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ENVIRONMENTAL PROTECTION

97 JUN -2 PM 4:34

May 30, 1997

Ms. Jennifer Eberle
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, #250
Alameda, California 94502-6577

RE: Former Shell Service Station
461 8th Street
Oakland, California 94607
WIC #204-5508-6205

Site ID 4254

Dear Ms. Eberle:

This letter is provided to describe recently completed activities performed at the above referenced Shell Oil Products Company site in accordance with reporting requirements of the California Administrative Code Title 23 Waters, Chapter 3, Subchapter 16, Article 5, Section 2652.d.

Second Quarter 1997 Activities

This site is sampled semi-annually in the first and third quarters. The next sampling event is scheduled for the third quarter of 1997.

Proposed Activities

Ground water monitoring and sampling will continue on the proposed schedule. A report will be issued documenting the third quarter 1997 ground water sampling event.

If you have any questions, please call.

Sincerely,

Enviros, Inc.

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

cc: Mr. Alex Perez, Shell Oil Products Company
Mr. Rory Campbell, Hanson, Bridgett, Marcus, Vlahos & Rudy
Mr. Sheldon E. Crandall

enviros®

May 30, 1997

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

RE: Ground Water Monitoring Report - Second Quarter 1997
Former Shell Service Station
2703 Martin Luther King Jr. Way
Oakland, California
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 second 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 April 7, 1997. Ground water samples were transported to Sequoia Analytical (Sequoia) 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 appears to flow south-southeasterly at an approximate hydraulic gradient of 0.015.

- Wells MW-1 and MW-2 were ND for TPPH, BTEX, and MTBE. Wells V-1 and V-2 contained 2,200 ppb and 90,000 ppb TPPH and 42 ppb and 4,400 ppb benzene, respectively. MTBE was not detected in any wells sampled this quarter.

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 methyl-tertiary-butyl-ether (MTBE) according to EPA Method 8020. Additionally, a

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

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.

for

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	
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	
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	
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**								

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
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	
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	
V-2 (DUP)										
07-Apr-97	NA	NA	NA	77000	4400	2000	3200	14000	<250	

Abbreviations:

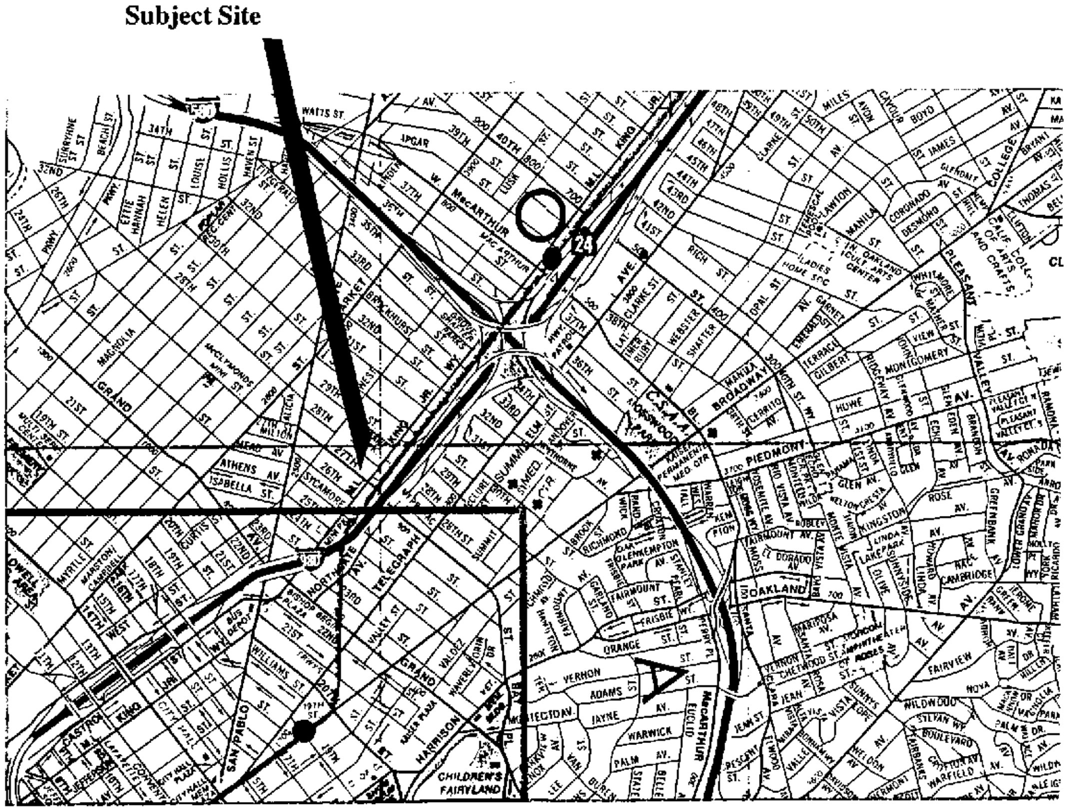
TPPH = Total Purgeable Petroleum Hydrocarbons carbon range C6 to C12 by EPA Method 8015 modified

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



N

BASE MAP: CALIFORNIA STATE AUTOMOBILE ASSOCIATION

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

Drawn By: DML	Date: 12-28-95	Approved By: [signature]	Date: 5-29-97

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.
- **15.86** Ground water elevation in feet above MSL
- **(42)** Benzene concentration in ppb ND = Not Detected

Notes: Monitoring performed 7-Apr-97.
Approximate Hydraulic Gradient = 0.015.

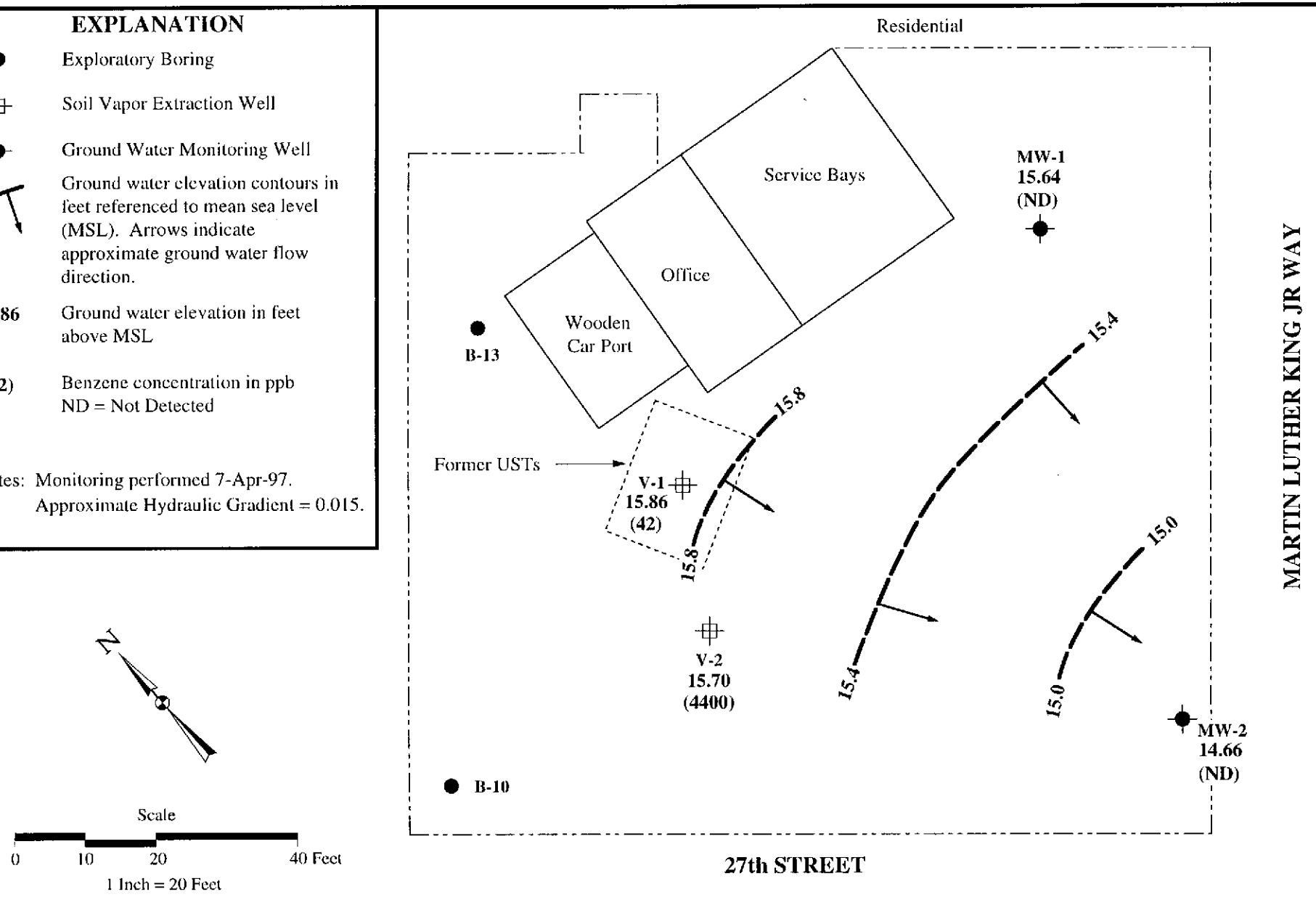


PLATE
2

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

enviros®
97324

Drawn By: MED | Date: 13-May-97 | Approved By: mh | Date: 5-29-97

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

April 25, 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

2nd Quarter 1997

Quarterly Groundwater Monitoring Report 970407-F-3

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	04/07/97	TOC	--	NONE	--	--	7.89	20.17
MW-2	04/07/97	TOC	--	NONE	--	--	7.81	20.11
V-1	04/07/97	TOC	--	NONE	--	--	7.40	13.01
V-2 *	04/07/97	TOC	SHEEN/ODOR	--	--	--	7.10	13.27

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

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 970407-F3

Date: 4/7/97

Page 1 of 1

Address: 2703 Martin Luther King Junior Way, Oakland, CA

#: 254-5508-1701

Engineer: R. Jeff Granberry

Phone No.: (510) 675-6168
Fax #: 675-6172

sultant Name & Address:
aine Tech Services, Inc.
80 Rogers Ave., San Jose, CA 95112

sultant Contact: Fran Thie

Phone No.: (408) 573-0555
Fax #: 573-7771

mments:

pled by: TG

ed Name: Tim GRAF

LAB: SEQUOIA

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring [X]	4461	24 hours [ ]
Site Investigation [ ]	4441	48 hours [ ]
Soil Classify/Disposal [ ]	4442	16 days [X] (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: 9704458

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	4/7			W		3						X	X						CONFIRM ~~BY~~ MTBE BY	
MW-2						3						X	X						8260 IF	
V-1						3						X	X						DETECTED	
V-2						3						X	X							
EB						3						X	X							
DUP	4/7			W		3						X	X							

Relinquished By (signature):	Printed Name:	Date / Time:	Received (signature):	Printed Name:	Date / Time:
[signature]	Tim GRAF	Date: 4/8/97 Time: 930	[signature]	S. WRIGHT	Date: 4/8/97 Time: 930
[signature]	S. WRIGHT	Date: 4/8/97 Time: 1250			Date: Time:
		Date: Time:	Mara Grislis	Mara Grislis	Date: 4/8/97 Time: 12:33

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

