CAMBRIA

December 5, 1996

Ms. Jennifer Eberle
Alameda County Environmental Protection Services
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502-6577

ENVIRONMENTAL PROTECTION
96 DEC 10 AM 8:

Re: **Third Quarter 1996 Monitoring Report**
Former Shell Service Station
1230 14th Street
Oakland, California
WIC # 204-4878-1300

Dear Ms. Eberle:

On behalf of Shell Oil Products Company, Cambria Environmental Technology, Incorporated (Cambria) is submitting this quarterly monitoring report for the site referenced above in accordance with the requirements specified in California Code of Regulations Title 23, Chapter 3, Subchapter 16, Article 5, Section 2652d. The site wells were sampled this quarter by Blaine Tech Services, Inc. of San Jose, California (Blaine). Blaine's sampling report, which includes the laboratory analytic report, is included as Attachment A. Ground water elevations are contoured on Figure 1, and the ground water elevation and analytic data are tabulated on Table 1

As we discussed November 26, 1996, we will meet in January 1997 to determine an appropriate course of action for the site. Please call if you have any questions.

Sincerely,
Cambria Environmental Technology, Inc.

REGISTERED GEOLOGIST
N. SCOTT MacLEOD
No. 5747
STATE OF CALIFORNIA

N. Scott MacLeod, R.G.
Principal Geologist

Attachments: A - Blaine Tech Services Reports

cc: R. Jeff Granberry, Shell Oil Products Company

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

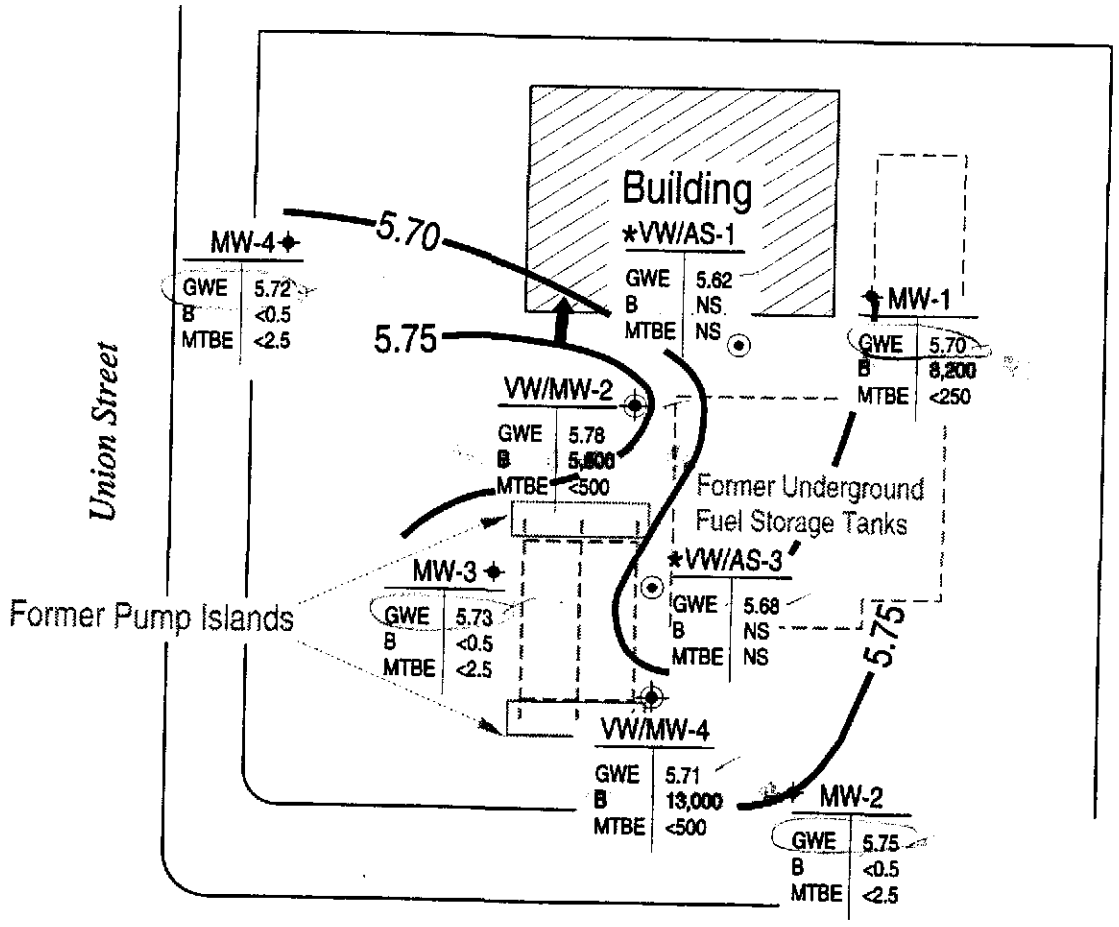

Table 1 says Flow West

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
*	Not Contoured, Well Screened Shallow
GWE	Ground Water Elevation in ft. referenced to mean sea level
B	Benzene Concentration in parts per billion (ppb)
MTBE	Methyl tert-Butyl Ehter concentrations in parts per billion (ppb)
	Ground Water Contour
	Ground Water Flow Direction

0

Scale

CAMBRIA
Environmental Technology, Inc.

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

F:/PROJECT/SHELL/OAK1230/QM-MAP.DWG

Grour
Ben

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Table 1. Ground Water Elevation and Analytic Data - 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 (Concentrations in parts per billion)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	POG	Notes
MW-1	03/25/96	9.53	9.05	---	37,000	<500	7,400	1,500	720	3,300	<5,000	
(All)	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	[illegible]	510	780	790	[illegible] 3,800	
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	---	
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	---	
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	---	
