enviros®

November 15, 1996

Mr. R. Jeff Granberry
Shell Oil Products Company
P.O. Box 4023
Concord, California 94524

RE: **Quarterly Monitoring Report - Third Quarter 1996**
Former Shell Service Station
2101 Park Boulevard
Oakland, California
WIC #204-5508-1206

Dear Mr. Granberry:

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 (ACHCSA).

Quarterly Monitoring & Sampling Summary

Ground water monitoring and sampling for the second quarter of 1996 are summarized below:

- Blaine Tech Services Inc. (Blaine Tech) measured ground water levels and collected ground water samples from Wells S-1, S-2, and S-3 on September 26, 1996. The samples were transported to Sequoia Analytical (Sequoia) of Redwood City, California for chemical analysis.

- Ground water level measurement data were evaluated and used to prepare a ground water contour map (Plate 2). Ground water flow direction appears to be southerly at a calculated hydraulic gradient of 0.04.

- The ground water from Well S-3 contained 8,900 ppb TPPH and 920 ppb benzene. Wells S-1 and S-2 contained TPPH concentrations ranging from ND to 83 ppb and non-detectable benzene concentrations. Well S-1 also contained 190 ppb TEPH.

Quarterly Sampling

Monitoring Wells S-1, S-2, and S-3 were sampled and analyzed for Total Purgeable Petroleum Hydrocarbons (TPPH) according to EPA Method 8015 (Modified) and benzene,

toluene, ethylbenzene, xylenes (BTEX), and methyl-tertiary-butyl-ether (MTBE) according to EPA Method 8020. Monitoring Well S-1 was also analyzed for Total Extractable Petroleum Hydrocarbons (TEPH) according to EPA Method 8015 (Modified). Additionally, an equipment blank and a duplicate sample were prepared and analyzed for quality control purposes.

Field monitoring data and chemical analytical data for TPPH, TEPH and BTEX have been included in Table 1. A ground water contour/benzene concentration map is presented as Plate 2. The Blaine Tech quarterly ground water monitoring report is presented in Appendix A.

Quarterly monitoring, sampling, and reporting will continue on the established schedule for the next quarter.

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

Sincerely,

Enviros, Inc.

Jeff Gaarder
Project Geologist

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

Attachments

Table 1. Well Concentrations

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

Appendix A

Blaine Tech Services Inc. - Quarterly Ground Water Monitoring Report

cc: Mr. Barney Chan, Alameda County Health Care Services Agency
Mr. Frank J. Schlessinger, Schlessinger & Associates
Mr. Steve Makara, Goodyear Tire & Rubber Company

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
2101 Park Boulevard
Oakland, California
WIC #204-5508-1206

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	O & G by 5520 B (ug/L)	O & G by 5520 B/F (ug/L)	Comments
S-1	Top casing elevation (ft):			11.93									
20-Jun-95	4.67	7.26	0.00	160	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	
12-Sep-95	4 19	7.74	0.00	<50	250	3.0	<0.5	<0.5	<0.5	NA	<5000	<5000	
28-Dec-95	5.30	6.63	0.00	70	160	1.1	<0.5	<0.5	1.3	NA	<5000	<5000	
25-Mar-96	3.44	8.49	0.00	70	220	<0.5	<0.5	<0.5	<0.5	<2.0	NA	NA	
27-Jun-96	3 15	8.78	0.00	<50	140	0.59	<0.50	<0.50	<0.50	<2.5	NA	NA	
26-Sep-96	3.90	8.03	0.00	<50	190	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	
S-2	Top casing elevation (ft):			12.06									
20-Jun-95	5 80	6.26	0.00	180	NA	1.1	<0.5	<0.5	0.6	NA	NA	NA	
12-Sep-95	5 78	6.28	0.00	190	NA	18	<0.5	1.2	0.6	NA	NA	NA	
28-Dec-95	4 02	8.04	0.00	200	NA	11	1.0	1.0	4.0	NA	NA	NA	
25-Mar-96	5.56	6.50	0.00	180	NA	12	0.8	1.4	1.0	<2.0	NA	NA	
27-Jun-96	6.00	6.06	0.00	150	NA	7.7	0.79	0.93	0.5	<2.5	NA	NA	
26-Sep-96	5.73	6.33	0.00	83	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	
S-3	Top casing elevation (ft):			13.54									
20-Jun-95	4.90	8.64	0.00	5500	NA	240	34	120	840	NA	NA	NA	
12-Sep-95	5 37	8.17	0.00	5200	NA	690	14	290	280	NA	NA	NA	
28-Dec-95	3 90	9.64	0.00	13000	NA	670	34	960	1400	NA	NA	NA	
25-Mar-96	4 30	9.24	0.00	7300	NA	560	65	540	820	<200	NA	NA	
27-Jun-96	5 00	8.54	0.00	17000	NA	1100	83	1200	2700	<250	NA	NA	
26-Sep-96	5 23	8.31	0.00	8900	NA	920	43	400	1100	<125	NA	NA	

