

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



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

REMEDIAL ACTION COMPLETION CERTIFICATION

September 10, 1997

Mike Kuhl
P. O. Box 63
Glenbrook, NV 89413

RE: STID # 4879 2420 Davis St., San Leandro, CA 94577

Dear Mr. Kuhl:

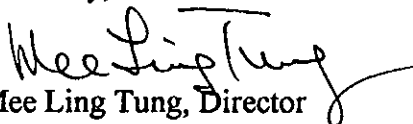
This letter confirms the completion of a site investigation and remedial action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank 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, no further action related to the underground tank release is required.

This notice is issued pursuant to a regulation contained in Section 2721 (e) of Title 23 of the California Code of Regulations.

Please contact our office if you have any questions regarding this matter.

Sincerely,


Mee Ling Tung, Director

- c: Gordon Coleman, Chief, Environmental Protection Division
- Kevin Graves, San Francisco Bay RWQCB
- Dave Deaner, SWRCB, UST Cleanup Fund Program (with enclosure)
- Mike Bakaldin, San Leandro Fire Department
- Tom Peacock (1 copy of letter only)

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: August 29, 1997

Agency name: Alameda County-HazMat Address: 1131 Harbor Bay Pkwy
City/State/Zip: Alameda, CA 94502 Phone: (510) 567-6700
Responsible staff person: D. Klettke Title: Hazardous Materials Spec.

II. CASE INFORMATION

Site facility name: Mike Kuhl
Site facility address: 2420 Davis Street, San Leandro, CA 94577
RB LUSTIS Case No: N/A Local Case No./LOP Case No.: 4879
URF filing date: 8/28/90 SWEEPS No: N/A

<u>Responsible Parties:</u>	<u>Addresses:</u>	<u>Phone Numbers:</u>
Michael Kuhl, P. O. Box 63,	Glenbrook, Nevada 89413	(702) 749-5623

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	1000	gasoline	removed	8/7/90
2	1000	gasoline	removed	8/7/90
3	2000	gasoline	removed	8/7/90

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: unknown
Site characterization complete? YES
Date approved by oversight agency: unknown
Monitoring Wells installed? YES Number: three (3)
Proper screened interval? YES, 5'-30' in MW-1, 4'-25' in MW-2, 8'-18' in MW-3. Although stabilized groundwater levels are above screened intervals, first encountered groundwater levels are all within screened intervals.
Highest GW depth below ground surface: 2.73' in MW-2 Lowest depth: 5.78' in MW-3
Flow direction: consistently south-southwest
Most sensitive current use: commercial/industrial
Are drinking water wells affected? Aquifer name: San Leandro Cone
Is surface water affected? Possibly by chlorinated solvents
Nearest affected SW name: Oyster Bay
Off-site beneficial use impacts (addresses/locations): unknown
Report(s) on file? YES Where is report(s) filed? Alameda County
1131 Harbor Bay Pkwy
Alameda, CA 94502

Treatment and Disposal of Affected Material:

<u>Material</u>	<u>Amount (include units)</u>	<u>Action (Treatment or Disposal w/destination)</u>	<u>Date</u>
Tanks	2 1000-gallon, 1 1000-gallon	disposal, Erickson, Inc. Richmond, CA	8/07/90
Piping			
Free Product			
Soil			
Groundwater			
Barrels			

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	<u>Before</u>	<u>After*</u>	<u>Before</u>	<u>After</u>
TPH (Gas)	<1	---	3200	200
TPH (Diesel)	N/A	---	N/A	N/A
Benzene	0.0036	---	370	9.3
Toluene	0.0031	---	17	<0.5
Ethyl benzene	<0.0025	---	<0.0005	<0.5
Xylenes	0.003	---	370	<0.5
Oil & Grease	N/A			
Heavy metals	N/A			
Chlorinated hydrocarbons**				
Other				

* No over-excavation was warranted due to single digit ppb levels of BTX detected in initial soil samples.

**Concentrations of chlorinated solvents found in groundwater samples collected from MW-1 are summarized in Table 3.

Comments (Depth of Remediation, etc.):

On August 7, 1990, three (3) underground storage tanks (USTs), 2-1000-gallon and 1-2000-gallon capacity were excavated and removed from the site (See Figure 2). These tanks were transported and disposed of at Erickson's Richmond, CA facility. None of the USTs contained any visible holes, and hydrocarbon odors were not noted. Groundwater was encountered in both excavations.

Six soil samples (1N, 1S, 2N, 2S, 3E, 3W) were obtained (two from each tank), and were subsequently analyzed for TPHg and BTEX (See Figure 3). Analyses of the soil samples for TPHg were reported as non-detect for all six soil samples. Analytical results for benzene (3.6 ppb) and total xylenes (3.0 ppb) were reported for sample 2N, and toluene (3.1 ppb) and total xylenes (2.5 ppb) were reported for sample 3E. Laboratory analytical results for the initial soil and groundwater samples are summarized in Table 1.

See Section VII, Additional Comments, etc...

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? **Undetermined**

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? **Undetermined**

Does corrective action protect public health for current land use? **YES**

Site management requirements: **None**

Should corrective action be reviewed if land use changes? **YES**

Monitoring wells Decommissioned: **None, pending closure**


Number Decommissioned: **None** Number Retained: **three (3)**

List enforcement actions taken: **None**

List enforcement actions rescinded: **N/A**

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Eva Chu Title: Hazardous Materials Specialist

Signature:  Date: 8-29-97

Reviewed by

Name: Pam Evans Title: Sr. Haz Mat Specialist


Signature:  Date: 8-29-97

Name: Thomas Peacock Title: Supervising HazMat Specialist

Signature:  Date: 9-2-97

VI. RWQCB NOTIFICATION

Date Submitted to RB:

RB Response: 

RWQCB Staff Name: Kevin Graves

Title: AWRCE

Signature: 

Date: 9/5/97

VII. ADDITIONAL COMMENTS, DATA, ETC.

In October 1986, two groundwater monitoring wells were installed and sampled by Exceltech, Inc., on the subject site near the three gasoline USTs. Soil and groundwater samples were analyzed for volatile hydrocarbons and BTX. The soils encountered in the borings consisted of silty clays, silty sands and gravels. The free groundwater encountered in the borings was observed at a depth of 12.5' bgs. Monitoring well DM-1 and DM-2 terminated at a depth of 30 and 25 feet respectively in silty clay horizon. No free product was observed on the water surface and there was no odor of fuel from the soil. No detectable levels of volatile hydrocarbons or BTX were found in any of the soil or water samples analyzed.

Two groundwater samples (one from each excavation) were obtained and analyzed for TPHg and BTEX. The groundwater sample obtained from the excavation of tank #1, was found to contain 70 ppb of TPHg, and non-detectable levels of BTEX. The groundwater sample obtained from the excavation of tanks #2 and #3 (these tanks shared a common excavation) was found to contain 3.2 ppm of TPHg, 370 ppb-benzene, 17 ppb-toluene and 370 ppb-total xylenes.