VW/MW-2	03/25/96	9.04	9.26	---	13,000	<250	900	920	180	1,500	---	
(All)	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	[illegible]	2,200	1,100	2,500	---	a
VW/MW-4	03/25/96	8.45	9.69	---	83,000	<250	6,500	7,000	2,000	11,000	---	
(All)	03/25/96	8.45	9.69	---	84,000	<250	6,400	7,000	2,100	12,000	---	a
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	---	a
	09/26/96	12.43	5.71	NE	52,000	<500	[illegible]	2,700	2,100	3,200	---	
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	---	---	---	---	---	---	---	
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	---	---	---	---	---	---	---	

Table 1. Ground Water Elevation and Analytic Data - 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 (Concentrations in parts per billion)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	POG	Notes

Abbreviations:

GW = Ground water
TPHg = Total petroleum hydrocarbons as gasoline modified by EPA Method 8015
TOC = Top of casing elevation
ft = Feet
MTBE = Methyl tert-Butyl Ether by modified EPA method 8020
POG = Petroleum Oil and Grease modified by standard method SM 5520 B&F

Notes:

a = Duplicate sample

CAMBRIA

Attachment A

Blaine Tech Services Reports

BLAINE
TECH SERVICES INC.

985 TIMOTHY DRIVE
SAN JOSE, CA 95133
(408) 995-5535
FAX (408) 293-8773

October 15, 1996

Shell Oil Company
P.O. Box 4023
Concord, CA 94524

Attn: R. Jeff Granberry

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

3rd Quarter 1996

Quarterly Groundwater Monitoring Report 960926-Z-2

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) 995-5535 ext. 201.

Yours truly,

Fran Thie

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

cc: Cambria Environmental Technology, Inc.
1144 65th St., Ste. C
Oakland, CA 94608
Attn: Mari Reeves

(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	9/26/96	TOC	ODOR	NONE	--	--	12.88	21.18
MW-2	9/26/96	TOC	--	NONE	--	--	12.15	22.00
MW-3	9/26/96	TOC	--	NONE	--	--	12.45	21.70
MW-4	9/26/96	TOC	--	NONE	--	--	12.29	21.10
VW/MW-2 *	9/26/96	TOC	ODOR	NONE	--	--	12.52	22.08
VW/MW-4	9/26/96	TOC	ODOR	NONE	--	--	12.43	19.60
VW/AS-1	9/26/96	TOC	--	NONE	--	--	12.98	19.13
VW/AS-3	9/26/96	TOC	--	NONE	--	--	12.49	19.64

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

9609H34

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 960926-22

Date: 9-26-96
Page 1 of 1

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

WIC#: 204-5508-3103

Shell Engineer: R. Jeff Granberry — Phone No.: (510) 675-6166 Fax #:

Consultant Name & Address: Blaine Tech Services, Inc. 985 Timothy Dr., San Jose, CA 95133

Consultant Contact: Fran Thie — Phone No.: (408) 995-5535 Fax #:

Comments:

Sampled by: BRETT BLEAU

Printed Name:

