CAMBRIA

December 22, 1997

#295 1-21-98
JE
Tom: I do not have this case.
Larry

Jennifer Eberle
Alameda County Department
of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Re: **Third Quarter 1997 Monitoring Report**
Former Shell Service Station
1230 14th Street
Oakland, California
WIC # 204-4878-1300
Cambria Project # 24-314-397

Dear Ms. Eberle:

On behalf of Shell Oil Products Company (Shell), Cambria Environmental Technology, Inc. (Cambria) is submitting this monitoring report to satisfy the quarterly reporting requirements prescribed by California Administrative Code Title 23 Waters, Division 3, Chapter 16, Article 5, Section 2652.d.

THIRD QUARTER 1997 ACTIVITIES

Ground Water Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California measured ground water depths and collected water samples from selected site wells (Figure 1). The Blaine report, describing these sampling activities and presenting the analytic results, is included as Attachment A. Cambria calculated ground water elevations and compiled the analytic data (Table 1), and prepared a ground water elevation contour map (Figure 1).

Oxygen Releasing Compound (ORC) Installation: Blaine installed ORCs in wells MW-1, VW/MW-2, and VW/MW-4 on March 25, 1997. Sampling of these wells has been suspended until dissolved oxygen (DO) concentrations return to pre-ORC levels. At that time, Blaine will sample the wells and install additional ORCs.

CAMBRIA
ENVIRONMENTAL
TECHNOLOGY, INC.
1144 65TH STREET,
SUITE B
OAKLAND,
CA 94608
PH: (510) 420-0700
FAX: (510) 420-9170

ANTICIPATED FOURTH QUARTER 1997 ACTIVITIES

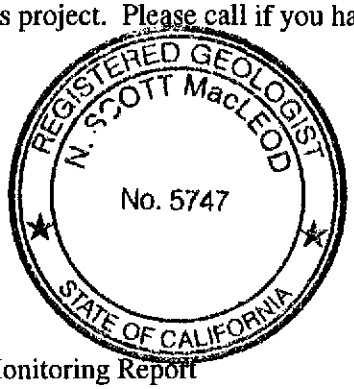
Ground Water Monitoring: Blaine will measure ground water elevations and collect ground water samples from selected site wells. Cambria will submit a report summarizing the activities for the upcoming quarter.

Ground Water Investigation: During a May 20, 1997 telephone conversation with Paul Waite of Cambria, Jennifer Eberle discussed evaluating further ground water investigation at this site based on monitoring results. Based on the DO concentrations in the wells with ORCs, we anticipate sampling and replacing the ORCs in wells MW-1, VM/MW-2, and VM/MW-4 during the first quarter 1998. We recommend evaluating further investigation based on these analytical results.

CLOSING

We appreciate the opportunity to work with you on this project. Please call if you have any questions.

Sincerely,
Cambria Environmental Technology, Inc.

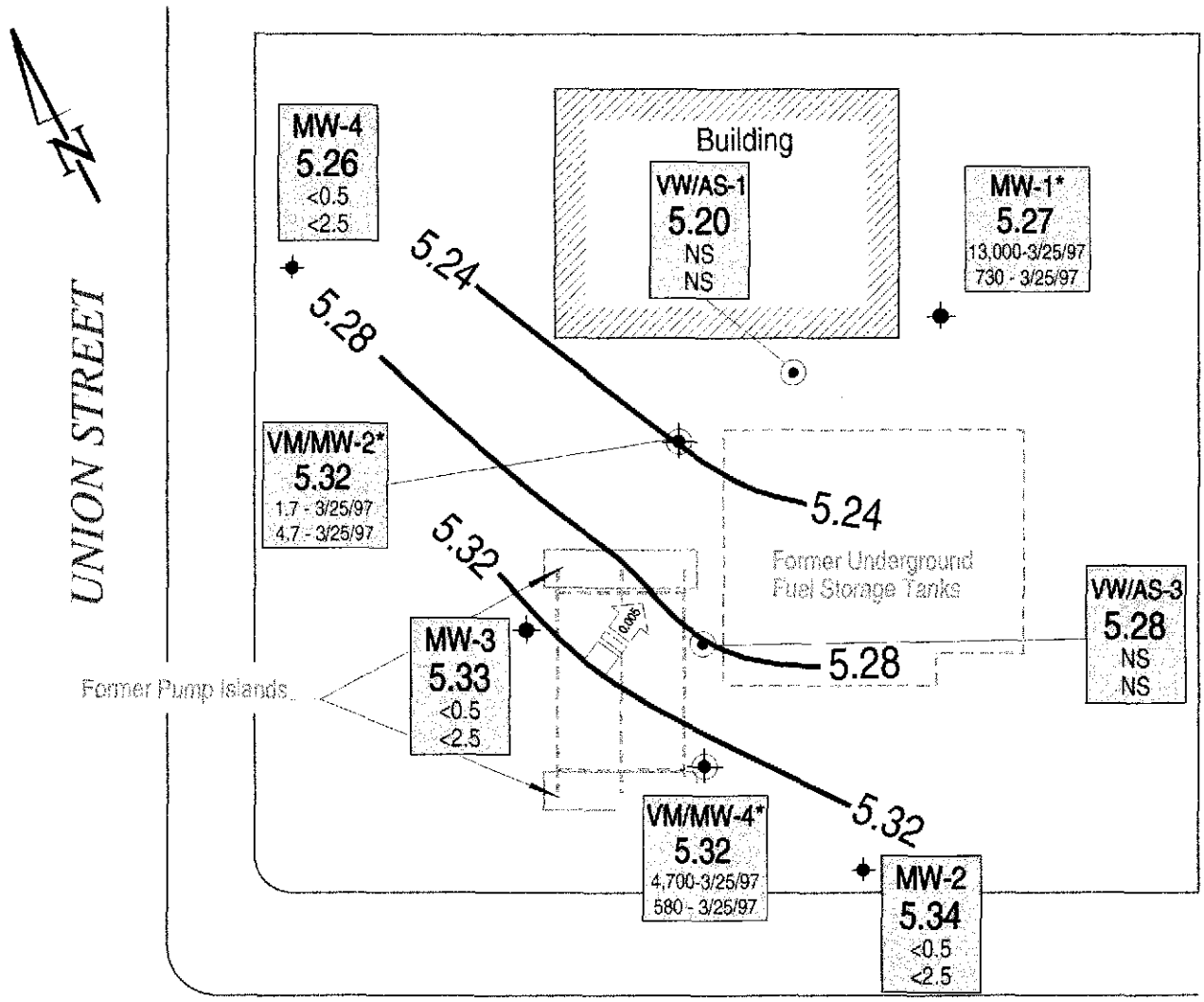


Khaled B. Rahman, R.G., C.H.G.
Senior Geologist

Attachments: A - Blaine Quarterly Ground Water Monitoring Report

cc: A. E. (Alex) Perez, Shell Oil Products Company, P.O. Box 8080, Martinez, California 94553

F:\PROJECT\SHELL\OAK1230\QMs\3Q97QM.WPD



EXPLANATION

- MW-2 — Ground Water Monitoring Well
- VW/AS-3 — Combination Air Sparge/Soil Vapor Extraction Wells
- VW/MW-4 — Combination Soil Vapor Extraction Well/Monitoring Well
- Ground Water Contour
- *Ground Water Flow Direction/Gradient (ft/ft)*
- NS — Not Sampled
- * — Not Contoured, ORCs removed prior to gauging

MW-2
ELEV.
Benz. - Date
MTBE - Date

1. Ground water elevation, ft above mean sea level (msl)
2. *Benzene and MTBE concentrations are in parts per* billion (ppb)
3. Date is most recent sampling unless otherwise indicated

0 20
Scale (ft)

Base Map by Tank Protect Engineering

CAMBRIA
Environmental Technology, Inc.

Former Shell Service Station
1230 14th Street
Oakland, California

F:/PROJECT/SHELL/OAK1230/FIGURES/3QM97-MP.DWG

Ground Water Elevation
Contours
September 26, 1997

FIGURE
1

Table 1. Ground Water Elevation and Analytic Data - Former Shell Service Station WIC # 204-5508-3103 - 1230 14th Street, Oakland, California

Well ID (Quarters Sampled)	Date	GW Depth (ft)	GW Elev. (ft)	GW Flow Direction	TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	POG	DO (mg/L)	Notes
					← concentrations in µg/L →								
MW-1	03/25/96	9.53	9.05	---	37,000	<500	7,400	1,500	720	3,300	<5,000	---	
(Sampling Suspended)	06/21/96	10.72	7.86	NE	35,000	890	9,900	460	340	3,500	<5,000	---	
TOC=18.58	09/26/96	12.88	5.70	W	19,000	<250	8,200	510	780	790	3,800	---	
	12/19/96	12.59	5.99	N	27,000	<100	120	1,200	1,400	2,800	9,000	---	
	12/19/96	12.59	5.99	N	32,000	830	12,000	1,300	1,600	3,100	8,800	---	duplicate
	03/25/97	11.10	7.48	NE	39,000	730	13,000	1,600	840	3,100	<5,000	1.2	
	06/26/97	12.42	6.16	NE	---	---	---	---	---	---	---	---	a
	09/26/97	13.31	5.27	NE	---	---	---	---	---	---	---	0.8	a
MW-2	03/25/96	8.19	9.71	---	<50	<2.5	<0.50	<0.50	<0.50	<0.50	---	---	
(All)	06/21/96	9.94	7.96	NE	<50	<2.5	<0.50	<0.50	<0.50	<0.50	---	---	
TOC=17.90	9/26/96	12.15	5.75	NW	<50	<2.5	<0.50	<0.50	<0.50	<0.50	---	---	
	12/19/96	11.70	6.20	N	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	
	03/25/97	9.25	8.65	NE	<50	<2.5	<0.50	<0.50	<0.50	<0.50	---	1.8	
	06/26/97	11.36	6.54	NE	<50	<2.5	<0.50	<0.50	<0.50	<0.50	<5,000	2.4	
	09/26/97	12.56	5.34	NE	<50	<2.5	<0.50	<0.50	<0.50	<0.50	<5,000	1.1	
	09/26/97	12.56	5.34	NE	<50	<2.5	<0.50	<0.50	<0.50	<0.50	<5,000	1.1	duplicate
MW-3	03/25/96	8.47	9.71	---	<50	<2.5	<0.50	<0.50	<0.50	<0.50	---	---	
(All)	06/21/96	10.40	7.78	NE	<50	<2.5	<0.50	<0.50	<0.50	<0.50	---	---	
TOC= 18.18	09/26/96	12.45	5.73	N	<50	<2.5	<0.50	<0.50	<0.50	<0.50	---	---	
	12/19/96	12.14	6.02	N	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	
	03/25/97	9.54	8.64	NE	<50	<2.5	<0.50	<0.50	<0.50	<0.50	---	2.2	
	06/26/97	11.66	6.52	NE	<50	<2.5	<0.50	<0.50	<0.50	<0.50	<5,000	3.6	
	09/26/97	12.85	5.33	NE	<50	<2.5	<0.50	<050	<0.50	<0.50	<5,000	1.1	
MW-4	03/25/96	9.20	8.81	---	<50	<2.5	<0.50	<0.50	<0.50	<0.50	---	---	
(All)	06/21/96	10.25	7.76	NE	<50	<2.5	<0.50	<0.50	<0.50	<0.50	---	---	
TOC= 18.01	09/26/96	12.29	5.72	NE	<50	<2.5	<0.50	<0.50	<0.50	<0.50	---	---	
	12/19/96	12.47	5.54	N	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	
	03/25/97	9.44	8.57	NE	<50	<2.5	<0.50	<0.50	<0.50	<0.50	---	1.8	
	06/26/97	11.57	6.44	NE	<50	<2.5	<0.50	<0.50	<0.50	<0.50	<5,000	6.2	
	06/26/97	11.57	6.44	NE	<50	<2.5	<0.50	<0.50	<0.50	<0.50	<5,000	6.2	duplicate
	09/26/97	12.75	6.26	NE	<50	<2.5	<0.50	<0.50	<0.50	<0.50	<5,000	2.1	
VW/MW-2	03/25/96	9.04	9.26	---	13,000	<250	900	920	180	1,500	---	---	

Table 1. Ground Water Elevation and Analytic Data - Former Shell Service Station WIC # 204-5508-3103 - 1230 14th Street, Oakland, California

