June 23, 1998

Ms. Madhulla Logan
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Re: May 1998 Semiannual Ground Water Sampling Report
Mills College Corporation Yard, Oakland, California
Project No.: K275-H (982)

Dear Ms. Logan:

We are pleased to submit our report for the above referenced project. In summary, no significant changes were observed at the site during the May 1998 monitoring event. Should you have any questions or require additional information, please do not hesitate to contact me.

Sincerely,

Harza Engineering Company of California

Jana C. Miller

for Derek Armentrout
Project Chemist

DA:mac\encl.
Copies: Addressee (1)
Mr. David Johnson (Mills College -1)
Case Officer (Regional Water Quality Control Board -1)

Harza Engineering Company, Western Division
425 Roland Way Oakland, California 94621
Tel: (510) 568-4001 Fax: (510) 568-2205

May 1998 Semiannual
Ground Water Sampling Report
Mills College Corporation Yard
Oakland, California

June 23, 1998

Prepared For:

Mills College
5000 MacArthur Boulevard
Oakland, CA 94613

Prepared By:

Harza Engineering Company of California
425 Roland Way
Oakland, CA 94621

for Derek Armentrout
Project Chemist

for Mark C. Litzau
Manager, Environmental Services

K275HRPT.001
06/23/98

HARZA

TABLE OF CONTENTS

May 1998 Semiannual Ground Water Sampling Report

Mills College Corporation Yard, Oakland, California

1.0 INTRODUCTION

This report presents the results of the May 1998 semiannual ground water sampling performed at the Mills College Corporation Yard in Oakland, California. The project location is shown on the Site Vicinity Map (Figure 1).

The purpose of the investigation has been to evaluate the extent of petroleum hydrocarbons in ground water related to a previously removed gasoline underground storage tank (UST) at the site. The investigation included collecting and analyzing ground water samples from five existing monitoring wells. This investigation was performed to comply with the continuing monitoring program under the jurisdiction of Alameda County Health Care Services Agency (ACHCSA).

2.0 BACKGROUND

In October 1988, a 1,000-gallon gasoline UST was removed from the Corporation Yard facility. A report prepared by Blaine Tech Services, Inc. of San Jose, California, indicated that soil samples collected from a depth of 21 feet below ground surface (bgs) following tank removal contained moderately high levels of total petroleum hydrocarbons as gasoline (TPHg). It is understood that 100 cubic yards of contaminated soils were excavated from the tank pit area at the time of tank removal and aerated on-site.

Beginning in June 1989, Harza (formerly Kaldveer Associates) performed soil and ground water quality investigations at the site, consisting of the installation and sampling of three ground water monitoring wells (MW-1 through MW-3) and two additional shallow soil borings. The results of these investigations, presented in a report titled *Soil and Ground Water Testing Report for Mills College Corporation Yard,* dated May 7, 1991, indicated that the majority of gasoline contamination in the unsaturated zone in the vicinity of the tanks appeared to have been removed during the soil excavation program conducted when the tanks were removed. Additional wells were installed in May 1994 (MW-4) and April 1995 (MW-5).

Analysis of ground water samples collected from the monitoring wells since June 1989 have indicated the presence of TPHg at concentrations up to 11 parts per million (ppm). The measured ground water flow direction at the site has been toward the south to west-southwest.

3.0 SCOPE OF SERVICES

The investigation consisted of the following tasks:

- Measuring ground water levels for use in developing a ground water elevation contour map.
- Collecting ground water samples from the five existing wells at the Corporation Yard.
- Analyzing the ground water samples for TPHg and for purgeable aromatic compounds (benzene, toluene, ethylbenzene, and xylenes [BTEX]).

4.0 FIELD INVESTIGATION

4.1 Monitoring Well Sampling

Monitoring wells MW-1 through MW-5 were sampled on May 7, 1998. Following an initial ground water level measurement, a minimum of three well-casing volumes of water were purged from each well using a Teflon bailer. Purging consisted of the gradual removal of water from the well until physical parameters such as pH, temperature, and electrical conductivity (EC) stabilized.

