

SHELL OIL CORPORATION

QUARTERLY REPORT TO

THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

Date of Report: April 22, 1992

Service Station WIC Number: 204-5510-0303
Site Address (Number, Street): 5755 Broadway
City: Oakland 94618
County: Alameda

Actions in the past three months:

Collected 1st quarter ground water samples and submitted 1st quarter monitoring report.

Actions planned for next three months:

Submit 2nd quarter monitoring report.

Soil Contamination defined? Y\N N
Soil Clean-up in progress? Y\N N
Free-product plume defined? Y\N NA
Free-product cleanup in progress? Y\N NA
Dissolved constituent plume defined? Y\N N
Dissolved constituent cleanup in progress? Y\N N

Contractor: Weiss Associates, Emeryville, California.



92 APR 85 11 1:27

TRANSMITTAL LETTER**FROM:** J. Michael Asport

TO: Larry Seto
 Alameda Department of
 Environmental Health
 80 Swan Way, Room 200
 Oakland, CA 94621

VIA: X First Class Mail
 ___ Fax ___ pages
 ___ UPS (Surface)
 ___ Federal Express

SUBJECT: CALWATER reports for Shell Oil Company**JOB:**81-619,618,602

AS: ___ We discussed on the telephone today
 ___ You requested _____
 ___ We believe you may be interested
X Is required

WE ARE SENDING: X Enclosed
 ___ Under Separate Cover Via _____

Copies of 1st quarter CALWATER reports that were sent to the RWQCB for Shell sites in your jurisdiction.

FOR: ___ Your information
X Your use
 ___ Your review & comments
 ___ Return to you

PLEASE: X Keep this material
 ___ Return within 2 weeks
 ___ Acknowledge receipt

cc: Kurt Miller
 Shell Oil Company
 P.O. Box 4023
 Concord, CA 94524



92 MAY - 7 11 2:32

LOP 3611

TRANSMITTAL LETTER

FROM: Jeni Martin

DATE: April 29, 1992

TO: Barney Chan
Alameda County Department
of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621-1426

VIA: X First Class Mail
 ___ Fax ___ pages
 ___ UPS (Surface)
 ___ Federal Express
 ___ Courier

SUBJECT: Shell Service Station
WIC #204-5510-0303
5755 Broadway
Oakland, California

JOB: 81-619-01

AS: ___ We discussed on the telephone today
 ___ You requested _____
 ___ We believe you may be interested
 X Is required

WE ARE SENDING: X Enclosed
 ___ Under Separate Cover Via _____

1. Quarterly ground water monitoring report for the subject site

FOR: ___ Your information **PLEASE:** X Keep this material
 X Your use ___ Return within 2 weeks
 ___ Your review & comments ___ Acknowledge receipt
 ___ Return to you

MESSAGE:

Please call if you have any questions.

cc: Kurt Miller, Shell Oil Company, P.O. Box 5278, Concord, California 94520-9998
Lester Feldman, Regional Water Quality Control Board - San Francisco Bay
Region, 2101 Webster Street, Oakland, California 94612



April 29, 1992

Mr. Barney Chan
Alameda County Department of
Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621-1426

Re: Shell Service Station
WIC #204-5510-0303
5755 Broadway
Oakland, California 94606
WA Job #81-619-01

94618

Dear Mr. Chan:

This letter describes the recently completed and anticipated activities at the Shell service station referenced above (Figure 1). This status report satisfies the quarterly reporting requirements prescribed by California Administrative Code Title 23 Waters, Chapter 3, Subchapter 16, Article 5, Section 265.d. Included below are descriptions and results of activities performed in the first quarter 1992, and proposed work for the second quarter 1992.

First Quarter 1992 Activities

- EMCON Associates of San Jose, California measured ground water depths and collected water samples from the three site wells. EMCON's report describing these activities and the analytic results for ground water are included as Attachment A.
- Weiss Associates (WA) used EMCON's ground water depth measurements and ground water elevations to prepare a ground water elevation contour map (Figure 2).

Anticipated Second Quarter 1992 Activities

During the second quarter 1992 WA will submit a report presenting the results of ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results, a ground water elevation contour map and previous ground water elevation contour maps.

Mr. Barney Chan
April 29, 1992

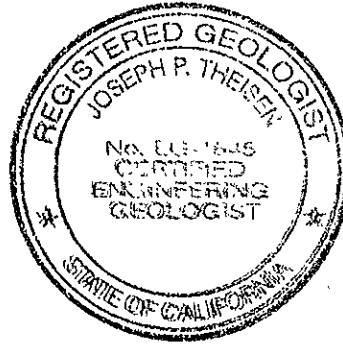
2

Weiss Associates



Please call if you have any questions.

Sincerely,
Weiss Associates



Jeni Martin

Jeni C. Martin
Staff Geologist

J P Theisen

Joseph P. Theisen, C.E.G.
Senior Hydrogeologist

JCM/JPT:fc

E:\ALLSHELL\600\619QMAP2.WP

Attachments: Figures
A - EMCON Associate's Ground Water Monitoring Report

cc: Kurt Miller, Shell Oil Company, P.O. Box 5278, Concord, California 94520-9998
Lester Feldman, Regional Water Quality Control Board - San Francisco Bay Region, 2101
Webster Street, Oakland, California 94612

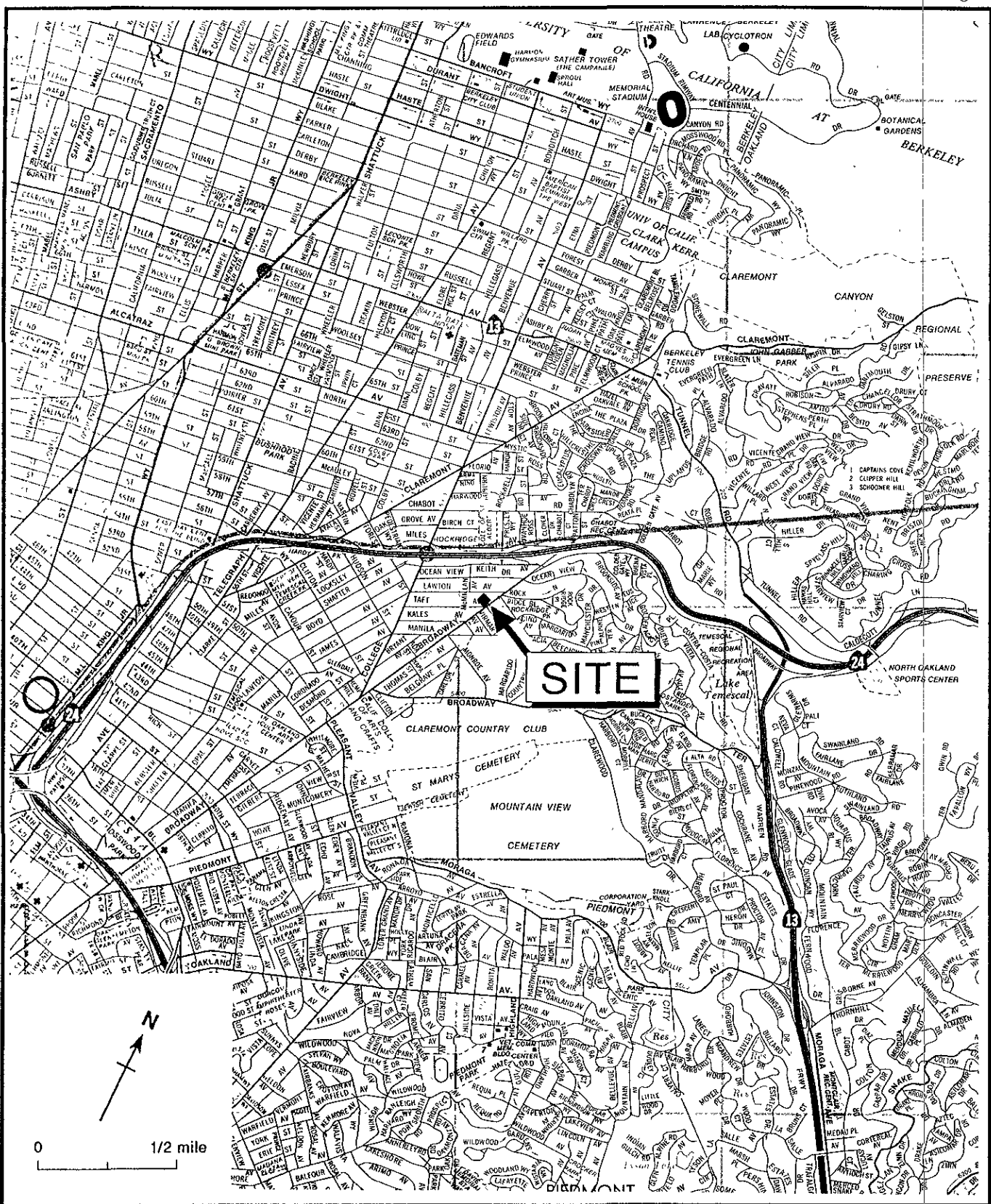


Figure 1. Site Location Map - Shell Service Station WIC #204-5510-0303, 5755 Broadway, Oakland, California

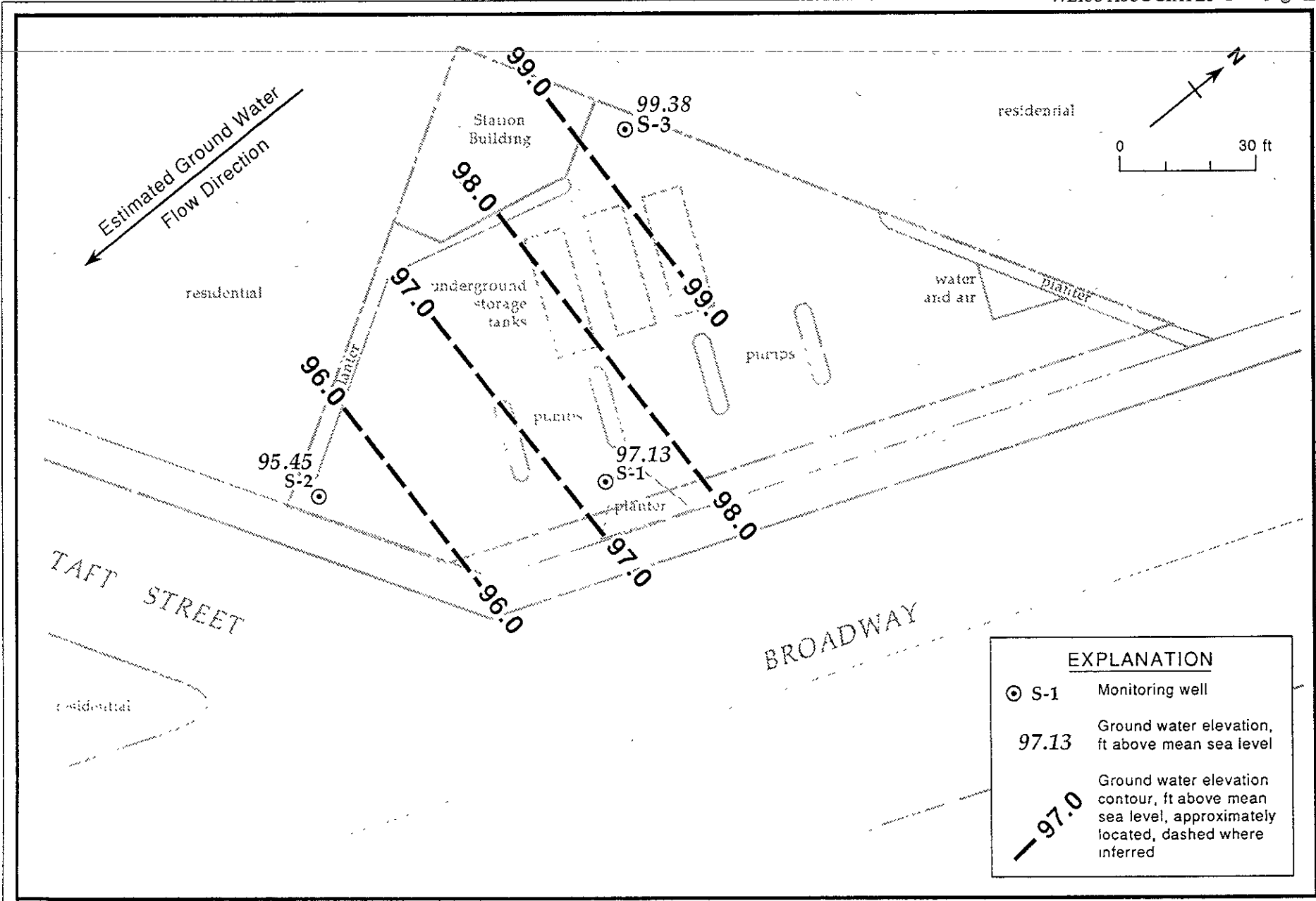


Figure 2. Ground Water Elevation Contours -March 13, 1992 - Shell Service Station WIC#204-5510-0303, 5755 Broadway, Oakland, California

ATTACHMENT A
GROUND WATER MONITORING REPORT AND ANALYTIC REPORT



EMCON
ASSOCIATES

Consultants in Wastes
Management and
Environmental Control

March 26, 1992
Project: G67-40.01
WIC#: 204-5510-0303

Mr. David Elias
Weiss Associates
5500 Shellmound Street
Emeryville, California 94608-2411

Re: First quarter 1992 ground-water monitoring report, Shell Oil
Company, 5755 Broadway, Oakland, California

Dear Mr. Elias:

This letter presents the results of the first quarter 1992 ground-water monitoring event for the Shell Oil Company (Shell) service station located at 5755 Broadway, Oakland, California. First quarter monitoring was conducted on March 13, 1992. The site is monitored quarterly.

GROUND-WATER LEVEL SURVEY

A water-level survey preceded the purging and sampling of the monitoring wells. The wells included in the survey are identified in figure 1 (supplied by Harding Lawson Associates). During the survey, wells S-1 through S-3 were measured for depth to water, floating product thickness, and total depth. Depth to water and floating product thickness were measured to the nearest 0.01 foot with an oil/water interface probe. No floating product was observed in any wells. Total depth was measured to the nearest 0.1 foot. Results of the first quarter water-level survey, and available data from four previous surveys, are summarized in table 1.

SAMPLING AND ANALYSIS

Ground-water samples were collected from wells S-1 through S-3 on March 13, 1992. Prior to sample collection, the wells were purged with a polyvinyl chloride (PVC) bailer. During the purging operation, ground water was monitored for pH, electrical conductivity, and temperature as a function of volume of water removed. All three wells were evacuated to dryness before three casing volumes were removed. The wells were allowed to recharge for up to 24 hours. Samples were collected as soon as the wells had recharged to a level sufficient for sample collection. Field measurements from first quarter monitoring, and available measurements from four previous monitoring events, are summarized in table 1. Purge water from the monitoring wells was contained in a 55-

G674001A.DOC



gallon drum. The drum was identified with a Shell-approved label and secured for on-site storage.

Ground water samples were collected with a Teflon® bailer, labeled, placed on ice, and transported to a Shell-approved and state-certified analytical laboratory for analysis. Shell chain-of-custody documents accompanied all samples to the laboratory.

All equipment that was placed down a well or that came in contact with ground water was steam cleaned on site with steaming hot deionized water prior to use at each well.

Quality control (QC) samples for first quarter monitoring included a trip blank (TB). All water samples collected during first quarter monitoring were analyzed for total petroleum hydrocarbons (TPH) as gasoline, and benzene, toluene, ethylbenzene, and total xylenes (BTEX).

ANALYTICAL RESULTS

Analytical results for the first quarter 1992 monitoring event, and available results from four previous monitoring events, are summarized in table 2. The original certified analytical report and a copy of the final chain-of-custody document are attached.


If you have any questions, please call.

Very truly yours,

EMCON Associates



David Larsen
Environmental Sampling Coordinator



Orrin Childs
Environmental Sampling Supervisor

DL/OC:dl

Attachments: Table 1 - Monitoring well field measurement data
Table 2 - Summary of analytical results
Figure 1 - Site map
Certified analytical report
Chain-of-custody document

Table 1
Monitoring Well Field Measurement Data
First Quarter 1992

Shell Station: 5755 Broadway
Oakland, California
WIC #: 204-5510-0303

Date: 03/26/92
Project Number: G67-40.01

Well Desig- nation	Water Level Field Date	TOC Elevation (ft-MSL)	Depth to Water (feet)	Ground- water Elevation (ft-MSL)	Total Well Depth (feet)	Floating Product Thickness (feet)	Water Sample Field Date	pH (std. units)	Electrical Conductivity (micromhos/cm)	Temperature (degrees F)	Turbidity (NTU)
S-1	10/17/90	100.0*	4.09	95.91	NR	NR	10/17/90	NR	NR	NR	NR
S-1	01/25/91	100.0*	3.88	96.12	NR	NR	01/25/91	NR	NR	NR	NR
S-1	06/03/91	100.0*	3.51	96.49	NR	NR	06/03/91	NR	NR	NR	NR
S-1	08/30/91	100.0*	4.24	95.76	NR	NR	08/30/91	NR	NR	NR	NR
S-1	03/13/92	100.0*	2.87	97.13	11.8	ND	03/13/92	7.38	922	63.2	>200
S-2	10/17/90	98.92	4.57	94.35	NR	NR	10/17/90	NR	NR	NR	NR
S-2	01/25/91	98.92	4.52	94.40	NR	NR	01/25/91	NR	NR	NR	NR
S-2	06/03/91	98.92	4.02	94.90	NR	NR	06/03/91	NR	NR	NR	NR
S-2	08/30/91	98.92	4.70	94.22	NR	NR	08/30/91	NR	NR	NR	NR
S-2	03/13/92	98.92	3.47	95.45	9.4	ND	03/13/92	7.18	1140	62.3	>200
S-3	10/17/90	101.67	4.29	97.38	NR	NR	10/17/90	NR	NR	NR	NR
S-3	01/25/91	101.67	3.84	97.83	NR	NR	01/25/91	NR	NR	NR	NR
S-3	06/03/91	101.67	3.25	98.42	NR	NR	06/03/91	NR	NR	NR	NR
S-3	08/03/91	101.67	4.73	96.94	NR	NR	08/30/91	NR	NR	NR	NR
S-3	03/13/92	101.67	2.29	99.38	9.5	ND	03/13/92	7.26	1385	63.2	>200

TOC = top of casing

ft-MSL = elevation in feet, relative to mean sea level

std. units = standard pH units

micromhos/cm = micromhos per centimeter

degrees F = degrees Fahrenheit

NTU = nephelometric turbidity units

* = Site not surveyed relative to mean sea level. S-1 was assigned an elevation of 100.00 ft.; S-2 and S-3 are relative to S-1.

NR = not reported; data not available

ND = none detected

Table 2
 Summary of Analytical Results
 First Quarter 1992
 milligrams per liter (mg/l) or parts per million (ppm)

Shell Station: 5755 Broadway
 Oakland, California
 WIC #: 204-5510-0303

Date: 03/26/92
 Project Number: G67-40.01

*This is not
 the complete
 summary*

*.003 ppm
 3 ppb*

Sample Designation	Water Sample Field Date	TPH-g (mg/l)	Benzene (mg/l)	Toluene (mg/l)	Ethylbenzene (mg/l)	Total Xylenes (mg/l)
	<i>8/10/90</i>					
	<i>12/13/89</i>					
S-1	10/17/90	<0.03	0.00099	<0.0003	<0.0003	<0.0003
S-1	01/25/91	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-1	06/03/91	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-1	08/30/91	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-1	03/13/92	<0.03	0.00052	<0.0003	<0.0003	<0.0003
S-2	10/17/90	0.32	0.044	0.00075	0.0079	0.0046
S-2	01/25/91	0.45	0.14	0.0018	0.0062	0.015
S-2	06/03/91	0.49	0.15	0.0027	0.0082	0.007
S-2	08/30/91	0.07	0.00037	<0.0003	<0.0003	<0.0003
S-2	03/13/92	1.3	0.21	0.0057	0.034	0.079
S-3	10/17/90	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-3	01/25/91	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-3	06/03/91	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-3	08/30/91	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-3	03/13/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
TB	03/13/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003

TPH-g = total petroleum hydrocarbons as gasoline



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: Dave Larsen

Project: 5755 Broadway, Oakland, Shell

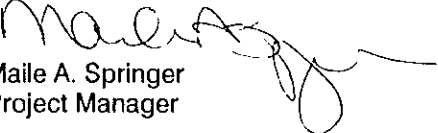
Enclosed are the results from 4 water samples received at Sequoia Analytical on March 17, 1992. The requested analyses are listed below:

2032814	Water, S-3	3/13/92	EPA 5030/8015/8020
2032815	Water, S-1	3/13/92	EPA 5030/8015/8020
2032816	Water, S-2	3/13/92	EPA 5030/8015/8020
2032817	Water, Travel Blank	3/13/92	EPA 5030/8015/8020

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


Maile A. Springer
Project Manager

EMCON ASSOCIATES

MAR 24 1992

RECEIVED



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates	Client Project ID: 5755 Broadway, Oakland, Shell	Sampled: Mar 13, 1992
1938 Junction Ave.	Matrix Descript: Water	Received: Mar 17, 1992
San Jose, CA 95131	Analysis Method: EPA 5030/8015/8020	Analyzed: 3/17-18/92
Attention: Dave Larsen	First Sample #: 203-2814	Reported: Mar 20, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P.	Benzene	Toluene	Ethyl Benzene	Xylenes
		Hydrocarbons				
		$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)
203-2814	S-3	N.D.	N.D.	N.D.	N.D.	N.D.
203-2815	S-1	N.D.	0.52	N.D.	N.D.	N.D.
203-2817	Travel Blank	N.D.	N.D.	N.D.	N.D.	N.D.

Detection Limits:	30	0.30	0.30	0.30	0.30
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Maile A. Springer
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: Dave Larsen

Client Project ID: 5755 Broadway, Oakland, Shell
Matrix Descript: Water
Analysis Method: EPA 5030/8015/8020
First Sample #: 203-2816

Sampled: Mar 13, 1992
Received: Mar 17, 1992
Analyzed: Mar 18, 1992
Reported: Mar 20, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P.	Benzene	Toluene	Ethyl	Xylenes
		Hydrocarbons			Benzene	
		$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)	$\mu\text{g/L}$ (ppb)
203-2816	S-2	1,300	210	5.7	34	79

Detection Limits:

3,300

3.0

3.0

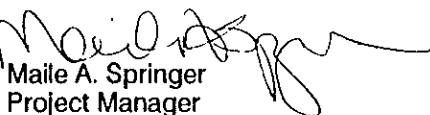
3.0

3.0

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL


Maile A. Springer
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: Dave Larsen

Client Project ID: 5755 Broadway, Oakland, Shell

QC Sample Group: 2032814 - 15, 17

Reported: Mar 20, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
---------	---------	---------	---------------	---------

Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	M.Nipp	M.Nipp	M.Nipp	M.Nipp
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Mar 17, 1992	Mar 17, 1992	Mar 17, 1992	Mar 17, 1992
QC Sample #:	GBLK031792	GBLK031792	GBLK031792	GBLK031792

Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	30
Conc. Matrix Spike:	8.9	8.8	8.8	27
Matrix Spike % Recovery:	89	88	88	90
Conc. Matrix Spike Dup.:	9.7	9.7	9.4	29
Matrix Spike Duplicate % Recovery:	97	97	94	97
Relative % Difference:	8.6	9.7	6.6	7.1

SEQUOIA ANALYTICAL

Maile A. Springer
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$

2032814.EEE <3>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131

Client Project ID: 5755 Broadway, Oakland, Shell

Attention: Dave Larsen

QC Sample Group: 203-2816

Reported: Mar 20, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
---------	---------	---------	---------------	---------

Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	M.Nipp	M.Nipp	M.Nipp	M.Nipp
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Mar 18, 1992	Mar 18, 1992	Mar 18, 1992	Mar 18, 1992
QC Sample #:	GBLK031892	GBLK031892	GBLK031892	GBLK031892

Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	30
Conc. Matrix Spike:	10	10	10	30
Matrix Spike % Recovery:	100	100	100	100
Conc. Matrix Spike Dup.:	10	10	10	30
Matrix Spike Duplicate % Recovery:	100	100	100	100
Relative % Difference:	0.0	0.0	0.0	0.0

SEQUOIA ANALYTICAL

Maile A. Springer
Maile A. Springer
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



Site Address: 5755 Broadway
Oakland, CA

Analysis Required **COPY** LAB: SEQUOIA

WIC#: 204-5510-0303

Shell Engineer: Kurt Miller
Phone No. (510) 685-3853
Fax #: 685-3853

Consultant Name & Address: EMCON Assoc.
1938 Junction Ave.
San Jose, CA 95131

Consultant Contact: David Larsen
Phone No. (408) 453-2269
Fax #: 453-2269

Comments: TPH-gasoline/BTEX - 3-40 ml HCL bats/well

Sampled By: *Bart Stafford*
Printed Name: Bart Stafford

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
Quarterly Monitoring <input checked="" type="checkbox"/>	5461	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	5441	48 hours <input type="checkbox"/>
Soil for disposal <input type="checkbox"/>	5442	15 days <input checked="" type="checkbox"/> (Normal)
Water for disposal <input type="checkbox"/>	5443	Other <input type="checkbox"/>
Air Sample- Sys O&M <input type="checkbox"/>	5452	NOTE: Notify Lab as soon as possible of 24/48 hrs. TAT.
Water Sample - Sys O&M <input type="checkbox"/>	5453	
Other <input type="checkbox"/>		

Sample ID	Date	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	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-3	3-13-92		X		3	X	X				40 ml	HCL	No	2032814	
S-1	3-13-92		X		3	X	X				↓	↓	↓	15	
S-2	3-13-92		X		3	X	X				↓	↓	↓	16	
TB	3-13-92		X		3	X	X				↓	↓	↓	17	

Relinquished By (signature): <i>Bart Stafford</i>	Printed name: Bart Stafford	Date: 3-16-92	Received (signature): <i>D Larsen</i>	Printed name: D Larsen	Date: 3-16-92
Relinquished By (signature): <i>Alex Savva</i>	Printed name: Alex Savva	Date: 3-17-92	Received (signature): <i>Alex Savva</i>	Printed name: Alex Savva	Date: 3-17-92
Relinquished By (signature): <i>Alex Savva</i>	Printed name: Alex Savva	Date: 3-17-92	Received (signature):	Printed name:	Date:

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