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

Project: Shell Oakland/970407-F3

Enclosed are the results from samples received at Sequoia Analytical on April 8, 1997. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9704458 -01	LIQUID, MW-1	04/07/97	TPGBMW Purgeable TPH/BTEX
9704458 -02	LIQUID, MW-2	04/07/97	TPGBMW Purgeable TPH/BTEX
9704458 -03	LIQUID, V-1	04/07/97	TPGBMW Purgeable TPH/BTEX
9704458 -04	LIQUID, V-2	04/07/97	TPGBMW Purgeable TPH/BTEX
9704458 -05	LIQUID, EB	04/07/97	TPGBMW Purgeable TPH/BTEX
9704458 -06	LIQUID, DUP	04/07/97	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
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/970407-F3	Sampled: 04/07/97
1680 Rogers Avenue	Sample Descript: MW-1	Received: 04/08/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/15/97
Attention: Fran Thie	Lab Number: 9704458-01	Reported: 04/21/97

QC Batch Number: GC041597BTEX17A
Instrument ID: GCHP17

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	108

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/970407-F3	Sampled: 04/07/97
1680 Rogers Avenue	Sample Descript: MW-2	Received: 04/08/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/15/97
Attention: Fran Thie	Lab Number: 9704458-02	Reported: 04/21/97

QC Batch Number: GC041597BTEX17A
Instrument ID: GCHP17

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	113

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/970407-F3	Sampled: 04/07/97
1680 Rogers Avenue	Sample Descript: V-1	Received: 04/08/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/15/97
Attention: Fran Thie	Lab Number: 9704458-03	Reported: 04/21/97

QC Batch Number: GC041597BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**500**	**2200**
Methyl t-Butyl Ether	25	N.D.
Benzene	**5.0**	**42**
Toluene	5.0	N.D.
Ethyl Benzene	**5.0**	**130**
Xylenes (Total)	**5.0**	**15**
Chromatogram Pattern:		**C6-C12**

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, (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/970407-F3	Sampled: 04/07/97
1680 Rogers Avenue	Sample Descript: V-2	Received: 04/08/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/16/97
Attention: Fran Thie	Lab Number: 9704458-04	Reported: 04/21/97

QC Batch Number: GC041697BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**10000**	**90000**
Methyl t-Butyl Ether	500	N.D.
Benzene	**100**	**4400**
Toluene	**100**	**1900**
Ethyl Benzene	**100**	**3300**
Xylenes (Total)	**100**	**14000**
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	88

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/970407-F3	Sampled: 04/07/97
1680 Rogers Avenue	Sample Descript: EB	Received: 04/08/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/16/97
Attention: Fran Thie	Lab Number: 9704458-05	Reported: 04/21/97

QC Batch Number: GC041697BTEX21A
Instrument ID: GCHP21

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	106

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/970407-F3
Sample Descript: DUP
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9704458-06

Sampled: 04/07/97
Received: 04/08/97

Analyzed: 04/15/97
Reported: 04/21/97

QC Batch Number: GC041597BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**5000**	**77000**
Methyl t-Butyl Ether	250	N.D.
Benzene	**50**	**4400**
Toluene	**50**	**2000**
Ethyl Benzene	**50**	**3200**
Xylenes (Total)	**50**	**14000**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	105

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/970407-F3

Lab Proj. ID: 9704458

Received: 04/08/97

Reported: 04/21/97

LABORATORY NARRATIVE

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

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

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

Client Project ID: Shell Oakland/ 970407-F3
Matrix: Liquid
Work Order #: 9704458 -01 -03, 06

Reported: Apr 23, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC041597BTEX17A	GC041597BTEX17A	GC041597BTEX17A	GC041597BTEX17A	GC041597BTEX17A
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:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD #:	970425502B	970425502B	970425502B	970425502B	970425502B
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/15/97	4/15/97	4/15/97	4/15/97	4/15/97
Analyzed Date:	4/15/97	4/15/97	4/15/97	4/15/97	4/15/97
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	10	10	10	31	61
MS % Recovery:	100	100	100	103	102
Dup. Result:	10	10	10	30	61
MSD % Recov.:	100	100	100	100	102
RPD:	0.0	0.0	0.0	3.3	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	BLK041597ABS	BLK041597ABS	LK041597ABS	BLK041597ABS	BLK041597ABS
Prepared Date:	4/15/97	4/15/97	4/15/97	4/15/97	4/15/97
Analyzed Date:	4/15/97	4/15/97	4/15/97	4/15/97	4/15/97
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	9.9	10	9.7	29	59
LCS % Recov.:	99	100	97	97	98
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:
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.
1680 Rogers Avenue
San Jose, CA 95112
Attention: Fran Thie

Client Project ID: Shell Oakland/ 970407-F3
Matrix: Liquid
Work Order #: 9704458 -04
Reported: Apr 23, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC041697BTEX17A	GC041697BTEX17A	GC041697BTEX17A	GC041697BTEX17A	GC041697BTEX17A
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 #:	970458307B	970458307B	970458307B	970458307B	970458307B
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/16/97	4/16/97	4/16/97	4/16/97	4/16/97
Analyzed Date:	4/16/97	4/16/97	4/16/97	4/16/97	4/16/97
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	10	9.8	10	30	60
MS % Recovery:	100	98	100	100	100
Dup. Result:	11	11	12	36	71
MSD % Recov.:	110	110	120	120	118
RPD:	9.5	12	18	18	17
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK041697ABS	BLK041697ABS	LK041697ABS	BLK041697ABS	BLK041697ABS
Prepared Date:	4/16/97	4/16/97	4/16/97	4/16/97	4/16/97
Analyzed Date:	4/16/97	4/16/97	4/16/97	4/16/97	4/16/97
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	9.9	8.8	9.1	28	54
LCS % Recov.:	99	88	91	93	90

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

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Blaine Tech Services, Inc.
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Client Project ID: Shell Oakland/ 970407-F3
Matrix: Liquid
Work Order #: 9704458 -05

Reported: Apr 23, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC041697BTEX21A	GC041697BTEX21A	GC041697BTEX21A	GC041697BTEX21A	GC041697BTEX21A
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:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD #:	970446401A	970446401A	970446401A	970446401A	970446401A
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/16/97	4/16/97	4/16/97	4/16/97	4/16/97
Analyzed Date:	4/16/97	4/16/97	4/16/97	4/16/97	4/16/97
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	10	14	10	31	68
MS % Recovery:	100	140	100	103	113
Dup. Result:	9.6	14	9.9	30	65
MSD % Recov.:	96	140	99	100	108
RPD:	4.1	0.0	1.0	3.3	4.5
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	BLK041697	BLK041697	BLK041697	BLK041697	BLK041697
Prepared Date:	4/16/97	4/16/97	4/16/97	4/16/97	4/16/97
Analyzed Date:	4/16/97	4/16/97	4/16/97	4/16/97	4/16/97
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	9.4	9.4	9.5	28	59
LCS % Recov.:	94	94	95	93	98
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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