Well ID (Quarters Sampled)	Date	GW Depth (ft)	GW Elev. (ft)	GW Flow Direction	TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	POG	DO (mg/L)	Notes
					← concentrations in µg/L →								
(Sampling Suspended)	06/21/96	10.48	7.82	NE	27,000	700	4,100	1,100	1,400	3,200	---	---	
TOC= 18.30	09/26/96	12.52	5.78	NE	27,000	<500	5,300	1,900	980	2,200	---	---	
	09/26/96	12.52	5.78	NE	29,000	<250	5,800	2,200	1,100	2,500	---	---	duplicate
	12/19/96	12.42	5.88	N	50,000	590	6,200	5,100	1,700	5,600	---	---	
	03/25/97	9.83	8.47	NE	210	14	5.6	<0.50	0.52	<0.50	---	2.0	
	03/25/97	9.83	8.47	NE	250	4.7	1.7	0.58	0.51	<0.50	---	2.0	duplicate
	06/26/97	12.43	5.87	NE	---	---	---	---	---	---	---	---	a
	09/26/97	12.98	5.32	NE	---	---	---	---	---	---	---	0.9	a
VW/MW-4	03/25/96	8.45	9.69	---	83,000	<250	6,500	7,000	2,000	11,000	---	---	
(Sampling Suspended)	03/25/96	8.45	9.69	---	84,000	<250	6,400	7,000	2,100	12,000	---	---	duplicate
TOC= 18.14	06/21/96	10.38	7.76	NE	110,000	1,700	14,000	15,000	3,700	17,000	---	---	
	06/21/96	10.38	7.76	NE	100,000	<1,000	12,000	12,000	2,900	13,000	---	---	duplicate
	09/26/96	12.43	5.71	NE	52,000	<500	13,000	2,700	2,100	3,200	---	---	
	12/19/96	11.87	6.27	N	75,000	<1,250	15,000	6,600	3,000	7,600	---	---	
	03/25/97	9.60	8.54	NE	56,000	580	4,700	1,500	2,500	6,300	---	2.4	
	06/26/97	12.36	5.78	NE	---	---	---	---	---	---	---	---	a
	09/26/97	12.82	5.32	NE	---	---	---	---	---	---	---	0.4	a
VW/AS-1	03/25/96	8.98	9.62	---	---	---	---	---	---	---	---	---	
(Gauge only)	06/21/96	10.95	7.65	NE	---	---	---	---	---	---	---	---	
TOC= 18.60	09/26/96	12.98	5.62	N	---	---	---	---	---	---	---	---	
	12/19/96	12.67	5.93	N	---	---	---	---	---	---	---	---	
	03/25/97	10.12	8.48	NE	---	---	---	---	---	---	---	---	
	06/26/97	12.34	6.26	NE	---	---	---	---	---	---	---	---	
	09/26/97	13.40	5.20	NE	---	---	---	---	---	---	---	---	b
VW/AS-3	03/25/96	8.50	9.67	---	---	---	---	---	---	---	---	---	
(Gauge only)	06/21/96	10.42	7.75	NE	---	---	---	---	---	---	---	---	
TOC= 18.17	09/26/96	12.49	5.68	NE	---	---	---	---	---	---	---	---	
	12/19/96	12.28	5.89	N	---	---	---	---	---	---	---	---	
	03/25/97	9.61	8.56	NE	---	---	---	---	---	---	---	---	
	06/26/97	11.80	6.37	NE	---	---	---	---	---	---	---	---	
	09/26/97	12.89	5.28	NE	---	---	---	---	---	---	---	---	b

Table 1. Ground Water Elevation and Analytic Data - Former Shell Service Station WIC # 204-5508-3103 - 1230 14th Street, Oakland, California

Well ID (Quarters Sampled)	Date	GW Depth (ft)	GW Elev. (ft)	GW Flow Direction	TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	POG	DO (mg/L)	Notes
					← concentrations in µg/L →								

Abbreviations:

GW = Ground water
TPHg = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
TOC = Top of casing elevation
ft = Feet
MTBE = Methyl tert-Butyl Ether by EPA Method 8020
POG = Petroleum Oil and Grease by SMMW 5520 B&F
DO = Dissolved oxygen
µg/L = Micrograms per liter
mg/L = Milligrams per liter

Notes:

a = Oxygen releasing compounds (ORCs) installed in wells were removed prior to gauging.
b = DO reading not taken due to small diameter of well
Benzene, Toluene, Ethylbenzene, and Xylenes by EPA Method 8020

BLAINE
TECH SERVICES INC.

