enviros®

to TP
for TE
Stid 454 (2)
PE

August 30, 1997

Mr. Alex Perez
Shell Oil Products Company
P.O. Box 4023
Concord, California 94524

RE: **Ground Water Monitoring Report - Third Quarter 1997**
Former Shell Service Station
2703 Martin Luther King Jr. Way
Oakland, California 94612
WIC #204-5508-1701

Dear Mr. Perez:

This Quarterly Monitoring Report describes the recently completed activities associated with ground water monitoring and sampling at the referenced site (Plates 1 and 2). This report was prepared to meet quarterly reporting guidelines issued by the Regional Water Quality Control Board, San Francisco Bay Region and the Alameda County Health Care Services Agency.

Quarterly Monitoring & Sampling Summary

Ground water monitoring and well sampling for the third quarter of 1997 are summarized below:

- Blaine Tech Services, Inc. (Blaine) of San Jose, California measured water levels and collected ground water samples from Wells MW-1, MW-2, V-1, and V-2 July 2, 1997. Ground water samples were transported to Sequoia Analytical of Redwood City, California for laboratory analysis.

- Enviros, Inc. (Enviros) evaluated water-level measurement data and prepared a ground water contour/benzene concentration map (Plate 2). Ground water flow direction appears to range from south to southwesterly at an approximate hydraulic gradient of 0.008.

- Wells MW-1 and MW-2 were ND for TPPH, BTEX, and MTBE. Wells V-1 and V-2 contained 2,600 ppb and 82,000 ppb TPPH and 340 ppb and 5,500 ppb benzene, respectively. MTBE detections in Wells V-1 and V-2 by EPA Method 8020 were not confirmed by EPA Method 8260.

Quarterly Sampling

Monitoring Wells MW-1, MW-2, V-1, and V-2 were sampled and analyzed for Total Purgeable Petroleum Hydrocarbons quantitated as gasoline (TPPH) according to EPA Method 8015 (Modified), and benzene, toluene, ethylbenzene, and xylenes (BTEX) and

Enviros, Inc. 270 Perkins Street P.O. Box 259 Sonoma, California 95476-0259 Tel 707 / 935-4850 Fax 707 / 935-6649

methyl-tertiary-butyl-ether (MTBE) according to EPA Method 8020. Additionally, a duplicate sample and an equipment blank were prepared and analyzed for quality control purposes.

Field monitoring and chemical analytical data have been included in Table 1. Blaine's quarterly ground water monitoring report is presented in Appendix A.

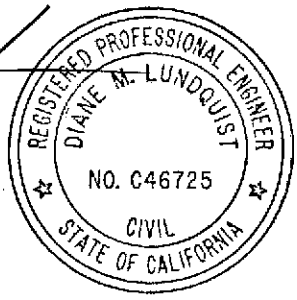
If you have any questions regarding the contents of this document, please call.

Sincerely,

Enviros, Inc.

Matthew E. Donohue
Project Engineer

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



Attachments:

Table 1. Well Concentrations

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

Appendix A

Blaine Tech Services Inc. - Quarterly Ground Water Monitoring Report

cc: Ms. Jennifer Eberle, Alameda County Health Care Services Agency

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
2703 Martin Luther King Jr. Way
Oakland, California
WIC #204-5508-1701

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
MW-1 (B-11)		**Top casing elevation (ft): 23.53**								
02-Aug-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	
05-Aug-96	8.76	14.77	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
17-Oct-96	9.88	13.65	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
08-Jan-97	6.82	16.71	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
07-Apr-97	7.89	15.64	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
02-Jul-97	8.71	14.82	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
MW-1 (DUP)										
05-Aug-96	NA	NA	NA	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
MW-2 (B-12)		**Top casing elevation (ft): 22.47**								
17-Jul-96	NA	NA	NA	<50	<0.50	0.69	<0.50	<0.50	<2.5	Water sample from Boring
05-Aug-96	8.35	14.12	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
17-Oct-96	9.32	13.15	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
08-Jan-97	6.80	15.67	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
07-Apr-97	7.81	14.66	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
02-Jul-97	8.27	14.20	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
MW-2 (DUP)		**Top casing elevation (ft): 22.47**								
17-Oct-96	NA	NA	NA	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
08-Jan-97	NA	NA	NA	<50	<0.50	<0.50	<0.50	<0.50	<2.5	

