ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

ENVIRONMENTAL HEALTH DEPARTMENT
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

March 4, 2015

Mills College
c/o: Linda Zitzner
5000 Macarthur Blvd.
Oakland, CA 94613
(Sent via E-mail to: lzitzner@mills.edu)

Subject: Case Closure for Fuel Leak Case No. RO0000155 (Global ID T0600100899), Mills College, 5000 MacArthur Blvd., Oakland, CA 94619

Dear Responsible Parties:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25296.10[g]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Health (ACEH) is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed. This case closure letter and the case closure summary can also be viewed on the State Water Resources Control Board's Geotracker website (http://geotracker.waterboards.ca.gov) and the Alameda County Environmental Health website (http://www.acgov.org/aceh/index.htm).

Due to residual contamination, the site was closed with Site Management Requirements that limit future land use to the current commercial land use. This includes both the Corporation/ Maintenance Yard and the Mills Hall/ Toyon Meadow/ Holmgren Meadow site. Though Toyon Meadow meets the residential LTCP Direct Contact and Outdoor Air Exposure Specific scenario, the potential for construction in the meadow in a college setting may include a basement structure and encounter the residual contamination identified in the 10- to 14-foot bgs zone. Site Management Requirements are further described in Additional Information of the attached Case Closure Summary.

If you have any questions, please call Keith Nowell at (510) 567-6764. Thank you.

Sincerely,

Dilan Roe, P.E.
LOP and SCP Program Manager

Enclosures:
1. Remedial Action Completion Certification
2. Case Closure Summary

Cc w/enc.:

Leroy Griffin, Oakland Fire Department 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032
(sent via electronic mail to lgriffin@oaklandnet.com)

Alameda County Public Works, Building Inspection Division, 399 Elmhurst Street, Room 141, Hayward, CA 94544

R. Lee Dooley, EquoLogic, 1095 Branham Lane, Suite 204, San Jose, CA 95136
(Sent via E-mail to: ldooley@equologicgroup.com)

Case Worker (sent via electronic mail to keith.nowell@acgov.org)
eFile, GeoTracker

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
OFFICE OF THE DIRECTOR
1131 HARBOR BAY PARKWAY
ALAMEDA, CA 94502
(510) 567-6777
FAX (510) 337-9135

REMEDIAL ACTION COMPLETION CERTIFICATION

March 4, 2015

Mills College
c/o: Linda Zitzner
5000 Macarthur Blvd.
Oakland, CA 94613
(Sent via E-mail to: lzitzner@mills.edu)

Subject: Case Closure for Fuel Leak Case No. RO0000155 (Global ID T0600100899), Mills College, 5000 MacArthur Blvd., Oakland, CA 94619

Dear Responsible Parties:

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25296.10 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.3 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

Please be aware that claims for reimbursement of corrective action costs submitted to the Underground Storage Tank Cleanup Fund more than 365 days after the date of this letter or issuance or activation of the Fund's Letter of Commitment, whichever occurs later, will not be reimbursed unless one of the following exceptions applies:

- Claims are submitted pursuant to Section 25299.57, subdivision (k) (reopened UST case); or
- Submission within the timeframe was beyond the claimant's reasonable control, ongoing work is required for closure that will result in the submission of claims beyond that time period, or that under the circumstances of the case, it would be unreasonable or inequitable to impose the 365-day time period.

This notice is issued pursuant to subdivision (g) of Section 25296.10 of the Health and Safety Code. Please contact our office if you have any questions regarding this matter.

Sincerely,

Ariu Levi
Director

UST Case Closure Summary Form

Agency Information Date: December 29, 2014

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6764
Staff Person: Keith Nowell, PG	Title: Hazardous Materials Specialist

Case Information

Facility Name: Mills College		
Facility Address: 5000 MacArthur Blvd. Oakland , CA 94619		
RB LUSTIS Case No: 01-0976	Local Case No.: STID 3221	LOP Case No.: RO0000155
URF Filing Date: July 14, 1994 (CY)	GeoTracker Global ID: T0600100899	
APN: 37A-2701-29-3	Current Land Use: Private College (Commercial and Residential)	
Responsible Party(s):	Address:	Phone:
Mills College c/o: Linda Zitzner	5000 Macarthur Blvd. Oakland, CA 94613	(510) 430-2024

Tank Information

Tank No.	Size (gal)	Contents	Closed in-Place/ Removed/Active	Date
1 (CY)	1,000	Gasoline	Removed	October 21, 1988
2 (TM)	500	Fuel oil	Removed	June 28, 1989

CY: Corporation (Maintenance) Yard
TM: Holmgren / Toyon Meadow area

Conceptual Site Model (Attachment 1, 2 pages)

Closure Criteria Met (Attachment 2, 2 pages)

LTCP Groundwater Specific Criteria (Attachment 3, 4 pages)

LTCP Vapor Specific Criteria (Attachment 4, 4 pages)

LTCP Direct Contact and Outdoor Air Exposure Criteria (Attachment 5, 3 pages)

Optional Site Map(s) (Attachment 6, 14 pages)

Analytical Data (Attachment 7, 28 pages)

Additional Information:

This case file contains information regarding two underground storage tank locations within Mills College. Both former USTs were located on one 100+ acre parcel, but were separated by a distance of approximately 1/3-mile. One UST was located in the Mills College Corporation Yard, abbreviated CY, and one in the Holmgren / Toyon Meadow area and is abbreviated TM. Because of the differences in release histories, these two cases are addressed separately in this closure summary.

Site Management Requirements:

This fuel leak case has been evaluated for closure consistent with the State Water Resource Control Board Low-Threat Underground Storage Tank Closure Policy (LTCP).

Mills College Corporation (Maintenance) Yard -- Residual contamination potentially exists in the vicinity of MW-1 and EB-2; however, soil bore EB-3 demonstrates that passage of time has naturally attenuated soil and groundwater concentrations such that no significant risk remains adversely affecting human health as a result of controlling exposure through the use of mitigation measures or through the use of institutional controls

If a change in land use to any residential, or conservative land use, or if any redevelopment occurs, Alameda County Environmental health (ACEH) must be notified as required by Government Code Section 65850.2.2. ACEH will re-evaluate the case upon receipt of approved development/construction plans.

Excavation or construction activities in areas of residual contamination require planning and implementation of appropriate health and safety procedures by the responsible party prior to and during excavation and construction activities.

This site is to be entered into the City of Oakland Permit Tracking System due to the residual contamination on site.

Holmgren/ Toyon Meadow -- Direct contact and outdoor air exposure (Table 1 criteria -TM Attachment 5) appear to be met although data for the 0 to 5 and 5 to 10 foot zones are gathered from limited number of soil bores. Historical soil bores indicate the majority of residual soil impacts likely exist below 10 feet below ground surface (bgs). Based on this evaluation, site management requirements appear to be necessary. If a change in land use to any residential, or conservative land use, or if any redevelopment occurs, Alameda County Environmental Health (ACEH) must be notified as required by Government Code Section 65850.2.2. ACEH will re-evaluate the case upon receipt of approved development/construction plans.

Additionally, excavation or construction activities in areas of residual contamination require planning and implementation of appropriate health and safety procedures by the responsible party prior to and during excavation and construction activities.

UST Case Closure Summary Form

RWQCB Notification

Notification Date: August 24, 2014

RWQCB Staff Name: Cherie McCaulou	Title: Engineering Geologist

Local Agency Representative

Prepared by: Keith Nowell	Title: Hazardous Materials Specialist
Signature: Keith Nowell	Date: 3/04/2015
Approved by: Dilan Roe	Title: LOP and SCP Program Manager
Signature: Dilan Roe	Date: 3/4/2015

This Case Closure Summary along with the Case Closure Transmittal letter and the Remedial Action Completion Certification provides documentation of the case closure. This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions. The Conceptual Site Model may not contain all available data. Additional information on the case can be viewed in the online case file. The entire case file can be viewed over the Internet on the Alameda County Environmental Health (ACEH) website (http://www.acgov.org/aceh/lop/ust.htm) or the State of California Water Resources Control Board GeoTracker website (http://geotracker.waterboards.ca.gov). Not all historic documents for the fuel leak case may be available on GeoTracker. A more complete historic case file for this site is located on the ACEH website.

ATTACHMENT 1

CSM Report Go

MILLS COLLEGE (T0600100899) - MAP THIS SITE

OPEN - ELIGIBLE FOR CLOSURE

5000 MACARTHUR BLVD.
OAKLAND , CA 94619
ALAMEDA COUNTY

ACTIVITIES REPORT
PUBLIC WEBPAGE

VIEW PRINTABLE CASE SUMMARY FOR THIS SITE

CLEANUP OVERSIGHT AGENCIES
ALAMEDA COUNTY LOP *(LEAD)* - *CASE #: RO0000155*
CASEWORKER: *KEITH NOWELL* - ***SUPERVISOR:*** *DILAN ROE*
SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #: 01-0976*
CASEWORKER: *Cherie McCaulou* - ***SUPERVISOR:*** *Cheryl L. Prowell*

CUF Claim #: 2339 **CUF Priority Assigned:** C **CUF Amount Paid:** $89,680

CR Site ID #: NOT SPECIFIED

THIS PROJECT WAS LAST MODIFIED BY ***KEITH NOWELL*** ON 12/29/2014 8:42:45 AM - HISTORY

THIS SITE HAS SUBMITTALS. CLICK HERE TO OPEN A NEW WINDOW WITH THE SUBMITTAL APPROVAL PAGE FOR THIS SITE.

CSM REPORT - VIEW PUBLIC NOTICING VERSION OF THIS REPORT

UST CLEANUP FUND CLAIM INFORMATION (DATA PULLED FROM SCUFIIS)

							FIVE YEAR REVIEW INFORMATION				
CLAIM NO	PRIORITY	CLAIMANT	SITE ADDRESS	AMT REIMB TO DATE	AGE OF LOC	IMPACTED WELLS?	REVIEW NUM	REVIEWER	FUND RECOMMENDATION	TO OVERSIGHT DATE	TO CLAIMANT DATE
2339	C	MILLS COLLEGE 5000 MACARTHUR BLVD., OAKLAND CA 94613	5000 MACARTHUR BLVD OAKLAND, CA 94613	$84,680	15		3	Pat G. Cullen	Concurred with Current Corrective Action	7/17/2012	7/17/2012

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
MILLS COLLEGE (Global ID: T0600100899) 5000 MACARTHUR BLVD. OAKLAND, CA 94619	Open - Eligible for Closure	6/28/2014	11/8/1988	26	ALAMEDA COUNTY LOP *(LEAD)* - *CASE #: RO0000155* ***CASEWORKER:*** *KEITH NOWELL* - ***SUPERVISOR:*** *DILAN ROE* SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #: 01-0976* ***CASEWORKER:*** *Cherie McCaulou* - ***SUPERVISOR:*** *Cheryl L. Prowell*

STAFF NOTES (INTERNAL)
Not all historic documents for the fuel leak case may be available on GeoTracker. A more complete historic case file for this site is located on the Alameda County Environmental Health website at https://ehgis.acgov.org/dehpublic/dehpublic.jsp.

SITE HISTORY
Not all historic documents for the fuel leak case may be available on GeoTracker. A more complete historic case file for this site is located on the Alameda County Environmental Health website at https://ehgis.acgov.org/dehpublic/dehpublic.jsp.

October 21, 1988 one 1,000-gallon gasoline UST was removed. 100 yd3 was excavated and aerated during tank removal activities at the Corporation Yard. Maximum concentrations of 16,327 mg/kg TPHg and 204 mg/kg benzene were detected in soil samples collected from beneath the UST. Soil was reported to be aerated and reused as fill in other areas of the site. On May 7, 1991, three monitoring wells were installed in the Corporation Yard area.

Another small fuel UST was removed from what is currently Mills Hall / Toyon Meadow. TPHd was detected at concentrations of up to 6,300 ppm and 250 yd3 of soil were removed and went to a Class III landfill. Subsequent sampling detected maximum concentrations of 11,000 mg/kg TPHd. Groundwater samples were not collected during this investigation. One groundwater monitoring well was installed and sampled in 1990 with two additional monitoring wells installed in 1991. The groundwater samples from the June 1991 Toyon Meadow monitoring event reported maximum TPHd concentration of 3,200 ug/L. Well MHW-1 was abandoned after being damaged during site redevelopment and replaced with MWH-1A in May 1994.

A case file review performed by ACEH in 2013 indicated the Corporation Yard portion of the case met the LTCP. One remaining data gap was identified for the Mills Hall / Toyon Meadow - potential impact to the nearby creek. A groundwater assessment was performed in December 2013 to evaluate the meadow for migration of groundwater to the creek. The assessment did not advance borings deep enough for recovery of grab groundwater samples and recovered soil samples in lieu of groundwater. Maximum TPHd concentration of 6.95 mg/kg was identified in the assessment indicating the creek was not impacted by the release of diesel fuel. ACEH is of the opinion the case meets the LTCP criteria for closure.

RESPONSIBLE PARTIES

NAME	ORGANIZATION	ADDRESS	CITY	EMAIL
DAVID JOHNSON	MILLS COLLEGE	5000 MACARTHUR BLVD.	OAKLAND	
RENEE JADUSHLEVER	MILLS COLLEGE	5000 MACARTHUR BLVD.	OAKLAND	

CLEANUP ACTION INFO

ACTION TYPE	BEGIN DATE	END DATE	PHASE	CONTAMINANT MASS REMOVED	DESCRIPTION
EXCAVATION	6/1/1989	6/30/1989	Soil		

RISK INFORMATION VIEW LTCP CHECKLIST VIEW PATH TO CLOSURE PLAN VIEW CASE REVIEWS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED WELLS
	Commercial			11/8/1988		0

Benzene, Diesel, Gasoline	GW - Municipal and Domestic Supply	Close and Remove Tank

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLOSURE REQUEST
NO	NO	EBMUD	12/5/2014	12/5/2014	2/4/2014		5/27/2014

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN: 037A270102903

GW BASIN NAME:

WATERSHED NAME: South Bay - East Bay Cities (20420)

COUNTY: Alameda

PUBLIC WATER SYSTEM(S):
- **EAST BAY MUD** - 375 ELEVENTH STREET, OAKLAND, CA 94607

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER - HIDE — VIEW ESI SUBMITTALS

NO GROUNDWATER DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL - HIDE — VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
B-14	12/18/2013		ND	ND	ND	ND	ND	
B-15	12/18/2013		ND	ND	ND	ND	ND	
B-16	12/18/2013		ND	ND	ND	ND	ND	

MOST RECENT GEO_WELL DATA - HIDE — VIEW ESI SUBMITTALS

NO GEO_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

LOGGED IN AS KNOWELL

CONTACT GEOTRACKER HELP

ATTACHMENT 2

LTCP Checklist Go

GEOTRACKER HOME | MANAGE PROJECTS | REPORTS | SEARCH | LOGOUT

MILLS COLLEGE (T0600100899) - MAP THIS SITE

OPEN - ELIGIBLE FOR CLOSURE

5000 MACARTHUR BLVD.
OAKLAND , CA 94619
ALAMEDA COUNTY

VIEW PRINTABLE CASE SUMMARY FOR THIS SITE

ACTIVITIES REPORT
PUBLIC WEBPAGE

CLEANUP OVERSIGHT AGENCIES
ALAMEDA COUNTY LOP *(LEAD)* - *CASE #: RO0000155*
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SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #: 01-0976*
CASEWORKER: Cherie McCaulou - SUPERVISOR: Cheryl L. Prowell

CUF Claim #: 2339 CUF Priority Assigned: C CUF Amount Paid: $89,680

CR Site ID #: NOT SPECIFIED

THIS PROJECT WAS LAST MODIFIED BY *KEITH NOWELL* ON 3/4/2015 5:19:00 PM - HISTORY

THIS SITE HAS SUBMITTALS. CLICK HERE TO OPEN A NEW WINDOW WITH THE SUBMITTAL APPROVAL PAGE FOR THIS SITE.

CLOSURE POLICY *THIS VERSION IS FINAL AS OF 3/4/2015* *CHECKLIST INITIATED ON 11/14/2012* CLOSURE POLICY HISTORY

General Criteria - *The site satisfies the policy general criteria* - CLEAR SECTION ANSWERS — YES

a. Is the unauthorized release located within the service area of a public water system?
Name of Water System : EBMUD — ◉ YES ○ NO

b. The unauthorized release consists only of petroleum (info). — ◉ YES ○ NO

c. The unauthorized ("primary") release from the UST system has been stopped. — ◉ YES ○ NO

d. Free product has been removed to the maximum extent practicable (info). — ◉ FP Not Encountered ○ YES ○ NO

e. A conceptual site model that assesses the nature, extent, and mobility of the release has been developed (info). — ◉ YES ○ NO

f. Secondary source has been removed to the extent practicable (info). — ◉ YES ○ NO

g. Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15. — ○ Not Required ◉ YES ○ NO

h. Does a nuisance exist, as defined by Water Code section 13050. — ○ YES ◉ NO

1. Media-Specific Criteria: Groundwater - *The contaminant plume that exceeds water quality objectives is stable or decreasing in areal extent, and meets all of the additional characteristics of one of the five classes of sites listed below.* - CLEAR SECTION ANSWERS — NO

EXEMPTION - Soil Only Case (Release has not Affected Groundwater - Info) — ○ YES ◉ NO

Does the site meet any of the Groundwater specific criteria scenarios? — ○ YES ◉ NO

ADDITIONAL QUESTIONS - Please indicate only those conditions that do not meet the policy criteria:

Plume Length (That Exceeds Water Quality Objectives) :
○ ≥ 100 Feet and < 250 Feet ○ ≥ 250 Feet and < 1,000 Feet ○ ≥ 1,000 Feet ○ Unknown

Plume is Stable or Decreasing in AREAL Extent :
○ No ○ Unknown

Free Product in Groundwater :
○ Yes ◉ No ○ Unknown

Free Product Has Been Removed to the Maximum Extent Practicable :
○ No ○ Unknown

For sites with free product, the Plume Has Been Stable or Decreasing for 5-Years (info) :
○ No ○ Unknown

For sites with free product, owner Willing to Accept a Land Use Restriction (if required) :
○ No ○ Unknown

Free Product Extends Offsite :
○ Yes ○ Unknown

Benzene Concentration :
○ ≥ 1,000 µg/l and < 3,000 µg/l ○ ≥ 3,000 µg/l ○ Unknown

MTBE Concentration :
○ ≥ 1,000 µg/l ○ Unknown

Nearest Supply Well (From Plume Boundary) :
○ ≤ 250 Feet ○ > 250 Feet and ≤ 1,000 Feet ○ Unknown

Nearest Surface Water Body (From Plume Boundary) :
◉ ≤ 250 Feet ○ > 250 Feet and ≤ 1,000 Feet ○ Unknown

2. Media Specific Criteria: Petroleum Vapor Intrusion to Indoor Air - *The site is considered low-threat for the vapor-intrusion-to-air pathway if site-specific conditions satisfy items 2a, 2b, or 2c* - CLEAR SECTION ANSWERS — NO

EXEMPTION - Active Commercial Petroleum Fueling Facility — ○ YES ◉ NO

Does the site meet any of the Petroleum Vapor Intrusion to Indoor Air specific criteria scenarios? — ○ YES ◉ NO

ADDITIONAL QUESTIONS - Please indicate only those conditions that do not meet the policy criteria:

Soil Gas Samples :
○ No Soil Gas Samples ○ Taken Incorrectly

Exposure Type :
○ Residential ◉ Commercial

Free Product :
○ In Groundwater ○ In Soil ○ Unknown

TPH In the Bioattenuation Zone :
◉ ≥ 100 mg/kg ○ Unknown ○ Soil samples not taken at two depths within 5 ft. zone (only for Scenario 4 with BioZone)

Bioattenuation Zone Thickness :
○ < 5 Feet (No BioZone) ○ ≥ 5 Feet and < 10 Feet ◉ ≥ 10 Feet and < 30 Feet ○ ≥ 30 Feet ○ 30ft BioZone Compromised TPH > 100mg/kg ○ Unknown

O2 Data In Bioattenuation Zone :
◉ No O_2 Data ○ O_2 < 4% ○ O_2 ≥ 4%

Benzene in Groundwater :
○ ≥ 100 µg/l and < 1,000 µg/l ○ ≥ 1,000 µg/l ○ Unknown

Soil Gas Benzene :
○ ≥ 85 µg/m³ and < 280 µg/m³ ○ ≥ 280 µg/m³ and < 85,000 µg/m³ ○ ≥ 85,000 µg/m³ and < 280,000 µg/m³ ○ ≥ 280,000 µg/m³ ◉ Unknown

Soil Gas EthylBenzene :
○ ≥ 1,100 µg/m³ and < 3,600 µg/m³ ○ ≥ 3,600 µg/m³ and < 1,100,000 µg/m³ ○ ≥ 1,100,000 µg/m³ and < 3,600,000 µg/m³ ○ ≥ 3,600,000 µg/m³ ◉ Unknown

Soil Gas Naphthalene :
○ ≥ 93 µg/m³ and < 310 µg/m³ ○ ≥ 310 µg/m³ and < 93,000 µg/m³ ○ ≥ 93,000 µg/m³ and < 310,000 µg/m³ ○ ≥ 310,000 µg/m³ ◉ Unknown

3. Media Specific Criteria: Direct Contact and Outdoor Air Exposure - *The site is considered low-threat for direct contact and outdoor air exposure if it meets 1, 2, or 3 below.* - CLEAR SECTION ANSWERS — NO

EXEMPTION - The upper 10 feet of soil is free of petroleum contamination ○ YES ◉ NO

Does the site meet any of the Direct Contact and Outdoor Air Exposure criteria scenarios? ○ YES ◉ NO

ADDITIONAL QUESTIONS - Please indicate only those conditions that do not meet the policy criteria:

Exposure Type :
○ Residential ◉ Commercial ○ Utility Worker

Petroleum Constituents in Soil :
○ ≤ 5 Feet bgs ◉ >5 Feet bgs and ≤10 Feet bgs ○ Unknown

Soil Concentrations of Benzene :
○ > 1.9 mg/kg and ≤ 2.8 mg/kg ○ > 2.8 mg/kg and ≤ 8.2 mg/kg ○ > 8.2 mg/kg and ≤ 12 mg/kg ○ > 12 mg/kg and ≤ 14 mg/kg ○ > 14 mg/kg ○ Unknown

Soil Concentrations of EthylBenzene :
○ > 21 mg/kg and ≤ 32 mg/kg ○ > 32 mg/kg and ≤ 89 mg/kg ○ > 89 mg/kg and ≤ 134 mg/kg ○ > 134 mg/kg and ≤ 314 mg/kg ○ > 314 mg/kg ○ Unknown

Soil Concentrations of Naphthalene :
○ > 9.7 mg/kg and ≤ 45 mg/kg ○ > 45 mg/kg and ≤ 219 mg/kg ○ > 219 mg/kg ○ Unknown

Soil Concentrations of PAH :
○ > 0.063 mg/kg and ≤ 0,68 mg/kg ○ > 0.68 mg/kg and ≤ 4.5 mg/kg ○ > 4.5 mg/kg ○ Unknown

Area of Impacted Soil :
○ Area of Impacted Soil > 82 by 82 Feet ○ Unknown

Additional Information

Should this case be closed in spite of NOT meeting policy criteria? ◉ YES ○ NO

Explain:

Media-Specific Criteria: Groundwater : Soil & groundwater investigation demonstrated surface water body not affected by contaminant plume.
the Corporation Yard fails the Media Specific Criteria: Direct Contact and Outdoor Air Exposure as no samples recovered in the 0-5-foot interval. However, based on the limited sampling conducted in the 5- 10-foot interval, it is unlikely that concentrations exceed Table 1 values.

Has this LTCP Checklist been updated for FY 14/15? ◉ YES ○ NO

SPELL CHECK

Save Form as Partially Completed | Save Form as Complete

LOGGED IN AS KNOWELL

CONTACT GEOTRACKER HELP

ATTACHMENT 3
CORPORATION (MAINTENANCE) YARD
LTCP GROUNDWATER SPECIFIC CRITERIA

LTCP Groundwater Specific Scenario under which case was closed: Scenario 1

Site Data		LTCP **Scenario 1 Criteria**	LTCP Scenario 2 Criteria	LTCP Scenario 3 Criteria	LTCP Scenario 4 Criteria
Plume Length	<100 feet	**<100 feet**	<250 feet	<250 feet	<1,000 feet
Free Product	No free product.	**No free product**	No free product	Removed to maximum extent practicable	No free product
Plume Stable or Decreasing	Decreasing	**Stable or decreasing**	Stable or decreasing	Stable or decreasing for minimum of 5 Years	Stable or decreasing
Distance to Nearest Water Supply Well	> 1,000 feet	**>250 feet**	>1,000 feet	>1,000 feet	>1,000 feet
Distance to Nearest Surface Water and Direction	>250 feet	**>250 feet**	>1,000 feet	>1,000 feet	>1,000 feet
Property Owner Willing to Accept a Land Use Restriction?	Not applicable for groundwater specific criteria; however, see Site Management Requirements in Additional Information.	**Not applicable**	Not applicable	Yes	Not applicable

GROUNDWATER CONCENTRATIONS

Constituent	Historic Site Maximum (µg/L)	Current Site Maximum (µg/L)	LTCP Scenario 1 Criteria (µg/L)	LTCP Scenario 2 Criteria (µg/L)	LTCP Scenario 3 Criteria (µg/L)	LTCP Scenario 4 Criteria (µg/L)
Benzene	2,100 (MW-1 June 1989)	3.6 (MW-1 April 2013)	No criteria	<3,000	No criteria	<1,000
MTBE	7.4 (MW-1 January 2000)	0.33 (MW-1 April 2013)	No criteria	<1,000	No criteria	<1,000
Total Petroleum Hydrocarbons as gasoline (TPH-g)	16,000 (MW-1 June 1991)	49 (MW-1 on April 2013)				

Scenario 5: If the site does not meet scenarios 1 through 4, has a determination been made that under current and reasonably expected future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame?	----

Attachment 3 Comments (Corporate – Maintenance– Yard):

Groundwater flow direction Predominant flow to southwest, varies from west-northwest to south-southwest,

Water Supply Wells in Vicinity:

Department of Water Resources (DWR) well survey indicates four wells, with depths ranging between 324 to 358 feet, were once located on the Mills College campus. The DWR reports did not contain location data. However, Sanborn maps dated 1950 show three historical wells denoted as: Area 1 (2 wells, located 1,300 feet west of the Corporate Yard), and Area 2 (1 well, located 2,200 feet southwest of the Corporate Yard). Both Area 1 & 2 wells were not definitively located during a 2013 geophysical survey, although magnetic anomalies near the Sanborn Map locations indicate the wells may exist. No evidence of the wells was observed in either area; the wells appear to be lost and unused although they may not have properly destroyed.

Alameda County Public Works Agency (ACPWA) well records search identified ten wells at Mills College. Eight wells are monitoring wells associated with environmental investigations. The other two wells have unknown specific location, usage, and depth; one of these two wells was reported as abandoned but not destroyed.

GeoTracker Groundwater Ambient Monitoring & Assessment (GAMA) well search indicates zero (0) public water supply wells (DWR, Dept. of Pesticide Regulation, California Dept. of Public Health) within a 2,000 foot radius of the Corporate Yard.

Surface Water in Vicinity:

Leona (aka Lion & Aliso) Creek (on Mills campus) lies approximately 1,800 to 2,000 feet west to southwest down-gradient. Based on distance and plume length, Leona Creek is not considered a receptor.

Lake Aliso (on Mills campus) lies approximately 880 feet northwest and cross-gradient. Based on hydrogeologic position, Lake Aliso is not considered a receptor.

ATTACHMENT 3
HOLMGREN/ TOYON MEADOW
LTCP GROUNDWATER SPECIFIC CRITERIA

LTCP Groundwater Specific Scenario under which case was closed:
This case should be closed in spite of not meeting the groundwater specific media criteria.

Site Data		LTCP Scenario 1 Criteria	LTCP Scenario 2 Criteria	LTCP Scenario 3 Criteria	LTCP Scenario 4 Criteria
Plume Length	<100 feet (measured from MW-2M that exceeds WQOs to MW-3M)	<100 feet	<250 feet	<250 feet	<1,000 feet
Free Product	No free product.	No free product	No free product	Removed to maximum extent practicable	No free product
Plume Stable or Decreasing	Stable to Decreasing (Plume is migrating, however source mass is decreasing)	Stable or decreasing	Stable or decreasing	Stable or decreasing for minimum of 5 Years	Stable or decreasing
Distance to Nearest Water Supply Well	>1,000 feet (No water supply wells within 2,000 foot radius survey)	>250 feet	>1,000 feet	>1,000 feet	>1,000 feet
Distance to Nearest Surface Water and Direction	<250 feet west, down-gradient to Leona Creek (170 buffer distance)	>250 feet	>1,000 feet	>1,000 feet	>1,000 feet
Property Owner Willing to Accept a Land Use Restriction?	Not applicable for groundwater specific criteria; however, see Site Management Requirements in Additional Information.	Not applicable	Not applicable	Yes	Not applicable

GROUNDWATER CONCENTRATIONS

Constituent	Historic Site Maximum (µg/L)	Current Site Maximum (µg/L)	LTCP Scenario 1 Criteria (µg/L)	LTCP Scenario 2 Criteria (µg/L)	LTCP Scenario 3 Criteria (µg/L)	LTCP Scenario 4 Criteria (µg/L)
Benzene	2,100 (MW-1 June 1989)	3.6 (MW-1 April 2013)	No criteria	<3,000	No criteria	<1,000
MTBE	7.4 (MW-1 January 2000)	0.33 (MW-1 April 2013)	No criteria	<1,000	No criteria	<1,000
Total Petroleum Hydrocarbons as gasoline (TPH-g)	16,000 (MW-1 June 1991)	49 (MW-1 on April 2013)				

Scenario 5: If the site does not meet scenarios 1 through 4, has a determination been made that under current and reasonably expected future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame?	Yes

Attachment 3 Comments (Holmgren/ Toyon Meadow):

The Holmgren/ Toyon Meadow area does not meet the LTCP Groundwater Specific criteria as the distance from the leading edge of the plume boundary to Leona (aka Lion & Aliso) Creek is less than 200 feet. In late 2013, a soil and groundwater investigation was performed to evaluate if the contaminant plume migration had reached Leona Creek. Though groundwater was not encountered in the borings, vadose zone soil samples did not detect TPH or BTEX concentrations above the laboratory reporting limits.

Groundwater flow direction Predominant flow to southwest, varies from west-northwest to south-southwest,

Department of Water Resources (DWR) well survey indicates four wells, with depths ranging between 324 to 358 feet, were once located on the Mills College campus. The DWR reports did not contain location data. However, Sanborn maps dated 1950 show three historical wells denoted as: Area 1 (2 wells, located approximately 480 feet northeast of Toyon Meadow), and Area 2 (1 well, located approximately 900 feet southwest of Toyon Meadow). Both Area 1 & 2 wells were not definitively located during a 2013 geophysical survey, although magnetic anomalies near the Sanborn Map locations indicate the wells may exist. No evidence of the wells was observed in either area; the wells appear to be lost and unused although likely they were not properly destroyed.

Alameda County Public Works Agency (ACPWA) well records search identified ten wells at Mills College. Eight wells are monitoring wells associated with environmental investigations. The other two wells have unknown specific location, usage, and depth; one of these two wells was reported as abandoned but not destroyed.

GeoTracker Groundwater Ambient Monitoring & Assessment (GAMA) well search indicates zero (0) public water supply wells (DWR, Dept. of Pesticide Regulation (DPR), California Dept. of Public Health (CDPH)) within a 2,000 foot radius of the Toyon Meadow site.

Surface Water in Vicinity:

Leona Creek (on Mills campus) lies approximately 250 feet west and down-gradient of the Toyon Meadow Underground Storage Tank (UST) excavation. Based on relative distance (approximately 250 feet), position, and plume length (approximately 80 feet), Leona Creek is a potential receptor with a plume buffer distance of approximately 170 feet.

Lake Aliso (on Mills campus) lies approximately 1,100 feet northeast and up-gradient of Toyon Meadow. Based on hydrogeologic position, Lake Aliso is not considered a receptor.

Surface Water Receptor Risk

In June 1991, surface water samples were collected from Aliso Creek both upstream (SWS-U) and downstream (SWS-L). Concentrations of Total Petroleum Hydrocarbons as diesel (TPH-d), and benzene, toluene, ethylbenzene, and xylenes (collectively BTEX) were not detected above laboratory reporting limits (RLs); however, TPH as oil was detected at 0.1 milligrams per liter (mg/L) at both SWS-U and SWS-L. During 1991 to 1996, TPH as oil was not detected above laboratory RLs indicating that the creek detections likely did not originate from the fuel oil UST.

Site risk to surface water bodies and plume length evaluated based on Water Quality Objectives (WQOs) as defined by the Basin Plan and Environmental Screening Levels (ESLs) where the Basin Plan has no criteria. The WQO for TPH-d is 100 micrograms per liter (µg/L) (San Francisco Bay Regional Water Quality Control Board ESLs, Dec. 2013, Table F-2a, Surface water screening levels, Fresh water habitats). The current TPH-d groundwater concentrations of 115 µg/L and 136 µg/L at MW-2M exceeded WQO's in October 2012 and April 2013, respectively. However, the down-gradient concentrations of TPH-d at MW-3M (located between the source area and Leona Creek) have decreased from 90.4 µg/L to 75.6 µg/L from October 2012 and April 2013, respectively, and these concentrations are below WQO criteria.

Grab groundwater samples collected at GB-1 in 1996 can be compared to grab groundwater samples collected adjacent to B-13 in 2012 (and adjacent to 1989 soil boring B-8, the location of maximum TPH-d concentration in soil at 11,000 milligrams per kilogram (mg/kg)). Grab groundwater concentrations of TPH-d at GB-1 and B-13 have decreased from 75,000 µg/L to 9,460 µg/L, respectively, over the past 16 years. Likewise, soil concentrations in adjacent soil borings show a decrease in residual source mass from 11,000 mg/kg (B-8 at 14 feet below ground surface (bgs)) to 1,400 mg/kg (B-13 at 15 feet bgs).

ATTACHMENT 4
CORPORATION (MAINTENANCE) YARD
LTCP VAPOR SPECIFIC CRITERIA

LTCP Vapor Specific Scenario under which case was closed:
This case should be closed in spite of not meeting the vapor specific media criteria.

Active Fueling Station	Not applicable

Site Data		LTCP Scenario 1 Criteria	LTCP Scenario 2 Criteria	LTCP Scenario 3A Criteria	LTCP Scenario 3B Criteria	LTCP Scenario 3C Criteria	LTCP Scenario 4 Criteria
Unweathered LNAPL	No LNAPL	LNAPL in groundwater	LNAPL in soil	No LNAPL	No LNAPL	No LNAPL	No criteria
Thickness of Bioattenuation Zone Beneath Foundation	≥10 feet (Shallowest on-site DTW MW-3 @ 14.11 ft.)	≥30 feet	≥30 feet	≥5 feet	≥10 feet	≥5 feet	≥5 feet
Total TPH in Soil in Bioattenuation Zone	>100 mg/kg	<100 mg/kg	<100 mg/kg	<100 mg/kg	<100 mg/kg	<100 mg/kg	<100 mg/kg
Maximum Current Benzene Concentration in Groundwater	<100 µg/L (3.6 µg/L MW-1 April 2013)	No criteria	No criteria	<100 µg/L	≥100 and <1,000 µg/L	<1,000 µg/L	No criteria
Oxygen Data within Bioattenuation Zone	No oxygen data	No criteria	No criteria	No oxygen data or <4%	No oxygen data or <4%	≥4% at lower end of zone	≥4% at lower end of zone
Depth of soil vapor measurement beneath foundation	----	No criteria	No criteria	No criteria	No criteria	No criteria	≥5 feet

SCENARIO 4 DIRECT MEASUREMENT OF SOIL VAPOR CONCENTRATIONS

Site Soil Vapor Data			No Bioattenuation Zone		Bioattenuation Zone	
Constituent	Historic Maximum ($\mu g/m^3$)	Current Maximum ($\mu g/m^3$)	Residential	Commercial	Residential	Commercial
Benzene	----	----	<85	<280	<85,000	<280,000
Ethylbenzene	----	----	<1,100	<3,600	<1,100,000	<3,600,000
Naphthalene	----	----	<93	<310	<93,000	<310,000

If the site does not meet scenarios 1 through 4, does a site-specific risk assessment for the vapor intrusion pathway demonstrate that human health is protected?	No
If the site does not meet scenarios 1 through 4, has a determination been made that petroleum vapors from soil or groundwater will have no significant risk of adversely affecting human health?	Yes

Attachment 4 Corporation (Maintenance) Yard Comments:

This site does not meet the LTCP Vapor Specific scenario as indirect evidence indicates residual TPH concentrations in the bioattenuation zone exceed 100 mg/kg:

- MW1-11 at 520 mg/kg TPHg and EB2-11 at 580 mg/kg TPHg;
- EB-2 has PID readings of 1.1 ppm at 6 feet bgs with no PHC odor, with PHC odor grading to strong odor by 11 feet, and the PID readings to a maximum of 1,225 ppm (with strong PHC odor) at 11 feet bgs.

Bio-attenuation zone thickness (≥10 feet) partially determined by vadose zone thickness near the former Underground Storage Tank (UST) excavation where shallowest depth-to-water (DTW) historically was:

- MW-1 = 14.36 (adjacent to former UST source area)
- MW-2 = 14.37 (adjacent to former UST source area)
- MW-3 = 14.11 (adjacent to former UST source area)
- MW-4 = 8.84 (off-site, down- to cross-gradient and southwest of MW-1, along Seminary Avenue)
- MW-5 = 23.38 (on-site, down-gradient of MW-1)

During UST removal in 1988, maximum TPH-g concentrations within the bioattenuation zone (zero to 10 feet below the ground surface- bgs) were collected from sample #1 (16,327 milligrams per kilogram (mg/kg)) and sample #2 (7,622), both from nine (9) feet bgs. These impacted soils were over-excavated spoils disposed off-site. Residual impacted soil exists in the area downgradient of the tank pit, as demonstrated by MW-1 and EB-2 sampled in 1989, which were sampled at 11 feet bgs with maximum TPH-g concentrations of 520 mg/kg at MW-1-11 and 580 mg/kg at EB2-11. Soil was not sampled in the ground surface to 10 feet bgs bioattenuation zone during the 1989 investigation.

Based on the MW-1 and EB-2 data, localized soil impacts potentially extend south under the maintenance building where further excavation is not feasible.

MW-1 benzene groundwater concentrations have decreased from 2,100 micrograms per liter (µg/L) (June 1989) to 3.6 µg/L in April 2013. Benzene concentration decreases indicate the residual source mass is naturally attenuating (benzene exceeded 1% solubility indicating potential unweathered LNAPL in 1989 decreasing three orders of magnitude. Additionally, naphthalene groundwater concentrations were not detected above laboratory reporting limits (RLs) (<0.50 µg/L) from wells MW-1 to MW-3 in 2012 and 2013. Ethylbenzene groundwater concentrations were only detected in well MW-1 (historical maximum of 0.81 µg/L on April 2013) slightly above the laboratory RL of 0.20 µg/L. The groundwater data suggests weathering of the residual source mass and depletion of TPHg and VOCs).

Current low groundwater VOC concentrations, decreasing groundwater concentration trends (notably benzene concentrations), and soil delineation indicating limited lateral extents indicate the residual source is weathering and natural attenuation has mitigated the risk of petroleum vapor intrusion to indoor air. Hence, a determination has been made that the site is closeable in spite of not meeting the groundwater media specific criteria.

ATTACHMENT 4
HOLMGREN/ TOYON MEADOW
LTCP VAPOR SPECIFIC CRITERIA

LTCP Vapor Specific Scenario under which case was closed:
Scenario 3A

	Active as of Not applicable. (Open meadow, grassy area)

Site Data		LTCP Scenario 1 Criteria	LTCP Scenario 2 Criteria	LTCP Scenario 3A Criteria	LTCP Scenario 3B Criteria	LTCP Scenario 3C Criteria	LTCP Scenario 4 Criteria
Unweathered LNAPL	No LNAPL	LNAPL in groundwater	LNAPL in soil	No LNAPL	No LNAPL	No LNAPL	No criteria
Thickness of Bioattenuation Zone Beneath Foundation	≥5 feet (Shallowest DTW MHW-2 @ 8.26 ft.)	≥30 feet	≥30 feet	≥5 feet	≥10 feet	≥5 feet	≥5 feet
Total TPH in Soil in Bioattenuation Zone	<100 mg/kg	<100 mg/kg	<100 mg/kg	<100 mg/kg	<100 mg/kg	<100 mg/kg	<100 mg/kg
Maximum Current Benzene Concentration in Groundwater	<0.20 µg/L (MW-1M, MW-2M, MW-3M on 4/22/2014)	No criteria	No criteria	<100 µg/L	≥100 and <1,000 µg/L	<1,000 µg/L	No criteria
Oxygen Data within Bioattenuation Zone	No oxygen data	No criteria	No criteria	No oxygen data or <4%	No oxygen data or <4%	≥4% at lower end of zone	≥4% at lower end of zone
Depth of soil vapor measurement beneath foundation	----	No criteria	No criteria	No criteria	No criteria	No criteria	≥5 feet

SCENARIO 4 DIRECT MEASUREMENT OF SOIL VAPOR CONCENTRATIONS

Site Soil Vapor Data			No Bioattenuation Zone		Bioattenuation Zone	
Constituent	Historic Maximum ($\mu g/m^3$)	Current Maximum ($\mu g/m^3$)	Residential	Commercial	Residential	Commercial
Benzene	----	----	<85	<280	<85,000	<280,000
Ethylbenzene	----	----	<1,100	<3,600	<1,100,000	<3,600,000
Naphthalene	----	----	<93	<310	<93,000	<310,000

If the site does not meet scenarios 1 through 4, does a site-specific risk assessment for the vapor intrusion pathway demonstrate that human health is protected?	----
If the site does not meet scenarios 1 through 4, has a determination been made that petroleum vapors from soil or groundwater will have no significant risk of adversely affecting human health?	----

Attachment 4 Holmgren/ Toyon Meadow Comments:

Receptor for vapor intrusion to indoor air is Mills Hall, located approximately 25 to 50 feet southwest and cross- to down-gradient of MHW-1/1A (MW-1M).

