

**FACSIMILE**

**To:** Scott Seery  
**Organization:** Alameda County Department of Environmental Health  
**Fax #:** 337-9335  
**Re:** 6039 College, Oakland  
**Date:** [REDACTED]  
**Pages:** 29, including this cover sheet.

**Mr. Seery:**

Attached are the 1<sup>st</sup> Quarter 1998 analytical reports and field notes for the Shell Service Station at 6039 College Avenue, Oakland, as requested during your telephone conversation with Khaled Fahman earlier today. Also included is a copy of the fax Cambria sent to Pamela Evans of ACDEH on October 21, 1997 to confirm our prior conversations regarding the leak at this site. [REDACTED] and native soil was not accessible during the repair; therefore, no samples were collected during Cambria's October 21, 1997 site visit.

*missing*

Please don't hesitate to call me at (510) 420-3319 if I can be of further assistance.

Sincerely,

Maureen Feineman

cc: A.E. (Alex) Perez, Shell Oil Products Company, (510) 335-5029, without attachments

From the desk of...

Maureen D. Feineman  
 Geologist  
 Cambria Environmental Technology, Inc.  
 1144 65th Street, Suite C  
 Oakland, CA 94608

(510) 420-0700  
 Fax: (510) 420-9170



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

February 18, 1998

Shell Oil Company  
P.O. Box 8080  
Martinez, CA 94553

Attn: Alex Perez

Shell WIC #204-5508-3301  
6039 College Avenue  
Oakland, California

1st Quarter 1998

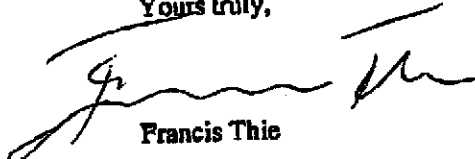
## Groundwater Monitoring Report 980120-K-2

---

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: Cambria Environmental Technology, Inc.  
1144 65th Street, Suite C  
Oakland, CA 94608  
Attn: Maureen Feinemen

(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 IMMISCIBLE LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLE LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
MW-1	01/20/98	TOC	-	NONE	-	-	9.35	24.51
MW-2	01/20/98	TOC	-	NONE	-	-	9.43	24.41
[REDACTED]	[REDACTED]	TOC	[REDACTED]	NONE	-	-	8.43	24.88
[REDACTED]	[REDACTED]	TOC	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	10.25	-
MW-5	01/20/98	TOC	-	NONE	-	-	8.06	28.65
MW-6	01/20/98	TOC	-	NONE	-	-	7.76	24.15
T-1	01/20/98	TOC	-	NONE	-	-	DRY	4.22
T-2	01/20/98	TOC	-	NONE	-	-	DRY	7.93

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



**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

**CHAIN OF CUSTODY RECORD**

Serial No: 980120-K2

Date: 3/21/98  
Page 1 of 1

Silo Address: 6039 College Ave., Oakland

WICI: 204-5508-3301

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: [Signature]

Printed Name: Mark Spaulder

**Analysis Required**

LAB: Sequoia

TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Yes/No Disposal	Combustion TPH 8015 & BTEX 8020 (WBC)	ESP 8270	Oil & Grease	Asbestos	Centrifuge Size	Preparation Used	Composite Y/N
-------------------------	----------------------------	---------------------	------------------------------	-----------------	---------------------------------------	----------	--------------	----------	-----------------	------------------	---------------

CHECK ONE (X) BOX ONLY	CT/DT	TURN AROUND
Quantity Monitoring <input checked="" type="checkbox"/>	6441	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	6441	48 hours <input type="checkbox"/>
Soil Clarity/Disposal <input type="checkbox"/>	6443	18 days <input checked="" type="checkbox"/>
Water Clarity/Disposal <input type="checkbox"/>	6443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	6443	
Water Rem. or Sys. O & M <input type="checkbox"/>	6443	
Other <input type="checkbox"/>		

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)	Yes/No Disposal	Combustion TPH 8015 & BTEX 8020 (WBC)	ESP 8270	Oil & Grease	Asbestos	Centrifuge Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION COMMENT	
M-3 1	1/20/98			3		1						X	X	X							
M-5 2				3		3						X									
M-6 3				3		3						X									
DA 4				3		1						X	X	X							
EB 5				3		3						X									

