GROUND WATER SAMPLING REPORT
DECEMBER, 1990
FOR
MILLS HALL/TOYON MEADOW
MILLS COLLEGE
OAKLAND, CALIFORNIA

Kaldveer Associates
Geoscience Consultants

Oakland, CA • San Jose, CA • Bellevue, WA • Tacoma, WA

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January 17, 1991
KE1025-7B-509, 17807

Mills College
5000 MacArthur Boulevard
Oakland, California 94621

Attention: Mr. David Johnson

RE: GROUND WATER SAMPLING
REPORT - DECEMBER, 1990
MILLS HALL/TOYON MEADOW
MILLS COLLEGE
OAKLAND, CALIFORNIA

Dear Mr. Johnson:

Enclosed is our December, 1990 ground water sampling report for the Mills Hall/Toyon Meadow area. We appreciate the opportunity to provide services to you on this project and trust this report meets your needs at this time. If you have any questions, or require additional information, please do not hesitate to call.

Very truly yours,

KALDVEER ASSOCIATES, INC.

Dennis Laduzinsky, C.E.G.
Senior Engineering Geologist

John R. Sutton, P.E./G.E.
Manger, Environmental/Hazardous
Waste Services
Associate

DL/JRS:pv
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GROUND WATER SAMPLING REPORT
DECEMBER, 1990

For
MILLS HALL/TOYON MEADOW
MILLS COLLEGE
OAKLAND, CALIFORNIA

To
Mills College
5000 MacArthur Boulevard
Oakland, California 94621

January, 1991

Dennis Laduzinsky, C.E.G.
Senior Engineering Geologist

John R. Sutton, P.E./G.E.
Manager, Environmental/Hazardous
Waste Services
Associate

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GROUND WATER SAMPLING REPORT
DECEMBER, 1990
MILLS HALL/TOYON MEADOW
MILLS COLLEGE
OAKLAND, CALIFORNIA

I. INTRODUCTION

This report presents the results of a ground water sampling study at the Mills Hall/Toyon Meadow area at Mills College in Oakland, California. The project location is shown on the Site Location Map, Figure 1. The scope of services provided during this investigation consisted of collecting and analyzing ground water samples from one monitoring well. Ground water samples were analyzed for total petroleum hydrocarbons as diesel and purgeable aromatic compounds (BTEX). The well location is shown on the Site Plan, Figure 2.

II. FIELD INVESTIGATION

A. Well Sampling

One ground water monitoring well was sampled on December 20, 1990. Following an initial ground water level measurement, a minimum of four well-casing volumes of water was purged from the well using a teflon bailer. Purging consisted of the rapid removal of water from the well until physical parameters such as pH, temperature and specific conductivity had stabilized. Following purging, samples were collected using the teflon bailer, placed in appropriate sample containers, labeled, and placed in refrigerated storage for transport to the laboratory under chain-of-custody control. All sampling equipment was thoroughly cleaned with trisodium phosphate detergent and rinsed with distilled water prior to sampling. A monitoring well sampling log is attached to this report as Appendix A.

III. ANALYTICAL RESULTS

A. Laboratory Procedures

Ground water samples were analyzed by Med-Tox Associates of Pleasant Hill, California. Samples were analyzed for total petroleum hydrocarbons as diesel using EPA Method 8015, and for purgeable aromatic compounds using EPA Method 8020.

B. Analytical Results

The results of the chemical analyses are presented on Table 1 and laboratory certificates are attached to this report as Appendix B.

The laboratory did not report the presence of petroleum hydrocarbons as diesel, or purgeable aromatic (BTEX) compounds in detectable quantities. These results are unchanged from the last sampling in July, 1989.

IV. LIMITATIONS

This report has been prepared according to generally accepted geologic and environmental practices. No other warranty, either expressed or implied is made. The analysis, conclusions and recommendations contained in this report are based on site conditions as they existed at the time of our investigation; review of previous reports relevant to the site conditions; and laboratory results from an outside analytical laboratory.

Changes in the information or data gained from any of these sources could result in changes in our conclusions or recommendations. If such changes do occur, we should be advised so that we can review our report in light of these changes.

* * * * * * * * * * * * * * * * * *

TABLE 1

SUMMARY OF GROUND WATER SAMPLE ANALYSES
(reported in parts per million, mg/l)

Constituent	MW-2	Detection Limit
TPH Diesel	ND	0.05
Benzene	ND	0.0003
Toluene	ND	0.0003
Ethylbenzene	ND	0.0003
Xylenes	ND	0.001

Approximate Scale in Miles

0 1/2 1

Base: Provided by Thomas Brothers Maps, Dated 1988

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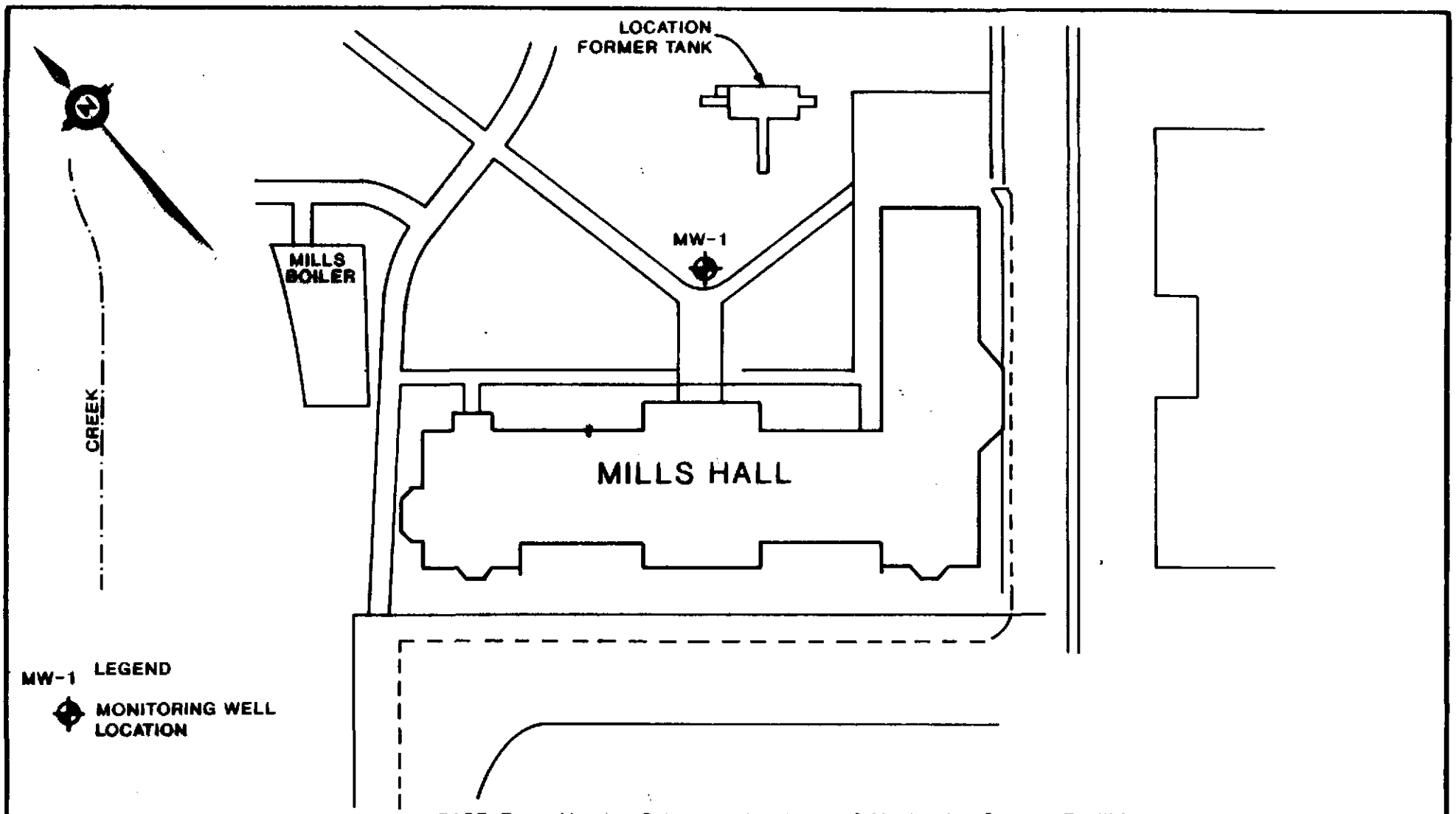
SITE VICINITY MAP

MILLS COLLEGE
MILLS HALL/TOYON MEADOW
Oakland, California

PROJECT NO.	DATE	
KE1025-7B-509	January 1991	Figure 1



BASE: Toyon Meadow Schematic Landscape & Masterplan Campus Facilities

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SITE PLAN

MILLS COLLEGE
MILLS HALL/TOYON MEADOW
Oakland, California

PROJECT NO.	DATE	
KE1025-7B-509	January 1991	Figure 2

WATER SAMPLE LOG

Project Name: Mills Corporation Yard Date: 12/20/90
Project Number: KE1025-7-509 Sampler: JF
Well Number: MH-1 Weather: Sunny Clear 30's
Well Location: North of Mills Hall Entry

Well Construction:

Date Completed: 7/11/89
Total Depth of Well: 22 feet
Diameter: 2 inches
Well Elevation & Reference:
N/A

Groundwater Levels:

Initial: N/A
Final: N/A
Reference Point:
Well Volume of Water: 9 (.17) = 1.5q

Sampling Equipment & Cleaning

Sampler Type: Bailer
Method of Cleaning: Liquinox/Dist.
Pump or Bailer Type: Teflon
Method of Cleaning:
pH Meter: Hydac
Conductivity Meter: Hydac
Comments:

SAMPLING MEASUREMENTS

Time	Discharge (gal.) Per Time Period	Discharge (gal.) Cummulative	pH	Temp (°C)	Spec. Conductance (umhos/cm) Field	Spec. Conductance (umhos/cm) @ 25°C	Color/ Turbidity	Odor
1310								
1310		2	7.23	54.4	864		Silty Brown Mud	None
1330		4	6.94	48.1	853		"	"
1345		6	7.18	48.0	848			
1350	Sampled							

Total Discharge: 6 gallons
Casing Volumes Removed: 4
Method of Disposal: ground surface

Comments: Christy box flooded sponged dry - lock very rusted

Kaldveer Associates
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WELL SAMPLE LOG MH-1

MILLS COLLEGE
Oakland, California

PROJECT NO.	DATE	
KE1025-7B-509	January 1991	Figure B-1

APPENDIX B

LABORATORY REPORT, MED-TOX ASSOCIATES, PLEASANT HILL, CALIFORNIA

MED-TOX ASSOCIATES, INC.

ENVIRONMENTAL & OCCUPATIONAL HEALTH SERVICES
3440 Vincent Road Pleasant Hill, CA 94523 • (415) 930-9090 • FAX# (415) 930-0256

LABORATORY ANALYSIS REPORT

KALDVEER ASSOCIATES, INC.
425 ROLAND WAY
OAKLAND, CA 94621

ATTN: DENNIS LADUZINSKY

CLIENT PROJ. NO: KE1025-7

REPORT DATE: 01/15/91

DATE SAMPLED: 12/20/90
DATE RECEIVED: 12/20/90
DATE EXTRACTED: 12/27/90
DATE ANALYZED: 12/28/90

MED-TOX JOB NO: 9012133

ANALYSIS OF: WATER SAMPLE

Sample Identification Client Id.	Lab No.	Extractable Hydrocarbons as Diesel (mg/L)	Extractable Hydrocarbons as Oil (mg/L)
MH-1	01C	ND	ND
Detection Limit		0.05	0.1

Method: 3520 GCFID

Instrument: C

ND = Not Detected

Andrew Bradeen, Manager
Organic Laboratory

Results FAXed to Dennis Laduzinsky 01/04/91

KALDVEER ASSOCIATES, INC.

CLIENT JOB NO: KE1025-7
CLIENT ID: MH-1
DATE SAMPLED: 12/20/90
DATE RECEIVED: 12/20/90
REPORT DATE: 01/15/91

MED-TOX LAB NO: 9012133-01A
MED-TOX JOB NO: 9012133

DATE ANALYZED: 12/27/90
INSTRUMENT: F

BTEX

METHOD: EPA 8020 (5030)

	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene	ND	0.3
Toluene	ND	0.3
Ethylbenzene.	ND	0.3
Xylenes, Total.	ND	1

ND = Not Detected

MED-TOX ASSOCIATES, INC

QUALITY CONTROL DATA

KALDVEER ASSOCIATES, INC.

CLIENT PROJ. NO: KE1025-7

MED-TOX JOB NO: 9012133

DATE EXTRACTED: 12/27/90
DATE ANALYZED: 12/28/90
INSTRUMENT: C

MED-TOX JOB NO: 9012133

CLIENT REF: KE1025-7

MATRIX SPIKE RECOVERY SUMMARY
TPH EXTRACTABLE WATERS
METHOD 3520
(WATER MATRIX; EXTRACTION METHOD)

ANALYTE	Spike Conc. (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
Diesel	0.510	ND	0.358	0.331	67.5	7.8

CURRENT QC LIMITS (Revised 11/12/90)

Analyte	Percent Recovery	RPD
Diesel	(37-104)	32

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

DATE ANALYZED: 12/27/90

MED-TOX JOB NO: 9012133

INSTRUMENT: H

CLIENT REF: KE1025-7

MATRIX SPIKE RECOVERY SUMMARY
METHOD TPHBTW
5030 w/GCFID/8020

ANALYTE	Spike Conc. (ug/L)	Sample Result (ug/L)	MS Result (ug/L)	MSD Result (ug/L)	Average Percent Recovery	RPD
Benzene	16.2	ND	17.0	14.6	97.5	15.2
Toluene	52.8	ND	56.5	50.2	101.0	11.8
Hydrocarbons as Gasoline	505	ND	508	505	100.4	0.6

CURRENT QC LIMITS (Revised 11/12/90)

Analyte	Percent Recovery	RPD
Benzene	(83-117)	17.8
Toluene	(89-111)	14.9
Gasoline	(76-108)	17.3

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

R-1, S-B
R-3, S-4

Lab Job # 9012133

CHAIN-OF-CUSTODY RECORD

Project Number	Project Name	Location
KE1025-7	Mills Hall	Mills

Sampler's Name (printed): JEFF FIELGER

KA Sample I.D. Number	Lab Sample I.D. Number	Date	Soil	Water	Number/Type of Container	Analytical Tests: Method 8015 - TPH as Gasoline	Method 8015 - TPH as Diesel	Method 8240 - Volatile Organics	Method 8270 - Semi-Volatile Organics	Method 8010 - Halogenated Volatile Organics	Method 8080 - Organochlorine Pesticides & PCB's	Waste Oil - Metals -	Method 8020 BTEX			Remarks
MH-1	01A, B	12/20		X	2 x 40ml								X			ACIDIFIED WITH HCl
MH-1	C, D	12/20		X	2 x 1L-AMBER		X									ACIDIFIED WITH HCl

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	12/20/90 1520	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)
	12/21/90 1620	Denise Harrington

Requested Turnaround Time: Standard

Remarks:

Kaldveer Assoc. Contact: DENNIS LASZINSKY

Ship To:

Attention:

Phone No:

Please address correspondence and return cooler # _____ to:

Kaldveer Associates, Inc.
425 Roland Way
Oakland, California 94621
(415) 568-4001

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