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

October 20, 1997

Shell Oil Company
P.O. Box 5278
Concord, CA 94520-9998

Attn: Alex Perez

Shell WIC #204-5508-3103
1230 14th Street
Oakland, California

3rd Quarter 1997

Groundwater Monitoring Report 970926-L-1

Blaine Tech Services, Inc. performs environmental sampling and documentation as an independent third party. Copies of our Sampling 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, CA 95476
Attn: Josh Bergstrom

(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)
MW-1	09/26/97	TOC	–	NONE	–	–	13.31	21.31
MW-2*	09/26/97	TOC	–	NONE	–	–	12.56	22.11
MW-3	09/26/97	TOC	–	NONE	–	–	12.85	20.31
MW-4	09/26/97	TOC	–	NONE	–	–	12.75	21.00
VW/MW-2	09/26/97	TOC	–	NONE	–	–	12.98	21.37
VW/MW-4	09/26/97	TOC	–	NONE	–	–	12.82	19.34
VW/AS-1	09/26/97	TOC	–	NONE	–	–	13.40	19.25
VW/AS-3	09/26/97	TOC	–	NONE	–	–	12.89	19.77

* Sample DUP was a duplicate sample taken from well MW-2.

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 970926-L1

Date: 9-26-97
Page 1 of 1

Site Address: 1230 14th St., Oakland, CA

WIC#: 204-5508-3103

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: 9709H23

Sampled by: [signature]

Printed Name: LAD GILCHRIST

LAB: SEQUOIA

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	TOTAL OIL + GREASE		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
1 MW-2	9/26			X		5						X	X							
2 MW-3	↓			X		5						X	X							
3 MW-4				X		5						X	X							
4 EB				X		5						X	X							
5 DUP	↓			X		5						X	X							

CHECK ONE (1) BOX ONLY — CT/DT — TURN AROUND TIME

- G.W. Monitoring XX — 4461 — 24 hours
- Site Investigation — 4441 — 48 hours
- Soil Classify/Disposal — 4442 — 15 days (Normal)
- Water Classify/Disposal — 4443 — Other
- Soil/Air Rem. or Sys. O & M — 4452
- Water Rem. or Sys. O & M — 4453 — NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.
- Other

UST AGENCY:

Relinquished By (signature)	Printed Name	Date / Time	Received (signature)	Printed Name	Date / Time
[signature]	LAD GILCHRIST	9/26/97 3:00	[signature]	Damon Ayres	9/26/97 3:00
[signature]	Damon Ayres	9/26/97	[signature]		
			[signature]		4/26/97 11:23

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

2nd Or Ovn. w Custody

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

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

Project: Shell Oakland 970926-L1

Enclosed are the results from samples received at Sequoia Analytical on September 26, 1997. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9709H23 -01	LIQUID, MW-2	09/26/97	Total Oil&Grease (5520B)
9709H23 -01	LIQUID, MW-2	09/26/97	TPGM2W Purgeable TPH/BTEX
9709H23 -02	LIQUID, MW-3	09/26/97	Total Oil&Grease (5520B)
9709H23 -02	LIQUID, MW-3	09/26/97	TPGM2W Purgeable TPH/BTEX
9709H23 -03	LIQUID, MW-4	09/26/97	Total Oil&Grease (5520B)
9709H23 -03	LIQUID, MW-4	09/26/97	TPGM2W Purgeable TPH/BTEX
9709H23 -04	LIQUID, EB	09/26/97	Total Oil&Grease (5520B)
9709H23 -04	LIQUID, EB	09/26/97	TPGM2W Purgeable TPH/BTEX
9709H23 -05	LIQUID, DUP	09/26/97	Total Oil&Grease (5520B)
9709H23 -05	LIQUID, DUP	09/26/97	TPGM2W Purgeable TPH/BTEX

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, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Shell Oakland 970926-L1

Lab Proj. ID: 9709H23

Sampled: 09/26/97
Received: 09/26/97
Analyzed: see below

Reported: 10/08/97

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9709H23-01 Sample Desc : **LIQUID,MW-2**				
Total Oil&Grease (5520B)	mg/L	10/05/97	5.0	N.D.
Lab No: 9709H23-02 Sample Desc : **LIQUID,MW-3**				
Total Oil&Grease (5520B)	mg/L	10/05/97	5.0	N.D.
Lab No: 9709H23-03 Sample Desc : **LIQUID,MW-4**				
Total Oil&Grease (5520B)	mg/L	10/05/97	5.0	N.D.
Lab No: 9709H23-04 Sample Desc : **LIQUID,EB**				
Total Oil&Grease (5520B)	mg/L	10/05/97	5.0	N.D.
Lab No: 9709H23-05 Sample Desc : **LIQUID,DUP**				
Total Oil&Grease (5520B)	mg/L	10/05/97	5.0	N.D.

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, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services	Client Proj. ID: Shell Oakland 970926-L1	Sampled: 09/26/97
1680 Rogers Avenue	Sample Descript: MW-2	Received: 09/26/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/07/97
Attention: Fran Thie	Lab Number: 9709H23-01	Reported: 10/08/97

QC Batch Number: GC100797BTEX02A
Instrument ID: GCHP02

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	97

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
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services	Client Proj. ID: Shell Oakland 970926-L1	Sampled: 09/26/97
1680 Rogers Avenue	Sample Descript: MW-3	Received: 09/26/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/07/97
Attention: Fran Thie	Lab Number: 9709H23-02	Reported: 10/08/97

QC Batch Number: GC100797BTEX02A
Instrument ID: GCHP02

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	96

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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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services	Client Proj. ID: Shell Oakland 970926-L1	Sampled: 09/26/97
1680 Rogers Avenue	Sample Descript: MW-4	Received: 09/26/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/07/97
Attention: Fran Thle	Lab Number: 9709H23-03	Reported: 10/08/97

QC Batch Number: GC100797BTEX02A
Instrument ID: GCHP02

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	93

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 Oakland 970926-L1	Sampled: 09/26/97
1680 Rogers Avenue	Sample Descript: EB	Received: 09/26/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/07/97
Attention: Fran Thie	Lab Number: 9709H23-04	Reported: 10/08/97

QC Batch Number: GC100797BTEX02A
Instrument ID: GCHP02

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	100

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

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Peggy Penner
Project Manager

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Blaine Tech Services	Client Proj. ID: Shell Oakland 970926-L1	Sampled: 09/26/97
1680 Rogers Avenue	Sample Descript: DUP	Received: 09/26/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/07/97
Attention: Fran Thie	Lab Number: 9709H23-05	Reported: 10/08/97

QC Batch Number: GC100797BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

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

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	98

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

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Blaine Tech Services, Inc.	Client Project ID:	Shell Oakland 970926-L1	
1680 Rogers Ave.	Matrix:	Liquid	
San Jose, CA 95112			
Attention: Fran Thie	Work Order #:	9709H23 -01-05	Reported: Oct 10, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Total Oil & Grease
QC Batch#:	IN100397552000A
Analy. Method:	SM 5520 B
Prep. Method:	N.A.
Analyst:	P. Cheung
MS/MSD #:	BLK100397
Sample Conc.:	N.D.
Prepared Date:	10/3/97
Analyzed Date:	10/5/97
Instrument I.D.#:	MANUAL
Conc. Spiked:	20 mg/L
Result:	14
MS % Recovery:	70
Dup. Result:	15
MSD % Recov.:	75
RPD:	6.9
RPD Limit:	0-30

LCS #:	LCS100597
Prepared Date:	10/3/97
Analyzed Date:	10/5/97
Instrument I.D.#:	MANUAL
Conc. Spiked:	20 mg/L
LCS Result:	15
LCS % Recov.:	75

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

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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, Inc.	Client Project ID:	Shell Oakland 970926-L1	
1680 Rogers Ave.	Matrix:	Liquid	
San Jose, CA 95112			
Attention: Fran Thie	Work Order #:	9709H23-01-05	Reported: Oct 10, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC100797BTEX02A	GC100797BTEX02A	GC100797BTEX02A	GC100797BTEX02A	GC100797BTEX02A
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:	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab
MS/MSD #:	971021002	971021002	971021002	971021002	971021002
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	10/7/97	10/7/97	10/7/97	10/7/97	10/7/97
Analyzed Date:	10/7/97	10/7/97	10/7/97	10/7/97	10/7/97
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	9.8	9.4	9.6	29	64
MS % Recovery:	98	94	96	97	107
Dup. Result:	9.6	9.2	9.5	28	61
MSD % Recov.:	96	92	95	93	102
RPD:	2.1	2.2	1.0	3.5	4.8
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	BLK100797	BLK100797	BLK100797	BLK100797	BLK100797
Prepared Date:	10/7/97	10/7/97	10/7/97	10/7/97	10/7/97
Analyzed Date:	10/7/97	10/7/97	10/7/97	10/7/97	10/7/97
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	9.3	9.0	9.1	28	60
LCS % Recov.:	93	90	91	93	100
MS/MSD Control Limits	60-140	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130	70-130

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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	Client Proj. ID: Shell Oakland 970926-L1	Received: 09/26/97
1680 Rogers Avenue		
San Jose, CA 95112	Lab Proj. ID: 9709H23	Reported: 10/08/97
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 10 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

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Peggy Penner
Project Manager