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
2703 Martin Luther King Jr. Way
Oakland, California
WIC #204-5508-1701

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
B-10		**Top casing elevation (ft): NA**								
17-Jul-96	NA	NA	NA	20000	400	<100	<100	870	<500	Water sample from Boring
B-13		**Top casing elevation (ft): NA**								
17-Jul-96	NA	NA	NA	290000	34000	21000	9900	47000	<2500	Water sample from Boring
V-1		**Top casing elevation (ft): 23.26**								
02-Aug-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	
05-Aug-96	8.58	14.68	0.00	NA	NA	NA	NA	NA	NA	
17-Oct-96	10.02	13.24	0.00	NA	NA	NA	NA	NA	NA	
16-Jan-97	5.55	17.71	0.00	9500	1200	250	280	880	<50	
07-Apr-97	7.40	15.86	0.00	2200	42	<5.0	130	15	<25	
02-Jul-97	8.94	14.32	0.00	2600	340	5.8	49	12	74	MTBE by 8260: <4.0 ppb
V-2		**Top casing elevation (ft): 22.80**								
02-Aug-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	
05-Aug-96	7.94	14.86	0.00	NA	NA	NA	NA	NA	NA	
17-Oct-96	9.30	13.50	0.00	NA	NA	NA	NA	NA	NA	
08-Jan-97	5.82	16.98	0.00	69000	4800	2800	2700	13000	750	
07-Apr-97	7.10	15.70	0.00	90000	4400	1900	3300	14000	<500	
02-Jul-97	8.35	14.45	0.00	82000	5500	2700	3500	16000	530	MTBE by 8260: <100

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
2703 Martin Luther King Jr. Way
Oakland, California
WIC #204-5508-1701

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
V-2 (DUP)										
07-Apr-97	NA	NA	NA	77000	4400	2000	3200	14000	<250	
02-Jul-97	NA	NA	NA	85000	5600	2800	3600	17000	520	MTBE by 8260: <100

Abbreviations:

TPPH = Total Purgeable Petroleum Hydrocarbons carbon range C6 to C12 by EPA Method 8015 modified

BTEX = benzene, toluene, ethylbenzene, xylenes by EPA Method 8020

MTBE = methyl-tertiary-butyl-ether by EPA Method 8020

NA = Not analyzed or not available

<x = Not detected at detection limit of x

Subject Site

N

BASE MAP: CALIFORNIA STATE AUTOMOBILE ASSOCIATION

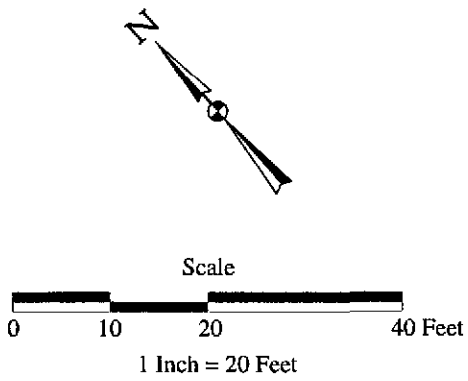
PLATE	VICINITY MAP	enviros®
1	Former Shell Service Station 2703 Martin Luther King Jr. Way Oakland, California	95324

Drawn By: DML	Date: 12-28-95	Approved By:	Date: 8.25.97

EXPLANATION

- Exploratory Boring
- Soil Vapor Extraction Well
- Ground Water Monitoring Well
- Ground water elevation contours in feet referenced to mean sea level (MSL). Arrows indicate approximate ground water flow direction.
- **14.32** Ground water elevation in feet above MSL
- **(340)** Benzene concentration in ppb ND = Not Detected

Notes: Monitoring performed 2-Jul-97.
Approximate hydraulic gradient = 0.008.



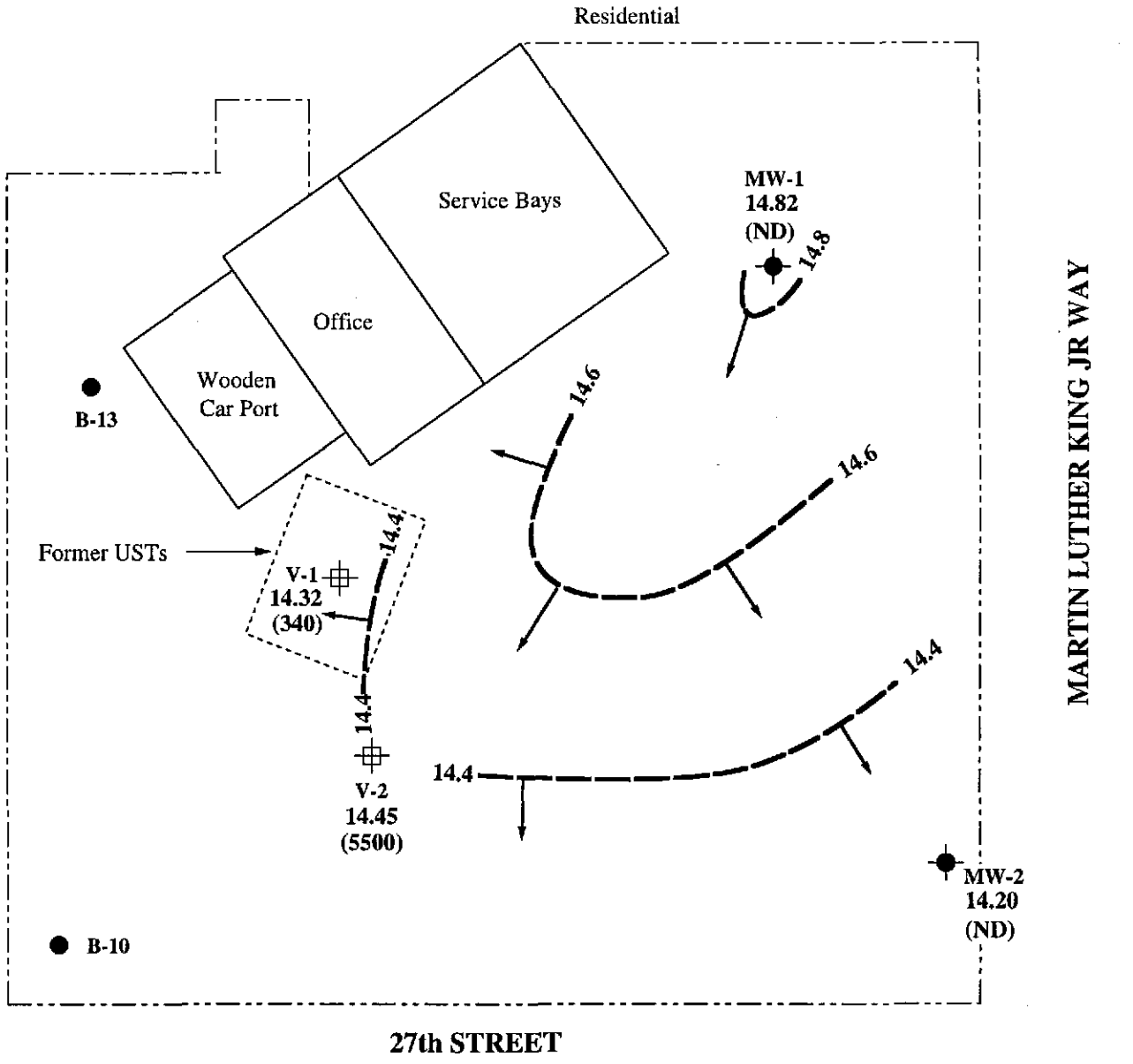


PLATE
2

GROUND WATER CONTOUR/BENZENE CONCENTRATION MAP
Shell Oil Products Company
2703 Martin Luther King Jr. Way
Oakland, California

enviros®
97324

Drawn By: MED | Date: 15-Aug-97 | Approved By: MEO | Date: 8.25.97

Appendix A

Blaine Tech Services, Inc.
Quarterly Ground Water Monitoring Report

BLAINE
TECH SERVICES inc

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

July 30, 1997

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

Attn: Alex Perez

Shell WIC #204-5508-1701
2703 Martin Luther King Junior Way
Oakland, California

3rd Quarter 1997

Quarterly Groundwater Monitoring Report 970702-F-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) 573-0555 ext. 201.