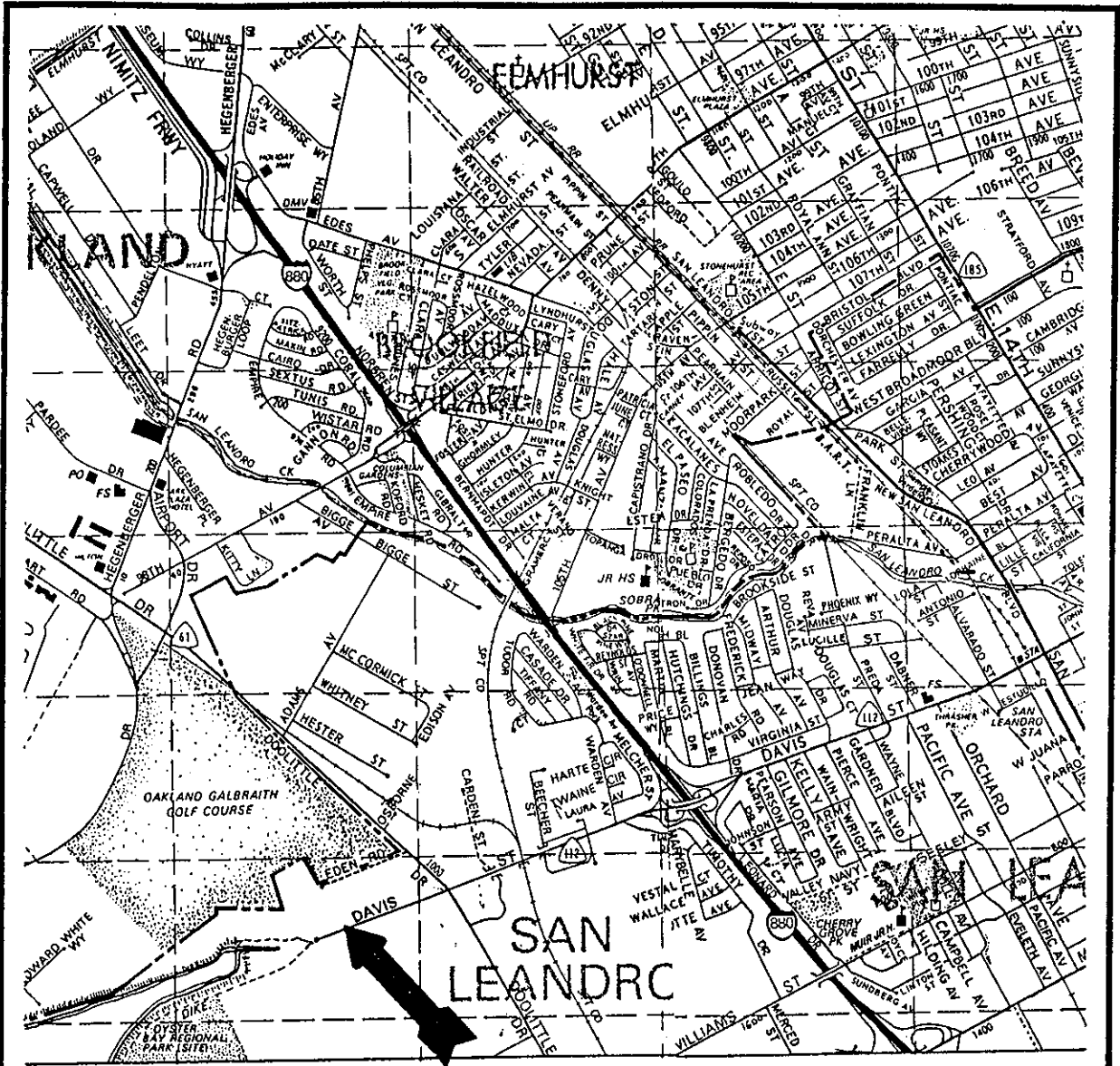
On March 12, 1992, monitoring well MW-3 was installed to address the concerns of the RWQCB, which was to provide groundwater levels, direction and gradient for the quarterly groundwater reporting criteria. The analyses performed on all soil samples obtained from the borings were non-detect for TPHg and BTEX. Monitoring well MW-3 was sampled on March 30, 1992, and the analytical results of the one groundwater sample taken was found to contain non-detectable levels of TPHg and BTEX. Groundwater flow is reported to be in a roughly south-southwesterly direction with a measured gradient of about 0.01ft/ft. Depth to groundwater was measured at 3.23' bgs (MW-1), 3.07' bgs (MW-2) and 4.20' bgs (MW-3).

On December 31, 1992, groundwater samples were obtained from wells MW-1, MW-2 and MW-3 and analyzed for TPHg and BTEX. Results reported from the groundwater sample obtained from MW-1 was found to contain TPHg (83 ppb), benzene (55 ppb) and toluene (2.4 ppb). The groundwater samples obtained from monitoring wells MW-2 and MW-3 were found to contain non-detectable levels of TPHg and BTEX. Groundwater flow was reported to be in a south-southwesterly direction with a measured gradient of 0.0143ft/ft.

Since analytical results from this sampling event indicated two unknown peaks on the TPHg chromatogram chart detected in the groundwater sample collected from well MW-1, further analysis of the sample using EPA Test Method 624 indicated elevated levels of chlorinated solvents. The chlorinated solvents chloroethane (150.0 ppb), 1,1-DCE (9.0 ppb), methylene chloride (250 ppb), 1,2-DCE (5.0 ppb), 1,1-DCA (1300 ppb) and 1,1,1-TCA (855 ppb) were detected in the groundwater sample from MW-1. After a cursory review of the chlorinated hydrocarbon concentrations found in the San Leandro Plume Study (SLPS), these concentrations were found to be in excess of those reported in the SLPS. However, the concentrations of chlorinated solvents did not exceed a human health risk in excess of $10E-5$ for groundwater volatilization from groundwater to indoor air for a commercial scenario, based on a RBCA Tier 1 calculation.

Quarterly groundwater sampling and analysis has been performed twelve (12) times in wells MW-1 and MW-2 (since 1/22/91), and eight (8) times in MW-3 (since 3/20/92). The results of the groundwater analyses are summarized in Table 2 - Analytical Results.

Due to the fact that chlorinated solvents were detected in excess of those documented in the DTSC "San Leandro Plume Study", a historical use and list of past and present businesses on the above referenced site was provided by Michael Kuhl. After review of this document, and due to the fact that concentrations of chlorinated hydrocarbons are usually associated with releases from waste oil tanks, of which none are known to have existed on this property, further groundwater monitoring is not warranted. The concentrations of benzene have only been detected from monitoring well MW-1 have decreased with time, and have not been detected in groundwater samples collected from MW-2 and MW-3. This information suggests that the hydrocarbon plume is indeed stable and contaminants are not migrating off-site. This site should not pose a significant threat to the quality of groundwater in the shallow aquifer, and since it is in close proximity to the bay, would not be a preferred source of drinking water.



ACC Environmental Consultants, Inc. 1000 Atlantic Avenue, Suite 110 Alameda, California 94501		2420/2424 Davis Street San Leandro, California	
Project No. 6038-1	Date: 7/6/92	Dn by: MCK	Figure No. 1

FIGURE 1

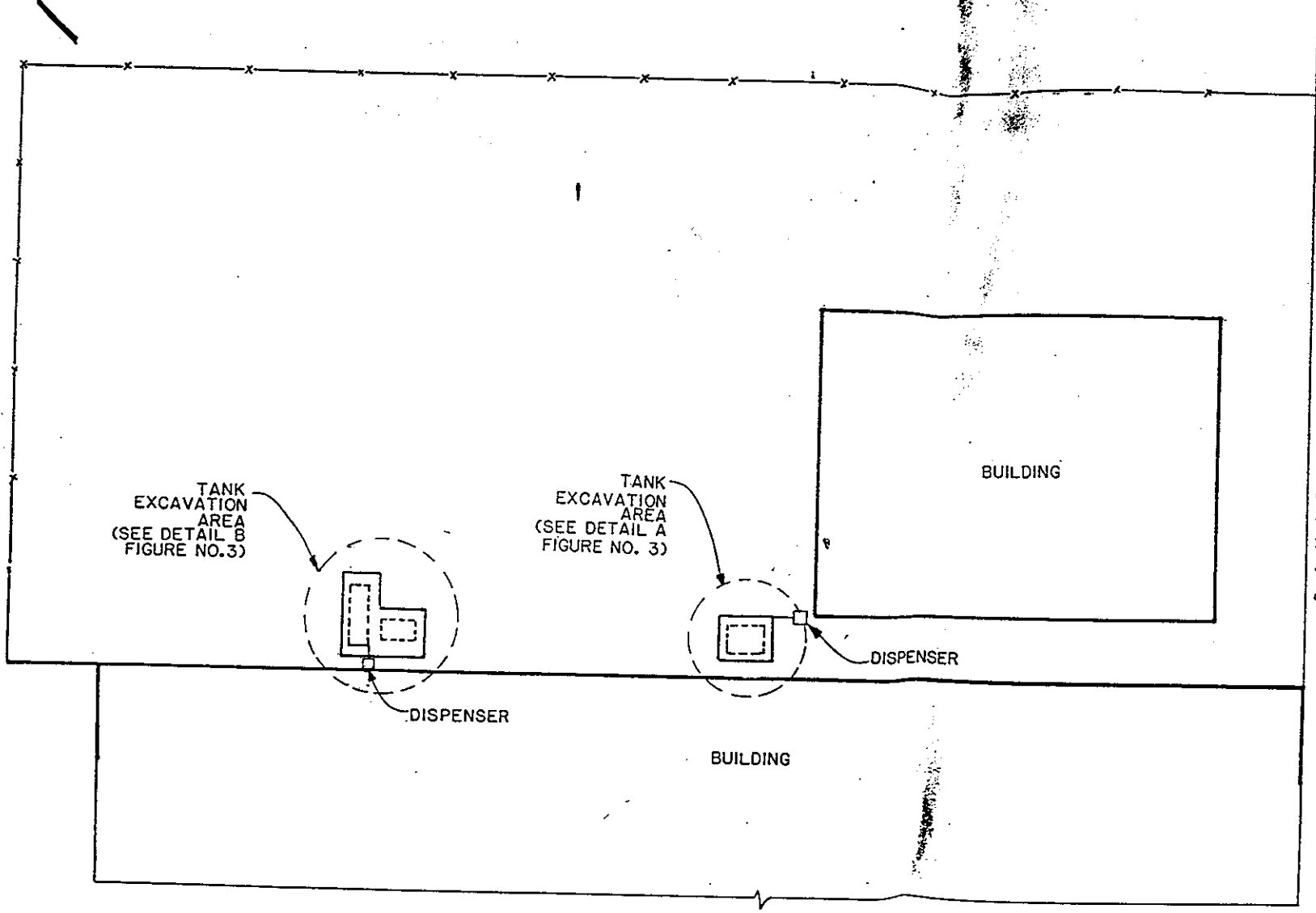
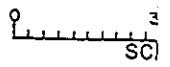


