Weiss Associates *Environmental and Geologic Services*

5500 Shellmound Street, Emeryville, CA 94608-2411 *Fax: 510-547-5043* *Phone:* ***510-450-6000***

July 29, 1996

P0945

Barney Chan
Alameda County
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Second Quarter 1996**
Shell Service Station
WIC #204-5508-3400
4411 Foothill Boulevard
Oakland, California
WA Job #81-1168-206

Dear Mr. Chan:

This status report satisfies the quarterly reporting requirements prescribed by California Administrative Code Title 23 Waters, Division 3, Chapter 16, Article 5, Section 2652.d.

Activities This Quarter

- Blaine Tech Services, Inc. (BTS) of San Jose, California measured ground water depths and collected ground water samples from the site wells (Figures 1 and 2). BTS' report describing these activities and the analytic report for the ground water samples are included as Attachment A.

- Weiss Associates (WA) calculated ground water elevations (Table 1), compiled the analytic data (Table 2) and prepared a ground water elevation contour map (Figure 2).

Anticipated Activities Next Quarter

WA will submit a report presenting a summary of activities for the upcoming quarter. Please call if you have any questions or comments.

Sincerely,
Weiss Associates

Grady S. Glasser
Technical Assistant

James W. Carmody, C.H.G.
Senior Project Hydrogeologist

Attachments: A - BTS Ground Water Monitoring Report

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

GSG\JWC:all
I:\SHELL\1168\QM\96Q2R.DOC

Figure 1. Site Location Map - Shell Service Station WIC# 204-5508-3400 - 4411 Foothill Boulevard, Oakland, California