LAB: SEQ

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)+ MTBE	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020 + MTBE	OIL + GREASE		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
1. MW-1	9-26			X		5	X					X	X						CONFIRM HIGHEST EPA 8260	MTBE HIT BY
2. MW-2	"			X		3	X					X								
3. MW-3	"			X		3						X								
4. MW-4	"			X		3						X								
5. VW/MW-2	"			X		3						X								
6. VW/MW-4	"			X		3						X								
7. EB	"			X		3						X								
8. DUP	"			X		3						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	NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.	
Water Rem. or Sys. O & M	☐ 4453		
Other	☐		

UST AGENCY: ____

	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
Relinquished By (signature):	BRETT BLEAU	9-27-96	1010		M. Hall	9-27-96	1010
Relinquished By (signature):							
Relinquished By (signature):							

Received (signature): — Printed Name: — Date: — Time:

Received (signature): L D Cardenas — Printed Name: L D Cardenas — Date: 9-27-96 — Time: 1317

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

2nd Of One of Custody

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 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 Technical Services
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Project: Shell Oakland/960926-Z2

Enclosed are the results from samples received at Sequoia Analytical on September 27, 1996. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9609H34 -01	LIQUID, MW-1	09/26/96	TRPH (SM 5520 B&F)
9609H34 -01	LIQUID, MW-1	09/26/96	TPGBMW Purgeable TPH/BTEX
9609H34 -02	LIQUID, MW-2	09/26/96	TPGBMW Purgeable TPH/BTEX
9609H34 -03	LIQUID, MW-3	09/26/96	TPGBMW Purgeable TPH/BTEX
9609H34 -04	LIQUID, MW-4	09/26/96	TPGBMW Purgeable TPH/BTEX
9609H34 -05	LIQUID, VW/MW-2	09/26/96	TPGBMW Purgeable TPH/BTEX
9609H34 -06	LIQUID, VW/MW-4	09/26/96	TPGBMW Purgeable TPH/BTEX
9609H34 -07	LIQUID, EB	09/26/96	TPGBMW Purgeable TPH/BTEX
9609H34 -08	LIQUID, DUP	09/26/96	TPGBMW 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, (415) 364-9600, FAX (415) 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 Technical Services
985 Timothy Drive
San Jose, CA 95133

Attention: Fran Thie

Client Proj. ID: Shell Oakland/960926-Z2

Lab Proj. ID: 9609H34

Sampled: 09/26/96
Received: 09/27/96
Analyzed: see below

Reported: 10/09/96

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9609H34-01				
Sample Desc : **LIQUID,MW-1**				
TRPH (SM 5520 B&F)	**mg/L**	**10/04/96**	**5.0**	**3.8**

= 3,800 ppb

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, (415) 364-9600, FAX (415) 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 Technical Services
985 Timothy Drive
San Jose, CA 95133

Attention: Fran Thie

Client Proj. ID: Shell Oakland/960926-Z2
Sample Descript: MW-1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9609H34-01

Sampled: 09/26/96
Received: 09/27/96

Analyzed: 10/03/96
Reported: 10/25/96

QC Batch Number: GC100396BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**5000**	**19000**
Methyl t-Butyl Ether	250	N.D.
Benzene	**50**	**8200**
Toluene	**50**	**510**
Ethyl Benzene	**50**	**780**
Xylenes (Total)	**50**	**790**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	81

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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Blaine Technical Services	Client Proj. ID: Shell Oakland/960926-Z2	Sampled: 09/26/96
985 Timothy Drive	Sample Descript: MW-2	Received: 09/27/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/03/96
Attention: Fran Thie	Lab Number: 9609H34-02	Reported: 10/09/96

QC Batch Number: GC100396BTEX01A
Instrument ID: GCHP01

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	110

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, (415) 364-9600, FAX (415) 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 Technical Services	Client Proj. ID: Shell-Oakland/960926-Z2	Sampled: 09/26/96
985 Timothy Drive	Sample Descript: MW-3	Received: 09/27/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/03/96
Attention: Fran Thie	Lab Number: 9609H34-03	Reported: 10/09/96

QC Batch Number: GC100396BTEX01A
Instrument ID: GCHP01

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	78

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, (415) 364-9600, FAX (415) 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 Technical Services	Client Proj. ID: Shell Oakland/960926-Z2	Sampled: 09/26/96
985 Timothy Drive	Sample Descript: MW-4	Received: 09/27/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/03/96
Attention: Fran Thie	Lab Number: 9609H34-04	Reported: 10/09/96

QC Batch Number: GC100396BTEX22A
Instrument ID: GCHP22

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	79

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, (415) 364-9600, FAX (415) 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 Technical Services	Client Proj. ID: Shell Oakland/960926-Z2	Sampled: 09/26/96
985 Timothy Drive	Sample Descript: VW/MW-2	Received: 09/27/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/03/96
Attention: Fran Thie	Lab Number: 9609H34-05	Reported: 10/25/96

QC Batch Number: GC100396BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**10000**	**27000**
Methyl t-Butyl Ether	500	N.D.
Benzene	**100**	**5300**
Toluene	**100**	**1900**
Ethyl Benzene	**100**	**980**
Xylenes (Total)	**100**	**2200**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	76

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, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland/960926-Z2	Sampled: 09/26/96
985 Timothy Drive	Sample Descript: VW/MW-4	Received: 09/27/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/03/96
Attention: Fran Thle	Lab Number: 9609H34-06	Reported: 10/09/96

QC Batch Number: GC100396BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**10000**	**52000**
Methyl t-Butyl Ether	500	N.D.
Benzene	**100**	**13000**
Toluene	**100**	**2700**
Ethyl Benzene	**100**	**2100**
Xylenes (Total)	**100**	**3200**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	84

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 Technical Services	Client Proj. ID: Shell Oakland/960926-Z2	Sampled: 09/26/96
985 Timothy Drive	Sample Descript: EB	Received: 09/27/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/03/96
Attention: Fran Thie	Lab Number: 9609H34-07	Reported: 10/09/96

QC Batch Number: GC100396BTEX07A
Instrument ID: GCHP07

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	82

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

SEQUOIA ANALYTICAL - ELAP #1210

Reggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 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 Technical Services	Client Proj. ID: Shell Oakland/960926-Z2	Sampled: 09/26/96
985 Timothy Drive	Sample Descript: DUP	Received: 09/27/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/03/96
Attention: Fran Thie	Lab Number: 9609H34-08	Reported: 10/25/96

QC Batch Number: GC100396BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**5000**	**29000**
Methyl t-Butyl Ether	250	N.D.
Benzene	**50**	**5800**
Toluene	**50**	**2200**
Ethyl Benzene	**50**	**1100**
Xylenes (Total)	**50**	**2500**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	74

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, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Client Project ID: Shell, Oakland / 960926-Z2
Matrix: Liquid
Work Order #: 9609H34 -01
Reported: Oct 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Total Recoverable Petroleum Hydrocarb.
QC Batch#:	OP0930965520EXA
Analy. Method:	SM 5520 BF
Prep. Method:	EPA 3510

Analyst:	J. Aquino
MS/MSD #:	BLK093096
Sample Conc.:	N.D.
Prepared Date:	9/30/96
Analyzed Date:	10/1/96
Instrument I.D.#:	Manual
Conc. Spiked:	10 mg/L
Result:	10
MS % Recovery:	100
Dup. Result:	8.1
MSD % Recov.:	81
RPD:	21
RPD Limit:	0-30

LCS #:	BLK100296
Prepared Date:	10/2/96
Analyzed Date:	10/4/96
Instrument I.D.#:	Manual
Conc. Spiked:	10 mg/L
LCS Result:	9.8
LCS % Recov.:	98

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

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

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

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

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

Blaine Tech Services, Inc.	Client Project ID:	Shell, Oakland / 960926-Z2	
985 Timothy Drive	Matrix:	Liquid	
San Jose, CA 95133			
Attention: Fran Thie	Work Order #:	9609H34-01-03, 05-07	Reported: Oct 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC100396BTEX07A	GC100396BTEX07A	GC100396BTEX07A	GC100396BTEX07A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	H. Porter	H. Porter	H. Porter	H. Porter
MS/MSD #:	9609H3902	9609H3902	9609H3902	9609H3902
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	10/3/96	10/3/96	10/3/96	10/3/96
Analyzed Date:	10/3/96	10/3/96	10/3/96	10/3/96
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	11	9.2	8.8	26
MS % Recovery:	110	92	88	87
Dup. Result:	10	8.6	8.3	25
MSD % Recov.:	100	86	83	83
RPD:	9.5	6.7	5.8	3.9
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK100396	BLK100396	BLK100396	BLK100396
Prepared Date:	10/3/96	10/3/96	10/3/96	10/3/96
Analyzed Date:	10/3/96	10/3/96	10/3/96	10/3/96
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	11	9.1	8.7	26
LCS % Recov.:	110	91	87	87

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

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

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

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

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Blaine Technical Services
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Client Proj. ID: Shell Oakland/960926-Z2
Lab Proj. ID: 9609H34

Received: 09/27/96
Reported: 10/25/96

LABORATORY NARRATIVE

Please note: Report revised 10/25/96.

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

WELL GAUGING DATA

Project # 960926-Z2 Date SEPT 26, 96 Client SHELL

Site 1230 14TH STREET OAKLAND

Well I.D.	Well Size (in.)	Sheen/ Odor	Depth to Immiscible Liquid (feet)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to Water (feet)	Depth to Well Bottom (feet)	Survey Point: TOB or TOC
MW-1	2					12.88	21.18	TOC
MW-2	2					12.15	22.00	
MW-3	2					12.45	21.70	
MW-4	2					12.29	21.10	
VW/MW-2	2					12.52	22.08	
VW/MW-4	2					12.43	19.60	
VW/AS-1	2					12.98	19.13	
VW/AS-2	2					12.49	19.64	

SHELL WELL MONITORING DATA SHEET

Project #: 960926-T2	Wic #: 204 5508 3103
Sampler: PB	Start Date: 9-26
Well I.D.: MW-1	Well Diameter: (circle one) (2) 3 4 6 ____
Total Well Depth: Before 21.18 After	Depth to Water: Before 12.88 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade Other:	

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

1.3 (1 Case Volume) x 3 (Specified Volumes) = 3.9 gallons

Purging: Bailer *
Disposable Bailer
Middleburg
Electric Submersible
Extraction Pump
Other_____

Sampling: Bailer *
Disposable Bailer
Extraction Port
Other_____

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1221	64.8	7.3	1010	7200	1.5	0008
1223	64.4	7.3	980	7200	3.0	"
1224	64.4	7.3	980	7200	4.0	"

Did Well Dewater? No If yes, gals. Gallons Actually Evacuated: 4.0

Sampling Time: 1230 Sampling Date: 9-26

Sample I.D.: MW-1 Laboratory: SEQ

Analyzed for: TPH-G BTEX TPH-D OTHER: TOG, MTBE (Circle)

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for: TPH-G BTEX TPH-D OTHER: (Circle)

SHELL WELL MONITORING DATA SHEET

Project #: 960926-22	Wic #: 204 5508 3103
Sampler: BB	Start Date: 9-26
Well I.D.: MW-2	Well Diameter: (circle one) (2) 3 4 6 ____
Total Well Depth: Before 22.00 After	Depth to Water: Before 12.15 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade Other:	

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

1.6 (1 Case Volume) x 3 (Specified Volumes) = 4.8 gallons

Purging: Bailer ^
Disposable Bailer
Middleburg
Electric Submersible
Extraction Pump
Other ____

Sampling: Bailer ^
Disposable Bailer
Extraction Port
Other ____

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1153	67.4	7.1	970	7200	1.75	
1155	67.2	7.2	950	7200	3.50	
1157	67.6	7.2	950	7200	5.0	

Did Well Dewater? No If yes, gals. Gallons Actually Evacuated: 5.0

Sampling Time: 1200 Sampling Date: 9-26

Sample I.D.: MW-2 Laboratory: SEQ

Analyzed for: (TPH-G) BTEX TPH-D OTHER: MTBE (Circle)

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for: TPH-G BTEX TPH-D OTHER: (Circle)

SHELL WELL MONITORING DATA SHEET

Project #: 960926-22 Wic #: 204 5508 3103

Sampler: BB Start Date: 9-26

Well I.D.: MW-3 Well Diameter: (circle one) (2) 3 4 6 ____

Total Well Depth: Depth to Water:

Before 21.70 After Before 12.45 After

Depth to Free Product: Thickness of Free Product (feet):

Measurements referenced to: (PVC) Grade Other:

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

1.5 (1 Case Volume) X 3 (Specified Volumes) = 4.5 gallons

Purging: Bailer >
Disposable Bailer
Middleburg
Electric Submersible
Extraction Pump
Other

Sampling: Bailer^
Disposable Bailer
Extraction Port
Other

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1143	66.8	7.2	1060	7200	1.5	
1145	66.4	7.1	1050	7200	3.0	
1147	66.2	7.1	1050	7200	4.5	