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
2101 Park Boulevard
Oakland, California
WIC #204-5508-1206

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	O & G by 5520 B (ug/L)	O & G by 5520 B/F (ug/L)	Comments
S-3 (DUP)													
20-Jun-95	NA	NA	NA	6300	NA	270	37	120	1100	NA	NA	NA	
12-Sep-95	NA	NA	NA	4700	NA	620	13	260	240	NA	NA	NA	
28-Dec-95	NA	NA	NA	13000	NA	800	34	1000	1600	NA	NA	NA	
25-Mar-96	NA	NA	NA	7400	NA	580	19	620	670	<20	NA	NA	
27-Jun-96	NA	NA	NA	1903	NA	13	1.0	14	34	7.2	NA	NA	
26-Sep-96	NA	NA	NA	9800	NA	960	41.0	450	1300	120	NA	NA	MTBE by 8260: <16 ppb (a)

Abbreviations
NA = Not analyzed or not available
TPPH = Total Purgeable Petroleum Hydrocarbons carbon range C6 to C12 by EPA Method 8015 (Modified)
(previously reported as Total Petroleum Hydrocarbons as Gasoline)
TPH-D = Total Extractable Petroleum Hydrocarbons carbon range C9 to C24 by EPA Method 8015 (Modified)
(previously reported as Total Petroleum Hydrocarbons as Diesel)
O&G = Oil and Grease
BTEX = benzene, toluene, ethylbenzene, xylene by EPA Method 8020
MTBE = methyl-tertiary-butyl ether by EPA Method 8020
<x = Not detected at detection limit of x
(DUP) = Duplicate sample

Note
(a) = The MTBE was analyzed by EPA method 8260 one day past hold time. The MTBE value did not confirm therefore, all MTBE results at this site should be considered estimated.
All wells surveyed to Mean Sea Level

