-1	09/01/98	Ferrous Iron
809123 -01	LIQUID, S-1	09/01/98	Purgeable TPH/BTEX/MTBE
809123 -01	LIQUID, S-1	09/01/98	MTBE by 8260
809123 -01	LIQUID, S-1	09/01/98	TPHMOW Fuel Fingerprint/Mo
809123 -01	LIQUID, S-1	09/01/98	Nitrate as Nitrate
809123 -01	LIQUID, S-1	09/01/98	Sulfate
809123 -02	LIQUID, S-2	09/01/98	Ferrous Iron
809123 -02	LIQUID, S-2	09/01/98	Nitrate as Nitrate
809123 -02	LIQUID, S-2	09/01/98	Sulfate
809123 -02	LIQUID, S-2	09/01/98	Purgeable TPH/BTEX/MTBE
809123 -02	LIQUID, S-2	09/01/98	MTBE by 8260
809123 -03	LIQUID, S-3	09/01/98	Ferrous Iron
809123 -03	LIQUID, S-3	09/01/98	Nitrate as Nitrate
809123 -03	LIQUID, S-3	09/01/98	Sulfate
809123 -03	LIQUID, S-3	09/01/98	Purgeable TPH/BTEX/MTBE
809123 -03	LIQUID, S-3	09/01/98	MTBE by 8260
809123 -04	LIQUID, EB	09/01/98	Purgeable TPH/BTEX/MTBE
809123 -05	LIQUID, DUP	09/03/98	Purgeable TPH/BTEX/MTBE
809123 -05	LIQUID, DUP	09/03/98	MTBE by 8260
809123 -05	LIQUID, DUP	09/03/98	Ferrous Iron

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SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9809123 -05	LIQUID, DUP	09/03/98	Nitrate as Nitrate
9809123 -05	LIQUID, DUP	09/03/98	Sulfate

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

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Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Shell 4411 Foothill Blvd

Lab Proj. ID: 9809123

Sampled: 09/01/98
Received: 09/02/98
Analyzed: see below

Reported: 09/22/98

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9809123-01				
Sample Desc : **LIQUID,S-1**				
Ferrous Iron	**mg/L**	**09/16/98**	**0.010**	**4.5**
Nitrate as Nitrate	mg/L	09/03/98	1.0	N.D.
Sulfate	**mg/L**	**09/03/98**	**1.0**	**12**
Lab No: 9809123-02				
Sample Desc : **LIQUID,S-2**				
Ferrous Iron	**mg/L**	**09/16/98**	**0.010**	**4.1**
Nitrate as Nitrate	mg/L	09/03/98	1.0	N.D.
Sulfate	**mg/L**	**09/03/98**	**1.0**	**7.8**
Lab No: 9809123-03				
Sample Desc : **LIQUID,S-3**				
Ferrous Iron	**mg/L**	**09/16/98**	**0.010**	**2.7**
Nitrate as Nitrate	mg/L	09/03/98	1.0	N.D.
Sulfate	**mg/L**	**09/03/98**	**1.0**	**7.3**

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Tech Services	Client Proj. ID: Shell 4411 Foothill Blvd	Sampled: 09/03/98
1680 Rogers Avenue		Received: 09/02/98
San Jose, CA 95112	Lab Proj. ID: 9809123	Analyzed: see below
Attention: Fran Thie		Reported: 09/22/98

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9809123-05				
Sample Desc : **LIQUID,DUP**				
Ferrous Iron	**mg/L**	**09/21/98**	**0.010**	**2.2**
Nitrate as Nitrate	mg/L	09/03/98	1.0	N.D.
Sulfate	**mg/L**	**09/03/98**	**1.0**	**7.2**

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
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Shell 4411 Foothill Blvd
Sample Descript: S-1
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9809123-01

Sampled: 09/01/98
Received: 09/02/98
Extracted: 09/08/98
Analyzed: 09/09/98
Reported: 09/22/98

QC Batch Number: GC0908980HBPEXB
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	2300
Chromatogram Pattern:		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.