FIGURE 2

DAVIS STREET



NO.	DESCRIPTION	DATE	DRAWN	APPROVED

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PROFESSIONAL SEAL	DATE 08/10/90
	JOB NO. E136-01
	DWG. NO. E136-01/2
	DRAWN N TOOR
	CHK'D G MILLIKAN
	APP'D J HICKS

EGC ENVIRONMENTAL GEOTECHNICAL CONSULTANTS IN APPLIED EARTH SCIENCES	SITE PL
2420/2424 DAVIS ST., SAN ANTONIO, TX 78204	MIKE KL

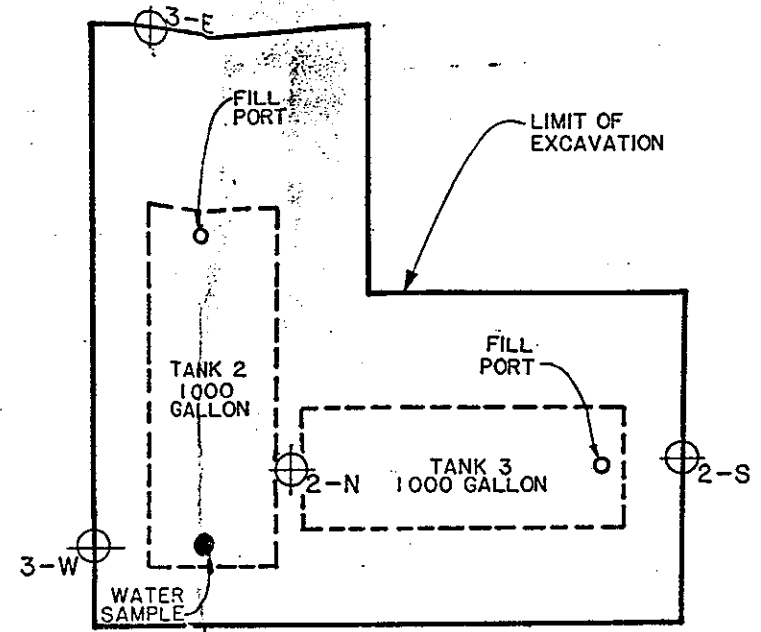
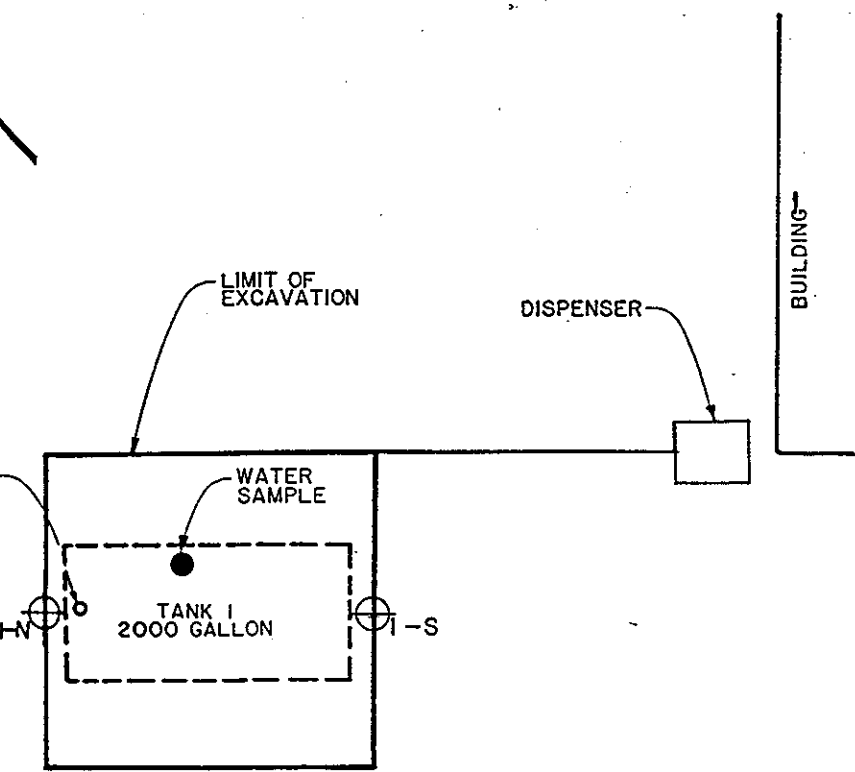
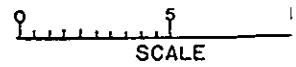
NOTES

1. MAP BASED ON FIELD STUDIE

EXPLANATION

- ⊕ APPROXIMATE SOIL SAMPLE
- APPROXIMATE WATER SAMPLE

FIGURE 3



BUILDING

DESCRIPTION	DRAWN	APPROVED

PROFESSIONAL SEAL	DATE 08/10/90
	JOB NO. E136-01
	DATE PL. E136-01/3
	DRAWN N TOOR

EGC ENVIRONMENTAL GEOTECHNICAL CONSULTANTS IN APPLIED EARTH SCIENCE
TANK EXCAVATION DETAILS

The groundwater samples were removed from the excavations (tanks 2 and 3 shared a common excavation) using clean, teflon bailers. They were placed into 40 ml VOA's which were sealed without any headspace. The samples were labeled, logged on a Chain-of-Custody form and transported on ice to NET Pacific Inc., a California Department of Health Services-certified environmental laboratory. Chain-of-Custody records and soil analytical results are included in Appendix B.

LABORATORY ANALYTICAL RESULTS

Soil and groundwater samples were analyzed for Total Petroleum Hydrocarbons (Volatile) as Gasoline (TPH-G) by EPA method GC FID/5030, and Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) by EPA method (8015 mod./8020). Analytical results are as follows:

SOILS

<u>Parameter</u>	<u>Sample #1N Results</u>	<u>Sample #1S Results</u>	<u>Sample #2S Results</u>	<u>Sample #2N Results</u>	<u>Sample #3W Results</u>	<u>Sample #3E Results</u>
TPH-G (ppm)	ND	ND	ND	ND	ND	ND
Benzene (ppb)	ND	ND	ND	3.6	ND	ND
Toluene (ppb)	ND	ND	ND	ND	ND	3.1
Ethylbenzene (ppb)	ND	ND	ND	ND	ND	ND
Xylenes (ppb)	ND	ND	ND	3.0	ND	2.5

ppm = parts per million
ppb = parts per billion
ND = not detected

GROUNDWATER

<u>Excavation Sample ID #</u>	<u>A Tank #1 Sample</u>	<u>B Tank #2 Sample</u>
TPH-G (ppm)	0.07	3.2
Benzene (ppb)	ND	370
Toluene (ppb)	ND	17
Ethylbenzene (ppb)	ND	ND
Xylenes (ppb)	ND	370

TABLE 1

4.0 FINDINGS

During this round of sampling, one sample from each groundwater monitoring well was submitted to Chromalab for analysis of volatile organic compounds by EPA test method 624. In addition to the volatile organic analysis, groundwater samples from monitoring wells MW-1 and MW-2 were tested for TPH as gasoline with BTEX by EPA test method 8015/602. Tables 2 and 3 summarize the analytical results of the groundwater samples collected from each monitoring well. Table 2 indicates the historic analytical results for TPH as gasoline with BTEX and Volatile Organic Hydrocarbons in monitoring wells MW-1, MW-2 and MW-3. Table 3 indicates historical analytical results for Volatile Organic Hydrocarbons as reported in monitoring well MW-1.

Analytical results with chain of custody forms for December 22, 1994 round of sampling are attached in Appendix A.

TABLE 2 - ANALYTICAL RESULTS

Well No.	Date Sampled	TPH-g (ug/L)	Benzene (ug/L)	Toluene (ug/L)	E. Benzene (ug/L)	Xylenes (ug/L)	VOC (ug/L)
MW-1	01/22/91	350	5.6	0.6	<0.5	1.5	NT
	04/22/91	60	<0.5	<0.5	<0.5	0.06	NT
	07/23/91	<50	<0.5	<0.5	<0.5	<0.5	NT
	11/22/91	60	<0.5	<0.5	<0.5	<0.5	NL
	03/30/92	NT	NT	NT	NT	NT	NT
	06/22/92	69	32	0.77	<0.5	0.81	NT
	09/31/92	210	78	<0.5	<0.5	1.4	NT
	12/31/92	83	55	2.4	<0.5	<0.5	detected
	03/23/93	72	7.3	<0.5	<0.5	<0.5	detected
	06/28/93	650	25	1.2	<0.5	1.1	detected
	01/06/94	500	28	<0.5	<0.5	<0.5	detected
	06/22/94	330	13	<0.5	<0.5	0.9	detected
	12/22/94	200	9.3	<0.5	<0.5	<0.5	detected
MW-2	01/22/91	<50	<0.5	<0.5	<0.5	<0.5	NT
	04/22/91	<50	<0.5	<0.5	<0.5	<0.5	NT
	07/23/91	<50	<0.5	<0.5	<0.5	<0.5	NT
	11/22/91	<50	<0.5	<0.5	<0.5	<0.5	NT
	03/30/92	NT	NT	NT	NT	NT	NT
	06/22/92	<50	<0.5	<0.5	<0.5	0.80	NT
	09/31/92	<50	<0.5	<0.5	<0.5	<0.5	NT

