Weiss Associates Environmental and Geologic Services

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

May 20, 1994

Sum Arigala
Regional Water Quality Control Board-
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, CA 94612

Re: Shell Service Station
WIC #204-6138-0501
3790 Hopyard Road
Pleasanton, California
WA Job #81-795-104

Dear Mr. Arigala:

This letter describes 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 1994 and proposed work for the second quarter 1994.

First Quarter 1994 Activities:

- Blaine Tech Services, Inc. (BTS) of San Jose, California measured ground water depths and collected ground water samples from the site wells. BTS' report describing these activities and the analytic report for the ground water samples are included as Attachment A.
- Weiss Associates (WA) calculated ground water elevations and compiled the analytic data (Table 1 and Attachment B) and prepared a ground water elevation contour map (Figure 2).

Anticipated Second Quarter 1994 Activities:

WA will submit a report presenting the results of the second quarter 1994 ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results, ground water elevations and a ground water elevation contour map. Historical and current data will be compiled into one table.

Please call if you have any questions.

Sincerely,
Weiss Associates

John Wolf
Technical Assistant

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

JAW/JWC:jaw

J:\SHELL\700\795QMAP4.WP

Attachments: A - Blaine Tech's Ground Water Monitoring Report
B - Historical Ground Water Elevation and Analytic Data

cc: Dan Kirk, Shell Oil Company, P.O. Box 5278, Concord, California 94520-9998
Ted Klenk, Pleasanton Fire Department, 4444 Railroad Street, Pleasanton, California 94566

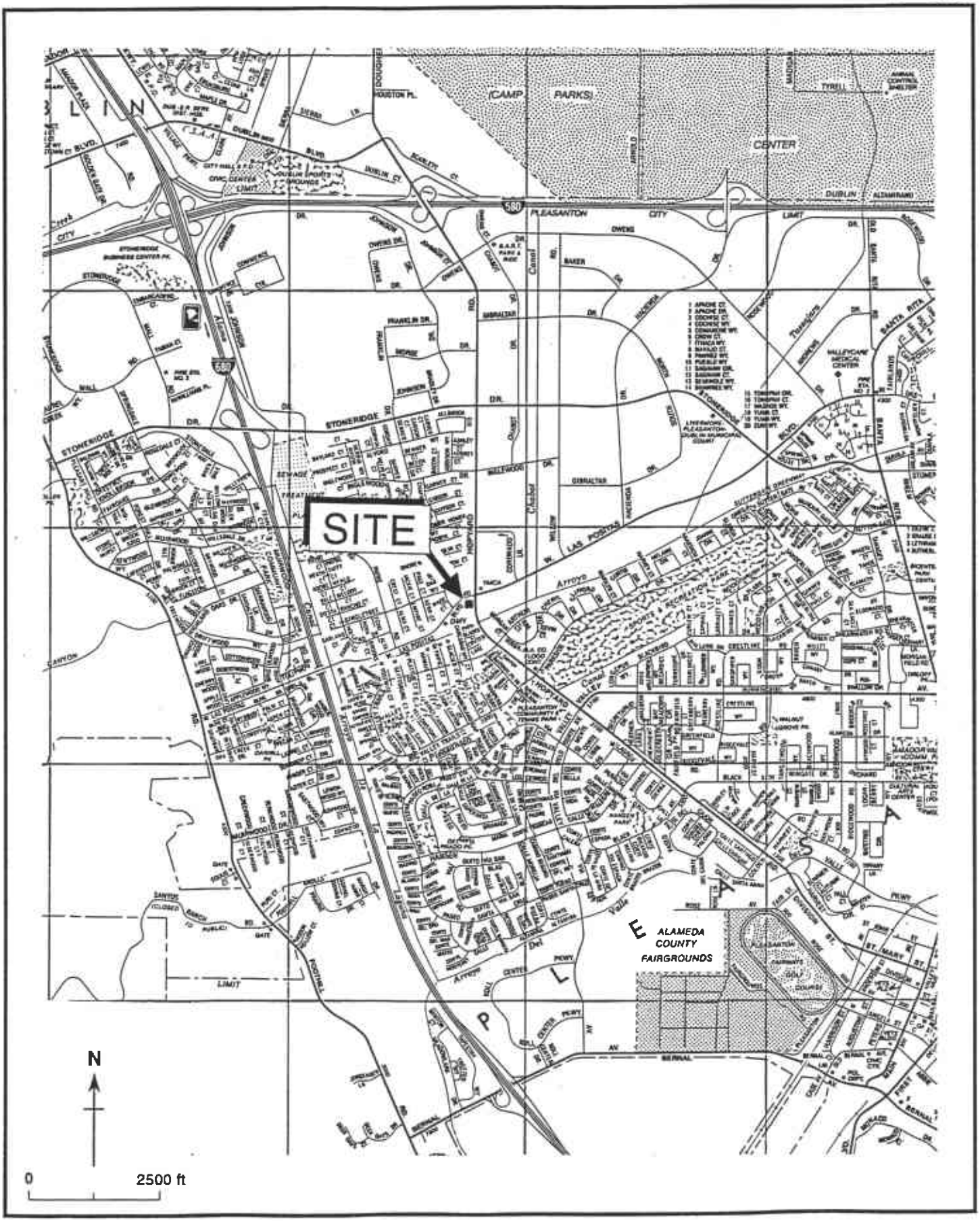

Figure 1. Site Location Map - Shell Service Station WIC# 204-6138-0501, 3970 Hopyard Road, Pleasanton, California

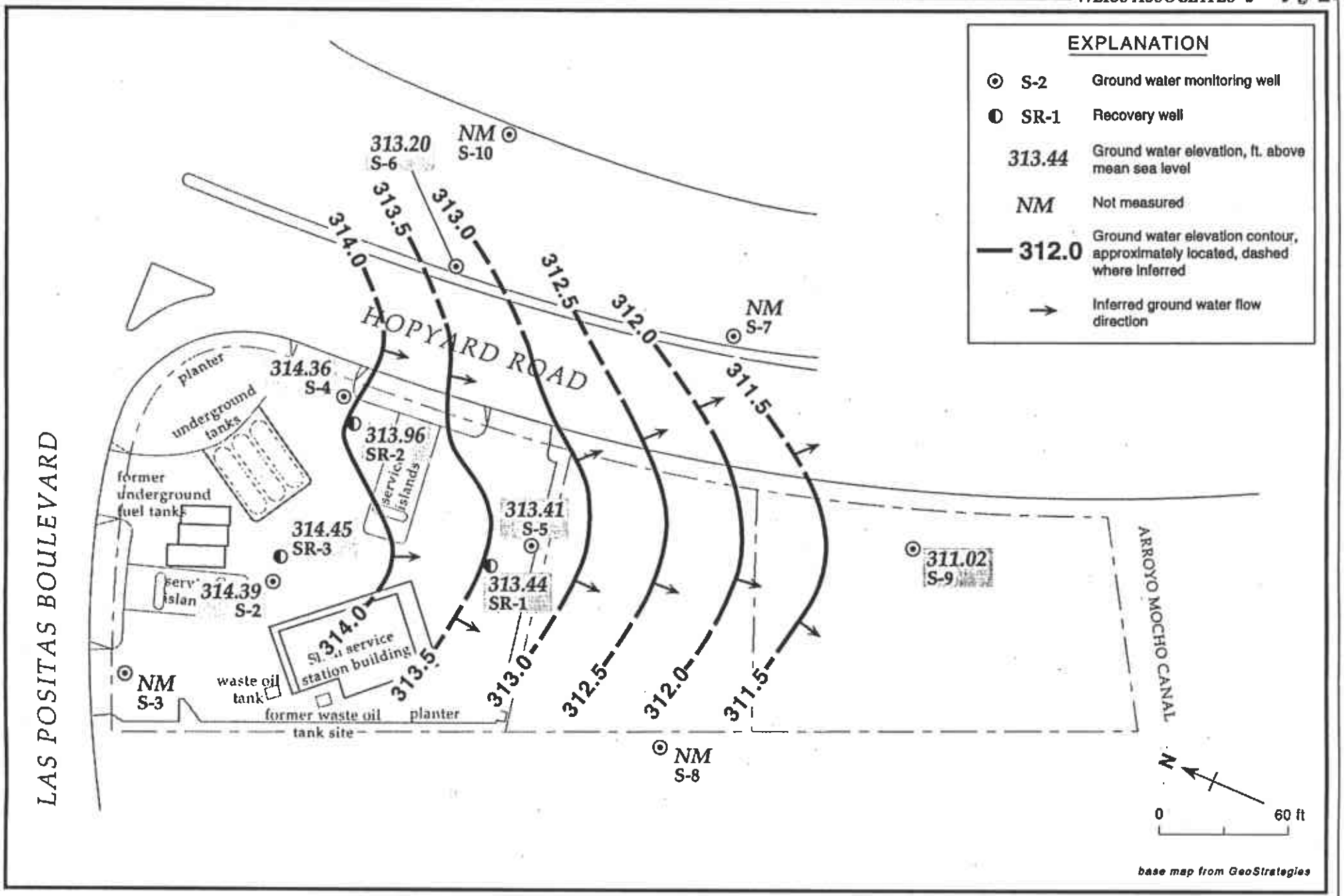

Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - March 4, 1994 - Shell Service Station WIC# 204-6138-0501
3790 Hopyard Road, Pleasanton, California

Table 1. Ground Water Eelvations and Analytic Results - Shell Service Station WIC# 204-6138-0501, 3790 Hopyard Road, Pleasanton, CA

Well ID	Sampling Date	Top-of-Casing (ft/msl)	Depth to Water (ft)	Ground Water Elevation (ft/msl)	TPH-G	TPH-D	B	T	E	X
					<----------parts per billion (µ/l)---------->					
S-4	03/04/94	328.53	14.17	314.36	150	NA	25	1.4	6.8	2.8
	03/04/94[dup]	328.53	14.17	314.36	140	NA	28	0.8	7.9	3.2
S-5	03/04/94	329.66	16.25	313.41	70[a]	NA	<0.5	<0.5	<0.5	<0.5
S-6	03/04/94	327.62	14.42	313.20	220	NA	<0.5	<0.5	<0.5	<0.5
S-9	03/04/94	328.24	17.22	311.02	<50	NA	<0.5	<0.5	<0.5	<0.5
SR-1	03/04/94	329.78	16.34	313.44	NA	NA	NA	NA	NA	NA
SR-2	03/04/94	328.35	14.39	NA	NA	NA	NA	NA	NA	NA
SR-3	03/04/94	329.11	14.66	NA	NA	NA	25	1.8	17	20
Trip Blank					<50	<50	<0.5	<0.5	<0.5	<0.5
DTSC MCLs					NE	NE	1	100[b]	680	1,750

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
TPH-D = Total petroleum hydrocarbons as diesel by Modified EPA Method 8015
B = Benzene by EPA Method
E = Ethylbenzene by EPA Method
T = Toluene by EPA Method
X = Xylenes by EPA Method
DTSC MCLs = California Department of Toxic Substances Control maximum contaminant levels for drinking water
NE = Not established
NA = Not analyzed/Not available
<n = Not detected at detection limits of n ppb
dup = Duplicate sample

Notes:

a = The result for gasoline is an unknown hydrocarbon which consists of a single peak
b = DTSC recommened action level; MCL not established

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

March 27, 1994

Shell Oil Company
P.O. Box 5278
Concord, CA 94520-9998

Attn: Daniel T. Kirk

SITE:
Shell WIC #204-6138-0501
3790 Hopyard Road
Pleasanton, California

QUARTER:
1st quarter of 1994

QUARTERLY GROUNDWATER SAMPLING REPORT 940304-F-1

This report contains data collected during routine inspection, gauging and sampling of groundwater monitoring wells performed by Blaine Tech Services, Inc. in response to the request of the consultant who is overseeing work at this site on behalf of our mutual client, Shell Oil Company. Data collected in the course of our field work is presented in a TABLE OF WELL GAUGING DATA. The field information was collected during our preliminary gauging and inspection of the wells, the subsequent evacuation of each well prior to sampling, and at the time of sampling.

Measurements taken include the total depth of the well and the depth to water. The surface of water was further inspected for the presence of immiscibles which may be present as a thin film (a sheen on the surface of the water) or as a measurable free product zone (FPZ). At intervals during the evacuation phase, the purge water was monitored with instruments that measure electrical conductivity (EC), potential hydrogen (pH), temperature (degrees Fahrenheit), and turbidity (NTU). In the interest of simplicity, fundamental information is tabulated here, while the bulk of the information is turned over directly to the consultant who is making professional interpretations and evaluations of the conditions at the site.

STANDARD PROCEDURES

Evacuation

Groundwater wells are thoroughly purged before sampling to insure that the sample is collected from water that has been newly drawn into the well from the surrounding geologic formation. The selection of equipment to evacuate each well is based on the physical characteristics of the well and what is known about the performance of the formation in which the well has been installed. There are several suitable devices which can be used for evacuation. The most commonly employed devices are air or gas actuated pumps, electric submersible pumps, and hand or mechanically actuated bailers. Our personnel frequently employ USGS/Middleburg positive displacement pumps or similar air actuated pumps which do not agitate the water standing in the well.

Normal evacuation removes three case volumes of water from the well. More than three case volumes of water are removed in cases where more evacuation is needed to achieve stabilization of water parameters and when requested by the local implementing agency. Less water may be removed in cases where the well dewaters and does not recharge to 80% of its original volume within two hours and any additional time our personnel have reason to remain at the site. In such cases, our personnel return to the site within twenty four hours and collect sample material from the water which has recharged into the well case.

Decontamination

All apparatus is brought to the site in clean and serviceable condition. The equipment is decontaminated after each use and before leaving the site. Effluent water from purging and on-site equipment cleaning is collected and transported to Shell's Martinez Manufacturing Complex in Martinez, California.

Free Product Skimmer

The column headed, VOLUME OF IMMISCIBLES REMOVED (ml) is included in the TABLE OF WELL GAUGING DATA to cover situations where a free product skimming device must be removed from the well prior to gauging. Skimmers are installed in wells with a free product zone on the surface of the water. The skimmer is a free product recovery device which often prevents normal well gauging and free product zone measurements. The 2.0" and 3.0" PetroTraps fall into the category of devices that obstruct normal gauging. In cases where the consultant elects to have our personnel pull the skimmers out of the well and gauge the well, our personnel perform the additional task of draining the accumulated free product out of the PetroTrap before putting it back in the well. This

recovered free product is measured and logged in the VOLUME OF IMMISCIBLES REMOVED column. Gauging at such sites is performed in accordance with specific directions from the professional consulting firm overseeing work at the site on Shell's behalf.

Sample Containers

Sample material is collected in specially prepared containers which are provided by the laboratory that performs the analyses.

Sampling

Sample material is collected in stainless steel bailer type devices normally fitted with both a top and a bottom check valve. Water is promptly decanted into new sample containers in a manner which reduces the loss of volatile constituents and follows the applicable EPA standard for handling volatile organic and semi-volatile compounds.

Following collection, samples are promptly placed in an ice chest containing prefrozen blocks of an inert ice substitute such as Blue Ice or Super Ice. The samples are maintained in either an ice chest or a refrigerator until delivered into the custody of the laboratory.

Sample Designations

All sample containers are identified with a site designation and a discrete sample identification number specific to that particular groundwater well. Additional standard notations (e.g. time, date, sampler) are also made on the label.

Chain of Custody

Samples are continuously maintained in an appropriate cooled container while in our custody and until delivered to the laboratory under a standard Shell Oil Company chain of custody. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date, and signature of the person releasing the samples followed by the time, date and signature of the person accepting custody of the samples).

Hazardous Materials Testing Laboratory

The samples obtained at this site were delivered to National Environmental Testing, Inc. in Santa Rosa, California. NET is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #178.

Objective Information Collection

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. performs no consulting and does not become involved in the marketing or installation of remedial systems of any kind. Blaine Tech Services, Inc. is concerned only with the generation of objective information, not with the use of that information to support evaluations and recommendations concerning the environmental condition of the site. Even the straightforward interpretation of objective analytical data is better performed by interested regulatory agencies, and those engineers and geologists who are engaged in the work of providing professional opinions about the site and proposals to perform additional investigation or design remedial systems.

Reportage

Submission of this report and the attached laboratory report to interested regulatory agencies is handled by the consultant in charge of the project. Any professional evaluations or recommendations will be made by the consultant under separate cover.

Please call if we can be of any further assistance.

Richard C. Blaine

RCB/mla

attachments: table of well gauging data
chain of custody
certified analytical report

cc: Weiss Associates
5500 Shellmound Street
Emeryville, CA 94608-2411
ATTN: Michael Asport

TABLE OF WELL GAUGING DATA

WELL I.D.	DATA COLLECTION DATE	MEASUREMENT REFERENCED TO	QUALITATIVE OBSERVATIONS (sheen)	DEPTH TO FIRST IMMISCIBLES LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLES LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
S-2	3/4/94	TOB	--	NONE	--	--	14.82	35.14
S-4 *	3/4/94	TOB	ODOR	NONE	--	--	14.17	36.08
S-5	3/4/94	TOB	--	NONE	--	--	16.25	35.98
S-6	3/4/94	TOB	ODOR	NONE	--	--	14.42	34.80
S-9	3/4/94	TOB	--	NONE	--	--	17.22	34.79
SR-1	3/4/94	TOB	--	NONE	--	--	16.34	35.00
SR-2	3/4/94	TOB	--	NONE	--	--	14.39	35.18
SR-3	3/4/94	TOB	--	NONE	--	--	14.66	35.04

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

8257

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 940304E1

Date: 3/4
Page 1 of 1

Site Address: 3790 Hopyard Rd., Pleasanton

WIC#: 204-6138-0501

Shell Engineer: Dan Kirk — Phone No.: (510) 675-6168 Fax #: 675-6160

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

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

Comments:

Sampled by: Tom Flory

Printed Name: Tom Flory

LAB: NET

Sample ID	Time	Date	Sludge	Soil	Water	Air	No. of conts.
S-2	910	3/4/94			X		3
S-4	1045				X		3
S-5	958				X		3
S-6	1023				X		3
S-7	935				X		3
DUP	—				X		3
EB	930				X		3
TB	LAB	↓			X		2

Analysis Required

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			Asbestos	Container Size 4 mL VOA	Preparation Used HCl	Composite Y/N
					X						
					X						
					X						
					X						
					X						
					X						
					X						
					X				↓	↓	

CHECK ONE (1) BOX ONLY — CT/DI

- Quarterly Monitoring [X] 8021
- Site Investigation [ ] 8021
- Soil Closure/Disposal [ ] 8022
- Water Closure/Disposal [ ] 8023
- Soil/Air Rem. or Sys. O & M [ ] 8022
- Water Rem. or Sys. O & M [ ] 8023
- Other [ ]

TURN AROUND TIME

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

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

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS

Relinquished By (Signature)	Printed Name	Date	Time	Received (Signature)	Printed Name	Date	Time
	Tom Flory	3/4/94	1200				
	GP Lumber	3/4/94	1700				
(VIA FAX)						3/8/94	0900

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

NATIONAL ENVIRONMENTAL TESTING, INC.

Santa Rosa Division
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Jim Keller
Blaine Tech Services
985 Timothy Dr.
San Jose, CA 95133

Date: 03/16/1994
NET Client Acct. No: 1821
NET Pacific Job No: 94.00922
Received: 03/08/1994

Client Reference Information

SHELL, 3790 Hopyard Rd., Pleasanton

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Judy Ridley
Project Coordinator

Jim Hoch
Operations Manager

Enclosure(s)

Ref: SHELL, 3790 Hopyard Rd., Pleasanton

SAMPLE DESCRIPTION: S-2
Date Taken: 03/04/1994
Time Taken: 09:10
NET Sample No: 189197

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						03/11/1994
DILUTION FACTOR*	1						03/11/1994
as Gasoline	ND		50	ug/L	5030		03/11/1994
METHOD 8020 (GC,Liquid)	--						03/11/1994
Benzene	ND		0.5	ug/L	8020		03/11/1994
Toluene	ND		0.5	ug/L	8020		03/11/1994
Ethylbenzene	ND		0.5	ug/L	8020		03/11/1994
Xylenes (Total)	ND		0.5	ug/L	8020		03/11/1994
SURROGATE RESULTS	--						03/11/1994
Bromofluorobenzene (SURR)	97			% Rec.	5030		03/11/1994

Ref: SHELL, 3790 Hopyard Rd., Pleasanton

SAMPLE DESCRIPTION: S-4
Date Taken: 03/04/1994
Time Taken: 10:45
NET Sample No: 189198

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						03/11/1994
DILUTION FACTOR*	1						03/11/1994
as Gasoline	150		50	ug/L	5030		03/11/1994
METHOD 8020 (GC,Liquid)	--						03/11/1994
Benzene	25		0.5	ug/L	8020		03/11/1994
Toluene	1.4		0.5	ug/L	8020		03/11/1994
Ethylbenzene	6.8		0.5	ug/L	8020		03/11/1994
Xylenes (Total)	2.8		0.5	ug/L	8020		03/11/1994
SURROGATE RESULTS	--						03/11/1994
Bromofluorobenzene (SURR)	96			% Rec.	5030		03/11/1994

Ref: SHELL, 3790 Hopyard Rd., Pleasanton

SAMPLE DESCRIPTION: S-5
Date Taken: 03/04/1994
Time Taken: 09:58
NET Sample No: 189199

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						03/09/1994
DILUTION FACTOR*	1						03/09/1994
as Gasoline	70	G1	50	ug/L	5030		03/09/1994
METHOD 8020 (GC,Liquid)	--						03/09/1994
Benzene	ND		0.5	ug/L	8020		03/09/1994
Toluene	ND		0.5	ug/L	8020		03/09/1994
Ethylbenzene	ND		0.5	ug/L	8020		03/09/1994
Xylenes (Total)	ND		0.5	ug/L	8020		03/09/1994
SURROGATE RESULTS	--						03/09/1994
Bromofluorobenzene (SURR)	79			% Rec.	5030		03/09/1994

G1 : The result for Gasoline is an unk. HC which consists of a single peak.

Ref: SHELL, 3790 Hopyard Rd., Pleasanton

SAMPLE DESCRIPTION: S-6
Date Taken: 03/04/1994
Time Taken: 10:23
NET Sample No: 189200

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						03/09/1994
DILUTION FACTOR*	1						03/09/1994
as Gasoline	220	G1	50	ug/L	5030		03/09/1994
METHOD 8020 (GC,Liquid)	--						03/09/1994
Benzene	ND		0.5	ug/L	8020		03/09/1994
Toluene	ND		0.5	ug/L	8020		03/09/1994
Ethylbenzene	ND		0.5	ug/L	8020		03/09/1994
Xylenes (Total)	ND		0.5	ug/L	8020		03/09/1994
SURROGATE RESULTS	--						03/09/1994
Bromofluorobenzene (SURR)	92			% Rec.	5030		03/09/1994

G1 : The result for Gasoline is an unk. HC which consists of a single peak.

Ref: SHELL, 3790 Hopyard Rd., Pleasanton

SAMPLE DESCRIPTION: S-9
Date Taken: 03/04/1994
Time Taken: 09:35
NET Sample No: 189201

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						03/09/1994
DILUTION FACTOR*	1						03/09/1994
as Gasoline	ND		50	ug/L	5030		03/09/1994
METHOD 8020 (GC,Liquid)	--						03/09/1994
Benzene	ND		0.5	ug/L	8020		03/09/1994
Toluene	ND		0.5	ug/L	8020		03/09/1994
Ethylbenzene	ND		0.5	ug/L	8020		03/09/1994
Xylenes (Total)	ND		0.5	ug/L	8020		03/09/1994
SURROGATE RESULTS	--						03/09/1994
Bromofluorobenzene (SURR)	88			% Rec.	5030		03/09/1994

Ref: SHELL, 3790 Hopyard Rd., Pleasanton

SAMPLE DESCRIPTION: DUP
Date Taken: 03/04/1994
Time Taken:
NET Sample No: 189202

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						03/11/1994
DILUTION FACTOR*	1						03/11/1994
as Gasoline	140		50	ug/L	5030		03/11/1994
METHOD 8020 (GC,Liquid)	--						03/11/1994
Benzene	28		0.5	ug/L	8020		03/11/1994
Toluene	0.8		0.5	ug/L	8020		03/11/1994
Ethylbenzene	7.9		0.5	ug/L	8020		03/11/1994
Xylenes (Total)	3.2		0.5	ug/L	8020		03/11/1994
SURROGATE RESULTS	--						03/11/1994
Bromofluorobenzene (SURR)	98			% Rec.	5030		03/11/1994

Ref: SHELL, 3790 Hopyard Rd., Pleasanton

SAMPLE DESCRIPTION: EB
Date Taken: 03/04/1994
Time Taken: 09:30
NET Sample No: 189203

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						03/09/1994
DILUTION FACTOR*	1						03/09/1994
as Gasoline	ND		50	ug/L	5030		03/09/1994
METHOD 8020 (GC,Liquid)	--						03/09/1994
Benzene	ND		0.5	ug/L	8020		03/09/1994
Toluene	ND		0.5	ug/L	8020		03/09/1994
Ethylbenzene	ND		0.5	ug/L	8020		03/09/1994
Xylenes (Total)	ND		0.5	ug/L	8020		03/09/1994
SURROGATE RESULTS	--						03/09/1994
Bromofluorobenzene (SURR)	88			% Rec.	5030		03/09/1994

Ref: SHELL, 3790 Hopyard Rd., Pleasanton

SAMPLE DESCRIPTION: TB
Date Taken: 03/04/1994
Time Taken:
NET Sample No: 189204

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						03/09/1994
DILUTION FACTOR*	1						03/09/1994
as Gasoline	ND		50	ug/L	5030		03/09/1994
METHOD 8020 (GC,Liquid)	--						03/09/1994
Benzene	ND		0.5	ug/L	8020		03/09/1994
Toluene	ND		0.5	ug/L	8020		03/09/1994
Ethylbenzene	ND		0.5	ug/L	8020		03/09/1994
Xylenes (Total)	ND		0.5	ug/L	8020		03/09/1994
SURROGATE RESULTS	--						03/09/1994
Bromofluorobenzene (SURR)	83			% Rec.	5030		03/09/1994

Ref: SHELL, 3790 Hopyard Rd., Pleasanton

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials
TPH (Gas/BTXE,Liquid)						
as Gasoline	100.0	1.00	1.00	mg/L	03/09/1994	aal
Benzene	95.6	9.56	10	ug/L	03/09/1994	aal
Toluene	98.8	9.88	10.0	ug/L	03/09/1994	aal
Ethylbenzene	107.2	10.72	10.0	ug/L	03/09/1994	aal
Xylenes (Total)	107.7	32.31	30.0	ug/L	03/09/1994	aal
Bromofluorobenzene (SURR)	100.0	100	100	% Rec.	03/09/1994	aal
TPH (Gas/BTXE,Liquid)						
as Gasoline	105.0	1.05	1.00	mg/L	03/11/1994	aal
Benzene	94.1	9.41	10.0	ug/L	03/11/1994	aal
Toluene	96.6	9.66	10.0	ug/L	03/11/1994	aal
Ethylbenzene	103.9	10.39	10.0	ug/L	03/11/1994	aal
Xylenes (Total)	101.5	30.46	30.0	ug/L	03/11/1994	aal
Bromofluorobenzene (SURR)	98.0	98	100	% Rec.	03/11/1994	aal
TPH (Gas/BTXE,Liquid)						
as Gasoline	96.6	0.966	1.00	mg/L	03/10/1994	aal
Benzene	114.0	5.70	5.00	ug/L	03/10/1994	aal
Toluene	104.4	5.22	5.00	ug/L	03/10/1994	aal
Ethylbenzene	99.8	4.99	5.00	ug/L	03/10/1994	aal
Xylenes (Total)	100.3	15.05	15.0	ug/L	03/10/1994	aal
Bromofluorobenzene (SURR)	109.0	109	100	% Rec.	03/10/1994	aal
TPH (Gas/BTXE,Liquid)						
as Gasoline	105.0	1.05	1.00	mg/L	03/11/1994	vin
Benzene	88.8	4.44	5.00	ug/L	03/11/1994	vin
Toluene	98.0	4.90	5.00	ug/L	03/11/1994	vin
Ethylbenzene	91.8	4.59	5.00	ug/L	03/11/1994	vin
Xylenes (Total)	95.1	14.27	15.0	ug/L	03/11/1994	vin
Bromofluorobenzene (SURR)	95.0	95	100	% Rec.	03/11/1994	vin

Ref: SHELL, 3790 Hopyard Rd., Pleasanton

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	03/09/1994	aal
Benzene	ND	0.5	ug/L	03/09/1994	aal
Toluene	ND	0.5	ug/L	03/09/1994	aal
Ethylbenzene	ND	0.5	ug/L	03/09/1994	aal
Xylenes (Total)	ND	0.5	ug/L	03/09/1994	aal
Bromofluorobenzene (SURR)	80		% Rec.	03/09/1994	aal
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	03/11/1994	aal
Benzene	ND	0.5	ug/L	03/11/1994	aal
Toluene	ND	0.5	ug/L	03/11/1994	aal
Ethylbenzene	ND	0.5	ug/L	03/11/1994	aal
Xylenes (Total)	ND	0.5	ug/L	03/11/1994	aal
Bromofluorobenzene (SURR)	73		% Rec.	03/11/1994	aal
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	03/10/1994	aal
Benzene	ND	0.5	ug/L	03/10/1994	aal
Toluene	ND	0.5	ug/L	03/10/1994	aal
Ethylbenzene	ND	0.5	ug/L	03/10/1994	aal
Xylenes (Total)	ND	0.5	ug/L	03/10/1994	aal
Bromofluorobenzene (SURR)	107		% Rec.	03/10/1994	aal
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	03/11/1994	vin
Benzene	ND	0.5	ug/L	03/11/1994	vin
Toluene	ND	0.5	ug/L	03/11/1994	vin
Ethylbenzene	ND	0.5	ug/L	03/11/1994	vin
Xylenes (Total)	ND	0.5	ug/L	03/11/1994	vin
Bromofluorobenzene (SURR)	87		% Rec.	03/11/1994	vin

Ref: SHELL, 3790 Hopyard Rd., Pleasanton

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Analyst Initials
TPH (Gas/BTXE,Liquid)										
as Gasoline	105.0	112.0	6.5	1.00	ND	1.05	1.12	mg/L	03/09/1994	aal
Benzene	107.0	108.2	1.1	32.8	ND	35.1	35.5	ug/L	03/09/1994	aal
Toluene	103.6	103.7	0.1	94.7	ND	98.1	98.2	ug/L	03/09/1994	aal
TPH (Gas/BTXE,Liquid)										
as Gasoline	92.9	81.4	13.2	1.00	ND	0.929	0.814	mg/L	03/10/1994	aal
Benzene	95.7	85.3	11.5	44.3	ND	42.4	37.8	ug/L	03/10/1994	aal
Toluene	96.3	86.1	11.2	109.0	ND	105.0	93.9	ug/L	03/10/1994	aal
TPH (Gas/BTXE,Liquid)										
as Gasoline	113.0	113.0	0.0	1.00	ND	1.13	1.13	mg/L	03/11/1994	vin
Benzene	114.0	115.2	1.0	33.5	ND	38.2	38.6	ug/L	03/11/1994	vin
Toluene	104.2	104.6	0.4	96.0	ND	100.0	100.4	ug/L	03/11/1994	vin

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KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. Actual reporting limits and results have been multiplied by the listed dilution factor. Do not multiply the reporting limits or reported values by the dilution factor.
dw	:	Result expressed as dry weight.
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than the applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, Rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, Rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986., Rev. 1, December 1987.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

Revised September, 1993
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ATTACHMENT B

HISTORICAL GROUND WATER ELEVATION AND ANALYTIC DATA

TABLE 1

HISTORICAL GROUND-WATER QUALITY DATABASE

Sample Date	Sample Point	TPH-G (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
02-Oct-90	S-3	<50	<0.5	<0.5	<0.5	1
18-Dec-90	S-3	<50	<0.5	1.6	<0.5	2
20-Mar-91	S-3	70	2.3	8.9	4	23
26-Jun-91	S-3	<50	<0.5	<0.5	<0.5	<0.5
05-Sep-91	S-3	<50	<0.5	<0.5	<0.5	<0.5
13-Dec-91	S-3	<50	<0.5	<0.5	<0.5	<0.5
11-Mar-92	S-3	<30	<0.3	<0.3	<0.3	<0.3
15-Jun-92	S-3	<50	<0.5	<0.5	<0.5	<0.5
17-Sep-92	S-3	<50	<0.5	<0.5	<0.5	<0.5
11-Dec-92	S-3	<50	<0.5	<0.5	<0.5	<0.5
04-Feb-93	S-3	<50	<0.5	<0.5	<0.5	<0.5
14-Feb-88	S-4	5,100	160	8	730	730
13-Oct-88	S-4	530	24	1	25	16
31-Jan-89	S-4	1,100	33	2	20	24
07-Mar-89	S-4	650	37	1	35	27
26-Jun-89	S-4	670	110	<1	85	71
08-Sep-89	S-4	380	32	<1	36	26
14-Dec-89	S-4	210	21	<0.5	30	23
05-Mar-90	S-4	350	43	<0.5	24	47
14-Jun-90	S-4	430	74	<0.5	71	46
02-Oct-90	S-4	700	74	2.2	100	55
18-Dec-90	S-4	1,400	180	2.9	280	230
20-Mar-91	S-4	1,200	100	<2	210	130
26-Jun-91	S-4	220	14	<0.5	34	17
05-Sep-91	S-4	580	31	0.8	53	26
13-Dec-91	S-4	370	24	0.9	1.3	46
11-Mar-92	S-4	1,600	23	1.2	12	20
16-Jun-92	S-4	480	48	<1	95	22
17-Sep-92	S-4	260	35	1.2	51	7.8
11-Dec-92	S-4	270	34	0.6	28	4.5
05-Feb-93	S-4	1,100	12	<5	69	100
14-Feb-88	S-5	1,000	40	86	180	180
13-Oct-88	S-5	560	66	20	18	36

TABLE 1

HISTORICAL GROUND-WATER QUALITY DATABASE

Sample Date	Sample Point	TPH-G (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
31-Jan-89	S-5	180	27	8	9	13
07-Mar-89	S-5	3,800	520	530	260	570
26-Jun-89	S-5	<50	3.8	<1	2	<3
08-Sep-89	S-5	110	25	2	2	12
14-Dec-89	S-5	1,700	300	86	67	140
05-Mar-90	S-5	1,100	100	110	79	240
14-Jun-90	S-5	600	94	36	40	62
02-Oct-90	S-5	4,500	1,400	160	260	300
20-Nov-90	S-5	16,000	4,600	720	790	1,000
18-Dec-90	S-5	25,000	7,600	1,100	1,300	2,300
20-Mar-91	S-5	310	39	12	18	30
26-Jun-91	S-5	1,300	250	62	120	160
05-Sep-91	S-5	4,700	660	150	170	280
13-Dec-91	S-5	1,400	580	19	110	80
11-Mar-92	S-5	<30	<0.3	<0.3	<0.3	<0.3
16-Jun-92	S-5	1,800	380	52	120	180
17-Sep-92	S-5	2,200	750	91	170	170
11-Dec-92	S-5	8,700	1,600	86	48	340
04-Feb-93	S-5	150	15	0.7	4.7	4
13-Oct-88	S-6	1,100	13	1	42	33
31-Jan-89	S-6	340	3.8	<1	8	3
07-Mar-89	S-6	190	3.8	<1	7	3
26-Jun-89	S-6	480	15	<1	6	<3
08-Sep-89	S-6	270	1.3	1	7	<3
15-Dec-89	S-6	320	1	<0.5	2.6	<1
06-Mar-90	S-6	420	3.1	<0.5	14	<1
14-Jun-90	S-6	370	3.7	0.9	4.8	3
02-Oct-90	S-6	190	6.6	1.6	1.9	2.8
18-Dec-90	S-6	430	10	0.7	1.6	1.5
20-Mar-91	S-6	130*	6.6	0.6	0.7	3
26-Jun-91	S-6	120*	3.8	0.8	<0.5	1.7
05-Sep-91	S-6	60	<0.5	0.8	<0.5	0.5
13-Dec-91	S-6	150	2.3	<0.5	<0.5	150

TABLE 1

HISTORICAL GROUND-WATER QUALITY DATABASE

Sample Date	Sample Point	TPH-G (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
11-Mar-92	S-6	<30	<0.3	<0.3	<0.3	<0.3
15-Jun-92	S-6	170	<0.5	<0.5	<0.5	<0.5
17-Sep-92	S-6	190	<0.5	1.6	<0.5	1.2
11-Dec-92	S-6	180	<0.5	0.8	<0.5	0.7
05-Feb-93	S-6	290	<0.5	<0.5	<0.5	0.7
13-Oct-88	S-7	<50	0.6	1	<1	<3
31-Jan-89	S-7	<50	<0.5	<1	<1	<3
07-Mar-89	S-7	<50	<0.5	<1	<1	<3
26-Jun-89	S-7	<50	<0.5	<1	<1	<3
08-Sep-89	S-7	<50	<0.5	<1	<1	<3
15-Dec-89	S-7	<50	<0.5	<0.5	<0.5	<1
06-Mar-90	S-7	<50	<0.5	<0.5	<0.5	<1
14-Jun-90	S-7	<50	<0.5	<0.5	<0.5	<1
02-Oct-90	S-7	<50	<0.5	0.6	<0.5	0.9
18-Dec-90	S-7	<50	0.5	<0.5	<0.5	0.8
20-Mar-91	S-7	<50	<0.5	<0.5	<0.5	<0.5
26-Jun-91	S-7	<50	<0.5	<0.5	<0.5	<0.5
05-Sep-91	S-7	<50	<0.5	0.6	<0.5	<0.5
13-Dec-91	S-7	<50	<0.5	<0.5	<0.5	<0.5
11-Mar-92	S-7	<30	<0.3	<0.3	<0.3	<0.3
15-Jun-92	S-7	<50	<0.5	<0.5	<0.5	<0.5
17-Sep-92	S-7	<50	0.6	0.6	<0.5	<0.5
11-Dec-92	S-7	<50	<0.5	<0.5	<0.5	<0.5
05-Feb-93	S-7	<50	<0.5	<0.5	<0.5	<0.5
07-Mar-89	S-8	<50	1.2	1	<1	<3
26-Jun-89	S-8	<50	0.8	1	<1	<3
08-Sep-89	S-8	<50	<0.5	<1	<1	<3
14-Dec-89	S-8	<50	<0.5	<0.5	<0.5	<1
05-Mar-90	S-8	<50	<0.5	0.5	<0.5	<1
14-Jun-90	S-8	<50	<0.5	<0.5	<0.5	<1
02-Oct-90	S-8	<50	<0.5	<0.5	<0.5	<0.5
18-Dec-90	S-8	<50	2.9	7	1	6.4
20-Mar-91	S-8	50*	0.8	1.6	2.6	5.2

TABLE 1

HISTORICAL GROUND-WATER QUALITY DATABASE

Sample Date	Sample Point	TPH-G (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
26-Jun-91	S-8	<50	<0.5	<0.5	<0.5	<0.5
05-Sep-91	S-8	<50	<0.5	<0.5	<0.5	<0.5
13-Dec-91	S-8	<50	<0.5	<0.5	<0.5	<0.5
11-Mar-92	S-8	<30	<0.3	<0.3	<0.3	<0.3
15-Jun-92	S-8	<50	1.4	1.9	<0.5	<0.5
17-Sep-92	S-8	<50	<0.5	<0.5	<0.5	<0.5
11-Dec-92	S-8	<50	<0.5	<0.5	<0.5	<0.5
04-Feb-93	S-8	<50	<0.5	<0.5	<0.5	<0.5
07-Mar-89	S-9	<50	<0.5	<1	<1	<3
26-Jun-89	S-9	<50	<0.5	<1	<1	<3
08-Sep-89	S-9	<50	1.7	2	<1	<3
15-Dec-89	S-9	<50	0.5	<0.5	<0.5	<1
06-Mar-90	S-9	<50	<0.5	<0.5	<0.5	<1
14-Jun-90	S-9	<50	<0.5	<0.5	<0.5	<1
02-Oct-90	S-9	<50	<0.5	<0.5	<0.5	<0.5
18-Dec-90	S-9	<50	20	27	7.1	35
20-Mar-91	S-9	70*	0.7	0.7	<0.5	1
26-Jun-91	S-9	<50	<0.5	<0.5	<0.5	<0.5
05-Sep-91	S-9	<50	<0.5	0.8	<0.5	<0.5
13-Dec-91	S-9	<50	<0.5	<0.5	<0.5	<0.5
11-Mar-92	S-9	<30	<0.3	<0.3	<0.3	<0.3
16-Jun-92	S-9	<50	<0.5	<0.5	<0.5	<0.5
17-Sep-92	S-9	<50	<0.5	<0.5	<0.5	<0.5
11-Dec-92	S-9	<50	<0.5	<0.5	<0.5	<0.5
04-Feb-93	S-9	<50	<0.5	<0.5	<0.5	<0.5
11-Aug-89	S-10	<50	<0.5	<1	<1	<3
08-Sep-89	S-10	<50	<0.5	<1	<1	<3
15-Dec-89	S-10	<50	<0.5	<0.5	<0.5	<1
06-Mar-90	S-10	<50	<0.5	<0.5	<0.5	<1
14-Jun-90	S-10	<50	<0.5	<0.5	<0.5	<1
02-Oct-90	S-10	<50	<0.5	<0.5	<0.5	1
18-Dec-90	S-10	<50	<0.5	<0.5	<0.5	1.4
20-Mar-91	S-10	<50	<0.5	<0.5	<0.5	<0.5

TABLE 1

HISTORICAL GROUND-WATER QUALITY DATABASE

Sample Date	Sample Point	TPH-G (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
26-Jun-91	S-10	50	1.8	5.8	1.9	13
05-Sep-91	S-10	<50	<0.5	<0.5	<0.5	<0.5
13-Dec-91	S-10	<50	<0.5	<0.5	<0.5	<0.5
11-Mar-92	S-10	<30	<0.3	<0.3	<0.3	<0.3
15-Jun-92	S-10	<50	<0.5	<0.5	<0.5	<0.5
17-Sep-92	S-10	<50	<0.5	<0.5	<0.5	<0.5
11-Dec-92	S-10	<50	<0.5	<0.5	<0.5	<0.5
05-Feb-93	S-10	<50	<0.5	<0.5	<0.5	<0.5
11-Oct-89	SR-1	200	100	<1	10	10
14-Dec-89	SR-1	500	210	<0.5	16	16
05-Mar-90	SR-1	64	20	<0.5	1.5	4
14-Jun-90	SR-1	60	17	<0.5	1.9	1
02-Oct-90	SR-1	<50	5	<0.5	<0.5	<0.5
18-Dec-90	SR-1	<50	28	5.5	4.5	4.5
20-Mar-91	SR-1	<50*	4.2	<0.5	1.4	0.5
26-Jun-91	SR-1	<50	5	<0.5	0.5	<0.5
05-Sep-91	SR-1	<50	8.6	<0.5	0.7	<0.5
13-Dec-91	SR-1	70	9.4	7.1	6.6	22
11-Mar-92	SR-1	<30	<0.3	<0.3	<0.3	<0.3
15-Jun-92	SR-1	<50	<0.5	<0.5	<0.5	<0.5
17-Sep-92	SR-1	51	1.4	<0.5	<0.5	<0.5
11-Oct-89	SR-2	880	<10	1	29	33
14-Dec-89	SR-2	1,100	17	<0.5	100	67
05-Mar-90	SR-2	140	3	<0.5	12	7
14-Jun-90	SR-2	<50	<0.5	<0.5	2.6	<1
02-Oct-90	SR-2	<50	<0.5	<0.5	0.5	<0.5
18-Dec-90	SR-2	<50	1.6	1.4	1.6	2.7
20-Mar-91	SR-2	90	1.3	<0.5	6.1	1.4
26-Jun-91	SR-2	<50	0.6	<0.5	1.7	<0.5
05-Sep-91	SR-2	<50	1.2	<0.5	1.2	<0.5
13-Dec-91	SR-2	<50	<0.5	<0.5	<0.5	<0.5
11-Mar-92	SR-2	<30	0.5	<0.3	<0.3	<0.3
15-Jun-92	SR-2	120	6	1	0.7	2.1

TABLE 1

HISTORICAL GROUND-WATER QUALITY DATABASE

Sample Date	Sample Point	TPH-G (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
17-Sep-92	SR-2	140	8.3	0.6	0.9	0.7
11-Oct-89	SR-3	500	92	10	43	100
14-Dec-89	SR-3	2,400	310	27	170	340
05-Mar-90	SR-3	70	15	0.8	5.8	10
14-Jun-90	SR-3	470	59	2.3	35	50
02-Oct-90	SR-3	1,700	91	6.2	7	100
18-Dec-90	SR-3	140	10	0.8	7.5	14
20-Mar-91	SR-3	1,350	970	3.6	64	79
26-Jun-91	SR-3	240	48	15	20	N/A0
26-Jun-91	SR-3	240	48	4.2	15	20
05-Sep-91	SR-3	160	19	<0.5	6	5.9
13-Dec-91	SR-3	50	13	<0.5	3.1	4.7
11-Mar-92	SR-3	410	28	1.6	22	24
16-Jun-92	SR-3	600	55	2.1	2.8	33
17-Sep-92	SR-3	210	25	1.8	17	20

TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline
PPB = Parts Per Billion

* Compounds detected and calculated as low boiling hydrocarbons consist of compounds eluting within the chromatographic range of gasoline, but are not characteristic of the standard gasoline standard pattern.

Notes:

1. All data shown as <x are reported as ND (none detected).]
2. Wells SR-1, SR-2, and SR-3 were monitored only subsequent to the September 17, 1992 sampling.