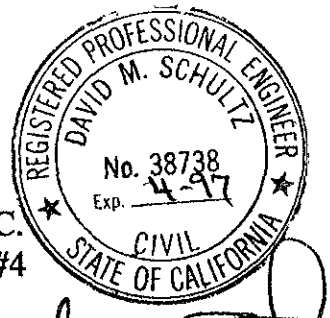
aqua science engineers inc.

September 23, 1994

QUARTERLY GROUNDWATER MONITORING REPORT
SEPTEMBER 7, 1994 GROUNDWATER SAMPLING
ASE JOB NO. 2750
at
2110 Santa Clara Avenue
Alameda, California



Submitted by:
AQUA SCIENCE ENGINEERS, INC.
2411 Old Crow Canyon Road, #4
San Ramon, CA 94583
(510) 820-9391

1.0 INTRODUCTION

This report outlines the methods and findings of Aqua Science Engineers, Inc. (ASE)'s quarterly groundwater sampling at the property located at 2110 Santa Clara Avenue in Alameda, California *(Figures 1 and 2).*

2.0 GROUNDWATER SAMPLING

On September 7, 1994, ASE measured the depth to groundwater in the site well using an electric water level sounder. The well was then purged dry using a pre-cleaned 12 volt PVC pump. Groundwater samples were collected with a dedicated polyethylene bailer after the well recovered to 99% of its original water level. Groundwater samples were decanted from the bailer into three (3) 40-ml volatile organic analysis (VOA) vials and two (2) 1-liter amber glass bottles. All of the samples were preserved with hydrochloric acid, labeled, placed in protective foam sleeves, and stored on wet ice for transport to American Environmental Network (AEN) of Pleasant Hill, California (CSDHS #1172) under chain of custody. No odors were present in the groundwater at the time of the sampling.

Well sampling purge water was contained in DOT 17H drums and stored on-site for handling by the client at a later date. See Appendix B for a copy of the well sampling field log.

3.0 ANALYTICAL RESULTS FOR GROUNDWATER

The groundwater samples were analyzed by AEN for total petroleum hydrocarbons as diesel (TPH-D) by EPA Method 8015, and benzene, toluene, ethylbenzene and total xylenes (BTEX) by EPA Method 8020. The analytical results are tabulated below in Table One, and the certified analytical report and chain of custody form are included in Appendix A. No hydrocarbons were detected in the groundwater samples.

TABLE ONE
Summary of Chemical Analysis of **GROUNDWATER** Samples
All Results are in **parts per billion**

Well I.D.	Date of Sampling	TPH Diesel	Benzene	Toluene	Ethyl Benzene	Total Xylenes
MW-1	5-23-94	<50	<0.5	<0.5	<0.5	<2
	9-07-94	<50	<0.5	<0.5	<0.5	<2
EPA METHOD		3510/ 8015	8020	8020	8020	8020

4.0 CONCLUSIONS AND RECOMMENDATIONS

No hydrocarbons were detected in groundwater samples collected from monitoring well MW-1 for the second consecutive quarter. ASE recommends continuing the current quarterly groundwater monitoring program at the site. If no hydrocarbons are detected in the well during the next two quarterly sampling periods, ASE will recommend applying for site closure.

5.0 REPORT LIMITATIONS

The results of this investigation represent conditions at the time of the groundwater sampling, at the specific locations at which the samples were collected, and for the specific parameters analyzed for by the laboratory.

It does not fully characterize the site for contamination resulting from unknown sources, or for parameters not analyzed for by the laboratory. All of the laboratory work cited in this report was prepared under the direction of an independent CSDHS certified laboratory. The independent laboratory is solely responsible for the contents and conclusions of the chemical analysis data.

Aqua Science Engineers appreciates the opportunity to assist you with your environmental needs. Should you have any questions or comments, please feel free to call us at (510) 820-9391.

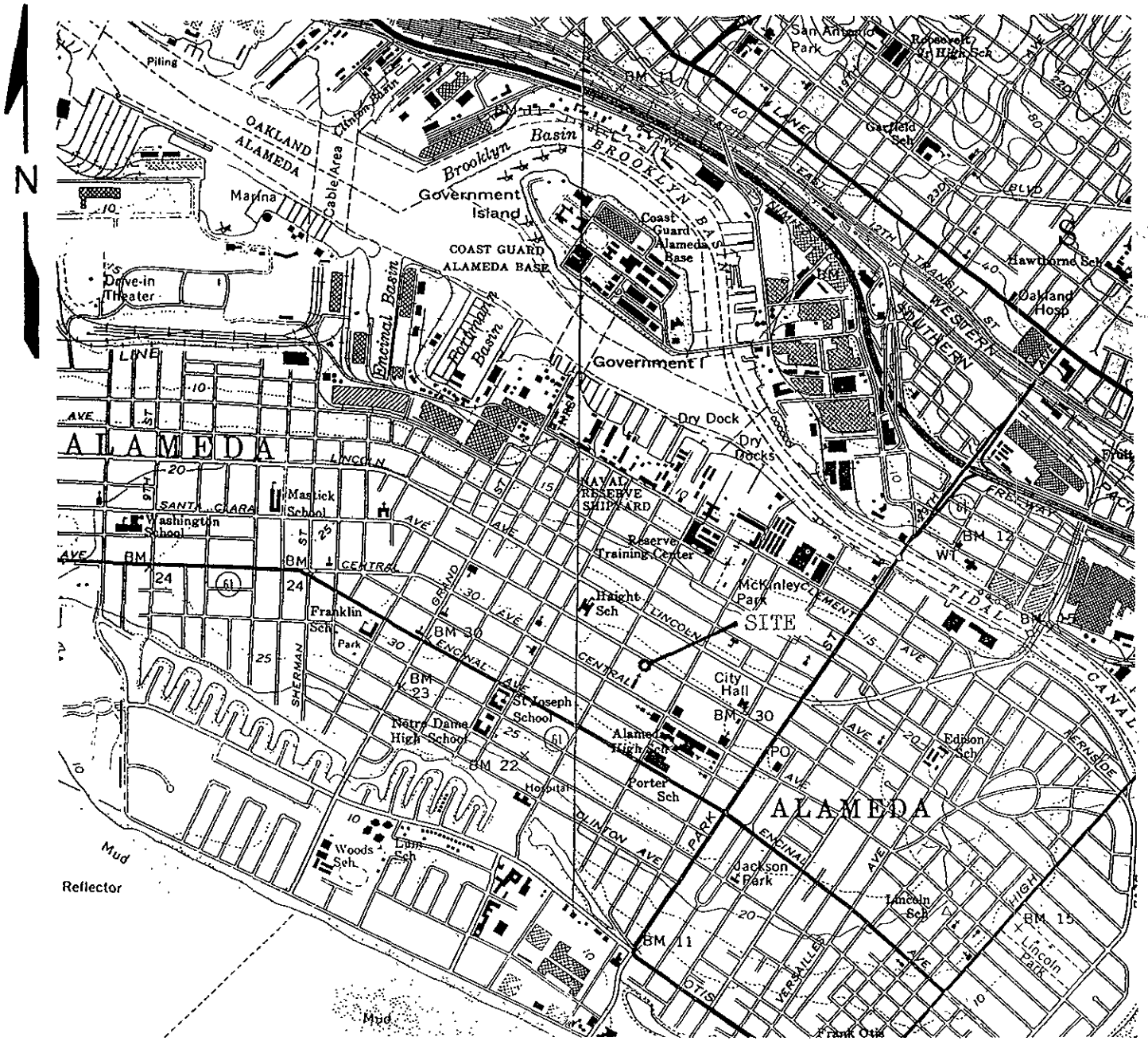
Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.

Robert E. Kitay, R.E.A.
Project Geologist

Attachments: Figures 1 and 2
Appendices A and B

cc: Mr. Micheal Ghidella
Ms. Juliet Shin, ACHCSA
Mr. Rich Hiett, RWQCB, San Francisco Bay Region

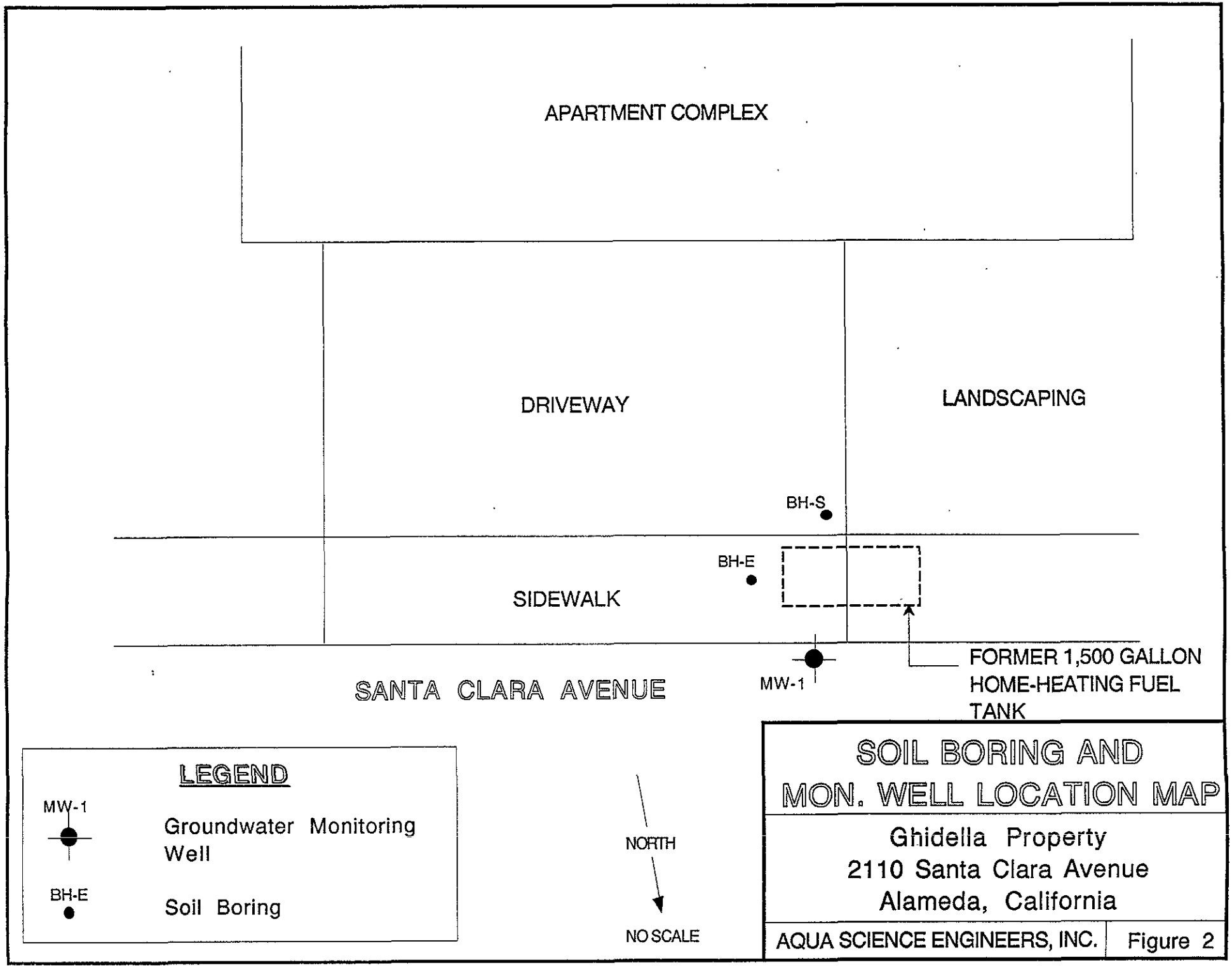


LOCATION MAP

Ghidella Property
2110 Santa Clara Avenue
Alameda, California

Aqua Science Engineers | Figure 1

BASE: Oakland East and Oakland West 7.5 minute quadrangle topographic map, dated 1980, scale 1:24,000.