Relinquished by (Signature): <u>[Signature]</u>	Printed Name: <u>Mark Spaulder</u>	Date: <u>3/21/98</u>	Time: <u>11:10</u>	Received (Signature): <u>[Signature]</u>	Printed Name: <u>Steve Ten</u>	Date: <u>3/21/98</u>	Time: <u>4:15</u>
Relinquished by (Signature): <u>[Signature]</u>	Printed Name: <u>Steve Ten</u>	Date: <u>3/21/98</u>	Time: <u>4:15</u>	Received (Signature): <u>[Signature]</u>	Printed Name: <u>[Signature]</u>	Date: <u>3/21/98</u>	Time: <u>5:15</u>
Relinquished by (Signature): <u>[Signature]</u>	Printed Name: <u>[Signature]</u>	Date: <u>3/21/98</u>	Time: <u>5:15</u>	Received (Signature): <u>[Signature]</u>	Printed Name: <u>[Signature]</u>	Date: <u>3/21/98</u>	Time: <u>5:15</u>

MAR-19-1998 17:12 CAMBRIA 510 420 9170 P.04/28



# Sequoia Analytical

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(650) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

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

Project: Shell Oakland/980120-K2

Enclosed are the results from samples received at Sequoia Analytical on January 21, 1998.  
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9801B59 -01	LIQUID, MW-3	01/20/98	TPGM2W Purgeable TPH/BTEX
9801B59 -01	LIQUID, MW-3	01/20/98	8270 SemiVolatile Organi
9801B59 -01	LIQUID, MW-3	01/20/98	TRPH (SM 5520 B&F)
9801B59 -02	LIQUID, MW-5	01/20/98	TPGM2W Purgeable TPH/BTEX
9801B59 -03	LIQUID, MW-6	01/20/98	TPGM2W Purgeable TPH/BTEX
9801B59 -04	LIQUID, Dup	01/20/98	TPGM2W Purgeable TPH/BTEX
9801B59 -04	LIQUID, Dup	01/20/98	8270 SemiVolatile Organi
9801B59 -04	LIQUID, Dup	01/20/98	TRPH (SM 5520 B&F)
9801B59 -05	LIQUID, EB	01/20/98	TPGM2W 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 Fenner  
Project Manager



**Sequoia Analytical**

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 300

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(650) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112

Client Proj. ID: Shell Oiland/980120-K2  
Lab Proj. ID: 9801B59

Sampled: 01/20/98  
Received: 01/21/98  
Analyzed: see below

Reported: 02/04/98

Attention: Fran Thie

**LABORATORY ANALYSIS**

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9801B59-01 Sample Desc: LIQUID,MW-3				
TRPH (SM 5520 B&F)	mg/L	01/26/98	5.0	N.D.
Lab No: 9801B59-04 Sample Desc: LIQUID,Dup				
TRPH (SM 5520 B&F)	mg/L	01/26/98	5.0	N.D.

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  
404 N. Wigt Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(650) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: <b>Sh...</b> Sample Descript: <b>...</b> Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9801B59-01	Sampled: 01/20/98 Received: 01/21/98  Analyzed: 01/30/98 Reported: 02/04/98
--	---	---

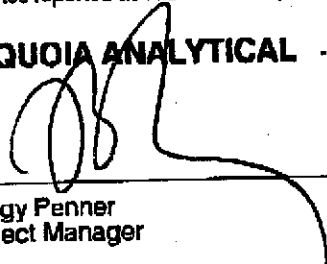
QC Batch Number: GC013098BTEX18A  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	2100
Methyl Ethyl Ethyl	500	360
Benzene	5.0	1000
Toluene	5.0	73
Ethyl Benzene	5.0	420
Xylenes (Total)	5.0	C6-C12
Chromatogram Pattern:		
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  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(650) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9675  
FAX (916) 921-0100

Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112 Attention: Fran Thie	Client Proj. ID: Shell Oakland/980120-K2 Sample Descript: MW-3 Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9801B59-01	Sampled: 01/20/98 Received: 01/21/98 Extracted: 01/23/98 Analyzed: 01/23/98 Reported: 02/04/98
--	--	--

QC Batch Number: MS0120988270EXB  
Instrument ID: F4

**Semivolatile Organics (EPA 8270)**

Analyte	Detection Limit ug/L	Sample Results ug/L
Acenaphthene	5.0	N.D.
Acenaphthylene	5.0	N.D.
Anthracene	5.0	N.D.
Benzoic Acid	10	N.D.
Benzo(a)anthracene	5.0	N.D.
Benzo(b)fluoranthene	5.0	N.D.
Benzo(k)fluoranthene	5.0	N.D.
Benzo(g,h,i)perylene	6.0	N.D.
Benzo(a)pyrene	5.0	N.D.
Benzyl alcohol	5.0	N.D.
Bis(2-chloroethoxy)methane	5.0	N.D.
Bis(2-chloroethyl)ether	5.0	N.D.
Bis(2-chloroisopropyl)ether	10	N.D.
Bis(2-ethylhexyl)phthalate	5.0	N.D.
4-Bromophenyl phenyl ether	5.0	N.D.
Butyl benzyl phthalate	10	N.D.
4-Chloroaniline	5.0	N.D.
2-Chloronaphthalene	5.0	N.D.
4-Chloro-3-methylphenol	5.0	N.D.
2-Chlorophenol	5.0	N.D.
4-Chlorophenyl phenyl ether	5.0	N.D.
Chrysene	5.0	N.D.
Dibenzo(a,h)anthracene	5.0	N.D.
Dibenzofuran	10	N.D.
Di-n-butyl phthalate	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	10	N.D.
3,3-Dichlorobenzidine	5.0	N.D.
2,4-Dichlorophenol	5.0	N.D.
Diethyl phthalate	5.0	N.D.
2,4-Dimethylphenol	5.0	N.D.
Dimethyl phthalate	10	N.D.
4,6-Dinitro-2-methylphenol	10	N.D.
2,4-Dinitrophenol	5.0	N.D.
2,4-Dinitrotoluene	5.0	N.D.
2,6-Dinitrotoluene	5.0	N.D.
Di-n-octyl phthalate	5.0	N.D.
Fluoranthene	5.0	N.D.







# Sequoia Analytical

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(650) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

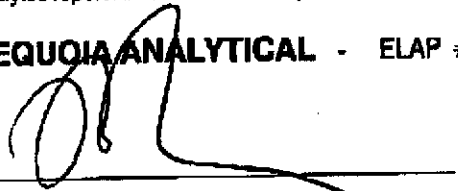
Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Shell Oakland/980120-K2 Sample Descript: MW-3 Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9801B59-01	Sampled: 01/20/98 Received: 01/21/98 Extracted: 01/23/98 Analyzed: 01/23/98 Reported: 02/04/98
--	--	--

QC Batch Number: MS0120998270EXB  
Instrument ID: F4

Analyte	Detection Limit ug/L	Sample Results ug/L	
Fluorene	5.0	N.D.	
Hexachlorobenzene	5.0	N.D.	
Hexachlorobutadiene	5.0	N.D.	
Hexachlorocyclopentadiene	10	N.D.	
Hexachloroethane	5.0	N.D.	
Indeno(1,2,3-cd)pyrene	5.0	N.D.	
Isophorone	5.0	N.D.	
2-Methylnaphthalene	5.0	N.D.	
2-Methylphenol	5.0	N.D.	
4-Methylphenol	5.0	N.D.	
Naphthalene	5.0	N.D.	
2-Nitroaniline	10	N.D.	
3-Nitroaniline	10	N.D.	
4-Nitroaniline	10	N.D.	
Nitrobenzene	5.0	N.D.	
2-Nitrophenol	5.0	N.D.	
4-Nitrophenol	10	N.D.	
n-Nitrosodiphenylamine	5.0	N.D.	
n-Nitroso-di-n-propylamine	5.0	N.D.	
Pentachlorophenol	10	N.D.	
Phenanthrene	5.0	N.D.	
Phenol	5.0	N.D.	
Pyrene	5.0	N.D.	
1,2,4-Trichlorobenzene	5.0	N.D.	
2,4,5-Trichlorophenol	10	N.D.	
2,4,6-Trichlorophenol	10	N.D.	
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>	
2-Fluorophenol	21	110	32
Phenol-d5	10	110	23
Nitrobenzene-d5	35	114	75
2-Fluorobiphenyl	43	116	72
2,4,6-Tribromophenol	10	123	84
p-Terphenyl-d14	33	141	50

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  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(650) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (650) 364-9255  
FAX (510) 988-9673  
FAX (916) 921-0100

Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112

Client Proj. ID: Shell Oakland/980120-K2  
Sample Descript:   
Matrix: LIQUID  
Analysis Method: 8015 Mod/8020  
Lab Number: 9801B59/02

Sampled: 01/20/98  
Received: 01/21/98

Analyzed: 02/02/98  
Reported: 02/04/98

Attention: Fran Thie

QC Batch Number: GC020298BTEX21A  
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 Ethyl Benzene	50	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	83

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  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(650) 364-9600 FAX (650) 364-9233  
(510) 988-9600 FAX (510) 988-9673  
(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/980120-K2 Sample Descript: <del>MM</del> Matrix: LIQUID Analysis Method: 8015 Mod/8020 Lab Number: 9801B5903	Sampled: 01/20/98 Received: 01/21/98 Analyzed: 02/02/98 Reported: 02/04/98
--	---	---

QC Batch Number: GC020298BTEX21A  
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.
<del>Non-Halogenated Aromatics</del>	2.5	<del>N.D.</del>
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	87

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  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(650) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: <b>Shel Oakland/980120-K2</b> Sample Description: <b>[REDACTED]</b> Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9801B59-04	Sampled: 01/20/98 Received: 01/21/98  Analyzed: 01/30/98 Reported: 02/04/98
--	--	---

QC Batch Number: GC013098BTEX18A  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	8000
Benzene	5.0	330
Toluene	5.0	950
Ethyl Benzene	5.0	68
Xylenes (Total)	5.0	390
Chromatogram Pattern:		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	98

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  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(650) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112

Client Proj. ID: Shell Oakland/980120-K2  
Sample Descript: Dup  
Matrix: LIQUID  
Analysis Method: EPA 8270  
Lab Number: 9801B59-04

Sampled: 01/20/98  
Received: 01/21/98  
Extracted: 01/23/98  
Analyzed: 01/23/98  
Reported: 02/04/98

QC Batch Number: MS0120988270EXB  
Instrument ID: F4

### Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acenaphthene	5.0	N.D.
Acenaphthylene	5.0	N.D.
Anthracene	5.0	N.D.
Benzoic Acid	10	N.D.
Benzo(a)anthracene	5.0	N.D.
Benzo(b)fluoranthene	5.0	N.D.
Benzo(k)fluoranthene	5.0	N.D.
Benzo(g,h,i)perylene	5.0	N.D.
Benzo(a)pyrene	5.0	N.D.
Benzyl alcohol	5.0	N.D.
Bis(2-chloroethoxy)methane	5.0	N.D.
Bis(2-chloroethyl)ether	5.0	N.D.
Bis(2-chloroisopropyl)ether	5.0	N.D.
Bis(2-ethylhexyl)phthalate	10	N.D.
4-Bromophenyl phenyl ether	5.0	N.D.
Butyl benzyl phthalate	5.0	N.D.
4-Chloroaniline	10	N.D.
2-Chloronaphthalene	5.0	N.D.
4-Chloro-3-methylphenol	5.0	N.D.
2-Chlorophenol	5.0	N.D.
4-Chlorophenyl phenyl ether	5.0	N.D.
Chrysene	5.0	N.D.
Dibenzo(a,h)anthracene	5.0	N.D.
Dibenzofuran	5.0	N.D.
Di-n-butyl phthalate	10	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
3,3-Dichlorobenzidine	10	N.D.
2,4-Dichlorophenol	5.0	N.D.
Diethyl phthalate	5.0	N.D.
2,4-Dimethylphenol	5.0	N.D.
Dimethyl phthalate	5.0	N.D.
4,6-Dinitro-2-methylphenol	10	N.D.
2,4-Dinitrophenol	10	N.D.
2,4-Dinitrotoluene	5.0	N.D.
2,6-Dinitrotoluene	5.0	N.D.
Di-n-octyl phthalate	5.0	N.D.
Fluoranthene	5.0	N.D.

**SEQUOIA ANALYTICAL**





# Sequoia Analytical

CAMBRIA

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

510 420 9170 P.14/28  
(650) 364-9600 FAX (650) 364-9233  
(510) 998-9600 FAX (510) 988-9673  
(916) 921-9600 FAX (916) 921-0100

Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112

Client Proj. ID: Shell Oakland/980120-K2  
Sample Descript: [REDACTED]  
Matrix: LIQUID  
Analysis Method: EPA 8270  
Lab Number: 9801B59-04

Sampled: 01/20/98  
Received: 01/21/98  
Extracted: 01/23/98  
Analyzed: 01/23/98  
Reported: 02/04/98

QC Batch Number: MS0120988270EXB  
Instrument ID: F4

Analyte	Detection Limit ug/L	Sample Results ug/L	
Fluorene	5.0	N.D.	
Hexachlorobenzene	5.0	N.D.	
Hexachlorobutadiene	5.0	N.D.	
Hexachlorocyclopentadiene	10	N.D.	
Hexachloroethane	5.0	N.D.	
Indeno(1,2,3-cd)pyrene	5.0	N.D.	
Isophorone	5.0	N.D.	
2-Methylnaphthalene	5.0	N.D.	
2-Methylphenol	5.0	N.D.	
4-Methylphenol	5.0	N.D.	
[REDACTED]	5.0	[REDACTED]	
2-Nitroaniline	10	N.D.	
3-Nitroaniline	10	N.D.	
4-Nitroaniline	10	N.D.	
Nitrobenzene	5.0	N.D.	
2-Nitrophenol	10	N.D.	
4-Nitrophenol	10	N.D.	
n-Nitrosodiphenylamine	5.0	N.D.	
n-Nitroso-di-n-propylamine	5.0	N.D.	
Pentachlorophenol	10	N.D.	
Phenanthrene	5.0	N.D.	
Phenol	5.0	N.D.	
Pyrene	5.0	N.D.	
1,2,4-Trichlorobenzene	5.0	N.D.	
2,4,5-Trichlorophenol	10	N.D.	
2,4,6-Trichlorophenol	5.0	N.D.	
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>	
2-Fluorophenol	21	110	46
Phenol-d5	10	110	32
Nitrobenzene-d5	35	114	77
2-Fluorobiphenyl	43	116	74
2,4,6-Tribromophenol	10	123	87
p-Terphenyl-d14	33	141	59

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  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(650) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Shell Oakland/980120-K2 Sample Descript: EB Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9801B59-05	Sampled: 01/20/98 Received: 01/21/98  Analyzed: 01/30/98 Reported: 02/04/98
--	--	---

QC Batch Number: GC013098BTEX18A  
Instrument ID: GCHP18

**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:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	82

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  
404 N. Wiget Lane  
819 Striker Avenue, Suite B

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(650) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Blaine Tech Services, Inc.  
1680 Rogers Ave.  
San Jose, CA 95112  
Attention: Fran Thle

Client Project ID: Shell Oakland / 980120-K2  
Matrix: Liquid

Work Order #: 9801B59 -01, 04

Reported: Feb 6, 1998

### QUALITY CONTROL DATA REPORT

**Analyte:** Total Recoverable  
Petroleum Hydrocarbons

**QC Batch#:** SP012198552000A

**Analy. Method:** SM 5520BF

**Prep. Method:** SM 5520BF

**Analyst:** P. Cheung

**BS/BSD #:** BLK012198

**Sample Conc.:** N.D.

**Prepared Date:** 1/21/98

**Analyzed Date:** 1/21/98

**Instrument I.D.#:** MANUAL

**Conc. Spiked:** 10 mg/L

**Result:** 9.0

**BS % Recovery:** 90

**Dup. Result:** 9.4

**BSD % Recov.:** 94

**RPD:** 4.3

**RPD Limit:** 0-30

**LCS #:** LCS012398

**Prepared Date:** 1/23/98

**Analyzed Date:** 1/25/98

**Instrument I.D.#:** MANUAL

**Conc. Spiked:** 10 mg/L

**LCS Result:** 7.1

**LCS % Recov.:** 71

**MS/MSD** 60-140

**LCS** 70-130

**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

9801B59.BLA <1>







**Sequoia Analytical**

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(650) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

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

Client Project ID: Shell Oakland / 980120-K2  
Matrix: Liquid

Work Order #: 9801B59-01, 04-05

Reported: Feb 6, 1998

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC013098BTEX18A	GC013098BTEX18A	GC013098BTEX18A	GC013098BTEX18A	GC013098BTEX18A
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. Minkel	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD #:	980191606	980191606	980191606	980191606	980191606
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/30/98	1/30/98	1/30/98	1/30/98	1/30/98
Analyzed Date:	1/30/98	1/30/98	1/30/98	1/30/98	1/30/98
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	8.1	8.1	8.0	25	52
MS % Recovery:	81	81	80	83	87
Dup. Result:	8.1	8.1	8.4	25	53
MSD % Recov.:	81	81	84	83	88
RPD:	0.0	0.0	4.9	0.0	1.9
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK013098	BLK013098	BLK013098	BLK013098	BLK013098
Prepared Date:	1/30/98	1/30/98	1/30/98	1/30/98	1/30/98
Analyzed Date:	1/30/98	1/30/98	1/30/98	1/30/98	1/30/98
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	8.1	8.6	8.1	25	53
LCS % Recov.:	81	86	81	83	88

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					

SEQUOIA ANALYTICAL

Reggy Fenner  
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

9801B59.BLA <2>





**Sequoia Analytical**

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(650) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

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

Client Project ID: Shell Oakland / 980120-K2  
Matrix: Liquid

Work Order #: 9801B59-02-03

Reported: Feb 6, 1998

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC020298BTEX21A	GC020298BTEX21A	GC020298BTEX21A	GC020298BTEX21A	GC020298BTEX21A
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. Mirafab	A. Mirafab	A. Mirafab	A. Mirafab	A. Mirafab
MS/MSD #:	9801B5604	9801B5604	9801B5604	9801B5604	9801B5604
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	2/2/98	2/2/98	2/2/98	2/2/98	2/2/98
Analyzed Date:	2/2/98	2/2/98	2/2/98	2/2/98	2/2/98
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:	9.1	9.1	9.1	27	54
MS % Recovery:	91	91	91	90	90
Dup. Result:	8.8	8.8	8.8	26	51
MSD % Recov.:	88	88	88	87	85
RPD:	3.4	3.4	3.4	3.8	5.7
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK020298	BLK020298	BLK020298	BLK020298	BLK020298
Prepared Date:	2/2/98	2/2/98	2/2/98	2/2/98	2/2/98
Analyzed Date:	2/2/98	2/2/98	2/2/98	2/2/98	2/2/98
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:	8.9	8.8	9.0	26	52
LCS % Recov.:	89	88	80	87	87

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					

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

9801B59.BLA <3>





**Sequoia Analytical**

680 Chesapeake Drive Redwood City, CA 94063  
 404 N. Wiget Lane Walnut Creek, CA 94598  
 819 Striker Avenue, Suite 8 Sacramento, CA 95834

510 420 9170 P.19/28  
 (650) 364-9600 FAX (510) 988-9673  
 (510) 988-9600 FAX (510) 988-9673  
 (916) 921-9600 FAX (916) 921-0100

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

Client Project ID: Shell Oakland / 980120-K2  
 Matrix: Liquid

Work Order #: 9801B59-01, 04

Reported: Feb 6, 1998

**QUALITY CONTROL DATA REPORT**

Analyte:	Phenol	2-Chlorophenol	1,4-Dichloro-benzene	N-Nitroso-Di-N-propylamine
QC Batch#:	MS0120988270EXB	MS0120988270EXB	MS0120988270EXB	MS0120988270EXB
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3510	EPA 3510	EPA 3510	EPA 3510

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	BLK012098	BLK012098	BLK012098	BLK012098
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/20/98	1/20/98	1/20/98	1/20/98
Analyzed Date:	1/20/98	1/20/98	1/20/98	1/20/98
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L	200 µg/L
Result:	88	166	145	170
MS % Recovery:	44	83	73	85
Dup. Result:	81	161	146	173
MSD % Recov.:	41	81	73	87
RPD:	8.8	3.1	0.69	1.7
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	BLK012398	BLK012398	BLK012398	BLK012398
Prepared Date:	1/23/98	1/23/98	1/23/98	1/23/98
Analyzed Date:	1/23/98	1/23/98	1/23/98	1/23/98
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L	200 µg/L
LCS Result:	67	146	128	152
LCS % Recov.:	34	73	64	76

MS/MSD LCS Control Limits	12-110	27-123	38-97	41-116
---------------------------	--------	--------	-------	--------

**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

**SEQUOIA ANALYTICAL**

Peggy Penner  
 Project Manager





**Sequoia Analytical**

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(650) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

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

Client Project ID: Shell Oakland / 980120-K2  
Matrix: Liquid

Work Order #: 9801B59-01, 04

Reported: Feb 6, 1998

**QUALITY CONTROL DATA REPORT**

Analyte:	1,2,4-Trichloro-benzene	4-Chloro-2-Methylphenol	Acenaphthene	4-Nitrophenol
QC Batch#:	MS0120988270EXB	MS0120988270EXB	MS0120988270EXB	MS0120988270EXB
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3510	EPA 3510	EPA 3510	EPA 3510

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	BLK012098	BLK012098	BLK012098	BLK012098
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/20/98	1/20/98	1/20/98	1/20/98
Analyzed Date:	1/20/98	1/20/98	1/20/98	1/20/98
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L	200 µg/L
Result:	156	162	159	74
MS % Recovery:	78	81	80	37
Dup. Result:	160	159	158	66
MSD % Recov.:	80	80	79	33
RPD:	2.5	1.9	0.63	11
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	BLK012398	BLK012398	BLK012398	BLK012398
Prepared Date:	1/23/98	1/23/98	1/23/98	1/23/98
Analyzed Date:	1/23/98	1/23/98	1/23/98	1/23/98
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L	200 µg/L
LCS Result:	138	153	145	48
LCS % Recov.:	68	77	73	24