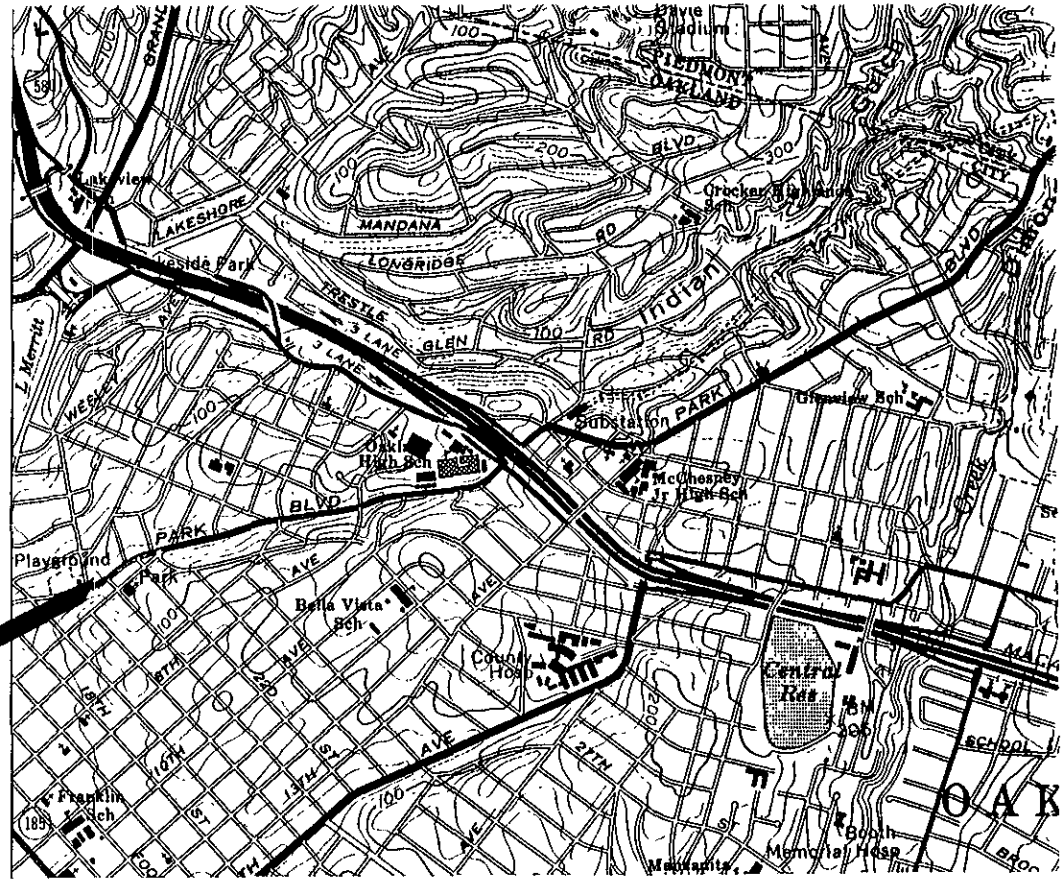

PLATE
1

VICINITY MAP
Former Shell Service Station
2101 Park Boulevard
Oakland, California

enviros®
E4/95267.01

Drawn By: GLV

Date: 2-24-95

Approved By: _____ Date: 11-15-96

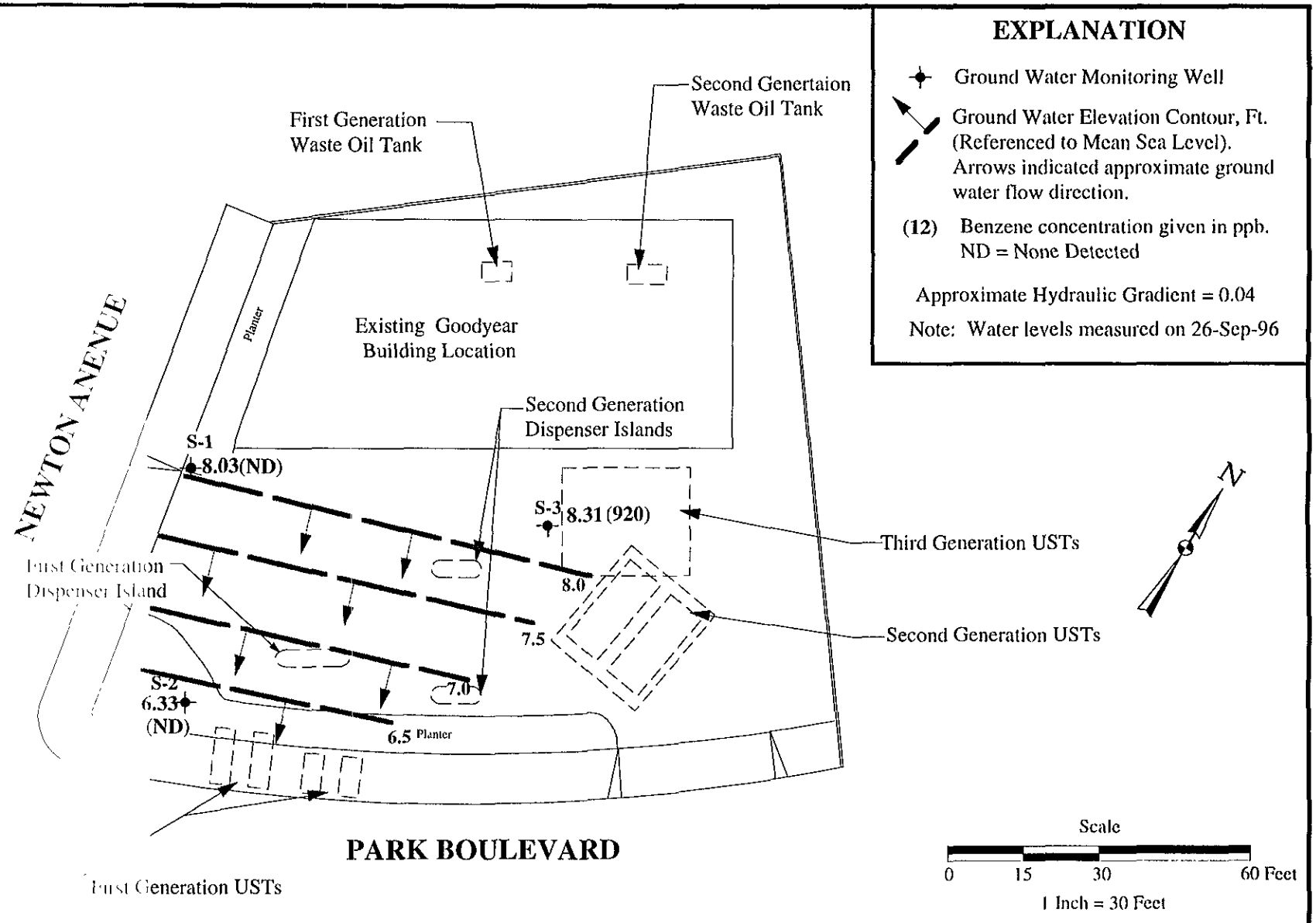

PLATE
2

GROUND WATER CONTOUR/BENZENE CONCENTRATION MAP
Former Shell Service Station
2101 Park Boulevard
Oakland, California

enviros®
96267

Drawn By: PLS | Date: 12-Nov-96 | Approved By: [signature] | Date: 11-15-96

Appendix A

BLAINE TECH SERVICES INC.
Quarterly Ground Water Monitoring Report

BLAINE
TECH SERVICES INC.

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

October 16, 1996

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

Attn: R. Jeff Granberry

Shell WIC #204-5508-1206
2101 Park Blvd.
Oakland, California

3rd Quarter 1996

Quarterly Groundwater Monitoring Report 960926-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) 995-5535 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)
S-1	9/26/96	TOC	--	NONE	--	--	3.90	16.84
S-2	9/26/96	TOC	--	NONE	--	--	5.73	15.47
S-3 *	9/26/96	TOC	--	NONE	--	--	5.23	16.83

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

9609H36

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 960926-F3

Date: 9/26/96
Page 1 of 1

Site Address: 2101 Park Blvd., Oakland, CA

WIC#: 204-5508-1206

Shell Engineer: R. Jeff Granberry ~~Lynn Walker~~ Phone No.: (510) 675-6168 Fax #: 675-6172

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

Consultant Contact: Fran Thie Phone No.: (408) 995-5535 x201 Fax #: 293-8773

Comments:

Sampled by: Tim Graf

Printed Name: Tim Graf

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		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-1	9/23			W		5		X				X	X						CONFIRM	HIGHEST
S-2	"			"		3						X	X						MTBE HIT	
S-3	"			"		3						X	X						BY EPA	8260
EB	"			"		3						X	X							
DUP	"			"		3						X	X							

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

		CT/DT	
G.W. Monitoring	X	4441	24 hours ☐
Site Investigation	☐	4441	48 hours ☐
Soil Classify/Disposal	☐	4442	15 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:

	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
Relinquished By (signature): Tim Graf	Tim Graf	9-27-96	1010	Received (signature): Marianne Rei	M. Rei	9-27-96	1010
Relinquished By (signature): Marianne Rei		Date:	Time:	Received (signature):		Date:	Time:
Relinquished By (signature):		Date:	Time:	Received (signature): L Kim	L Kim	9/27/96	1319