Yours truly,

Francis Thie

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

cc: Enviros, Inc.
P.O. Box 259
Sonoma, CA 95476-0259
Attn: Joe Neely

(Any professional evaluations or recommendations will be made by the consultant under separate cover.)

TABLE OF WELL GAUGING DATA

WELL I.D.	DATA COLLECTION DATE	MEASUREMENT REFERENCED TO	QUALITATIVE OBSERVATIONS (sheen)	DEPTH TO FIRST IMMISCIBLES LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLES LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
MW-1	07/02/97	TOC	--	NONE	--	--	8.71	20.18
MW-2	07/02/97	TOC	--	NONE	--	--	8.27	20.10
V-1	07/02/97	TOC	ODOR	NONE	--	--	8.94	13.03
V-2 *	07/02/97	TOC	ODOR	NONE	--	--	8.35	13.27

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

9707294

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 970702-F2

Date: 7/2/97
Page 1 of 1

Site Address: 2703 Martin Luther King Junior Way, Oakland, CA
WIC#: 254-5508-1701
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: TG
Printed Name: Tim GRAF

LAB: Sequoia

CHECK ONE (1) BOX ONLY	C1/D1	TURN AROUND TIME
G.W. Monitoring	[X] 4481	24 hours [ ]
Site Investigation	[ ] 4481	48 hours [ ]
Soil Classify/Disposal	[ ] 4482	15 days [X] (Normal)
Water Classify/Disposal	[ ] 4483	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:

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		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
MW-1	7/2			W		3						X	X							
MW-2	"			"		3						X	X						V	# CONFIRM
V-1	"			"		3						X	X							MTBE by
V-2	"			"		3						X	X							8260 IF
DUP	7/2			W		3						X	X							DETECTED

Relinquished By (signature): Tim Graf	Printed Name: Tim GRAF	Date: 7/3/97 Time: 1014	Received (signature): Kelli Knight	Printed Name: KWRIGHT	Date: 7/3/97 Time: 1014
Relinquished By (signature):	Printed Name:	Date: Time:	Received (signature):	Printed Name:	Date: Time:
Relinquished By (signature):	Printed Name:	Date: Time:	Received (signature):	Printed Name:	Date: Time:

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

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

Project: Shell Oakland/970702-F2

Enclosed are the results from samples received at Sequoia Analytical on July 3, 1997. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9707294 -01	LIQUID, MW-1	07/02/97	TPGBMW Purgeable TPH/BTEX
9707294 -02	LIQUID, MW-2	07/02/97	TPGBMW Purgeable TPH/BTEX
9707294 -03	LIQUID, V-1	07/02/97	MTBEMW Methyl t-Butyl Ethe
9707294 -03	LIQUID, V-1	07/02/97	TPGBMW Purgeable TPH/BTEX
9707294 -04	LIQUID, V-2	07/02/97	MTBEMW Methyl t-Butyl Ethe
9707294 -04	LIQUID, V-2	07/02/97	TPGBMW Purgeable TPH/BTEX
9707294 -05	LIQUID, Dup	07/02/97	MTBEMW Methyl t-Butyl Ethe
9707294 -05	LIQUID, Dup	07/02/97	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

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 Tech Services	Client Proj. ID: Shell Oakland/970702-F2	Sampled: 07/02/97
1680 Rogers Avenue	Sample Descript: MW-1	Received: 07/03/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 07/12/97
Attention: Fran Thie	Lab Number: 9707294-01	Reported: 07/18/97

QC Batch Number: GC071297BTEX01A
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	90