MS/MSD LCS Control Limits	39-98	23-97	46-118	10-80
---------------------------	-------	-------	--------	-------

**SEQUOIA ANALYTICAL**

Peggy Fenner  
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





**Sequoia Analytical**

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(650) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

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

Client Project ID: Shell Oakland / 980120-K2  
Matrix: Liquid

Work Order #: 9801B59-01, 04

Reported: Feb 6, 1998

**QUALITY CONTROL DATA REPORT**

Analyte:	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
QC Batch#:	MS0120988270EXB	MS0120988270EXB	MS0120988270EXB
Analy. Method:	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3510	EPA 3510	EPA 3510

Analyst:	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	BLK012098	BLK012098	BLK012098
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	1/20/98	1/20/98	1/20/98
Analyzed Date:	1/20/98	1/20/98	1/20/98
Instrument I.D.#:	F4	F4	F4
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L

Result:	165	159	133
MS % Recovery:	83	80	67

Dup. Result:	167	161	134
MSD % Recov.:	84	81	67

RPD:	1.2	1.3	0.75
RPD Limit:	0-30	0-30	0-30

LCS #:	BLK012398	BLK012398	BLK012398
Prepared Date:	1/23/98	1/23/98	1/23/98
Analyzed Date:	1/23/98	1/23/98	1/23/98
Instrument I.D.#:	F4	F4	F4
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L

LCS Result:	153	126	122
LCS % Recov.:	77	63	61

MS/MSD LCS Control Limits	24-96	9-103	26-127
---------------------------	-------	-------	--------

**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



**Sequoia  
Analytical**680 Chesapeake Drive  
404 N. Wiget Lane  
919 Sirkker Avenue, Suite 8Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834(650) 364-9600  
(510) 988-9600  
(916) 921-9600FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112  
Attention: Fran Thie

Client Proj. ID: Shell Oakland/980120-K2

Received: 01/21/98

Lab Proj. ID: 9801B59

Reported: 02/04/98

**LABORATORY NARRATIVE**

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 10 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

Please note: Samples 9801B59-01, -02 and -03 were analyzed twice in order to obtain the lowest DL's possible for the BTEX compounds.

**SEQUOIA ANALYTICAL**  
Peggy Penner  
Project Manager



**WELL HEAD INSPECTION CHECKLIST AND REPAIR ORDER**

Client Shell WIC#204-5508-3301  
 6039 COLLEGE AVE.  
 OAKLAND

Inspection date: 1/20/98  
 Inspected by: Mark  
 BTS Event # 980120-K2

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

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

Well I.D.	Deficiency	Corrective Action Taken

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

Well I.D.	Persisting Deficiency	BTS Office assigns or defers Correction to:	Date assigned	Date corrected

Office review and assignments made by \_\_\_\_\_ date \_\_\_\_\_



### SHELL WELL MONITORING DATA SHEET

Project #: 280120-K2	WIC #: 20455083301
Sampler: M/S	Date: 1/20/98
Well I.D.: <del>          </del>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 24.88	Depth to Water: 8.43
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
<u>4"</u>	0.65	Other	radius <sup>2</sup> * 0.163

Purge Method:  Bailer      Sampling Method:  Bailer  
 Middleburg       Extraction Port  
 Electric Submersible      Other: \_\_\_\_\_  
 Extraction Pump

<u>10.7</u>	x	<u>3</u>	=	<u>32.1</u> Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
2:27	76.6	6.8	620	39.7	11	<del>          </del>
2:29	76.2	6.6	600	42.3	22	
2:30	76.0	6.5	570	33.5	33	

Did well dewater? Yes  No      Gallons actually evacuated: 33

Sampling Time: 2:35      Sampling Date: 1/20

Sample I.D.: mw-3      Laboratory: Sequoia Crosby

Analyzed for: TPH-G BTEX MTBE TPH-D Other: SPH 020 0+G

Equipment Blank I.D.: @                 Duplicate I.D.: DLP

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):      Pre-purge:                 <sup>mg/l</sup>      Post-purge: 6.1 <sup>mg/l</sup>

### SHELL WELL MONITORING DATA SHEET

Project #: <u>980120-K2</u>	WIC #: <u>204 9508 7301</u>
Sampler: <u>MS</u>	Date: <u>1/20</u>
Well I.D.: <u>[REDACTED]</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: _____	Depth to Water: <u>10.25</u>
Depth to Free Product: <u>9.03</u>	Thickness of Free Product (feet): <u>0.62</u>
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius <sup>2</sup> * 0.163