APARTMENT COMPLEX
DRIVEWAY
LANDSCAPING
BH-S
BH-E
SIDEWALK
MW-1
FORMER 1,500 GALLON HOME-HEATING FUEL TANK
SANTA CLARA AVENUE
LEGEND
MW-1
Groundwater Monitoring Well
BH-E
Soil Boring
NORTH
NO SCALE
SOIL BORING AND MON. WELL LOCATION MAP
Ghidella Property
2110 Santa Clara Avenue
Alameda, California
AQUA SCIENCE ENGINEERS, INC.
Figure 2

APPENDIX A

Analytical Report and Chain of Custody Form

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 11134

AQUA SCIENCE ENGINEERS, INC
2411 OLD CROW CANYON RD. #4
SAN RAMON, CA 94583

ATTN: ROBERT KITAY
CLIENT PROJ. ID: 2750
CLIENT PROJ. NAME: GHIDELLA PROP.

REPORT DATE: 09/19/94
DATE(S) SAMPLED: 09/07/94
DATE RECEIVED: 09/08/94
AEN WORK ORDER: 9409090

PROJECT SUMMARY:

On September 8, 1994, this laboratory received 1 water sample(s).

Client requested sample(s) be analyzed for organic parameters. Results of analysis are summarized on the following page(s).

Please see quality control report for a summary of QC data pertaining to this project.

If you have any questions, please contact Client Services at (510) 930-9090.

Larry Klein
Laboratory Director

AQUA SCIENCE ENGINEERS, INC.

AEN JOB NO: 9409090
DATE SAMPLED: 09/07/94
DATE RECEIVED: 09/08/94
CLIENT PROJ. ID: 2750

Client Sample Id	AEN Lab Id	Extractable Hydrocarbons as Diesel (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)
MW-1	01	ND	ND	ND	ND	ND
Reporting Limit		50	0.5	0.5	0.5	2
EPA Method:		3510 GCFID	8020	8020	8020	8020
Instrument:		C	F	F	F	F
Date Extracted:		09/09/94	NA	NA	NA	NA
Date Analyzed:		09/12/94	09/13/94	09/13/94	09/13/94	09/13/94

NA = Not Applicable
ND = Not Detected

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9409090

CLIENT PROJECT ID: 2750

Quality Control and Project Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration that can reliably be determined during routine laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix and method dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

AEN JOB NO: 9409090
DATE EXTRACTED: 09/09/94
INSTRUMENT: C
MATRIX: WATER

Surrogate Standard Recovery Summary
Method: EPA 3510 GCFID

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
09/12/94	MW-1	01	91

Current QC Limits

Surrogate	Percent Recovery
n-Pentacosane	30-120

QUALITY CONTROL DATA

AEN JOB NO: 9409090
DATE EXTRACTED: 09/09/94
DATE ANALYZED: 09/12/94
SAMPLE SPIKED: DI WATER
INSTRUMENT: C
MATRIX: WATER

Method Spike Recovery Summary
Method: EPA 3510 GCFID

Analyte	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Diesel	2.01	75	9	65-103	12

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

AEN JOB NO: 9409090
INSTRUMENT: F
MATRIX: WATER

Surrogate Standard Recovery Summary
Method: EPA 8020, 5030 GCFID

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
09/13/94	MW-1	01	98

Current QC Limits

Surrogate	Percent Recovery
Fluorobenzene	70-115

QUALITY CONTROL DATA

AEN JOB NO: 9409090
DATE ANALYZED: 09/12/94
SAMPLE SPIKED: 9409071-01
INSTRUMENT: F
MATRIX: WATER

Matrix Spike Recovery Summary
Method: EPA 8020, 5030 GCFID

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Benzene	18	97	6	82-125	15
Toluene	47	101	2	75-126	17

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

*** END OF REPORT ***

R-3, S-3
R-7, S-H

9409090

Aqua Science Engineers, Inc.
2411 Old Crow Canyon Road, #4,
San Ramon, CA 94583
(510) 820-9391 - FAX (510) 837-4853

Chain of Custody

DATE 9-7-94 PAGE 1 OF 1

SAMPLERS (SIGNATURE) (PHONE NO.)
Robert E. Kitay (510) 820-9391

PROJECT NAME Ghidella Property NO. 2750
ADDRESS 2110 Santa Clara Avenue, Alameda

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:

SAMPLE ID.	DATE	TIME	MATRIX	NO. OF SAMPLES	TPH-GASOLINE (EPA 5030/8015)	TPH-GASOLINE/BTEX (EPA 5030/8015-8020)	TPH-DIESEL (EPA 3510/8015)	PURGABLE AROMATICS (EPA 602/8020) BTEX only	PURGABLE HALOCARBONS (EPA 601/8010)	VOLATILE ORGANICS (EPA 624/8240)	BASE/NUETRALS, ACIDS (EPA 625/8270)	OIL & GREASE (EPA 5520 E&F or B&F)	LUFT METALS (5) (EPA 6010+7000)	TITLE 22 (CAM 17) (EPA 6010+7000)	TCLP (EPA 1311/1310)	STLC- CAM WET (EPA 1311/1310)	REACTIVITY CORROSIVITY IGNITABILITY					
4-E MW-1	9/7	12:00	Water	5			X	X														

RELINQUISHED BY:
Robert E. Kitay 14:22
(signature) (time)
Robert E. Kitay 9-8-94
(printed name) (date)
Company- ASE

RECEIVED BY:
Michael E. McMullen 14:22
(signature) (time)
Michael McMullen 9/8/94
(printed name) (date)
Company- AEN

RELINQUISHED BY:
Michael McMullen 16:30
(signature) (time)
9/8/94
(printed name) (date)
Company-

RECEIVED BY LABORATORY:
Denise Harrington
(signature) (time)
DENISE HARRINGTON
(printed name) (date)
AEN 9/8/94 1630
Company-

COMMENTS:

APPENDIX B

Well Sampling Field Log

aqua science engineers inc.

WELL SAMPLING FIELD LOG

Project Name and Address: Ghidella Property, 2110 Santa Clara Ave., Alameda, CA
Job #: 2750 Date of sampling: 9-7-94
Well Name: MW-1 Sampled by: RK
Total depth of well (feet): 18.62 Well diameter (inches): 2
Depth to water before sampling (feet): 6.99
Thickness of floating product if any: None
Depth of well casing in water (feet): 11.63
Number of gallons per well casing volume (gallons): 1.9
Number of well casing volumes to be removed: 4
Req'd volume of groundwater to be purged before sampling (gallons): 7.6
Equipment used to purge the well: 12 volt PVC pump
Time Evacuation Began: 10:55 Time Evacuation Finished: 11:10
Approximate volume of groundwater purged: 5 gallons
Did the well go dry?: Yes After how many gallons: 5
Time samples were collected: 12:00
Depth to water at time of sampling: 7.06
Percent recovery at time of sampling: 99%
Samples collected with: Disposable polyethylene bailer
Sample color: None Odor: None
Description of sediment in sample: None

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
Initial	70.7	8.29	610
2 gallons	71.5	7.94	354
4 gallons	70.2	7.79	337

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
MW-1	3	40-ml VOA vials	HCl	Yes	BTEX
↓	2	1-liter amber glass	↓	↓	TPH-D