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 Tech Services	Client Proj. ID: Shell Oakland/970702-F2	Sampled: 07/02/97
1680 Rogers Avenue	Sample Descript: MW-2	Received: 07/03/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 07/12/97
Attention: Fran Thie	Lab Number: 9707294-02	Reported: 07/18/97

QC Batch Number: GC071297BTEX01A
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	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

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 Tech Services	Client Proj. ID: Shell Oakland/970702-F2	Sampled: 07/02/97
1680 Rogers Avenue	Sample Descript: V-1	Received: 07/03/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: EPA 8260	Analyzed: 07/18/97
Attention: Fran Thie	Lab Number: 9707294-03	Reported: 07/18/97

QC Batch Number: MS0714978260F3A
Instrument ID: F3

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	4.0	N.D.

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	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
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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/970702-F2	Sampled: 07/02/97
1680 Rogers Avenue	Sample Descript: V-1	Received: 07/03/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 07/14/97
Attention: Fran Thie	Lab Number: 9707294-03	Reported: 07/18/97

QC Batch Number: GC071497BTEX01A
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**500**	**2600**
Methyl t-Butyl Ether	**25**	**74**
Benzene	**5.0**	**340**
Toluene	**5.0**	**5.8**
Ethyl Benzene	**5.0**	**49**
Xylenes (Total)	**5.0**	**12**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	102

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 Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Shell Oakland/970702-F2
Sample Descript: V-2
Matrix: LIQUID
Analysis Method: EPA 8260
Lab Number: 9707294-04

Sampled: 07/02/97
Received: 07/03/97

Analyzed: 07/18/97
Reported: 07/18/97

QC Batch Number: MS0714978260F3A
Instrument ID: F3

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	100	N.D.

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	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 Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Shell Oakland/970702-F2
Sample Descript: V-2
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9707294-04

Sampled: 07/02/97
Received: 07/03/97

Analyzed: 07/14/97
Reported: 07/18/97

QC Batch Number: GC071497BTEX22A
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10000	82000
Methyl t-Butyl Ether	500	530
Benzene	100	5500
Toluene	100	2700
Ethyl Benzene	100	3500
Xylenes (Total)	100	16000
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	109

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 Tech Services	Client Proj. ID: Shell Oakland/970702-F2	Sampled: 07/02/97
1680 Rogers Avenue	Sample Descript: Dup	Received: 07/03/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: EPA 8260	Analyzed: 07/18/97
Attention: Fran Thie	Lab Number: 9707294-05	Reported: 07/18/97

QC Batch Number: MS0714978260F3A
Instrument ID: F3

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	100	N.D.

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	104

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 Tech Services	Client Proj. ID: Shell Oakland/970702-F2	Sampled: 07/02/97
1680 Rogers Avenue	Sample Descript: Dup	Received: 07/03/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 07/14/97
Attention: Fran Thie	Lab Number: 9707294-05	Reported: 07/18/97

QC Batch Number: GC071497BTEX22A
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10000	85000
Methyl t-Butyl Ether	500	520
Benzene	100	5600
Toluene	100	2800
Ethyl Benzene	100	3600
Xylenes (Total)	100	17000
Chromatogram Pattern:		C6-C12

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

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

Client Project ID: Shell Oakland / 970702-F2
Matrix: Liquid
Work Order #: 9707294 -01-02
Reported: Jul 28, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC071297BTEX01A	GC071297BTEX01A	GC071297BTEX01A	GC071297BTEX01A	GC071297BTEX01A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Heider	J. Heider	J. Heider	J. Heider	J. Heider
MS/MSD #:	970632905	970632905	970632905	970632905	970632905
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/12/97	7/12/97	7/12/97	7/12/97	7/12/97
Analyzed Date:	7/12/97	7/12/97	7/12/97	7/12/97	7/12/97
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	9.6	9.1	9.2	27	67
MS % Recovery:	96	91	92	90	112
Dup. Result:	8.8	8.3	8.3	24	60
MSD % Recov.:	88	83	83	80	100
RPD:	8.7	9.2	10	12	11
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	BLK071297	BLK071297	BLK071297	BLK071297	BLK071297
Prepared Date:	7/12/97	7/12/97	7/12/97	7/12/97	7/12/97
Analyzed Date:	7/12/97	7/12/97	7/12/97	7/12/97	7/12/97
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	8.3	7.7	7.8	23	57
LCS % Recov.:	83	77	78	77	95
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

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

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

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

Client Project ID: Shell Oakland / 970702-F2
Matrix: Liquid
Work Order #: 9707294-03

Reported: Jul 28, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC071497BTEX01A	GC071497BTEX01A	GC071497BTEX01A	GC071497BTEX01A	GC071497BTEX01A
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. Porter	A. Porter	A. Porter	A. Porter	A. Porter
MS/MSD #:	970604219	970604219	970604219	970604219	970604219
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/14/97	7/14/97	7/14/97	7/14/97	7/14/97
Analyzed Date:	7/14/97	7/14/97	7/14/97	7/14/97	7/14/97
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	9.3	8.8	8.5	25	62
MS % Recovery:	93	88	85	83	103
Dup. Result:	9.6	9.1	9.0	26	65
MSD % Recov.:	96	91	90	87	108
RPD:	3.2	3.4	5.7	3.9	4.7
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	BLK071497	BLK071497	BLK071497	BLK071497	BLK071497
Prepared Date:	7/14/97	7/14/97	7/14/97	7/14/97	7/14/97
Analyzed Date:	7/14/97	7/14/97	7/14/97	7/14/97	7/14/97
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	8.6	8.1	8.1	24	58
LCS % Recov.:	86	81	81	80	97
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

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

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

Client Project ID: Shell Oakland / 970702-F2
Matrix: Liquid
Work Order #: 9707294-04-05
Reported: Jul 28, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC071497BTEX22A	GC071497BTEX22A	GC071497BTEX22A	GC071497BTEX22A	GC071497BTEX22A
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. Porter	A. Porter	A. Porter	A. Porter	A. Porter
MS/MSD #:	970704218	970704218	970704218	970704218	970704218
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/14/97	7/14/97	7/14/97	7/14/97	7/14/97
Analyzed Date:	7/14/97	7/14/97	7/14/97	7/14/97	7/14/97
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	9.3	9.3	9.6	27	54
MS % Recovery:	93	93	96	90	90
Dup. Result:	9.1	9.4	10	28	59
MSD % Recov.:	91	94	100	93	98
RPD:	2.2	1.1	4.1	3.6	8.8
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	BLK071497	BLK071497	BLK071497	BLK071497	BLK071497
Prepared Date:	7/14/97	7/14/97	7/14/97	7/14/97	7/14/97
Analyzed Date:	7/14/97	7/14/97	7/14/97	7/14/97	7/14/97
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	7.7	7.6	8.0	22	44
LCS % Recov.:	77	76	80	73	73
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

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

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

Client Project ID: Shell Oakland / 970702-F2
Matrix: Liquid
Work Order #: 9707294-03-05
Reported: Jul 28, 1997

QUALITY CONTROL DATA REPORT

Analyte:	MTBE
QC Batch#:	MS0714978260F3A
Analy. Method:	EPA 8260
Prep. Method:	N.A.
Analyst:	L. Zhu
MS/MSD #:	970742318
Sample Conc.:	N.D.
Prepared Date:	7/14/97
Analyzed Date:	7/14/97
Instrument I.D.#:	F3
Conc. Spiked:	50 µg/L
Result:	47
MS % Recovery:	94
Dup. Result:	46
MSD % Recov.:	92
RPD:	2.2
RPD Limit:	0-25

LCS #:	VDB071797
Prepared Date:	7/17/97
Analyzed Date:	7/17/97
Instrument I.D.#:	F3
Conc. Spiked:	50 µg/L
LCS Result:	48
LCS % Recov.:	96

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

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

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Blaine Tech Services	Client Proj. ID: Shell Oakland/970702-F2	Received: 07/03/97
1680 Rogers Avenue		
San Jose, CA 95112	Lab Proj. ID: 9707294	Reported: 07/18/97
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 14 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

MTBE Note: MTBE did not confirm by EPA 8260 therefore all MTBE results at this site should be considered suspect.

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager