ST0454
RE

CAMBRIA

May 31, 1998

Mr. Alex Perez
Shell Oil Products Company
P.O. Box 8080
Martinez, California 94553

Re: **Ground Water Monitoring Report - Second Quarter 1998**
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 1998 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 on April 2, 1998. Ground water samples were transported to Sequoia Analytical of Redwood City, California for laboratory analysis.

- Cambria Environmental Technology, Inc. (Cambria) evaluated water-level measurement data and prepared a ground water contour/chemical concentration map (Plate 2). Ground water flow direction varies from southerly to southeasterly, at approximate hydraulic gradients of 0.03 to 0.06.

- Wells MW-1, MW-2 and V-1 were ND for TPPH, BTEX, and MTBE. Well V-2 contained 62,000 ppb TPPH, and 6,800 ppb benzene. MTBE was not detected in Well V-2.

CAMBRIA
ENVIRONMENTAL
TECHNOLOGY, INC.
270 PERKINS STREET,
P.O. BOX 259
SONOMA,
CA 95476
PH: (707) 935-4850
FAX: (707) 935-6649

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 duplicate sample was prepared and analyzed for quality control purposes.

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

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

Sincerely,
Cambria Environmental Technology, Inc.

Thomas Magney
Project Geologist

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

Attachments:

Table 1. Well Concentrations

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

Appendix A

Blaine Tech Services Inc. - Ground Water Monitoring Report

cc: Mr. Tom Peacock, Alameda County Health Care Services Agency

TABLE 1

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

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
MW-1 (B-11)		**Top casing elevation (ft): 23.53**								
02-Aug-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	
05-Aug-96	8.76	14.77	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
17-Oct-96	9.88	13.65	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
08-Jan-97	6.82	16.71	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
07-Apr-97	7.89	15.64	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
02-Jul-97	8.71	14.82	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
24-Oct-97	9.26	14.27	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
09-Jan-98	7.94	15.59	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
02-Apr-98	7.21	16.32	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
MW-1 (DUP)										
05-Aug-96	NA	NA	NA	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
MW-2 (B-12)		**Top casing elevation (ft): 22.47**								
17-Jul-96	NA	NA	NA	<50	<0.50	0.69	<0.50	<0.50	<2.5	Water sample from Boring
05-Aug-96	8.35	14.12	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
17-Oct-96	9.32	13.15	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
08-Jan-97	6.80	15.67	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
07-Apr-97	7.81	14.66	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
02-Jul-97	8.27	14.20	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
24-Oct-97	9.12	13.35	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	

TABLE 1

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

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
09-Jan-98	7.41	15.06	0.00	<50	<0.50	<0.50	<0.50	<0.50	6.3	
02-Apr-98	6.59	15.88	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**								
17-Jul-96	NA	NA	NA	290000	34000	21000	9900	47000	<2500	Water sample from Boring
V-1		**Top casing elevation (ft): 23.26**								
02-Aug-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	
05-Aug-96	8.58	14.68	0.00	NA	NA	NA	NA	NA	NA	
17-Oct-96	10.02	13.24	0.00	NA	NA	NA	NA	NA	NA	
16-Jan-97	5.55	17.71	0.00	9500	1200	250	280	880	<50	
07-Apr-97	7.40	15.86	0.00	2200	42	<5.0	130	15	<25	
02-Jul-97	8.94	14.32	0.00	2600	340	5.8	49	12	74	MTBE by 8260: <4.0 ppb
24-Oct-97	9.43	13.83	0.00	57000	5200	2300	3600	16000	1900	MTBE by 8260: <200 ppb
09-Jan-98	6.81	16.45	0.00	23000	2400	1700	1300	2300	310	
02-Apr-98	4.58	18.68	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	

TABLE 1

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

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
V-1 (DUP)										
09-Jan-98	NA	NA	NA	24000	2500	1800	1400	2400	450	
02-Apr-98	NA	NA	NA	<50	<0.50	<0.50	<0.50	<0.50	<2.5	
V-2		**Top casing elevation (ft): 22.80**								
02-Aug-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	
05-Aug-96	7.94	14.86	0.00	NA	NA	NA	NA	NA	NA	
17-Oct-96	9.30	13.50	0.00	NA	NA	NA	NA	NA	NA	
08-Jan-97	5.82	16.98	0.00	69000	4800	2800	2700	13000	750	
07-Apr-97	7.10	15.70	0.00	90000	4400	1900	3300	14000	<500	
02-Jul-97	8.35	14.45	0.00	82000	5500	2700	3500	16000	530	MTBE by 8260: <100 ppb
24-Oct-97	10.03	12.77	0.00	7300	1100	97	230	180	91	MTBE by 8260: <12 ppb
09-Jan-98	6.94	15.86	0.00	40000	4100	1500	2500	9000	280	
02-Apr-98	5.35	17.45	0.00	62000	6800	2400	3400	14000	<250	
V-2 (DUP)										
07-Apr-97	NA	NA	NA	77000	4400	2000	3200	14000	<250	
02-Jul-97	NA	NA	NA	85000	5600	2800	3600	17000	520	MTBE by 8260: <100 ppb
24-Oct-97	NA	NA	NA	12000	1700	340	650	630	120	MTBE by 8260: <20 ppb

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

TABLE 1

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

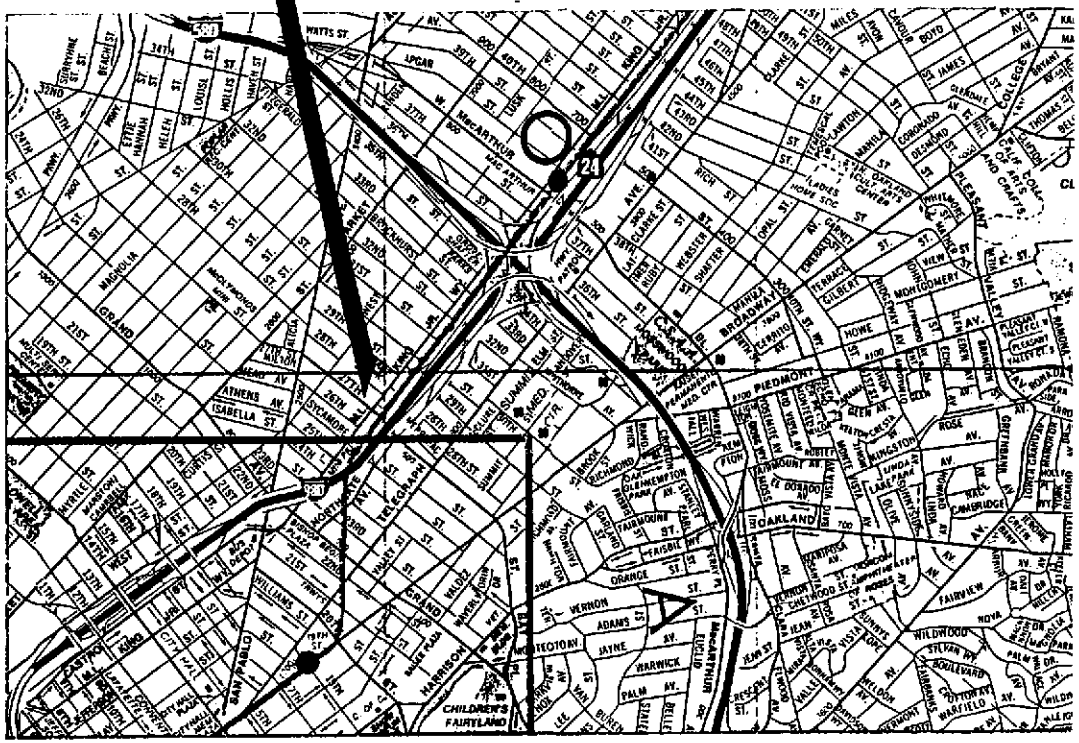
Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments

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

NA = Not analyzed or not available

<x = Not detected at detection limit of x

Subject Site



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BASE MAP: CALIFORNIA STATE AUTOMOBILE ASSOCIATION

PLATE	VICINITY MAP	CAMBRIA
1	Former Shell Service Station 2703 Martin Luther King Jr. Way Oakland, California	240-0781

Drawn By: DML	Date: 12-28-95	Approved By: _____	Date: 5-26-98

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.
- **17.45** Ground water elevation in feet above MSL
- **(6800)** Benzene concentration in ppb ND = Not Detected
- *(<250)* MTBE concentration in ppb ND =Not Detected

Notes: Monitoring performed 02-Apr-98.
Approximate hydraulic gradient = 0.03-0.06

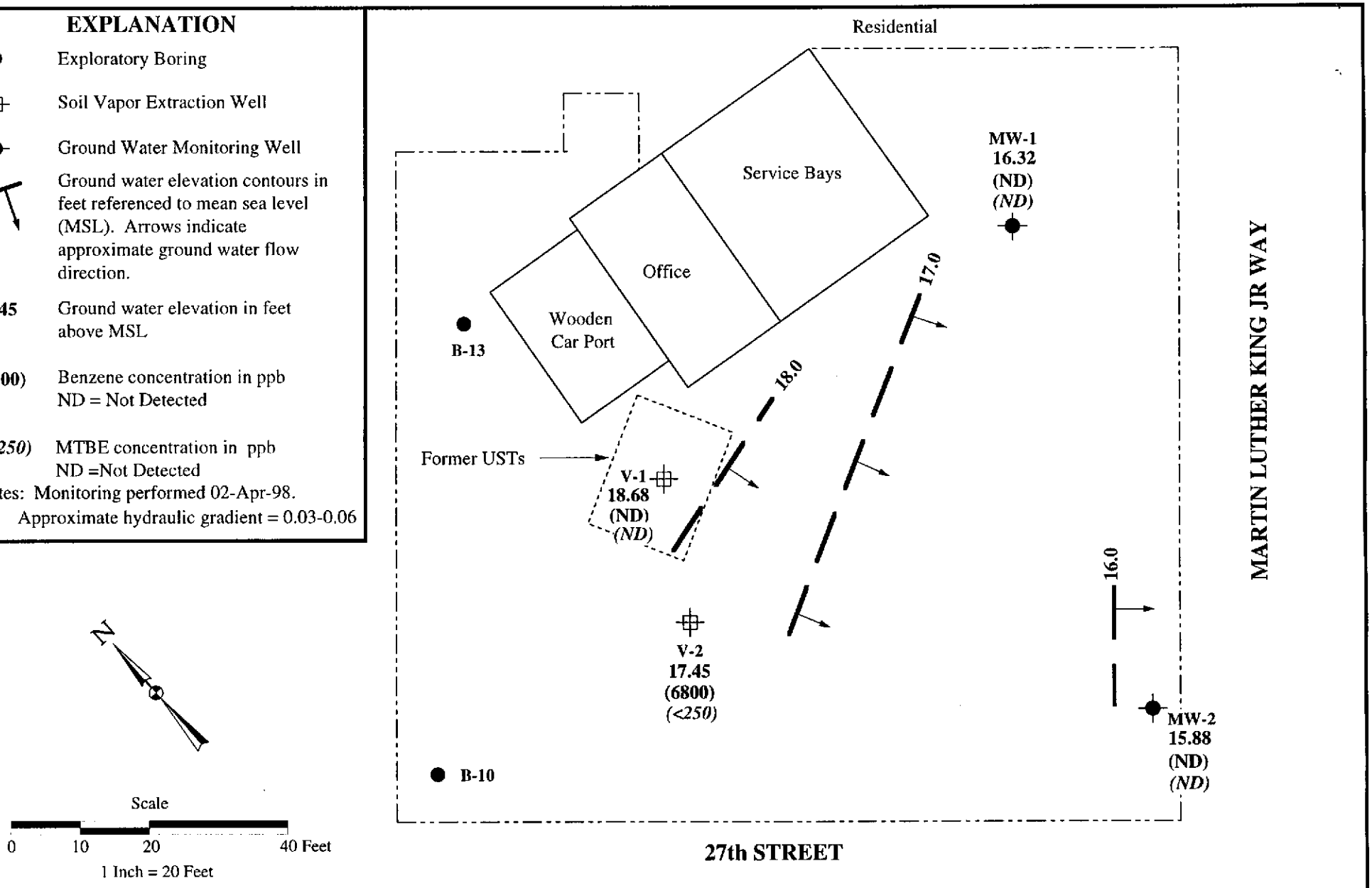

PLATE 2

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

CAMBRIA
240-0781

Drawn By: TNM	Date: 19-May-98	Approved By:	Date: 5-26-98

Appendix A

Blaine Tech Services, Inc.
Ground Water Monitoring Report

BLAINE
TECH SERVICES INC.

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

May 5, 1998

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

Attn: Alex Perez

RECEIVED
MAY - 7 1998
BY:

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

2nd Quarter 1998

Groundwater Monitoring Report 980402-K-4

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,

Deedee Keen for:
Francis Thie

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

cc: Cambria Environmental Technology, 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	04/02/98	TOC	–	NONE	–	–	7.21	20.21
MW-2	04/02/98	TOC	–	NONE	–	–	6.59	20.08
V-1*	04/02/98	TOC	–	NONE	–	–	4.58	13.07
V-2	04/02/98	TOC	ODOR	NONE	–	–	5.35	13.20

* Sample DUP was a duplicate sample taken from well V-1.

SHELL OIL PRODUCTS COMPANY *CHAIN OF CUSTODY RECORD*

WIC OR FACILITY ID: [illegible]

Date: [illegible]

Results to: O Consult. O Shell

Page [illegible] of [illegible]

Site Address: [illegible] Oakland

Consultant/Contact: [illegible]

Address: [illegible]

Phone: [illegible]

Shell Engineer: [illegible]

Lab: [illegible]

TURN AROUND TIME *Select one only*

O 24 hrs. O 48 hrs. ⦿ 15 days (Normal) O Other

CLASS TYPE/DETAIL TYPE *Select one only*

O Site Invest (4441) O Wtr Rem/Sys (4453)

O Soil Clas/Disp (4442) ⦿ G.W. Monitor (4461)

O Wtr Clas/Disp (4443) O Other

O Soil/Air Rem/Sys (4452)

Waste Protocol Number:

Start Time (military): [illegible]

Sampled by: [illegible]

UST Agency:

Analysis Required

SAMPLE MATRIX *Select one only*

⦿ Water O NAPL O Sludge O Sediment

O Soil O Vapor O Bedrock O Other

Field Sample ID	Sample Time (military)	Composite?	Acid pres.	Cnt.Sz.(40ml)	Cnt.Sz.-Other	Total No. Containers	TPH-P/MBTEX(8015/8021)	TPH-P/BTEX (8015/8021)	MBTEX (8021)	BTEX (8021)	TPH-P (8015m)	TPH-E (8015m)	TPH-xx (8015m)	TRPH (418.1)	MBTEX (8260)	VOCs (8260) (specify)	SVOCs (8270) (specify)	Lead (specify)	Test for Disposal	Other (specify)
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]													
[illegible]	[illegible]		[illegible]	[illegible]		[illegible]														
[illegible]	[illegible]		[illegible]	[illegible]		[illegible]	[illegible]													
[illegible]	[illegible]		[illegible]	[illegible]		[illegible]	[illegible]													
[illegible]			[illegible]	[illegible]		[illegible]	[illegible]													

LAB USE ONLY

Lab Tracking No.: 9804222

Sample Condition/Comments

01

02

03

04

05

Cooler Temperature: 5.0

Comments

Material Description

Relinquished By (signature):	Printed Name:	Date:	Received By (signature):	Printed Name:	Date:
[signature]	[illegible]	Date: [illegible] Time: [illegible]	[signature]	LANCE A [illegible]	Date: 4.3.98 Time: 11:11
[signature]	LANCE A [illegible]	Date: 4.3.98 Time:			Date: Time:
		Date: Time:	Terri Downs	DOWNS	Date: 4/3 Time: 1215

TRAN

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

SHELL CHAIN OF CUSTODY REVISED 12/97

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 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
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

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

Project: Shell 2703 Martin Luther Way

Enclosed are the results from samples received at Sequoia Analytical on April 3, 1998. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9804222 -01	LIQUID, MW-1	04/02/98	Purgeable TPH/BTEX/MTBE
9804222 -02	LIQUID, MW-2	04/02/98	Purgeable TPH/BTEX/MTBE
9804222 -03	LIQUID, V-1	04/02/98	Purgeable TPH/BTEX/MTBE
9804222 -04	LIQUID, V-2	04/02/98	Purgeable TPH/BTEX/MTBE
9804222 -05	LIQUID, Dup	04/02/98	Purgeable TPH/BTEX/MTBE

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, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Shell 2703 Martin Luther Way
Sample Descript: MW-1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9804222-01

Sampled: 04/02/98
Received: 04/03/98

Analyzed: 04/10/98
Reported: 04/30/98

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	112

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, (650) 364-9600, FAX (650) 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
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Blaine Tech Services	Client Proj. ID: Shell 2703 Martin Luther Way	Sampled: 04/02/98
1680 Rogers Avenue	Sample Descript: MW-2	Received: 04/03/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/10/98
Attention: Fran Thie	Lab Number: 9804222-02	Reported: 04/30/98

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	109

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Blaine Tech Services	Client Proj. ID: Shell 2703 Martin Luther Way	Sampled: 04/02/98
1680 Rogers Avenue	Sample Descript: V-1	Received: 04/03/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/10/98
Attention: Fran Thie	Lab Number: 9804222-03	Reported: 04/30/98

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	109

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Shell 2703 Martin Luther Way
Sample Descript: V-2
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9804222-04

Sampled: 04/02/98
Received: 04/03/98

Analyzed: 04/10/98
Reported: 04/30/98

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**5000**	**62000**
Methyl t-Butyl Ether	250	N.D.
Benzene	**50**	**6800**
Toluene	**50**	**2400**
Ethyl Benzene	**50**	**3400**
Xylenes (Total)	**50**	**14000**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	111

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, (650) 364-9600, FAX (650) 364-9233
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Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Shell 2703 Martin Luther Way
Sample Descript: Dup
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9804222-05

Sampled: 04/02/98
Received: 04/03/98

Analyzed: 04/10/98
Reported: 04/30/98

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	110

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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Blaine Tech Services, Inc.
1680 Rogers Ave.
San Jose, CA 95112
Attention: Fran Thie

Client Project ID: Shell 2703 Martin Luther Way
Matrix: Liquid
Work Order #: 9804222 -01-05

Reported: May 1, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Gas
QC Batch#:	701310393
Analy. Method:	EPA 8015M
Prep. Method:	N.A.
Analyst:	-
MS/MSD #:	BLK041098
Sample Conc.:	N.D.
Prepared Date:	4/10/98
Analyzed Date:	4/10/98
Instrument I.D.#:	-
Conc. Spiked:	1000 µg/L
Result:	932
MS % Recovery:	90.6
Dup. Result:	907
MSD % Recov.:	88.1
RPD:	2.7
RPD Limit:	0-25

LCS #:	LCS041098
Prepared Date:	4/10/98
Analyzed Date:	4/10/98
Instrument I.D.#:	-
Conc. Spiked:	1000 µg/L
LCS Result:	893.4
LCS % Recov.:	89.3

MS/MSD	53-146
LCS	79-127
Control Limits	

SEQUOIA ANALYTICAL
Elap #2245

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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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.).

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager