



**Weiss Associates**

5500 Shellmound Street, Emeryville, CA 94608-2411

Environmental and Geologic Services

Fax: 510-547-5043 Phone: 510-450-6000

ALCO  
HAZMAT  
94 JUL -6 PM 2: 53

June 16, 1994

Britt Johnson  
Alameda County Department of  
Environmental Health  
80 Swan Way, Room 200  
Oakland, CA 94621

Re: Shell Service Station  
WIC #204-0079-0109  
999 San Pablo Avenue  
Albany, California  
WA Job #81-699-104

Dear Mr. Johnson:

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 second quarter 1994 and proposed work for the third quarter 1994.

Second 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 scheduled to be sampled this quarter. Well S-5 contained 1.62 ft of floating hydrocarbons, probably originating from the adjacent Arco station, and was not sampled. 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 (Tables 1 and 2) and prepared a ground water elevation contour map (Figure 2).

Anticipated Third Quarter 1994 Activities:

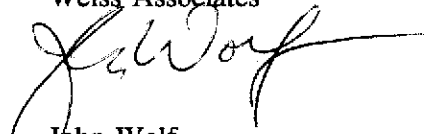
WA will submit a report presenting the results of the third quarter 1994 ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results, ground water elevations and a ground water elevation contour map.

Conclusions and Recommendations:

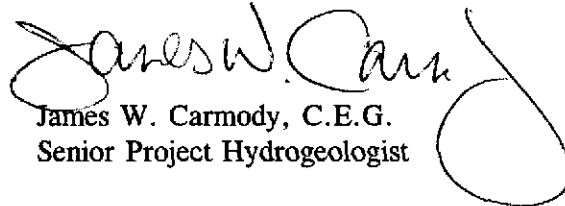
- Since the floating hydrocarbons measured in monitoring well S-5 appear to originate from the Arco Station across Marin Avenue south of the Shell site, WA does not intend to install a hydrocarbon skimmer or bail floating hydrocarbons from monitoring well S-5.
- WA recommends continued quarterly monitoring at this time.

Please call if you have any questions.

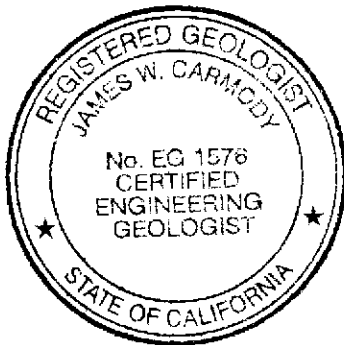
Sincerely,  
Weiss Associates



John Wolf  
Technical Assistant



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



JAW/JWC:jaw

J:\SHELL\650\699QMMY4.WP

Attachments: A - Blaine Tech's Ground Water Monitoring Report

cc: Dan Kirk, Shell Oil Company, P.O. Box 5278, Concord, California 94520-9998  
Kevin Graves, Regional Water Quality Control Board - San Francisco Bay Region, 2101  
Webster Street, Suite 500, Oakland, California 94612

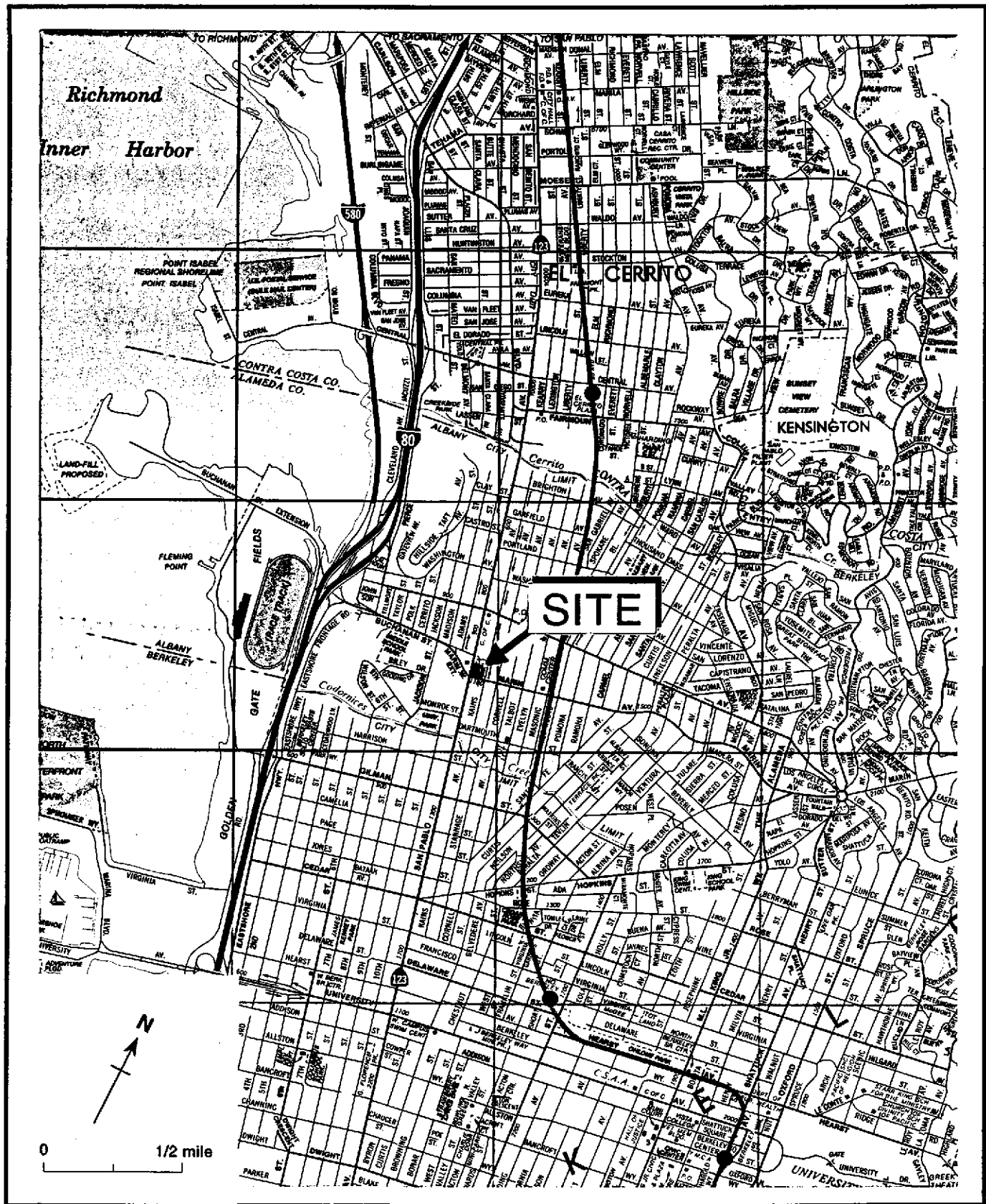


Figure 1. Site Location Map - Shell Service Station WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California

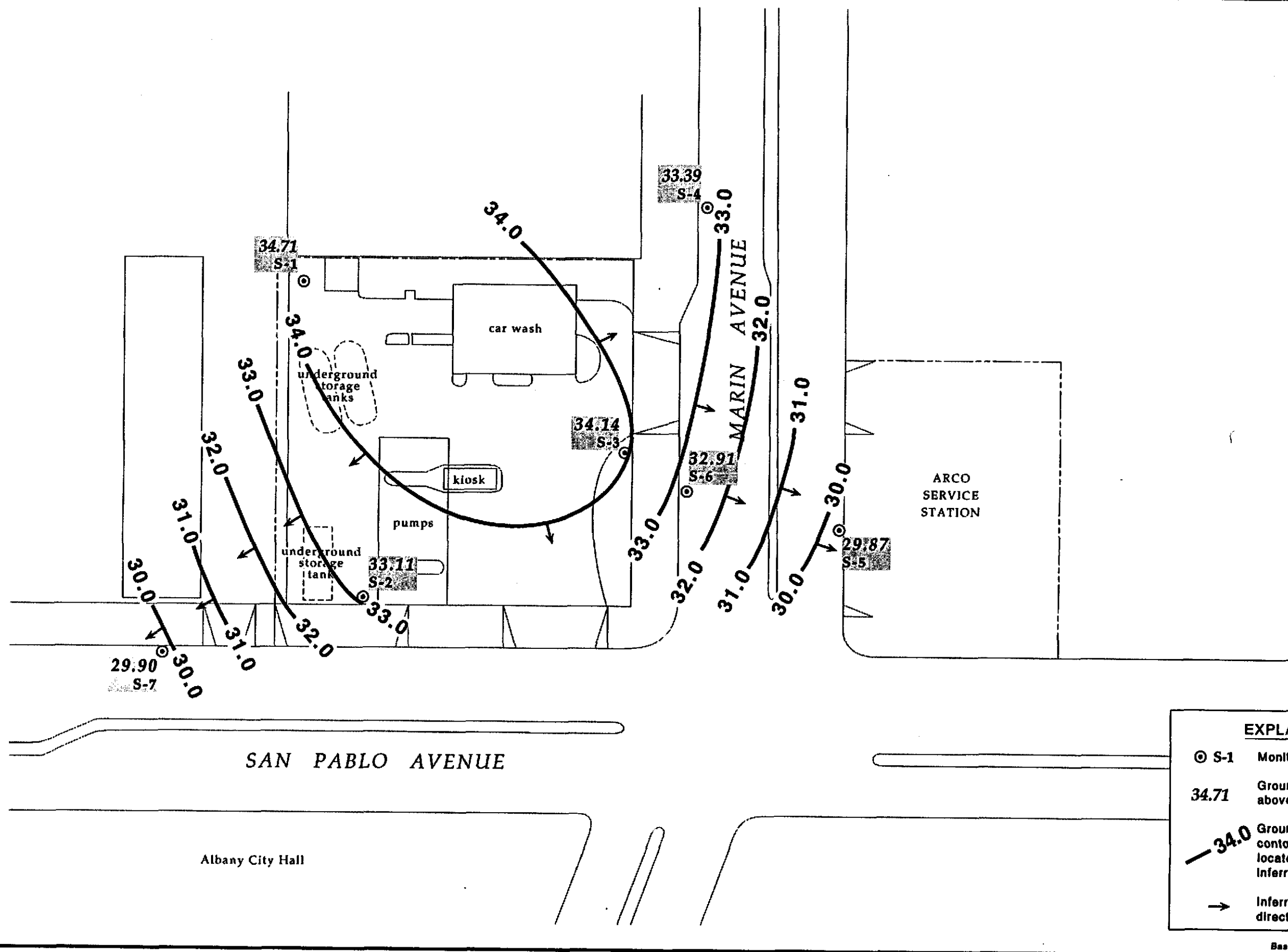


Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - March 13, 1994- Shell Service Station WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California

Table 1. Ground Water Elevations - Shell Service Station WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California

Well ID	Date	Top-of-Vault Elevation	Depth to Water (ft)	Floating Hydrocarbon Thickness (ft) <sup>a</sup>	Ground Water Elevation (ft above msl)
S-1	05/06/92	42.73	7.95	---	34.78
	08/26/92		8.24	---	34.49
	10/28/92		8.52	---	34.21
	01/19/93		6.54	---	36.19
	04/29/93		7.93	---	34.80
	07/22/93		8.09	---	34.64
	10/21/93		9.43	---	33.30
	01/04/94		8.25	---	34.48
	<b>04/13/94</b>		<b>8.02</b>	---	<b>34.71</b>
	S-2		05/06/92	40.73	8.10
08/26/92		8.37	---		32.36
10/28/92		8.64	---		32.09
01/19/93		5.82	---		34.91
04/29/93		7.70	---		33.03
07/22/93		8.38	---		32.35
10/21/93		8.58	---		32.15
01/04/94		7.70	---		33.03
<b>04/13/94</b>		<b>7.62</b>	---		<b>33.11</b>
S-3		05/06/92	41.46		7.55
	08/26/92	7.53		---	33.93
	10/28/92	7.95		---	33.51
	01/19/93	6.12		---	35.34
	04/29/93	7.27		---	34.19
	07/22/93	7.62		---	33.84
	10/21/93	7.81		---	33.65
	01/04/94	7.49		---	33.97
	<b>04/13/94</b>	<b>7.32</b>		---	<b>34.14</b>
	S-4	05/06/92		41.10	7.21
08/26/92		8.13	---		32.97
10/28/92		8.73	---		32.37
01/19/93		5.86	---		35.24
04/29/93		7.02	---		34.08
07/22/93		7.76	---		33.34
10/21/93		8.53	---		32.57
01/04/94		7.92	---		33.18
<b>04/13/94</b>		<b>7.71</b>	---		<b>33.39</b>

-- Table 1 continues on next page --

Table 1. Ground Water Elevations - Shell Service Station WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California (continued)

Well ID	Date	Top-of-Vault Elevation	Depth to Water (ft)	Floating Hydrocarbon Thickness (ft) <sup>a</sup>	Ground Water Elevation (ft above msl)
S-5	05/06/92	39.99	14.31	5.66	30.21
	08/26/92		14.26	3.80	28.77
	10/28/92		14.22	3.81	28.82
	01/19/93		12.36	3.96	30.80
	04/29/93		9.64	0.90	31.07
	07/22/93		9.55	0.90	31.16
	10/21/93		11.23	0.73	29.34
	01/04/94		11.69	1.90	29.82
	<b>04/13/94</b>		<b>11.42</b>	<b>1.62</b>	<b>29.87</b>
	S-6		05/06/92	40.12	8.27
08/26/92		9.57	---		31.55
10/28/92		8.90	---		32.22
01/19/93		4.84	---		35.28
04/29/93		5.61	---		34.51
07/22/93		6.56	---		33.56
10/21/93		8.73	---		31.39
01/04/94		7.14	---		32.98
<b>04/13/94</b>		<b>7.21</b>	<b>---</b>		<b>32.91</b>
S-7		05/06/92	40.10		10.34
	08/26/92	11.13		---	28.97
	10/28/92	11.52		---	28.58
	01/19/93	8.68		---	31.42
	04/29/93	9.90		---	30.20
	07/22/93	---		---	---
	10/21/93	11.10		---	29.00
	01/04/94	10.40		---	29.70
	<b>04/13/94</b>	<b>10.20</b>		<b>---</b>	<b>29.90</b>

Notes:

a = When floating hydrocarbons are present, ground water elevation corrected by the relation:  
corrected ground water elevation = (top-of-box elevation) - (depth to water) + (0.8 x floating hydrocarbon thickness)

Table 2. Analytic Results for Ground Water, Former Shell Service Station, WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California

Sample ID	Date	Depth to Water (ft)	TPH-G	B	E	T	X
-----parts per billion (µg/L)-----							
<b>WELLS</b>							
S-1	05/06/92	7.95	1,200	5.5	80	<2.5	36
(Sampling Bi-annually 1st & 3rd Quarters)	07/29/92	8.24	2,000	9.4	130	<2.5	<2.5
	10/28/92	8.52	1,300	27	72	3.2	13
	01/19/93	6.54	1,500	13	29	3	31
	04/29/93	7.93	2,000	15	82	<2.5	<65
	07/22/93	8.09	620	1.1	3.5	4.2	13
	10/21/93	9.43	1,200	34	15	25	9.5
	01/04/94	8.25	860	<2.5	5.7	<2.5	5.3
S-2	05/06/92	8.10	20,000	2,600	860	110	1,900
(Sampling Bi-annually 1st & 3rd Quarters)	07/29/92	8.37	42,000	5,000	1,100	160	3,500
	10/28/92	8.64	34,000	4,800	1,600	330	2,900
	01/19/93	5.82	20,000	2,300	660	370	1,300
	04/29/93	7.70	40,000	2,000	900	67	1,900
	07/22/93	8.38	22,000	3,000	1,000	120	1,600
	07/22/93 <sup>dup</sup>	8.38	17,000	3,000	1,000	110	1,500
	10/21/93	8.58	14,000	2,800	870	74	1,100
	10/21/93 <sup>dup</sup>	8.58	13,000	3,200	960	53	820
	01/04/94	7.70	21,000	2,100	990	67	770
	01/04/94 <sup>dup</sup>	7.70	22,000	2,000	910	64	750
S-3	05/06/92	7.55	6,600	38	45	51	65
(Sampling Bi-annually 1st & 3rd Quarters)	07/29/92	7.53	5,800	18	29	12	60
	10/28/92	7.95	3,000	55	16	11	32
	01/19/93	6.12	3,100	<5	11	5.1	16
	04/29/93	7.27	3,000	31	<5	22	14
	07/22/93	7.62	2,600	3.1	23	43	53
	10/21/93	7.81	2,500	73	16	14	32
	01/04/94	7.49	4,800	13	<12.5	21	33
S-4	05/06/92	7.21	54	<0.5	<0.5	<0.5	<0.5
(Sampling Annually 1st Qtr)	07/29/92	8.13	67	<0.5	<0.5	<0.5	<0.5
	10/28/92	8.73	<50	<0.5	<0.5	<0.5	<0.5
	01/19/93	5.86	86	1.2	2.7	0.7	15
	04/29/93	7.02	<50	<0.5	<0.5	<0.5	<0.5
	04/29/93 <sup>dup</sup>	7.02	<50	<0.5	<0.5	<0.5	<0.5
	07/22/93	7.76	<50	<0.5	<0.5	<0.5	<0.5
	10/21/93	8.53	<50	<0.5	<0.5	<0.5	<0.5
	01/04/94	7.92	<50	<0.5	<0.5	<0.5	<0.5
S-5	05/06/92 <sup>FHC</sup>	14.31	---	---	---	---	---
(Sampled Quarterly)	07/29/92 <sup>FHC</sup>	14.26	---	---	---	---	---
	10/28/92 <sup>FHC</sup>	14.22	---	---	---	---	---

-- Table 2 continues on next page --



Table 2. Analytic Results for Ground Water, Former Shell Service Station, WIC #204-0079-0109, 999 San Pablo, Albany, California (continued)

Sample ID	Date	Depth to Water (ft)	TPH-G					X
			B	E	T	X		
			-----parts per billion (µg/L)-----					
	01/19/93 <sup>FHC</sup>	12.36	---	---	---	---	---	
	04/29/93 <sup>FHC</sup>	9.64	---	---	---	---	---	
	07/22/93 <sup>FHC</sup>	9.55	---	---	---	---	---	
	10/21/93 <sup>FHC</sup>	11.23	---	---	---	---	---	
	01/04/94 <sup>FHC</sup>	11.69	---	---	---	---	---	
S-6	05/06/92	8.27	7,100	330	110	29	210	
(Sampling Bi-	07/29/92	9.57	13,000	240	56	<50	780	
annually 1st	10/28/92	8.90	10,000	470	67	210	170	
& 3rd Quarters)	01/19/93	4.84	4,800	100	27	26	45	
	04/29/93	5.61	7,000	430	<12.5	20	42	
	07/22/93	6.56	5,800	260	65	120	150	
	10/21/93	8.73	5,500	270	120	69	140	
	01/04/94	7.14	7,100	180	63	58	62	
S-7	05/06/92	10.34	<50	<0.5	<0.5	<0.5	<0.5	
(Sampled	07/29/92	11.13	160	<0.5	<0.5	<0.5	<0.5	
Quarterly)	10/28/92	11.52	<50	<0.5	<0.5	<0.5	<0.5	
	01/19/93	8.68	50	1.1	1.9	0.6	9.2	
	04/29/93	9.90	<50	<0.5	<0.5	<0.5	<0.5	
	07/22/93 <sup>a</sup>	---	---	---	---	---	---	
	10/21/93	11.10	<50	<0.5	<0.5	<0.5	<0.5	
	01/04/94	10.40	<50	<0.5	<0.5	<0.5	<0.5	
	04/13/94	10.20	<50	1.4	<0.5	0.61	0.64	
	04/13/94 <sup>dup</sup>	10.20	<50	1.4	<0.5	0.61	0.66	
Trip Blank	04/29/93		<50	<0.5	<0.5	<0.5	<0.5	
	07/22/93		<50	<0.5	<0.5	<0.5	<0.5	
	10/21/93		<50	<0.5	<0.5	<0.5	<0.5	
	01/04/94		<50	<0.5	<0.5	<0.5	<0.5	
	04/13/94		<50	<0.5	<0.5	<0.5	<0.5	
DTSC MCLs			NE	1	680	10 <sup>b</sup>	1,750	

-- Table 2 continues on next page --



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Table 2. Analytic Results for Ground Water, Former Shell Service Station, WIC #204-0079-0109, 999 San Pablo, Albany, California (continued)

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Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015

B = Benzene by EPA Method 8020

E = Ethylbenzene by EPA Method 8020

T = Toluene by EPA Method 8020

X = Xylenes by EPA Method 602 or 8020

--- = Not analyzed

DTSC MCLs = California Department of Toxic Substances Control maximum contaminant levels for drinking water

NE = Not established

<n = Not detected at detection limits of n ppb

dup = Duplicate sample

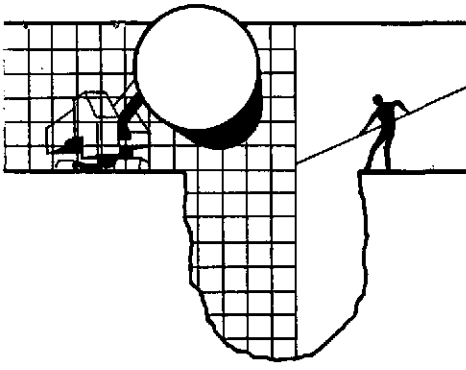
FHC = Floating hydrocarbons detected, no sample collected

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Notes:

a = Well inaccessible

b = DTSC recommended action level for drinking water; MCL not established



April 28, 1994

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

Attn: Daniel T. Kirk

SITE:  
Shell WIC #204-0079-0109  
999 San Pablo Avenue  
Albany, California

QUARTER:  
2nd quarter of 1994

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**QUARTERLY GROUNDWATER SAMPLING REPORT 940413-F-1**

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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**

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### **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 dewateres 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 site 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 Sequoia Analytical Laboratory in Redwood City, California. Sequoia Analytical Laboratory is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #1210.

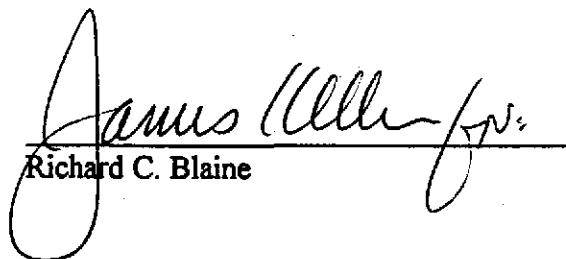
### Objective Information Collection

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

RCBlp

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 (m)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
				IMMISCIBLES LIQUID (FPZ) (feet)	IMMISCIBLES LIQUID ZONE (feet)				
S-1	4/13/94	TOB	-	NONE	-	-	-	8.02	11.89
S-2	4/13/94	TOB	ODOR	NONE	-	-	-	7.62	12.12
S-3	4/13/94	TOB	-	NONE	-	-	-	7.32	12.20
S-4	4/13/94	TOB	-	NONE	-	-	-	7.71	14.20
S-5	4/13/94	TOB	FREE PRODUCT	9.80	1.62	-	-	11.42	-
S-6	4/13/94	TOB	ODOR	NONE	-	-	-	7.21	15.19
S-7*	4/13/94	TOB	-	NONE	-	-	-	10.20	15.05

\* Sample DUP was a duplicate sample taken from well S-7.



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

**CHAIN OF CUSTODY RECORD**

Serial No: 910413F1

Date:   
Page 1 of 1

Silo Address: 999 San Pablo Ave., Albany

WICI: 204-0079-0109

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: [Signature]

Printed Name: Tom Flory

**Analysis Required**

TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/802)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N
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LAB: Anamatrix

CHECK ONE (IF BOX ONLY)	CI/DI	TURN AROUND TIME
Quality Monitoring <input checked="" type="checkbox"/> 6441		24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/> 6441		48 hours <input type="checkbox"/>
Soil Classfy/Disposal <input type="checkbox"/> 6442		15 days <input checked="" type="checkbox"/> (if needed)
Water Classfy/Disposal <input type="checkbox"/> 6443		Other <input type="checkbox"/>
Soil/Air Rem. of Syr. O & M <input type="checkbox"/> 6443		NOTE: Notify Lab as soon as possible of 24/48 hr. TAT.
Water Rem. of Syr. O & M <input type="checkbox"/> 6443		
Other <input type="checkbox"/>		

Sample ID	Date	Sludge	Soil	Water	Air	No. of conk.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/802)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS	
S-7 1257	4/13			X		3						X							
D48 -	4/13			X		3						X							
EB 1258	4/13			X		3						X							
TB LAD	4/13			X		2						X							

Relinquished by (signature): <u>[Signature]</u>	Printed Name: <u>Tom Flory</u>	Date: <u>4/13/03</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>S. WAGNER</u>	Date: <u>4/13/03</u>
Relinquished by (signature):	Printed Name:	Date:	Received (signature):	Printed Name:	Date:
Relinquished by (signature):	Printed Name:	Date:	Received (signature):	Printed Name:	Date:



# Sequoia Analytical

680 Chesapeake Drive  
1900 Bates Avenue, Suite L  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Concord, CA 94520  
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(510) 686-9600  
(916) 921-9600

FAX (415) 364-9233  
FAX (510) 686-9689  
FAX (916) 921-0100

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

Project: 940413F1, Shell, 999 San Pablo

Enclosed are the results from 4 water samples received at Sequoia Analytical on April 15, 1994. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
4D93001	Water, S-7	4/13/94	EPA 5030/8015 Mod./8020
4D93002	Water, Dup	4/13/94	EPA 5030/8015 Mod./8020
4D93003	Water, EB	4/13/94	EPA 5030/8015 Mod./8020
4D93004	Water, TB	4/13/94	EPA 5030/8015 Mod./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

Suzanne Chin  
Project Manager





Blaine Tech Services, Inc. 985 Timothy Drive San Jose, CA 95133 Attention: Jim Keller	Client Project ID: 940413F1, Shell, 999 San Pablo Sample Matrix: Water Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 4D93001	Sampled: Apr 13, 1994 Received: Apr 15, 1994 Reported: Apr 26, 1994
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**TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION**

Analyte	Reporting Limit µg/L	Sample I.D. 4D93001 S-7	Sample I.D. 4D93002 Dup	Sample I.D. 4D93003 EB	Sample I.D. 4D93004 TB
Purgeable Hydrocarbons	50	N.D.	N.D.	N.D.	N.D.
Benzene	0.50	1.4	1.4	N.D.	N.D.
Toluene	0.50	0.61	0.61	N.D.	N.D.
Ethyl Benzene	0.50	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.50	0.64	0.66	N.D.	N.D.
Chromatogram Pattern:		C4 - C12	C4 - C12	..	..

**Quality Control Data**

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0
Date Analyzed:	4/18/94	4/18/94	4/19/94	4/19/94
Instrument Identification:	GCHP-3	GCHP-3	GCHP-2	GCHP-17
Surrogate Recovery, %: (QC Limits = 70-130%)	99	109	102	101

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.  
 Analytes reported as N.D. were not detected above the stated reporting limit.

**SEQUOIA ANALYTICAL**

  
 Suzanne Chin  
 Project Manager



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

Client Project ID: 940413F1, Shell, 999 San Pablo  
 Matrix: Liquid

QC Sample Group: 4D93001-02

Reported: Apr 26, 1994

**QUALITY CONTROL DATA REPORT**

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel

MS/MSD Batch#:	4D65603	4D65603	4D65603	4D65603
Date Prepared:	-	-	-	-
Date Analyzed:	4/18/94	4/18/94	4/18/94	4/18/94
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Matrix Spike % Recovery:	93	91	90	90
Matrix Spike Duplicate % Recovery:	98	94	93	90
Relative % Difference:	5.2	3.2	3.3	0.0

LCS Batch#:	-	-	-	-
Date Prepared:	-	-	-	-
Date Analyzed:	-	-	-	-
Instrument I.D.#:	-	-	-	-
LCS % Recovery:	-	-	-	-

% Recovery Control Limits:	71-133	72-128	72-130	71-120
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**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.

SEQUOIA ANALYTICAL

*[Signature]*  
 Suzanne Chin  
 Project Manager



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

Client Project ID: 940413F1, Shell, 999 San Pablo  
Matrix: Liquid

QC Sample Group: 4D93003

Reported: Apr 26, 1994

**QUALITY CONTROL DATA REPORT**

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel

MS/MSD Batch#:	4D52206	4D52206	4D52206	4D52206
Date Prepared:	-	-	-	-
Date Analyzed:	4/19/94	4/19/94	4/19/94	4/19/94
Instrument I.D.#:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Matrix Spike % Recovery:	100	100	100	103
Matrix Spike Duplicate % Recovery:	110	110	110	110
Relative % Difference:	9.5	9.5	9.5	6.6

LCS Batch#:	-	-	-	-
Date Prepared:	-	-	-	-
Date Analyzed:	-	-	-	-
Instrument I.D.#:	-	-	-	-
LCS % Recovery:	-	-	-	-

% Recovery Control Limits:	71-133	72-128	72-130	71-120
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**Please Note:**

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SEQUOIA ANALYTICAL

Suzanne Chin  
Project Manager





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

Client Project ID: 940413F1, Shell, 999 San Pablo  
 Matrix: Liquid

QC Sample Group: 4D93004

Reported: Apr 26, 1994

**QUALITY CONTROL DATA REPORT**

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel

MS/MSD Batch#:	4D52209	4D52209	4D52209	4D52209
Date Prepared:	-	-	-	-
Date Analyzed:	4/19/94	4/19/94	4/19/94	4/19/94
Instrument I.D.#:	GCHP-17	GCHP-17	GCHP-17	GCHP-17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Matrix Spike % Recovery:	100	100	100	107
Matrix Spike Duplicate % Recovery:	110	110	110	110
Relative % Difference:	9.5	9.5	9.5	2.8

LCS Batch#:	-	-	-	-
Date Prepared:	-	-	-	-
Date Analyzed:	-	-	-	-
Instrument I.D.#:	-	-	-	-
LCS % Recovery:	-	-	-	-

% Recovery Control Limits:	71-133	72-128	72-130	71-120
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SEQUOIA ANALYTICAL

  
 Suzanne Chin  
 Project Manager

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