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REPORT FOR SECOND QUARTER 2001 GROUNDWATER MONITORING AT

A&C Auto Service
186 E. Lewelling Boulevard
San Lorenzo, California

Prepared for

Mr. Carl Graffenstatte
Graffenstatte Property

Prepared by

Sierra Environmental, Inc.

July 2, 2001
Project 01-137.03

Sierra Environmental, Inc.
Environmental Consultants

July 2, 2001
Project 01-137.03

Mr. Carl Graffenstatte
P.O. Box 97397
Tacoma, WA 98497

Subject: Report for Second Quarter 2001 Groundwater Monitoring at A&C Auto Service, 186 E. Lewelling Boulevard, San Lorenzo, California

Dear Mr. Graffenstatte:

Sierra Environmental, Inc. (Sierra) is pleased to submit this report summarizing the results of the second quarter 2001 groundwater monitoring event which we conducted at the subject location, hereafter, referred to as Site. Site location is shown in Figure 1. This monitoring event was requested by Alameda County Health Care Services (ACHCS) in a letter dated February 23, 2001. As part of a case closure procedure, ACHCS requested that quarterly groundwater monitoring should be resumed at the Site. The purpose of the groundwater monitoring is to determine whether gasoline constituents in groundwater beneath the Site remain stable and decrease with natural attenuation.

Sierra obtained and recorded groundwater data, and collected groundwater samples from three groundwater monitoring wells (MW1 through MW3) at the Site for chemical analysis. Sierra submitted the samples to Entech Analytical Labs, Inc. (Entech) of Santa Clara, California. Entech is a State-certified analytical laboratory (ELAP # 1-2346).

BACKGROUND

On September 5, 1990, three underground storage tanks (USTs) were removed from the Site. The USTs consisted of two 4,000-gallon gasoline and one 350-gallon waste oil tanks. The approximate location of the USTs is shown in the enclosed Figure 2. After removal, four soil samples were collected from beneath the gasoline tanks. One soil sample was also collected from beneath the waste oil tank.

2084 Alameda Way, Suite 201
San Jose, California 95126
Phone (408) 248-3700
Fax (408) 248-4700

Up to 4,000 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHG) and 1.3 ppm benzene were detected in the soil samples collected from beneath the gasoline tanks.

On June 14 and 15, 1994, CET Environmental Services, Inc. (CET) constructed groundwater monitoring wells MW1, MW2, and MW3 to evaluate groundwater condition beneath the Site. CET performed the last groundwater monitoring event in September 11, 1995. The results "Third Quarter 1995 Groundwater Monitoring Report" indicated that groundwater depths ranged between 15.37 to 16. 20 feet bellow top of well casings with a west/northwesterly flow direction. Analytical results showed 0.05 ppm, 39 ppm, and 49 ppm TPHG in groundwater samples collected from MW1 through MW3, respectively.

Sierra understands that CET performed a precision off-site soil and groundwater sampling as part of delineating groundwater impact at the Site on October 17, 1995. According to Plate 2 provided by CET, up to 21 ppm TPHG and 0.088 ppm benzene were detected in the groundwater samples collected off-site, near or at Lewelling Boulevard during this sampling event. Sierra could not obtain a copy of the CET report for this sampling event, because Ms. Young has not paid CET's invoices.

On April 16, 1999, Sierra Environmental, Inc. performed one groundwater monitoring episode at the Site. Groundwater was measured at approximately 12 to 13 feet below top of casings with a southeast low direction. 0.16 ppm, 50 ppm, and 16 ppm TPHG were detected in MW1 through MW3, respectively. 25 parts per billion (ppb) and 10 ppb benzene were detected in MW2 and MW3 respectively. No methyl tertiary butyl ether (MTBE) was detected in any of the groundwater samples.

