

SOIL AND GROUND WATER  
TESTING REPORT  
FOR  
MILLS COLLEGE CORPORATION YARD  
OAKLAND, CALIFORNIA



# Kaldveer Associates Geoscience Consultants

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

## PRINCIPALS

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President  
Richard Short, P.E., G.E.  
Executive Vice President  
Ronald L. Bojuniemi, P.E., G.E.  
Vice President

## ASSOCIATES

Patrick Stevens, P.E., G.E.  
David Hoexter, C.E.G., R.E.A.  
Larry Goldfarb, P.E.  
John Sutton, P.E., G.E.  
Jeffrey A. Arneberg, P.E.  
Ralph M. Isaacs, Ph.D., P.E.  
Richard J. Bielefeld, R.G.P., C.E.G.

## PROFESSIONALS

Dawn Rinaldi, P.E.  
Guy Petraborg, P.E.  
Dennis Laduzinsky, C.E.G.  
Randy Rowley, R.G., R.E.A.  
Michael Leaverton, P.E.

May 7, 1989  
KE1025-2A, 18405

Mills College  
5000 MacArthur Boulevard  
Oakland, California 94613-1399

Attention: Mr. David Johnson  
Director, Campus Facilities

RE: SOIL AND GROUND WATER TESTING  
REPORT  
MILLS COLLEGE CORPORATION YARD  
OAKLAND, CALIFORNIA


Dear Mr. Johnson:


Kaldveer Associates is pleased to submit our soil and ground water testing report for the Mills College Corporation Yard in Oakland, California. The enclosed report contains a description of our investigation, results of soil and ground water sample analyses, and our conclusions and recommendations regarding site environmental quality.

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 don't hesitate to call.

Very truly yours,

KALDVEER ASSOCIATES, INC.

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

  
John R. Sutton, P.E./G.E.  
Associate

DL/JRS:pv  
Copies: Addressee (4)

425 Roland Way, Oakland, CA 94621 (415) 568-4001 FAX: 415-568-2205  
 1737 North First Street, Suite 300, San Jose, CA 95112 (408) 436-5703 FAX: 408-436-5735

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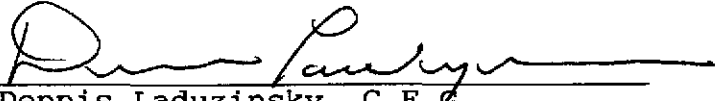
SOIL AND GROUND WATER  
TESTING REPORT


For  
MILLS COLLEGE CORPORATION YARD  
OAKLAND, CALIFORNIA

To  
Mills College  
5000 MacArthur Boulevard  
Oakland, California 94613-1399

By  
KALDVEER ASSOCIATES



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

  
John R. Sutton, P.E./G.E.  
Associate

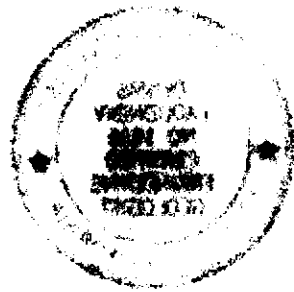


TABLE OF CONTENTS

Page No.

Letter of Transmittal

TITLE PAGE

TABLE OF CONTENTS

I.	INTRODUCTION . . . . .	1
II.	CONCLUSIONS AND RECOMMENDATIONS . . . . .	2
	A. Conclusions . . . . .	2
	B. Recommendations . . . . .	3
III.	SCOPE OF SERVICES . . . . .	3
IV.	FIELD INVESTIGATION . . . . .	3
	A. Site Description . . . . .	3
	B. Drilling and Soil Sampling . . . . .	4
	C. Subsurface Conditions . . . . .	4
	D. Monitoring Well Construction . . . . .	5
	E. Well Development and Sampling . . . . .	5
	F. Ground Water Gradient . . . . .	6
V.	ANALYTICAL RESULTS . . . . .	6
	A. Laboratory Procedures . . . . .	6
	B. Analytical Results - Soil . . . . .	6
	C. Analytical Results - Water . . . . .	6
VI.	DISCUSSION . . . . .	7
VII.	LIMITATIONS . . . . .	8

TABLE 1 - GROUND WATER ELEVATION DATA

TABLE 2 - ANALYTICAL RESULTS - SOIL

TABLE 3 - ANALYTICAL RESULTS - WATER

FIGURE 1 - SITE VICINITY MAP

FIGURE 2 - PROJECT LOCATION MAP

FIGURE 3 - SITE PLAN

FIGURE 4 - DIAGRAMMATIC CROSS SECTION A-A'

FIGURE 5 - GROUND WATER ELEVATION CONTOURS, JUNE, 1989

FIGURE 6 - GROUND WATER ELEVATION CONTOURS, DECEMBER, 1990

APPENDIX A - BORING LOGS AND WELL CONSTRUCTION DETAILS

APPENDIX B - WELL SAMPLING LOGS

APPENDIX C - ANALYTICAL RESULTS - MED-TOX ASSOCIATES, INC.

SOIL AND GROUND WATER TESTING  
REPORT  
FOR  
MILLS COLLEGE CORPORATION YARD  
OAKLAND, CALIFORNIA

I. INTRODUCTION

This report presents the results of an investigation of soil and ground water quality at the Mills College Corporation Yard located in Oakland, California. The site is located near the intersection of MacArthur Boulevard and Seminary Avenue as shown on Figures 1 and 2.

The purpose of this investigation has been to collect shallow soil and ground water samples to evaluate the distribution of soil and ground water contamination related to a former underground gasoline storage tank at the corporation yard facility. In October, 1988, a 1,000-gallon fuel tank, which had been used to store gasoline was excavated and removed from the corporation yard facility. A report prepared by Blaine Tech Services, Inc. indicated that soil samples obtained from a depth of 21 feet following tank removal contained moderately high levels of petroleum hydrocarbons. It is understood that approximately 100 cubic yards of contaminated soils were excavated from the tank pit area at the time of tank removal and aerated onsite. The Alameda County Department of Environmental Health subsequently issued a letter, dated February 15, 1989, requiring additional investigation of the vertical and lateral extent of potential contamination related to the former tank.

The present investigation has been conducted in accordance with a work plan prepared by Kaldveer Associates dated March 3, 1989 and approved by Alameda County Department of Environmental Health on April 26, 1989. This investigation was performed in June, 1989 and included the installation of three ground water monitoring wells and two shallow soil borings, with analysis of soil and ground water samples for total petroleum hydrocarbon as gasoline, and purgeable aromatic compounds (benzene, toluene, xylene, and ethylbenzene). A report summarizing the results of this investigation was submitted in draft form to Mills College in July, 1989.

This report summarizes all work performed at the site to date, and includes the results of an additional round of ground water sampling performed in December, 1990. The results of the ground water sampling have been previously submitted in a separate report dated January 17, 1991.

## II. CONCLUSIONS AND RECOMMENDATIONS

### A. Conclusions

Based on the information collected during this investigation, the following conclusions are presented:

1. The majority of gasoline contamination in the unsaturated zone appears to have been removed during the soil excavation operations conducted at the time the tank was removed.
2. Petroleum hydrocarbons as gasoline were detected at concentrations of from 1.0 to 1200 parts per million in soil samples collected immediately adjacent to the former tank excavation area.
3. Petroleum hydrocarbons as gasoline were not detected in soil samples collected at a distance of 10 to 13 feet from the former tank excavation area.
4. Petroleum hydrocarbons as gasoline were detected at a concentration of 11 parts per million in a water sample collected from the downgradient well (MW-1) when sampled in June, 1989. Hydrocarbons as gasoline were measured in water sampled from Well MW-1 at a concentration of 2.5 parts per million (ppm) when resampled in December, 1990. Benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations were measured at 0.40, 0.21, 0.056, and 0.31 ppm, respectively at the 1990 sampling. This well also contained a slight hydrocarbon film on the water surface when first bailed.
5. Hydrocarbons as gasoline were not detected in water samples collected from two additional wells installed during the June, 1989 investigation. The water sample collected from Well MW-2 did not contain hydrocarbons in detectable quantities when sampled again in December, 1990. However, the sample collected from Well MW-3 contained 0.05 ppm hydrocarbons as gasoline and 0.011 ppm benzene when resampled in 1990.
6. The surrounding topography and location of the existing building preclude additional investigation of soil and ground water quality adjacent to the former tank location.

## B. Recommendations

The following recommendations are presented at this time:

1. Copies of this, and the previous report by Blaine Tech Services, Inc. report should be submitted to the California Regional Water Quality Control Board and the Alameda County Department of Environmental Health.
2. Mills College proposes to sample the existing monitoring wells on a semi-annual basis for a period of two years to monitor potential changes in the distribution of hydrocarbons in ground water at the site. It is recommended that wells be sampled in June and December, 1991 and again in April and October, 1992.

## III. SCOPE OF SERVICES

The work performed during this investigation consisted of the following tasks:

1. Drilling five borings to a depths of 25 to 36 feet for soil sample collection.
2. Installing ground water monitoring wells to depths of approximately 36 feet in three of the borings.
3. Development and sampling of three ground water monitoring wells.
4. Purging and resampling three ground water monitoring wells 17 months later.
5. Level-line surveying of well-top elevations and obtaining water-level measurements.
6. Analyses of soil and ground water samples by a contract analytical laboratory.
7. Preparation of this report.

## IV. FIELD INVESTIGATION

### A. Site Description

The site is located on Pine Top Road in the northeastern corner of the Mills College property, adjacent to the intersection of Seminary Avenue and the Seminary Avenue exit off-ramp from Highway 580, as shown on Figures 1 and 2. The former tank location area is covered with asphalt paving and is surrounded by four existing structures. The site occupies a graded hilltop area that is



relatively level. However, relatively steep slopes surround the corporation yard on all sides. A public sidewalk and Seminary Avenue are located at the base of the slope to the south of the former tank complex.

#### B. Drilling and Soil Sampling

The initial field investigation was conducted on June 1 and 2, 1989 and consisted of installing three ground water monitoring wells and two soil borings at the approximate locations shown on Figure 3. The monitoring wells and soil borings were drilled with a truck-mounted drill rig equipped with 8-inch diameter hollow stem augers. Monitoring wells were installed to a depth of approximately 36 feet and soil borings were advanced to a depth of approximately 25 feet. Soils encountered during drilling were classified in the field by a Kaldveer geologist by visual examination in accordance with the Unified Soil Classification System (Figure A-1). Logs of the borings are presented in Appendix A.

Soil samples were collected from the borings at approximate 5-foot intervals using either a 2-inch I.D. Modified California sampler containing thin brass liners, or a standard penetration split-spoon sampler. The sampler was driven with a 140 pound hammer falling 30 inches. The number of blows required to drive the sampler the last 12 inches of an 18 inch drive are recorded as the penetration resistance (blows/foot) on the boring logs. The augers were steam-cleaned prior to installation of each monitoring well, and the sampler and brass liners were thoroughly cleaned with TSP (tri-sodium phosphate) detergent between samples to reduce the potential for cross-contamination. The shallow soil borings were backfilled with neat cement upon completion.

Samples collected for possible chemical analysis were collected in 2-inch diameter, 6-inch long, brass liners. These samples were examined for logging, sealed with aluminum foil-lined lids, labeled and immediately placed in refrigerated storage. A chain-of-custody form was initiated by the sampler and accompanied the samples to Med-Tox Associates of Pleasant Hill, California, a California Department of Health Services certified laboratory.

#### C. Subsurface Conditions

The surficial soils at the site consist of approximately 4 to 5 feet of sandy clay and clayey sand, underlain by deeply weathered (decomposed) granitic bedrock of the Leona Rhyolite. The bedrock is extremely friable and exhibits close fracturing with moderate to complete mineral decomposition and discoloration. Ground water was encountered at a depth of approximately 25 feet at the time of drilling and stabilized water levels were measured at a depth of approximately 19 feet one week later. A diagrammatic cross-section is presented on Figure 4.

The attached boring logs and related information (Appendix A) depict location-specific subsurface conditions encountered during our field investigation. The approximate locations of the borings were determined by pacing and should be considered accurate only to the degree implied by the method used. The passage of time could result in changes in the surface or subsurface conditions due to natural occurrences or human intervention.

#### D. Monitoring Well Construction

Three ground water monitoring wells were installed under permit from the Alameda County Flood Control and Water Conversation District. Ground water monitoring wells were completed to a depth of approximately 36 feet using 2-inch I.D. Schedule 40, threaded, PVC casing. A 0.020-inch slotted well screen was installed between the depths of approximately 19 to 30 feet in monitoring well MW-1, and from 14 to 34 feet in MW-2 and MW-3. A filter pack consisting of washed 2/12 sand was placed in the annular space around the well casing to a level approximately two feet above the slotted screen section in each well. One foot of bentonite above the sand pack, followed by neat cement to the surface completed the well construction. A locking well cover was installed on each well. Specific well construction details are presented along with the respective boring logs in Appendix A.

#### E. Well Development and Sampling

The initial round of monitoring well sampling was conducted on June 7, 1989. Prior to sampling, the wells were developed using a teflon bailer. Development consisted of the rapid removal of water from the well until the water was relatively free of sand, silt and turbidity. Well development consisted of the removal of approximately 5 well casing volumes of water from each well. Following development, each well was sampled using a clean teflon bailer. Water samples from each well were collected and decanted into appropriate glassware, labeled and placed in refrigerated storage, and delivered to the laboratory under chain-of-custody control. The bailer was thoroughly washed with TSP and rinsed with distilled water between wells to reduce the potential for cross-contamination.

The ground water monitoring wells were purged and resampled on December 20, 1990. Following an initial ground water level measurement, a minimum of four well-casing volumes of water were purged from each well using a teflon bailer. Purging consists of the rapid removal of water from the well until physical parameters such as pH, temperature and specific conductance had stabilized. Following purging, samples were collected using the teflon bailer, placed in laboratory-supplied glassware, labeled, and placed in refrigerated storage for transport to the laboratory under chain-

of-custody control. Monitoring well sampling logs are attached to this report as Appendix B.

#### F. Ground Water Gradient

Well-top elevations were surveyed to a common datum, and water levels were measured in each well. Well-top elevations, depth to water, and calculated water-surface elevations for each sampling date are presented in Table 1. These data are used to generate the ground water elevation contour maps presented on Figures 5 and 6. Ground water elevation data collected during this investigation indicate a general southwestward flow of ground water at an approximate gradient of 0.002 ft/ft.

### V. ANALYTICAL RESULTS

#### A. Laboratory Procedures

Soil and ground water samples were analyzed by Med-Tox Associates of Pleasant Hill, California for total petroleum hydrocarbons as gasoline and for purgeable aromatic hydrocarbons, using EPA Method 8015 and EPA Method 8020, respectively. Fifteen soil samples and six ground water samples were analyzed.

#### B. Analytical Results - Soil

Results of the soil sample analyses are presented in Table 2 and are attached to this report as Appendix C. Petroleum hydrocarbons as gasoline were only detected in the samples collected from borings MW-1 and EB-2. Soil samples collected from the boring for MW-1 at the 11, 16 and 21 foot depths were found to contain 520, 1, and 15 parts per million (ppm) total hydrocarbons as gasoline, respectively. Soil samples collected from the 11, 16 and 21 foot depths from boring EB-1 were found to contain 580, 1200 and 240 ppm, respectively. Purgeable aromatic compounds were detected at various concentrations as shown on Table 2.

#### C. Analytical Results - Water

Results of the water sample analyses are presented in Table 3 and are attached to this report as Appendix C. The ground water sample collected from monitoring well MW-1 for the June, 1989 sampling, was found to contain 11 ppm total petroleum hydrocarbon as gasoline, 2.1 ppm benzene, 1.9 ppm toluene, 0.031 ppm ethylbenzene, and 1.4 ppm xylenes. This well was found to contain 2.5 ppm TPH, 0.040 ppm benzene, 0.21 ppm toluene, 0.056 ethylbenzene and 0.31 ppm xylene in the December, 1990 sampling.

Ground water samples collected from monitoring wells MW-2 and MW-3 were not found to contain petroleum hydrocarbons as gasoline or purgeable aromatics in detectable quantities in the June, 1989 sampling. For December, 1990, MW-2 was again found to be free of

detectable hydrocarbons. However, the sample collected from well MW-3 contained 0.05 ppm TPH as gasoline, and 0.011 ppm benzene during the December, 1990 sampling.

## VI. DISCUSSION

Based on the data gathered to date it appears that the majority of hydrocarbon contamination related to the former underground storage tank has been removed during the previous tank removal and soil excavation operations. Although moderately high levels of hydrocarbons as gasoline were detected in soil samples collected from boring MW-1 and EB-2, it should be noted that these borings were placed immediately adjacent to the former tank location area. The distribution of hydrocarbons is shown graphically on Figure 4.

Hydrocarbons as gasoline were not detected in soil samples collected from EB-1, MW-2 and MW-3, which are located at a distance of 10, 12, and 13 feet away from the former tank excavation, respectively. Assuming that migration of hydrocarbons from the tank within the unsaturated zone would have occurred in a somewhat symmetrical pattern, the absence of hydrocarbons in soil samples collected from boring EB-1, MW-2, and MW-3 would suggest that residual soil contamination does not extend very far from the former tank location. Additional excavation of the contaminated soils encountered in boring MW-1 and EB-2 does not appear to be feasible given the proximity of the existing building to the former tank location.

In June, 1989, hydrocarbons as gasoline were detected in ground water only in the sample obtained from monitoring well MW-1 (the down-gradient well). Based on the December, 1990 sampling results, the level of hydrocarbons as gasoline measured in this well have decreased significantly, although a slight hydrocarbon sheen was present on the water surface when initially bailed. Monitoring Well MW-3 (approximate lateral-gradient) showed an increase of hydrocarbon levels from non-detectable in July, 1989 to 0.05 ppm during the December 1990 sampling round. The up-gradient well remained free of detectable hydrocarbons.

As moderately high concentrations of hydrocarbons were detected in the down-gradient well, additional wells would normally be installed to further evaluate the lateral extent of hydrocarbon contamination in ground water. However, the site presents logistical constraints which preclude installation of additional down-gradient monitoring wells at any meaningful location. At the Mills College Corporation Yard, the location of the existing buildings preclude additional investigation of the extent of soil and ground water contamination except possibly beneath the canopy area spanning the two adjacent buildings. However, installing a well beneath the canopy is not practical considering the height restriction on the type of drilling equipment that must be used,

coupled with the very hard drilling expected in the underlying bedrock (standard penetration resistance of up to 60 blows/6-inches). In short, the well would be very difficult and thus, very expensive to install.

The next available downgradient location for potential monitoring well installation would be in Seminary Drive at the base of the hill below the Corporation Yard office. Installation of a monitoring well in this location would, being on a city street, require traffic control, encroachment permits, and response to other logistical problems. These logistical concerns would also apply during well development and again at each sampling event. In addition, the well would be located too far from the former tank location to serve as a practical monitoring device. In our opinion, the amount of effort and cost involved in providing additional investigation at the Corporation Yard facility does not seem warranted given the moderate levels of hydrocarbons detected in ground water during this investigation. It is recommended that periodic ground water monitoring be performed to monitor potential changes in the distribution of hydrocarbons in ground water at the site.

#### VII. LIMITATIONS

Our services have been performed in accordance with generally accepted engineering and environmental principles and practices within the area at the time of our investigation. No other warranty, either expressed or implied as to the professional advice provided is made. It should be recognized that certain limitations are inherent in the evaluation of subsurface conditions, and that certain conditions may not be detected during an investigation of this type. If you wish to reduce the level of uncertainty associated with this study, we should be contacted for additional consultation.

The analysis and conclusions contained in this report are based on the site conditions as they existed at the time of our reconnaissance, discussions with governmental agents, owners or other familiar with the site or vicinity. Changes in the information or the data gained from these sources or in the proposed land use could result in changes in our conclusions. If such changes do occur, we should be advise so that we can review our report in light of those changes.

\* \* \* \* \*

TABLE 1

GROUND WATER ELEVATION DATA  
(all values reported in feet)

<u>Monitoring Well</u>	<u>Relative Well Top Elevation (1)</u>	<u>Depth to Water</u>	<u>Relative Ground Water Elevation</u>
<u>June 1989</u>			
MW-1	100.00	19.44	80.56
MW-2	99.98	19.36	80.62
MW-3	100.01	19.40	80.61
<u>December 1990</u>			
MW-1	100.00	22.05	77.95
MW-2	99.98	21.96	78.02
MW-3	100.01	22.00	78.01

(1) Well-top elevations based on an arbitrary datum of 100.00 feet at MW-1.

TABLE 2

ANALYTICAL RESULTS - SOIL  
(reported in parts per million, mg/kg)

Sample Location & Depth(ft)	TPH Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes
MW1-11	520.0	0.78	2.8	2.4	14.0
MW1-16	1.0	0.3	0.11	0.007	0.045
MW1-21	15.0	1.6	2.3	0.26	1.6
MW2-11	ND	0.002	0.002	ND	ND
MW2-16	ND	0.001	0.001	ND	ND
MW2-21	ND	ND	0.001	ND	ND
MW3-11	ND	0.015	0.001	ND	ND
MW3-16	ND	0.051	0.002	ND	0.005
MW3-21	ND	ND	ND	ND	ND
EB1-10.5	ND	0.005	0.002	ND	ND
EB1-15.5	ND	0.075	0.003	ND	ND
EB1-24	ND	0.003	0.002	ND	ND
EB2-11	580.0	7.6	50.0	13.0	72.0
EB2-16	1200.0	21.0	74.0	23.0	190.0
EB2-21	240.0	0.3	5.6	3.1	18.0

Notes:

TPH = Total Petroleum Hydrocarbons

ND = Not Detected; see laboratory reports for specific detection limits.

TABLE 3

ANALYTICAL RESULTS - WATER  
(reported in parts per million, mg/l)

<u>Monitoring Well/Date</u>	<u>TPH Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethylbenzene</u>	<u>Xylenes</u>
<u>MW-1</u>					
June, 1989	11.0	2.1	1.9	0.031	1.4
December, 1990	2.5	0.40	0.21	0.056	0.31
<u>MW-2</u>					
June, 1989	ND	ND	ND	ND	ND
December, 1990	ND	ND	ND	ND	ND
<u>MW-3</u>					
June, 1989	ND	ND	ND	ND	ND
December, 1990	0.05	0.011	ND	ND	ND

Notes:

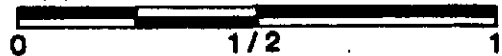
TPH = Total Petroleum Hydrocarbons

ND = Not Detected; see laboratory reports for specific detection limits.





Approximate Scale in Miles



Base: Provided by Thomas Brothers Maps, Dated 1988

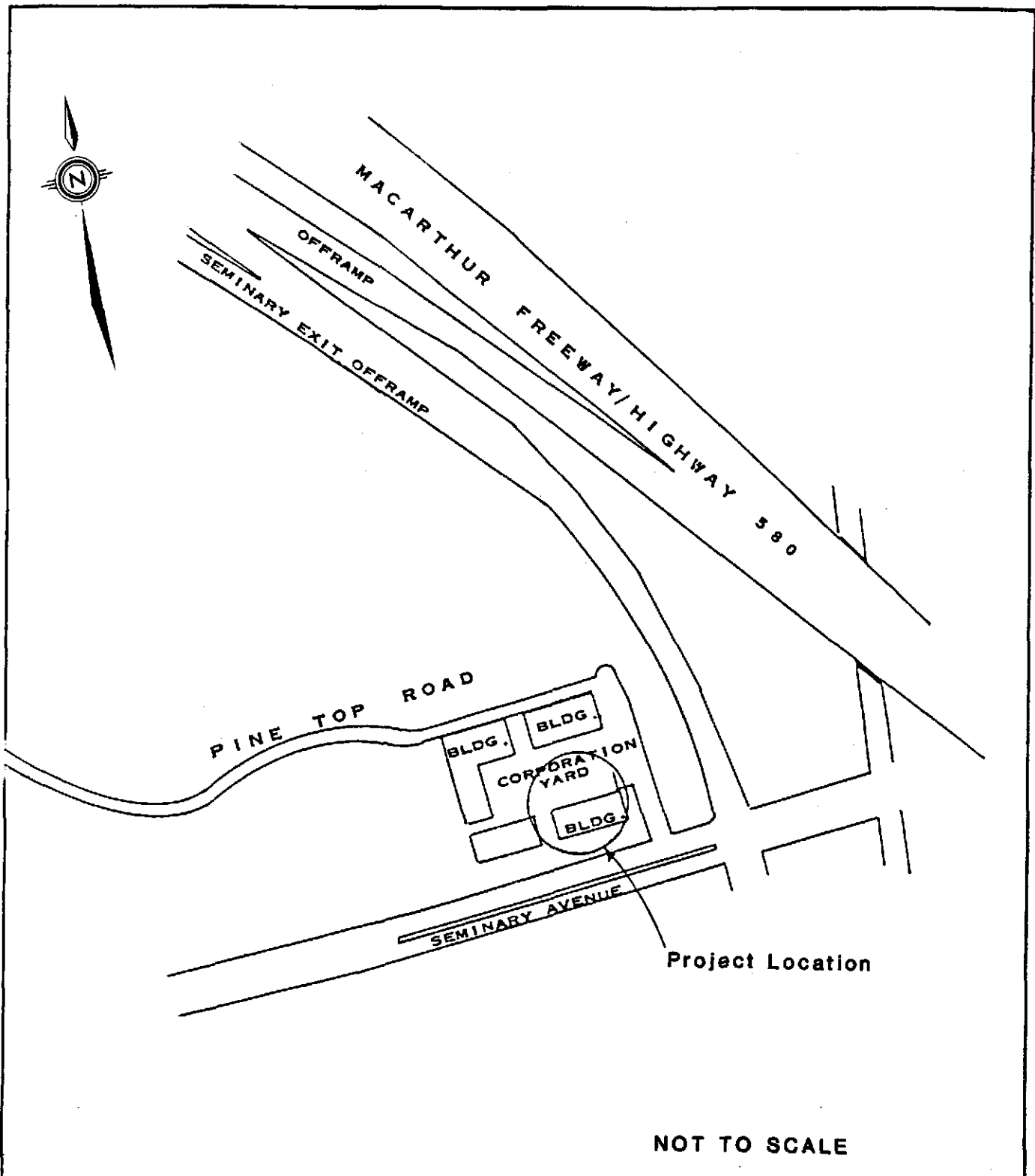


**Kaldveer Associates**  
Geoscience Consultants  
A California Corporation

**SITE VICINITY MAP**

**MILLS COLLEGE**  
**CORPORATION YARD FACILITY**  
Oakland, California

PROJECT NO.	DATE	Figure 1
KE1025-2A-719	May 1991	



NOT TO SCALE

Base: Thomas Bros. Maps, Alameda County, Dated 1988

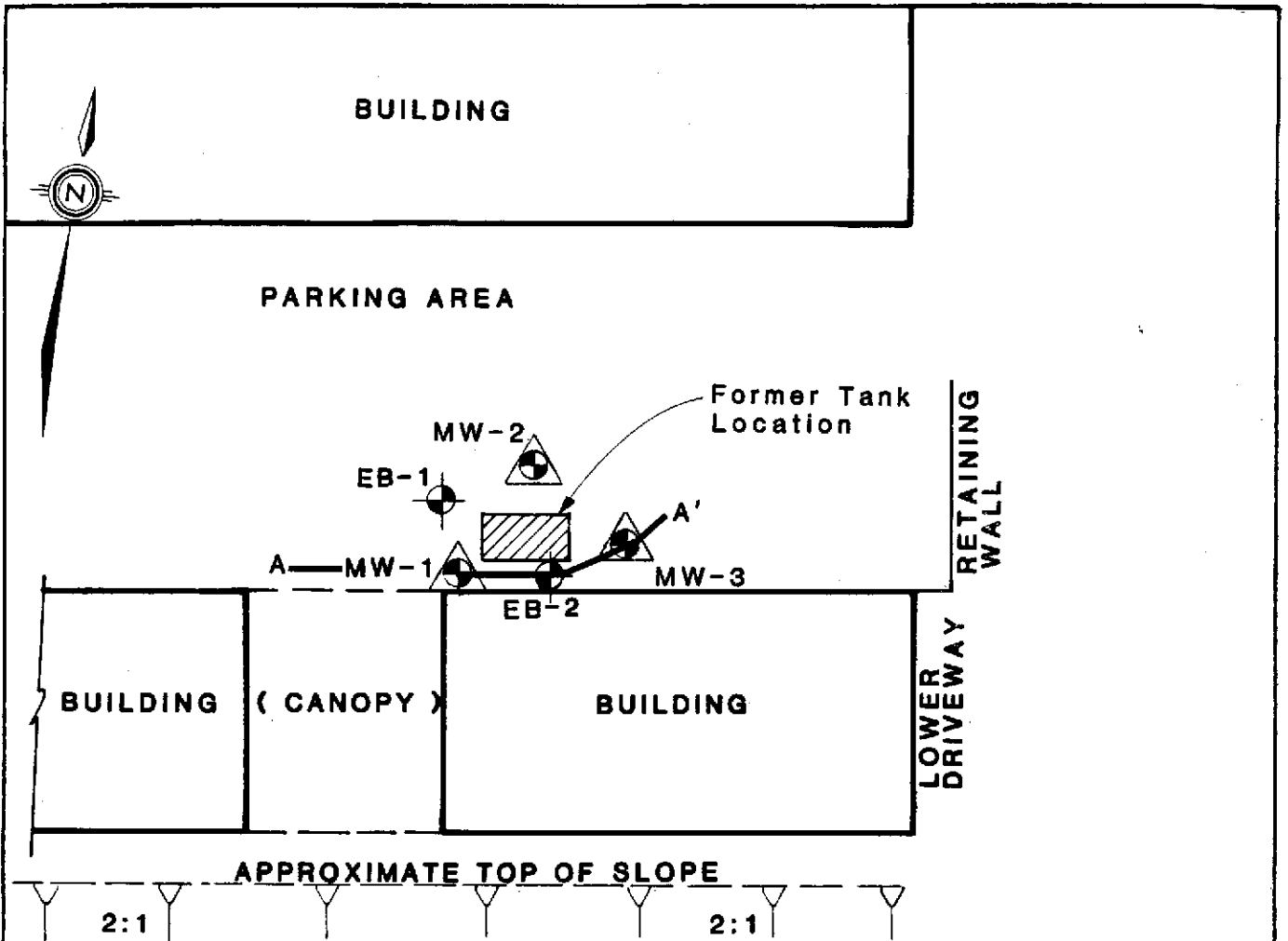


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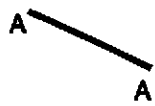
**PROJECT LOCATION MAP**

**MILLS COLLEGE  
CORPORATION YARD FACILITY  
Oakland, California**

PROJECT NO.	DATE	Figure 2
KE1025-2A-719	May 1991	



**LEGEND**

- EB-1  Approximate Location of Soil Boring
- MW-3  Approximate Location of Monitoring Well
-  Location of Cross-Section Shown on Figure 4



Base: After Blaine Tech Services Inc., 1988

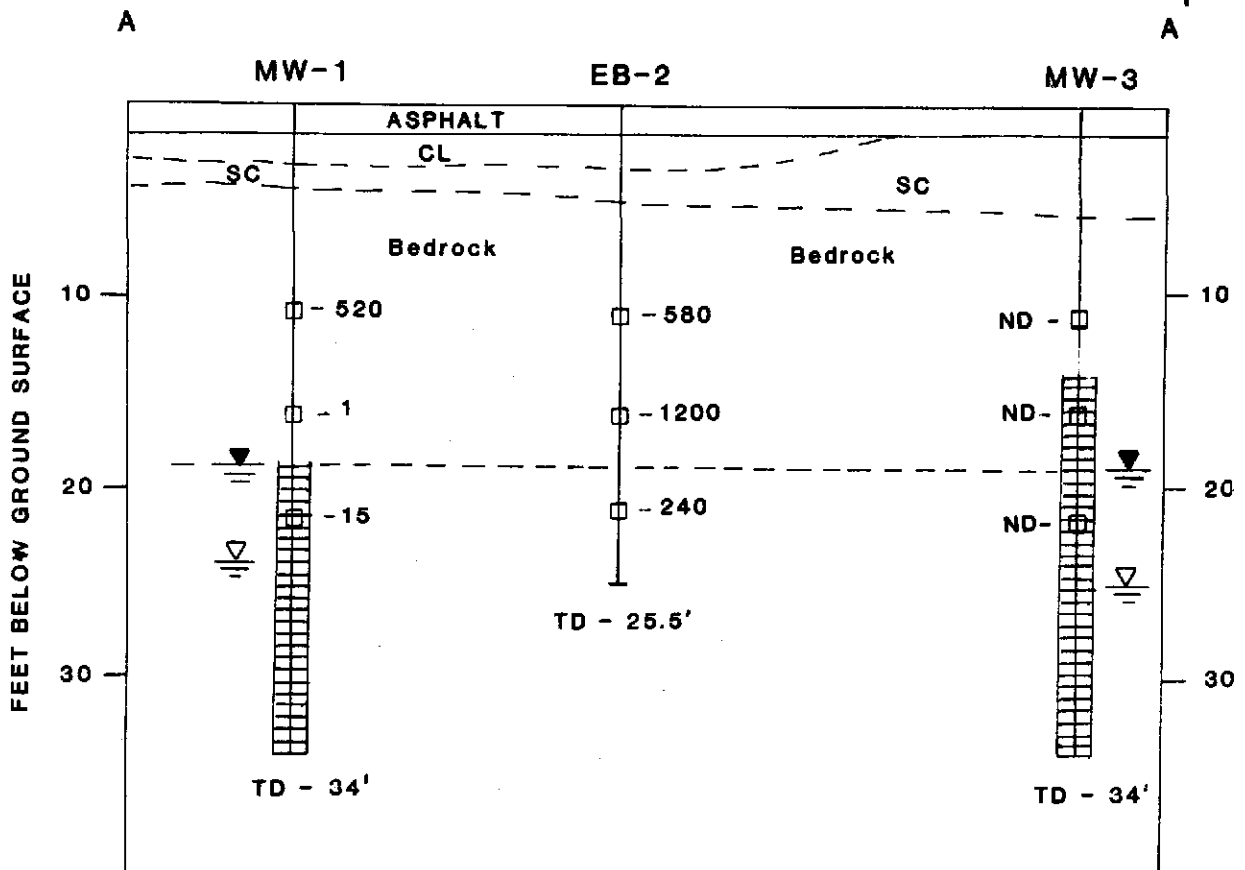


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 Geoscience Consultants  
 A California Corporation

**SITE PLAN**

**MILLS COLLEGE**  
**CORPORATION YARD FACILITY**  
 Oakland, California

PROJECT NO.	DATE	Figure 3
KE1025-2A-719	May 1991	



**LEGEND**

- ▼ - Stabilized Ground Water Level
- ▽ - Ground Water Level at Time of Drilling
- ▤ - Monitoring Well with Screened Interval
- -580 - Soil Sample Location with TPH Gasoline Concentration in ppm



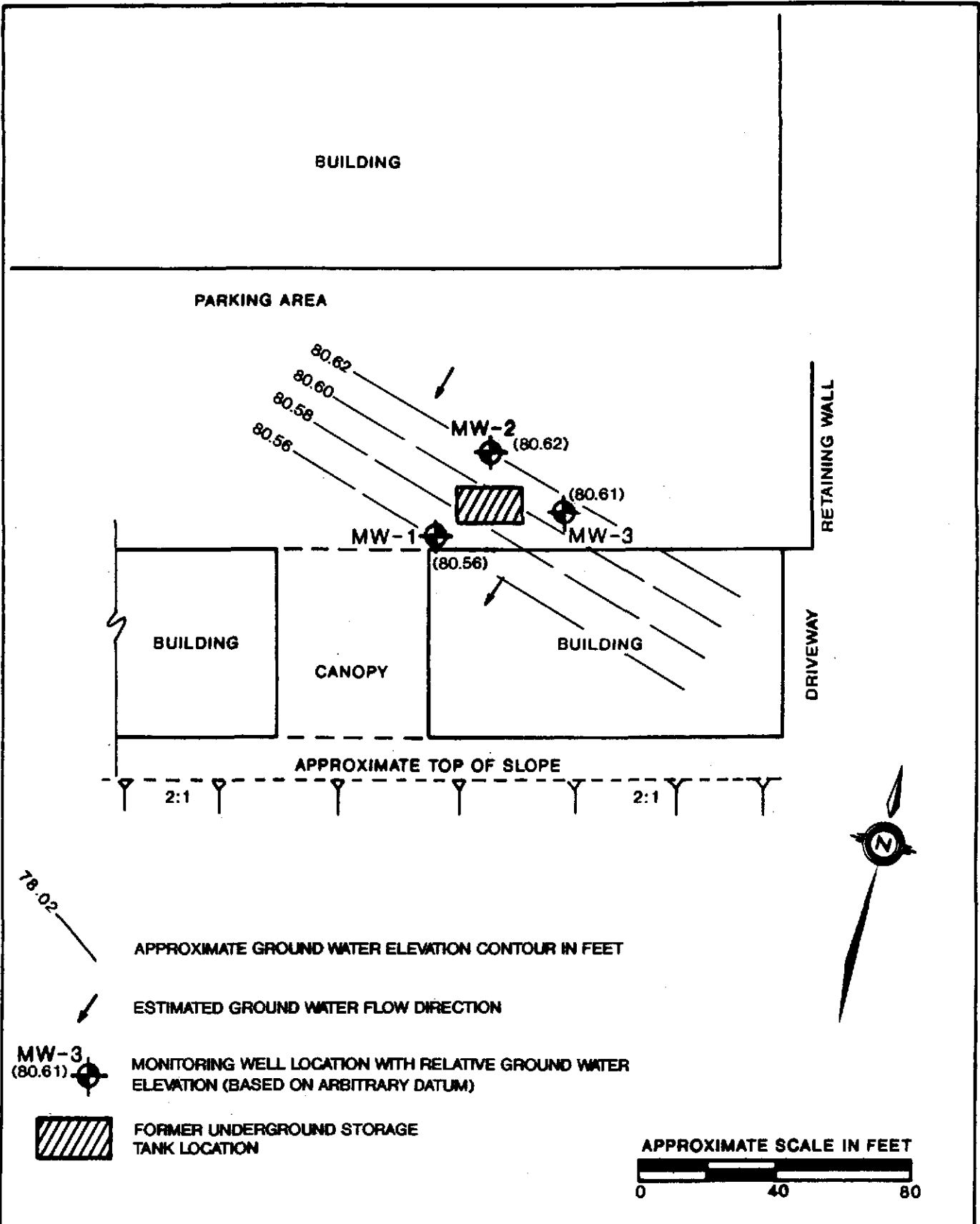
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Geoscience Consultants  
A California Corporation