Well No.	Date Sampled	TPH-g (ug/L)	Benzene (ug/L)	Toluene (ug/L)	E. Benzene (ug/L)	Xylenes (ug/L)	VOC (ug/L)
MW-2	12/31/92	<50	<0.5	<0.5	<0.5	<0.5	NT
	03/23/93	<50	<0.5	<0.5	<0.5	<0.5	NT
	06/28/93	<50	<0.5	<0.5	<0.5	<0.5	NT
	01/06/93	<50	<0.5	<0.5	<0.5	<0.5	*detected
	06/22/94	<50	<0.5	<0.5	<0.5	<0.5	NT
	12/22/94	<50	<0.5	<0.5	<0.5	<0.5	†detected
MW-3	03/20/92	<50	<0.5	<0.5	<0.5	<0.5	NT
	06/22/92	<50	<0.5	<0.5	<0.5	<0.5	NT
	09/22/92	<50	<0.5	<0.5	<0.5	<0.5	NT
	12/31/94	<50	<0.5	<0.5	<0.5	<0.5	NT
	03/23/93	<50	<0.5	<0.5	<0.5	<0.5	NT
	06/23/93	<50	<0.5	<0.5	<0.5	<0.5	NT
	01/06/94	<50	<0.5	<0.5	<0.5	<0.5	ND
	12/22/94	<50	<0.5	<0.5	<0.5	<0.5	ND

Notes: ug/L = parts per billion (ppb)

NT = Not Tested

ND = Below analytical detection limits for constituents

* Laboratory results reported 3.1 ppb Tetrachloroethene (PCE) in monitoring well MW-2

† Laboratory results reported 5.0 ppb Tetrachloroethene (PCE) in monitoring well MW-2

The levels of solvents detected in monitoring well MW-1 are summarized in Table 3. The solvents listed in Table 3 are identified by the Merck Index of chemicals as being degreasers and cleaning fluids.

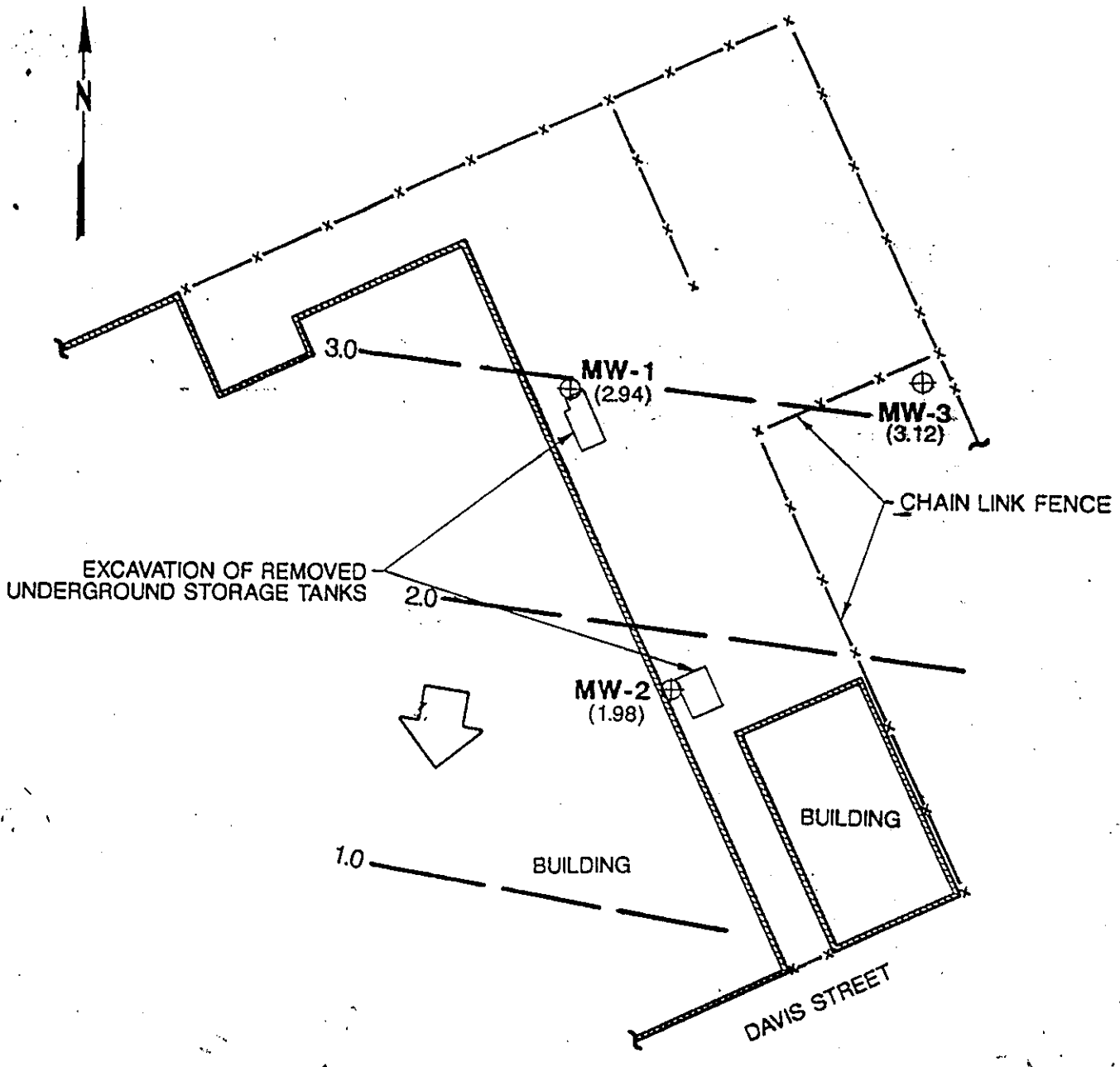
TABLE 3 - DETECTED CHLORINATED CONSTITUENTS (MW-1 Sample)

Analyte	12/31/92	03/23/93	06/28/93	01/08/94	06/22/94	12/22/94
Acetone	<5	<5	<5	<5	<5	<5
Benzene	54	5	28	20	13	12
Bromodichloromethane	<2	<2	<2	<2	<2	<2
Bromoform	<2	<2	<2	<2	<2	<2
Bromomethane	<2	<2	<2	<2	<2	<2
Methyl Ethyl Ketone	<2	<2	<2	<2	<2	<2
Carbon Tetrachloride	<2	<2	<2	<2	<2	<2
Chlorobenzene	<2	<2	<2	<2	<2	<2

Analyte	12/31/92	03/23/93	06/28/93	01/08/94	06/22/94	12/22/94
Chloroethane	150	160	80	73	170	170
2-Chloroethylvinyl Ether	<2	<2	<2	<2	<2	<2
Chloroform	<2	<2	<2	<2	<2	<2
Chloromethane	<2	<2	<2	3.2	<2	<2
Dibromochloromethane	<2	<2	<2	<2	<2	<2
1,1-Dichloroethane	1300	1600	820	590	350	560
1,2-Dichloroethane	<2	<2	<2	2.1	<2	<2
1,1-Dichloroethene	9	28	18	22	16	14
Cis-1,2-Dichloroethene	5	<2	<2	<2	<2	<2
Trans-1,2-Dichloroethene	<2	<2	<2	<2	<2	<2
1,2-Dichloropropane	<2	<2	<2	<2	<2	<2
Cis-1,3-Dichloropropene	<2	<2	<2	<2	<2	<2
Trans-1,3-Dichloropropene	<2	<2	<2	<2	<2	<2
Ethylbenzene	<2	<2	<2	<2	<2	<2
2-Hexanone	<2	<2	<2	<2	<2	<2
Methylene Chloride	250	160	<2	<2	<2	14
Methyl Isobutyl Ketone	<2	<2	<2	<2	<2	<2
Styrene	<2	<2	<2	<2	<2	<2
1,1,2,2-Tetrachloroethane	<2	<2	<2	<2	<2	<2
Tetrachloroethene	<2	<2	<2	<2	<2	<2
Toluene	<2	<2	<2	<2	<2	<2
1,1,1-Trichloroethane	855	920	410	220	>52	67
1,1,2-Trichloroethane	<2	<2	<2	<2	<2	<2
Trichloroethene	<2	<2	<2	<2	<2	<2
Trichlorofluoromethane	<2	<2	<2	<2	<2	<2
Vinyl Acetate	<2	<2	<2	<2	<2	<2
Vinyl Chloride	<2	<2	<2	<2	<2	<2
Xylenes	<2	<2	<2	<2	<2	<2

Notes:

ug/L = micrograms per liter (parts per billion)

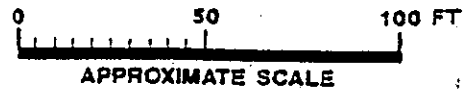


EXPLANATION

⊕ MW-1 (2.94) APPROXIMATE MONITORING WELL LOCATION WITH GROUNDWATER ELEVATION IN FEET

↓ APPROXIMATE DIRECTION OF GROUNDWATER FLOW ON 03/30/92

3.0 ——— GROUNDWATER CONTOUR



NOTES
1. MAP BASED ON APPROXIMATE FIELD MEASUREMENTS 01/22/91.

DATE 03/12/92

JOB NO. E136-04

DWG NO. E136-04/3

DRAWN N TOOR

CHK'D J PHILLIPS

APP'D J HICKS



ENVIRONMENTAL GEOTECHNICAL CONSULTANTS, INC
CONSULTANTS IN APPLIED EARTH SCIENCE

GROUNDWATER GRADIENT MAP

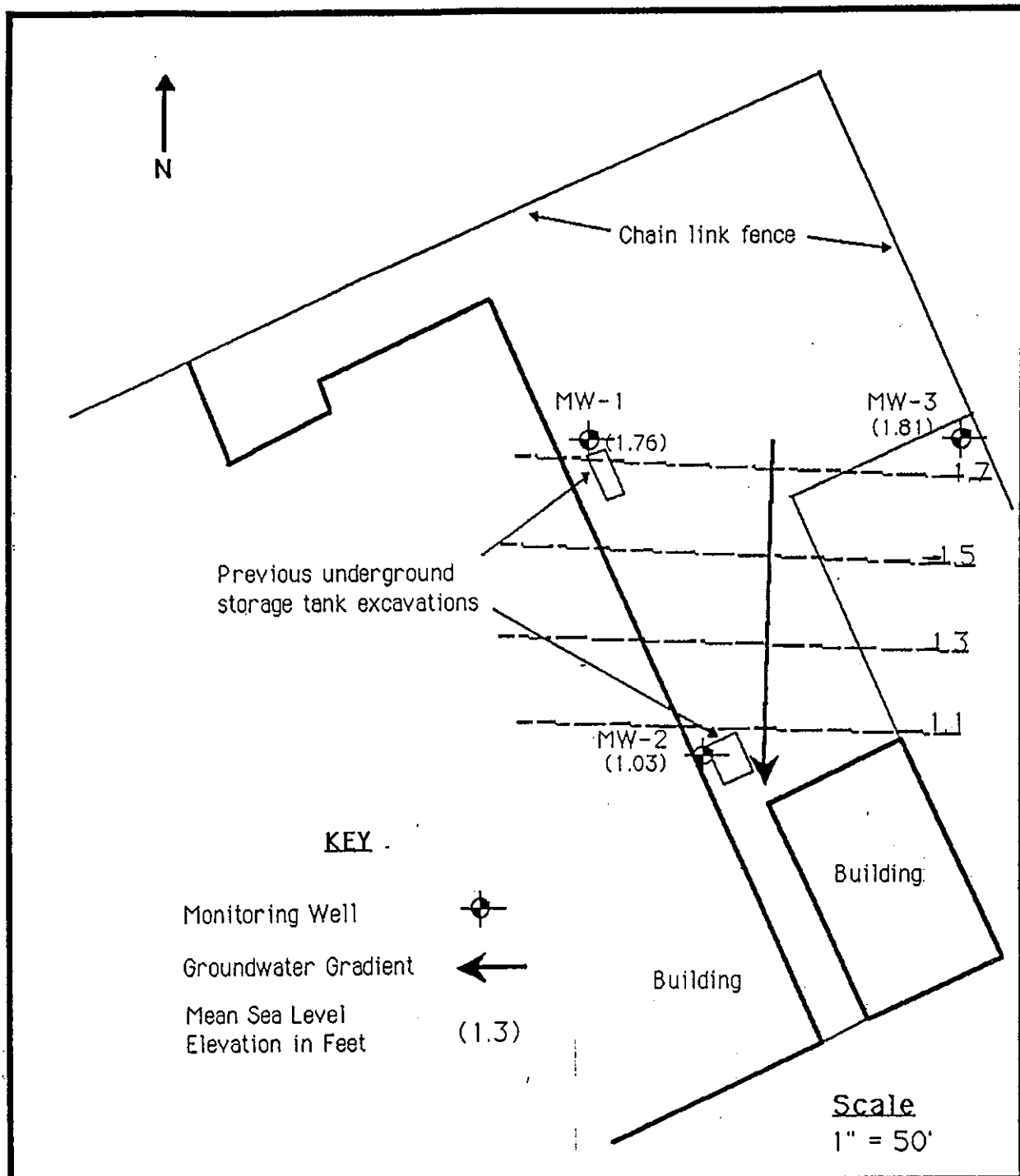
2420/2424 DAVIS ST., SAN LEANDRO, CALIFORNIA

MIKE KUHL

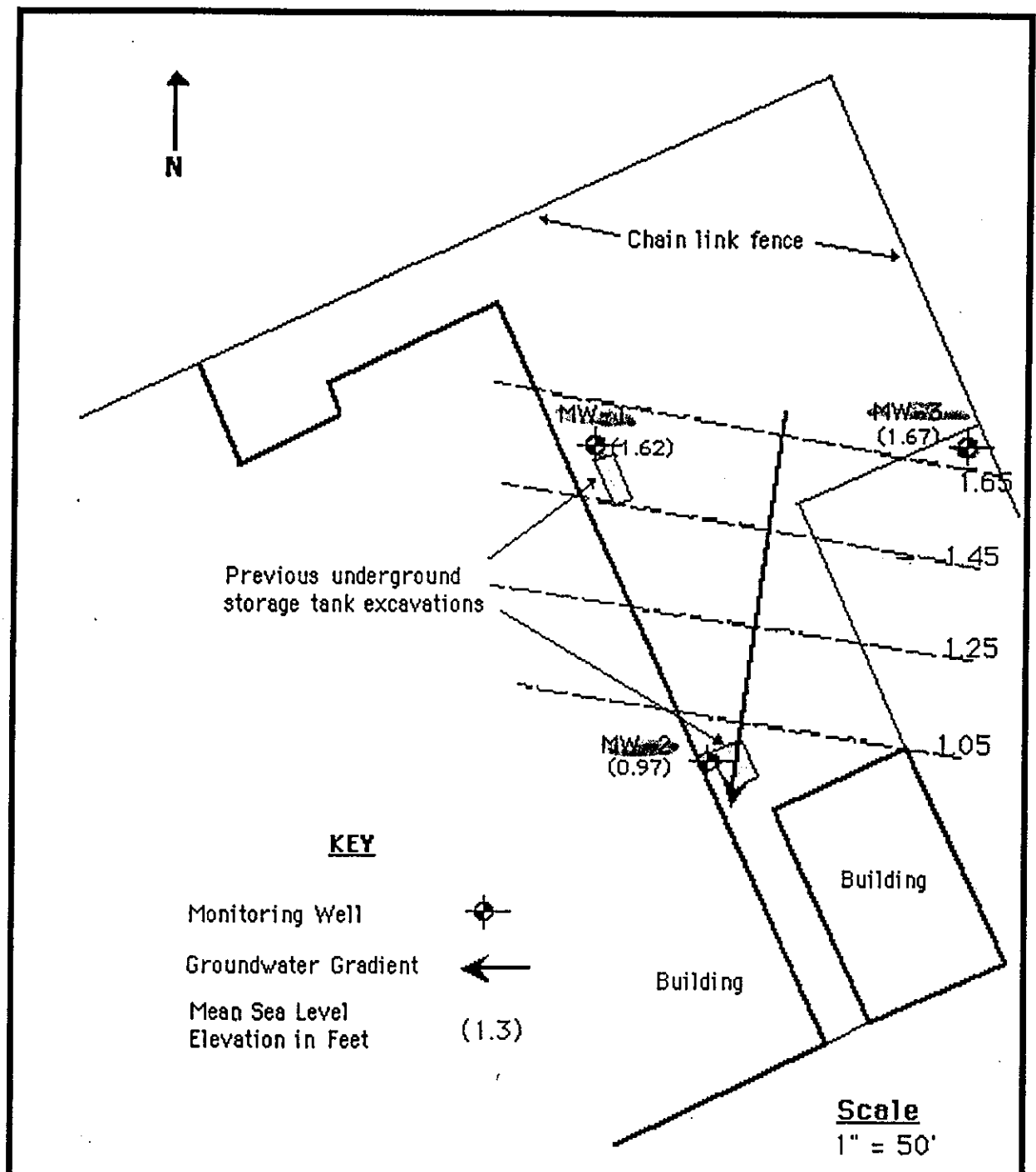
FIGURE NO.

3

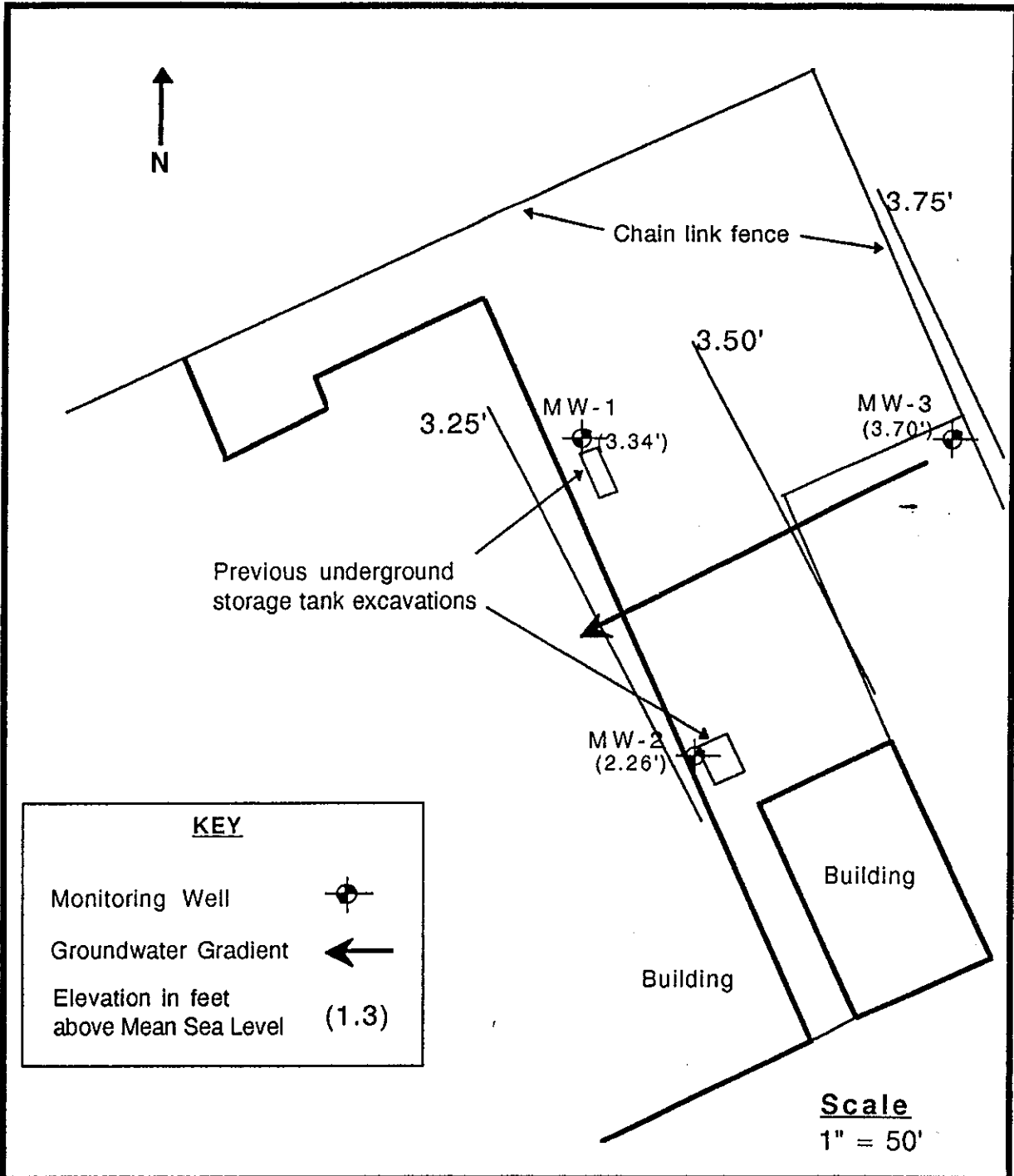
REV NO.



ACC Environmental Consultants, Inc. 1000 Atlantic Avenue, Suite 110 Alameda, California 94501		2420/2424 Davis Street San Leandro, California	
Project No. 6038-1.	Date: 7/6/92	Dn by: MCK	Figure No. 2



ACC Environmental Consultants, Inc. 1000 Atlantic Avenue, Suite 110 Alameda, California 94501		2420/2424 Davis Street San Leandro, California	
Project No. 6038-1	Date: 10/1/92	Dn by: MCK	Figure No. 2



ACC Environmental Consultants, Inc.
1000 Atlantic Avenue, Suite 110
Alameda, California 94501

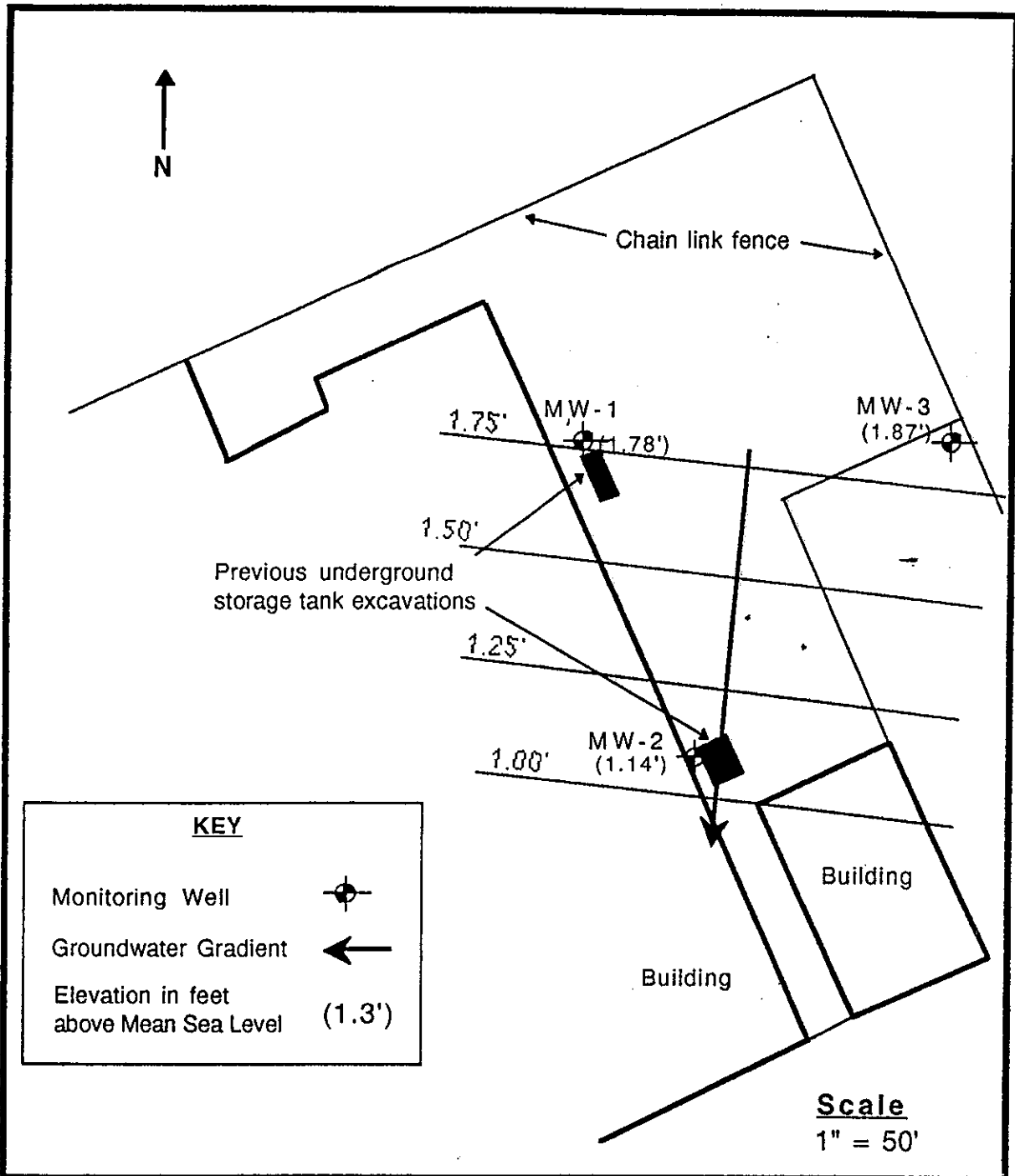
Groundwater Gradient
2420/2424 Davis Street
San Leandro, California

Project No. 6038-1

Date: 03/23/93

Dn by: MCK

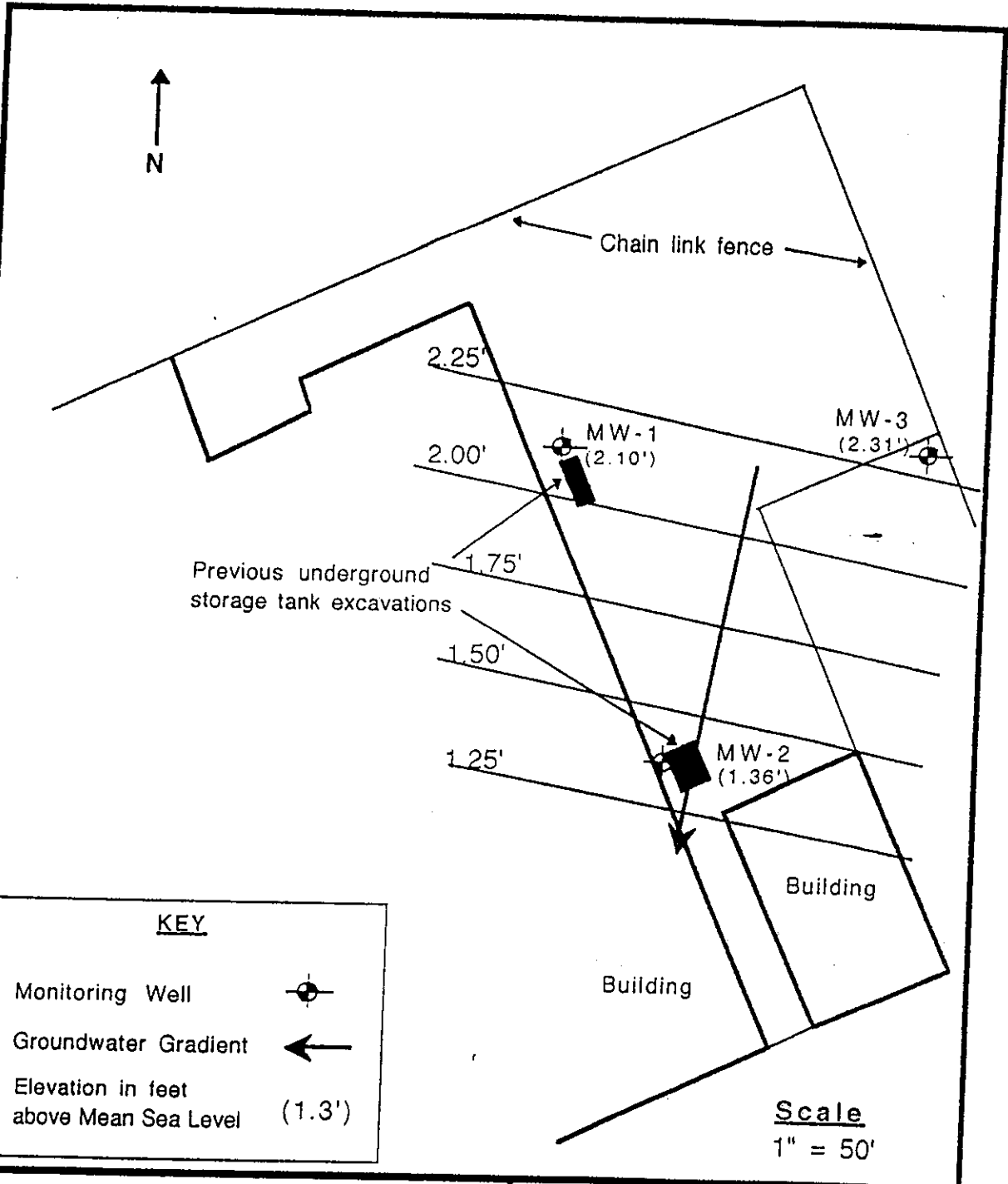
Figure No. 2



KEY	
Monitoring Well	
Groundwater Gradient	
Elevation in feet above Mean Sea Level	(1.3')

Scale
1" = 50'

ACC Environmental Consultants, Inc. 1000 Atlantic Avenue, Suite 110 Alameda, California 94501		Groundwater Gradient 2420/2424 Davis Street San Leandro, California	
Project No. 6038-1	Date: 06/28/93	Dn by: MCK	Figure No. 2



ACC Environmental Consultants, Inc.
 1000 Atlantic Avenue, Suite 110
 Alameda, California 94501

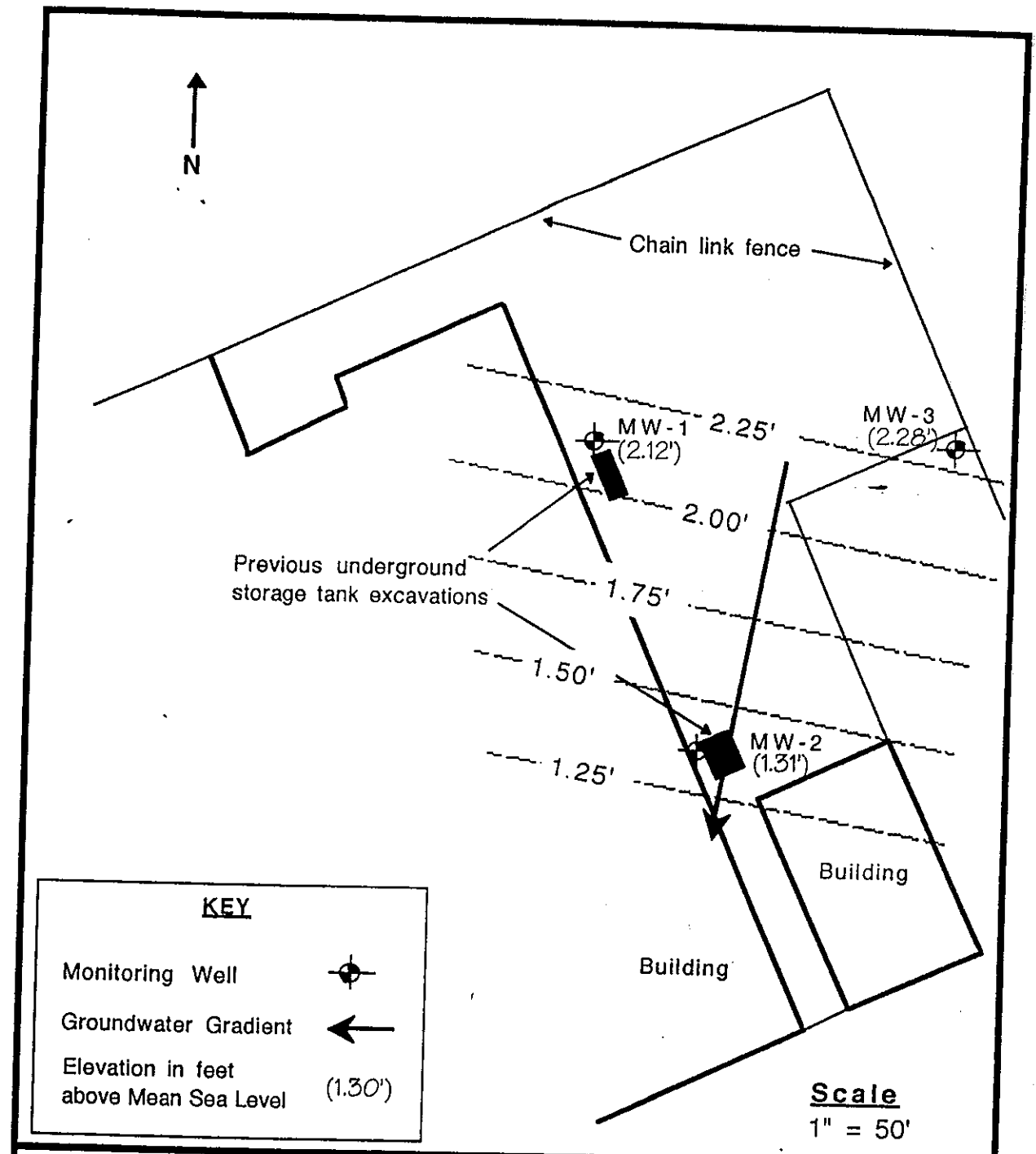
Groundwater Gradient
 2420/2424 Davis Street
 San Leandro, California

Project No. 6038-1

Date: 01/06/94

Dn by: MCK

Figure No. 2



KEY	
Monitoring Well	
Groundwater Gradient	
Elevation in feet above Mean Sea Level	(1.30')

ACC Environmental Consultants, Inc.
 1000 Atlantic Avenue, Suite 110
 Alameda, California 94501

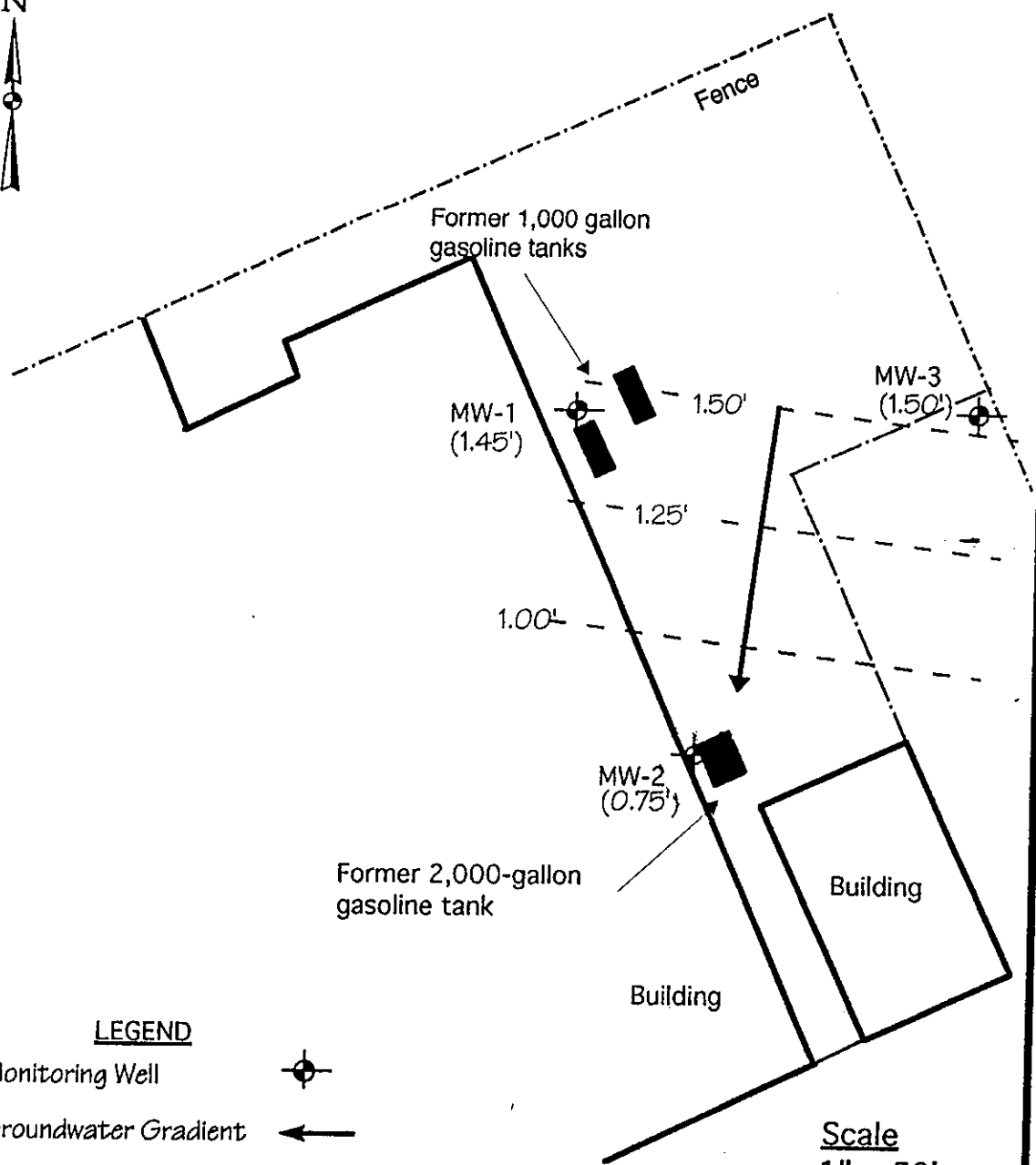
Groundwater Gradient
 2420/2424 Davis Street
 San Leandro, California

Project No. 6038-1

Date: 04/11/94

Dn by: MCK

Figure No. 2



LEGEND

- Monitoring Well
- Groundwater Gradient

Scale
1" = 50'

Elevation in Feet Above Mean Sea Level Measured on 9/27/94

ACC Environmental Consultants, Inc.
1000 Atlantic Avenue, Suite 110
Alameda, California 94501

Groundwater Gradient
2420/2424 Davis Street
San Leandro, California

Project No. 6038-1

Date: 01/2/95

Dn by: MCK

Figure No. 2



PROJECT NAME: Diamond Manufacturing
 PROJECT NUMBER: 1477G

MW-1
 BORING NO.: DM-1
 DATE DRILLED: 10/16/86
 LOGGED BY: Brad

Depth, ft.	Sample No.	Symbol	SOIL DESCRIPTION	Unified Soil Classification	Blows/foot 360 ft.-lbs				
0			6" Concrete 8" Baserock						
2			Sandy CLAYS, gray, moist, mottled, rare rock fragments, low plasticity						
4			Silty CLAYS, gray, moist, slight mottling, med plasticity, small pore spaces 15%						
4 1/2			▼ 4 1/2'						
8	1-1		Silty CLAYS, gray, moist, very stiff silts 20%, rare small pore spaces and root fragments	CL	22				
12	1-2		▼ 12'						
12			Sandy CLAYS, green, slightly moist, very stiff, Sand 15-20% fine, low plasticity, rare small pore spaces and root fragments, slight oxidation, minor fracturing present		20				
16	1-3	SP	Silty SANDS, brown, wet, dense, 15' sand fine, silts 20% grading into 4" lens of clays 15 1/2' grading into silty SANDS, sand fine, silts 20% 16' grading into gravels and sandy GRAVELS sand 15% fine	SM CL GP	48				
20	1-4	SP			47				
22			Silty SANDS, brown, wet, dense, sand fine, silts 20-25%, no bedding present minor lens of clay at shoe tip						
26	1-5	SP		SM	14				
26			Silty SANDS, brown, wet, dense, sand fine, silts 20%, gravelly sands toward show with small interbeds of clay, rare pebble fragments						
30	1-6	SP			15				
30			Sandy CLAYS, moist, stiff, sand 20%	CL					
32			Bottom hole 30 1/2'						



PROJECT NAME: Diamond Manufacturing

PROJECT NUMBER: 1477G

BORING NO.: DM-2

DATE DRILLED: 10/16/86

LOGGED BY: Brad

MW-2

EXPLORATORY BORING LOG

Depth, ft.	Sample No.	Symbol	SOIL DESCRIPTION	Unified Soil Classification	Blows/foot 350 ft-lbs			
0			6" Concrete 8" Baserock					
2			Clayey SANDS with Gravels, Brown, moist, sand fine, clay 15%, gravel 15%, fill Material	SC/SP				
4			Silty CLAYS with Sand, Gray, moist, silts					
6			4'4" 25%, very fine sand 15%, minor pebble fragments, low plasticity					
8	2-1		Sandy CLAY, Gray, Moist, very fine sand 15-20%, rare small rock fragments, med plasticity					
10			Sandy CLAYS, with Gravels, Blue, moist, very stiff, Sand fine 20%, gravels 15%, low plasticity, rare pore spaces, slight oxidation, minor root fragments, fragments, consistant, clays between 8-9'	CL	22			
12								
14	2-2							
16			Sandy GRAVELS, Brown, wet, dense, sand med-coarse 25-30% gravels angular to subrounded, sand and gravel med to well sorted					
18	2-3							
20			Sandy GRAVELS, brown, wet, dense, sand coarse 15%, gravels well sorted, angular to subrounded, scattered large gravels 10-12mm	GW	32			
22								
24	2-4							
26	2-5		Sandy GRAVELS, Brown, wet, firm sand fine to coarse 30-40% sandy poorly sort, gravels well sorted		10			
28					14			
30			Sandy CLAYS, Brown, very moist, stiff, sand fine 25%, rare pore spaces, slight mottling, small scattered rock fragments low plasticity, slight oxidation	CL				
			Bottom Hole 26'					

EXPLORATORY BORING LOG

PAGE 1 OF 1

PROJECT NO. **E136-04**

LOGGED BY:
M. SCHACKMAN

DATE DRILLED:
03/12/92

DRILL RIG: **MOBIL B-53**
DEPTH TO GROUNDWATER :

BORING ELEV:
EXISTING GRADE

BORING NO.
MW-3

BORING DIAM:
8 INCHES

SOIL / ROCK MATERIAL DESCRIPTION AND REMARKS

SOIL / ROCK MATERIAL DESCRIPTION AND REMARKS	CONSISTENCY	USCS GROUP SYMBOL	DEPTH IN FEET	SAMPLE	BLOW COUNT	WATER CONTENT	DRY DENSITY	PHOTONIZATION DETECTOR (PID)	PASSING #200
					N	%	PCF	ppm	%
ASPHALTIC CONCRETE, 2 inches FILL, clay, gravel, sand, glass, brown			1						
			2						
			3						
Silty CLAY, dark brown, moist, low plasticity		CL	4						
			5						
			6	1	9			0	
			7						
			8						
			9						
			10						
CLAY, gray, mottled, moist, moderate plasticity		CL	11	2	17			0	
			12						
			13						
			14						
			15						
Clayey SAND, grayish brown, saturated moderate plasticity		SC	16	3	12			0	
			17						
			18						
			19	4	23			0	
End of boring @ 19.5 feet Groundwater encountered @ 4.5 feet			20						
			21						
			22						
			23						
			24						
			25						

G:\CORE\LOGS\E13604A.CDR

DATE **05/25/92**
JOB NO. **E136-04**
DWG NO. **E13604/A**
DRAWN **J HATALA**
CHK'D **J PHILLIPS**
APP'D **J HICKS**

EGC ENVIRONMENTAL GEO TECHNICAL CONSULTANTS, INC.
CONSULTANTS IN APPLIED EARTH SCIENCE

**BORING LOG
MW-3**

2420/2424 DAVIS ST., SAN LEANDRO, CALIFORNIA
MIKE KUHL

FIGURE
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