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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

September 27, 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
Third 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 third 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 1992, three ground water monitoring wells were constructed to monitor the former tank area (Figure 2). Continuation of 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 third round of the quarterly monitoring program. Sampling of the site's three ground water monitoring wells was performed on September 9, 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 September indicate a gradient toward the west to northwest (Figure 2). However, the original measurement of water levels in September 1992 indicated a southwesterly gradient. The previous two quarters have indicated a northwesterly ground water flow direction. The September water level measurements also indicated slight decline in elevations of approximately three-tenths of a 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: 0.210 and 0.065 parts per million (ppm), respectively, for Monitoring Well MW-1; 0.380 ppm and nondetectable for Monitoring Well MW-2; and 0.140 and 0.120 ppm for MW-3. The chromatograph pattern for the total petroleum hydrocarbons detected are noted as discrete peaks, which may indicate that the contributing source was not diesel or gasoline. Benzene concentrations were 0.00086 ppm for MW-1, 0.0016 ppm for MW-2, and 0.00095 ppm for MW-3. Toluene, ethyl benzene, and xylenes concentrations were nondetectable for all wells. The travel blank, shipped with the samples (Sample 277), 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	9/11/92	34.75	8.58	26.17
	3/04/93		6.90	27.85
	6/22/93		7.80	26.95
	9/9/93		8.12	26.63
MW-2	9/11/92	35.26	9.13	26.13
	3/04/93		7.27	27.99
	6/22/93		8.30	26.96
	9/9/93		8.66	26.60
MW-3	9/11/92	35.19	9.04	26.15
	3/04/93		7.03	28.16
	6/22/93		8.15	27.04
	9/9/93		8.52	26.67

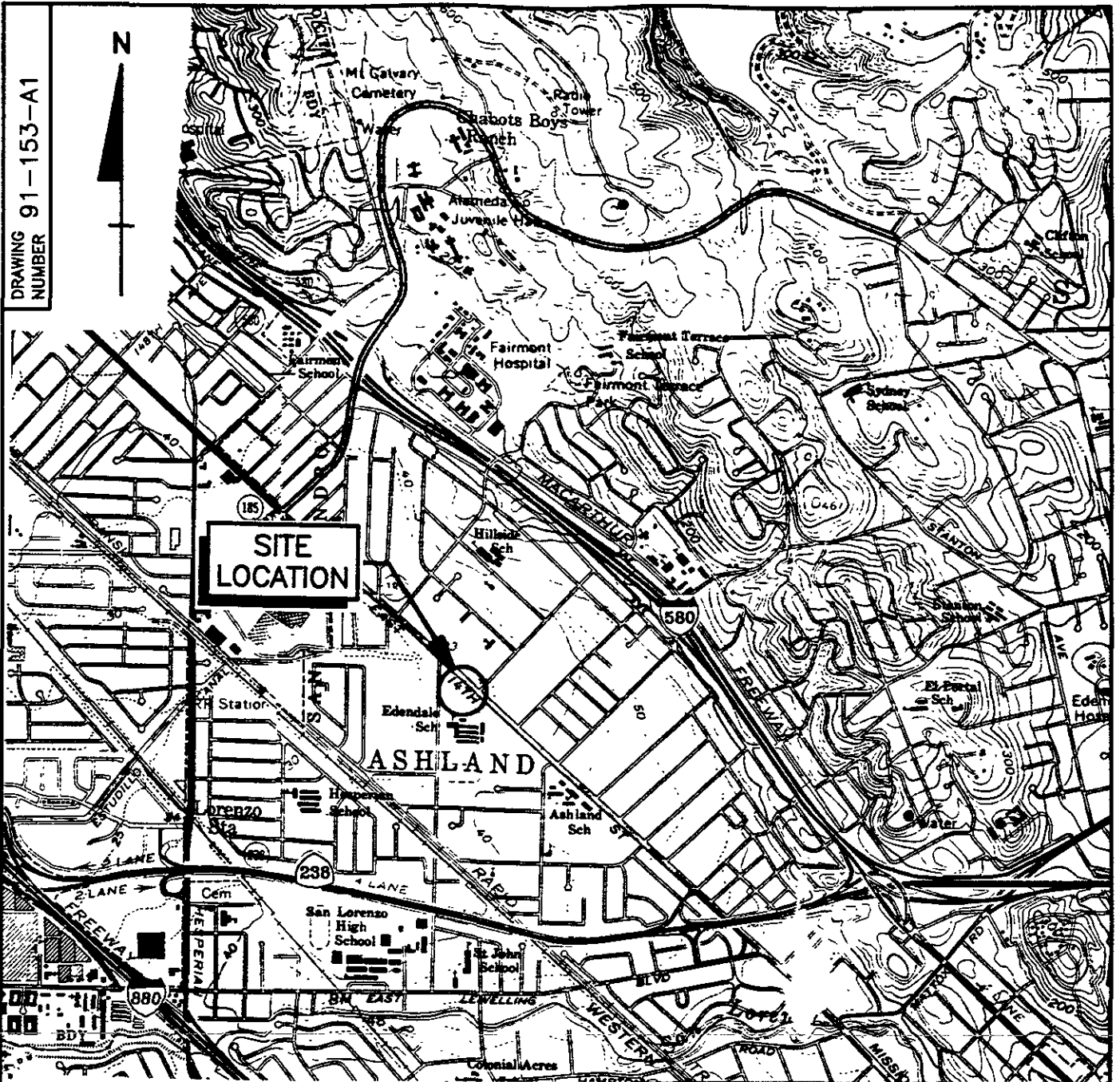
Notes:
 TOC denotes top of casing.
 NGVD denotes National Geodetic Vertical Datum.

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-1	9/9/93	0.065 <i>65</i>	0.210 <i>210</i>	0.00086 <i>0.86</i>	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-2	9/9/93	ND	0.380 <i>380</i>	0.0016 <i>1.6</i>	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
MW-3	9/9/93	0.120	0.140	0.00095	ND	ND	ND
Notes:		<i>120</i>	<i>140</i>	<i>0.86</i>			
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)

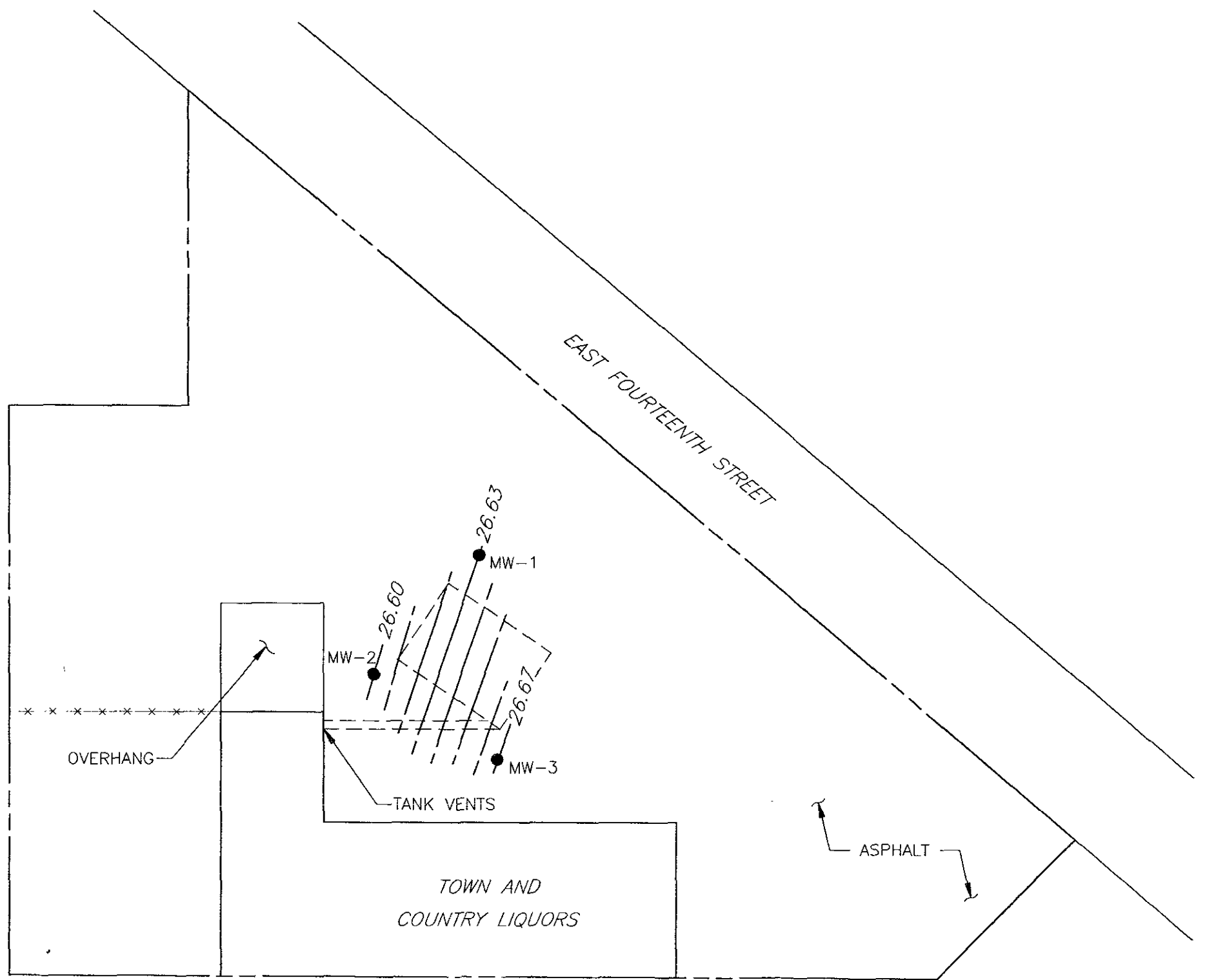
SITE LOCATION MAP
 GARCIA ENTERPRISES SITE
 SAN LEANDRO, CALIFORNIA

PREPARED FOR
GARCIA ENTERPRISES, INC.
 SAN LEANDRO, CALIFORNIA

Canonie Environmental

10-22-92	ISSUED FOR REPORT	VZC	DATE: 6-24-91	FIGURE 1	DRAWING NUMBER 91-153-A1
No.	DATE	ISSUE / REVISION	OWN. BY/CKD BY/APD BY		

DRAWING NUMBER
91-153-B9

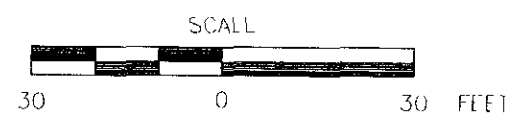


LEGEND:

- — — — — PROPERTY LINE
- - - - - APPROXIMATE LIMITS OF FORMER TANK EXCAVATION
- MW-1 MONITORING WELL LOCATION
- 26.60 — GROUND WATER CONTOUR, FEET ABOVE MEAN SEA LEVEL (MSL) SEPTEMBER 9, 1993

NOTES:

1. GROUND WATER CONTOURS ARE DASHED WHERE INFERRED.



MONITORING WELL LOCATIONS
GARCIA ENTERPRISE SITE
SAN LEANDRO, CALIFORNIA
PREPARED FOR
GARCIA ENTERPRISES, INC.
SAN LEANDRO, CALIFORNIA
Canonie Environmental

3	28 93	ISSUED FOR REPORT	VZC	<i>[Signature]</i>
No	DATE	ISSUE / REVISION	OWN BY	CK'D BY AND BY

DATE	9-23-93	FIGURE 2	DRAWING NUMBER
SCALE	AS SHOWN		91-153-B9

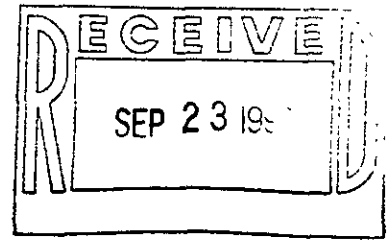
ATTACHMENT

CERTIFIED ANALYTICAL REPORTS



SEQUOIA ANALYTICAL

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



Canonie Environmental	Client Project ID: 91-153-06, Garcia San Leandro	Sampled: Sep 9, 1993
7901 Stoneridge Drive, Suite 100	Sample Matrix: Water	Received: Sep 9, 1993
Pleasanton, CA 94588	Analysis Method: EPA 5030/8015/8020	Reported: Sep 22, 1993
Attention: Dave Poole	First Sample #: 3144501	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3144501 MW-1	Sample I.D. 3144502 MW-3	Sample I.D. 3144503 MW-2	Sample I.D. 3144504 277
Purgeable Hydrocarbons	50	210	140	380	N.D.
Benzene	0.50	0.86	0.95	1.6	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:	9/18/93	9/18/93	9/18/93	9/18/93
Instrument Identification:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	43*	70	196*	88
*Matrix effects confirmed.				

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

SEQUOIA ANALYTICAL

Vickie Tague
Vickie Tague
Project Manager



SEQUOIA ANALYTICAL

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

Canonie Environmental	Client Project ID: 91-153-06, Garcia San Leandro	Sampled: Sep 9, 1993
7901 Stoneridge Drive, Suite 100	Sample Matrix: Water	Received: Sep 9, 1993
Pleasanton, CA 94588	Analysis Method: EPA 3510/3520/8015	Reported: Sep 22, 1993
Attention: Dave Poole	First Sample #: 3144501	

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 3144501 MW-1	Sample I.D. 3144502 MW-3	Sample I.D. 3144503 MW-2
Extractable Hydrocarbons	50	65	120	N.D.
Chromatogram Pattern:		Discrete Peaks	Discrete Peaks	--

Quality Control Data

Report Limit			
Multiplication Factor:	1.0	1.0	1.0
Date Extracted:	9/16/93	9/13/93	9/13/93
Date Analyzed:	9/20/93	9/15/93	9/15/93
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

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: 91-153-06, Garcia San Leandro
Matrix: Water

QC Sample Group: 3144501-4

Reported: Sep 22, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. MirafTAB	J. MirafTAB	J. MirafTAB	J. MirafTAB
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	BLK091893	BLK091893	BLK091893	BLK091893
Date Prepared:	-	-	-	-
Date Analyzed:	9/18/93	9/18/93	9/18/93	9/18/93
Instrument I.D.#:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
LCS % Recovery:	99	98	98	100
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	3163601	3163601	3163601	3163601
Date Prepared:	-	-	-	-
Date Analyzed:	9/18/93	9/18/93	9/18/93	9/18/93
Instrument I.D.#:	GCHP-2	GCHP-2	GCHP-2	GCHP-2
Matrix Spike % Recovery:	96	95	96	97
Matrix Spike Duplicate % Recovery:	97	96	99	97
Relative % Difference:	1.0	1.0	3.1	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.



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

Client Project ID: 91-153-06, Garcia San Leandro
Matrix: Water

QC Sample Group: 3144501

Reported: Sep 22, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Diesel
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Method: EPA 8015
Analyst: V. Harabajahian
Conc. Spiked: 300
Units: µg/L

LCS Batch#: BLK091693

Date Prepared: 9/16/93
Date Analyzed: 9/20/93
Instrument I.D.#: GCHP-5

LCS % Recovery: 52

Control Limits: 50-150

MS/MSD Batch #: 3145301

Date Prepared: 9/16/93
Date Analyzed: 9/20/93
Instrument I.D.#: GCHP-5

Matrix Spike % Recovery: *

Matrix Spike Duplicate % Recovery: *

Relative % Difference: *

*MS/MSD results affected by sample matrix.

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.



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: 91-153-06, Garcia San Leandro

Matrix: Water

QC Sample Group: 3144502-3

Reported: Sep 22, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Diesel
----------------	--------

Method: EPA 8015

Analyst: V. Harabajahian

Conc. Spiked: 300

Units: µg/L

LCS Batch#: BLK091393

Date Prepared: 9/13/93

Date Analyzed: 9/14/93

Instrument I.D.#: GCHP-5

LCS %

Recovery: 65

Control Limits: 50-150

MS/MSD

Batch #: 3130315

Date Prepared: 9/13/93

Date Analyzed: 9/14/93

Instrument I.D.#: GCHP-5

Matrix Spike

% Recovery: 95

Matrix Spike

**Duplicate %
Recovery:** 90

Relative %

Difference: 5.4

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.

3144501.CAN <5>

CANONIE ENVIRONMENTAL CHAIN-OF-CUSTODY RECORD

(See Reverse for Instructions)

LAB PROJECT NO. _____

PROJECT NAME GARCIA SAN LEANDRO SAMPLERS P. LEWIS

PROJECT NUMBER 91-153-06

(PRINT)
Phil Lewis
(SIGN)

RECORDER _____
(SIGN)

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

DATE	TIME	SAMPLE ID	Sample Container (letter code)	Sample Description (letter code)	NUMBER OF CONTAINERS AND PRESERVATION			Field Filtered (Check)	ANALYSIS REQUESTED				TAT Requested (letter code)	Maximum Holding Time for Method Requested	Sample Stored at 4°C No VOA Inspace (Check)	NOTES	LABORATORY USE ONLY		
					Unpreserved	HNO ₃	HCL		TPH-G	STEX	TPH-D	ASSIGNED BOTTLE NUMBERS					SAMPLE CONDITION UPON RECEIPT	NOTES	
9.9.93	1400	MW-1	A	A			3		X	X			1	140A	X				9309445 01
	1432	MW-3							X	X									02
	1502	MW-2							X	X									03
		277							X	X									04
	1400	MW-1	B	I										7 Day Ext	NA				01
	1432	MW-3																	02
	1502	MW-2																	03

NOTES / MISCELLANEOUS	Relinquished by: (Signature) <u>Phil Lewis</u>	Received By: (Signature)	Date	Time
	Relinquished By: (Signature)	Received By: (Signature)	Date	Time
	Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment <u>HAND Delivery</u>	Description of Transport Container <u>Blue cooler</u>	Other Chains-Of-Custody Transported with this Chain (by Serial No.) <u>NONE</u>	Dispatched By: (Signature) <u>Phil Lewis</u>	Date <u>9.9.93</u>	Time <u>1600</u>	Received for lab By: (Signature) <u>Stenstrom</u>	Date <u>9-9-93</u>	Time <u>1555</u>
Send Lab Results to (Name): <u>DAVE POOLE</u> (Check Office Below) Verbals Requested: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>								

- | | | | | | |
|--|--|--|--|---|--|
| <input type="checkbox"/> ATLANTA
TEL (404) 951-0055
FAX (404) 956-9364 | <input type="checkbox"/> DENVER
TEL (303) 790-1747
FAX (303) 799-0186 | <input type="checkbox"/> IRVINE
TEL (714) 757-1755
FAX (714) 757-0960 | <input type="checkbox"/> MT. VIEW
TEL (415) 960-1640
FAX (415) 960-0739 | <input type="checkbox"/> PORTER
TEL (219) 926-8651
FAX (219) 926-7169 | <input type="checkbox"/> OTHER _____
TEL _____
FAX _____ |
| <input type="checkbox"/> BOZEMAN
TEL (406) 586-9496
FAX (406) 586-9724 | <input type="checkbox"/> HOUSTON
TEL (713) 556-1666
FAX (713) 556-0666 | <input type="checkbox"/> KING OF PRUSSIA
TEL (215) 337-2551
FAX (215) 337-0560 | <input checked="" type="checkbox"/> PLEASANTON
TEL (510) 463-9117
FAX (510) 463-2981 | <input type="checkbox"/> PORTLAND
TEL (503) 241-0282
FAX (503) 241-0486 | <input type="checkbox"/> OTHER _____
TEL _____
FAX _____ |