Weiss Associates *Environmental and Geologic Services*

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

June 30, 1996

Madulla Logan
Alameda Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: **Second Quarter 1996**
Shell Service Station
WIC #204-5510-0600
4255 MacArthur Blvd.
Oakland, California
WA Job #81-0757-206

Dear Ms. Logan:

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.

Second Quarter 1996 Activities:

SEPARATE-PHASE HYDROCARBON REMOVAL SUMMARY	
Separate-Phase Hydrocarbons Removed This Quarter (lbs)	***Cumulative Pounds Removed***
0.98	12.1

- Since the Third Quarter 1994, about 12.1 lbs. of SPH have been removed from the wells (Table 1).
- BTS measured depths to ground water and collected ground water samples from the site wells (Figures 1 and 2). The BTS report describing these activities is included as Attachment A.
- Weiss Associates (WA) compiled the ground water elevation and analytic data (Tables 2 and 3, respectively) and prepared a ground water elevation contour, and benzene concentrations in ground water map (Figure 2).

Anticipated Third Quarter 1996 Activities:

- BTS will remove separate-phase hydrocarbons from the wells as needed.
- WA will submit a report presenting the results of the third quarter 1996 ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results, a ground water elevation contour map, a benzene concentration in ground water map and a table presenting separate-phase removal data.

Please call if you have any questions.

Sincerely,
Weiss Associates

Grady S. Glasser
Technical Assistant

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

Attachments: A - Ground Water Monitoring Report and Analytic Report

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

GSG/JWC:all
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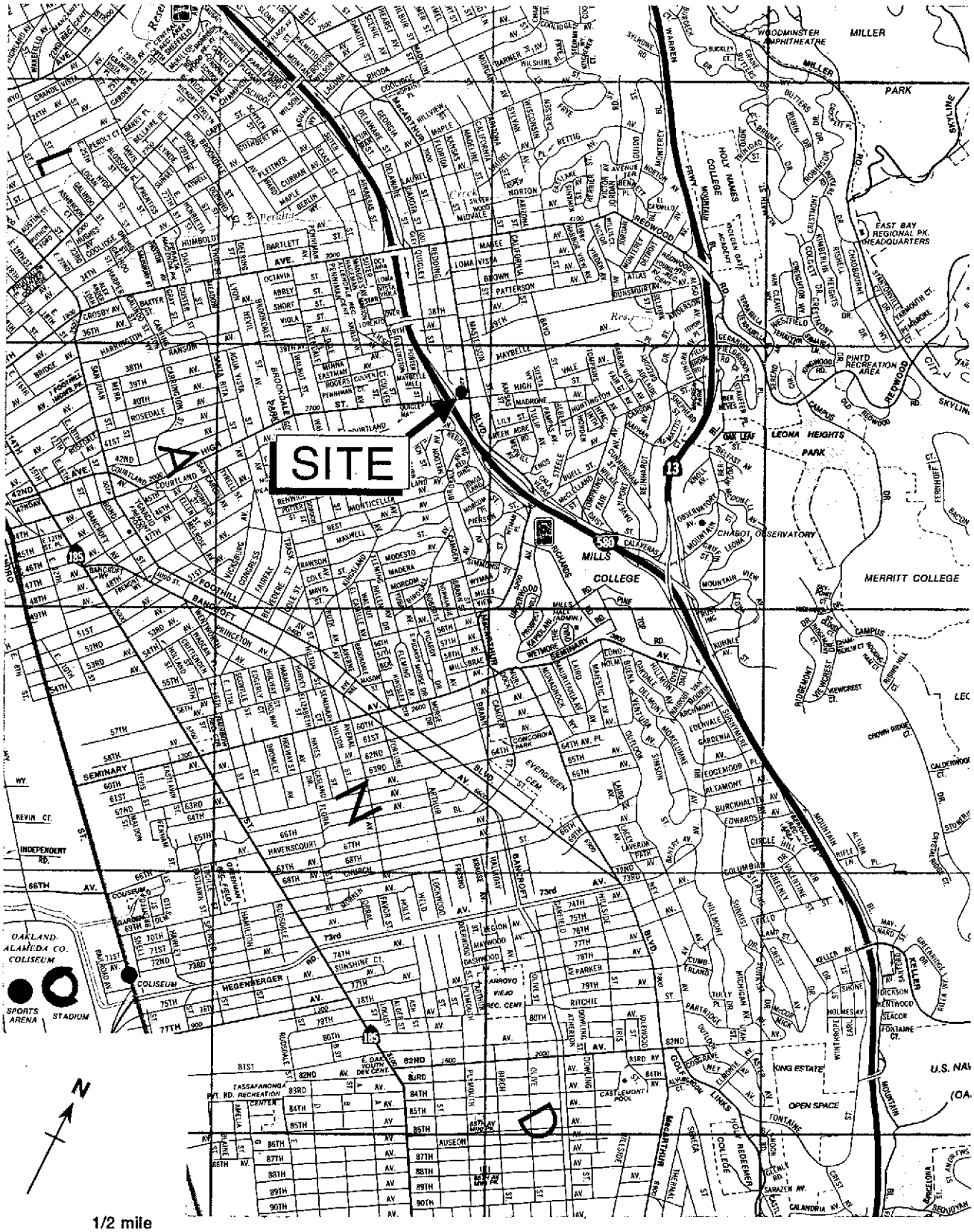

Figure 1. Site Location Map - Shell Service Station WIC# 204-5510-0600, 4255 MacArthur Boulevard, Oakland, California

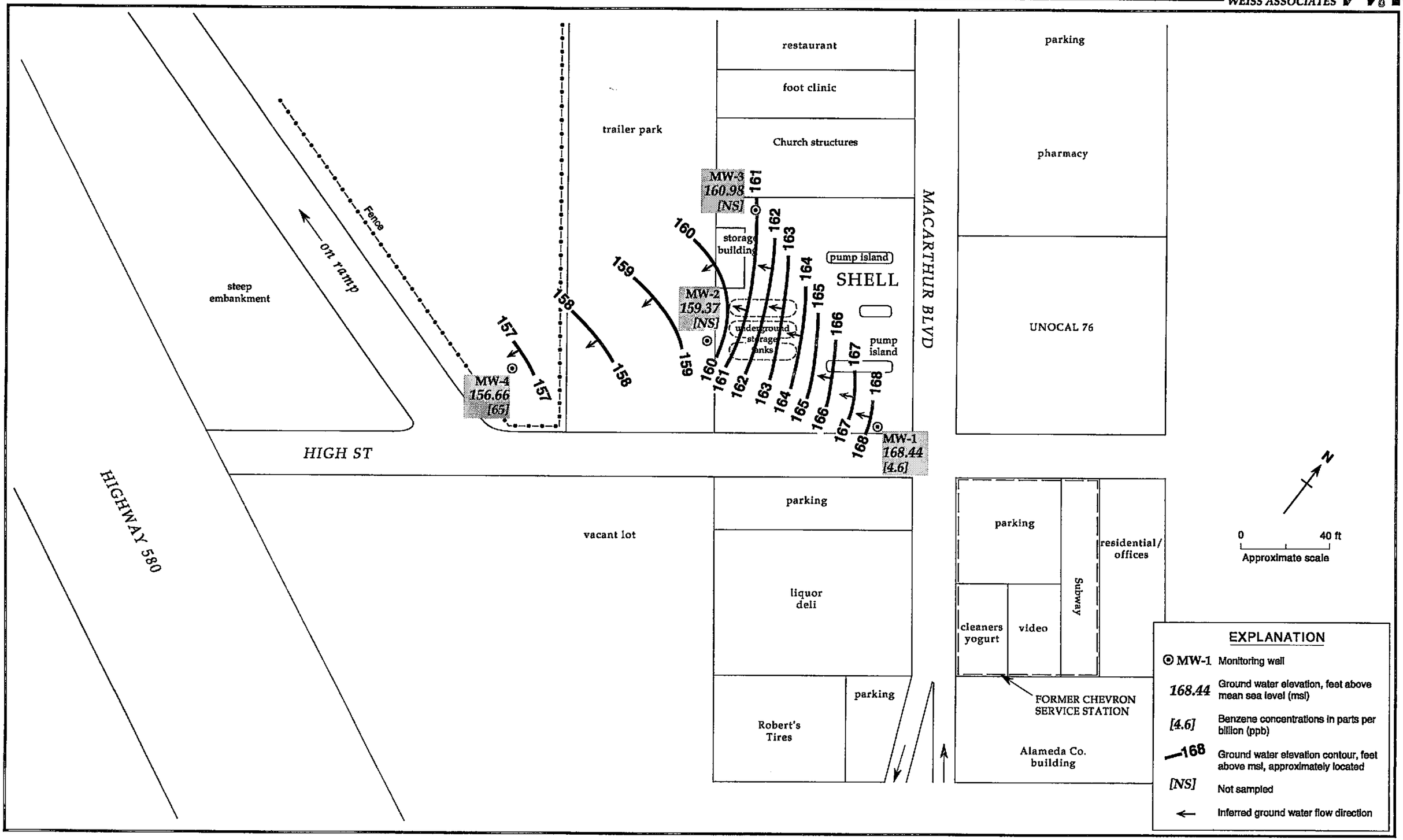

Figure 2. Montoring Well Locations, Ground Water Elevation Contours, and Benzene Concentrations in Ground Water - April 25, 1996 - Shell Service Station WIC #204-5510-0600, 4255 MacArthur Boulevard, Oakland, California

Table 1. Separate-Phase Hydrocarbon Removal - Shell Service Station WIC #204-5510-0600, 4255 MacArthur Blvd., Oakland, California

Well ID	Date	Separate-Phase Hydrocarbon Thickness (Ft)	Mass of Separate-Phase Hydrocarbons Removed (lbs)[a]	Cumulative Mass of Hydrocarbons Removed (lbs)
MW-2	11/17/93	0.0	0.0	0.0
	01/20/94	0.0	0.0	0.0
	04/25/94	0.0	0.0	0.0
	07/07/94	0.0	0.0	0.0
	01/13/95	0.0	0.0	0.0
	04/12/95	0.0	0.0	0.0
	08/10/95	0.52	5.98	5.98
	10/18/95	0.13	0.0	5.98
	01/17/96	0.17	1.74	7.72
	04/25/96	**0.03**	**0.65**	**8.37**
MW-3	11/17/93	0.0	0.0	0.0
	01/20/94	0.0	0.0	0.0
	04/25/94	0.0	0.0	0.0
	07/07/94	0.0	0.0	0.0
	01/13/95	---	0.02	0.02
	04/12/95	---	0.02	0.04
	08/10/95	0.06	0.69	0.73
	10/18/95	0.05	0.0	0.73
	01/17/96	0.24	2.62	3.35
	04/25/96	**0.02**	**0.33**	**3.68**
TOTAL HYDROCARBONS REMOVED				**12.05**

Notes:

--- = not measured

a = Mass of SPH in 10" boring and 4" well estimated by following factor: 1 ft of SPH = 11.5 lbs of SPH.

Table 2. Ground Water Elevations - Shell Service Station WIC #204-5510-0600, 4255 MacArthur Blvd., Oakland, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Separate-phase Hydrocarbons	Ground Water Elevation (ft above msl)
MW-1	11/17/93	175.79	8.59	---	167.20
	01/20/94		8.22	---	167.57
	04/25/94		7.63	---	168.16
	07/07/94		8.31	---	167.48
	10/27/94		8.84	---	166.95
	11/17/94		7.60	---	168.19
	11/28/94		7.56	---	168.23
	01/13/95		7.11	---	168.68
	04/12/95		7.08	---	168.71
	07/25/95		7.73	---	168.06
	10/18/95		8.42	---	167.37
	01/17/96		7.83	---	167.96
	04/25/96		**7.35**	**---**	**168.44**
MW-2	11/17/93	170.91	12.31	---	158.60
	01/20/94		11.48	---	159.43
	04/25/94		10.84	---	160.07
	07/07/94		11.89	---	159.02
	10/27/94		12.89	---	158.02
	11/17/94		9.11	---	161.80
	11/28/94		9.22	---	161.69
	01/13/95		8.10	---	162.81
	04/12/95		10.12	---	160.79
	07/25/95		11.53	0.52	159.80
	10/18/95		14.02	0.13	156.99
	01/17/96		10.27	0.17	160.78
	04/25/96		**11.68**	**0.03**	**159.25**
MW-3	11/17/93	174.61	15.40	---	159.21
	01/20/94		14.61	---	160.00
	04/25/94		13.12	---	161.49
	07/07/94		14.54	0.02	160.07
	10/27/94		15.62	0.05	159.03
	11/17/94		13.83	---	160.78
	11/28/94		14.02	---	160.59
	01/13/95		12.13	---	162.48
	04/12/95		12.96	---	161.65
	07/25/95		14.28	0.06	160.38
	10/18/95		15.88	0.05	158.77
	01/17/96		13.86	0.24	160.94
	04/25/96		**13.82**	**0.02**	**160.81**

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Table 2. Ground Water Elevations - Shell Service Station WIC #204-5510-0600, 4255 MacArthur Blvd., Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Separate-phase Hydrocarbons	Ground Water Elevation (ft above msl)
MW-4	11/17/94	164.06	6.62	---	157.44
	11/28/94		6.11	---	157.95
	01/13/95		6.05	---	158.01
	04/12/95		6.31	---	157.75
	07/25/95		7.36	---	156.70
	10/18/95		8.54	---	155.52
	01/17/96		8.48	---	155.58
	04/25/96		**7.40**	**---**	**156.66**

Notes:

a = When separate-phase hydrocarbons are present, ground water elevation corrected by adding 80% of the separate-phase hydrocarbon thickness measured in the well

--- = Data not available

Table 3. Analytic Results for Ground Water, Shell Service Station WIC #204-5510-0600, 4255 MacArthur Blvd., Oakland, California

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	MTBE	B	E	T	X
			← parts per billion (µg/L) →					
MW-1	11/17/93	8.59	410	---	21	7.9	11	47
	01/20/94	8.22	1,200	---	180	48	19	47
	04/25/94	7.63	3,100	---	610	130	<10	27
	07/07/94	8.31	2,400	---	1,000	250	10	20
	10/27/94	8.84	2,200	---	500	72	3.1	1.8
	01/13/95	7.11	570	---	75	6.7	2.5	11
	04/12/95	7.08	1,800	---	480	79	<5.0	<5.0
	07/25/95	7.73	120	---	15	2.1	1.1	2.9
	07/25/95[dup]	7.73	300	---	88	11	2.4	6.5
	10/18/95	8.42	130	---	9.5	1.3	0.8	1.7
	10/18/95[dup]	8.42	120	---	11	1.4	0.8	1.8
	01/17/96	7.83	250	---	22	1.6	0.9	2.3
	04/25/95	**7.35**	**<50**	**500[c]**	**4.6**	**<0.5**	**<0.5**	**0.60**
MW-2	11/17/93	12.31	31,000	---	9,400	1,000	4,600	3,900
	01/20/94	11.48	40,000	---	6,900	780	5,600	4,100
	01/20/94[dup]	11.48	41,000	---	7,200	900	6,200	4,800
	04/25/94	10.84	60,000	---	9,300	1,400	6,100	6,200
	07/07/94	11.89	280,000[a]	---	40,000	8,100	26,000	32,000
	07/07/94[dup]	11.89	53,000	---	13,000	2,000	6,600	8,400
	10/27/94	12.89	130,000	---	14,000	2,400	12,000	13,000
	10/27/94[dup]	12.89	390,000	---	8,800	1,700	7,000	11,000
	01/13/95	8.10	75,000	---	5,900	3,100	12,000	17,000
	04/12/95	10.12	100,000	---	8,500	2,400	11,000	12,000
	04/12/95[dup]	10.12	80,000	---	4,200	2,500	9,300	12,000
	08/10/95[SPH]	11.53	---	---	---	---	---	---
	10/18/95[SPH]	14.02	---	---	---	---	---	---
	01/17/96[SPH]	10.27	---	---	---	---	---	---
	04/25/96[SPH]	**11.68**	**—**	**—**	**—**	**—**	**—**	**—**
MW-3	11/17/93	15.40	18,000	---	5,400	720	660	2,200
	01/20/94	14.61	55,000	---	13,000	2,200	2,600	6,500
	04/25/94	13.12	96,000	---	11,000	3,100	1,600	9,900
	04/25/94[dup]	13.12	78,000	---	12,000	2,600	1,900	7,300
	07/07/94[SPH]	14.54	—	---	---	---	---	---

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Weiss Associates

Table 3. Analytic Results for Ground Water, Shell Service Station WIC #204-5510-0600, 4255 MacArthur Boulevard, Oakland, California (continued)

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	MTBE	B	E	T	X
			← parts per billion (µg/L) →					
	10/27/94[SPH]	15.62	---	---	---	---	---	---
	01/13/95	12.13	180,000	---	3,200	1,700	2,700	5,200
	01/13/95[dup]	12.13	23,000	---	4,000	960	690	3,000
	04/12/95	12.96	56,000	---	8,700	2,100	1,500	6,300
	08/10/95[SPH]	14.28	---	---	---	---	---	---
	10/18/95[SPH]	15.88	---	---	---	---	---	---
	01/17/96[SPH]	13.86	---	---	---	---	---	---
	04/25/96[SPH]	**13.82**	**---**	**---**	**---**	**---**	**---**	**---**
MW-4	11/28/94	6.11	2,900	---	200	76	17	260
	01/13/95	6.05	1,900	---	130	13	5.6	40
	04/14/95	6.31	680	---	150	10	<2.0	13
	07/25/95	7.36	340	---	100	8.8	0.8	3.0
	10/18/95	8.54	150	---	31	3.5	<0.5	0.8
	01/17/96	8.48	290	---	14	1.8	<0.5	0.8
	04/25/96	**7.40**	**<500**	**1,700**	**65**	**<5**	**<5**	**<5**
	04/25/96[dup]	**7.40**	**<500**	**1,500**	**66**	**8.7**	**<5**	**<5**
Trip Blank	01/20/94		<50		<0.5	<0.5	<0.5	<0.5
	04/25/94		<50		<0.5	<0.5	<0.5	<0.5
	07/07/94		<50		<0.5	<0.5	<0.5	<0.5
	10/27/94		<50		<0.5	<0.5	<0.5	<0.5
	01/13/95		<50		<0.5	<0.5	<0.5	<0.5
	04/12/95		<50		<0.5	<0.5	<0.5	0.89
	07/25/95		<50		<0.5	<0.5	<0.5	<0.5
	10/18/95		<50		<0.5	<0.5	<0.5	<0.5
DTSC MCLs			NE		1	680	100[b]	1,750

Table 2. Analytic Results for Ground Water, Shell Service Station WIC #204-5510-0600, 4255 MacArthur Blvd., Oakland, California (continued)

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
MTBE = Methyl-t-butyl-ether by EPA Method 8020
B = Benzene by EPA Method 8020
E = Ethylbenzene by EPA Method 8020
T = Toluene by EPA Method 8020
X = Xylenes by EPA Method 8020
POG = Non-polar Petroleum oil and grease by APHA Method 5520 B/F
SPH = Separate-phase hydrocarbons present, well not sampled
NE = Not established
DTSC MCLs = California Department of Toxic Substances Control maximum contaminant levels for drinking water
— = Not analyzed
<n = Not detected at detection limits of n ppb
dup = Duplicate sample

Notes:

a = Ground water surface had a sheen when sampled.
b = DTSC recommended action level; MCL not established
c = MTBE value is estimated by Sequoia Analytical of Redwood City, California

ATTACHMENT A

GROUND WATER MONITORING REPORT AND ANALYTIC REPORT

BLAINE
TECH SERVICES INC.

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

May 10, 1996

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

Attn: R. Jeff Granberry

Shell WIC #204-5510-0600
4255 MacArthur Blvd.
Oakland, California

2nd Quarter 1996

Quarterly Groundwater Monitoring Report 960425-W-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)
MW-1	4/25/96	TOC	–	NONE	--	–	7.35	23.28
MW-2	4/25/96	TOC	FREE PRODUCT	11.65	0.03	400	11.68	–
MW-3	4/25/96	TOC	FREE PRODUCT	13.80	0.02	200	13.82	–
MW-4 *	4/25/96	TOC	ODOR	NONE	--	–	7.40	30.25

* Sample DUP was a duplicate sample taken from well MW-4.

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 960425-W2

Date: 4-25-96
Page 1 of 1

Site Address:	4255 MacArthur Blvd., Oakland
WIC#:	204-5510-0600
Shell Engineer:	R. Jeff Granberry — Phone No.: (510) 675-6168, Fax #: 675-6160
Consultant Name & Address:	Blaine Tech Services, 985 Timothy Dr., San Jose, CA 95133
Consultant Contact:	Jim Keller — Phone No.: (408) 995-5535, Fax #: 293-8773
Comments:	
Sampled by:	[signature]
Printed Name:	William R Jones

LAB: SGQ

9604I61

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
Quarterly Monitoring [X]	5461	24 hours [ ]
Site Investigation [ ]	5441	48 hours [ ]
Soil Classify/Disposal [ ]	5442	16 days [X] (Normal)
Water Classify/Disposal [ ]	5443	Other [ ]
Soil/Air Rem. or Sys. O & M [ ]	5452	NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.
Water Rem. or Sys. O & M [ ]	5453	
Other [ ]		

Analysis Required

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	MTBE		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
MW-1	4/25/96			X		3						X	X							
MW-4	↓			X		3						X	X							
EB	↓			X		3						X	X							
DUP	↓			X		3						X	X							

Relinquished By (signature):	Printed Name:	Date/Time	Received (signature):	Printed Name:	Date/Time
[signature]	William R Jones	Date: 4-26 Time: 945	[signature]	JOHN HOWE	Date: 4-26-96 Time: 7:45
[signature]	JOHN HOWE	Date: 4-26-96 Time: 11:11	[signature]		Date: Time:
		Date: Time:	[signature]	L Krause	Date: 4/26/96 Time: 1111

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

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 960425-W2

Enclosed are the results from samples received at Sequoia Analytical on April 26, 1996. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9604I61 -01	LIQUID, MW1	04/25/96	TPGBMW Purgeable TPH/BTEX
9604I61 -02	LIQUID, MW4	04/25/96	TPGBMW Purgeable TPH/BTEX
9604I61 -03	LIQUID, EB	04/25/96	TPGBMW Purgeable TPH/BTEX
9604I61 -04	LIQUID, DUP	04/25/96	TPGBMW Purgeable TPH/BTEX

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

aine Technical Services
35 Timothy Drive
an Jose, CA 95133

tention: Jim Keller

Client Proj. ID: Shell Oakland 960425-W2
Sample Descript: MW1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9604I61-01

Sampled: 04/25/96
Received: 04/26/96

Analyzed: 05/01/96
Reported: 05/06/96

Batch Number: GC050196BTEX17A
trument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

nalyte	Detection Limit ug/L	Sample Results ug/L
PH as Gas	50	N.D.
ethyl t-Butyl Ether	**2.5**	**500 J**
enzene	**0.50**	**4.6**
oluene	0.50	N.D.
hyl Benzene	0.50	N.D.
ylenes (Total)	**0.50**	**0.60**
hromatogram Pattern:		

urrogates	Control Limits %		% Recovery
ifluorotoluene	70	130	95

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

QUOIA ANALYTICAL - ELAP #1210

gy Penner
ect 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 960425-W2	Sampled: 04/25/96
985 Timothy Drive	Sample Descript: MW4	Received: 04/26/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/02/96
Attention: Jim Keller	Lab Number: 9604I61-02	Reported: 05/06/96

QC Batch Number: GC050296BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	N.D.
Methyl t-Butyl Ether	**25**	**1700**
Benzene	**5.0**	**65**
Toluene	5.0	N.D.
Ethyl Benzene	5.0	N.D.
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	78

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

aine Technical Services
5 Timothy Drive
ın Jose, CA 95133

ention: Jim Keller

Client Proj. ID: Shell Oakland 960425-W2
Sample Descript: EB
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9604I61-03

Sampled: 04/25/96
Received: 04/26/96

Analyzed: 05/02/96
Reported: 05/06/96

Batch Number: GC050296BTEX03A
rument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

alyte	Detection Limit ug/L	Sample Results ug/L
PH as Gas	50	N.D.
thyl t-Butyl Ether	2.5	N.D.
nzene	0.50	N.D.
luene	0.50	N.D.
yl Benzene	0.50	N.D.
lenes (Total)	0.50	N.D.
romatogram Pattern:		

rrogates	Control Limits %		% Recovery
fluorotoluene	70	130	83

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

QUOIA ANALYTICAL - ELAP #1210

gy Penner
ect 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 960425-W2	Sampled: 04/25/96
985 Timothy Drive	Sample Descript: DUP	Received: 04/26/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/02/96
Attention: Jim Keller	Lab Number: 9604161-04	Reported: 05/06/96

QC Batch Number: GC050296BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	N.D.
Methyl t-Butyl Ether	**25**	**1500**
Benzene	**5.0**	**66**
Toluene	5.0	N.D.
Ethyl Benzene	**5.0**	**8.7**
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	77

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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aine Technical Services
35 Timothy Drive
an Jose, CA 95133
tention: Jim Keller

Client Proj. ID: Shell Oakland 960425-W2
Lab Proj. ID: 9604161

Received: 04/26/96
Reported: 05/06/96

LABORATORY NARRATIVE

J = MTBE value is estimated.

QUOIA ANALYTICAL

gy Penner
ject Manager

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Jim Keller

Client Project ID: Shell, Oakland / 960425-W2
Matrix: Liquid
Work Order #: 9604I61 -01

Reported: May 8, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC050196BTEX17A	GC050196BTEX17A	GC050196BTEX17A	GC050196BTEX17A
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 #:	9604D0303	9604D0303	9604D0303	9604D0303
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/1/96	5/1/96	5/1/96	5/1/96
Analyzed Date:	5/1/96	5/1/96	5/1/96	5/1/96
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	10	10	30
MS % Recovery:	100	100	100	100
Dup. Result:	9.8	9.7	9.7	29
MSD % Recov.:	98	97	97	97
RPD:	2.0	3.0	3.0	3.4
RPD Limit:	0-50	0-50	0-50	0-50
LCS #:	BLK050196	BLK050196	BLK050196	BLK050196
Prepared Date:	5/1/96	5/1/96	5/1/96	5/1/96
Analyzed Date:	5/1/96	5/1/96	5/1/96	5/1/96
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	10	10	31
LCS % Recov.:	100	100	100	103
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

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 / 960425-W2	
985 Timothy Drive	Matrix:	Liquid	
San Jose, CA 95133			
Attention: Jim Keller	Work Order #:	9604I61-02-03	Reported: May 8, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC050296BTEX03A	GC050296BTEX03A	GC050296BTEX03A	GC050296BTEX03A
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 #:	9604D6104	9604D6104	9604D6104	9604D6104
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/2/96	5/2/96	5/2/96	5/2/96
Analyzed Date:	5/2/96	5/2/96	5/2/96	5/2/96
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	9.9	9.8	30
MS % Recovery:	100	99	98	100
Dup. Result:	10	10	9.8	30
MSD % Recov.:	100	100	98	100
RPD:	0.0	1.0	0.0	0.0
RPD Limit:	0-50	0-50	0-50	0-50
LCS #:	BLK050296	BLK050296	BLK050296	BLK050296
Prepared Date:	5/2/96	5/2/96	5/2/96	5/2/96
Analyzed Date:	5/2/96	5/2/96	5/2/96	5/2/96
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	9.8	9.9	30
LCS % Recov.:	100	98	99	100
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

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Blaine Tech Services, Inc.	Client Project ID:	Shell, Oakland / 960425-W2	
985 Timothy Drive	Matrix:	Liquid	
San Jose, CA 95133			
Attention: Jim Keller	Work Order #:	9604I61-04	Reported: May 8, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC050296BTEX17A	GC050296BTEX17A	GC050296BTEX17A	GC050296BTEX17A
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 #:	9604D6104	9604D6104	9604D6104	9604D6104
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/2/96	5/2/96	5/2/96	5/2/96
Analyzed Date:	5/2/96	5/2/96	5/2/96	5/2/96
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	10	10	30
MS % Recovery:	100	100	100	100
Dup. Result:	9.7	9.7	9.5	28
MSD % Recov.:	97	97	95	93
RPD:	3.0	3.0	5.1	6.9
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:	BLK050296	BLK050296	BLK050296	BLK050296
Prepared Date:	5/2/96	5/2/96	5/2/96	5/2/96
Analyzed Date:	5/2/96	5/2/96	5/2/96	5/2/96
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	10	10	30
LCS % Recov.:	100	100	100	100
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

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