Following purging, samples were collected using a Teflon bailer, placed in appropriate sample containers, labeled, and placed in refrigerated storage for transport to the laboratory under chain-of-custody control. The bailer was washed with trisodium phosphate (TSP) and rinsed with deionized water between wells to reduce the potential for cross contamination. Purge water was contained on-site in 55-gallon drums.

4.2 Ground Water Gradient

Well-top elevations, depth to water, and calculated water-surface elevations are presented in Table 1. These data are used to generate the ground water elevation contours presented on Figure 2. No significant changes were observed from the previous monitoring event.

The water levels are similar in wells MW-1, MW-2, and MW-3, suggesting a flat gradient in this area. However, a relatively steep, west-southwestward gradient is depicted using wells MW-1, MW-4, and MW-5. In our opinion, ground water levels measured in wells MW-1 through MW-3 appear to be influenced by the highly transmissive backfill used in the former tank excavation. Only data from wells MW-1, MW-4, and MW-5 were used to calculate the ground water gradient and flow

direction shown on Figure 2. It is our professional opinion that ground water most likely follows the natural surface topography and flows toward the west or southwest. Wells MW-4 and MW-5 appear sufficient for monitoring downgradient water quality in any of the historically observed or potential ground water flow directions.

5.0 ANALYTICAL RESULTS

5.1 Laboratory Procedures

Ground water samples were analyzed by American Environmental Network (AEN) of Pleasant Hill, California. AEN is certified by the California Environmental Protection Agency for the analyses performed. Samples from each well were analyzed for TPHg using EPA Method 5030/GC-FID, and for BTEX using EPA Method 8020.

5.2 Analytical Results

The results of the chemical analyses are presented in Table 2 and laboratory analytical reports are attached as Appendix A. A historical summary of ground water sample analytical results is also included in Table 2. No significant changes were observed from the previous monitoring event.

TPHg was detected in the sample from well MW-1 at a concentration of 0.51 ppm. BTEX compounds were detected in the sample from MW-1 at concentrations of 0.16, 0.041, 0.045, and 0.022 ppm, respectively. A petroleum odor was recognized during the purging of the well.

Benzene was detected in the sample from well MW-2 at 0.012 ppm, and in the sample from well MW-3 at 0.0049 ppm. TPHg concentrations were below the laboratory method reporting limit (MRL) of 0.05 ppm in these wells. No TPHg or BTEX compounds were detected at or above the MRLs in the samples from wells MW-4 and MW-5.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The May 1998 analytical results are consistent with recent monitoring events, and no significant changes have been observed in ground water quality. The plume does not appear to be migrating significantly, as evidenced by nondetectable levels of contaminants in downgradient wells MW-4 and MW-5. Measured hydrocarbon concentrations appear relatively stable in wells MW-2 and MW-3. Ground water elevations in wells MW-1, MW-4, and MW-5 indicate a general ground water flow direction toward the west-southwest.

Preparation and submittal of reports will continue on a semiannual basis, contingent on ground water quality continuing to exhibit little variation, and on contaminants remaining on-site. The next monitoring event is scheduled for October 1998.

7.0 LIMITATIONS

The purpose of a geologic/hydrogeologic study is to reasonably characterize existing site conditions based on the geology/hydrogeology of the area. In performing such a study, a balance must be struck between a reasonable investigation into the site conditions and an exhaustive analysis of each conceivable condition. The following paragraphs discuss the assumptions and parameters under which such a study is conducted.

No investigation is thorough enough to detect every geologic/hydrogeologic condition of interest at a given site. If conditions have not been identified during the study, such a finding should not therefore be construed as a guarantee of the absence of such conditions at the site, but rather as the result of the services performed within the scope, limitations, and cost of the work performed.

We are unable to report on or accurately predict events that may change the site conditions after the described services are performed, whether occurring naturally or caused by external forces. We cannot assume responsibility for conditions we were not authorized to evaluate, or conditions not generally recognized as predictable when services were performed.

Geologic/hydrogeologic conditions may exist at the site that cannot be identified solely by visual observation. Where subsurface exploratory work was performed, our professional opinions are based in part on interpretation of data from discrete sampling locations that may not represent actual conditions at unsampled locations.