Did Well Dewater? No If yes, gals. Gallons Actually Evacuated: 4.5

Sampling Time: 1150 Sampling Date: 9-26

Sample I.D.: MW-3 Laboratory: SEQ

Analyzed for: (Circle) TPH-G BTEX TPH-D OTHER: MTBE

Duplicate I.D.: Cleaning Blank I.D.: EB @ 1140

Analyzed for: (Circle) TPH-G BTEX TPH-D OTHER: MTBE

SHELL WELL MONITORING DATA SHEET

Project #: 960926-Z1	Wic #: 204 5508 3103
Sampler: BB	Start Date: 9-26
Well I.D.: MW-4	Well Diameter: (circle one) (2) 3 4 6 ____
Total Well Depth: Before 21.10 After	Depth to Water: Before 12.29 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other:

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

1.4 (1 Case Volume) x 3 (Specified Volumes) = 4.2 gallons

Purging: Bailer x
Disposable Bailer
Middleburg
Electric Submersible
Extraction Pump
Other_____

Sampling: Bailer x
Disposable Bailer
Extraction Port
Other_____

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1126				720	1.5	
1128				720	3.0	
1130				720	4.5	

Did Well Dewater? No If yes, gals. Gallons Actually Evacuated: 4.5

Sampling Time: 1135	Sampling Date: 9-26
Sample I.D.: MW-4	Laboratory: SEQ
Analyzed for: (Circle) TPH-G BTEX TPH-D	OTHER: MTBE
Duplicate I.D.:	Cleaning Blank I.D.:
Analyzed for: (Circle) TPH-G BTEX TPH-D	OTHER:

SHELL WELL MONITORING DATA SHEET

Project #: 960926-Z2	Wic #: # 204 5508 3103
Sampler: BB	Start Date: 9-26
Well I.D.: VW/MW-2	Well Diameter: (circle one) (2) 3 4 6 ____
Total Well Depth: Before 22.08 After	Depth to Water: Before 12.52 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other:

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

1.5	x	3	=	4.5
1 Case Volume		Specified Volumes		gallons

Purging: Bailer x
Disposable Bailer
Middleburg
Electric Submersible
Extraction Pump
Other_____

Sampling: Bailer x
Disposable Bailer
Extraction Port
Other_____

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1205	67.4	7.2	1120	720	1.5	ODOR
1207	67.0	7.3	1150	720	3.0	"
1209	66.8	7.3	1170	720	4.5	"

Did Well Dewater? No If yes, gals. Gallons Actually Evacuated: 4.5

Sampling Time: 1215 Sampling Date: 9-26

Sample I.D.: VW/MW-2 Laboratory: SEQ

Analyzed for: TPH-G (BTEX) TPH-D OTHER: MTBE
(Circle)

Duplicate I.D.: DUP Cleaning Blank I.D.:

Analyzed for: TPH-G (BTEX) TPH-D OTHER: MTBE
(Circle)

SHELL WELL MONITORING DATA SHEET

Project #: 960926-Z2	Wic #: # 204 3308 3103
Sampler: BB	Start Date: 9-26
Well I.D.: UW/MW-4	Well Diameter: (circle one) (2) 3 4 6 ____
Total Well Depth: Before 19.60 After	Depth to Water: Before 12.43 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other:

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

1.1	x	3	3.3
1 Case Volume		Specified Volumes	= gallons

Purging: Bailer x
Disposable Bailer
Middleburg
Electric Submersible
Extraction Pump
Other_____

Sampling: Bailer x
Disposable Bailer
Extraction Port
Other_____

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1237	68.4	7.3	1300	7200	1.5	ODOR
1238	68.0	7.3	1260	7200	2.5	"
1240	67.8	7.3	1260	7200	3.5	"

Did Well Dewater? No If yes, gals. Gallons Actually Evacuated: 3.5

Sampling Time: 1245	Sampling Date: 9-26
Sample I.D.: UW/MW-4	Laboratory: SEQ
Analyzed for: (TPH-G) BTEX TPH-D OTHER: MTBE (Circle)	
Duplicate I.D.:	Cleaning Blank I.D.:
Analyzed for: TPH-G BTEX TPH-D OTHER: (Circle)	

WELL HEAD INSPECTION CHECKLIST AND REPAIR ORDER

Client _____ Inspection date: 9-26-96

Site address Shell Wic #204-5509-3103
1230 14th St.
Oakland, CA

Inspected by: BB

BTS Event # 960926-Z2

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

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

Well I.D.	Deficiency	Corrective Action Taken

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

Well I.D.	Persisting Deficiency

BTS Office assigns or defers Correction to:	Date assigned	Date corrected

Office review and assignments made by _____ date _____