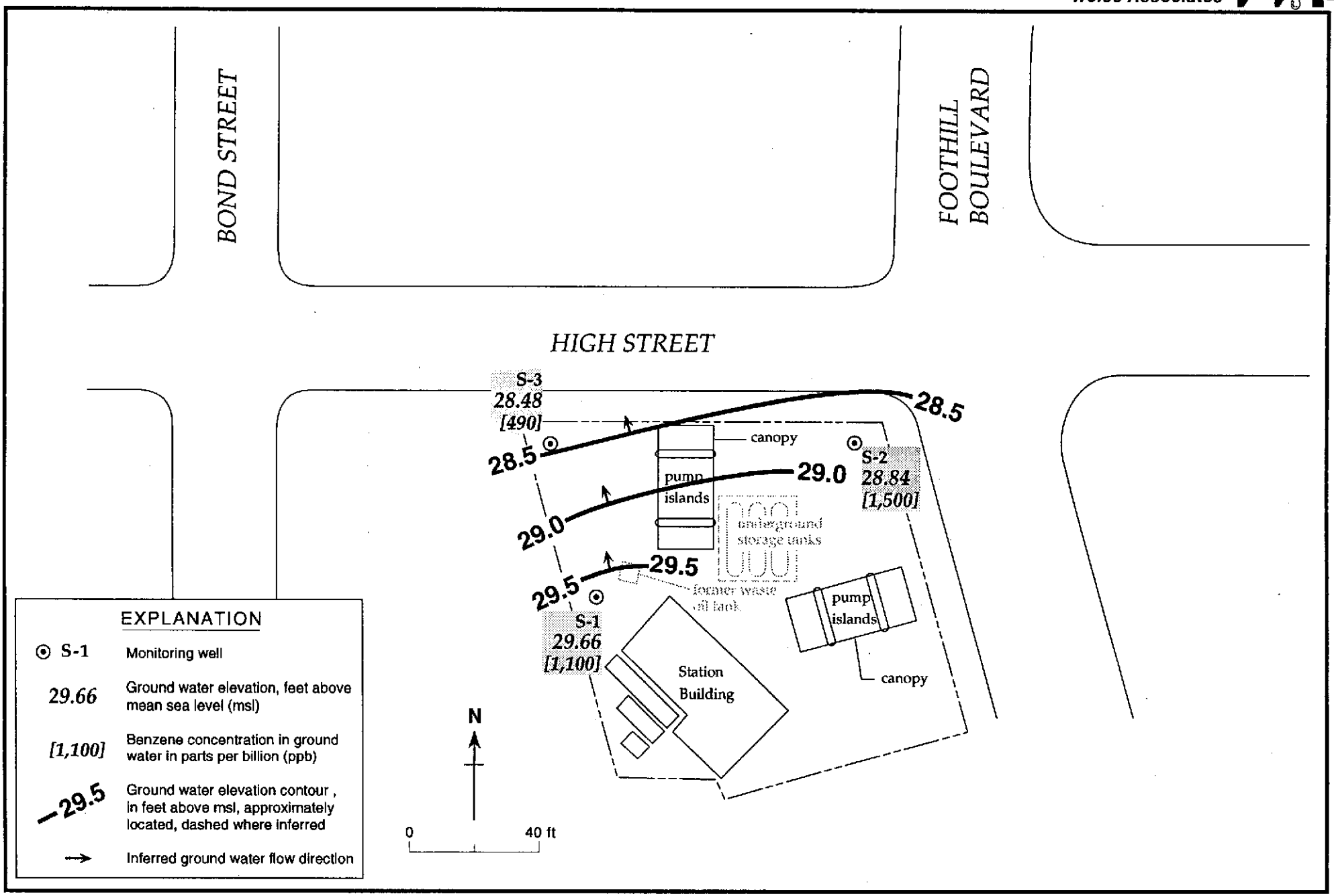

Figure 2. Monitoring Well Locations, Ground Water Elevation Contours, and Benzene Concentrations in Ground Water - June 21, 1996 - Shell Service Station WIC# 204-5508-3400 - 4411 Foothill Boulevard, Oakland, California

Table 1
Groundwater Elevation Data

Shell Service Station
4411 Foothill Boulevard at High Street
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)
S-1	12/18/92	NM	9.06	NA
	05/26/93	38.31	NM	NA
	05/28/93		12.13	26.18
	06/03/93		8.89	29.42
	06/08/93		8.80	29.51
	09/21/93		10.40	27.91
	12/14/93		9.66	28.65
	03/17/94		8.20	30.11
	06/16/94		9.41	28.90
	09/22/94		11.13	27.18
	12/15/94		7.15	31.16
	03/30/95		6.09	32.22
	06/20/95		7.30	31.01
	09/20/95		10.02	28.29
	12/06/95		11.64	26.67
	03/21/96		6.87	31.44
	06/21/96		8.65	29.66
S-2	05/28/93	38.79	9.51	29.28
	06/03/93		9.51	29.28
	06/08/93		9.57	29.22
	09/21/93		10.54	28.25
	12/14/93		9.76	29.03
	03/17/94		9.92	28.87
	06/16/94		10.11	28.68
	09/22/94		10.51	28.28
	12/15/94		9.12	29.67
	03/30/95		7.86	30.93
	06/20/95		9.51	29.28
	09/20/95		10.06	28.73
	12/06/95		10.52	28.27
	03/21/96		8.60	30.19
	06/21/96		9.95	28.84
S-3	05/28/93	37.33	8.45	28.88
	06/03/93		8.36	28.97
	06/08/93		8.41	28.92
	09/21/93		10.08	27.25
	12/94/93		8.80	28.53
	03/17/94		8.34	28.99
	06/16/94		9.12	28.21
	09/22/94		10.27	27.06
	12/15/94		7.81	29.52
	03/30/95		7.06	30.27
	06/20/95		8.15	29.18
	09/20/95		9.32	28.01
	12/06/95		10.53	26.80
	03/21/96		7.32	30.01
	06/21/96		8.85	28.48

Abbreviations:

MSL = Mean sea level
TOB = Top of box
NM = Not measured
NA = Not available

Table 2
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPPH, BTEX Compounds, TEPH, and TPH as Motor Oil)