Benzene has not been detected in Toyon Meadows monitoring wells since April 1995; maximum historical benzene concentration was 2 µg/L at MHW-1/1A. The lack of VOCs in site soil indicates vapor intrusion to indoor air not an issue.

Attachment 4 Holmgren/ Toyon Meadow Comments continued:

Based on the shallowest groundwater measurement of 8.26 feet bgs, the bioattenuation zone extends to a depth of approximately 8 feet bgs. Total TPH concentration is based on boring B-13 (advanced in 2012), located adjacent to boring B-8 (advanced in 1989). Boring B-13 total TPH (TPH C_{10}-C_{28}, as diesel) concentration is 4.02 mg/kg at 5 feet bgs and 7.8 mg/kg at 10 feet bgs.

The 1989 soil boring samples B1 to B11 demonstrate most of the impacted soil lies below 10 foot bgs with the maximum concentration being 11,000 mg/kg TPH-d at B8-14. Within the 10 foot bgs zone, TPH-d concentrations range between "not detected above laboratory RLs" to a maximum of 240 mg/kg at B7-10. Samples deeper than approximately 8 feet bgs are considered below the bioattenuation zone.

ATTACHMENT 5
CORPORATION (MAINTENANCE) YARD
LTCP DIRECT CONTACT AND OUTDOOR AIR EXPOSURE CRITERIA

LTCP Direct Contact and Outdoor Air Exposure Specific Scenario under which case was closed:
This case should be closed in spite of not meeting the vapor specific media criteria.

Are maximum concentrations less than those in Table 1 below?		----				
Constituent		Residential		Commercial/Industrial		Utility Worker
		0 to 5 feet bgs (mg/kg)	Volatilization to outdoor air (5 to 10 feet bgs) mg/kg	0 to 5 feet bgs (mg/kg)	Volatilization to outdoor air (5 to 10 feet bgs) mg/kg	0 to 10 feet bgs (mg/kg)
Site Maximum	Benzene	----	----	----	<0.050 (EB-3 @ 6')	<0.050 (EB-3 @ 6')
LTCP Criteria	Benzene	≤1.9	≤2.8	≤8.2	≤12	≤14
Site Maximum	Ethylbenzene	----	----	----	<0.050 (EB-3 @ 6')	<0.050 (EB-3 @ 6')
LTCP Criteria	Ethylbenzene	≤21	≤32	≤89	≤134	≤314
Site Maximum	Naphthalene	----	----	----	<0.001 (EB-3 @ 6')	<0.001 (EB-3 @ 6')
LTCP Criteria	Naphthalene	≤9.7	≤9.7	≤45	≤45	≤219
Site Maximum	PAHs	----	----	----	----	----
LTCP Criteria	PAHs	≤0.063	NA	≤0.68	NA	≤4.5
If maximum concentrations are greater than those in Table 1, are they less than levels from a site-specific risk assessment?		----				
If maximum concentrations are greater than those in Table 1, has a determination been made that the concentrations of petroleum in soil will have no significant risk of adversely affecting human health as a result of controlling exposure through the use of mitigation measures or through the use of institutional controls?		----				

Attachment 5 Comments:

The site does not meet the LTCP Direct Contact and Outdoor Air Exposure Specific scenario as no soil samples were collected from the 0 to 5 feet bgs zone during site investigations conducted between 1988 and 2012. Additionally, only one soil sample was recovered from the upper 10 feet bgs at a location that was not subsequently excavated. During the 1988 UST excavation and 1989 soil investigation, soil samples #1 and #2 at 9 feet were collected from the 5 to 10 feet bgs zone from the UST excavation samples. The 9-foot sample concentrations of TPHg and benzene were reported at 16,327 mg/kg and 204.27 mg/kg, respectively, for sample #1 and 7,622 mg/kg and 56.975 mg/kg, respectively, for sample #2. Concentrations of ethylbenzene were 200.53 mg/kg and 100.983 mg/kg, for #1 and #2, respectively. These two sample points were removed when the UST pit excavation was extended down to between 15 to 21 feet bgs.

Indirect evidence of soil impact delineation within the top 10 feet is gathered from soil boring PID and odor observations:

- MW-1 : No odor at 6 feet bgs (with no PID reading), PID reading maximum of 90 ppm with strong PHC odor at 11 feet bgs, and grades to no odor with PID of 5 ppm at 26 feet bgs.
- EB-2 (advanced in 1989): PID reading was 1.1 ppm with no odor at 6 feet bgs, PID reading increases to a maximum 1,225 ppm with strong PHC odor by 11 feet bgs, and PID reading decreases to 70 ppm with slight PHC odor at 25 feet bgs.
- EB-3 (advanced 2012): PID reading was 1.9 ppm with no odor at 10 feet bgs, PID reading increases to a maximum of 185 ppm with trace PHC odor at 15 feet bgs.

Attachment 5 Corporation (Maintenance) Yard comments continued:

The soil bore EB-2 benzene concentration at 11 feet bgs (7.6 mg/kg) does not exceed commercial/industrial and utility worker Table 1 criteria; however the benzene and ethylbenzene concentrations exceed the Residential criteria. Concentrations of benzene, ethylbenzene, and naphthalene from 6 and 10 feet bgs do not exceed laboratory RLs.

Lateral delineation of soil may be estimated based on comparison of UST samples #1 and #2 collected beneath the base of the UST, and borings MW-1 and EB-2 compared with soil samples from MW-2, MW-3, EB-1, and EB-3. Located approximately 5 to 10 feet laterally from the UST excavation are borings MW-1 and EB-2. Borings MW-1 and EB-2 soil concentrations at 11 feet bgs for benzene are 0.78 mg/kg and 7.6 mg/kg and for ethylbenzene concentrations are 2.4 mg/kg and 13.0 mg/kg, respectively. Borings MW-2, MW-3, and EB-1 benzene and ethylbenzene concentrations are below or just above laboratory RLs. This data indicates impacted soil concentrations decrease multiple orders of magnitude laterally. These 11 foot soil concentrations pass Table 1 criteria for commercial/industrial and utility workers. The above mentioned samples, coupled with 6 and 10 foot soil data from EB-3 indicates the site likely poses no significant risk of adversely affecting human health as a result of controlling exposure through the use of mitigation measures or through the use of institutional controls.

Naphthalene was an analyte in one soil boring, EB-3, at the corporation yard. The naphthalene concentration was reported below the laboratory reporting limit of 0.001 mg/kg at the 5-5.5-foot interval and 0.0097 mg/kg in soil bore EB-3 at 10-10.5-foot interval, then increasing to a maximum concentration of 2.49 mg/kg at 20 feet bgs. As naphthalene has been reported in soil bore EB3- at depths greater than 10 feet, and is used as a gasoline additive comprising up to 0.3% of gas formulation, a naphthalene concentration of 1.74 mg/kg was calculated based on the highest residual TPHg concentration of 580 mg/kg for the upper 10 feet (using EB-2 data at 11'). The calculated naphthalene concentration of 1.74 mg/kg is below the Commercial/Industrial Volatilization to outdoor air (5 to 10 feet bgs) criteria of 45 mg/kg by 25-fold and below the Utility Worker 0 to 10 feet bgs of criteria of 219 mg/kg.

Poly-aromatic hydrocarbons (PAHs) were not analyzed in soil per the LTCP as the UST formerly contained gasoline, not waste oil or Bunker C fuel.

ATTACHMENT 5
HOLMGREN/ TOYON MEADOW
LTCP DIRECT CONTACT AND OUTDOOR AIR EXPOSURE CRITERIA

LTCP Direct Contact and Outdoor Air Exposure Specific Scenario under which case was closed: Maximum concentrations of petroleum hydrocarbons are less than or equal to those in Table 1 below.

Are maximum concentrations less than those in Table 1 below?		Yes				
Constituent		**Residential**		Commercial/Industrial		Utility Worker
		0 to 5 feet bgs (mg/kg)	**Volatilization to outdoor air (5 to 10 feet bgs) mg/kg**	0 to 5 feet bgs (mg/kg)	Volatilization to outdoor air (5 to 10 feet bgs) mg/kg	0 to 10 feet bgs (mg/kg)
Site Maximum	Benzene	**<0.0050 (B-13 from 5 feet bgs)**	**<0.0049 (B-13 from 10 feet bgs)**	<0.0050 (B-13 from 5 feet bgs)	<0.0049 (B-13 from 10 feet bgs)	<0.0050 (B-13 from 5 & 10 feet bgs)
LTCP Criteria	Benzene	**≤1.9**	**≤2.8**	≤8.2	≤12	≤14
Site Maximum	Ethylbenzene	**<0.0050 (B-13 from 5 feet bgs)**	**<0.0049 (B-13 from 10 feet bgs)**	<0.0050 (B-13 from 5 feet bgs)	<0.0049 (B-13 from 10 feet bgs)	<0.0050 (B-13 from 5 & 10 feet bgs)
LTCP Criteria	Ethylbenzene	**≤21**	**≤32**	≤89	≤134	≤314
Site Maximum	Naphthalene	**<0.0050 (B-13 from 5 feet bgs)**	**<0.0049 (B-13 from 10 feet bgs)**	<0.0050 (B-13 from 5 feet bgs)	<0.0049 (B-13 from 10 feet bgs)	<0.99, <0.97 (B-13 from 5 & 10 feet bgs)
LTCP Criteria	Naphthalene	**≤9.7**	**≤9.7**	≤45	≤45	≤219
Site Maximum	PAHs	**----**	**----**	----	----	----
LTCP Criteria	PAHs	**≤0.063**	**NA**	≤0.68	NA	≤4.5
If maximum concentrations are greater than those in Table 1, are they less than levels from a site-specific risk assessment?				----		
If maximum concentrations are greater than those in Table 1, has a determination been made that the concentrations of petroleum in soil will have no significant risk of adversely affecting human health as a result of controlling exposure through the use of mitigation measures or through the use of institutional controls?				----		

Attachment 5 Holmgren/ Toyon Meadow Comments:

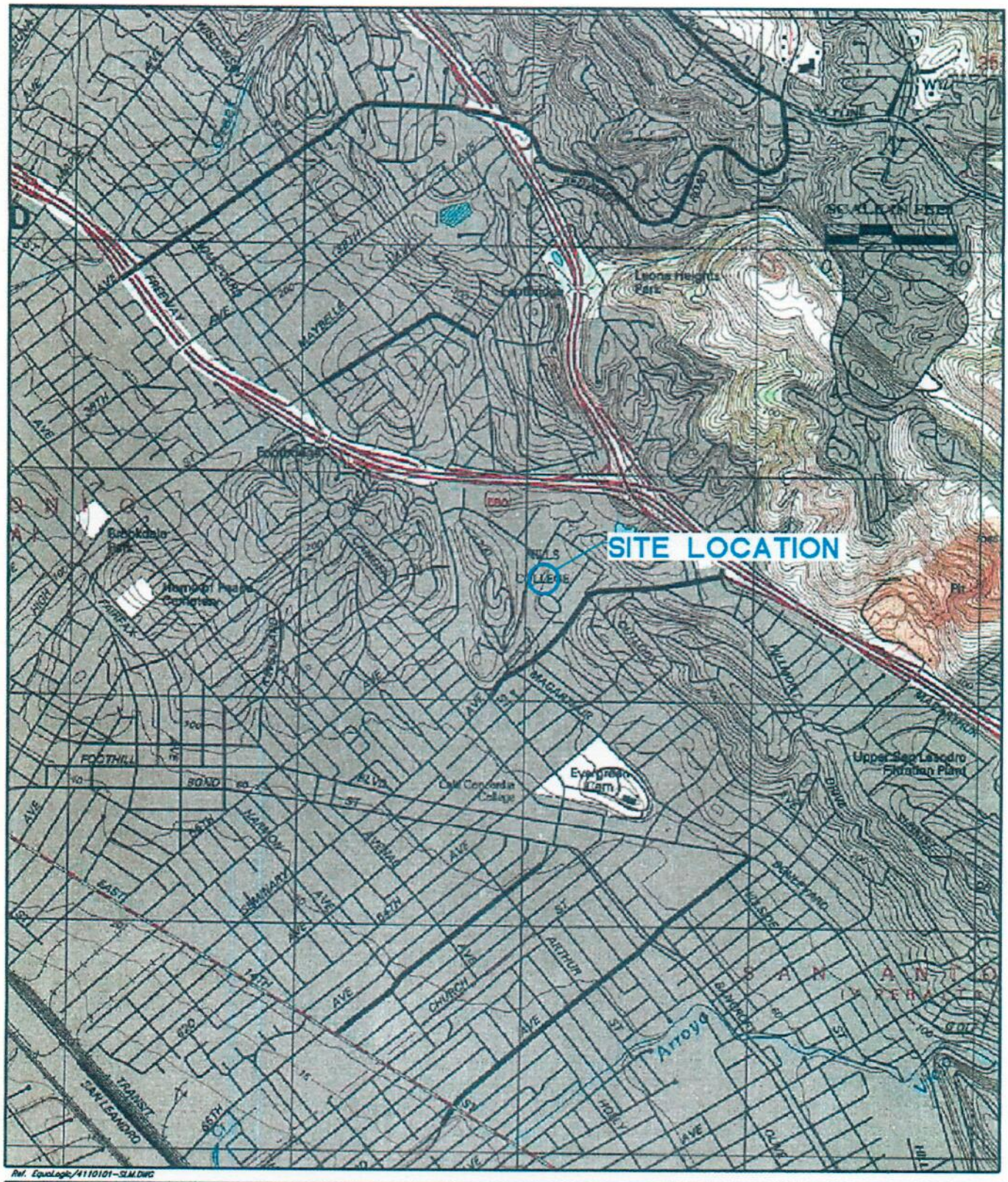
Two soil bores had samples collected from the zone from 0- to 10- feet bgs. Hence, data to evaluate against the LTCP Table 1 is limited to two samples at 5 feet bgs and 4 samples recovered in the zone between 5 and 10 feet bgs. Soil bores, B-12 to B-16 are the only locations where BTEX and naphthalene were analyzed. Soil samples collected at soil bores B-14 to B-16 were at a depth of 15 feet bgs only, and no BTEX or naphthalene concentrations were detected.

The 1989 soil boring samples B1 to B11 demonstrate most of the impacted soil lies below 10 foot bgs with the maximum concentration being 11,000 mg/kg TPH-d at B8-14. Within the 10 foot bgs zone, TPH-d concentrations range between "not detected above laboratory RLs" to a maximum of 240 mg/kg at B7-10.

Naphthalene was analyzed in soil from bores B-12 and B-13 in 2012 (in the vicinity of the former UST excavation) and in bores B-14 to B-16 in 2013 (in the vicinity of down-gradient well MHW-3). Naphthalene was only detected above laboratory RLs in bore B-13 (approximately 30 feet west and down-gradient of MHW-2) at 15 feet bgs (2.910 mg/kg) and 22 feet bgs (0.0022 mg/kg); the 5 and 10 foot bgs sample concentrations were not reported above laboratory RLs.

TPH as Waste Oil analysis was conducted on CS-1 to CS-8 (from 10 to 13 feet bgs), SS-1 and SS-2, and MHW-2 and MHW-3; concentrations were not reported above the detection limit of 20 mg/kg. Poly-Aromatic Hydrocarbons (PAHs) were appropriately not analyzed in soil per the LTCP as the UST formerly contained fuel oil (quantified as diesel), not waste oil or Bunker C fuel.

ATTACHMENT 6

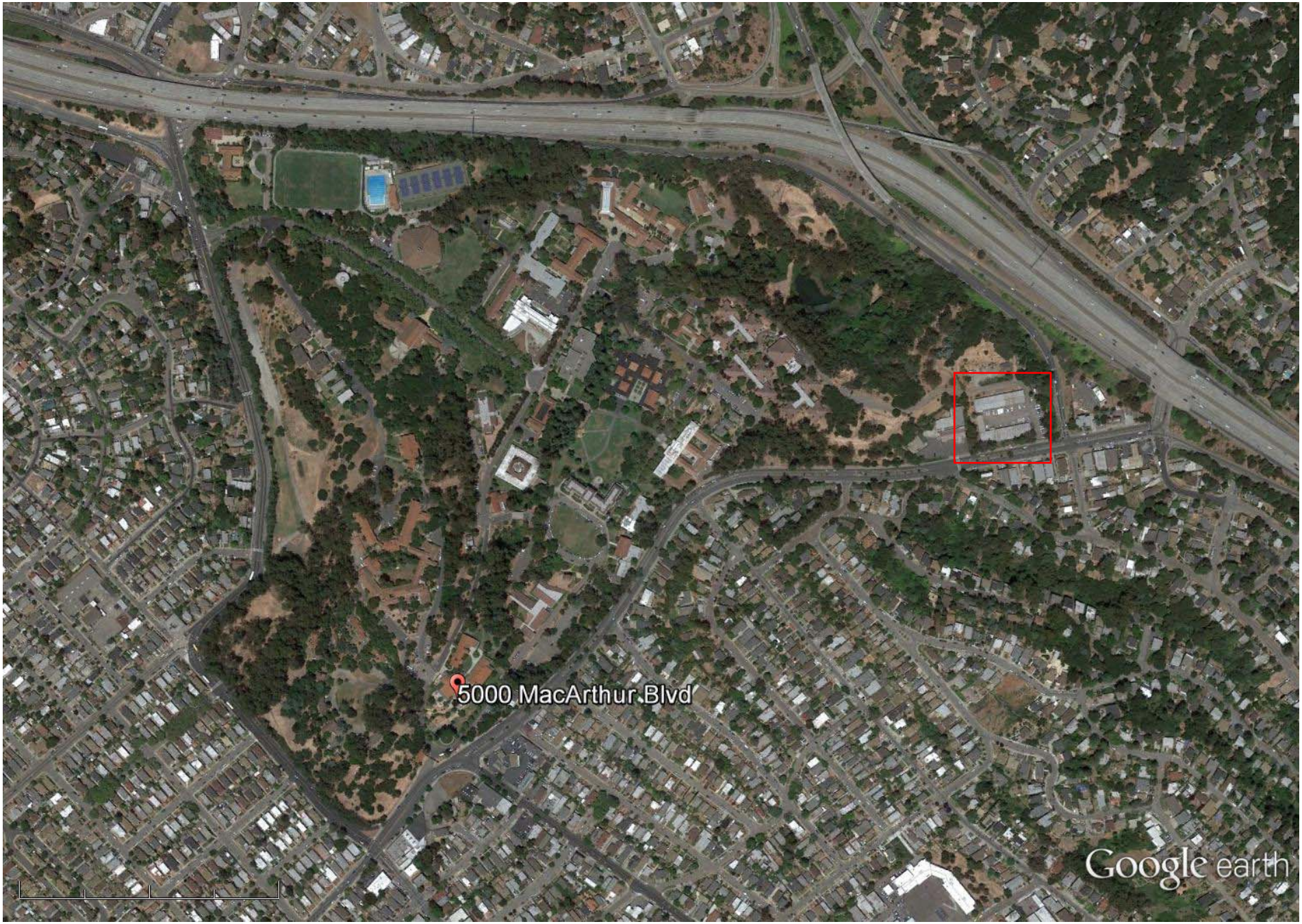


EquoLogic

SITE LOCATION MAP

MILLS COLLEGE
5000 MacArthur Boulevard
Oakland, California

FIGURE:
1
PROJECT:
411.01.01



Google earth

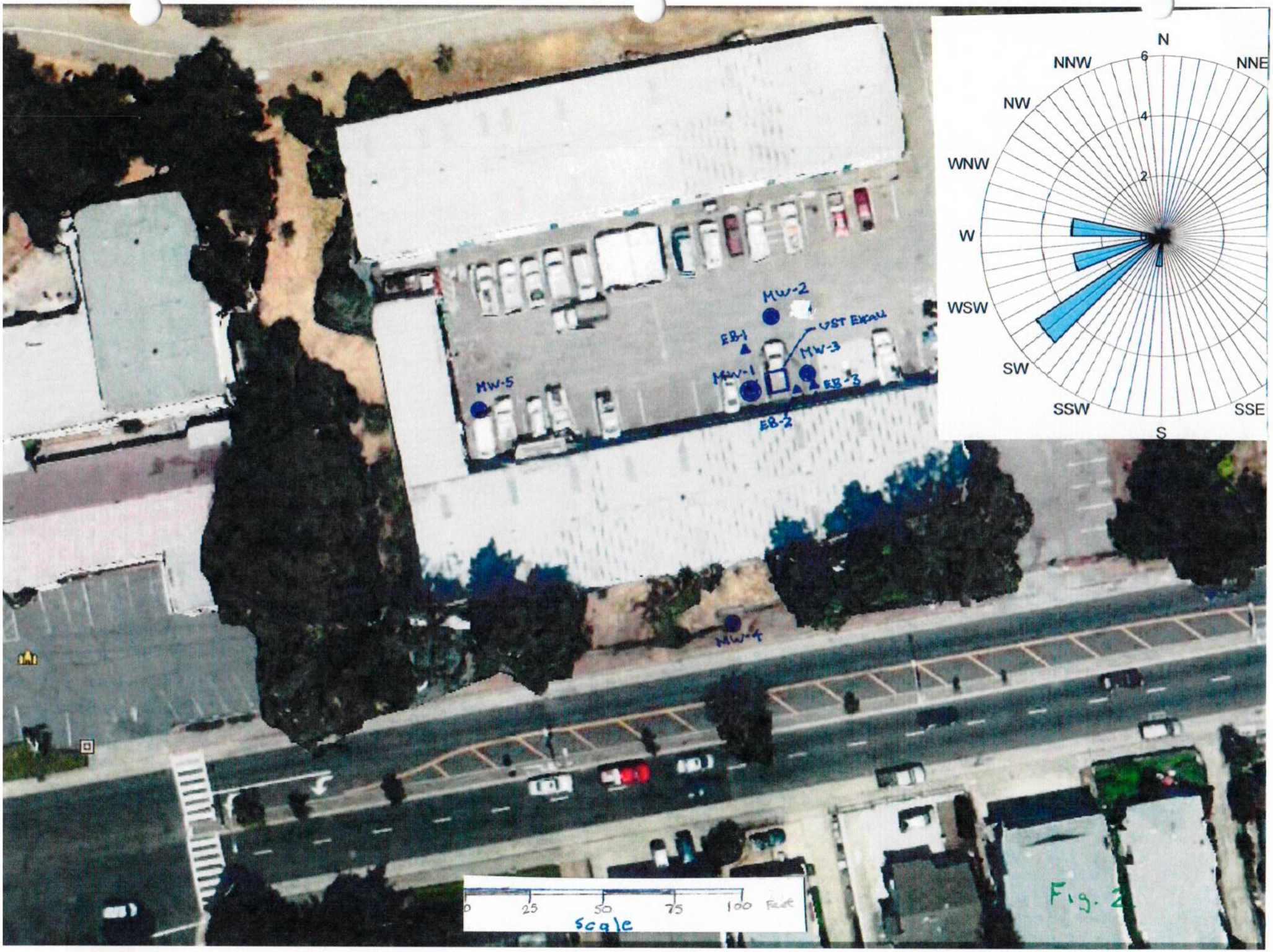
feet 3000
km 1

Coporation Yard
Image Date 6/9/2014

Google earth

feet 600
meters 200

Image date 6/9/2014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EB-1
UST Excav
MW-3
MW-1
EB-3
MW-5
EB-2
MW-4
N
NNW
NNE
NW
WNW
W
WSW
SW
SSW
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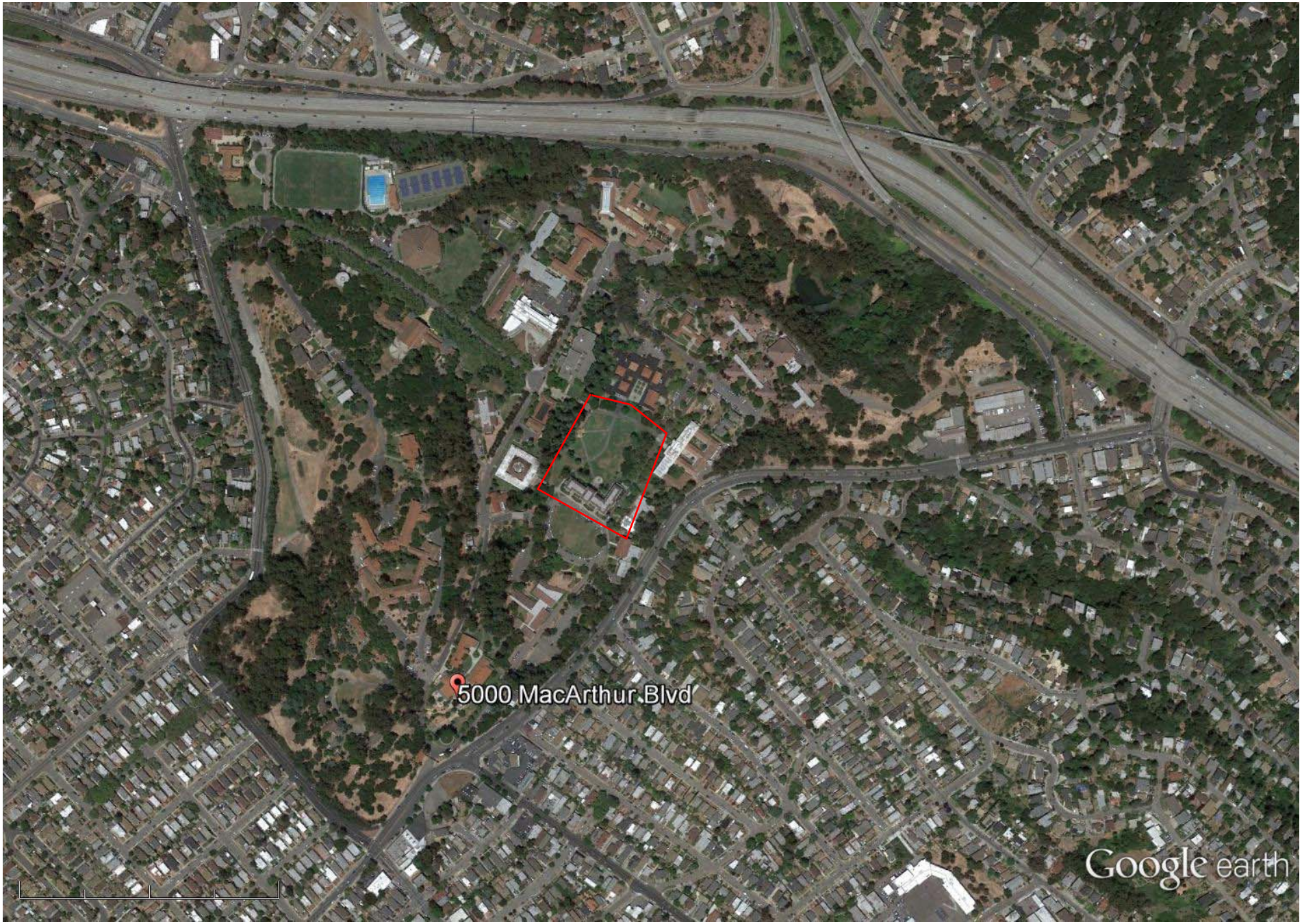
S
6
4
2
0
25
50
75
100
Feet
Scale

Fig. 2

Mill's College: Toyon Meadows

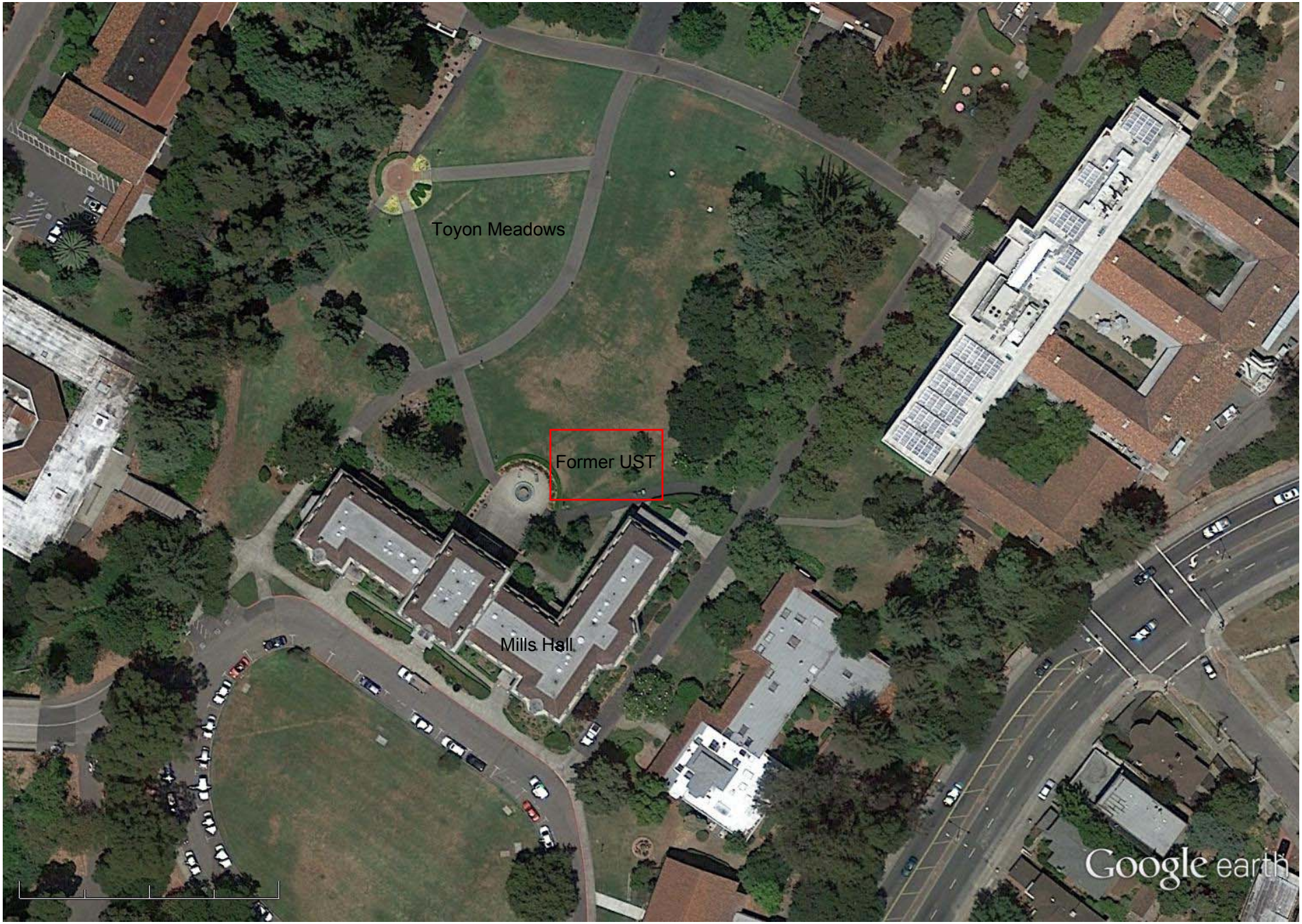


Google earth

feet 3000
km 1

Mills Hall and Toyon Meadow
Image Date 6/9/2014

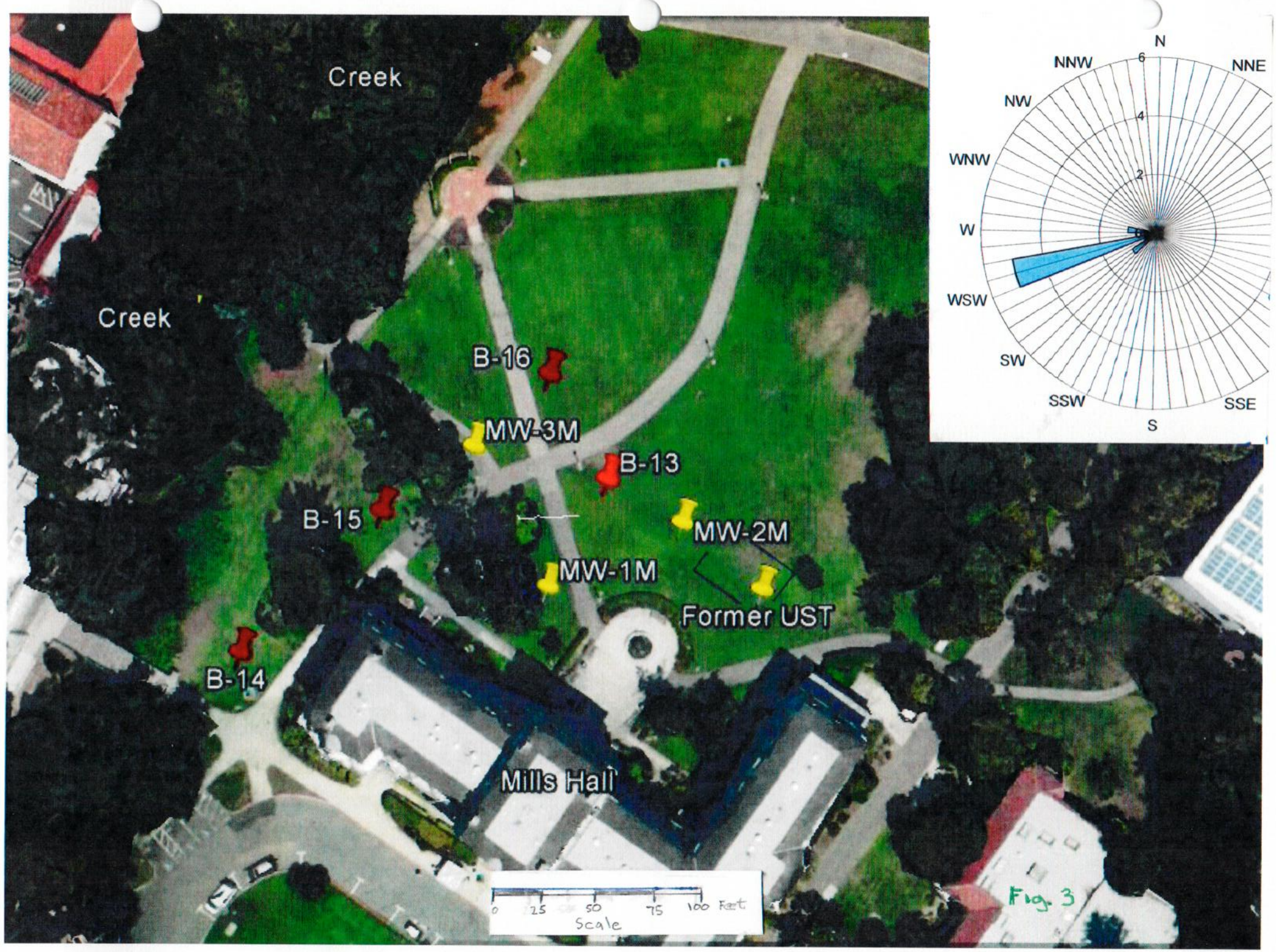
Mill's College: Toyon Meadows Former UST



Google earth

feet 500
meters 100

Mills Hall and Toyon Meadow
Image Date 6/9/2014


Creek
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Former UST
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Mills Hall
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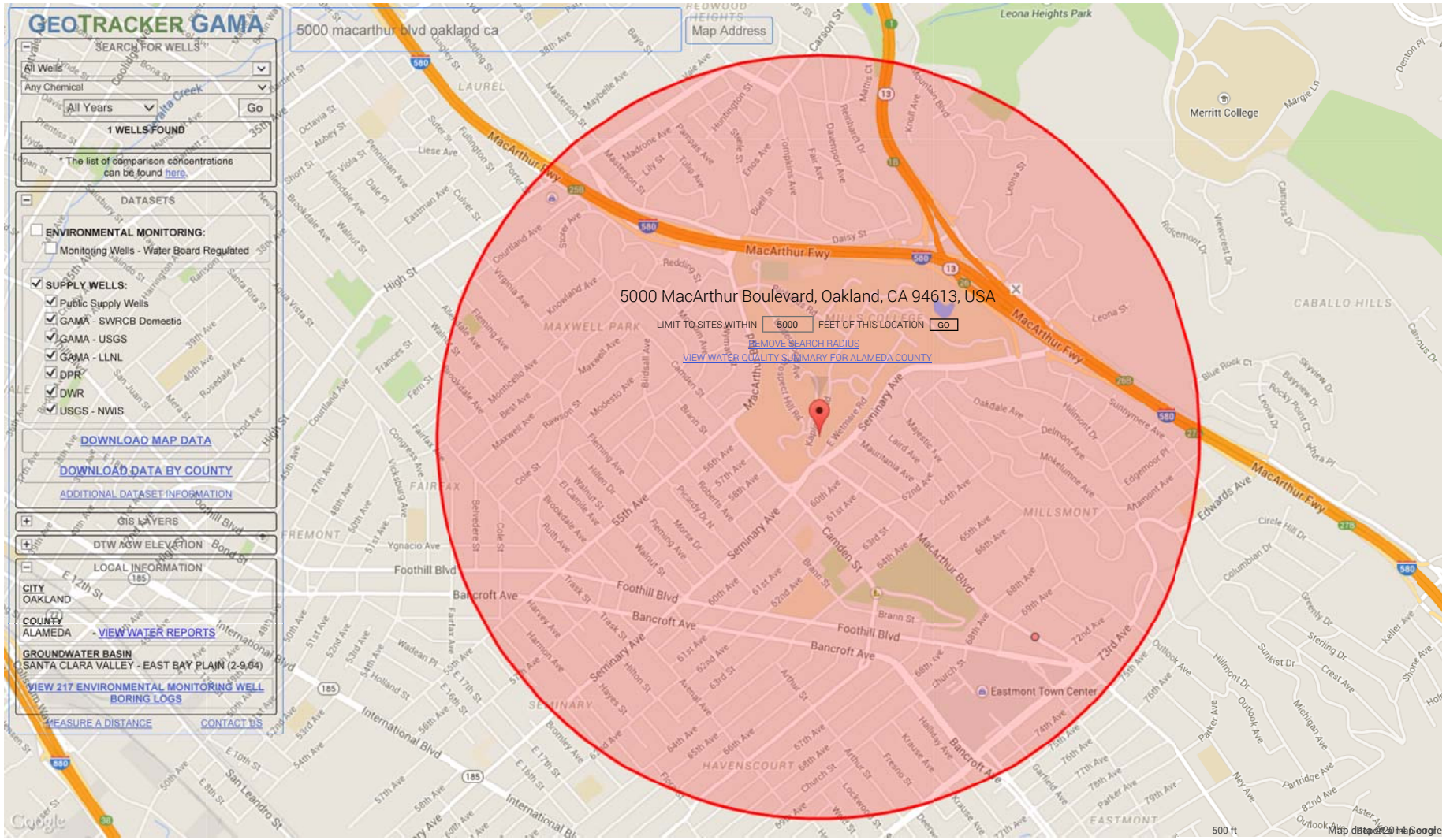
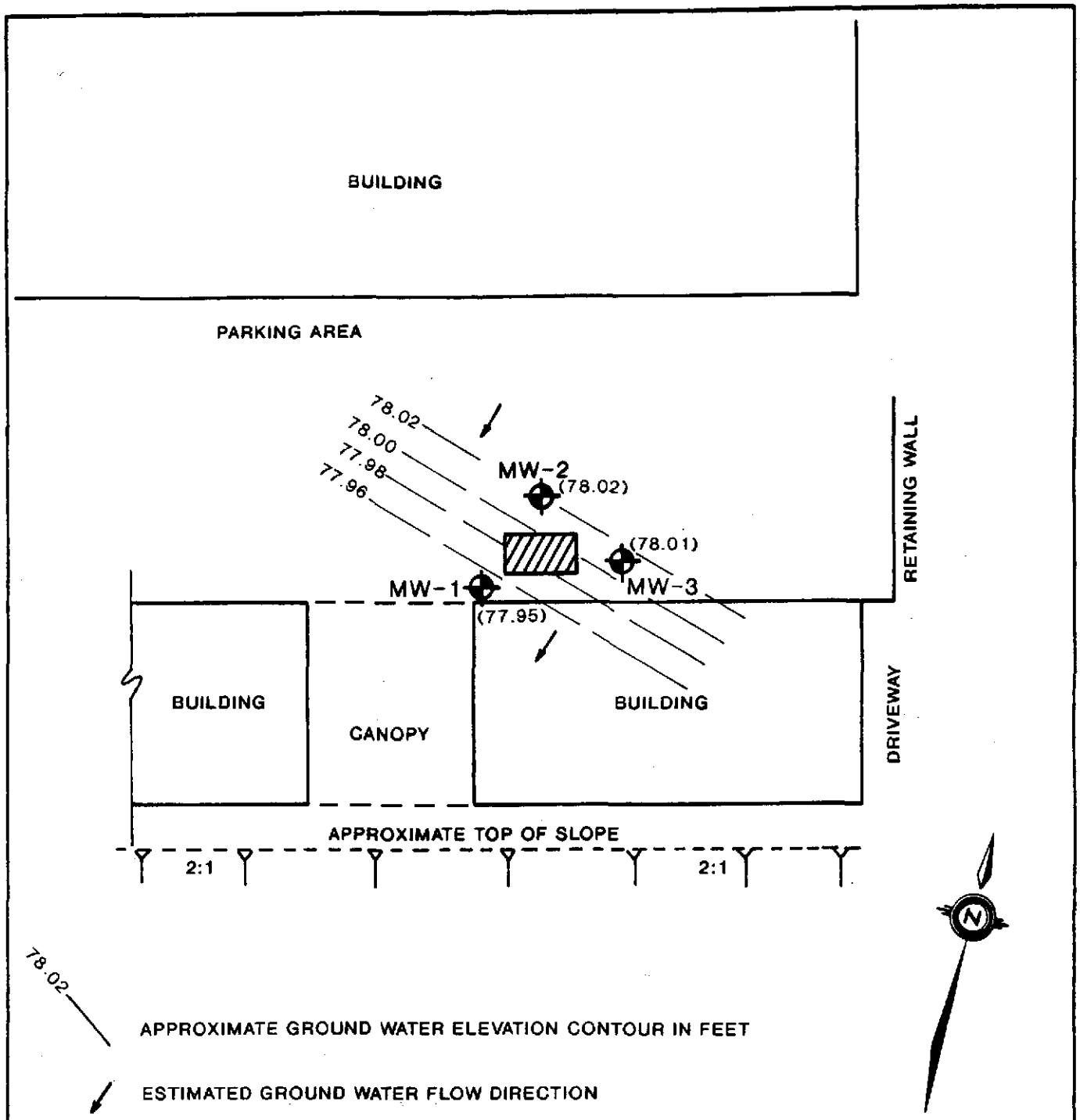
WSW
SW
SSW
SSE
S
6
4
2
0
25
50
75
100
Feet
Scale

Fig. 3



LOCATIONS FOUND

1 WELL [ZOOM IN ON LOCATION] [VIEW WELLS IN CLUSTER]



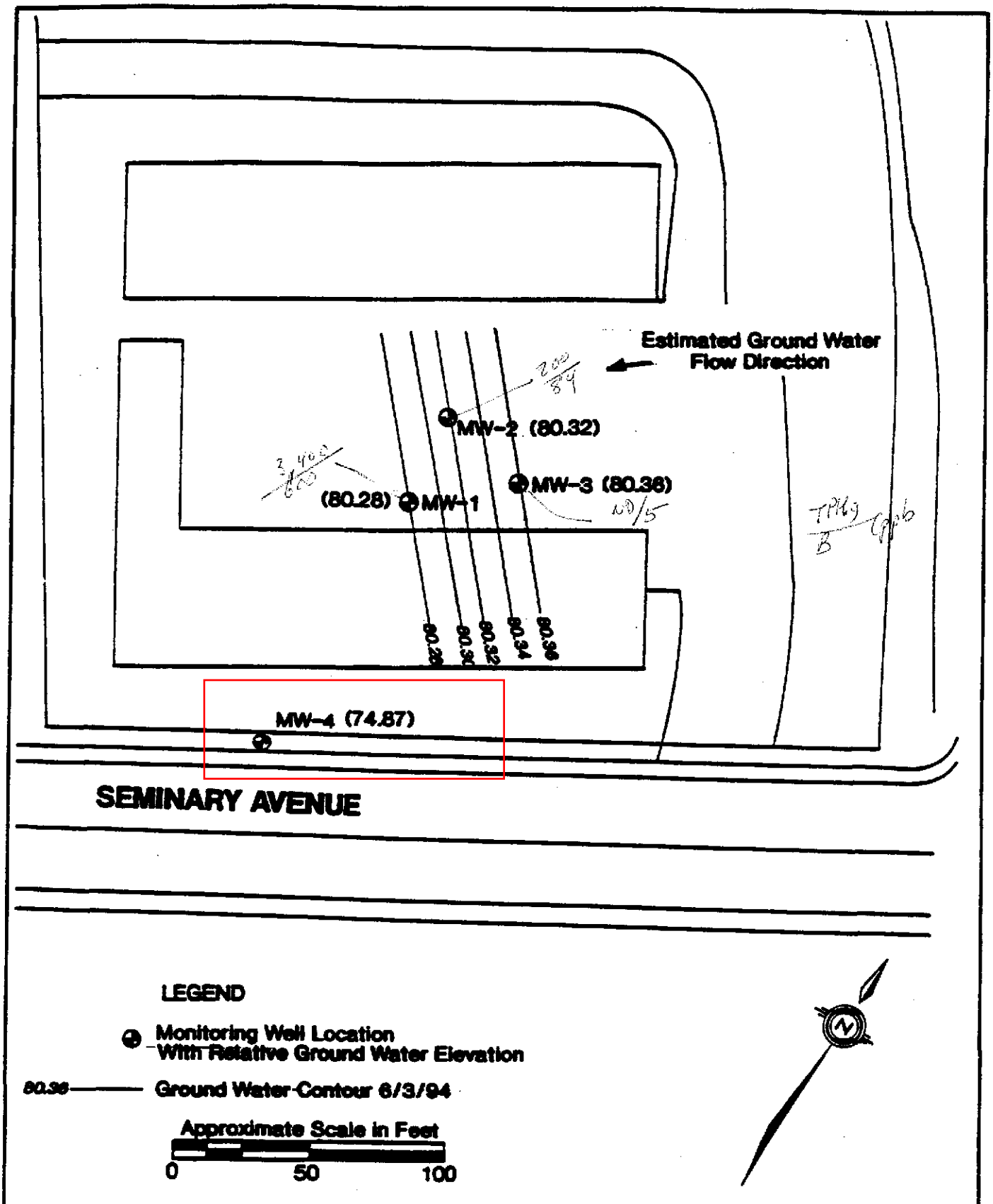
Kaldveer Associates
Geoscience Consultants
A California Corporation

GROUND WATER ELEVATION CONTOURS
DECEMBER, 1990

MILLS COLLEGE
CORPORATION YARD FACILITY
Oakland, California

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

MW-4 installed in 1994. No Soil analytical collected, Groundwater data only analyzed.



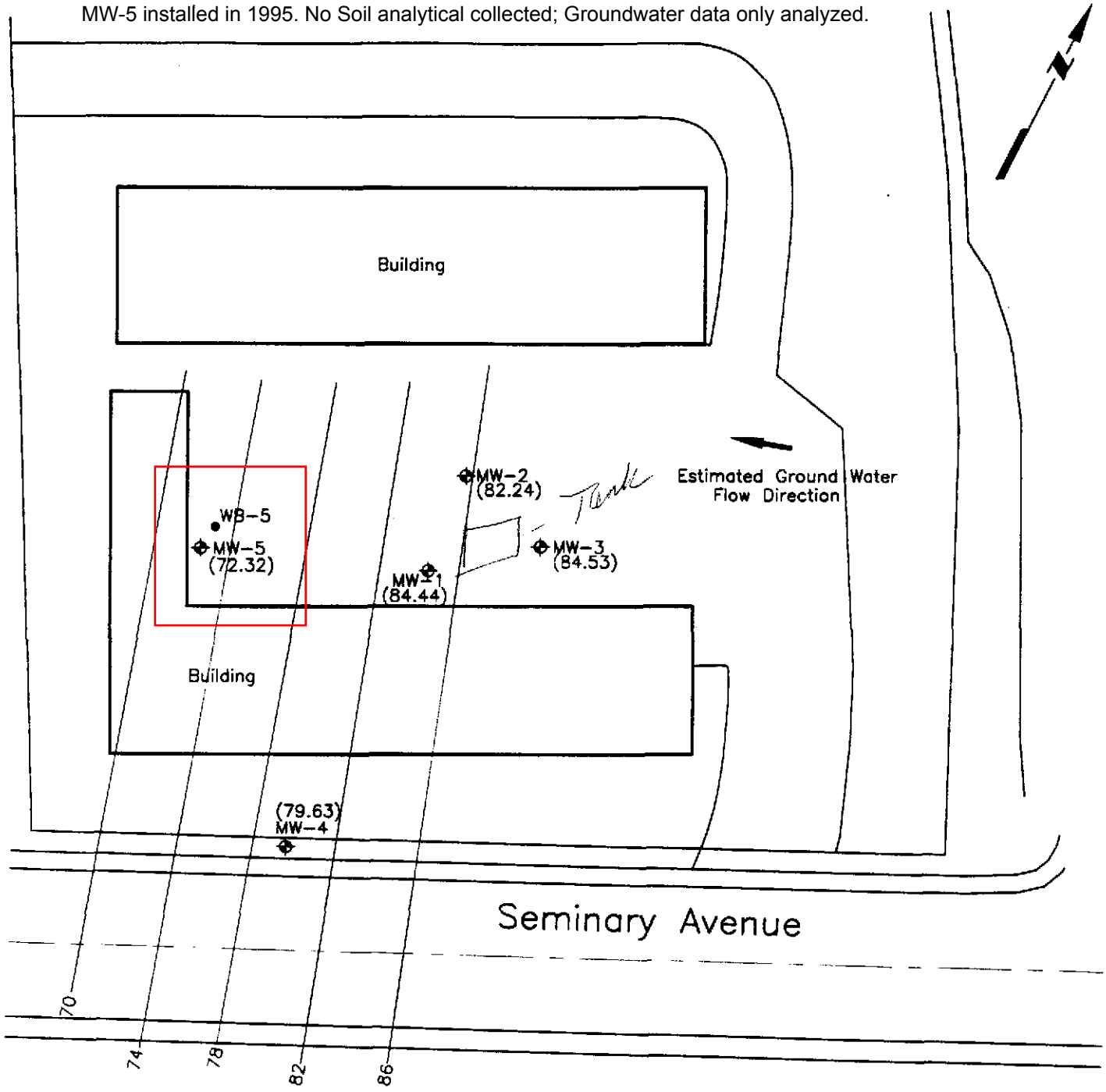
HARZA
Consulting Engineers and Scientists

SITE PLAN

MILLS CORPORATION YARD
Oakland, California

PROJECT NO.	DATE	
K275-H	June 1994	Figure 2

MW-5 installed in 1995. No Soil analytical collected; Groundwater data only analyzed.



LEGEND

- Monitoring Well Location
- 70 Ground Water Contour 5/16/95
- Soil Boring

Approximate scale in feet

0 50 100

6-95-2

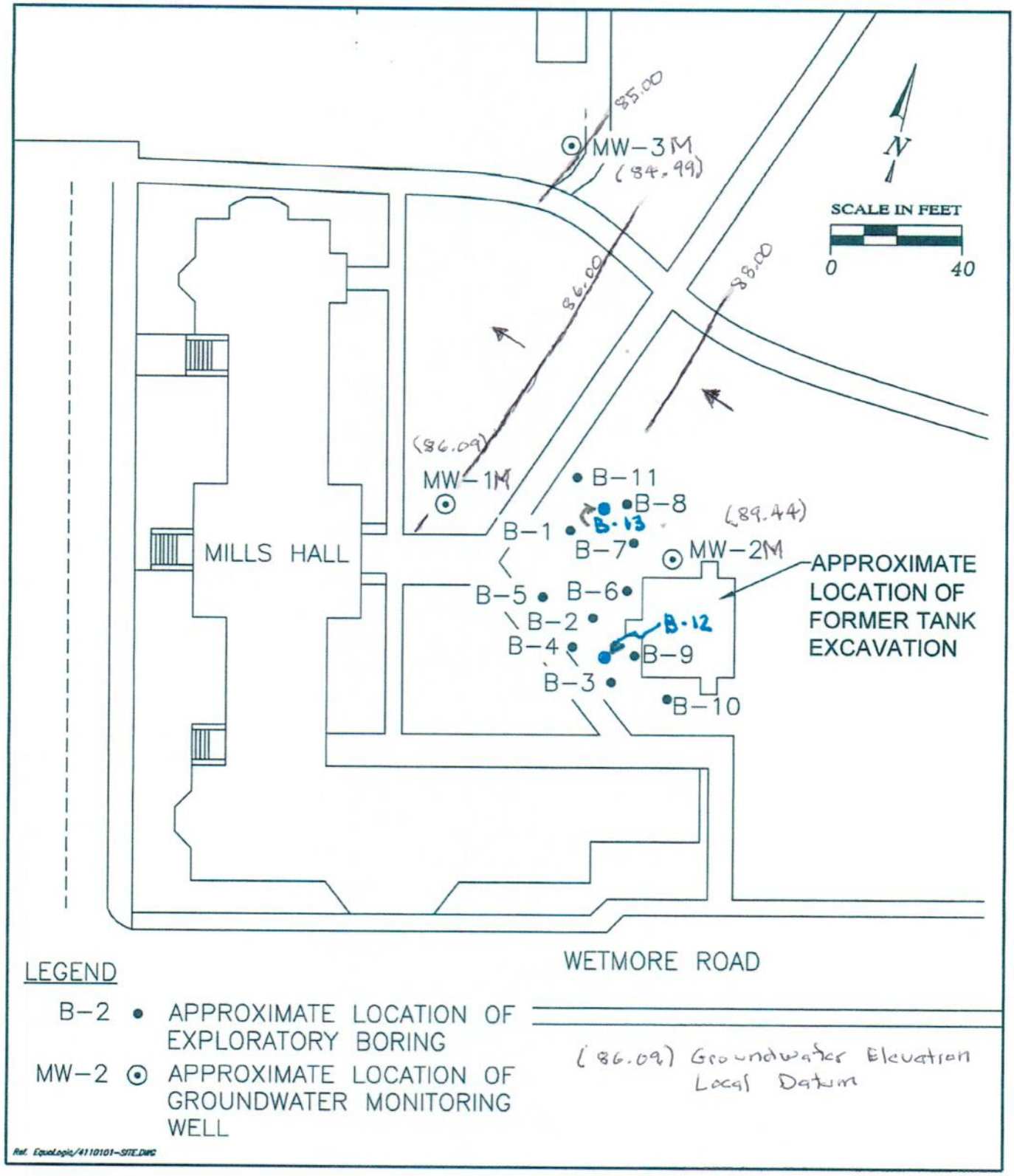
HARZA
Consulting Engineers and Scientists

SITE PLAN

MILLS COLLEGE
CORPORATION YARD FACILITY
Oakland, California

PROJECT NO.	DATE	FIGURE NO.
K275-H	June 1995	2

Groundwater Isocontour Date: 4/22/2012

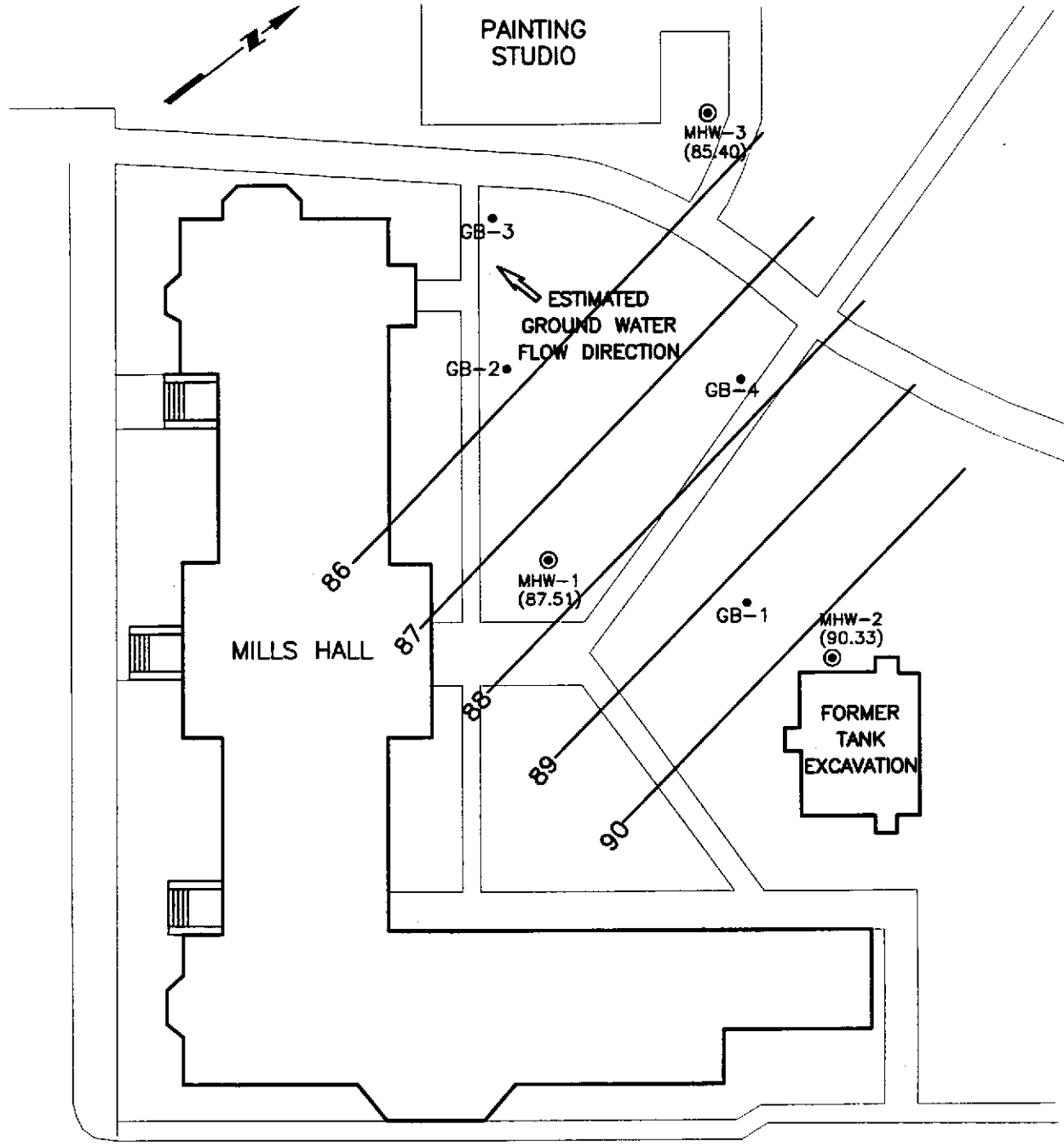


EquoLogic

SITE PLAN TOYON MEADOWS

MILLS COLLEGE
5000 MacArthur Boulevard
Oakland, California

FIGURE: 3
PROJECT: 411.01.01



LEGEND

MHW-3◉ APPROXIMATE LOCATION OF MONITORING WELL WITH RELATIVE GROUND WATER ELEVATION

GB-4• APPROXIMATE LOCATION OF GROUND WATER GRAB SAMPLE

90—— GROUND WATER CONTOUR 5/29/96

APPROXIMATE SCALE IN FEET

0 40 80

Base Provided By Mills College, Dated 3/88

6-96-2

Rev.	Drawn By	Chk'd By	Date
0	D.F.	D.A.	6/4/96

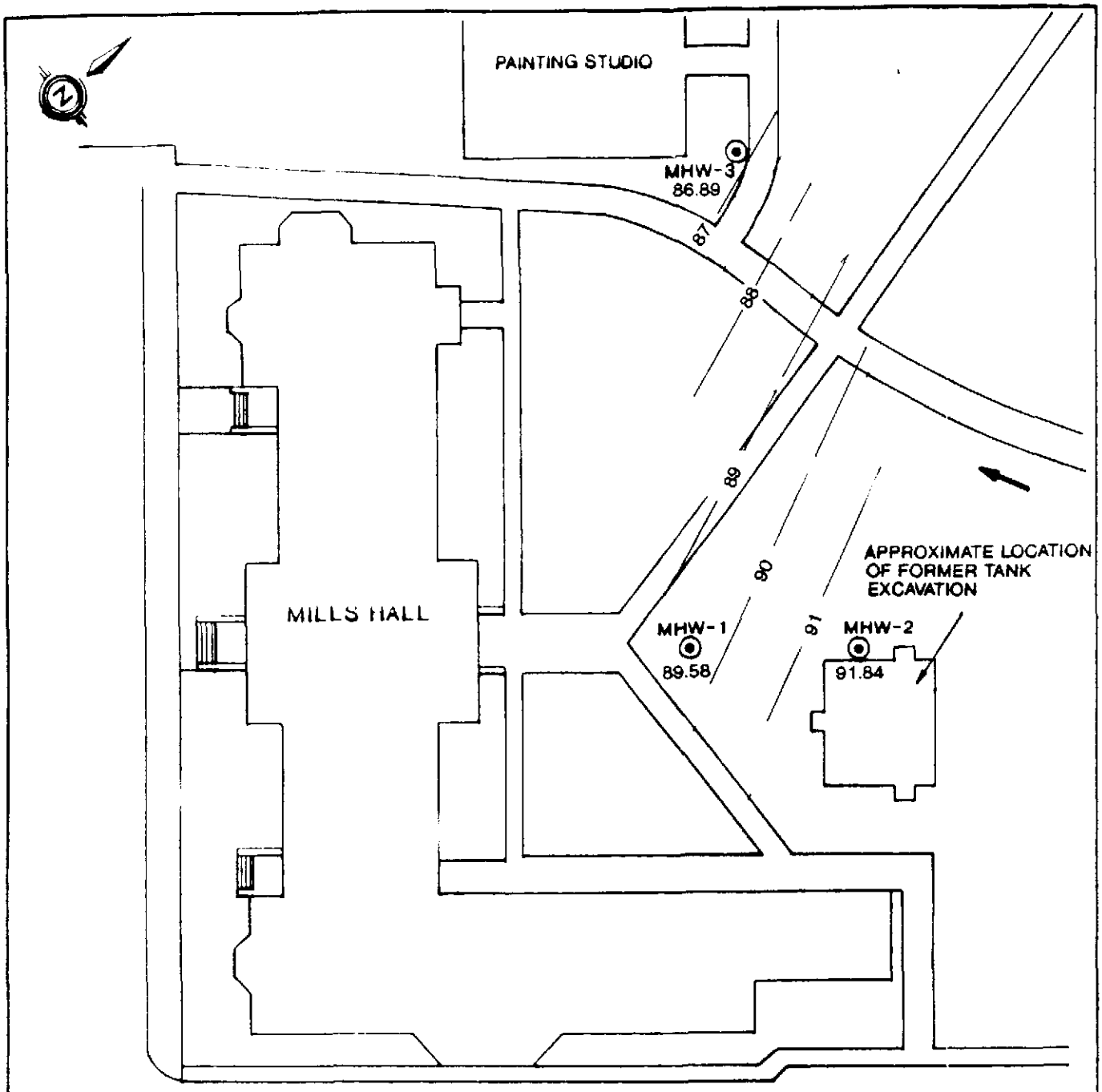
HARZA

SITE PLAN

MILLS HALL / TOYON MEADOW
Oakland, California

Figure 2

Project No. K275-G



LEGEND

MHW-1 89.58 — APPROXIMATE LOCATION OF MONITORING WELL

-90- — GROUND WATER CONTOURS APPROXIMATED BY STRAIGHT LINE INTERPOLATION BETWEEN WELLS

DIRECTION OF GROUND WATER FLOW

APPROXIMATE SCALE IN FEET

0 40 80

BASE: Provided by Mills College, Dated 3/88

Kaldveer Associates
Geoscience Consultants
A California Corporation

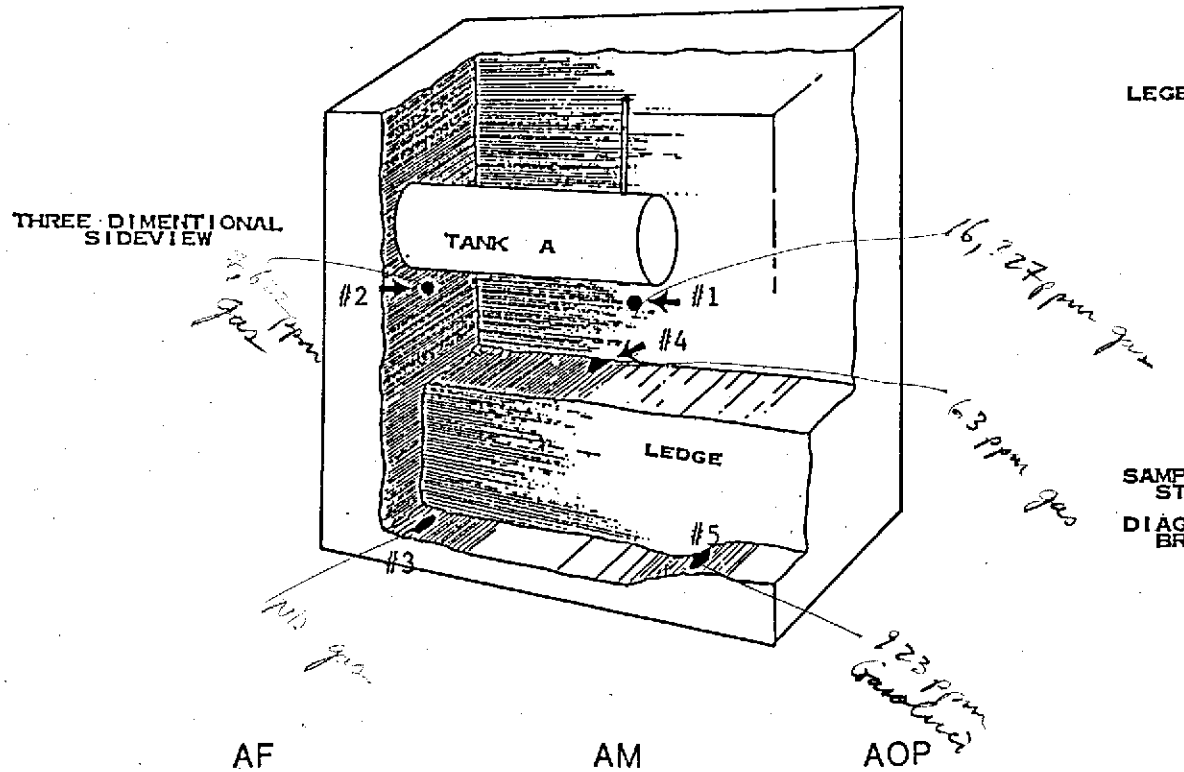
GROUND WATER CONTOUR MAP - MARCH 1992

MILLS HALL/TOYON MEADOW
Oakland, California

PROJECT NO.	DATE	
KE1025-3B-718	April 1992	Figure 9

ATTACHMENT 7

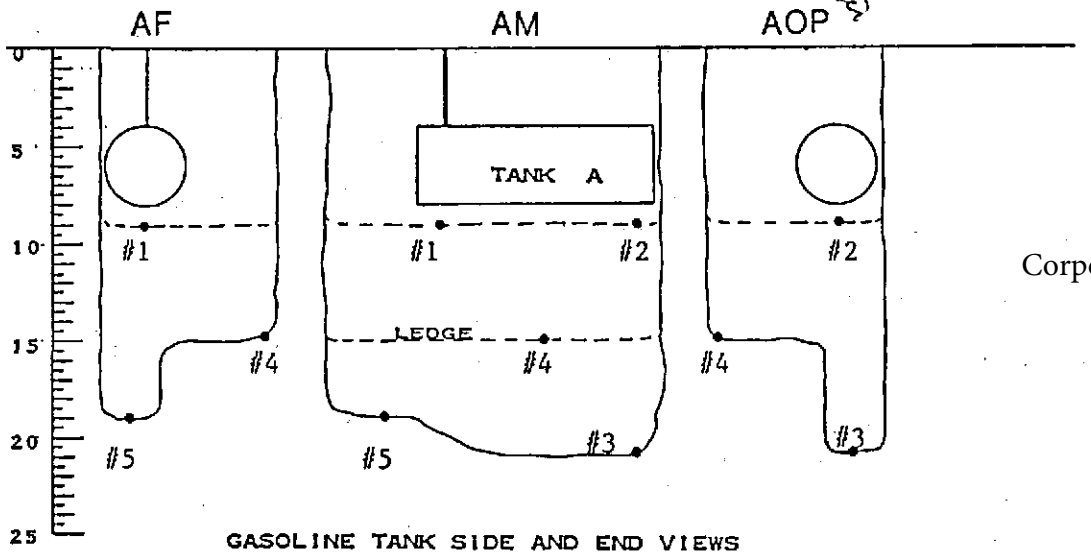
DIAGRAM THREE



LEGEND: AF = FILL END
AM = MIDDLE
AOP = OPPOSITE END

SAMPLING PERFORMED BY STEPHEN CARTER

DIAGRAMS PREPARED BY BRENT ADAMS



GASOLINE TANK SIDE AND END VIEWS

Corporation Yard Tank

SUPERIOR ANALYTICAL LABORATORY, INC.
1385 FAIRFAX ST., STE D • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 50410
CLIENT: Blaine Tech Services
CLIENT ID: Pearson Equipment

DATE RECEIVED: 10/21/88
DATE REPORTED: 10/31/88
JOB NO.: 88295C-1

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS
by Modified EPA SW-846 Method 8015

SITE SPECIFICATION: Pearson Equipment @ Mills College Corp. Yard
5000 MacArthur Blvd., Oakland, CA

Sample Identification	Concentration (mg/kg)
#1 88295C-1	16,327. Gasoline
#2 88295C-1	7,622. Gasoline
#3 88295C-1	ND < 10

mg/kg = part per million (ppm)

QA/QC Summary: Matrix Spike, Matrix Spike Duplicate
Gasoline @ 40 mg/L: Avg. Recovery: 82%, RPD: 10%

Les Partridge, Ph.D.
Laboratory Manager

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.
1385 FAIRFAX ST., STE D • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 50410
CLIENT: Blaine Tech Services
JOB NO.: 88295C-1

DATE SAMPLED: 10/21/88
DATE ANALYZED: 10/28/88
DATE REPORTED: 10/31/88

ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES
by EPA SW-846 Methods 5030 and 8020

SITE SPECIFICATION: Pearson Equipment @ Mills College Corp. Yard
5000 MacArthur Blvd, Oakland, CA

Concentration (ug/kg)

Sample Identification	Benzene	Toluene	Ethyl Benzene	Xylenes
#1 88295C-1	204270.	930244.	200530.	960495.
#2 88295C-1	56975.	386285.	100983.	498441.
#3 88295C-1	116.	33.	ND < 3	40.

ug/kg = part per billion (ppb)

QA/QC Summary: Matrix Spike, Matrix Spike Duplicate
Recoveries: 96 - 113%, RPD: < 6%

Les Partridge, Ph.D.
Laboratory Manager

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.
1385 FAIRFAX ST., STE D • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 50410
CLIENT: Blaine Tech Services
CLIENT ID: Pearson Equipment

DATE RECEIVED: 10/21/88
DATE REPORTED: 10/24/88
JOB NO.: 88295C-1

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS
by Modified EPA SW-846 Method 8015

SITE SPECIFICATION: Pearson Equipment @ Mills College Corp. Yard
5000 MacArthur Blvd., Oakland, CA

Sample Identification	Concentration (mg/kg)
#4 88295C-1	63. Gasoline range
#5 88295C-1	923. Gasoline range

mg/kg = part per million (ppm)

QA/QC Summary: Matrix Spike, Matrix Spike Duplicate
Gasoline @ 40 mg/L: Avg. Recovery:88.8% RPD:7.5%

Les Partridge, Ph.D.
Laboratory Manager

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.
1385 FAIRFAX ST., STE D • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 50410
CLIENT: Blaine Tech Services
JOB NO.: 88295C-1

DATE SAMPLED: 10/21/88
DATE ANALYZED: 10/24/88
DATE REPORTED: 10/24/88

ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES
by EPA SW-846 Methods 5030 and 8020

SITE SPECIFICATION: Pearson Equipment @ Mills College Corp. Yard
5000 MacArthur Blvd, Oakland, CA

	Concentration (ug/kg)			
Sample Identification	Benzene	Toluene	Ethyl Benzene	Xylenes
#4 88295C-1	651.	1063.	290.	1590.
#5 88295C-1	2254.	12397.	5675.	28375.

ug/kg = part per billion (ppb)

QA/QC Summary: Average surrogate compound recovery: 103.5%

Les Partridge, Ph.D.
Laboratory Manager

OUTSTANDING QUALITY AND SERVICE

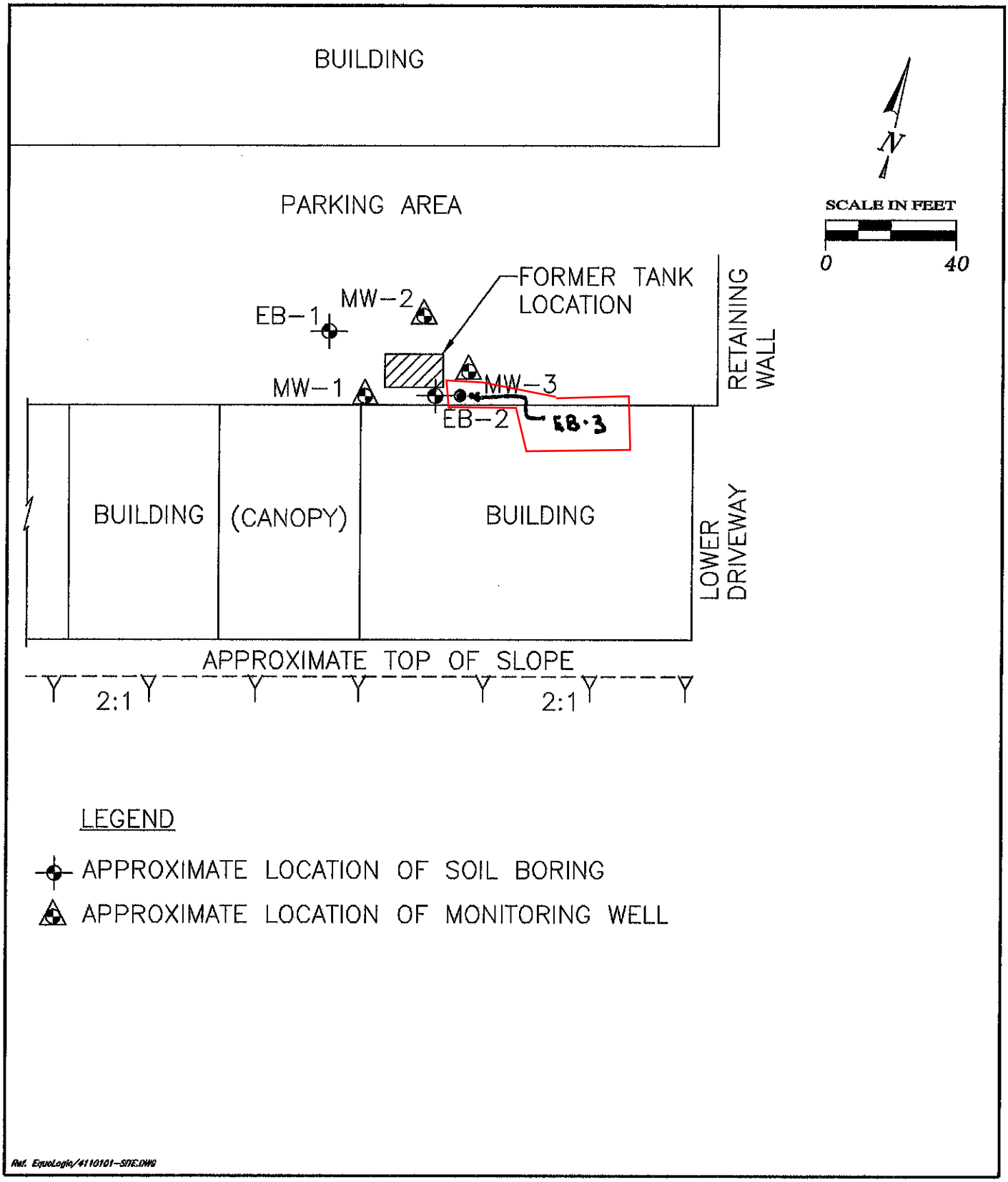
TABLE 2

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.



EquoLogic

SITE PLAN CORPORATION YARD

MILLS COLLEGE
5000 MacArthur Boulevard
Oakland, California

FIGURE:
2
PROJECT:
411.01.01

TABLE 1 - SUMMARY OF SOIL ANALYTICAL DATA
MILLS COLLEGE

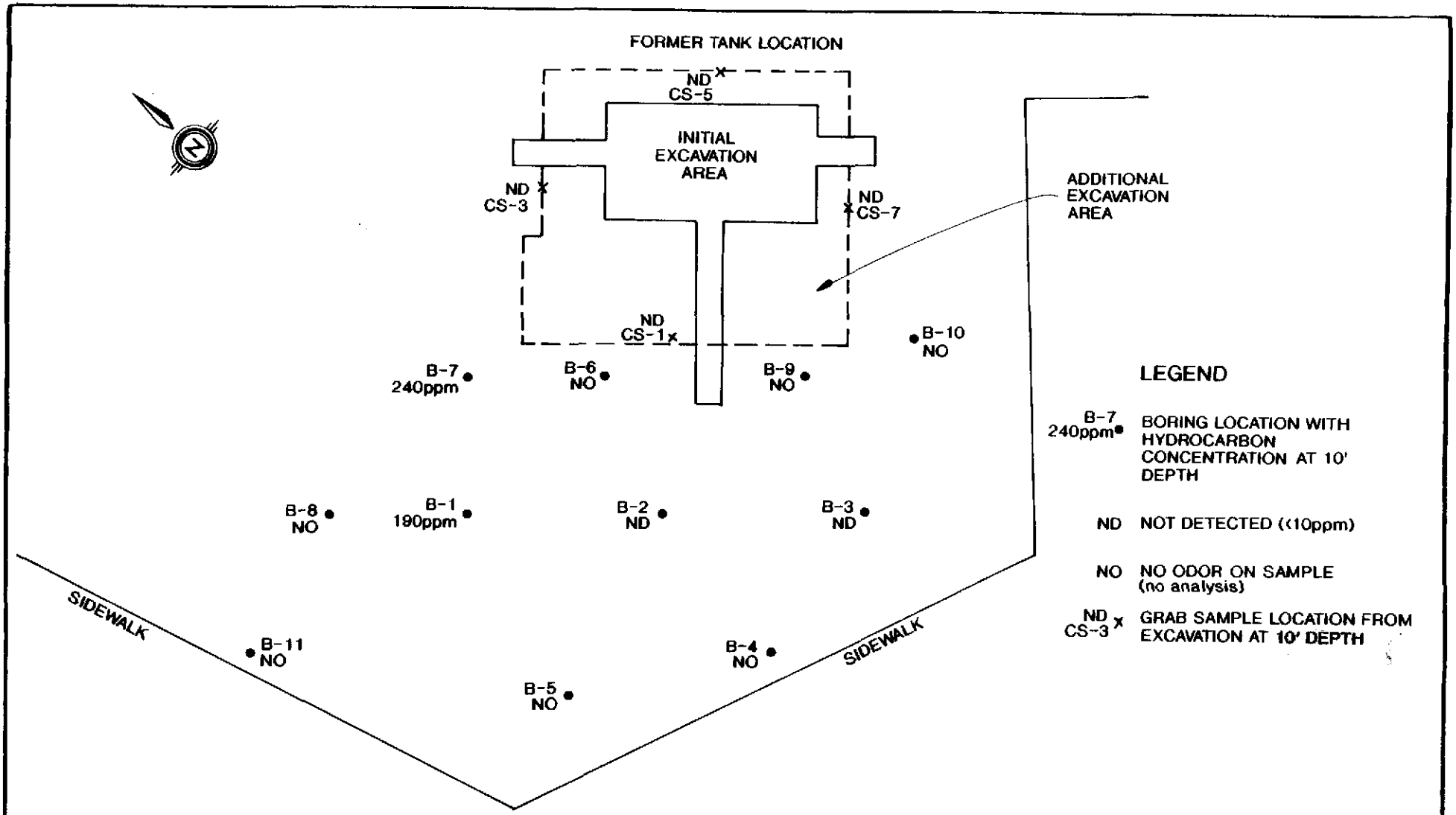
Boring	Depth Feet	Date	B ug/kg	T ug/kg	E ug/kg	X ug/kg	1,2-Dibrm ug/kg	1,2-Dichlorm ug/kg	DIPE ug/kg	ETBE ug/kg	MTBE ug/kg	Napth ug/kg	TAME ug/kg	TBA ug/kg	TPH (C10-28) mg/kg
TOYON MEADOWS															
B-12	5	11/8/2012	<0.49	**1.5**	<0.49	**1.0**	<0.49	<0.49	<0.49	<0.49	<0.98	<0.98	<0.49	<0.98	<2.5
B-12	10	11/8/2012	<0.49	**0.62**	<0.49	<0.98	<0.49	<0.49	<0.49	<0.49	<0.98	<0.98	<0.49	<9.8	**3.17**
B-12	15	11/8/2012	<0.48	**0.55**	<0.48	<0.97	<0.48	<0.48	<0.48	<0.48	<0.97	<0.97	<0.48	<9.7	**5.12**
B-12	20	11/8/2012	<0.48	<0.48	<0.48	<0.96	<0.48	<0.48	<0.48	<0.48	<0.96	<0.96	<0.48	<9.6	**3.6**
B-12	25	11/8/2012	<0.48	<0.48	<0.48	<0.97	<0.48	<0.48	<0.48	<0.48	<0.97	<0.97	<0.48	<9.7	**9.3**
B-12	29	11/8/2012	<0.48	**1.5**	<0.48	**1.7**	<0.48	<0.48	<0.48	<0.48	<0.96	<0.96	<0.48	<9.7	**3.01**
B-13	5	11/8/2012	<0.50	<0.50	<0.50	<0.99	<0.50	<0.50	<0.50	<0.50	<0.99	<0.99	<0.50	<9.6	**4.02**
B-13	10	11/8/2012	<0.49	**1.5**	<0.49	**3.1**	<0.49	<0.49	<0.49	<0.49	<0.97	<0.97	<0.49	<9.7	**7.8**
B-13	15	11/8/2012	<170	<170	<170	<340	<170	<170	<170	<170	<340	**2910**	<170	<3400	**1400**
B-13	20	11/8/2012	<0.48	<0.48	<0.48	<0.97	<0.48	<0.48	<0.48	<0.48	<0.97	<0.97	<0.48	<9.7	**2.85**
B-13	22	11/8/2012	<0.49	<0.49	<0.49	<0.98	<0.49	<0.49	<0.49	<0.49	<0.98	**2.2**	<0.49	<9.8	**3.51**
MAINTENANCE YARD															TPH (C6-10)
EB-3	6	10/22/2012	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<0.50	<10.0	<0.050
EB-3	10	10/22/2012	<0.48	<0.48	<0.48	<0.97	<0.48	<0.48	<0.48	<0.48	<0.97	<0.97	<0.48	<9.7	<0.048
EB-3	15	10/22/2012	**10.3**	<0.50	**2.7**	**5.7**	<0.50	<0.50	<0.50	<0.50	<1.0	**28.8**	<180	**27.7**	**129**
EB-3	20	10/22/2012	**3460**	**837**	**5390**	**24,800**	<180	<180	<180	<180	<350	**2490**	<180	<3500	**352**
EB-3	25	10/22/2012	**193**	**27.1**	**182**	**659**	<19	<19	<19	<19	<37	**65.3**	<19	<370	**10**

Notes

B	Benzene	DIPE	Di-isoproply ether
T	Toluene	ETBE	Ethyl tert-Butly Ether
E	Ethylbenzene	MTBE	Methyl Tert Butyl Ether
X	Xylene	Napth	Napthalene
1,2-Dibrm	1,2-Dibromoethane	TAME	Tert-Amyl Methyl Ether
1,2-Dichlorm	1,2-Dichloroethane	TBA	Tert Butyl Alcohol

TPH (C10-28) Total Petroleum Hydrocarbons

Elevated concentrations

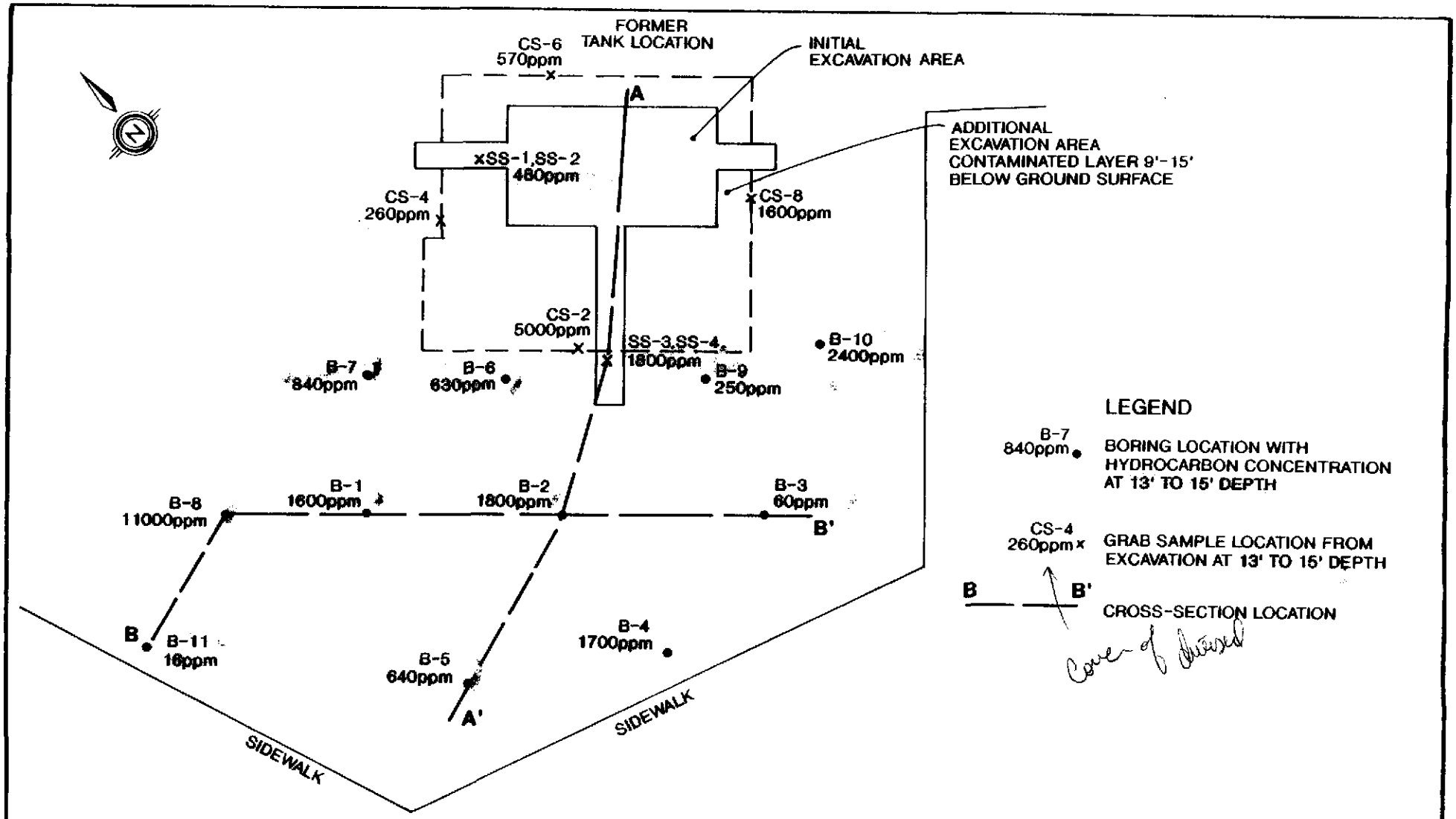


Kaldveer Associates
Geoscience Consultants
A California Corporation

TPH DIESEL IN SOIL AT 10' DEPTH

MILLS HALL/TOYON MEADOW
Oakland, California

PROJECT NO	DATE	
KE1025-3B-718	April 1992	Figure 4



Kaldveer Associates
Geoscience Consultants
A California Corporation

TPH DIESEL IN SOIL AT 13' TO 15' DEPTH

MILLS HALL/TOYON MEADOW
Oakland, California

PROJECT NO	DATE	
KE1025-3B-718	April 1992	Figure 5

TABLE 1 - SUMMARY OF SOIL ANALYTICAL DATA
MILLS COLLEGE

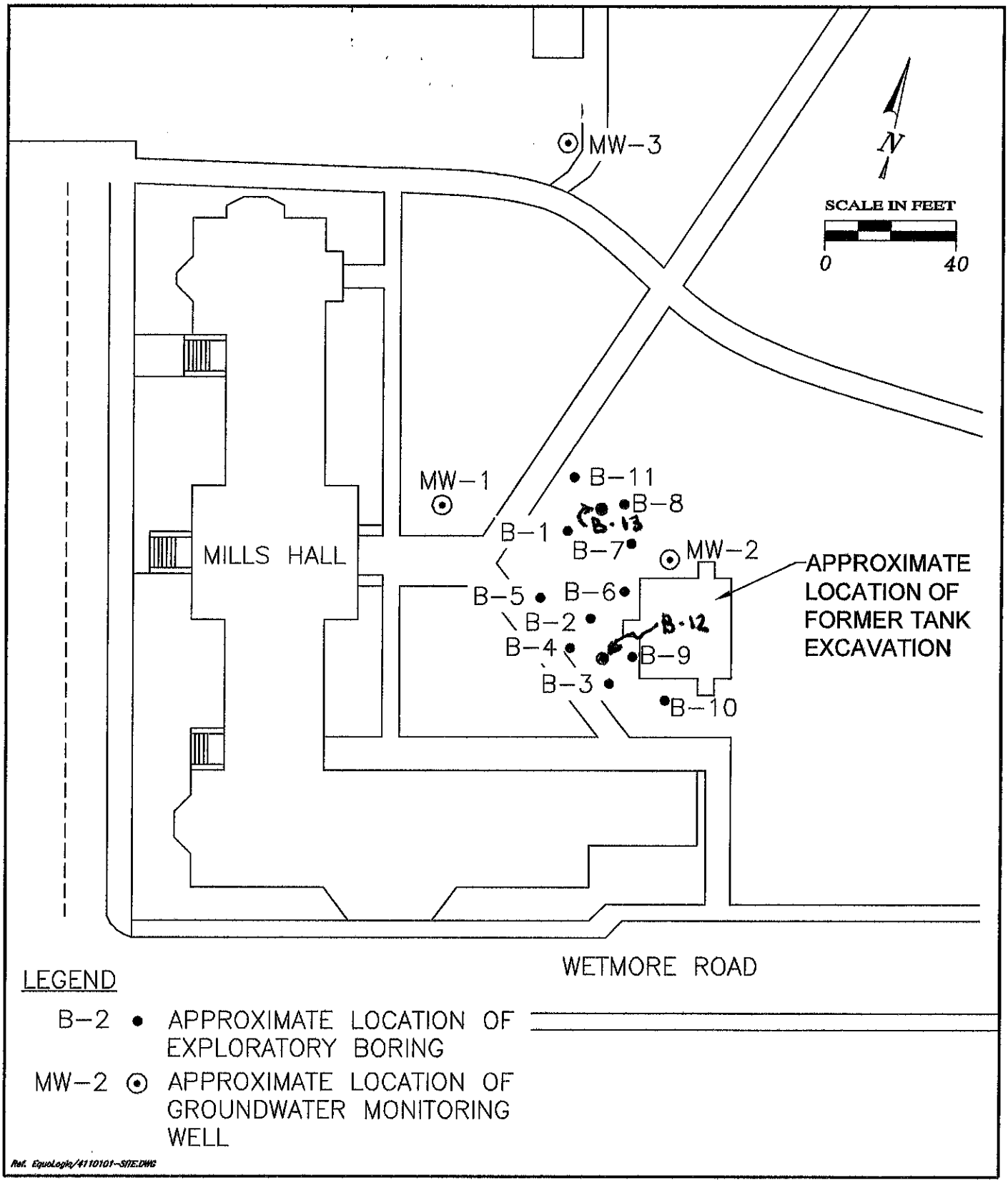
Boring	Depth Feet	Date	B ug/kg	T ug/kg	E ug/kg	X ug/kg	1,2-Dibrm ug/kg	1,2-Dichlorm ug/kg	DIPE ug/kg	ETBE ug/kg	MTBE ug/kg	Napth ug/kg	TAME ug/kg	TBA ug/kg	TPH (C10-28) mg/kg
TOYON MEADOWS															
B-12	5	11/8/2012	<0.49	**1.5**	<0.49	**1.0**	<0.49	<0.49	<0.49	<0.49	<0.98	<0.98	<0.49	<0.98	<2.5
B-12	10	11/8/2012	<0.49	**0.62**	<0.49	<0.98	<0.49	<0.49	<0.49	<0.49	<0.98	<0.98	<0.49	<9.8	**3.17**
B-12	15	11/8/2012	<0.48	**0.55**	<0.48	<0.97	<0.48	<0.48	<0.48	<0.48	<0.97	<0.97	<0.48	<9.7	**5.12**
B-12	20	11/8/2012	<0.48	<0.48	<0.48	<0.96	<0.48	<0.48	<0.48	<0.48	<0.96	<0.96	<0.48	<9.6	**3.6**
B-12	25	11/8/2012	<0.48	<0.48	<0.48	<0.97	<0.48	<0.48	<0.48	<0.48	<0.97	<0.97	<0.48	<9.7	**9.3**
B-12	29	11/8/2012	<0.48	**1.5**	<0.48	**1.7**	<0.48	<0.48	<0.48	<0.48	<0.96	<0.96	<0.48	<9.7	**3.01**
B-13	5	11/8/2012	<0.50	<0.50	<0.50	<0.99	<0.50	<0.50	<0.50	<0.50	<0.99	<0.99	<0.50	<9.6	**4.02**
B-13	10	11/8/2012	<0.49	**1.5**	<0.49	**3.1**	<0.49	<0.49	<0.49	<0.49	<0.97	<0.97	<0.49	<9.7	**7.8**
B-13	15	11/8/2012	<170	<170	<170	<340	<170	<170	<170	<170	<340	**2910**	<170	<3400	**1400**
B-13	20	11/8/2012	<0.48	<0.48	<0.48	<0.97	<0.48	<0.48	<0.48	<0.48	<0.97	<0.97	<0.48	<9.7	**2.85**
B-13	22	11/8/2012	<0.49	<0.49	<0.49	<0.98	<0.49	<0.49	<0.49	<0.49	<0.98	**2.2**	<0.49	<9.8	**3.51**
MAINTENANCE YARD															TPH (C6-10)
EB-3	6	10/22/2012	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<0.50	<10.0	<0.050
EB-3	10	10/22/2012	<0.48	<0.48	<0.48	<0.97	<0.48	<0.48	<0.48	<0.48	<0.97	<0.97	<0.48	<9.7	<0.048
EB-3	15	10/22/2012	**10.3**	<0.50	**2.7**	**5.7**	<0.50	<0.50	<0.50	<0.50	<1.0	**28.8**	<180	**27.7**	**129**
EB-3	20	10/22/2012	**3460**	**837**	**5390**	**24,800**	<180	<180	<180	<180	<350	**2490**	<180	<3500	**352**
EB-3	25	10/22/2012	**193**	**27.1**	**182**	**659**	<19	<19	<19	<19	<37	**65.3**	<19	<370	**10**

Notes

B	Benzene	DIPE	Di-isoproply ether
T	Toluene	ETBE	Ethyl tert-Butly Ether
E	Ethylbenzene	MTBE	Methyl Tert Butyl Ether
X	Xylene	Napth	Napthalene
1,2-Dibrm	1,2-Dibromoethane	TAME	Tert-Amyl Methyl Ether
1,2-Dichlorm	1,2-Dichloroethane	TBA	Tert Butyl Alcohol

TPH (C10-28) Total Petroleum Hydrocarbons

Elevated concentrations



EquoLogic

SITE PLAN TOYON MEADOWS

MILLS COLLEGE
5000 MacArthur Boulevard
Oakland, California

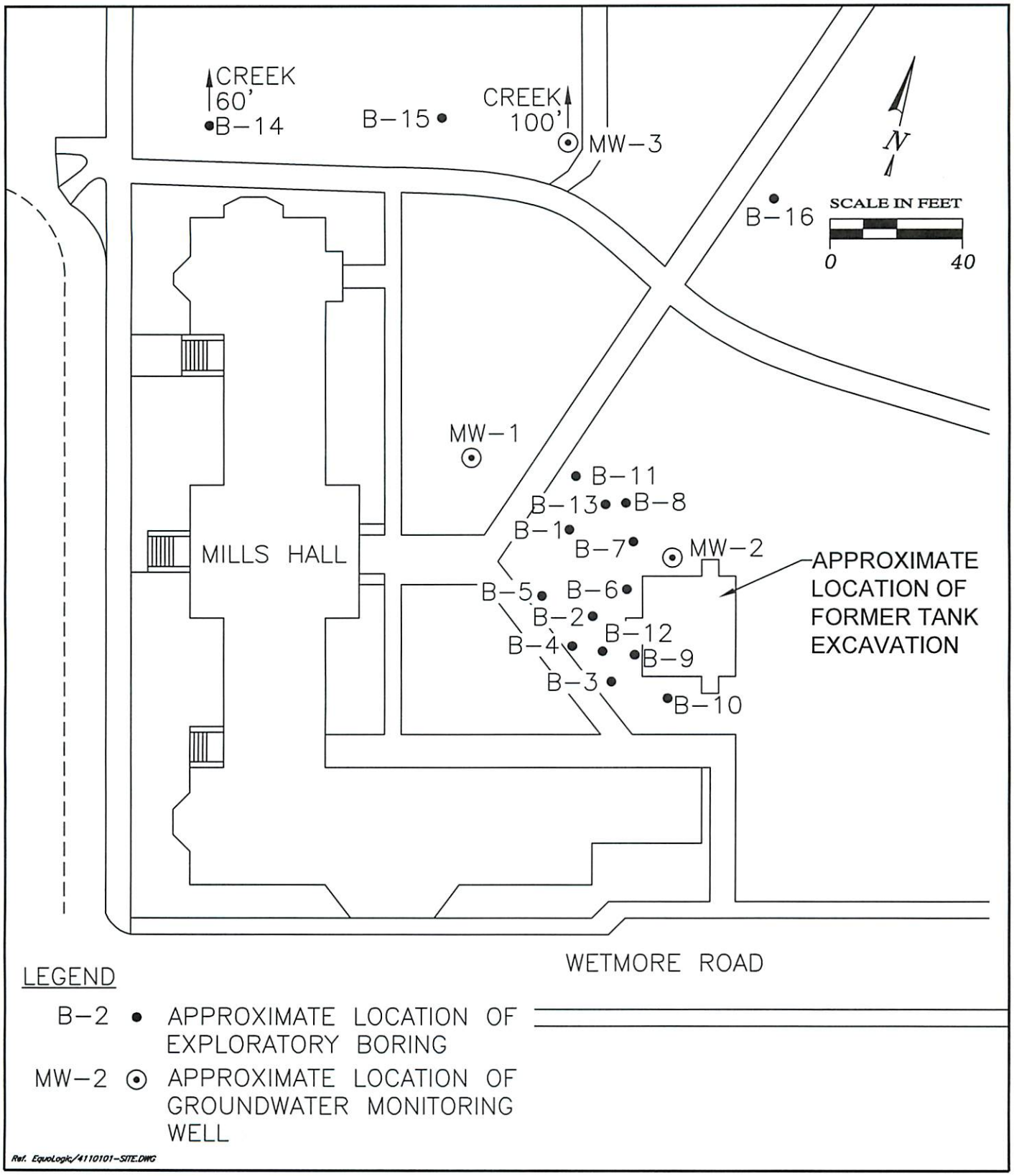
FIGURE:
3
PROJECT:
411.01.01

TABLE 1 - SUMMARY OF SOIL ANALYTICAL DATA
MILLS COLLEGE

Boring	Depth Feet	Date	B ug/kg	T ug/kg	E ug/kg	X ug/kg	1,2-Dibrm ug/kg	1,2-Dichlorm ug/kg	MTBE ug/kg	Napth ug/kg	TPH (C10-28) mg/kg
TOYON MEADOWS											
B-14	15	12/18/2013	<5.0	<5.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	6.95 J
B-15	15	12/18/2013	<4.9	<4.9	<4.9	<9.8	<4.9	<4.9	<4.9	<4.9	5.71 J
B-16	15	12/18/2013	<5.0	<5.0	<5.0	<9.9	<5.0	<5.0	<5.0	<5.0	4.87 J

Notes

B	Benzene	MTBE	Methyl Tert Butyl Ether
T	Toluene	Napth	Napthalene
E	Ethylbenzene	TPH	Total Petroleum Hydrocarbons
X	Xylene	J	Indicates an estimated value below the laboratory reportimg limit
1,2-Dibrm	1,2-Dibromoethane		
1,2-Dichlorm	1,2-Dichloroethane		



EquoLogic

SITE PLAN TOYON MEADOWS

MILLS COLLEGE
5000 MacArthur Boulevard
Oakland, California

FIGURE:
2
PROJECT:
411.01.01

Ground Water Elevation Data

January 2000 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

Ground Water Elevation Data

January 2000 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
January 2000	MW-1	100.00	18.75	81.25
	MW-2	99.98	18.68	81.30
	MW-3	100.01	18.69	81.32
	MW-4	88.88	15.51	73.37
	MW-5	99.98	29.92	70.06

NOTE

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

Table 1 - Summary of Groundwater Elevation Data
Mills College

Well	Date	Depth to Water (feet btoc)	Elevation toc (feet local datum)	WL Elevation (feet)
Toyon/Holmgren Meadow				
MW-1M	10/19/2012	13.75	99.50	85.75
	4/22/2012	13.41	99.50	86.09
MW-2M	10/19/2012	10.83	100.00	89.17
	4/22/2012	10.56	100.00	89.44
MW-3M	10/19/2012	13.06	98.04	84.98
	4/22/2012	13.05	98.04	84.99
Maintenance Yard				
MW-1	10/19/2012	19.40	100.00	80.60
	4/22/2012	17.32	100.00	82.68
MW-2	10/19/2012	19.28	99.98	80.70
	4/22/2012	17.33	99.98	82.65
MW-3	10/19/2012	19.21	100.01	80.80
	4/22/2012	17.21	100.01	82.80
Notes:				
btoc	below top of casing			
toc	top of casing			

TABLE 2
Ground Water Sample Analytical Results
January 2000 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
	January 2000	11.	0.17	0.014	0.022	0.036
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
	January 2000	ND	0.7	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
January 2000 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
	January 2000	ND	0.0031	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
	January 2000	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
	January 2000	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

TABLE 3

MTBE Concentration Data

January 2000 Ground Water Sampling Report
Mills College Corporation Yard, Oakland, California

Date	Monitoring Well	MTBE (ppb)
Janaury 2000	MW-1	7.4
	MW-2	ND
	MW-3	1.4
	MW-4	ND
	MW-5	ND

NOTE
Results reporting in micrograms per liter, or parts per billion (ppb)
ND: Not detected above laboratory method reporting limit

TABLE 2
Historical Ground Water Sample Analytical Results
Additional Site Investigation
Toyon Meadow, Mills College, Oakland, CA

Well	Date	TPHd ppm	TPH Oil ppm	Benzene ppm	Toluene ppm	Ethylbenzene ppm	Xylenes ppm
MHW-1/1A	June 1991	0.06	ND	ND	ND	ND	ND
	March 1992	ND	--	ND	ND	ND	ND
	October 1992	0.09	ND	ND	ND	ND	ND
	May 1994	ND	--	ND	ND	ND	ND
	October 1994	ND	--	ND	ND	ND	ND
	April 1995	0.06	--	0.002	0.0006	ND	ND
	October 1995	ND	--	ND	ND	ND	ND
MHW-2	June 1991	3.2	ND	ND	ND	ND	ND
	March 1992	0.1	--	ND	ND	ND	ND
	October 1992	0.61	ND	ND	ND	ND	ND
	May 1994	0.2	--	ND	ND	ND	ND
	October 1994	0.4	--	ND	ND	ND	ND
	April 1995	0.52	--	ND	ND	ND	ND
	October 1995	0.4	--	ND	ND	ND	ND
MHW-3	June 1991	ND	ND	ND	ND	ND	ND
	March 1992	ND	--	ND	ND	ND	ND
	October 1992	ND	ND	ND	ND	ND	ND
	May 1994	ND	--	ND	ND	ND	ND
	October 1994	ND	--	ND	ND	ND	ND
	April 1995	ND	--	0.0009	ND	ND	ND
	October 1995	ND	--	ND	ND	ND	ND

NOTES

TPHd: Total petroleum hydrocarbons as diesel
TPH Oil: Total petroleum hydrocarbons as oil
ppm: Parts per million or milligrams per liter
ND: Not detected at or above the laboratory method reporting limits
--: Not tested
Well MHW-1 was replaced by MHW-1A on May 2, 1994 prior to the monitoring event

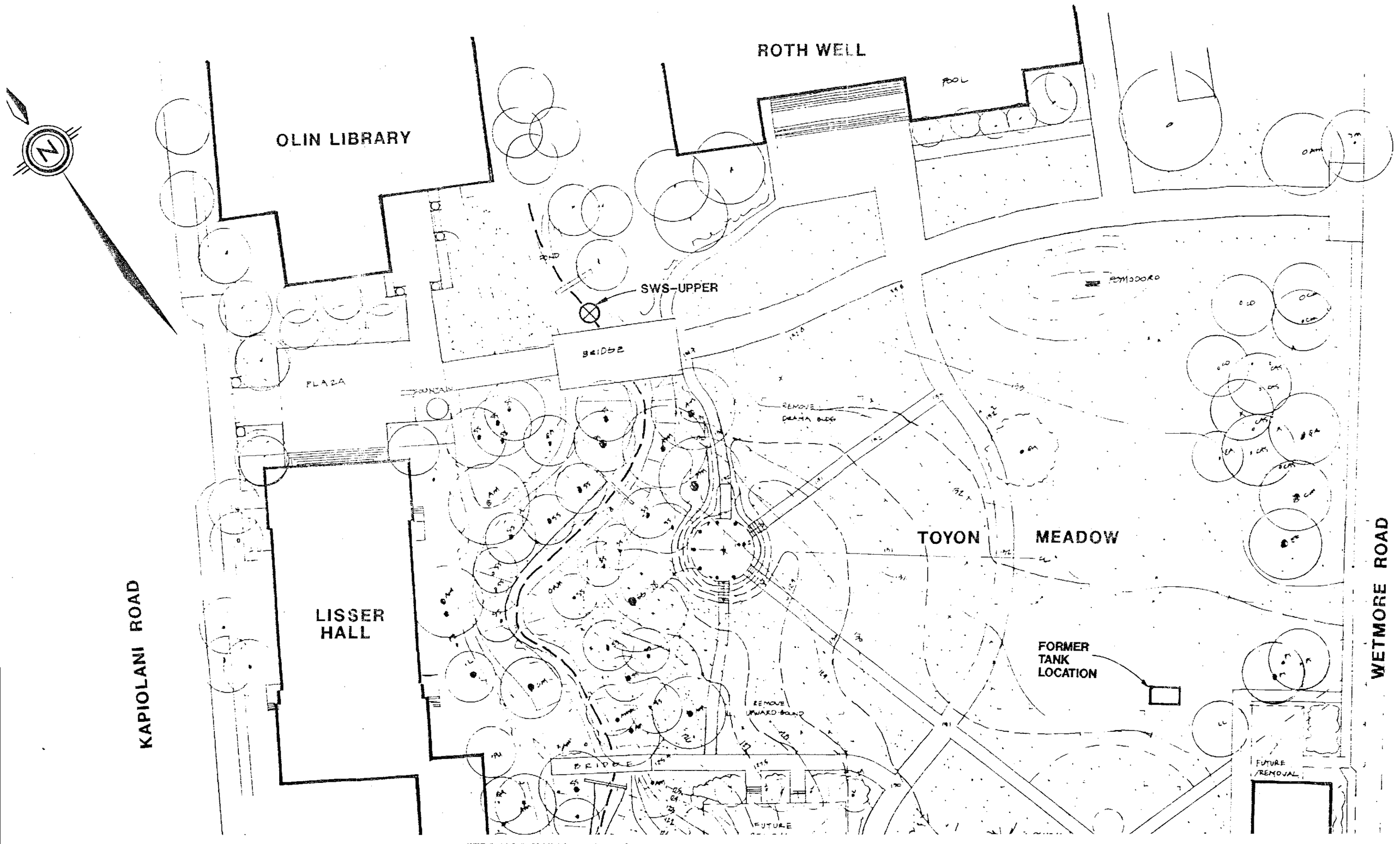
TABLE 3

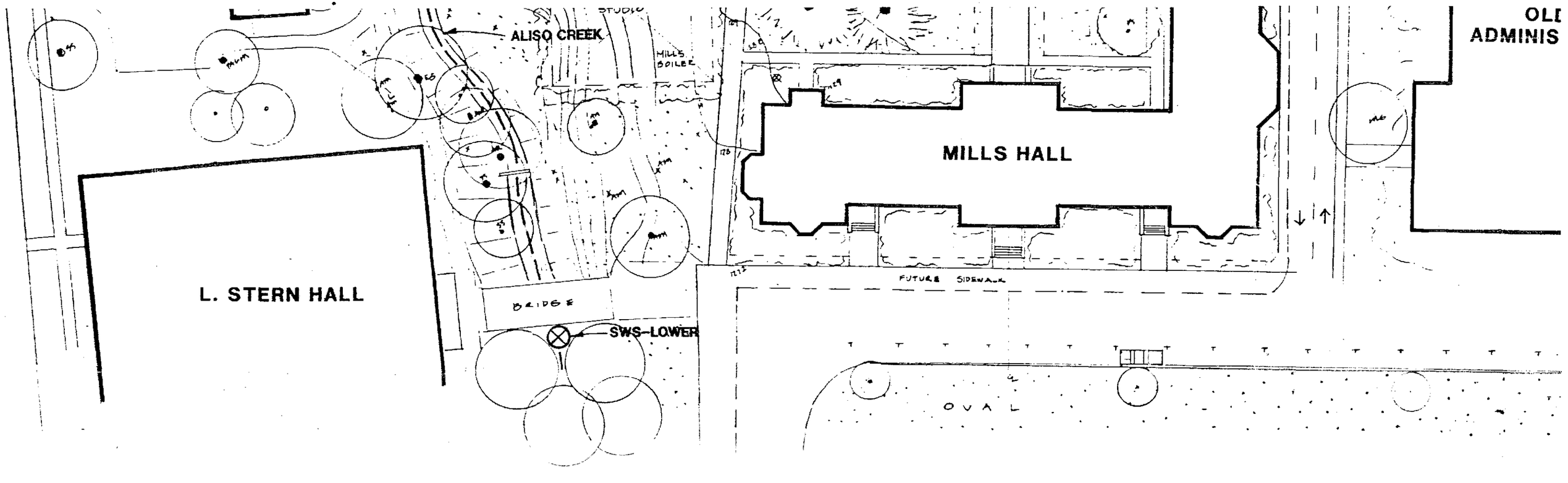
ANALYTICAL RESULTS - WATER
(Results Reported in parts per million, mg/1)

Constituent	MHW-1	MHW-2	MHW-3	SWS-U	SWS-L
JUNE 1991					
TPH as Diesel	0.06	3.2	ND	ND	ND
TPH as Oil	ND	ND	ND	0.1	0.1
Benzene	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND
Xylene	ND	ND	ND	ND	ND
MARCH 1992					
TPH as Diesel	ND	0.1	ND	NA	NA
TPH as Oil	NA	NA	NA	NA	NA
Benzene	ND	ND	ND	NA	NA
Toluene	ND	ND	ND	NA	NA
Ethylbenzene	ND	ND	ND	NA	NA
Xylene	ND	ND	ND	NA	NA

Notes:

MHW = Ground Water Monitoring Well Sample
SWS-U = Aliso Creek Surface Water Sample - Upstream
SWS-L = Aliso Creek Surface Water Sample - Downstream
NA = Not Analyzed
ND = Not Detected


ROTH WELL
OLIN LIBRARY
SWS-UPPER
BRIDGE
FLAZA
FOUNTAIN
POOL
REMOVE
DRAMA BLDG
REMOVE
UPWARD BOUND
BRIDGE
FUTURE
FUTURE
REMOVAL
TOYON MEADOW
FORMER
TANK
LOCATION
LISSER
HALL
KAPIOLANI ROAD
WETMORE ROAD



SCALE 1"=40'

0 40 80

⊗ SWS–Location of surface water sample from Aliso Creek

lan, dated March 20, 1988.

Kaldveer Associates
Geoscience Consultants
A California Corporation

SITE PLAN

MILLS HALL / TOYON MEADOW
Oakland, California

PROJECT NO.	DATE	Figure
KE1025–3B–718	April 1992	

F. Surface Water Sampling

As part of the investigation to evaluate potential impact of the old tank leak, two water samples were collected from Aliso Creek, which is located about 180 feet west of the former tank site. One surface water sample was collected upstream of the Toyon Meadow area, and the other sample was collected well downstream. Samples at each location were collected in HCl-preserved 40 ml VOA (three each) and 1 liter amber bottles (two each). Surface water sample locations are shown on Figure 2.

G. Ground and Surface Water Quality Investigation Results

Results of the ground water sample analyses are presented in Table 3 and are attached to this report as Appendix C. Monitoring well MHW-1 was sampled in July, 1989, December 20, 1990, and again on June 12, 1991 when newly installed Wells MHW-2 and MHW-3 were sampled for the first time. On March 24, 1992 all three wells were sampled again. Surface water samples were collected from Aliso Creek on June 13, 1991.

1. Ground Water Quality - June 12, 1991

The water sample collected from Well MHW-1 on June 12, 1991 was found to contain 0.06 ppm TPH as diesel. This well was found to be free of detectable hydrocarbons during the two previous sampling rounds in 1989 and 1990 (0.05 ppm detection limit). Well MHW-2, installed in the immediate vicinity of the former tank location contained 3.2 ppm TPH as diesel. The water sample collected from Well MHW-3 did not contain hydrocarbons as diesel in detectable quantities. Purgeable aromatic compounds (benzene, toluene, ethylbenzene, xylenes) were not detected in any of the wells with the exception of 0.001 ppm xylene reported for MHW-2. TPH as diesel was not detected in the surface water samples collected from Aliso Creek. However, both the upstream and downstream samples were reported to contain 0.10 ppm extractable hydrocarbons as oil. Low levels of heavy-end hydrocarbons are typical for urban runoff systems.

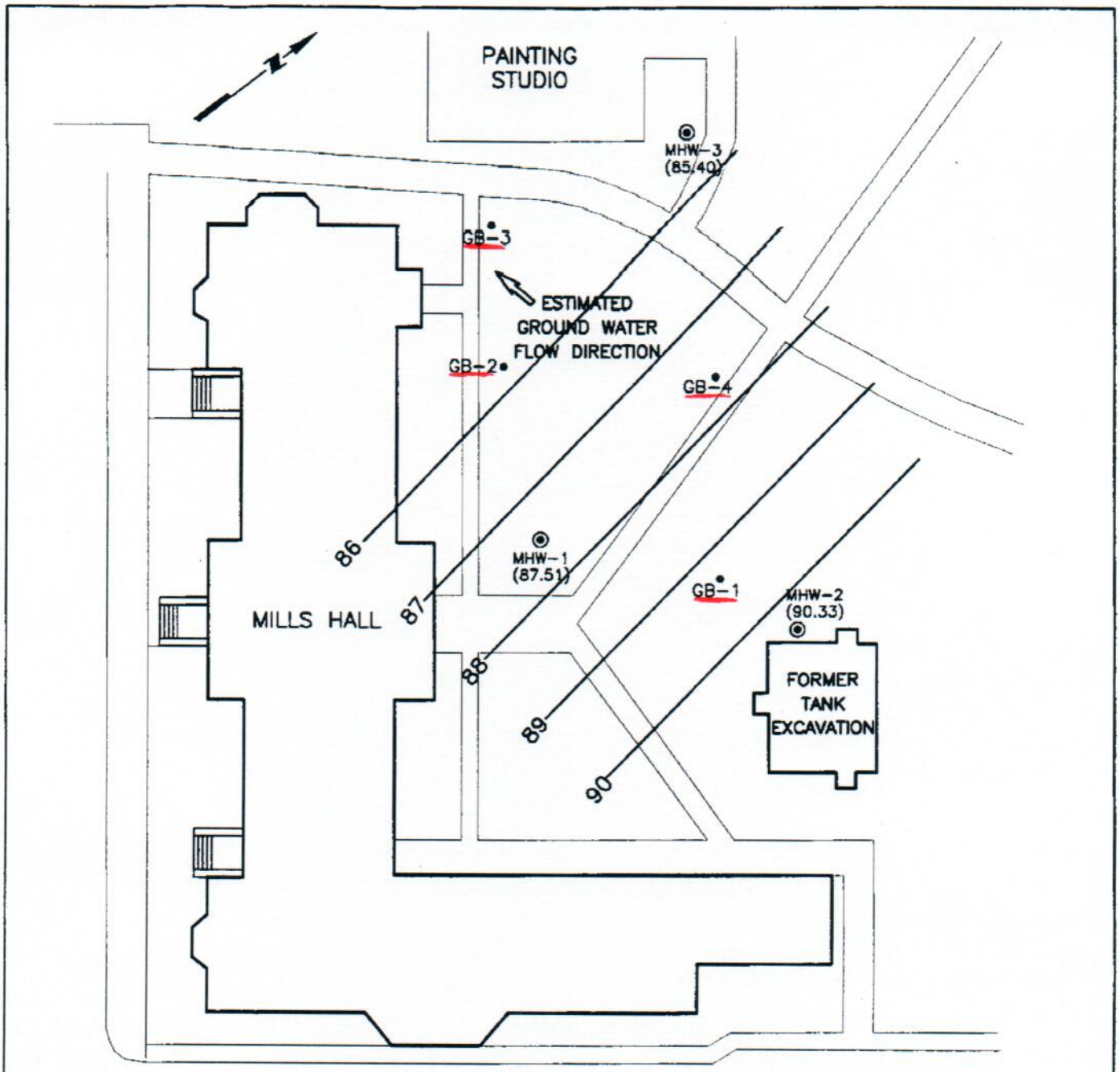
TABLE 3
Ground Water Grab Sample Analytical Results
Additional Site Investigation
Toyon Meadow, Mills College, Oakland, CA

May 1996

Sample ID	TPHd ppm	Benzene ppm	Toluene ppm	Ethylbenzene ppm	Xylenes ppm
GB-1	75.	0.0006	0.0058	0.0086	0.11
GB-2	0.09	ND	ND	ND	ND
GB-3	0.2	ND	ND	ND	ND
GB-4	0.06	ND	0.0007	ND	ND

NOTES

TPHd: Total petroleum hydrocarbons as diesel
ppm: Parts per million or milligrams per liter
ND: Not detected at or above the laboratory method reporting limits



LEGEND

MHW-3◉ APPROXIMATE LOCATION OF MONITORING WELL WITH RELATIVE GROUND WATER ELEVATION

GB-4• APPROXIMATE LOCATION OF GROUND WATER GRAB SAMPLE

90—— GROUND WATER CONTOUR 5/29/96

APPROXIMATE SCALE IN FEET

0 40 80

Base Provided By Mills College, Dated 3/88

6-96-2

Rev.	Drawn By	Chk'd By	Date
0	D.F.	D.A.	6/4/96

HARZA

SITE PLAN

MILLS HALL / TOYON MEADOW
Oakland, California

Figure 2

Project No. K275-G

TABLE 2 - SUMMARY OF GROUNDWATER ANALYTICAL DATA
MILLS COLLEGE

Boring	Date	B ug/l	T ug/l	E ug/l	X ug/l	1,2-Dibrm ug/l	1,2-Dichlorm ug/l	DIPE ug/l	ETBE ug/l	MTBE ug/l	Napth ug/l	TAME ug/l	TBA ug/l	TPH (C10-28) mg/l
TOYON MEADOWS														
MW-1 M	10/19/2012	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<0.50	<0.40	<2.4	**0.0333**
	4/22/2013	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<0.50	<0.40	<2.4	**0.0255**
MW-2 M	10/19/2012	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<0.50	<0.40	<2.4	**0.115**
	4/22/2013	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<0.50	<0.40	<2.4	**0.136**
MW-3 M	10/19/2012	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<0.50	<0.40	<2.4	**0.0904**
	4/22/2013	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<0.50	<0.40	<2.4	**0.0756**
B-12	11/8/2012	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<0.50	<0.40	<2.4	**0.0837**
B-13	11/8/2012	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	**18**	<0.40	<2.4	**9.46**
MAINTENANCE YARD														TPH (C6-10)
MW-1	10/19/2012	**1.7**	<0.20	**0.21**	<0.46	<0.20	**0.56**	<0.22	<0.22	**0.32**	<0.50	<0.40	<2.4	**0.036**
	4/22/2013	**3.6**	<0.20	**0.81**	<0.46	<0.20	**0.55**	<0.22	<0.22	**0.33**	<0.50	<0.40	<2.4	**0.049**
MW-2	10/19/2012	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<0.50	<0.40	**10.9**	<0.025
	4/22/2013	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	<0.20	<0.50	<0.40	**9.1**	<0.025
MW-3	10/19/2012	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	0.20	<0.50	<0.40	<2.4	<0.025
	4/22/2013	<0.20	<0.20	<0.20	<0.46	<0.20	<0.20	<0.22	<0.22	0.20	<0.50	<0.40	<2.4	<0.025

Notes

B	Benzene	DIPE	Di-isoproply ether	TPH (C10-28)	Total Petroleum Hydrocarbons as diesel
T	Toluene	ETBE	Ethyl tert-Butly Ether		
E	Ethylbenzene	MTBE	Methyl Tert Butyl Ether	TPH (6-10)	Total Petroleum Hydrocarbons as gasoline
X	Xylene	Napth	Napthalene		
1,2-Dibrm	1,2-Dibromoethane	TAME	Tert-Amyl Methyl Ether	ug/l	Microgarms per liter
1,2-Dichlorm	1,2-Dichloroethane	TBA	Tert Butyl Alcohol	mg/l	