Diagrammatic Cross Section A-A'

**MILLS COLLEGE**  
**CORPORATION YARD FACILITY**  
Oakland, California

PROJECT NO.	DATE
KE1025-2A-719	May 1991

Figure 4



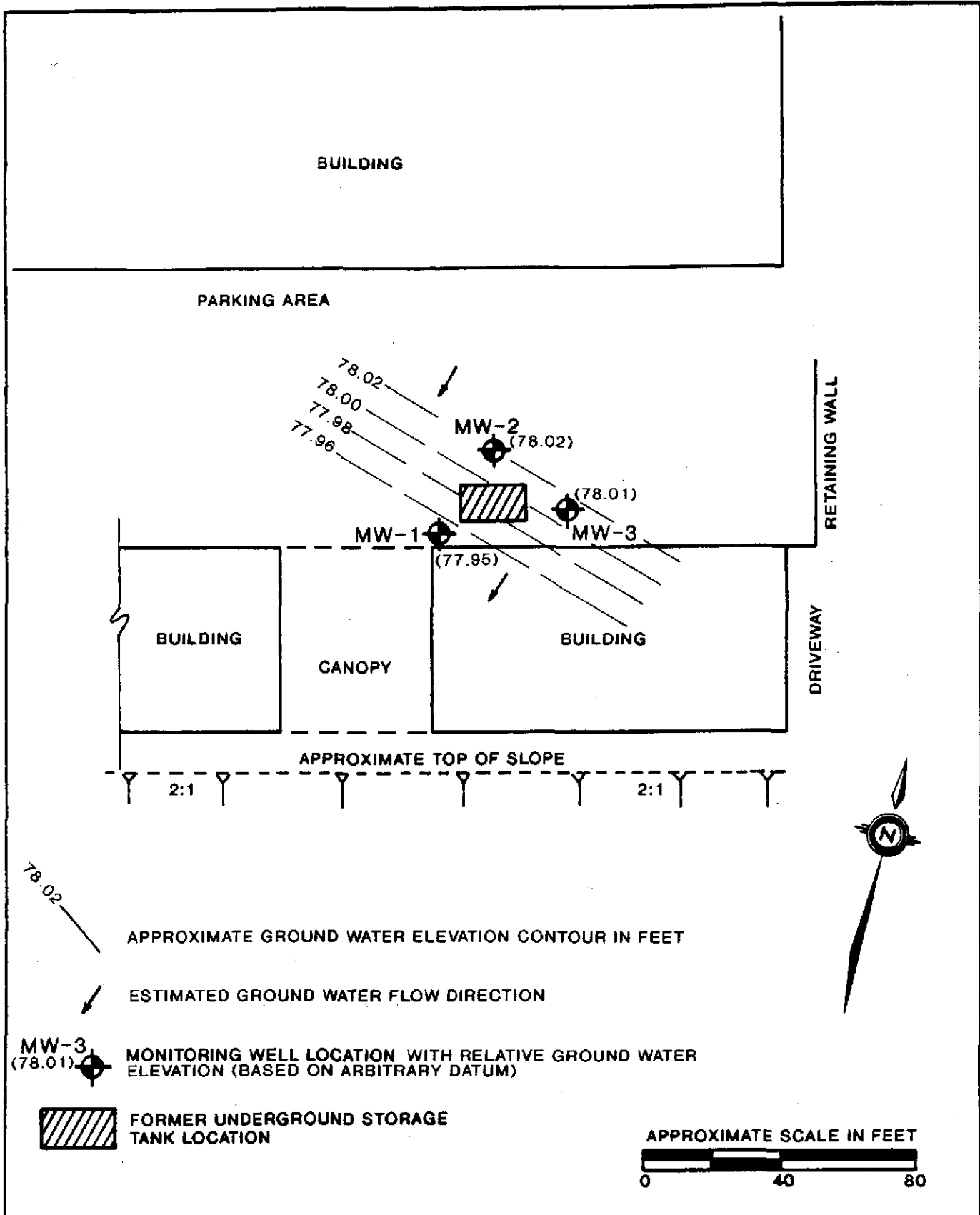
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**Geoscience Consultants**  
 A California Corporation

**GROUND WATER ELEVATION CONTOURS**  
**JUNE, 1989**

**MILLS COLLEGE**  
**CORPORATION YARD FACILITY**  
**Oakland, California**

<b>PROJECT NO.</b>	<b>DATE</b>
KE1025-2A-719	May 1991

**Figure 5**



**Kaldveer Associates**  
 Geoscience Consultants  
 A California Corporation

GROUND WATER ELEVATION CONTOURS  
 DECEMBER, 1990

MILLS COLLEGE  
 CORPORATION YARD FACILITY  
 Oakland, California

PROJECT NO.	DATE	Figure 6
KE1025-2A-719	May 1991	

APPENDIX A  
BORING LOGS AND WELL CONSTRUCTION  
DETAILS

PRIMARY DIVISIONS			GROUP SYMBOL	SECONDARY DIVISIONS
COARSE GRAINED SOILS MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS (LESS THAN 5% FINES)	GW	Well graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GRAVEL WITH FINES	GM	Silty gravels gravel-sand-silt mixtures non-plastic fines
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines
	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS (LESS THAN 5% FINES)	SW	Well graded sands, gravelly sands little or no fines
			SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures, non-plastic fines.
			SC	Clayey sands, sand-clay mixtures, plastic fines.
FINE GRAINED SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT IS LESS THAN 50%	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity	
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.	
		OL	Organic silts and organic silty clays of low plasticity.	
	SILTS AND CLAYS LIQUID LIMIT IS GREATER THAN 50%	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.	
		CH	Inorganic clays of high plasticity, fat clays	
		OH	Organic clays of medium to high plasticity, organic silts.	
HIGHLY ORGANIC SOILS			Pt	Peat and other highly organic soils

### DEFINITION OF TERMS

SILTS AND CLAYS	U.S. STANDARD SERIES SIEVE			CLEAR SQUARE SIEVE OPENINGS			COBBLES	BOULDERS
	200	40	10	4	3/4"	3"		
	SAND			GRAVEL				
	FINE	MEDIUM	COARSE	FINE	COARSE			

### GRAIN SIZES

SANDS AND GRAVELS	BLOWS/FOOT <sup>†</sup>
VERY LOOSE	0 - 4
LOOSE	4 - 10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	OVER 50

SILTS AND CLAYS	STRENGTH <sup>‡</sup>	BLOWS/FOOT <sup>†</sup>
VERY SOFT	0 - 1/4	0 - 2
SOFT	1/4 - 1/2	2 - 4
FIRM	1/2 - 1	4 - 8
STIFF	1 - 2	8 - 16
VERY STIFF	2 - 4	16 - 32
HARD	OVER 4	OVER 32

### RELATIVE DENSITY

<sup>†</sup> Number of blows of 140 pound hammer falling 30 inches to drive a 2 inch O.D. (1-3/8 inch I.D.) split spoon (ASTM D-1586).

<sup>‡</sup> Unconfined compressive strength in tons/sq. ft. as determined by laboratory testing or approximated by the standard penetration test (ASTM D-1586), pocket penetrometer, torvane, or visual observation.

### CONSISTENCY



**Kaldveer Associates**  
Geoscience Consultants  
A California Corporation

### KEY TO EXPLORATORY BORING LOGS Unified Soil Classification System (ASTM D-2487)

MILLS CORPORATION YARD  
Oakland, California

PROJECT NO.	DATE	Figure A-1
KE1025-2A	May 1991	



DRILL RIG	Hollow Stem Auger	SURFACE ELEVATION	--	LOGGED BY	RDB
DEPTH TO GROUNDWATER	24½' (note 2)	BORING DIAMETER	8"	DATE DRILLED	6-1-89

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLDWS/FT)	WATER CONTENT (%)	P.I.D. Reading	UNCONFINED COMPRESSIVE STRENGTH (KSF)
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
2" asphaltic concrete over 14" base-rock				1					
CLAY, sandy, coarse grained, damp slight odor (petroleum hydrocarbons)	olive green	firm	CL	2					
SAND, clayey, with silt, fine grained damp	light orange-brown	medium dense	SC	3					
GRANITIC ROCK, decomposed, close fracturing, friable, damp, no odor	mottled yellow orange brown white	dense	bed rock	5					
				6		38			
grading to strong odor (petroleum hydrocarbons)		very dense		7					
				8					
grading no odor				9					
				10					
				11		50/6"		90	
				12					
				13					
				14					
				15					
				16		50/6"		5.0	
grading to strong odor (petroleum hydrocarbon)				17					
				18					
bedrock hardens at 20 ft.				19					
				20					




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**EXPLORATORY BORING LOG**

MILLS CORPORATION YARD  
 Oakland, California

PROJECT NO.	DATE	BORING NO.
KE1025-2A	May 1991	MW-1

DRILL RIG Hollow Stem Auger				SURFACE ELEVATION _____			LOGGED BY RDB				
DEPTH TO GROUNDWATER 24½' (note 2)				BORING DIAMETER 8"			DATE DRILLED 6-1-89				
DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	P.I.D. Reading (ppm)	UNCONFINED COMPRESSIVE STRENGTH (KSF)		
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE								
<p>GRANITIC ROCK decomposed, close fracturing, low hardness strong odor (petroleum hydrocarbons) moist to wet</p> <p>grading to saturated grading to no odor</p> <p>bedrock hardens at at depth of approximately 27 feet</p> <p>bedrock softens slightly</p> <p>bedrock hardens at a depth of approximately 32 feet</p> <p>bedrock softens at a depth of approximately 34 feet</p>	<p>mottled yellow orange brown white</p>	<p>very dense</p>	<p>bed rock</p>	21	75/10"		100				
				22							
				23							
				24							
				25							
				26				60/6"		5.0	
				27							
				28							
				29							
				30							
				31				50/4"			
				32							
				33							
				34							
				35				60/6"			
Bottom of Boring = 36½ feet				36							
<p>Notes:</p> <p>1. The Stratification lines represent the approximate boundaries between soil types and the transition may be gradual.</p> <p>2. Groundwater level was measured at 24½ feet at time of drilling.</p>				37							
				38							
				39							
				40							
 <p><b>Kaldveer Associates</b> Geoscience Consultants A California Corporation</p>					<b>EXPLORATORY BORING LOG</b>						
					MILLS CORPORATION YARD Oakland, California						
					PROJECT NO.	DATE	BORING NO.				
					KE1025-2A	May 1991	MW-1				

Detail  
Depths

Ground Surface

Christy Box & Cover

Steel Well Housing with  
Locking Cover

Slip-on Well Cap

Boring, 8 " Diameter

Cement

Solid PVC Well Casing,  
2 " O.D.