TABLES

TABLE 1
Ground Water Elevation Data

May 1998 Semiannual Ground Water Sampling Report
Mills College Corporation Yard, Oakland, California
(Reported in Feet)

Date	Monitoring Well	Relative Well-Top Elevation [1]	Depth to Water	Ground Water Elevation
June 1989	MW-1	100.00	19.44	80.56
	MW-2	99.98	19.36	80.62
	MW-3	100.01	19.40	80.61
December 1990	MW-1	100.00	22.05	77.95
	MW-2	99.98	21.96	78.02
	MW-3	100.01	22.00	78.01
June 1991	MW-1	100.00	20.85	79.15
	MW-2	99.98	20.76	79.22
	MW-3	100.01	20.81	79.20
March 1992	MW-1	100.00	19.87	80.13
	MW-2	99.98	19.92	80.06
	MW-3	100.01	19.82	80.19
October 1992	MW-1	100.00	21.69	78.31
	MW-2	99.98	21.60	78.38
	MW-3	100.01	21.65	78.36
May 1994	MW-1	100.00	19.66	80.34
	MW-2	99.98	19.62	80.36
	MW-3	100.01	19.60	80.41
	MW-4	88.88	13.60	75.28
June 1994	MW-1	100.00	19.72	80.28
	MW-2	99.98	19.65	80.33
	MW-3	100.01	19.65	80.36
	MW-4	88.88	14.01	74.87
October 1994	MW-1	100.00	20.17	79.83
	MW-2	99.98	20.10	79.88
	MW-3	100.01	20.08	79.93
	MW-4	88.88	17.95	70.93
January 1995	MW-1	100.00	17.46	82.54
	MW-2	99.98	17.48	82.50
	MW-3	100.01	17.30	82.71
	MW-4	88.88	10.76	78.12
May 1995	MW-1	100.00	15.56	84.44
	MW-2	99.98	15.75	84.23
	MW-3	100.01	15.50	84.51
	MW-4	88.88	9.25	79.63
	MW-5	99.98	27.66	72.32

TABLE 1
Ground Water Elevation Data

May 1998 Semiannual Ground Water Sampling Report
Mills College Corporation Yard, Oakland, California
(Reported in Feet)

Date	Monitoring Well	Relative Well-Top Elevation [1]	Depth to Water	Ground Water Elevation
October 1995	MW-1	100.00	18.68	81.32
	MW-2	99.98	18.21	81.77
	MW-3	100.01	18.62	81.39
	MW-4	88.88	14.65	74.23
	MW-5	99.98	28.36	71.62
May 1996	MW-1	100.00	15.92	84.08
	MW-2	99.98	15.70	84.28
	MW-3	100.01	15.83	84.18
	MW-4	88.88	9.55	79.33
	MW-5	99.98	25.51	74.47
September 1996	MW-1	100.00	17.74	82.26
	MW-2	99.98	17.67	82.31
	MW-3	100.01	17.64	82.37
	MW-4	88.88	14.59	74.29
	MW-5	99.98	27.83	72.15
April 1997	MW-1	100.00	16.91	83.09
	MW-2	99.98	16.82	83.16
	MW-3	100.01	16.83	83.18
	MW-4	88.88	11.77	77.11
	MW-5	99.98	26.93	73.05
October 1997	MW-1	100.00	19.00	81.00
	MW-2	99.98	18.96	81.02
	MW-3	100.01	18.98	81.03
	MW-4	88.88	16.10	72.78
	MW-5	99.98	31.25	68.73
May 1998	MW-1	100.00	14.36	85.64
	MW-2	99.98	14.37	85.61
	MW-3	100.01	14.11	85.90
	MW-4	88.88	8.84	80.04
	MW-5	99.98	23.38	76.60

NOTE

[1] Well-top elevations are based on an arbitrary datum of 100.00 feet at MW-1.

TABLE 2
Ground Water Sample Analytical Results
May 1998 Semiannual Ground Water Sampling Report
Mills College Corporation Yard, Oakland, California

Sample ID	Sample Date	TPHg ppm	Benzene ppm	Toluene ppm	Ethylbenzene ppm	Xylenes ppm
MW-1	June 1989	11.	2.1	1.9	0.031	1.4
	December 1990	2.5	0.4	0.21	0.056	0.31
	June 1991	16.	2.0	1.1	0.41	2.8
	March 1992	1.6	0.26	0.1	0.47	0.12
	October 1992	2.8	0.33	0.13	0.06	0.2
	October 1992 (D)	4.2	0.54	0.23	0.08	0.36
	May 1994	3.4	0.6	0.11	0.11	0.15
	October 1994	8.7	1.0	0.29	0.14	0.36
	January 1995	5.9	1.5	0.088	0.13	0.14
	April 1995	3.4	0.78	0.34	0.1	0.21
	October 1995	0.87	0.092	0.026	0.041	0.025
	May 1996	1.0	0.2	0.068	0.035	0.05
	September 1996	1.5	0.27	0.073	0.064	0.0095
	April 1997	0.6	0.12	0.027	0.024	0.028
	October 1997	1.0	0.16	0.036	0.035	0.07
	May 1998	0.51	0.16	0.041	0.045	0.022
MW-2	June 1989	ND	ND	ND	ND	ND
	December 1990	ND	ND	ND	ND	ND
	June 1991	ND	0.005	0.0005	ND	ND
	March 1992	0.09	0.047	ND	ND	ND
	October 1992	ND	0.003	0.0006	ND	ND
	May 1994	0.2	0.084	ND	ND	ND
	October 1994	0.2	0.13	ND	ND	ND
	January 1995	0.7	0.21	ND	ND	ND
	May 1995	ND	0.004	ND	ND	ND
	October 1995	0.2	0.11	ND	ND	ND
	May 1996	0.2	0.086	ND	0.001	ND
	September 1996	0.09	0.059	ND	ND	ND
	April 1997	ND	0.022	ND	ND	ND
	October 1997	ND	0.022	ND	ND	ND
	May 1998	ND	0.012	ND	ND	ND
MW-3	June 1989	ND	ND	ND	ND	ND
	December 1990	0.05	0.011	ND	ND	ND
	June 1991	0.1	0.007	ND	ND	ND
	March 1992	0.09	0.27	0.0009	ND	ND
	October 1992	ND	0.005	ND	ND	ND

TABLE 2
Ground Water Sample Analytical Results
May 1998 Semiannual Ground Water Sampling Report
Mills College Corporation Yard, Oakland, California

Sample ID	Sample Date	TPHg ppm	Benzene ppm	Toluene ppm	Ethylbenzene ppm	Xylenes ppm
MW-3 (continued)	May 1994	ND	**0.005**	ND	ND	ND
	October 1994	ND	**0.004**	ND	ND	ND
	January 1995	ND	**0.012**	ND	ND	ND
	May 1995	**0.07**	**0.006**	ND	ND	ND
	October 1995	ND	**0.002**	ND	ND	**0.002**
	May 1996	ND	**0.007**	ND	ND	ND
	September 1996	ND	**0.012**	ND	ND	ND
	April 1997	ND	**0.043**	ND	ND	ND
	October 1997	ND	**0.0057**	ND	ND	ND
	May 1998	ND	**0.0049**	ND	ND	ND
MW-4	May 1994	ND	ND	ND	ND	ND
	June 1994	ND	ND	ND	ND	ND
	October 1994	ND	ND	ND	ND	ND
	January 1995	ND	ND	ND	ND	ND
	May 1995	ND	ND	ND	ND	ND
	October 1995	ND	ND	ND	ND	ND
	May 1996	ND	ND	ND	ND	ND
	September 1996	ND	ND	ND	ND	ND
	April 1997	ND	ND	ND	ND	ND
	October 1997	ND	ND	ND	ND	ND
	May 1998	ND	ND	ND	ND	ND
MW-5	April 1995	ND	ND	ND	ND	ND
	October 1995	ND	ND	ND	ND	ND
	May 1996	ND	ND	ND	ND	ND
	September 1996	ND	ND	ND	ND	ND
	April 1997	ND	ND	ND	ND	ND
	October 1997	ND	ND	ND	ND	ND
	May 1998	ND	ND	ND	ND	ND

NOTES

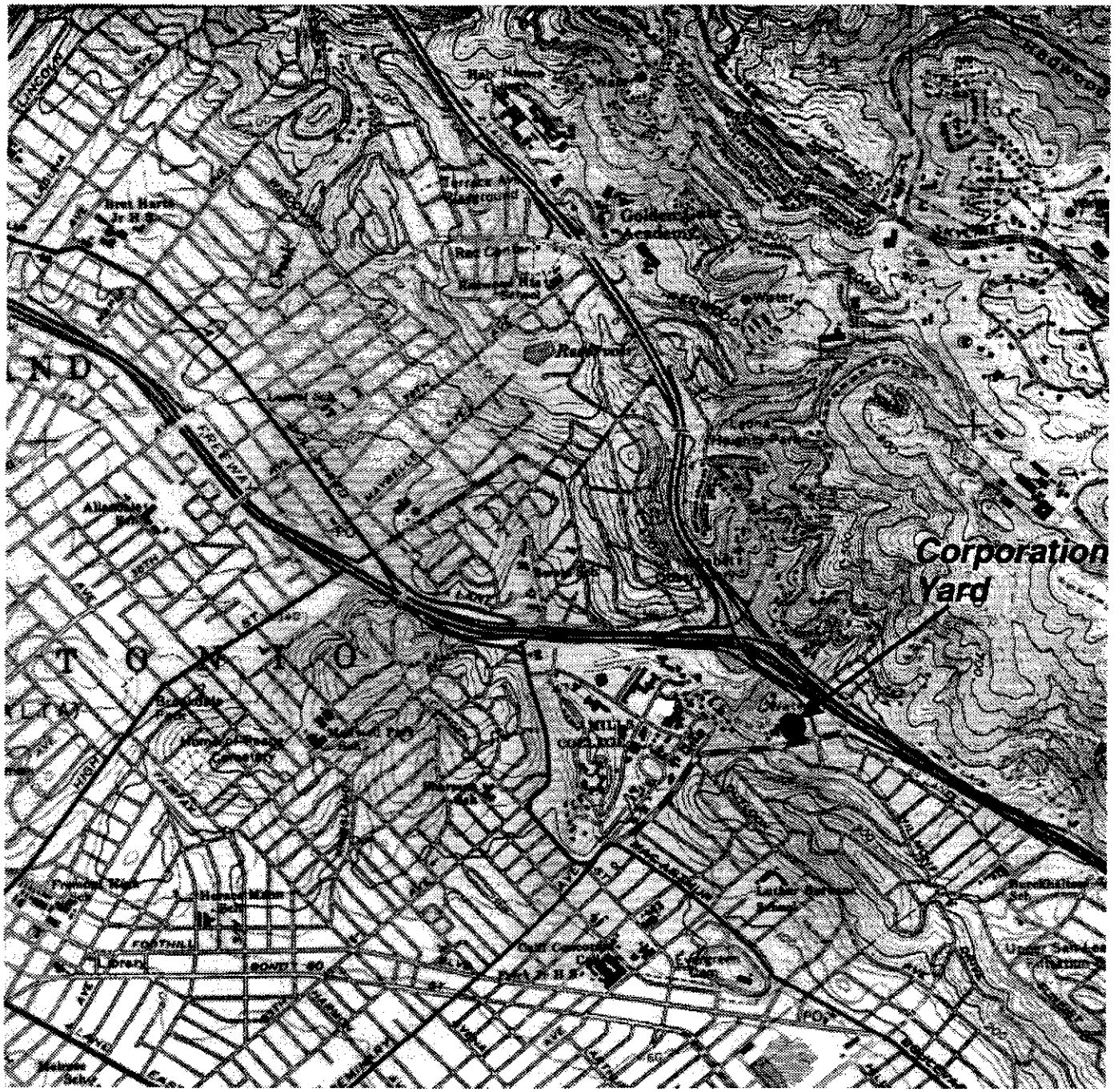
TPHg: Total petroleum hydrocarbons as gasoline

ppm: Parts per million or milligrams per liter

ND: Not detected at or above the laboratory method reporting limits

(D): Dupicate sample analytical results

FIGURES



N

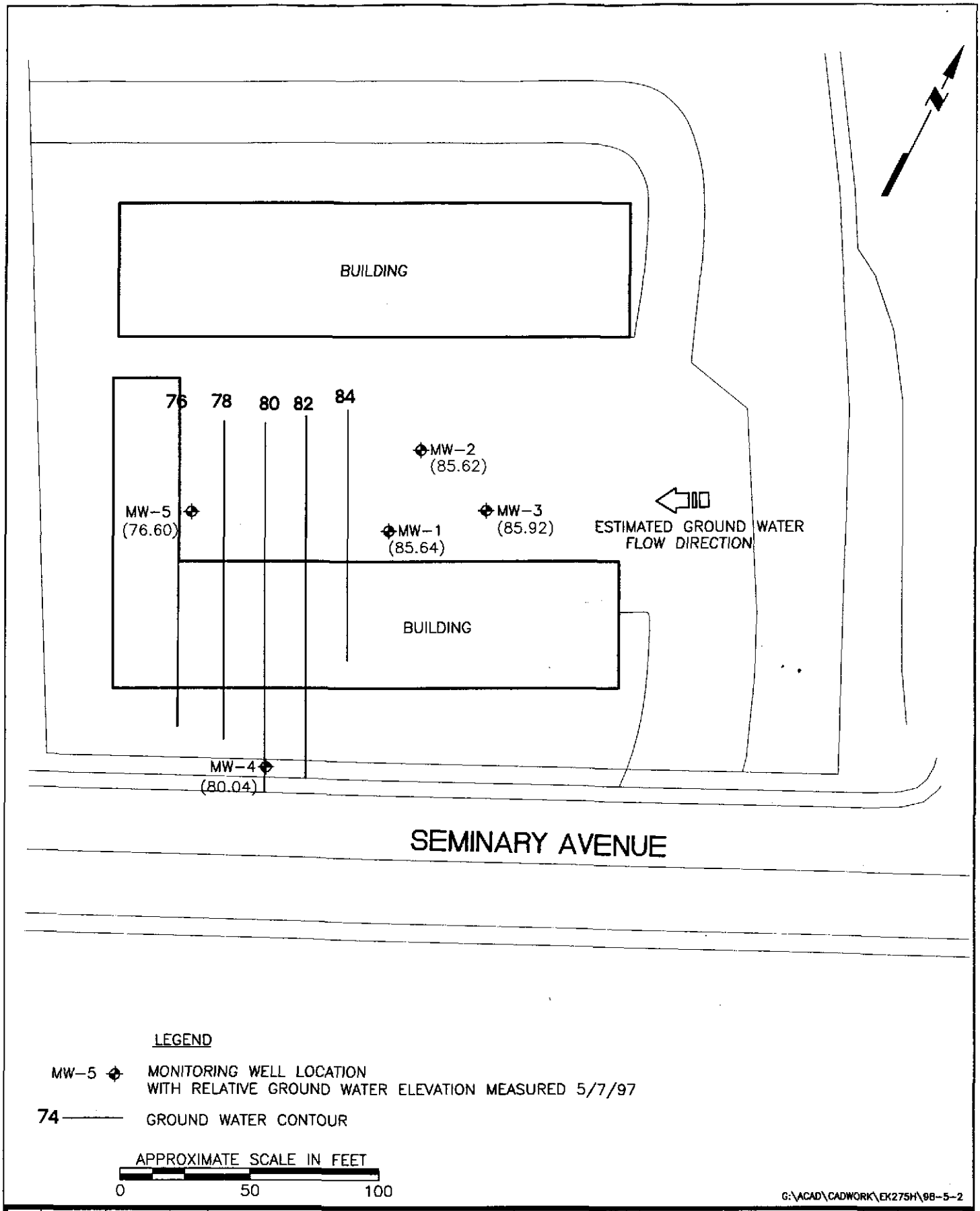
Approximate Scale In Miles

0 1/2 1

BASE: By U.S.G.S. Oakland East, California, 7.5 Min. Quadrangle Topography.

E275G1

Date		SITE VICINITY MAP	Figure
12/97	HARZA	MILLS COLLEGE CORPORATION YARD FACILITY Oakland, California	1
Project No. K275-H			



LEGEND

MW-5 ◆ MONITORING WELL LOCATION
WITH RELATIVE GROUND WATER ELEVATION MEASURED 5/7/97

74 ——— GROUND WATER CONTOUR

APPROXIMATE SCALE IN FEET

0 50 100

G:\ACAD\CADWORK\EK275H\98-5-2

Rev.	Drawn By	Chk'd By	Date
0	H.H.	M.A.	6/4/98

HARZA

SITE PLAN

MILLS COLLEGE
CORPORATION YARD FACILITY
Oakland, California

Figure 2

Project No. K275-H

APPENDIX A

Laboratory Analytical Reports

HARZA

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 11134

HARZA
425 ROLAND WAY
OAKLAND, CA 94621

ATTN: MARY ANDERS
CLIENT PROJ. ID: K275-H
CLIENT PROJ. NAME: MILLS COLLEGE

REPORT DATE: 05/19/98

DATE(S) SAMPLED: 05/07/98

DATE RECEIVED: 05/07/98

AEN WORK ORDER: 9805082

PROJECT SUMMARY:

On May 7, 1998, this laboratory received 5 water sample(s).

Client requested sample(s) be analyzed for chemical 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.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

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

Reviewed by:

William Sorbole

HARZA

SAMPLE ID: MW-1
AEN LAB NO: 9805082-01
AEN WORK ORDER: 9805082
CLIENT PROJ. ID: K275-H

DATE SAMPLED: 05/07/98
DATE RECEIVED: 05/07/98
REPORT DATE: 05/19/98

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	**EPA 8020**				
Benzene	71-43-2	160 *	0.5	ug/L	05/14/98
Toluene	108-88-3	41 *	0.5	ug/L	05/14/98
Ethylbenzene	100-41-4	45 *	0.5	ug/L	05/14/98
Xylenes, Total	1330-20-7	22 *	2	ug/L	05/14/98
Purgeable HCs as Gasoline	5030/GCFID	0.51 *	0.05	mg/L	05/14/98

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

HARZA

SAMPLE ID: MW-2
AEN LAB NO: 9805082-02
AEN WORK ORDER: 9805082
CLIENT PROJ. ID: K275-H

DATE SAMPLED: 05/07/98
DATE RECEIVED: 05/07/98
REPORT DATE: 05/19/98

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	**EPA 8020**				
Benzene	71-43-2	12 *	0.5	ug/L	05/14/98
Toluene	108-88-3	ND	0.5	ug/L	05/14/98
Ethylbenzene	100-41-4	ND	0.5	ug/L	05/14/98
Xylenes, Total	1330-20-7	ND	2	ug/L	05/14/98
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	05/14/98

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

HARZA

SAMPLE ID: MW-3
AEN LAB NO: 9805082-03
AEN WORK ORDER: 9805082
CLIENT PROJ. ID: K275-H

DATE SAMPLED: 05/07/98
DATE RECEIVED: 05/07/98
REPORT DATE: 05/19/98

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	**EPA 8020**				
Benzene	71-43-2	4.9 *	0.5	ug/L	05/14/98
Toluene	108-88-3	ND	0.5	ug/L	05/14/98
Ethylbenzene	100-41-4	ND	0.5	ug/L	05/14/98
Xylenes, Total	1330-20-7	ND	2	ug/L	05/14/98
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	05/14/98

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

HARZA

SAMPLE ID: MW-3
AEN LAB NO: 9805082-03
AEN WORK ORDER: 9805082
CLIENT PROJ. ID: K275-H

DATE SAMPLED: 05/07/98
DATE RECEIVED: 05/07/98
REPORT DATE: 05/19/98

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	**EPA 8020**				
Benzene	71-43-2	4.9 *	0.5	ug/L	05/14/98
Toluene	108-88-3	ND	0.5	ug/L	05/14/98
Ethylbenzene	100-41-4	ND	0.5	ug/L	05/14/98
Xylenes, Total	1330-20-7	ND	2	ug/L	05/14/98
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	05/14/98

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

HARZA

SAMPLE ID: MW-4
AEN LAB NO: 9805082-04
AEN WORK ORDER: 9805082
CLIENT PROJ. ID: K275-H

DATE SAMPLED: 05/07/98
DATE RECEIVED: 05/07/98
REPORT DATE: 05/19/98

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	**EPA 8020**				
Benzene	71-43-2	ND	0.5	ug/L	05/14/98
Toluene	108-88-3	ND	0.5	ug/L	05/14/98
Ethylbenzene	100-41-4	ND	0.5	ug/L	05/14/98
Xylenes, Total	1330-20-7	ND	2	ug/L	05/14/98
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	05/14/98

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

HARZA

SAMPLE ID: MW-5
AEN LAB NO: 9805082-05
AEN WORK ORDER: 9805082
CLIENT PROJ. ID: K275-H

DATE SAMPLED: 05/07/98
DATE RECEIVED: 05/07/98
REPORT DATE: 05/19/98

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	**EPA 8020**				
Benzene	71-43-2	ND	0.5	ug/L	05/14/98
Toluene	108-88-3	ND	0.5	ug/L	05/14/98
Ethylbenzene	100-41-4	ND	0.5	ug/L	05/14/98
Xylenes, Total	1330-20-7	ND	2	ug/L	05/14/98
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	05/14/98

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9805082

CLIENT PROJECT ID: K275-H

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 routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte 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

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9805082
INSTRUMENT: F
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
05/14/98	MW-1	01	104
05/14/98	MW-2	02	98
05/14/98	MW-3	03	97
05/14/98	MW-4	04	96
05/14/98	MW-5	05	96
QC Limits:			70-130

DATE ANALYZED: 05/14/98
SAMPLE SPIKED: LCS
INSTRUMENT: F

Laboratory Control Sample Recovery

Analyte	Spike Added (ug/L)	Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Benzene	200	107	<1	70-130	20
Toluene	200	109	<1	70-130	20
Ethylbenzene	200	109	1	70-130	20
Total Xylenes	600	109	<1	70-130	20

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

*** END OF REPORT ***

R353

Contact: Derek Armentrout
HARZA Consulting Engineers and Scientists
425 Roland Way (510) 568-4001
Oakland, CA 94621 (510) 568-2205 Fax

Project Number	Lab Project Number
K275-14	9805082
Project Name	**Sampler's Name (printed)**
Mills College	M. Anders

Harza Sample ID	Lab Sample ID	Date	Time	Sample Type	Number/Type of Container	TPH as Gasoline / BTEX	TPH as Diesel / Motor Oil / Full Scan / Method 418.1 - TRPH	Method 8240 - Volatile Organic Compounds	Method 8010 - Halogenated VOCs	Method 8020 - BTEX	Method 8270 - Semivolatile Organic Compounds	Method 8080 - Organochlorine Pesticides / PCBs	Metals -	Remarks
MW-1	1ABC	5/7/98	1300	wtr	(3) VOAs	X								
MW-2	2ABC	"	1225	"	"	X								
MW-3	3ABC	"	1152	"	"	X								
MW-4	4ABC	"	1045	"	"	X								
MW-5	5ABC	"	1120	"	"	X								

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Mary C. Hu	5/7/98	16:50	Rich Gilmore	5-7-98	16:50
Rich Gilmore	5-7-98	18:35	Greg Glaser	5/7	1835

Requested Turnaround Time: ☒ Standard ☐ 3-Day ☐ 2-Day ☐ 24-Hour ☐ other ☐ FAX Results

NOTES Bill Mills College DIRECTLY

custody.dwg