Shell Service Station
4411 Foothill Boulevard at High Street
Oakland, California

Well Number	Date Sampled	TPPH (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzen (ppb)	Xylenes (ppb)	TEPH (ppb)	TPH as Motor Oil (ppb)	MTBE (ppb)
S-1	12/18/92 [a]	41,000	3,100	1,100	1,200	8,700	NA	9,400	NA
	05/26/93	39,000	1,300	4,700	1,500	7,800	6,000	370	NA
	09/21/93	34,000	480	5,000	3,800	18,000	5,900	ND	NA
	12/14/93	25,000	1,100	5,000	2,200	11,000	13,000	ND	NA
	03/17/94	57,000	1,300	5,400	2,100	11,000	1,600	2,300	NA
	06/16/94	57,000	1,600	6,000	2,000	13,000	3,000	210	NA
	09/22/94	39,000	1,300	2,100	1,500	7,100	ND	ND	NA
	12/15/94	30,000	1,100	4,700	1,600	10,000	3,100 [b]	ND	NA
	03/30/95 [c]	30,000	1,400	4,000	1,500	11,000	3,100 [b]	ND	NA
	06/20/95	28,000	1,100	2,300	1,100	8,300	2,100	NC	NA
	09/20/95	40,000	840	3,600	1,300	8,600	2,600	NC	NA
	12/06/95	38,000	920	3,200	1,500	9,400	6,400 [b]	ND	NA
	03/21/96	48,000	700	4,200	1,100	8,600	7,700	ND	330
	06/21/96	56,000	1,100	7,400	3,000	18,000	5,900	ND	800
S-2	06/29/93	1,300	290	35	38	130	NA	NA	NA
	09/21/93	3,300	870	24	190	120	NA	NA	NA
	12/14/93	1,300	400	16	36	27	NA	NA	NA
	03/17/94	4,500	610	27	92	110	NA	NA	NA
	03/17/94 [dup]	4,000	610	26	93	120	NA	NA	NA
	06/16/94	2,800	690	45	97	140	NA	NA	NA
	09/22/94	4,000	630	94	64	230	NA	NA	NA
	12/15/94	1,600	450	300	67	130	NA	NA	NA
	03/30/95 [c]	8,200	2,800	190	240	700	NA	NA	NA
	06/20/95	9,600	2,600	160	170	500	NA	NA	NA
	09/20/95	4,200	920	45	98	140	NA	NC	NA
	12/06/95	ND [f]	790 [f]	67 [f]	64	130	NA	NA	NA
	03/21/96	3,700	850	45	96	170	NA	NA	560
	06/21/96	4,600	1,500	88	220	370	---	---	1,700
	06/21/96 [dup]	4,600	1,500	89	220	370	—	—	1,700
S-3	06/29/93	29,000	1,500	1,800	950	6,200	NA	NA	NA
	09/21/93	15,000	900	2,200	2,600	11,000	NA	NA	NA
	12/14/93	20,000	1,100	2,400	1,800	8,500	NA	NA	NA
	03/17/94	14,000	580	190	750	1,700	NA	NA	NA
	06/16/94	20,000	700	690	1,400	4,100	NA	NA	NA
	06/16/94 [dup]	19,000	680	560	1,300	3,700	NA	NA	NA
	09/22/94	24,000	630	1,100	1,400	5,700	NA	NA	NA
	09/22/94 [dup]	25,000	720	1,100	1,500	6,100	NA	NA	NA
	12/15/94	18,000	520	800	1,100	4,200	NA	NA	NA
	12/15/94 [dup]	23,000	1,000	1,900	2,000	8,600	NA	NA	NA
	03/30/95 [e]	8,800	360	730	700	3,700	NA	NA	NA
	03/30/95 [e dup]	7,600	330	570	600	2,600	NA	NA	NA
	06/20/95	9,600	510	170	960	1,700	NA	NA	NA

Table 2
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPPH, BTEX Compounds, TEPH, and TPH as Motor Oil)