Bentonite Pellet Seal

No. 2/12  
Sand Filter Pack

Machine Slotted, PVC Well  
Screen, 0.02 "

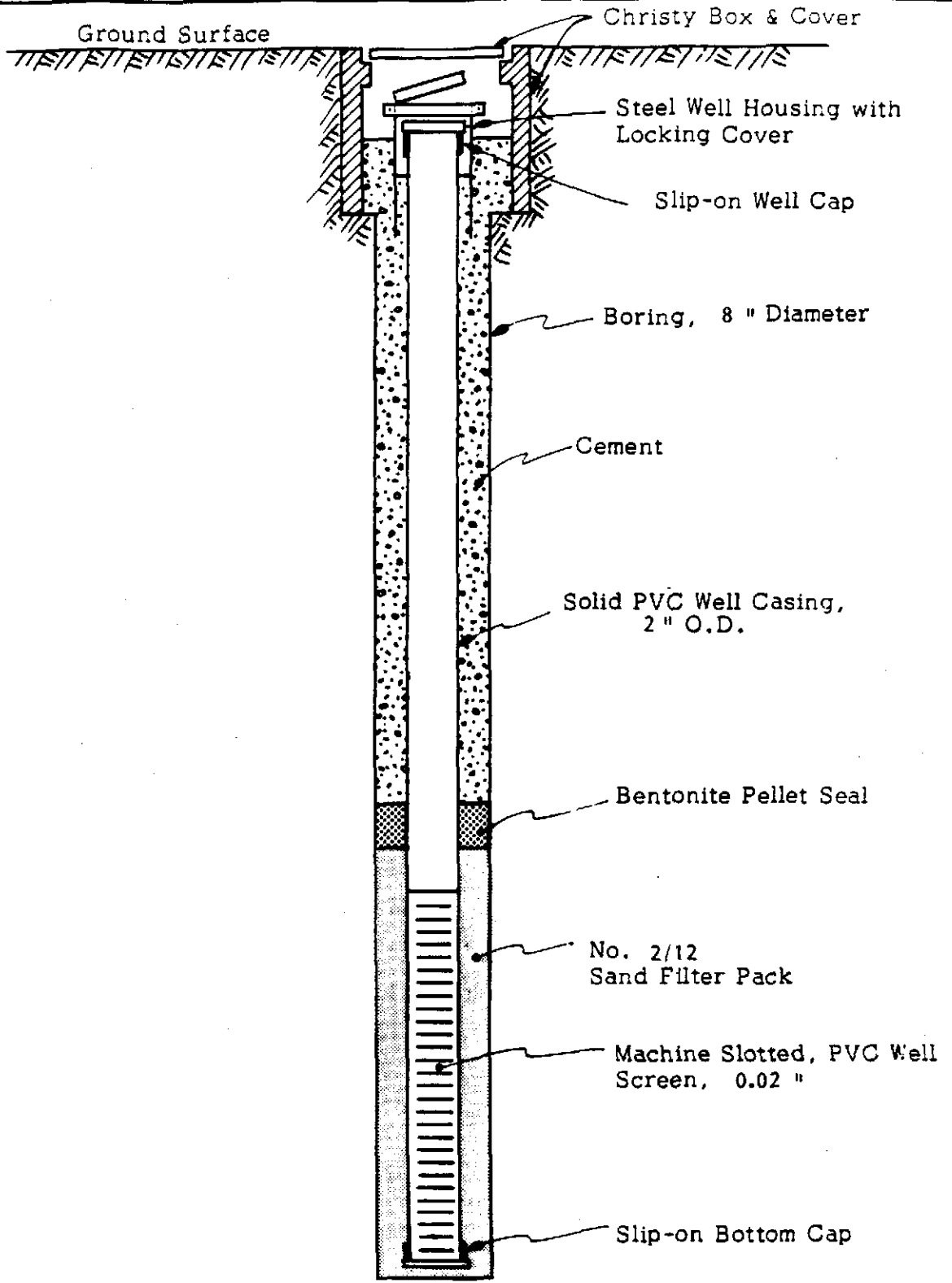
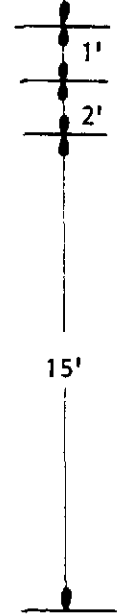
Slip-on Bottom Cap

16'

1'

2'

15'



**Kaldveer Associates**  
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A California Corporation

MONITORING WELL COMPLETION DETAIL

MILLS CORPORATION YARD  
Oakland, California

PROJECT NO.

DATE

KE1025-2A

May 1991

Figure MW-1

DRILL RIG	Hollow Stem Auger	SURFACE ELEVATION	LOGGED BY	RDB	
DEPTH TO GROUNDWATER	25' (note 2)	BORING DIAMETER	8"	DATE DRILLED	6/2/89

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	P.L.D. Reading (ft)	UNCONFINED COMPRESSIVE STRENGTH (K SF)
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
2½" asphalt over 15" baserock				1					
SAND, clayey with silt, fine-grained, damp	light orange-brown	medium dense	SC	2					
				3					
				4					
				5					
GRANITIC ROCK, decomposed, close fracturing, friable, damp	mottled yellow orange brown white	very dense	bed rock	5					
				6	75/10"	50.4			
				7					
				8					
				9					
				10					
				11	50/6"	17.3			
				12					
				13					
				14					
				15					
				16	50/4"	25.7			
				17					
				18					
				19					
				20					



**Kaldveer Associates**  
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**EXPLORATORY BORING LOG**

MILLS CORPORATION YARD  
 Oakland, California

PROJECT NO.	DATE	BORING NO
KE1025-2A	May 1991	

MW-2

DRILL RIG Hollow Stem Auger				SURFACE ELEVATION _____		LOGGED BY RDB				
DEPTH TO GROUNDWATER 25 feet (note 2)				BORING DIAMETER 8"		DATE DRILLED 6/2/89				
DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT.)	WATER CONTENT (%)	P.L.D. Reading	UNCONFINED COMPRESSIVE STRENGTH (KSF)	
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE							
GRANITIC ROCK, decomposed, close fracturing, low hardness, damp to moist  grading to saturated	mottled yellow orange brown white	very dense	bed rock	21	50/4"					
				22						
				23						
				24						
				25						
				26	50/6"					8.1
				27						
				28						
				29						
				30						
				31	50/5"					
				32						
				33						
34										
35										
36	50/5½"									
37										
38										
39										
40										
Bottom of Boring = 36½ feet										
Notes: 1. The stratification lines represent the approximate boundaries between soil types and the transition may be gradual. 2. Groundwater was measured at 25 feet at time of drilling.										



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**EXPLORATORY BORING LOG**

MILLS CORPORATION YARD  
Oakland, California

PROJECT NO.

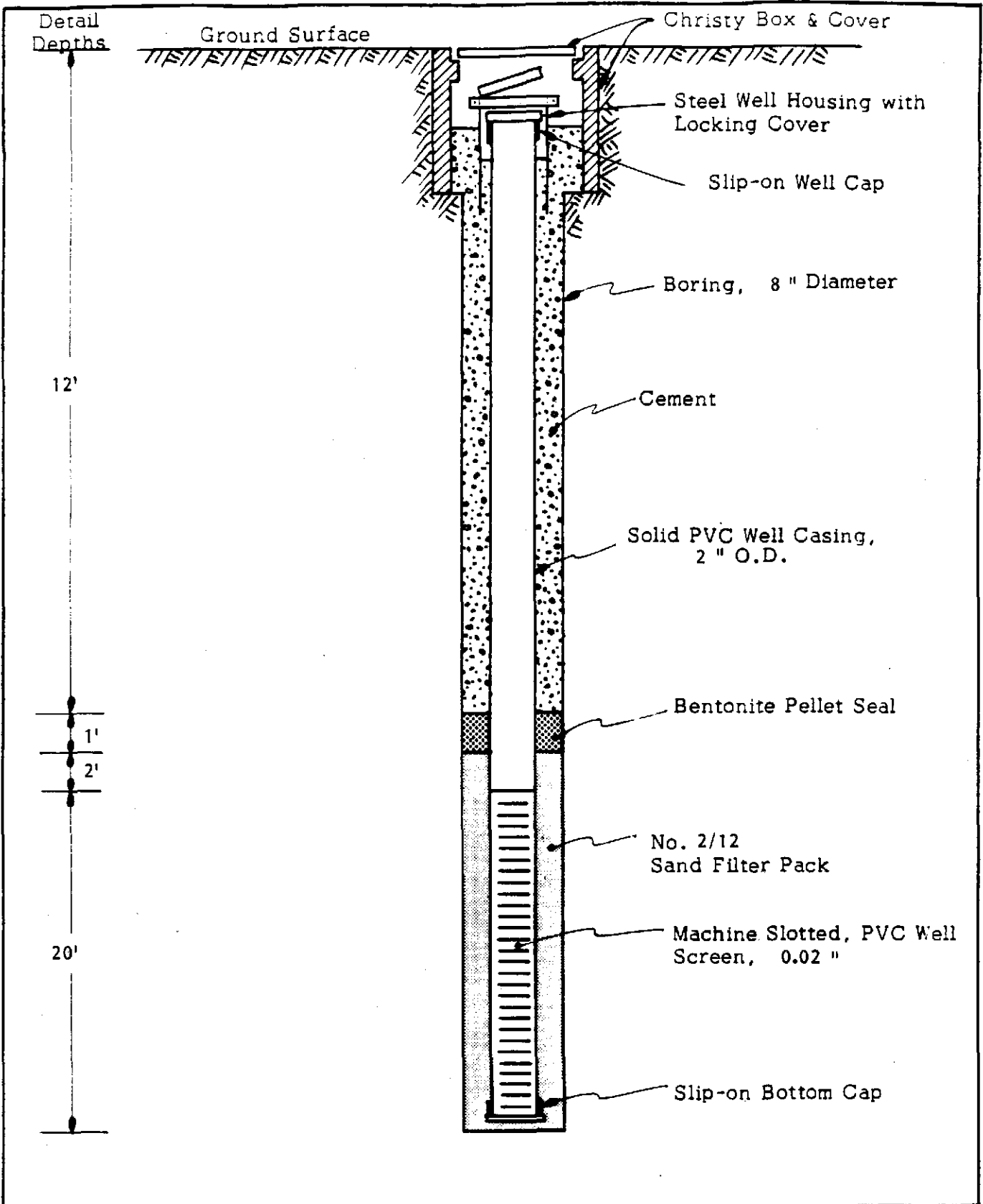
KE1025-2A

DATE

May 1991

BORING NO.

MW-2



**MONITORING WELL COMPLETION DETAIL**

MILLS CORPORATION YARD  
Oakland, California

PROJECT NO.	DATE	Figure MW-2
KE1025-2A	May 1991	

DRILL RIG Hollow Stem Auger		SURFACE ELEVATION _____		LOGGED BY RDB					
DEPTH TO GROUNDWATER 25' (note 2)		BORING DIAMETER 8"		DATE DRILLED 6-2-89					
DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	P.L.D. Reading (ppm)	UNCONFINED COMPRESSIVE STRENGTH (PSF)
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
2" asphalt over 15" baserock				1					
SAND, clayey with silt, fine-grained, damp	light orange brown	medium dense	SC	2					
				3					
				4					
				5					
				6					
GRANITIC ROCK, decomposed, close fracturing, friable, damp	mottled yellow orange brown white	very dense	bed rock	6	50			6.1	
				7					
				8					
				9					
				10					
				11	50/6"			7.9	
				12					
				13					
				14					
				15					
				16	50/6"			2.5	
				17					
				18					
				19					
20									
bedrock hardens at a depth of approximately 19 feet									




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**EXPLORATORY BORING LOG**

MILLS CORPORATION YARD  
 Oakland, California

PROJECT NO.	DATE	BORING NO. MW-3
KE1025-2A	May 1991	

DRILL RIG Hollow Stem Auger		SURFACE ELEVATION _____		LOGGED BY RDB								
DEPTH TO GROUNDWATER 25' (Note 2)		BORING DIAMETER 8"		DATE DRILLED 6-2-89								
DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT.)	WATER CONTENT (%)	P.I.D. Reading (ppm)	UNCONFINED COMPRESSIVE STRENGTH (KSF)			
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE									
GRANITIC ROCK, decomposed, close factoring, damp to moist  grading to saturated	mottled yellow orange brown white	very dense	bed rock	21	50/3"			1.5				
				22								
				23								
				24								
				25								
				26					50/4"			
				27								
				28								
				29								
				30								
				31					80/10"			
				32								
				33								
				34								
				35					81/10"			
Bottom of Boring = 35½ feet				36								
Notes; 1. The stratification lines represent the approximate boundaries between soil types and the transition may be gradual. 2. Groundwater level was measured at 25 feet at time of drilling.				37								
				38								
				39								
				40								



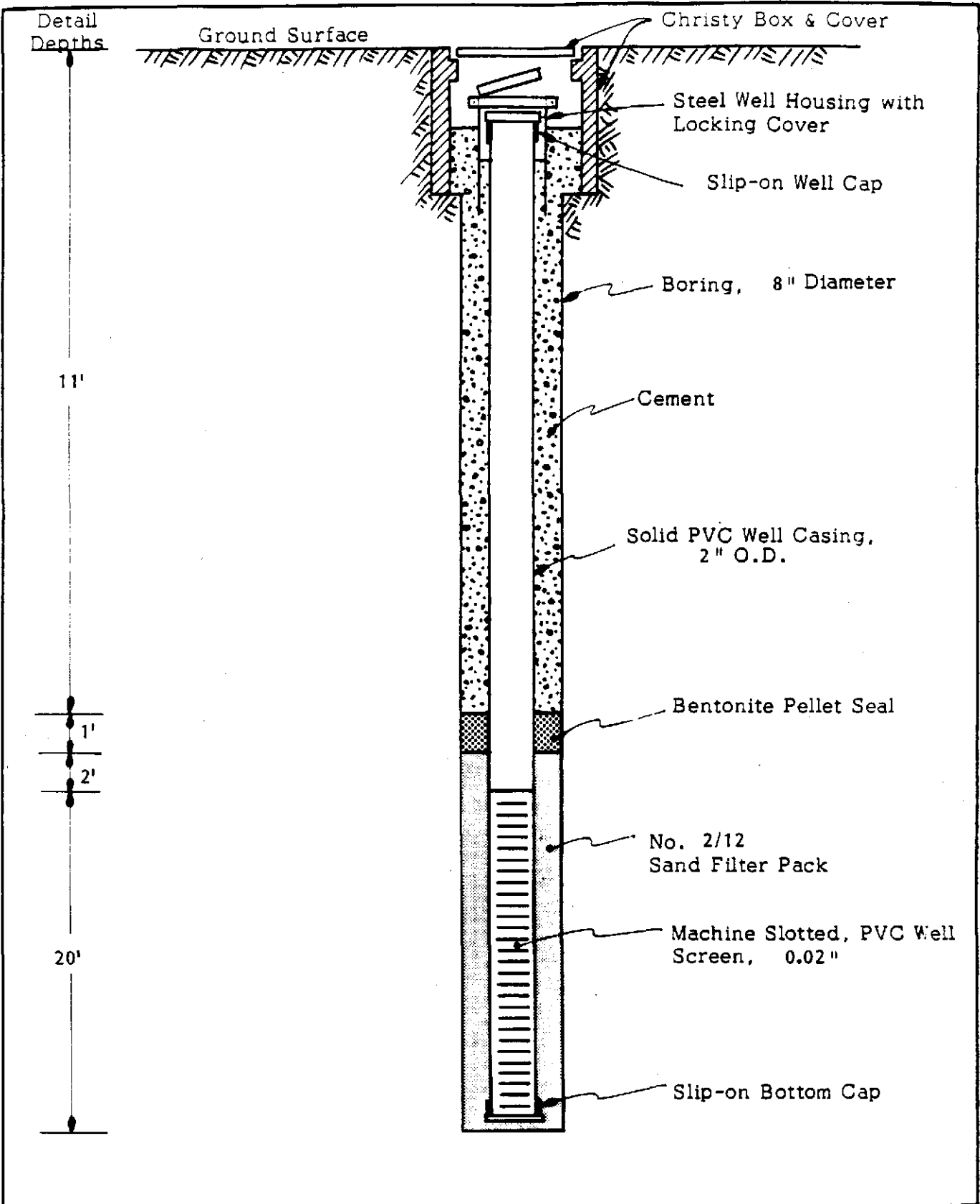
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A California Corporation

**EXPLORATORY BORING LOG**

MILLS CORPORATION YARD  
Oakland, California

PROJECT NO.	DATE	BORING NO.
KE1025-2A	May 1991	MW-3





**Kaldveer Associates**  
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**MONITORING WELL COMPLETION DETAIL**

MILLS CORPORATION YARD  
 Oakland, California

PROJECT NO.

DATE

KE1025-2A

May 1991

Figure MW-3

DRILL RIG	Hollow Stem Auger	SURFACE ELEVATION	—	LOGGED BY	RDB
DEPTH TO GROUNDWATER	24½ (note 2)	BORING DIAMETER	8"	DATE DRILLED	6/1/89

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	P.I.D. Reading (ppm)	UNCONFINED COMPRESSIVE STRENGTH (PSI)
DESCRIPTION AND REMARKS	COLOR	CONSIST	SOIL TYPE						
2" asphalt over 16" baserock				1					
SAND, clayey with silt, fine grained, damp	light orange brown	medium dense	SC	2					
				3					
				4					
GRANITIC ROCK, decomposed, close fracturing, friable, damp	mottled yellow orange brown white	very dense	bed rock	5					
				6	50/6"			4.3	
				7					
				8					
bedrocks softens at a depth of approximately 9 ft.				9					
				10					
bedrock hardens at a depth of approximately 13 ft.				11	70			2.2	
				12					
				13					
				14					
				15					
				16	80/10"			6.8	
				17					
				18					
bedrock hardens at a depth of approximately 20 ft.				19					
				20					



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 A California Corporation

<b>EXPLORATORY BORING LOG</b>		
MILLS CORPORATION YARD Oakland, California		
PROJECT NO.	DATE	BORING NO.
KE1025-2A	May 1991	EB-1

DRILL RIG Hollow Stem Auger	SURFACE ELEVATION _____	LOGGED BY RDB
DEPTH TO GROUNDWATER 24½ (note 2)	BORING DIAMETER 8"	DATE DRILLED 6/1/89

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT.)	WATER CONTENT (%)	P.I.D. Reading (ppm)	UNCONFINED COMPRESSIVE STRENGTH (K.SF)
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
GRANITIC ROCK, decomposed, close fracturing, low hardness, damp to wet	mottled yellow brown orange white	very dense	bed rock	21					
				22					
				23					
				24					
grading to saturated				24					
Bottom of Boring = 25 feet				25		50/4"	▽		
				26					
				27					
				28					
				29					
				30					
				31					
				32					
				33					
				34					
				35					
				36					
				37					
				38					
				39					
				40					

Notes:  
 1. The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.  
 2. Groundwater level was measured at 24½ feet at time of drilling.




**EXPLORATORY BORING LOG**




MILLS CORPORATION YARD  
 Oakland, California

PROJECT NO.	DATE	BORING NO. EB-1
KE1025-2A	May 1991	

DRILL RIG	Hollow Stem Auger	SURFACE ELEVATION	LOGGED BY	RDB	
DEPTH TO GROUNDWATER	25' (note 2)	BORING DIAMETER	8"	DATE DRILLED	6/1/89

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	P.L.U. Reading (ppm)	UNCONFINED COMPRESSIVE STRENGTH (PSF)
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
1½" asphalt over 18" baserock				1					
CLAY, sandy with silt coarse-grained, damp	light orange-brown	firm	CL	2					
				3					
SAND, silty, fine-grained, damp	light orange-brown	medium dense	SM	4					
				5					
GRANITIC ROCK, decomposed, close fracturing, friable, damp, no odor	mottled yellow orange brown white	medium dense	bed rock	6		36		1.1	
				7					
				8					
grading to strong odor (petroleum hydrocarbons)				9					
				10					
		very dense		11		70		1225	
				12					
				13					
				14					
grading to moist				15					
				16		75		863	
				17					
bedrock hardens at 18 feet				18					
				19					
				20					

 <b>Kaldveer Associates</b> Geoscience Consultants A California Corporation	<b>EXPLORATORY BORING LOG</b>		
	MILLS CORPORATION YARD Oakland, California		
	PROJECT NO.	DATE	BORING NO.
	KE1025-2A	May 1991	EB-2

DRILL RIG Hollow Stem Auger		SURFACE ELEVATION _____		LOGGED BY RDB					
DEPTH TO GROUNDWATER 25' (note 2)		BORING DIAMETER 8"		DATE DRILLED 6/1/89					
DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT.)	WATER CONTENT (%)	P.I.D. Readings (ppm)	UNCONFINED COMPRESSIVE STRENGTH (K.S.F.)
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
GRANITIC ROCK, decomposed, close fracturing, low hardness, damp strong odor (petroleum hydrocarbons)  grading to slight odor (petroleum hydrocarbons)  grading to saturated	mottled yellow brown orange white	very dense	bed rock	21		90/6"	1/2	1140	
				22					
				23					
				24					
				25					
Bottom of Boring = 25½ feet				26		70/6"	1/2	70	
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
Notes: 1. The Stratification lines represent the approximate boundaries between soil types and the transition may be gradual. 2. Groundwater level was measured at 25 feet at time of drilling.									
 <b>Kaldveer Associates</b> Geoscience Consultants A California Corporation				<b>EXPLORATORY BORING LOG</b>					
				MILLS CORPORATION YARD Oakland, California					
				PROJECT NO.		DATE		BORING NO. EB-2	
				KE1025-2A		May 1991			

APPENDIX B  
WELL SAMPLE LOGS

WATER SAMPLE LOG

Project Name: Mills Corporation Yard Date: 12/20/90  
 Project Number: KE1025-7-509 Sampler: IF  
 Well Number: MW-1 Weather: Cold  
 Well Location: Adjacent to building - West of MW-2 and MW-3

Well Construction:

Date Completed: 6-1-89  
 Total Depth of Well: 34 feet  
 Diameter: 2 inches  
 Well Elevation & Reference: \_\_\_\_\_  
100.00 (arbitrary datum)

Groundwater Levels:

Initial: \_\_\_\_\_  
 Final: \_\_\_\_\_  
 Reference Point: Top of PVC  
 Well Volume of Water: 14(.17) = 2.4g

Sampling Equipment & Cleaning

Sampler Type: Teflon Bailer  
 Method of Cleaning: Liquinox/Rinse  
 Pump or Bailer Type: N/A  
 Method of Cleaning: N/A  
 pH Meter: Hydac  
 Conductivity Meter: Hydac  
 Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SAMPLING MEASUREMENTS

Time	Discharge (gal.)		pH	Temp (°C)	Spec. Conductance (umhos/cm)		Color/Turbidity	Odor
	Per Time Period	Cummulative			Field	@ 25°C		
0930								
0943		2.5	6.73	59.7	912			Gas
0954		5.0	6.50	63.8	920			
1010		10.0	6.55	63.0	925			
1015	Sample							

Total Discharge: 10 gallons  
 Casing Volumes Removed: 4  
 Method of Disposal: pavement surface

Comments: \*Only product on water sample surface



**Kaldveer Associates**  
 Geoscience Consultants  
 A California Corporation

**WATER SAMPLE LOG MW-1**

MILLS COLLEGE  
 Oakland, California

PROJECT NO.  
 KE1025-2A

DATE  
 May 1991

Figure B-1

WATER SAMPLE LOG

Project Name: Mills Corporation Yard Date: 12/20/90  
 Project Number: KE1025-7-509 Sampler: IF  
 Well Number: MW-2 Weather: Clear Cool Calm  
 Well Location: North of former tank

Well Construction:

Date Completed: 6-2-89  
 Total Depth of Well: 35  
 Diameter: 2 inches  
 Well Elevation & Reference: \_\_\_\_\_  
99.98' (arbitrary datum)

Groundwater Levels:

Initial: NA  
 Final: NA  
 Reference Point: \_\_\_\_\_  
 Well Volume of Water: 10(.17) = 1.7g

Sampling Equipment & Cleaning

Sampler Type: Bailer  
 Method of Cleaning: \_\_\_\_\_  
 Pump or Bailer Type: Teflon  
 Method of Cleaning: Liquinox/Water  
 pH Meter: Hydac  
 Conductivity Meter: Hydac  
 Comments: \_\_\_\_\_

SAMPLING MEASUREMENTS

Time	Discharge (gal.)		pH	Temp (°C)	Spec. Conductance (umhos/cm)		Color/Turbidity	Odor
	Per Time Period	Cummulative			Field	@ 25°C		
1040	Begin							
1048		2.5	8.00	65.1	494		light brown/Slight	None
1055		5.0	7.74	67.0	517		"	"
1110		10.0	7.71	67.7	491		"	"

Total Discharge: 10 gallons  
 Casing Volumes Removed: 5  
 Method of Disposal: pavement surface

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



**Kaldveer Associates**  
 Geoscience Consultants  
 A California Corporation

**WATER SAMPLE LOG MW-2**

**MILLS COLLEGE**  
 Oakland, California

PROJECT NO.	DATE
KE1025-2A	May 1991

Figure B-2



WATER SAMPLE LOG

Project Name: Mills Corporation Yard Date: 12/20/90  
 Project Number: KE1025-7-509 Sampler: IF  
 Well Number: MW-3 Weather: Clear/Cold  
 Well Location: East of former tank

Well Construction:

Date Completed: 6/2/90  
 Total Depth of Well: 34 feet  
 Diameter: 2 inches  
 Well Elevation & Reference: \_\_\_\_\_  
100.01 (arbitraty datum)

Groundwater Levels:

Initial: NA  
 Final: NA  
 Reference Point: \_\_\_\_\_  
 Well Volume of Water: 9 (.17) = 1.5 gal

Sampling Equipment & Cleaning

Sampler Type: Bailer  
 Method of Cleaning: \_\_\_\_\_  
 Pump or Bailer Type: Teflon  
 Method of Cleaning: Liquinox/Water  
 pH Meter: Hydac  
 Conductivity Meter: Hydac  
 Comments: \_\_\_\_\_

SAMPLING MEASUREMENTS

Time	Discharge (gal.)		pH	Temp (°C)	Spec. Conductance (umhos/cm)		Color/ Turbidity	Odor
	Per Time Period	Cummulative			Field	@ 25°C		
1130	Begin							
1143		3	7.32	68.8	354		Gray-Green Silty	None
1153		6	7.43	66.5	355		Gray-Brown Silty	None
1210		12	7.49	66.2	366		Gray-Brown Cloudy	None
1215	Sampled							

Total Discharge: 12 gallons  
 Casing Volumes Removed: 8  
 Method of Disposal: pavement surface

Comments: \_\_\_\_\_



**Kaldveer Associates**  
 Geoscience Consultants  
 A California Corporation

**WATER SAMPLE LOG MW-3**

MILLS COLLEGE  
 Oakland, California

PROJECT NO.

DATE

KE1025-2A

May 1991

Figure B-3

APPENDIX C  
ANALYTICAL RESULTS  
MED-TOX ASSOCIATES, INC.

JUN 26 1989

PAGE 1 OF 16

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 PROJECT NO.: KE1025-2

REPORT DATE: 06/23/89

DATE SAMPLED: 06/01-02/89

DATE RECEIVED: 06/02/89

MED-TOX JOB NO: 8906018

ANALYSIS OF: FIFTEEN SOIL SAMPLES FOR BTXE AND TOTAL  
PETROLEUM HYDROCARBONS

See attached for results

  
\_\_\_\_\_  
Michael Lynch, Manager  
Organic Laboratory

Results FAXed to Dennis Laduzinsky 06/15/89

KALDVEER ASSOCIATES, INC.

CLIENT ID: MW1-11  
CLIENT JOB NO: KE1025-2

MED-TOX LAB NO: 8906018-01A  
MED-TOX JOB NO: 8906018

DATE SAMPLED: 06/01/89  
DATE RECEIVED: 06/02/89

DATE ANALYZED: 06/06-08/89  
REPORT DATE: 06/23/89

BTXE AND TOTAL PETROLEUM HYDROCARBONS

METHOD: EPA 8020, 8015 (PURGE & TRAP)

	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene . . . . .	780	50
Toluene . . . . .	2,800	50
Ethylbenzene . . . . .	2,400	50
Xylenes . . . . .	14,000	200

TOTAL PETROLEUM HYDROCARBONS AS:

Gasoline 520 mg/kg 10 mg/kg

ND = Not detected at or above indicated method detection limit

KALDVEER ASSOCIATES, INC.

CLIENT ID: MW1-16  
CLIENT JOB NO: KE1025-2

MED-TOX LAB NO: 8906018-02A  
MED-TOX JOB NO: 8906018

DATE SAMPLED: 06/01/89  
DATE RECEIVED: 06/02/89

DATE ANALYZED: 06/06-08/89  
REPORT DATE: 06/23/89

BTXE AND TOTAL PETROLEUM HYDROCARBONS

METHOD: EPA 8020, 8015 (PURGE & TRAP)

	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene . . . . .	300	5
Toluene . . . . .	110	5
Ethylbenzene . . . . .	7	5
Xylenes . . . . .	45	20

TOTAL PETROLEUM HYDROCARBONS AS:

Gasoline 1 mg/kg 1 mg/kg

ND = Not detected at or above indicated method detection limit

KALDVEER ASSOCIATES, INC.

CLIENT ID: MW1-21  
CLIENT JOB NO: KE1025-2

MED-TOX LAB NO: 8906018-03A  
MED-TOX JOB NO: 8906018

DATE SAMPLED: 06/01/89  
DATE RECEIVED: 06/02/89

DATE ANALYZED: 06/06-08/89  
REPORT DATE: 06/23/89

BTXE AND TOTAL PETROLEUM HYDROCARBONS

METHOD: EPA 8020, 8015 (PURGE & TRAP)

	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene . . . . .	1,600	20
Toluene . . . . .	2,300	20
Ethylbenzene . . . . .	260	20
Xylenes . . . . .	1,600	60

TOTAL PETROLEUM HYDROCARBONS AS:

Gasoline                                    15 mg/kg                                    4 mg/kg

ND = Not detected at or above indicated method detection limit

KALDVEER ASSOCIATES, INC.

CLIENT ID: EB1-10.5  
CLIENT JOB NO: KE1025-2

MED-TOX LAB NO: 8906018-04A  
MED-TOX JOB NO: 8906018

DATE SAMPLED: 06/01/89  
DATE RECEIVED: 06/02/89

DATE ANALYZED: 06/08/89  
REPORT DATE: 06/23/89

BTXE AND TOTAL PETROLEUM HYDROCARBONS

METHOD: EPA 8020, 8015 (PURGE & TRAP)

	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene . . . . .	5	1
Toluene . . . . .	2	1
Ethylbenzene . . . . .	ND	1
Xylenes . . . . .	ND	3

TOTAL PETROLEUM HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not detected at or above indicated method detection limit

KALDVEER ASSOCIATES, INC.

CLIENT ID: EB1-15.5  
CLIENT JOB NO: KE1025-2

MED-TOX LAB NO: 8906018-05A  
MED-TOX JOB NO: 8906018

DATE SAMPLED: 06/01/89  
DATE RECEIVED: 06/02/89

DATE ANALYZED: 06/06-08/89  
REPORT DATE: 06/23/89

BTXE AND TOTAL PETROLEUM HYDROCARBONS

METHOD: EPA 8020, 8015 (PURGE & TRAP)

	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene . . . . .	75	1
Toluene . . . . .	3	1
Ethylbenzene . . . . .	ND	1
Xylenes . . . . .	ND	3

TOTAL PETROLEUM HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not detected at or above indicated method detection limit



KALDVEER ASSOCIATES, INC.

CLIENT ID: EB1-24  
CLIENT JOB NO: KE1025-2

MED-TOX LAB NO: 8906018-06A  
MED-TOX JOB NO: 8906018

DATE SAMPLED: 06/01/89  
DATE RECEIVED: 06/02/89

DATE ANALYZED: 06/07/89  
REPORT DATE: 06/23/89

BTXE AND TOTAL PETROLEUM HYDROCARBONS

METHOD: EPA 8020, 8015 (PURGE & TRAP)

	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene . . . . .	3	1
Toluene . . . . .	2	1
Ethylbenzene . . . . .	ND	1
Xylenes . . . . .	ND	3

TOTAL PETROLEUM HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not detected at or above indicated method detection limit

KALDVEER ASSOCIATES, INC.

CLIENT ID: EB2-11  
CLIENT JOB NO: KE1025-2

MED-TOX LAB NO: 8906018-07A  
MED-TOX JOB NO: 8906018

DATE SAMPLED: 06/01/89  
DATE RECEIVED: 06/02/89

DATE ANALYZED: 06/08-12/89  
REPORT DATE: 06/23/89

BTXE AND TOTAL PETROLEUM HYDROCARBONS

METHOD: EPA 8020, 8015 (PURGE & TRAP)

	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene . . . . .	7,600	200
Toluene . . . . .	50,000	200
Ethylbenzene . . . . .	13,000	200
Xylenes . . . . .	72,000	600

TOTAL PETROLEUM HYDROCARBONS AS:

Gasoline                                      580 mg/kg                      40 mg/kg

ND = Not detected at or above indicated method detection limit

KALDVEER ASSOCIATES, INC.

CLIENT ID: EB2-16  
CLIENT JOB NO: KE1025-2

MED-TOX LAB NO: 8906018-08A  
MED-TOX JOB NO: 8906018

DATE SAMPLED: 06/01/89  
DATE RECEIVED: 06/02/89

DATE ANALYZED: 06/08-12/89  
REPORT DATE: 06/23/89

BTXE AND TOTAL PETROLEUM HYDROCARBONS

METHOD: EPA 8020, 8015 (PURGE & TRAP)

	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene . . . . .	21,000	200
Toluene . . . . .	74,000	200
Ethylbenzene . . . . .	23,000	200
Xylenes . . . . .	190,000	600

TOTAL PETROLEUM HYDROCARBONS AS:

Gasoline 1,200 mg/kg 40 mg/kg

ND = Not detected at or above indicated method detection limit

KALDVEER ASSOCIATES, INC.

CLIENT ID: EB2-21  
CLIENT JOB NO: KE1025-2

MED-TOX LAB NO: 8906018-09A  
MED-TOX JOB NO: 8906018

DATE SAMPLED: 06/01/89  
DATE RECEIVED: 06/02/89

DATE ANALYZED: 06/07/89  
REPORT DATE: 06/23/89

BTXE AND TOTAL PETROLEUM HYDROCARBONS

METHOD: EPA 8020, 8015 (PURGE & TRAP)

	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene . . . . .	300	200
Toluene . . . . .	5,600	200
Ethylbenzene . . . . .	3,100	200
Xylenes . . . . .	18,000	600

TOTAL PETROLEUM HYDROCARBONS AS:

Gasoline                                      240 mg/kg                                      40 mg/kg

ND = Not detected at or above indicated method detection limit

KALDVEER ASSOCIATES, INC.

CLIENT ID: MW2-11  
CLIENT JOB NO: KE1025-2

MED-TOX LAB NO: 8906018-10A  
MED-TOX JOB NO: 8906018

DATE SAMPLED: 06/02/89  
DATE RECEIVED: 06/02/89

DATE ANALYZED: 06/07/89  
REPORT DATE: 06/23/89

BTXE AND TOTAL PETROLEUM HYDROCARBONS

METHOD: EPA 8020, 8015 (PURGE & TRAP)

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	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene . . . . .	2	1
Toluene . . . . .	2	1
Ethylbenzene . . . . .	ND	1
Xylenes . . . . .	ND	3

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TOTAL PETROLEUM HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not detected at or above indicated method detection limit

KALDVEER ASSOCIATES, INC.

CLIENT ID: MW2-16  
CLIENT JOB NO: KE1025-2

MED-TOX LAB NO: 8906018-11A  
MED-TOX JOB NO: 8906018

DATE SAMPLED: 06/02/89  
DATE RECEIVED: 06/02/89

DATE ANALYZED: 06/07/89  
REPORT DATE: 06/23/89

BTXE AND TOTAL PETROLEUM HYDROCARBONS

METHOD: EPA 8020, 8015 (PURGE & TRAP)

	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene . . . . .	1	1
Toluene . . . . .	1	1
Ethylbenzene . . . . .	ND	1
Xylenes . . . . .	ND	3

TOTAL PETROLEUM HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not detected at or above indicated method detection limit

KALDVEER ASSOCIATES, INC.

CLIENT ID: MW2-21  
CLIENT JOB NO: KE1025-2

MED-TOX LAB NO: 8906018-12A  
MED-TOX JOB NO: 8906018

DATE SAMPLED: 06/02/89  
DATE RECEIVED: 06/02/89

DATE ANALYZED: 06/07/89  
REPORT DATE: 06/23/89

BTXE AND TOTAL PETROLEUM HYDROCARBONS

METHOD: EPA 8020, 8015 (PURGE & TRAP)

	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene . . . . .	ND	1
Toluene . . . . .	1	1
Ethylbenzene . . . . .	ND	1
Xylenes . . . . .	ND	3

TOTAL PETROLEUM HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not detected at or above indicated method detection limit

KALDVEER ASSOCIATES, INC.

CLIENT ID: MW3-11  
CLIENT JOB NO: KE1025-2

MED-TOX LAB NO: 8906018-13A  
MED-TOX JOB NO: 8906018

DATE SAMPLED: 06/02/89  
DATE RECEIVED: 06/02/89

DATE ANALYZED: 06/07-08/89  
REPORT DATE: 06/23/89

BTXE AND TOTAL PETROLEUM HYDROCARBONS

METHOD: EPA 8020, 8015 (PURGE & TRAP)

	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene . . . . .	15	1
Toluene . . . . .	1	1
Ethylbenzene . . . . .	ND	1
Xylenes . . . . .	ND	3

TOTAL PETROLEUM HYDROCARBONS AS:

Gasoline . . . . . ND mg/kg . . . . . 0.2 mg/kg

ND = Not detected at or above indicated method detection limit



KALDVEER ASSOCIATES, INC.

CLIENT ID: MW3-16  
CLIENT JOB NO: KE1025-2

MED-TOX LAB NO: 8906018-14A  
MED-TOX JOB NO: 8906018

DATE SAMPLED: 06/02/89  
DATE RECEIVED: 06/02/89

DATE ANALYZED: 06/07/89  
REPORT DATE: 06/23/89

BTXE AND TOTAL PETROLEUM HYDROCARBONS

METHOD: EPA 8020, 8015 (PURGE & TRAP)

	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene . . . . .	51	1
Toluene . . . . .	2	1
Ethylbenzene . . . . .	ND	1
Xylenes . . . . .	5	3

TOTAL PETROLEUM HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not detected at or above indicated method detection limit

KALDVEER ASSOCIATES, INC.

CLIENT ID: MW3-21  
CLIENT JOB NO: KE1025-2

MED-TOX LAB NO: 8906018-15A  
MED-TOX JOB NO: 8906018

DATE SAMPLED: 06/02/89  
DATE RECEIVED: 06/02/89

DATE ANALYZED: 06/07/89  
REPORT DATE: 06/23/89

BTXE AND TOTAL PETROLEUM HYDROCARBONS

METHOD: EPA 8020, 8015 (PURGE & TRAP)

	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene . . . . .	ND	1
Toluene . . . . .	ND	1
Ethylbenzene . . . . .	ND	1
Xylenes . . . . .	ND	3

TOTAL PETROLEUM HYDROCARBONS AS:

Gasoline ND mg/kg 0.2 mg/kg

ND = Not detected at or above indicated method detection limit

JUN 28 1989

PAGE 1 OF 4

## 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: ROBERT BUSBY

CLIENT PROJECT NO.: KE1025-2

REPORT DATE: 06/27/89

DATE SAMPLED: 06/07/89

DATE RECEIVED: 06/07/89

MED-TOX JOB NO: 8906042

ANALYSIS OF: THREE WATER SAMPLES FOR BTXE AND TOTAL  
PETROLEUM HYDROCARBONS

See attached for results

  
Michael Lynch, Manager  
Organic Laboratory

Results FAXed to Dennis Laduzinsky 06/16/89

KALDVEER ASSOCIATES, INC.

CLIENT ID: MW-1  
CLIENT JOB NO: KE 1025-2

MED-TOX LAB NO: 8906042-01A  
MED-TOX JOB NO: 8906042

DATE SAMPLED: 06/07/89  
DATE RECEIVED: 06/07/89

DATE ANALYZED: 06/12-13/89  
REPORT DATE: 06/27/89

BTXE AND TOTAL PETROLEUM HYDROCARBONS

METHOD: EPA 602, 8015 (PURGE & TRAP)

	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene . . . . .	2,100	5
Toluene . . . . .	1,900	5
Ethylbenzene. . . . .	31	5
Xylenes . . . . .	1,400	20

TOTAL PETROLEUM HYDROCARBONS AS:

Gasoline 11 mg/L 1 mg/L

ND = Not detected at or above indicated method detection limit

KALDVEER ASSOCIATES, INC.

CLIENT ID: MW-2  
CLIENT JOB NO: KE 1025-2

MED-TOX LAB NO: 8906042-02A  
MED-TOX JOB NO: 8906042

DATE SAMPLED: 06/07/89  
DATE RECEIVED: 06/07/89

DATE ANALYZED: 06/12/89  
REPORT DATE: 06/27/89

BTXE AND TOTAL PETROLEUM HYDROCARBONS

METHOD: EPA 602, 8015 (PURGE & TRAP)

	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene . . . . .	ND	0.5
Toluene . . . . .	ND	0.5
Ethylbenzene. . . . .	ND	0.5
Xylenes . . . . .	ND	2
TOTAL PETROLEUM HYDROCARBONS AS:		
Gasoline	ND mg/L	0.1 mg/L

ND = Not detected at or above indicated method detection limit

KALDVEER ASSOCIATES, INC.

CLIENT ID: MW-3  
CLIENT JOB NO: KE 1025-2

MED-TOX LAB NO: 8906042-03A  
MED-TOX JOB NO: 8906042

DATE SAMPLED: 06/07/89  
DATE RECEIVED: 06/07/89

DATE ANALYZED: 06/12/89  
REPORT DATE: 06/27/89

BTXE AND TOTAL PETROLEUM HYDROCARBONS

METHOD: EPA 602, 8015 (PURGE & TRAP)

	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene . . . . .	ND	0.5
Toluene . . . . .	ND	0.5
Ethylbenzene. . . . .	ND	0.5
Xylenes . . . . .	ND	2

TOTAL PETROLEUM HYDROCARBONS AS:

Gasoline ND mg/L 0.1 mg/L

ND = Not detected at or above indicated method detection limit

8706042

CHAIN-OF-CUSTODY RECORD

Project Number KE 1025-2		Project Name _____					Number/Type of Containers	Analytical Tests TPH as gasoline with BTEX distinction	Remarks
Sampler's Name (printed) Robert D Busby									
Boring Number	Date	Time	Soil	Water	Sample Location or Depth	Sample Number			
MW-1	6/7/89			X	MW-1	MW-1	2x40ml WAS	X	
MW-2	6/7/89			X	MW-2	MW-2	2x40ml WAS	X	
MW-3	6/7/89			X	MW-3	MW-3	2x40ml WAS	X	

Relinquished by: (Signature) <i>Robert D Busby</i>	Date/Time 6/7/89 1245	Received by: (Signature) <i>Robin Byars</i>
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature) <i>Robin Byars</i>

Ship To: MED-TOX  
3440 Vincent Road  
Pleasant Hill, CA 94523

Attention: \_\_\_\_\_  
 Phone No: 415-930-9090

Requested Turnaround Time: 2 weeks, June 21, 1989

Remarks:

Kaldveer Assoc. Rob Busby/Dennis Wulzinsky  
 Contact:

Please address correspondence to:  
 Kaldveer Associates, Inc.  
 425 Roland Way  
 Oakland, California 94621  
 (415) 568-4001



8906018

CHAIN-OF-CUSTODY RECORD

Project Number		Project Name					Number/Type of Containers	Analytical Tests TPH Gasoline w/ BTX/E Distillation	Remarks
KE1025-2									
Sampler's Name (printed) R. Booby ATTN: Dennis Ladozinsky									
Boring Number	Date	Time	Soil	Water	Sample Location or Depth	Sampler Number			
MW-1	6/1/87	AM			MW 1-11		X	Sample condition Good	
MW-1					MW 1-16		X		
MW-1					MW 1-21		X		
EB-1					EB 1-10.5		X		
EB-1					EB 1-15.5		X		
EB-1		PM			EB 1-24		X		
EB-2					EB 2-11		X		
EB-2					EB 2-16		X		
EB-2					EB 2-21		X		
MW-2	6/2/87				MW 2-11		X		
MW-2					MW 2-16		X		
MW-2					MW 2-21		X		
MW-3					MW 3-11		X		
MW-3					MW 3-16		X		
MW-3					MW 3-21		X		

Relinquished by: (Signature) <i>R. Booby</i>	Date/Time 6/2/87 1500	Received by: (Signature) <i>Dennis Ladozinsky</i>
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature) <i>Dennis Ladozinsky</i>	Date/Time 4/7/89 1554	Received for Laboratory by: (Signature) <i>Robin Byars</i>

Ship To: MED-TOX

Attention: \_\_\_\_\_

Phone No: \_\_\_\_\_

Requested Turnaround Time: 2 week

Kaldveer Assoc. Contact: Dennis Ladozinsky

Please address correspondence to:

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





## 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 REF.: KE1025-7

REPORT DATE: 01/14/91


DATE SAMPLED: 12/20/90

DATE RECEIVED: 12/20/90

MED-TOX JOB NO: 9012134

ANALYSIS OF: WATER SAMPLES

See attached for results

  
Andrew Bradeen, Manager  
Organic Laboratory

Results FAXed to Dennis Laduzinsky 01/09/91

KALDVEER ASSOCIATES, INC.

CLIENT ID: MW-1  
CLIENT JOB NO: KE1025-7  
DATE SAMPLED: 12/20/90  
DATE RECEIVED: 12/20/90  
REPORT DATE: 01/14/91

MED-TOX LAB NO: 9012134-01A  
MED-TOX JOB NO: 9012134  
DATE ANALYZED: 12/27/90-01/2/91  
INSTRUMENT: F

BTEX AND HYDROCARBONS

METHOD: EPA 8020, 5030 GCFID

	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene . . . . .	400	0.3
Toluene . . . . .	210	0.3
Ethylbenzene. . . . .	56	0.3
Xylenes, Total. . . . .	310	1

PURGEABLE HYDROCARBONS AS:

Gasoline 2.5 mg/L 0.05 mg/L

ND - Not Detected

KALDVEER ASSOCIATES, INC.

CLIENT ID: MW-2  
CLIENT JOB NO: KE1025-7  
DATE SAMPLED: 12/20/90  
DATE RECEIVED: 12/20/90  
REPORT DATE: 01/14/91

MED-TOX LAB NO: 9012134-02A  
MED-TOX JOB NO: 9012134  
DATE ANALYZED: 12/27/90-01/4/91  
INSTRUMENT: F

BTEX AND HYDROCARBONS

METHOD: EPA 8020, 5030 GCFID

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

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PURGEABLE HYDROCARBONS AS:

Gasoline                      ND mg/L              0.05 mg/L

ND = Not Detected

KALDVEER ASSOCIATES, INC.

CLIENT ID: MW-3  
CLIENT JOB NO: KE1025-7  
DATE SAMPLED: 12/20/90  
DATE RECEIVED: 12/20/90  
REPORT DATE: 01/14/91

MED-TOX LAB NO: 9012134-03A  
MED-TOX JOB NO: 9012134  
DATE ANALYZED: 12/27/90  
INSTRUMENT: F

BTEX AND HYDROCARBONS

METHOD: EPA 8020, 5030 GCFID

	CONCENTRATION (ug/L)	DETECTION LIMIT (ug/L)
Benzene . . . . .	11	0.3
Toluene . . . . .	ND	0.3
Ethylbenzene. . . . .	ND	0.3
Xylenes, Total. . . . .	ND	1

PURGEABLE HYDROCARBONS AS:

Gasoline 0.05 mg/L 0.05 mg/L

ND = Not Detected

QUALITY CONTROL DATA

KALDVEER ASSOCIATES, INC.

CLIENT JOB NO: KE1025-7

MED-TOX JOB NO: 9012134

DATE ANALYZED: 12/27/90

MED-TOX JOB NO: 9012134

INSTRUMENT: F

CLIENT REF: KE1025-7

**MATRIX SPIKE RECOVERY SUMMARY**  
**METHOD TPBWT**  
**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	0.5

**CURRENT QC LIMITS (Revised 11/12/90)**

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Benzene	(118-83)	18
Toluene	(111-89)	15
Gasoline	(108-76)	17

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

R-3, S-4

**CHAIN-OF-CUSTODY RECORD**

Project Number  
**KE1025-7**

Project Name  
**CORP. YARD**

Location  
**MILLS**

Sampler's Name (printed)  
**JEFF FIEDLER**

KA Sample I.D. Number	Lab Sample I.D. Number	Date	Soil	Water	Number/Type of Container	Analytical Tests										Remarks										
						Method 8015 - TPH as Gasoline	Method 8015 - TPH as Diesel	Method 8240 - Volatile Organics	Method 8270 - Sem-Volatile Organics	Method 8010 - Heavy Metals	Method 8080 - Organochlorine Pesticides (PCB's)	Water Oil - Metals -	Method 8020 BTEX													
MW-1	01A, B	pho		X	2x10ml	X																				
MW-2	02A, B	↓		X	↓	X																				SAMPLES PRESERVED w/HCl
MW-3	03A, B	↓		X	↓	X																				↓

Relinquished by: (Signature) <i>[Signature]</i>	Date/Time 12/2/90 15:20	Received by: (Signature) <i>[Signature]</i>
Relinquished by: (Signature) <i>[Signature]</i>	Date/Time	Received by: (Signature)
Relinquished by: (Signature) <i>[Signature]</i>	Date/Time 12/2/90 16:20	Received for Laboratory by: (Signature) <i>[Signature]</i>

Ship To: Med-Tox Pleasant Hill

Attention: \_\_\_\_\_

Phone No: \_\_\_\_\_

Requested Turnaround Time: Standard

Kaldveer Assoc. Contact: DENNIS LAOZINSEI

Please address correspondence and return cooler # \_\_\_\_\_ to:  
 Kaldveer Associates, Inc.  
 425 Roland Way  
 Oakland, California 94621  
 (415) 568-4001



Remarks: