

# Canonie Environmental

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Canonie Environmental Services Corp.  
7901 Stoneridge Drive  
Suite 100  
Pleasanton, California 94588

Phone: 510-463-9117  
FAX: 510-463-2981

91-153-06

July 13, 1993

Mr. Scott Seery  
Senior Hazardous Materials Specialist  
Alameda County Health Care Services Agency  
Department of Environmental Health  
Hazardous Materials Program  
80 Swan Way, Room 200  
Oakland, CA 94621

Ground Water Monitoring Report  
Second Quarter 1993  
Garcia Enterprises, Inc. Site  
16211 East 14th Street  
San Leandro, California

Dear Mr. Seery:

This Ground Water Monitoring Report has been prepared by Canonie Environmental Services Corp. (Canonie) for the Garcia Enterprises, Inc., site located at 16211 East 14th Street in San Leandro, California. This report presents the results of ground water monitoring for the second quarter of 1993, as requested by the Alameda County Health Care Services Agency, Department of Environmental Health (County) in a letter dated November 16, 1992. Ground water monitoring is being performed to collect data to evaluate the potential impact to shallow ground water from petroleum hydrocarbons associated with two underground storage tanks (USTs) formerly located at the site.

## Introduction and Background

The Garcia Enterprises, Inc., site is located in San Leandro near the intersection of East 14th Street and 162nd Avenue (Figure 1). The current tenant of the property is Town and Country Liquors. The property was the former location of a car wash at which fuel was dispensed. Canonie performed removal of the USTs in July 1991 and preliminary site assessment activities in September 1992. A summary of remedial activities performed at the site may be referenced in a report entitled "Preliminary Site Assessment Report" (Canonie, November 1992).

During the preliminary site assessment activities in September, three ground water monitoring wells were constructed to monitor the former tank area (Figure 2). Continued ground water monitoring was requested by the County in their formal response to the Preliminary Site Assessment report in a letter dated November 16, 1993.

### Ground Water Monitoring Activities

This report presents the second round of the quarterly monitoring program. Sampling of the site's three ground water monitoring wells was performed on June 22, 1993.

### Piezometric Surface Monitoring

Prior to sampling, water levels were measured using a battery-powered sounder. A summary of water levels and measuring point elevations is given in Table 1. The measurements recorded in June indicate a gradient toward the northwest (Figure 2). However, the original measurement of water levels in September 1992 indicated a southwesterly gradient. The last two quarters have indicated an approximate 90° shift in the direction of ground water flow. The June water level measurements also indicated a decline in elevations of approximately 1-foot as compared to the last quarter.

### Chemical Monitoring


Following measurement of water levels, the wells were purged to prepare for sample collection. While purging, a minimum of three consecutive measurements of the indicator parameters pH, temperature, and conductivity were recorded immediately prior to sample collection. Three casing volumes were purged prior to sampling. A total of approximately 15 gallons of purge water was removed and placed in 55-gallon drums for temporary storage. The drums have been labeled nonhazardous, and the water is planned to be recycled through Gibson-Pilot in Redwood City.

Water samples were collected in triplicate in 40-milliliter volatile organic analysis (VOA) bottles and 1-liter amber glass containers for analysis for total petroleum hydrocarbons as gasoline (TPH-G), total petroleum hydrocarbons as diesel (TPH-D), and benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Methods 8015 modified and 602. Samples were labeled with the sample identification number, date, time, job number, and sampler's initials. Each sample was recorded on a chain-of-custody form which remained with the samples. The samples were immediately placed in an iced cooler and transported the same day to Sequoia Analytical in Redwood City for analysis.

A summary of the ground water analyses is given in Table 2. As shown in the table, only minor concentrations of TPH-G and TPH-D were detected: 0.170 and 0.160 parts per million (ppm), respectively, for Monitoring Well MW-1; 0.360 and 0.098 ppm for Monitoring Well MW-2; and 0.140 ppm THP-G for MW-3. TPH-D was nondetectable for MW-3, and toluene, ethyl benzene, and xylenes concentrations were nondetectable for all wells. The travel blank, shipped with the samples (Sample 200), indicated nondetectable concentrations of all analytes. Certified analytical results are attached.

No significant trends were noted. If you have any questions concerning this ground water monitoring report, please contact me or David Poole at (510) 463-9117.

Respectfully submitted,

  
James W. Babcock, Ph.D.  
Project Manager

JWB/hmt

Attachments

cc: A. Garcia, Garcia Enterprises, Inc.

**TABLE 1**

**GROUND WATER ELEVATIONS  
GARCIA ENTERPRISES, INC. SITE**

Well Number	Date Sampled	Units in Feet		
		Well Elevation TOC (NGVD)	Depth-to-Ground Water From TOC	Ground Water Elevation
MW-1	09/11/92	34.75	8.58	26.17
	03/04/93		6.90	27.85
	06/22/93		7.80	26.95
MW-2	09/11/92	35.26	9.13	26.13
	03/04/93		7.27	27.99
	06/22/93		8.30	26.96
MW-3	09/11/92	35.19	9.04	26.15
	03/04/93		7.03	28.16
	06/22/93		8.15	27.04

Notes:  
 TOC denotes top of casing.  
 NGVD denotes National Geodetic Vertical Datum.

TABLE 2

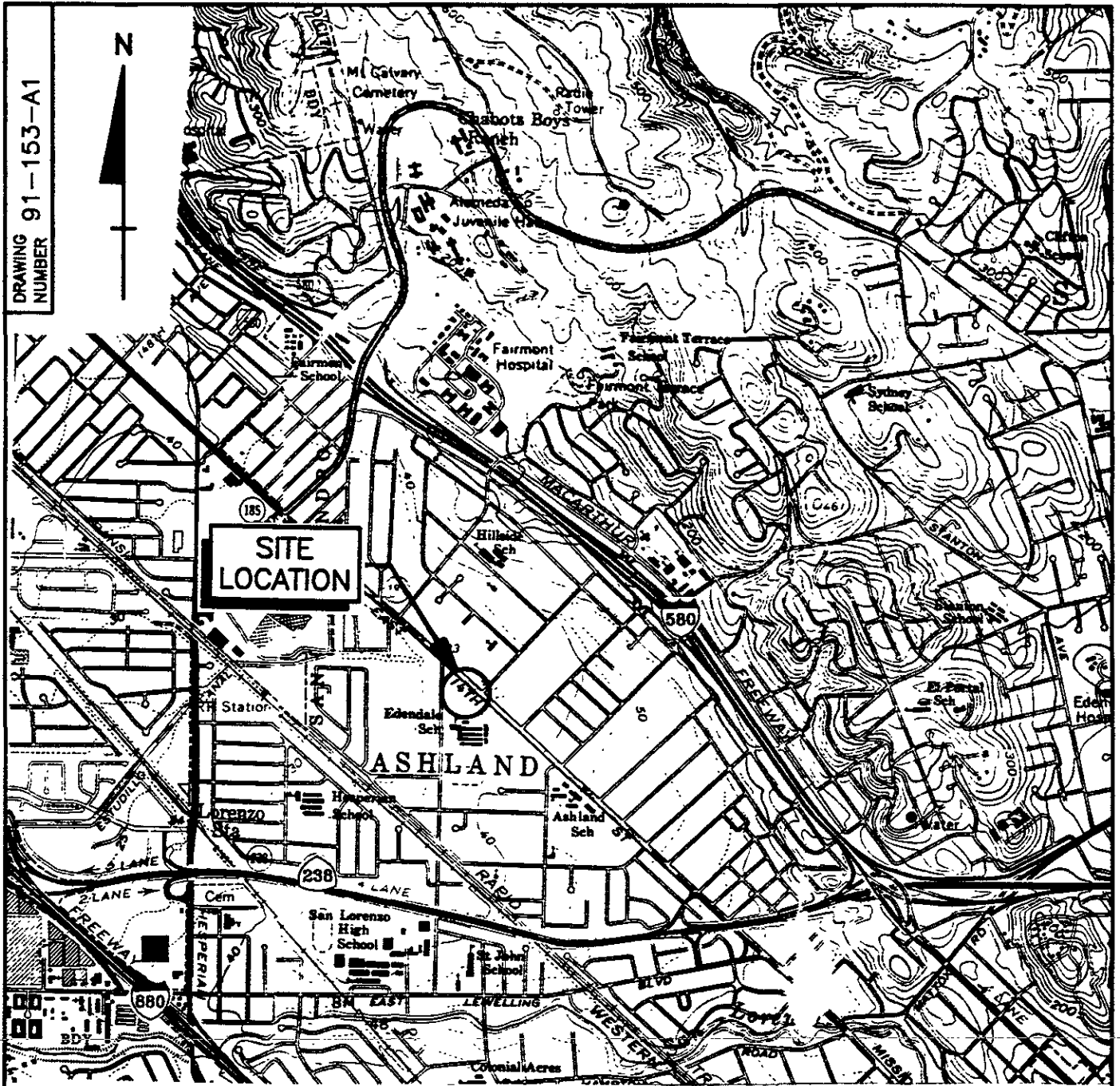
**SUMMARY OF CHEMICAL ANALYSES  
GARCIA ENTERPRISES, INC. SITE**

Sample Identification	Date Sampled	TPH-D (ppm)	TPH-G (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Xylenes (ppm)
MW-1	9/11/92	ND	ND	0.0026	ND	ND	ND
MW-1	3/4/93	0.110	0.170	ND	ND	ND	ND
MW-1	6/22/93	0.160	0.170	0.0012	ND	ND	ND
MW-2	9/11/92	ND	ND	ND	ND	ND	ND
MW-2	3/4/93	ND	ND	ND	ND	ND	ND
MW-2	6/22/93	0.098	0.360	0.0027	ND	ND	ND
MW-3	9/11/92	ND	0.055	0.0029	ND	ND	ND
MW-3	3/4/93	0.085	0.14	ND	ND	ND	ND
MW-3	6/22/93	ND	0.140	0.0015	ND	ND	ND

Notes:

- 1) ND indicates none detected at method detection limits.
- 2) NT denotes not tested.
- 3) TPH-D denotes total petroleum hydrocarbons - diesel range.
- 4) TPH-G denotes total petroleum hydrocarbons - gasoline range.

DRAWING NUMBER 91-153-A1



CALIFORNIA



QUADRANGLE LOCATION

SCALE



**REFERENCES:**

USGS 7.5 MIN TOPOGRAPHIC MAP  
 TITLED: HAYWARD & SAN LEANDRO, CALIFORNIA  
 DATED: 1959 (REV. 1980)