Purge Method: <u>Bailer</u>	Sampling Method: <u>Bailer</u>
<u>Middleburg</u>	<u>Extraction Port</u>
<u>Electric Submersible</u>	Other: _____
<u>Extraction Pump</u>	
Other: _____	

_____	_____	_____
1 Case Volume (Gals.)	Specified Volumes	Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
		[REDACTED]	[REDACTED]	[REDACTED]		
		[REDACTED]	[REDACTED]	[REDACTED]		

Did well dewater? Yes  No  Gallons actually evacuated: \_\_\_\_\_

Sampling Time: \_\_\_\_\_ Sampling Date: \_\_\_\_\_

Sample I.D.: \_\_\_\_\_ Laboratory: Sequoia Crosby

Analyzed for: TPH-G BTEX MTBE TPH-D Other: \_\_\_\_\_

Equipment Blank I.D.: \_\_\_\_\_ @ \_\_\_\_\_ Duplicate I.D.: \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: \_\_\_\_\_

D.O. (if req'd): Pre-purge: \_\_\_\_\_ mg/l Post-purge: \_\_\_\_\_ mg/l

### SHELL WELL MONITORING DATA SHEET

Project #: <u>980120-K2</u>	WIC #: <u>20495083301</u>
Sampler: <u>MS</u>	Date: <u>1/20/98</u>
Well I.D.: <u>MW-5</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>28.65</u>	Depth to Water: <u>8.06</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YST</u> HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius <sup>2</sup> * 0.163

Purge Method:                      Bailer    Sampling Method:     Bailer  
    Middleburg    Extraction Port  
    Electric Submersible     Other: \_\_\_\_\_  
    Extraction Pump

Other: \_\_\_\_\_

<u>11.4</u>	x	<u>3</u>	=	<u>40.2</u> Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
<u>8:54</u>	<u>75.2</u>	<u>6.8</u>	<u>820</u>	<u>73.2</u>	<u>14</u>	
<u>9:06</u>	<u>74.8</u>	<u>6.6</u>	<u>620</u>	<u>85.1</u>	<u>28</u>	
<u>9:08</u>	<u>74.3</u>	<u>6.5</u>	<u>620</u>	<u>88.1</u>	<u>41</u>	

Did well dewater?    Yes     No    Gallons actually evacuated: 41

Sampling Time: 9:17    Sampling Date: 1/20

Sample I.D.: MW-5    Laboratory: Sequonia Crosby

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

Equipment Blank I.D.: EB @ 217 Duplicate I.D.:

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):                      Pre-purge:                      Post-purge                      3.7

### SHELL WELL MONITORING DATA SHEET

Project #: <u>980120-K2</u>	WIC #: <u>20455083301</u>
Sampler: <u>Mark</u>	Date: <u>1/20/98</u>
Well I.D.: <u>4"-6</u>	Well Diameter: <u>(2)</u> 3 4 6 8 <u>   </u>
Total Well Depth: <u>24.5</u>	Depth to Water: <u>7.76</u>
Depth to Free Product: <u>   </u>	Thickness of Free Product (feet): <u>   </u>
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): <u>(YSI)</u> HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
<input checked="" type="checkbox"/> 2"	0.16	5"	1.02
<input type="checkbox"/> 3"	0.37	6"	1.47
<input checked="" type="checkbox"/> 4"	0.65	Other	radius <sup>2</sup> * 0.163

Purge Method:  Bailer  
 Middleburg  
 Electric Submersible  
 Extraction Pump  
 Other:    

Sampling Method:  Bailer  
 Extraction Port  
 Other:    

$$\frac{2.6}{1 \text{ Case Volume (Gals.)}} \times 3 \text{ Specified Volumes} = 7.8 \text{ Gals. Calculated Volume}$$

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
8:40	76.2	7.0	1000	57.9	2.75	
8:47	76.0	6.6	820	7200	3.5	
8:47	75.8	6.5	800	7200	3.90	

Did well dewater? Yes  No  Gallons actually evacuated: 8

Sampling Time: 8:57 Sampling Date: 1/20

Sample I.D.: 4"-6 Laboratory: (Sequoia) Crosby

Analyzed for: (TPH-G BTEX MTBE) TPH-D Other:    

Equipment Blank I.D.: @ True Duplicate I.D.:    

Analyzed for: TPH-G BTEX MTBE TPH-D Other:    

D.O. (if req'd): Pre-purge:     mg/L Post-purge: 2.7 mg/L