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

Shell Oil Co. 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 Technical Services
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Project: Shell Oakland/960926-F3

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
9609H36 -01	LIQUID, S-1	09/23/96	TPGBMW Purgeable TPH/BTEX
9609H36 -01	LIQUID, S-1	09/23/96	VTPHDW-Extract TPH
9609H36 -02	LIQUID, S-2	09/23/96	TPGBMW Purgeable TPH/BTEX
9609H36 -03	LIQUID, S-3	09/23/96	TPGBMW Purgeable TPH/BTEX
9609H36 -04	LIQUID, EB	09/23/96	TPGBMW Purgeable TPH/BTEX
9609H36 -05	LIQUID, Dup	09/23/96	MTBEMW Methyl t-Butyl Ethe
9609H36 -05	LIQUID, Dup	09/23/96	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	Client Proj. ID: Shell Oakland/960926-F3	Sampled: 09/23/96
985 Timothy Drive	Sample Descript: S-1	Received: 09/27/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/02/96
Attention: Fran Thie	Lab Number: 9609H36-01	Reported: 10/11/96

QC Batch Number: GC100296BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

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

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	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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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland/960926-F3	Sampled: 09/23/96
985 Timothy Drive	Sample Descript: S-1	Received: 09/27/96
San Jose, CA 95133	Matrix: LIQUID	Extracted: 10/07/96
	Analysis Method: EPA 8015 Mod	Analyzed: 10/07/96
Attention: Fran Thie	Lab Number: 9609H36-01	Reported: 10/11/96

QC Batch Number: GC1003960HBPEXC
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	**50**	**190**
Chromatogram Pattern:	**C9-C24**	**Unid.-HC**

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	113

Results quantitated against a diesel standard.
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 Technical Services	Client Proj. ID: Shell Oakland/960926-F3	Sampled: 09/23/96
985 Timothy Drive	Sample Descript: S-2	Received: 09/27/96
San Jose. CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/03/96
Attention: Fran Thie	Lab Number: 9609H36-02	Reported: 10/11/96

QC Batch Number: GC100396BTEX02A
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**	**83**
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:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	100

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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-F3	Sampled: 09/23/96
985 Timothy Drive	Sample Descript: S-3	Received: 09/27/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/02/96
Attention: Fran Thie	Lab Number: 9609H36-03	Reported: 10/11/96

QC Batch Number: GC100296BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**2500**	**8900**
Methyl t-Butyl Ether	125	N.D.
Benzene	**25**	**920**
Toluene	**25**	**43**
Ethyl Benzene	**25**	**400**
Xylenes (Total)	**25**	**1100**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	89

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-F3	Sampled: 09/23/96
985 Timothy Drive	Sample Descript: EB	Received: 09/27/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/02/96
Attention: Fran Thie	Lab Number: 9609H36-04	Reported: 10/11/96

QC Batch Number: GC100296BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

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

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	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 Technical Services	Client Proj. ID: Shell Oakland/960926-F3	Sampled: 09/23/96
985 Timothy Drive	Sample Descript: Dup	Received: 09/27/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: EPA 8260	Analyzed: 10/09/96
Attention: Fran Thie	Lab Number: 9609H36-05	Reported: 10/11/96

QC Batch Number: MS100496MTBEF3A
Instrument ID: F3

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	16	N.D.

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

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-F3	Sampled: 09/23/96
985 Timothy Drive	Sample Descript: Dup	Received: 09/27/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/02/96
Attention: Fran Thie	Lab Number: 9609H36-05	Reported: 10/11/96

QC Batch Number: GC100296BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**1000**	**9800**
Methyl t-Butyl Ether	**50**	**120**
Benzene	**10**	**960**
Toluene	**10**	**41**
Ethyl Benzene	**10**	**450**
Xylenes (Total)	**10**	**1300**
Chromatogram Pattern:		**C6-C12**

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

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-F3	Received: 09/27/96
985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Lab Proj. ID: 9609H36	Reported: 10/11/96

LABORATORY NARRATIVE

Please note: The MTBE was analyzed by EPA method 8260 one day past hold time. The MTBE value did not confirm therefore, all MTBE results at this site should be considered estimated.

SEQUOIA ANALYTICAL

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-F3
Matrix: Liquid
Work Order #: 9609H36 -01, 03-05
Reported: Oct 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC100296BTEX03A	GC100296BTEX03A	GC100296BTEX03A	GC100296BTEX03A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	G. Fish	G. Fish	G. Fish	G. Fish
MS/MSD #:	9609G7202	9609G7202	9609G7202	9609G7202
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	10/2/96	10/2/96	10/2/96	10/2/96
Analyzed Date:	10/2/96	10/2/96	10/2/96	10/2/96
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	11	9.5	9.1	28
MS % Recovery:	110	95	91	93
Dup. Result:	11	9.4	9.2	28
MSD % Recov.:	110	94	92	93
RPD:	0.0	1.1	1.1	0.0
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK100296	BLK100296	BLK100296	BLK100296
Prepared Date:	10/2/96	10/2/96	10/2/96	10/2/96
Analyzed Date:	10/2/96	10/2/96	10/2/96	10/2/96
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	11	9.0	8.7	26
LCS % Recov.:	110	90	87	87
MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130
Control Limits				

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

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Blaine Tech Services, Inc.
985 Timothy Drive
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Client Project ID: Shell, Oakland / 960926-F3
Matrix: Liquid
Work Order #: 9609H36-02

Reported: Oct 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC100396BTEX02A	GC100396BTEX02A	GC100396BTEX02A	GC100396BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	R. Burton	R. Burton	R. Burton	R. Burton
MS/MSD #:	9609G8203	9609G8203	9609G8203	9609G8203
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.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	8.6	8.3	23
MS % Recovery:	100	86	83	77
Dup. Result:	12	10	9.8	27
MSD % Recov.:	120	100	98	90
RPD:	18	15	17	16
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.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	11	9.5	9.2	25
LCS % Recov.:	110	95	92	83
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

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Blaine Tech Services, Inc.
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Client Project ID: Shell, Oakland / 960926-F3
Matrix: Liquid
Work Order #: 9609H36-01

Reported: Oct 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Diesel
QC Batch#:	GC1003960HBPEXC
Analy. Method:	EPA 8015M
Prep. Method:	EPA 3510
Analyst:	B. Sullivan
MS/MSD #:	9609G1107
Sample Conc.:	530
Prepared Date:	10/3/96
Analyzed Date:	10/5/96
Instrument I.D.#:	GCHP5
Conc. Spiked:	1000 µg/L
Result:	1700
MS % Recovery:	117
Dup. Result:	1700
MSD % Recov.:	117
RPD:	0.0
RPD Limit:	0-50

LCS #:	BLK100796
Prepared Date:	10/7/96
Analyzed Date:	10/7/96
Instrument I.D.#:	GCHP5
Conc. Spiked:	1000 µg/L
LCS Result:	1100
LCS % Recov.:	110

MS/MSD	50-150
LCS	60-140
Control Limits	

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Matrix: Liquid
Work Order #: 9609H36-05

Reported: Oct 11, 1996

QUALITY CONTROL DATA REPORT

Analyte:	MTBE
QC Batch#:	MS100496MTBEF3A
Analy. Method:	EPA 8260
Prep. Method:	N/A
Analyst:	L. Duong
MS/MSD #:	9609F7315
Sample Conc.:	15
Prepared Date:	10/4/96
Analyzed Date:	10/4/96
Instrument I.D.#:	MS-F3
Conc. Spiked:	50 µg/L
Result:	71
MS % Recovery:	112
Dup. Result:	72
MSD % Recov.:	114
RPD:	1.4
RPD Limit:	0-25

LCS #:	VDB100996
Prepared Date:	-
Analyzed Date:	10/9/96
Instrument I.D.#:	F3
Conc. Spiked:	50 µg/L
LCS Result:	51
LCS % Recov.:	102

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

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