Shell Service Station
4411 Foothill Boulevard at High Street
Oakland, California

Well Number	Date Sampled	TPPH (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzen (ppb)	Xylenes (ppb)	TEPH (ppb)	TPH as Motor Oil (ppb)	MTBE (ppb)
	06/20/95 dup	9,800	500	170	950	1,700	NA	NA	NA
	09/20/95	21,000	400	560	1,300	4,600	NA	NA	NA
	12/06/95	24,000	630	1,400	1,400	6,000	NA	NA	NA
	12/06/95 dup	22,000	630	1,200	1,400	5,500	NA	NA	NA
	03/21/96	9,100	290	110	490	1,600	NA	NA	NA
	03/21/96 dup	11,000	310	250	540	2,100	NA	NA	NA
	06/21/96	23,000	490	490	1,500	4,600	—	—	ND

Abbreviations:

TPPH = Total purgeable petroleum hydrocarbons
TEPH = Total extractable petroleum hydrocarbons
ppb = Parts per billion
NA = Not analyzed
ND = Not detected
NC = Not calculated, TPH as motor oil included with TEPH analysis.
(D) = Duplicate sample

a. Phenolic and napthalene compounds detected in Sample S-1 by semi-volatile organics (EPA Method 8270).
b. Laboratory noted that concentrations appears to be a lighter hydrocarbon than diesel.
c. Laboratory noted concentration due to a lighter petroleum product of hydrocarbon range C6 to C12.
d. Laboratory noted concentration due to hydrocarbon range C6 to C12.
e. National Environmental Testing, Inc., analyzed within hold time but further dilutions were required and analyzed out of hold time. NET suggests that these should be considered minimum concentrations.
f. Sample result is ND, but laboratory reporting limit for this analysis is 5,000 ppb.

ATTACHMENT A

BTS GROUND WATER MONITORING REPORT

BLAINE
TECH SERVICES INC.

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

July 15, 1996

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

Attn: R. Jeff Granberry

Shell WIC #204-5508-3400
4411 Foothill Blvd.
Oakland, California

2nd Quarter 1996

Quarterly Groundwater Monitoring Report 960621-D-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,

Francis Thie

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

cc: Weiss Associates
5500 Shellmound Street
Emeryville, CA 94608-2411
Attn: Grady Glasser

(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	6/21/96	TOB	ODOR	--	--	--	8.65	24.62
S-2 *	6/21/96	TOB	ODOR	--	--	--	9.95	22.26
S-3	6/21/96	TOB	ODOR	--	--	--	8.85	20.50

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

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 96621-D2

Date: 6-21-96
Page 1 of 1

Site Address: 4411 Foothill Blvd., Oakland

WIC#: 204-5508-3400

Shell Engineer: R. Jeff Gramberry — Phone No.: (510) 675-6168 Fax #: 675-6160

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

Consultant Contact: Jim Keller — Phone No.: (408) 995-5535 Fax #: 293-8773

Comments:

Sampled by: MIKE D

Printed Name: MIKE DILLOUGHERTY

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	MOTOR OIL	WITBE	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-1	6-21			✓		7		X				X	X	X						
S-2	6-21			✓		3						X		X						
S-3	6-21			✓		3						X		X						
EB	6-21			✓		3						X		X						
DUP	6-21			✓		3						X		X						

CHECK ONE (1) BOX ONLY — CT/01

- Quarterly Monitoring [X] 8441
- Site Investigation [ ] 8441
- Soil Closure/Disposal [ ] 8442
- Water Closure/Disposal [ ] 8443
- Soil/Air Rem. or Sys. O & M [ ] 8462
- Water Rem. or Sys. O & M [ ] 8463
- Other [ ]

TURN AROUND TIME

- 24 hours [ ]
- 48 hours [ ]
- 15 days [X] (Normal)
- Other [ ]

NOTE: Notify Lab as soon as Possible of 24/48 hr. TAT.

9606D84

Relinquished By (signature):	Printed Name:	Date:	Time:	Received (signature):	Printed Name:	Date:	Time:
Mike Dillougherty	MIKE DILLOUGHERTY	6-24	920	Scott Chang	Scott Chang	6/24	0930
Relinquished By (signature):	Printed Name:	Date:	Time:	Received (signature):	Printed Name:	Date:	Time:
Scott Chang	Scott Chang	6-24	1115				
Relinquished By (signature):	Printed Name:	Date:	Time:	Received (signature):	Printed Name:	Date:	Time:
					Will Hale	6/24/96	1119

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

Shell 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: Jim Keller

Project: Shell Oakland 960621-D2

Enclosed are the results from samples received at Sequoia Analytical on June 24, 1996. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9606D84 -01	LIQUID, S-1	06/21/96	TPGBMW Purgeable TPH/BTEX
9606D84 -01	LIQUID, S-1	06/21/96	TPHMOW Fuel Fingerprint/Mo
9606D84 -01	LIQUID, S-1	06/21/96	VTPHDW-CHEVRON Extract TPH
9606D84 -02	LIQUID, S-2	06/21/96	TPGBMW Purgeable TPH/BTEX
9606D84 -03	LIQUID, S-3	06/21/96	TPGBMW Purgeable TPH/BTEX
9606D84 -04	LIQUID, EB	06/21/96	TPGBMW Purgeable TPH/BTEX
9606D84 -05	LIQUID, DUP	06/21/96	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

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Blaine Technical Services	Client Proj. ID: Shell Oakland 960621-D2	Sampled: 06/21/96
985 Timothy Drive	Sample Descript: S-1	Received: 06/24/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 06/28/96
Attention: Jim Keller	Lab Number: 9606D84-01	Reported: 07/04/96

QC Batch Number: GC062896BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**5000**	**56000**
Methyl t-Butyl Ether	**250**	**800**
Benzene	**50**	**1100**
Toluene	**50**	**7400**
Ethyl Benzene	**50**	**3000**
Xylenes (Total)	**50**	**18000**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	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
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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 960621-D2	Sampled: 06/21/96
985 Timothy Drive	Sample Descript: S-1	Received: 06/24/96
San Jose, CA 95133	Matrix: LIQUID	Extracted: 06/27/96
	Analysis Method: EPA 8015 Mod	Analyzed: 06/29/96
Attention: Jim Keller	Lab Number: 9606D84-01	Reported: 07/04/96

QC Batch Number: GC0627960HBPEXB
Instrument ID: GCHP4A

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil Chromatogram Pattern:	2500	N.D.

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	152 Q

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 960621-D2	Sampled: 06/21/96
985 Timothy Drive	Sample Descript: S-1	Received: 06/24/96
San Jose, CA 95133	Matrix: LIQUID	Extracted: 06/27/96
	Analysis Method: EPA 8015 Mod	Analyzed: 06/29/96
Attention: Jim Keller	Lab Number: 9606D84-01	Reported: 07/04/96

QC Batch Number: GC0627960HBPEXB
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	**250**	**5900**
Chromatogram Pattern:	**C9-C24**	**Unidentified HC**

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	152 Q

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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Blaine Technical Services	Client Proj. ID: Shell Oakland 960621-D2	Sampled: 06/21/96
985 Timothy Drive	Sample Descript: S-2	Received: 06/24/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 06/28/96
Attention: Jim Keller	Lab Number: 9606D84-02	Reported: 07/04/96

QC Batch Number: GC062896BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**2000**	**4600**
Methyl t-Butyl Ether	**100**	**1700**
Benzene	**20**	**1500**
Toluene	**20**	**88**
Ethyl Benzene	**20**	**220**
Xylenes (Total)	**20**	**370**
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

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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 960621-D2	Sampled: 06/21/96
985 Timothy Drive	Sample Descript: S-3	Received: 06/24/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 06/28/96
Attention: Jim Keller	Lab Number: 9606D84-03	Reported: 07/04/96

QC Batch Number: GC062896BTEX17B
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**2500**	**23000**
Methyl t-Butyl Ether	125	N.D.
Benzene	**25**	**490**
Toluene	**25**	**490**
Ethyl Benzene	**25**	**1500**
Xylenes (Total)	**25**	**4600**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	94

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 960621-D2	Sampled: 06/21/96
985 Timothy Drive	Sample Descript: EB	Received: 06/24/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 06/28/96
Attention: Jim Keller	Lab Number: 9606D84-04	Reported: 07/04/96

QC Batch Number: GC062896BTEX02A
Instrument ID: GCHP2

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	95

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 960621-D2	Sampled: 06/21/96
985 Timothy Drive	Sample Descript: DUP	Received: 06/24/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 06/28/96
Attention: Jim Keller	Lab Number: 9606D84-05	Reported: 07/04/96

QC Batch Number: GC062896BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**2000**	**4600**
Methyl t-Butyl Ether	**100**	**1700**
Benzene	**20**	**1500**
Toluene	**20**	**89**
Ethyl Benzene	**20**	**220**
Xylenes (Total)	**20**	**370**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	95

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.	Client Project ID:	Shell, Oakland / 960621-D2		
985 Timothy Drive	Matrix:	Liquid		
San Jose, CA 95133				
Attention: Jim Keller	Work Order #:	9606D84	-01-02, 04-05	Reported: Jul 6, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC062896BTEX02A	GC062896BTEX02A	GC062896BTEX02A	GC062896BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Woo	J. Woo	J. Woo	J. Woo
MS/MSD #:	9606B2102	9606B2102	9606B2102	9606B2102
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	6/28/96	6/28/96	6/28/96	6/28/96
Analyzed Date:	6/28/96	6/28/96	6/28/96	6/28/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.4	9.6	9.5	29
MS % Recovery:	94	96	95	97
Dup. Result:	9.6	9.8	9.6	29
MSD % Recov.:	96	98	96	97
RPD:	2.1	2.1	1.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK062896	BLK062896	BLK062896	BLK062896
Prepared Date:	6/28/96	6/28/96	6/28/96	6/28/96
Analyzed Date:	6/28/96	6/28/96	6/28/96	6/28/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.6	9.7	9.6	29
LCS % Recov.:	96	97	96	97

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 Tech Services, Inc.	Client Project ID:	Shell, Oakland / 960621-D2	
985 Timothy Drive	Matrix:	Liquid	
San Jose, CA 95133			
Attention: Jim Keller	Work Order #:	9606D84-03	Reported: Jul 6, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC062896BTEX17B	GC062896BTEX17B	GC062896BTEX17B	GC062896BTEX17B
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Woo	J. Woo	J. Woo	J. Woo
MS/MSD #:	9606B2105	9606B2105	9606B2105	9606B2105
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	6/28/96	6/28/96	6/28/96	6/28/96
Analyzed Date:	6/28/96	6/28/96	6/28/96	6/28/96
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.5	9.1	8.8	25
MS % Recovery:	95	91	88	83
Dup. Result:	8.8	8.5	8.5	25
MSD % Recov.:	88	85	85	83
RPD:	7.7	6.8	3.5	0.0
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK062896	BLK062896	BLK062896	BLK062896
Prepared Date:	6/28/96	6/28/96	6/28/96	6/28/96
Analyzed Date:	6/28/96	6/28/96	6/28/96	6/28/96
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	8.3	8.4	8.3	25
LCS % Recov.:	83	84	83	83

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

SEQUOIA ANALYTICAL

Reggy 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.	Client Project ID:	Shell, Oakland / 960621-D2	
985 Timothy Drive	Matrix:	Liquid	
San Jose, CA 95133			
Attention: Jim Keller	Work Order #:	9606D83-01	Reported: Jul 6, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Diesel
QC Batch#:	GC0627960HBPEXB
Analy. Method:	EPA 8015M
Prep. Method:	EPA 3510
Analyst:	J. Minkel
MS/MSD #:	9606D7904
Sample Conc.:	N.D.
Prepared Date:	6/27/96
Analyzed Date:	6/29/96
Instrument I.D.#:	GCHP5
Conc. Spiked:	1000 µg/L
Result:	900
MS % Recovery:	90
Dup. Result:	900
MSD % Recov.:	90
RPD:	0.0
RPD Limit:	0-50

LCS #:	BLK062796
Prepared Date:	6/27/96
Analyzed Date:	6/28/96
Instrument I.D.#:	GCHP5
Conc. Spiked:	1000 µg/L
LCS Result:	800
LCS % Recov.:	80

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

SEQUOIA ANALYTICAL

Peggy Renner
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