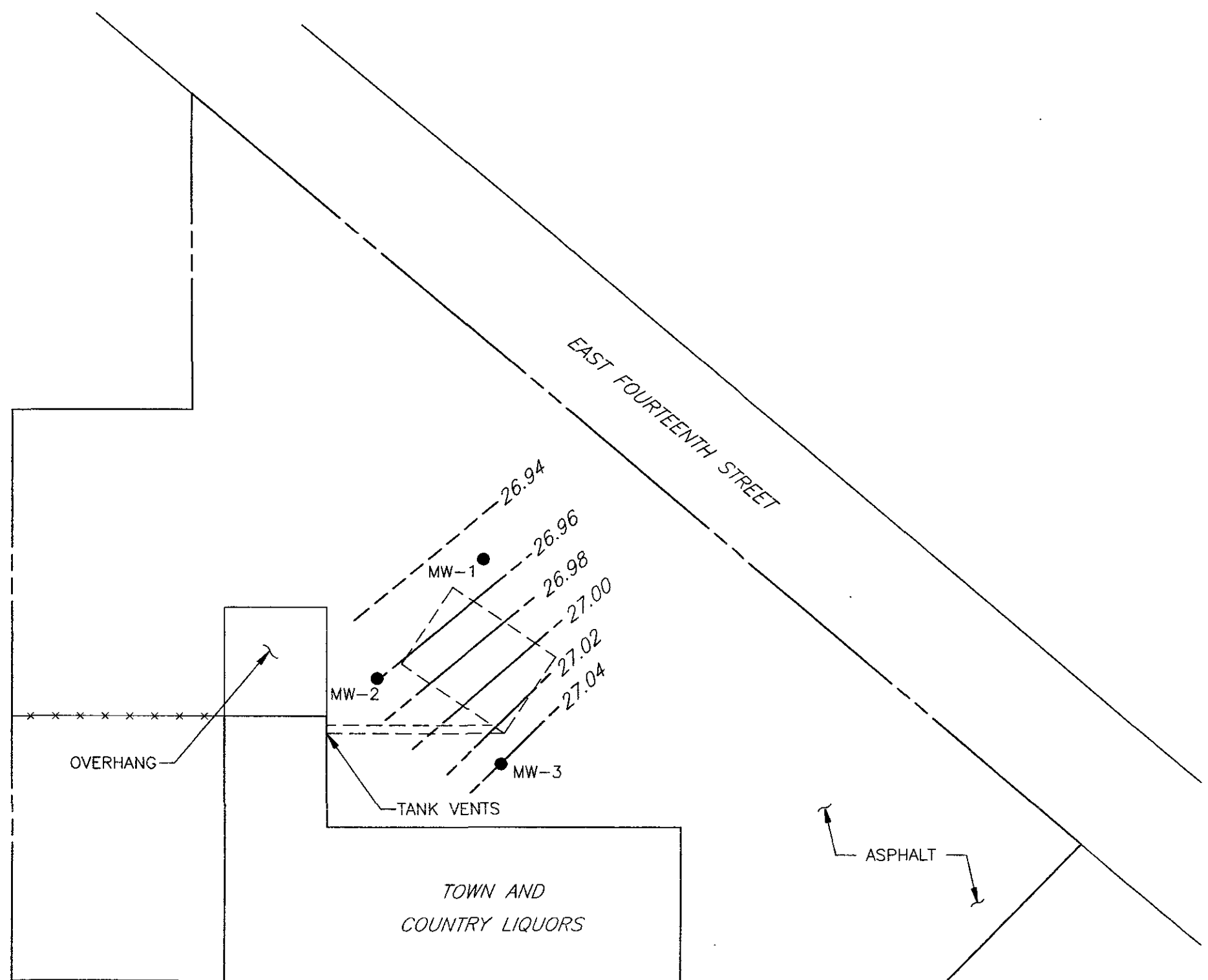
SITE LOCATION MAP  
 GARCIA ENTERPRISES SITE  
 SAN LEANDRO, CALIFORNIA

PREPARED FOR  
**GARCIA ENTERPRISES, INC.**  
 SAN LEANDRO, CALIFORNIA

**Canonie** Environmental

10-22-92	REVIEWED FOR REPORT	VZC	<i>[Signature]</i>	DATE: 6-24-91	FIGURE 1	DRAWING NUMBER 91-153-A1
No.	DATE	ISSUE / REVISION	DWN. BY/CK'D BY/APP'D BY	SCALE: AS SHOWN		

DRAWING NUMBER 91-153-B7

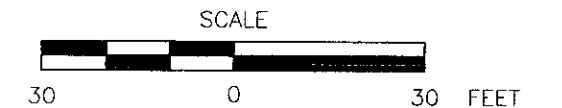


**LEGEND:**

- PROPERTY LINE
- - - - - APPROXIMATE LIMITS OF FORMER TANK EXCAVATION
- MW-1 MONITORING WELL LOCATION
- 26.96 — GROUND WATER CONTOUR, FEET ABOVE MEAN SEA LEVEL (MSL) JUNE 22, 1993

**NOTES:**

1. GROUND WATER CONTOURS ARE DASHED WHERE INFERRED.



MONITORING WELL LOCATIONS  
GARCIA ENTERPRISES SITE  
SAN LEANDRO, CALIFORNIA

PREPARED FOR  
GARCIA ENTERPRISES, INC.  
SAN LEANDRO, CALIFORNIA  
**Canonie Environmental**

3	7-14-93	ISSUED FOR REPORT	VZC	<i>[Signature]</i>	<i>[Signature]</i>
No.	DATE	ISSUE / REVISION	DWN BY	CK'D BY	AP'D BY

DATE: 10-20-92	FIGURE 2	DRAWING NUMBER 91-153-B7
SCALE: AS SHOWN		

ATTACHMENT

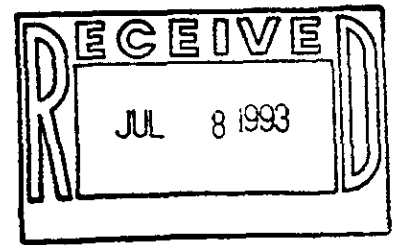
CERTIFIED ANALYTICAL REPORTS





# SEQUOIA ANALYTICAL

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



Canonie Environmental 7901 Stoneridge Drive, Suite 100 Pleasanton, CA 94588 Attention: Dave Poole	Client Project ID: 90-153-05, Garcia San Leandro Sample Matrix: Water Analysis Method: EPA 5030/8015/8020 First Sample #: 3FA7901	Sampled: Jun 22, 1993 Received: Jun 22, 1993 Reported: Jul 2, 1993
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## TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3FA7901 MW-1	Sample I.D. 3FA7902 MW-2	Sample I.D. 3FA7903 MW-3	Sample I.D. 3FA7904 200
Purgeable Hydrocarbons	50	170	360	140	N.D.
Benzene	0.50	1.2	2.7	1.5	N.D.
Toluene	0.50	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.50	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.50	N.D.	N.D.	N.D.	N.D.

Chromatogram Pattern:                      Discrete Peaks    Discrete Peaks    Discrete Peaks    --

### Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0
Date Analyzed:	7/1/93	7/1/93	7/1/93	7/1/93
Instrument Identification:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	71	52	81	99

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

### SEQUOIA ANALYTICAL

*V. Tague*  
Vickie Tague  
Project Manager



# SEQUOIA ANALYTICAL

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

Canonie Environmental 7901 Stoneridge Drive, Suite 100 Pleasanton, CA 94588 Attention: Dave Poole	Client Project ID: 90-153-05, Garcia San Leandro Sample Matrix: Water Analysis Method: EPA 3510/3520/8015 First Sample #: 3FA7901	Sampled: Jun 22, 1993 Received: Jun 22, 1993 Reported: Jul 2, 1993
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## TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 3FA7901 MW-1	Sample I.D. 3FA7902 MW-2	Sample I.D. 3FA7903 MW-3
Extractable Hydrocarbons	50	160	98	N.D.

Chromatogram Pattern:                      Discrete Peak      Discrete Peak      - -

### Quality Control Data

Report Limit			
Multiplication Factor:	1.0	1.0	1.0
Date Extracted:	6/28/93	6/28/93	6/28/93
Date Analyzed:	6/30/93	6/30/93	6/30/93
Instrument Identification:	GCHP-5	GCHP-5	GCHP-5

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

### SEQUOIA ANALYTICAL

*V. Tague*  
Vickie Tague  
Project Manager



# SEQUOIA ANALYTICAL

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

Canonie Environmental  
7901 Stoneridge Drive, Suite 100  
Pleasanton, CA 94588  
Attention: Dave Poole

Client Project ID: 90-153-05, Garcia San Leandro  
Matrix: Water

QC Sample Group: 3FA7901-04

Reported: Jul 2, 1993

## QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes	Diesel
<b>Method:</b>	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015
<b>Analyst:</b>	M. Nipp	M. Nipp	M. Nipp	M. Nipp	V. Nunzir
<b>Conc. Spiked:</b>	10	10	10	30	300
<b>Units:</b>	µg/L	µg/L	µg/L	µg/L	µg/L
<b>LCS Batch#:</b>	BLK070193	BLK070193	BLK070193	BLK070193	BLK062893
<b>Date Prepared:</b>	N/A	N/A	N/A	N/A	6/28/93
<b>Date Analyzed:</b>	7/1/93	7/1/93	7/1/93	7/1/93	6/29/93
<b>Instrument I.D.#:</b>	GCHP-2	GCHP-2	GCHP-2	GCHP-2	GCHP-5
<b>LCS % Recovery:</b>	86	86	85	87	84
<b>Control Limits:</b>	80-120	80-120	80-120	80-120	50-150

MS/MSD Batch #:	3FD4902	3FD4902	3FD4902	3FD4902	3FA5101
<b>Date Prepared:</b>	N/A	N/A	N/A	N/A	6/28/93
<b>Date Analyzed:</b>	7/1/93	7/1/93	7/1/93	7/1/93	6/29/93
<b>Instrument I.D.#:</b>	GCHP-2	GCHP-2	GCHP-2	GCHP-2	GCHP-5
<b>Matrix Spike % Recovery:</b>	95	95	95	97	84
<b>Matrix Spike Duplicate % Recovery:</b>	97	98	98	100	84
<b>Relative % Difference:</b>	2.1	3.1	3.1	3.0	0.0

SEQUOIA ANALYTICAL

Vickie Tague  
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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

# CANONIE ENVIRONMENTAL CHAIN-OF-CUSTODY RECORD

LAB PROJECT

(See Reverse for Instructions)

NO. \_\_\_\_\_

PROJECT NAME GARCIA SAN LEANDRO

SAMPLERS P. LEWIS  
(PRINT)  
Philip E Lewis  
(SIGN)

PROJECT NUMBER 90-153-05

RECORDER \_\_\_\_\_  
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES	SAMPLE DESCRIPTION CODES	TAT CODES
A. 40-ml VOA Vial	A. Ground Water F Oil	1. Standard
B. Glass Liter E. Brass Tube	B. Surface Water G Waste	2. 48 Hour
C. Plastic 500-ml F. Other _____	C. Leachate H Blank/Spike	3. 24 Hour
D. Plastic Liter	D. Rinseate I. Other _____	4. Other _____
	E. Soil/Sediment	

DATE	TIME	SAMPLE ID	Sample Container (letter code)	Sample Description (letter code)	NUMBER OF CONTAINERS AND PRESERVATION			ANALYSIS REQUESTED				TAT Requested (letter code)	Maximum Holding Time for Method Requested	Sample Stored at 4°C (check)	No VOA Releasates (check)	NOTES	LABORATORY USE ONLY		
					Unpreserved	HNO <sub>3</sub>	HCL	Field Filtered (check)	TPH-G	BTEX	TPH-D						ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT	NOTES
6-22-93	1155	MW-1	AA						X				14 DAY	X	X				9306A7901
↓	1225	MW-2	↓	↓	↓	↓	↓	↓	↓				↓	↓	↓				02
↓	1255	MW-3	↓	↓	↓	↓	↓	↓	↓				↓	↓	↓				03
↓		200	↓	H	↓	↓	↓	↓	↓				↓	↓	↓				04
↓	1155	MW-1	B	I					X				7 DAY EXT		N/A				
↓	1225	MW-2	↓	↓	↓	↓	↓	↓	↓				↓	↓	↓				
↓	1255	MW-3	↓	↓	↓	↓	↓	↓	↓				↓	↓	↓				

Relinquished by: (Signature)		Received By: (Signature)		Date	Time
<u>Philip E Lewis</u>					
Relinquished By: (Signature)		Received By: (Signature)		Date	Time
Relinquished By: (Signature)		Received By: (Signature)		Date	Time

Method of Shipment	Description of Transport Container	Other Chains-Of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
<u>HAND Delivery</u>	<u>Blue cooler</u>	<u>NONE</u>	<u>Philip E Lewis</u>	<u>6-22-93</u>	<u>1414</u>	<u>Phufay</u>	<u>6-22-93</u>	<u>1414</u>

Send Lab Results to (Name): DAVE POOLE (Check Office Below) Verbal Requested: Yes  No

- |  |  |  |  |   |  |
|--|--|--|--|---|--|
| <input type="checkbox"/> ATLANTA<br>TEL (404) 951-0055<br>FAX (404) 956-9364 | <input type="checkbox"/> DENVER<br>TEL (303) 790-1747<br>FAX (303) 799-0186  | <input type="checkbox"/> IRVINE<br>TEL (714) 757-1755<br>FAX (714) 757-0960          | <input type="checkbox"/> MT. VIEW<br>TEL (415) 980-1640<br>FAX (415) 980-0739              | <input type="checkbox"/> PORTER<br>TEL (219) 926-8651<br>FAX (219) 926-7169   | <input type="checkbox"/> OTHER _____<br>TEL _____<br>FAX _____ |
| <input type="checkbox"/> BOZEMAN<br>TEL (406) 586-9496<br>FAX (406) 586-9724 | <input type="checkbox"/> HOUSTON<br>TEL (713) 556-1666<br>FAX (713) 556-0666 | <input type="checkbox"/> KING OF PRUSSIA<br>TEL (215) 337-2551<br>FAX (215) 337-0560 | <input checked="" type="checkbox"/> PLEASANTON<br>TEL (510) 463-9117<br>FAX (510) 463-2981 | <input type="checkbox"/> PORTLAND<br>TEL (503) 241-0282<br>FAX (503) 241-0486 | <input type="checkbox"/> OTHER _____<br>TEL _____<br>FAX _____ |

CANONIE ENVIRONMENTAL SERVICES, CORP. • 6300 SOUTH SYRACUSE WAY, SUITE 300 • ENGLEWOOD, CO 80111 • TELEPHONE (303) 290-8336 • FAX (303) 290-8013

SERIAL NO. **19122**

WHITE: Field Copy    YELLOW: Project Copy    PINK: Laboratory Copy