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Project Manager

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Blaine Tech Services	Client Proj. ID: Shell 4411 Foothill Blvd	Sampled: 09/01/98
1680 Rogers Avenue	Sample Descript: S-1	Received: 09/02/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/09/98
Attention: Fran Thie	Lab Number: 9809123-01	Reported: 09/22/98

QC Batch Number: GC090998BTEX31A
Instrument ID: GCHP31

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**10000**	**26000**
Methyl t-Butyl Ether	**500**	**1400**
Benzene	**100**	**370**
Toluene	**100**	**620**
Ethyl Benzene	**100**	**1300**
Xylenes (Total)	**100**	**33**
Chromatogram Pattern:		**C6-C12**

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 #1210

Peggy Penner
Project Manager

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Blaine Tech Services	Client Proj. ID: Shell 4411 Foothill Blvd	Sampled: 09/01/98
1680 Rogers Avenue	Sample Descript: S-1	Received: 09/02/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: EPA 8260	Analyzed: 09/07/98
Attention: Fran Thie	Lab Number: 9809123-01	Reported: 09/22/98

QC Batch Number: MS090698MTBEH6A
Instrument ID: H6

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	100	120

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	98

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 4411 Foothill Blvd	Sampled: 09/01/98
1680 Rogers Avenue	Sample Descript: S-1	Received: 09/02/98
San Jose, CA 95112	Matrix: LIQUID	Extracted: 09/08/98
	Analysis Method: EPA 8015 Mod	Analyzed: 09/09/98
Attention: Fran Thie	Lab Number: 9809123-01	Reported: 09/22/98

QC Batch Number: GC0908980HBPEXB
Instrument ID: GCHP5A

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil Chromatogram Pattern:	500	N.D.

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

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

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Blaine Tech Services	Client Proj. ID: Shell 4411 Foothill Blvd	Sampled: 09/01/98
1680 Rogers Avenue	Sample Descript: S-2	Received: 09/02/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/14/98
Attention: Fran Thie	Lab Number: 9809123-02	Reported: 09/22/98

QC Batch Number: GC091498BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	2000	N.D.
Methyl t-Butyl Ether	**100**	**9300**
Benzene	**20**	**170**
Toluene	20	N.D.
Ethyl Benzene	20	N.D.
Xylenes (Total)	20	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	97

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 4411 Foothill Blvd	Sampled: 09/01/98
1680 Rogers Avenue	Sample Descript: S-2	Received: 09/02/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: EPA 8260	Analyzed: 09/07/98
Attention: Fran Thie	Lab Number: 9809123-02	Reported: 09/22/98

QC Batch Number: MS090698MTBEH6A
Instrument ID: H6

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	**200**	**12000**

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	100

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Tech Services	Client Proj. ID: Shell 4411 Foothill Blvd	Sampled: 09/01/98
1680 Rogers Avenue	Sample Descript: S-3	Received: 09/02/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/15/98
Attention: Fran Thie	Lab Number: 9809123-03	Reported: 09/22/98

QC Batch Number: GC091598BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**1000**	**9600**
Methyl t-Butyl Ether	**50**	**490**
Benzene	**10**	**480**
Toluene	**10**	**120**
Ethyl Benzene	**10**	**870**
Xylenes (Total)	**10**	**1800**
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 #1210

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Tech Services	Client Proj. ID: Shell 4411 Foothill Blvd	Sampled: 09/01/98
1680 Rogers Avenue	Sample Descript: S-3	Received: 09/02/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: EPA 8260	Analyzed: 09/07/98
Attention: Fran Thie	Lab Number: 9809123-03	Reported: 09/22/98

QC Batch Number: MS090798MTBEH6A
Instrument ID: H6

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	50	N.D.

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	99

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Shell 4411 Foothill Blvd
Sample Descript: EB
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9809123-04

Sampled: 09/01/98
Received: 09/02/98

Analyzed: 09/15/98
Reported: 09/22/98

QC Batch Number: GC091598BTEX03A
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	95

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Renner
Project Manager

Sequoia Analytical

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Blaine Tech Services	Client Proj. ID: Shell 4411 Foothill Blvd	Sampled: 09/03/98
1680 Rogers Avenue	Sample Descript: DUP	Received: 09/02/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/15/98
Attention: Fran Thie	Lab Number: 9809123-05	Reported: 09/22/98

QC Batch Number: GC091598BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**1000**	**9200**
Methyl t-Butyl Ether	**50**	**110**
Benzene	**10**	**420**
Toluene	**10**	**110**
Ethyl Benzene	**10**	**800**
Xylenes (Total)	**10**	**1700**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	117

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
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Shell 4411 Foothill Blvd
Sample Descript: DUP
Matrix: LIQUID
Analysis Method: EPA 8260
Lab Number: 9809123-05

Sampled: 09/03/98
Received: 09/02/98

Analyzed: 09/07/98
Reported: 09/22/98

QC Batch Number: MS090798MTBEH6A
Instrument ID: H6

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	50	N.D.

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	100

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Perner
Project Manager

Sequoia Analytical

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Blaine Tech Services, Inc.	Client Project ID:	Shell 4411 Foothill Blvd.	
1680 Rogers Ave.	Matrix:	Liquid	
San Jose, CA 95112			
Attention: Fran Thie	Work Order #:	9809123 -01-03	Reported: Sep 23, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0916986010M2A	ME0916986010M2A	ME0916986010M2A	ME0916986010M2A
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3010	EPA 3010	EPA 3010	EPA 3010
Analyst:	C. Caoile	C. Caoile	C. Caoile	C. Caoile
MS/MSD #:	980912301	980912301	980912301	980912301
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/16/98	9/16/98	9/16/98	9/16/98
Analyzed Date:	9/16/98	9/16/98	9/16/98	9/16/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Result:	0.97	0.97	0.96	0.96
MS % Recovery:	97	97	96	96
Dup. Result:	0.97	0.97	0.97	0.98
MSD % Recov.:	97	97	97	98
RPD:	0.0	0.0	1.0	2.1
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	CCVMI090998	CCVMI090998	CCVMI090998	CCVMI090998
Prepared Date:	9/9/98	9/9/98	9/9/98	9/9/98
Analyzed Date:	9/16/98	9/16/98	9/16/98	9/16/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	5.0 mg/L	5.0 mg/L	5.0 mg/L	5.0 mg/L
LCS Result:	5.0	5.1	5.1	5.2
LCS % Recov.:	100	102	102	104

MS/MSD	80-120	80-120	80-120	80-120
LCS	80-120	80-120	80-120	80-120
Control Limits				

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

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

Sequoia Analytical

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

Client Project ID: Shell 4411 Foothill Blvd.
Matrix: Liquid
Work Order #: 9809123-05
Reported: Sep 23, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0921986010M2A	ME0921986010M2A	ME0921986010M2A	ME0921986010M2A
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3010	EPA 3010	EPA 3010	EPA 3010
Analyst:	C. Caoile	C. Caoile	C. Caoile	C. Caoile
MS/MSD #:	9809B1303	9809B1303	9809B1303	9809B1303
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/21/98	9/21/98	9/21/98	9/21/98
Analyzed Date:	9/21/98	9/21/98	9/21/98	9/21/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Result:	1.1	0.88	0.96	0.95
MS % Recovery:	110	88	96	95
Dup. Result:	1.0	0.89	0.96	0.95
MSD % Recov.:	100	89	96	95
RPD:	9.5	1.1	0.0	0.0
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	CCVMI090998	CCVMI090998	CCVMI090998	CCVMI090998
Prepared Date:	9/9/98	9/9/98	9/9/98	9/9/98
Analyzed Date:	9/21/98	9/21/98	9/21/98	9/21/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	5.0 mg/L	5.0 mg/L	5.0 mg/L	5.0 mg/L
LCS Result:	5.0	5.1	5.1	5.3
LCS % Recov.:	100	102	102	106

MS/MSD	80-120	80-120	80-120	80-120
LCS	80-120	80-120	80-120	80-120
Control Limits				

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

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Blaine Tech Services, Inc.	Client Project ID:	Shell 4411 Foothill Blvd.	
1680 Rogers Ave.	Matrix:	Liquid	
San Jose, CA 95112			
Attention: Fran Thie	Work Order #:	9809123-01-05	Reported: Sep 23, 1998

QUALITY CONTROL DATA REPORT

Analyte:	MTBE
QC Batch#:	MS090698MTBEH6A
Analy. Method:	EPA 8260
Prep. Method:	N.A.
Analyst:	L. Zhu
MS/MSD #:	9808I2415
Sample Conc.:	280
Prepared Date:	9/6/98
Analyzed Date:	9/6/98
Instrument I.D.#:	H6
Conc. Spiked:	50 µg/L
Result:	330
MS % Recovery:	120
Dup. Result:	330
MSD % Recov.:	120
RPD:	0.0
RPD Limit:	0-25

LCS #:	LCS090798
Prepared Date:	-
Analyzed Date:	9/7/98
Instrument I.D.#:	H6
Conc. Spiked:	50 µg/L
LCS Result:	47
LCS % Recov.:	94

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

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

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

Client Project ID: Shell 4411 Foothill Blvd.

QC Sample Group: 9809123-03-05

Reported: Sep 22, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Liquid			
Method:	EPA 8020			
Analyst:	DBoYD			
ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
QC Batch #:	GC091598BTEX03A			
Sample No.:	9809323-02			
Date Prepared:	9/15/98	9/15/98	9/15/98	9/15/98
Date Analyzed:	9/15/98	9/15/98	9/15/98	9/15/98
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:	10	11	10	31
% Recovery:	103	107	102	103
Matrix pike Duplicate, ug/L:	9.9	9.6	9.7	29
% Recovery:	99	96	97	97
elative % Difference:	4.0	11	5.0	6.0
RPD Control Limits:	0-25	0-25	0-25	0-25

LCS Batch#:	GWLCS091598A			
Date Prepared:	9/15/98	9/15/98	9/15/98	9/15/98
Date Analyzed:	9/15/98	9/15/98	9/15/98	9/15/98
Instrument I.D.#:	GCHP03	GCHP03	GCHP03	GCHP03
Conc. Spiked, ug/L:	10	10	10	30
LCS Recovery, ug/L:	11	10	10	31
LCS % Recovery:	105	102	102	103

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

Peggy Penner
Project Manager

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

Client Project ID: Shell 4411 Foothill Blvd.

QC Sample Group: 9809123-02

Reported: Sep 22, 1998

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8020
Analyst: M. McMillan

ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
QC Batch #:	GC091498BTEX21A			
Sample No.:	GW9809323-1			
Date Prepared:	9/14/98	9/14/98	9/14/98	9/14/98
Date Analyzed:	9/14/98	9/14/98	9/14/98	9/14/98
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	10	10	10	30
Matrix Spike, ug/L:	12	12	12	37
% Recovery:	120	120	120	123
Matrix pike Duplicate, ug/L:	12	12	12	37
% Recovery:	120	120	120	123
elative % Difference:	0.0	0.0	0.0	0.0
RPD Control Limits:	0-25	0-25	0-25	0-25

LCS Batch#:	GWLCS091498A			
Date Prepared:	9/14/98	9/14/98	9/14/98	9/14/98
Date Analyzed:	9/14/98	9/14/98	9/14/98	9/14/98
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked, ug/L:	10	10	10	30
LCS Recovery, ug/L:	10.0	9.9	9.9	30
LCS % Recovery:	100.0	99	99	100.0

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

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Project Manager

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

Client Project ID: Shell 4411 Foothill Blvd.

QC Sample Group: 9809123-01

Reported: Sep 22, 1998

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8020
Analyst: R.GECKLER

ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
QC Batch #:	GC090998BTEX31A			
Sample No.:	GW9808154-3			
Date Prepared:	9/9/98	9/9/98	9/9/98	9/9/98
Date Analyzed:	9/9/98	9/9/98	9/9/98	9/9/98
Instrument I.D.#:	GCHP31	GCHP31	GCHP31	GCHP31
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	10	10	10	30
Matrix Spike, ug/L:	9.0	8.6	8.6	26
% Recovery:	90	86	86	87
Matrix pike Duplicate, ug/L:	8.5	8.5	8.2	25
% Recovery:	85	85	82	83
elative % Difference:	5.7	1.2	4.8	4.7
RPD Control Limits:	0-25	0-25	0-25	0-25

LCS Batch#:	GWLCS090998A			
Date Prepared:	9/9/98	9/9/98	9/9/98	9/9/98
Date Analyzed:	9/9/98	9/9/98	9/9/98	9/9/98
Instrument I.D.#:	GCHP31	GCHP31	GCHP31	GCHP31
Conc. Spiked, ug/L:	10	10	10	30
LCS Recovery, ug/L:	8.2	7.9	8.0	24
LCS % Recovery:	82	79	80	80

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

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

Client Project ID: Shell 4411 Foothill Blvd.

QC Sample Group: 9809123-01-03, -05

Reported: Oct 13, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Liquid	
Method:	EPA 300.0	
Analyst:	G. Fish	
ANALYTE	Sulfate	Nitrate
QC Batch #:	IN0903983000ACA	
Sample No.:	9809122-1	
Date Prepared:	9/3/98	9/3/98
Date Analyzed:	9/3/98	9/3/98
Instrument I.D.#:	INAC1	INAC1
Sample Conc., mg/L:	13	N.D.
Conc. Spiked, mg/L:	100	100
Matrix Spike, mg/L:	100	93
% Recovery:	87	93
Matrix pike Duplicate, mg/L:	99	93
% Recovery:	86	93
elative % Difference:	1.2	0.0
RPD Control Limits:		

LCS Batch#:	LCS0903983000ACA	
Date Prepared:	9/3/98	9/3/98
Date Analyzed:	9/3/98	9/3/98
Instrument I.D.#:	INAC1	INAC1
Conc. Spiked, mg/L:	10	10
LCS Recovery, mg/L:	9.5	9.5
LCS % Recovery:	95	95

Percent Recovery Control Limits:

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

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SEQUOIA ANALYTICAL

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

Client Project ID: Shell 4411 Foothill Blvd.

QC Sample Group: 9809123-01

Reported: Sep 22, 1998

QUALITY CONTROL DATA REPORT

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

QC Batch #:	GC0908980HBPEXB
Sample No.:	9809123-1
Date Prepared:	9/8/98
Date Analyzed:	9/9/98
Instrument I.D.#:	GCHP5A
Sample Conc., ug/L:	2300
Conc. Spiked, ug/L:	1000
Matrix Spike, ug/L:	3600
% Recovery:	130
Matrix pike Duplicate, ug/L:	3200
% Recovery:	90
elative % Difference:	36
RPD Control Limits:	0-50

LCS Batch#:	BLK090898BS
Date Prepared:	9/8/98
Date Analyzed:	9/9/98
Instrument I.D.#:	GCHP5A
Conc. Spiked, ug/L:	1000
Recovery, ug/L:	850
LCS % Recovery:	85

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

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Blaine Tech Services	Client Proj. ID: Shell 4411 Foothill Blvd	Received: 09/02/98
1680 Rogers Avenue		
San Jose, CA 95112	Lab Proj. ID: 9809123	Reported: 09/22/98
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 14 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