On March 21, 2001, Sierra's field personnel measured the groundwater levels at MW1 through MW3 using an electronic sounder. Depth of groundwater ranged approximately 13.5 to 14.5 below top of the well casings. Groundwater flow direction remained to be toward southwest with a gradient of 0.001 ft/ft. Table I presents the groundwater measurement data.

GROUNDWATER MONITORING

On June 26, 2001, Sierra's field personnel measured the groundwater levels at MW1 through MW3 using an electronic sounder. Depth of groundwater ranged approximately 15 to 15.5 below top of the well casings. Groundwater flow direction was changed toward southeast with a gradient of 0.02 ft/ft. Table I presents the groundwater measurement data.

Sierra's field personnel purged the wells using bailers. pH, temperature, and conductivity of groundwater was recorded during the purging activities to affirm that

groundwater in the wells have stabilized. After completion of the purging, groundwater samples MW1 through MW3 were collected from the wells. After collection, the groundwater from each well was transferred into clean volatile organic analysis (VOA) vials. The VOAs were sealed with Teflon®-septum screw caps, labeled, placed in a cooler, and delivered to Entech with chain-of-custody documentation.

All sampling and measurement equipment were washed with Liqui-Nox® (a phosphate free laboratory detergent), and rinsed with tap water at each measurement and sampling interval. Purged and wash water were stored in a 55-gallon drum at a designated location at the Site. Sierra's quality control/quality assurance (QA/QC) protocol is presented in Appendix A.

CHEMICAL ANALYSIS

The samples were analyzed for TPHG using the United States Environmental Protection Agency (EPA) modified method 8015, and for benzene, toluene, ethyl benzene, and total xylenes (BTEX) using EPA method 8020. Additionally, the samples were analyzed for fuel oxygenates using EPA method 8260B. Certified analytical results and chain-of-custody documentation are presented in Appendix B.

ANALYTICAL RESULTS

The analytical result for the water samples showed a decreasing trend of TPHG, and no detectable concentrations of benzene and MTBE in the groundwater beneath the Site.

Table II presents Summary of the analytical results.

CONCLUSION AND RECOMMENDATIONS

The groundwater data obtained during this monitoring event suggest that natural attenuation has reduced TPHG in the groundwater beneath the Site. No benzene or MTBE were detected in any of the groundwater samples. To confirm that this trend will continue, Sierra recommends to continue with the third quarter 2001 groundwater monitoring.

LIMITATIONS

The content and conclusion provided by Sierra in this report are based on information collected during its assessment/monitoring, which include, but are not limited to field observations and analytical results for the groundwater samples collected at the Site.

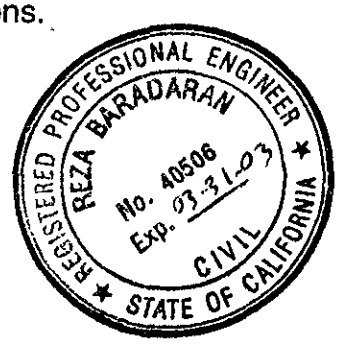
Sierra assumes that the samples collected and laboratory results are reasonably representative of the whole Site, which may not be the case at unsampled areas.

This assessment/monitoring was performed in accordance with generally accepted principles and practices of environmental engineering and assessment in Northern California at the time of the work. This report presents our professional opinion based on our findings, technical knowledge, and experience working on similar projects. No warranty, either expressed or implied, is made. The conclusions presented are based on the analytical results and current regulatory requirements. We are not responsible for the impact of any changes in environmental standards or regulations in the future.

Sierra appreciates to have the opportunity serving you on this project. Please feel welcome to call us if you have questions.

Very Truly Yours,

Sierra Environmental, Inc.



Reza Baradaran, PE, GE
Principal

Mitch Hajiaghai, REA II, CAC
Principal

Attachments:

Table I	-	Groundwater Elevation Data
Table II	-	Analytical Results for Groundwater Samples
Figure 1	-	Site Location Map
Figure 2	-	Site Plan
Figure 3	-	Groundwater Elevations and Gradient
Appendix A	-	QA/QC Protocol
Appendix B	-	Certified Analytical Results and Chain-of-Custody Documentation

cc: Mr. Amir Gholami, ACEH (1 Copy)
Mr. Craig Ellis, Esq. (1 Copy)

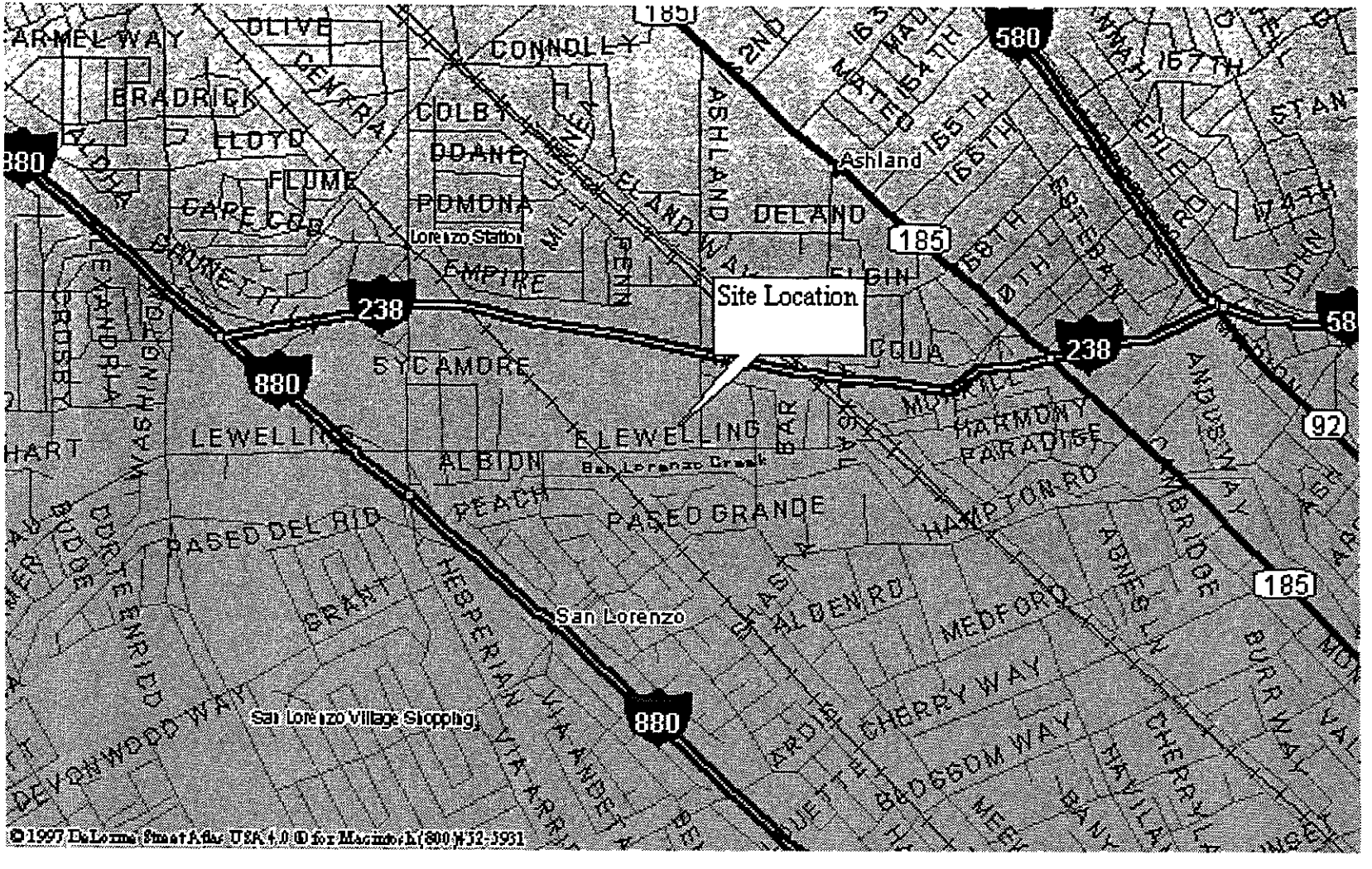
R01-137.02\2nd QGWM\ AF07022001

TABLE I
GROUNDWATER ELEVATION DATA

Well ID	Measurement Date	Well Casing Diameter (in)	Well Casing Elevation (ft)	Depth to Water[1] (ft)	Water Table[2] Elevation (ft)	Groundwater Flow Direction
MW1	6-23-94	2	44.88	17.37	27.51	NW
	3-15-95			13.47	31.41	W-SW
	6-01-95			13.35	31.53	W-NW
	9-11-95			15.37	29.51	W-NW
	4-16-99			12.05	32.83	W-SW
	3-21-01			13.59	31.29	W-SW
	6-26-01			14.72	30.16	NE
MW2	6-23-94	2	45.26	16.75	28.51	NW
	3-15-95			13.74	31.52	W-SW
	6-1-95			13.52	31.74	W-NW
	9-11-95			15.58	29.68	W-NW
	3-21-01			13.81	31.45	W-SW
	6-26-01			15.55	29.71	NE
MW3	6-23-94	2	45.81	16.55	29.26	NW
	3-15-95			14.43	31.38	W-SW
	6-1-95			14.16	31.65	W-NW
	9-11-95			16.20	29.61	W-NW
	3-21-01			14.44	31.37	W-SW
	6-26-01			14.97	30.84	NE

1. Depths to groundwater were measured to the top of the well casings
2. Water table elevations were measured in relation to the mean sea level (MSL)

NOTE: Top of the well casings were surveyed relative to a known benchmark referenced to mean sea level (MSL) by CET.



SIERRA ENVIRONMENTAL, INC.
Environmental Consultants
2084 Alameda Way, Suite 201, San Jose, CA 95126
Phone [408]248-3700 • Fax [408] 248-4700

Site Location Map

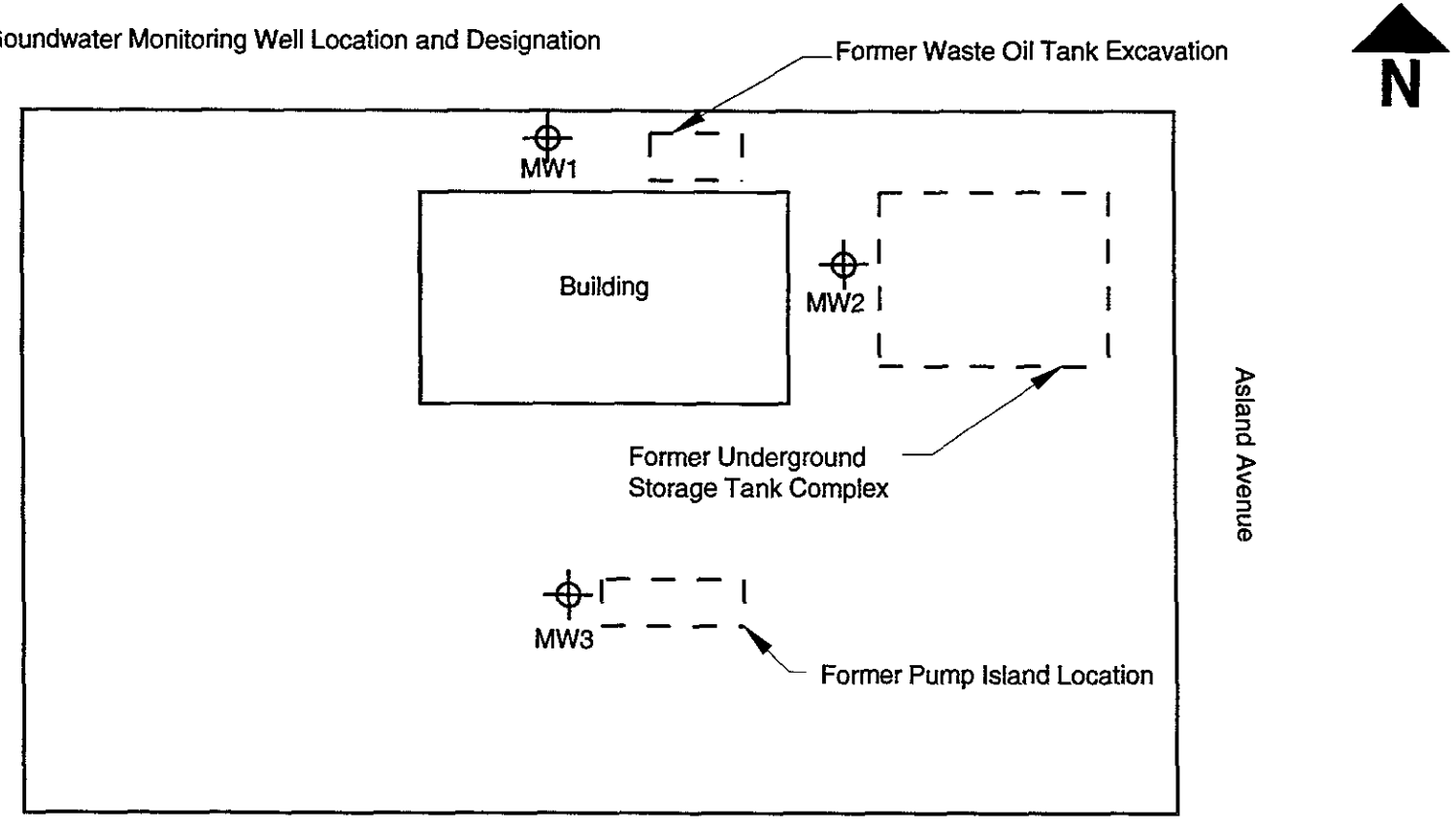
Second Quarter 2001 Groundwater Monitoring
A & C Auto Service

186 E. Lewelling Boulevard, San Lorenzo, California

FIGURE
1
July 2, 2001
Project 01-137.03

LEGEND

MW1 Goundwater Monitoring Well Location and Designation



Approximate Scale: 1' = 20'

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Environmental Consultants
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Phone [408]248-3700 • Fax [408] 248-4700

Site Plan

Second Quarter 2001 Groundwater Monitoring
A & C Auto Service

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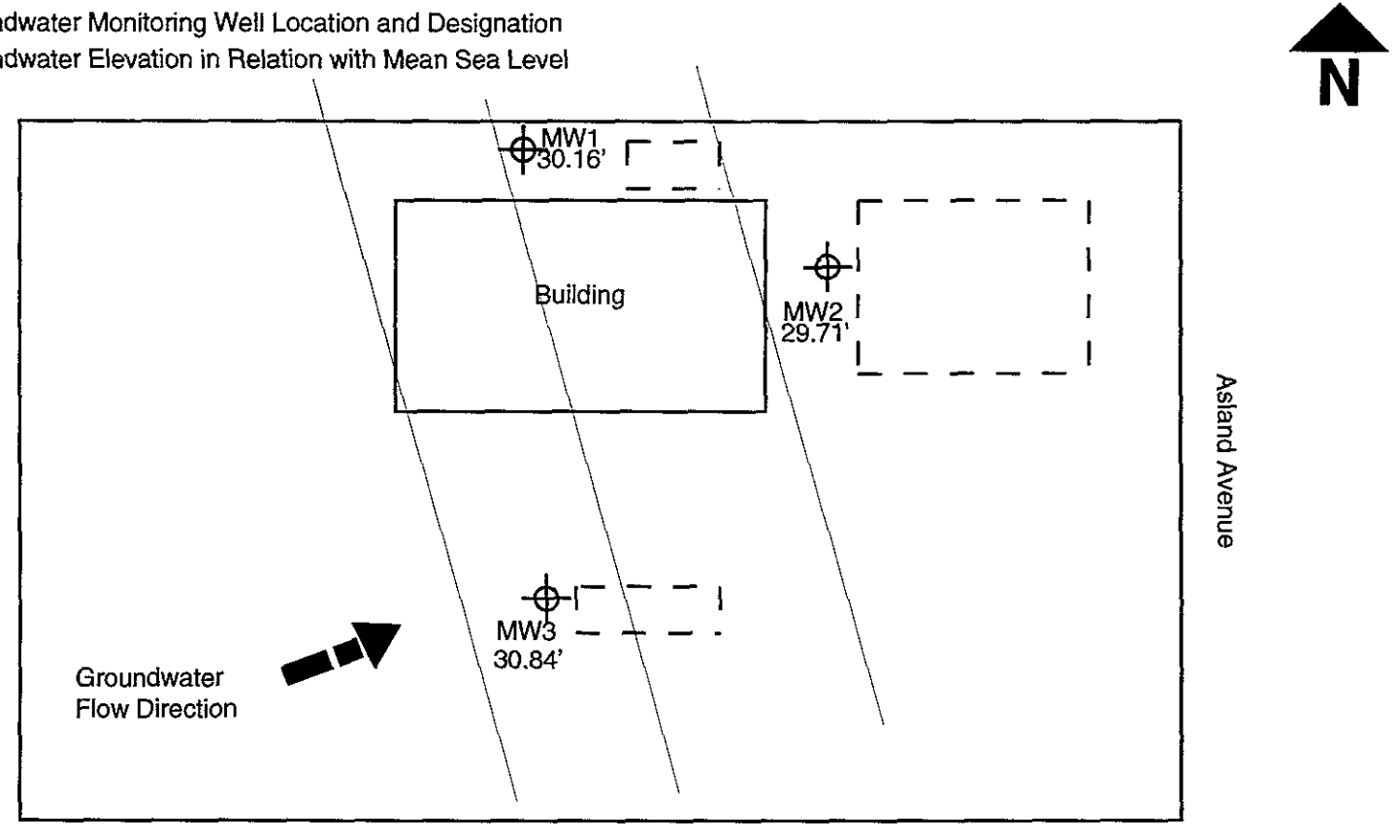
FIGURE
2
July 2, 2001
Project 99-137.03

LEGEND

MW1 Groundwater Monitoring Well Location and Designation
32.96' Groundwater Elevation in Relation with Mean Sea Level



Approximate Scale: 1' = 20'

SIERRA ENVIRONMENTAL, INC.
Environmental Consultants
2084 Alameda Way, Suite 201, San Jose, CA 95126
Phone [408]248-3700 • Fax [408] 248-4700

Groundwater Elevations and Gradient

Report for Second Quarter 2001 Groundwater Monitoring
A & C Auto Service

186 E. Lewelling Boulevard • San Lorenzo • California

FIGURE
3
July 2. 2001
Project 99-137.03

Appendix A

QA/QC PROTOCOL

QA/QC PROTOCOL

Groundwater Level and Well Depth Measurements

Groundwater level and well depths are measured using electrical sounder. An electrical sounder consists of a reel, two-conductor cable, a water sensor, and a control panel with a buzzer. To measure groundwater level, the sensor is lowered into a well. A low current circuit is completed when the sensor makes contact with water. The current in the circuit is then amplified and activate a buzzer which produce an audible signal. Cable markings are divided at 0.05-foot increments. Well depths are measured to the nearest 0.01 foot. Groundwater levels are measured before and after sample collection to ensure data accuracy.

Well Purging

Low flow submersible electrical pumps or bailers are used to purge groundwater monitoring wells. Approximately 3 to 5 well casing volume of water is removed from the well as a measure to stabilize natural, and representative groundwater in each well. pH, electrical conductivity, and temperature of the purged water is measured and recorded at approximately each casing volume interval. Purge water is stabilized when pH is recorded within 0.5 unit, electrical conductivity is within 5 percent, and temperature is within 1.0 degree Celsius.

Groundwater Sampling

Groundwater samples are transferred into appropriate containers provided by certified analytical laboratories. The containers include proper preservatives, and labels with appropriate project information. Groundwater is transferred into the containers with as little agitation as possible. After collection, containers are sealed and checked to ensure that no head space or air bubbles are present in the sample.

After collection, if required, samples are kept in a cooler to be delivered to analytical laboratory with chain-of-custody documentation.

Equipment Decontamination

All sampling equipment are washed with Liqui-Nox® (a phosphate free laboratory detergent), and rinsed with tab and deionized water before each sampling event, and at each sampling interval. To reduce the risk of cross contamination, wells that have shown lower levels of contamination historically are purged and sampled first.

Analytical Procedures

Samples are analyzed by an accredited State-certified analytical laboratory using procedures prescribed by United State Environmental Protection Agency (EPA) and other Federal, State, and Local agencies. At minimum a field blank is analyzed with each group of samples for quality assurance measures. At minimum two qualified personnel review analytical results and compare them with historical data for consistency and accuracy.

Field Reports

All field observations are documented in field reports. A field report contain project information, climatic condition, contractor/subcontractor information, field observation, discussions and communications during each particular field activity. Field reports are stored in appropriate project files. Project managers review field reports to obtain necessary information regarding the status of each project on daily basis.

Appendix B

CERTIFIED ANALYTICAL RESULTS AND CHAIN-OF-CUSTODY DOCUMENTATION

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Sierra Environmental, Inc.
2084 Alameda Way, Suite 201
San Jose, CA 95126
Attn: Mitch Hajiaghai

Date: 7/3/01
Date Received: 6/26/01
Project Name: A&C Auto Service
Project Number: 01-137 03
P.O. Number: 01-137 03
Sampled By: Mitch Hajiaghai

Certified Analytical Report

Order ID: 26061 **Lab Sample ID:** 26061-001 **Client Sample ID:** MW-1

Sample Time: **Sample Date:** 6/26/01 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.5	0.5	µg/L	N/A	6/27/01	WGC42069	EPA 8020
Toluene	ND		1	0.5	0.5	µg/L	N/A	6/27/01	WGC42069	EPA 8020
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	6/27/01	WGC42069	EPA 8020
Xylenes, Total	ND		1	0.5	0.5	µg/L	N/A	6/27/01	WGC42069	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	93	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	6/27/01	WGC42069	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	93	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	50	50	µg/L	N/A	6/27/01	WGC42069	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	102	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

July 03, 2001

Mitch Hajiaghai
Sierra Environmental, Inc.
2084 Alameda Way, Suite 201
San Jose, CA 95126

Order:	26061	**Date Collected:**	6/26/01
Project Name:	A&C Auto Service	**Date Received:**	6/26/01
Project Number:	01-137 03	**P.O. Number:**	01-137 03
Project Notes:			

On June 26, 2001, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Liquid	Gas/BTEX/MTBE	EPA 8015 MOD. (Purgeable)
		EPA 8020

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-588-0200.

Sincerely,

Michelle L. Anderson
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Sierra Environmental, Inc.
2084 Alameda Way, Suite 201
San Jose, CA 95126
Attn: Mitch Hajiaghai

Date: 7/3/01
Date Received: 6/26/01
Project Name: A&C Auto Service
Project Number: 01-137 03
P.O. Number: 01-137 03
Sampled By: Mitch Hajiaghai

Certified Analytical Report

Order ID: 26061 **Lab Sample ID:** 26061-002 **Client Sample ID:** MW-2

Sample Time: **Sample Date:** 6/26/01 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		100	0.5	50	µg/L	N/A	6/27/01	WGC42069	EPA 8020
Toluene	ND		100	0.5	50	µg/L	N/A	6/27/01	WGC42069	EPA 8020
Ethyl Benzene	910		100	0.5	50	µg/L	N/A	6/27/01	WGC42069	EPA 8020
Xylenes, Total	2100		100	0.5	50	µg/L	N/A	6/27/01	WGC42069	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	96	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		100	5	500	µg/L	N/A	6/27/01	WGC42069	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	96	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	15000		100	50	5000	µg/L	N/A	6/27/01	WGC42069	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	100	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

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Sierra Environmental, Inc.
2084 Alameda Way, Suite 201
San Jose, CA 95126
Attn: Mitch Hajiaghai

Date: 7/3/01
Date Received: 6/26/01
Project Name: A&C Auto Service
Project Number: 01-137 03
P.O. Number: 01-137 03
Sampled By: Mitch Hajiaghai

Certified Analytical Report

Order ID: 26061 **Lab Sample ID:** 26061-003 **Client Sample ID:** MW-3

Sample Time: **Sample Date:** 6/26/01 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		100	0.5	50	µg/L	N/A	6/27/01	WGC42069	EPA 8020
Toluene	ND		100	0.5	50	µg/L	N/A	6/27/01	WGC42069	EPA 8020
Ethyl Benzene	2100		100	0.5	50	µg/L	N/A	6/27/01	WGC42069	EPA 8020
Xylenes, Total	ND		100	0.5	50	µg/L	N/A	6/27/01	WGC42069	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	90	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		100	5	500	µg/L	N/A	6/27/01	WGC42069	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	90	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	14000	x	100	50	5000	µg/L	N/A	6/27/01	WGC42069	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	86	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

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STANDARD LAB QUALIFIERS (FLAGS)

All Entech lab reports now reference standard lab qualifiers. These qualifiers are noted in the adjacent column to the analytical result and are adapted from the U.S. EPA CLP program. The current qualifier list is as follows:

Qualifier (Flag)	Description
U	Compound was analyzed for but not detected
J	Estimated value for tentatively identified compounds or if result is below PQL but above MDL
N	Presumptive evidence of a compound (for Tentatively Identified Compounds)
B	Analyte is found in the associated Method Blank
E	Compounds whose concentrations exceed the upper level of the calibration range
D	Multiple dilutions reported for analysis; discrepancies between analytes may be due to dilution
X	Results within quantitation range; chromatographic pattern not typical of fuel

SIERRA ENVIRONMENTAL, INC.
Environmental Consultants

CHAIN OF CUSTODY

Project Name: A&C Auto Service **Project No:** 01-137.03 **Date:** 6/26/01

Project Location: 186 E. Lewelling Blvd **Client:** Carl Graffenstatte **Sampler:** Alicia Falk

Sample ID	Date Sampled	Sampling Time	Matrix	Nº of Containers	Analysis Requested							Turnaround Time
					8015/8020 TPHG BTEX, MTBE	8015 TPHD	418.1 TRPH	8010 VOCs	8270 SVOCs	Total Lead		
MW1	6/26/01		Water	6	X				26061-001			24-hour Other ___ Normal
MW2	↓		↓	↓	↓					-002		24-hour Other ___ Normal
MW3	↓		↓	↓	↓					-003		24-hour Other ___ Normal
												24-hour Other ___ Normal
												24-hour Other ___ Normal
												24-hour Other ___ Normal
												24-hour Other ___ Normal

Remarks:

Relinquished by	Date	Time	Received by	Date	Time
[signature]	6/26/01	1545	[signature]	6/26/01	1548
Relinquished by	Date	Time	Received by	Date	Time

2084 Alameda Way • Suite 201 • San Jose • California • 95126
Phone (408) 248-3700 • Fax (408) 248-4700