



June 14, 1995
STID 4445

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6700

REMEDIAL ACTION COMPLETION CERTIFICATION

Lee Family Association
1127 Webster St., Room 11
Oakland CA 94607

RE: Lee Family Association site/vacant lot, 387-12th St., Oakland CA 94607

Dear Lee Family Association,

This letter confirms the completion of site investigation and remedial action for the former 500-gallon underground fuel oil storage tank at the above referenced site.

Based on the available information 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 Title 23, Division 3, Chapter 16, Section 2721(e) of the California Code of Regulations.

If you have any questions regarding this letter, please contact Jennifer Eberle at (510) 567-6700, ext. 6761.

Very truly yours,

A handwritten signature in black ink that reads "Rafat A. Shahid".

Rafat A. Shahid, Director

cc: Mee Ling Tung, Acting Chief, Environmental Protection Division
Kevin Graves, RWQCB
Mike Harper, SWRCB (with attachment)
Bowen Li, 1330 Broadway, Suite 1028, Oakland CA 94612-2509
Homer Lee, 1420 University Ave., Berkeley CA 94702
Cambria, 1144-65th St., suite C, Oakland CA 94608
Jennifer Eberle

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QUALITY CONTROL BOARD

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: 1/12/95

Agency name: **Alameda County-HazMat** Address: **1131 Harbor Bay Pky**
 City/State/Zip: **Alameda CA 94502** Phone: **(510) 567-6700**
 Responsible staff person: **Jennifer Eberle** Title: **Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: **Lee Family Association/vacant lot**
 Site facility address: **387-12th St., Oakland CA 94607**
 RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **4445**
 URF filing date: **11/17/92** SWEEPS No: **N/A**

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 ENVIRONMENTAL
 QUALITY CONTROL BOARD

Responsible Parties: **Addresses:** **Phone Numbers:**
 Lee Family Assoc., 1127 Webster ST., Rm 11, Oakland CA 94607,
 Attn: Homer Lee

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	500	fuel oil	removed	7/24/92

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: tank-related

Site characterization complete? YES

Date approved by oversight agency: 1/12/95

Monitoring Wells installed? YES Number: 3

Proper screened interval? YES

Highest GW depth below ground surface: 18.00'bgs Lowest depth: 19.42'bgs

Flow direction: N-NW to N-NE

Most sensitive current use: vacant lot, may be developed into commercial/residential

Are drinking water wells affected? NO Aquifer name:

Is surface water affected? NO Nearest affected SW name:

Off-site beneficial use impacts (addresses/locations):

Leaking Underground Fuel Storage Tank Program

Report(s) on file? **YES** Where is report(s) filed?
Alameda County, 1131 Harbor Bay Pky, Alameda Ca 94502

Treatment and Disposal of Affected Material:

<u>Material</u>	<u>Amount</u> (include units)	<u>Action (Treatment</u> <u>of Disposal w/destination)</u>	<u>Date</u>
Tank	500 gal	disposed to H&H (manifest #91510160)	7/24/92
Soil	108 yd ³	disposed at BFI Vasco Rd., Livermore	8/25/92
drilling muds	2000 lb	disposed to USPCI in San Jose	4/5/95

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued)
Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppm)	
	<u>Before</u>	<u>After</u>	<u>Before</u>	<u>After</u>
TPH (Gas)	NA		NA	ND
TPH (Diesel)	8100	5300#	79	7.4
Benzene	ND	ND#	ND	.001
Toluene	1.9*	.410#	.004	.002
Xylene	14	.320#	.070	.024
Ethylbenzene	4.7	.230#	.057	ND
Oil & Grease	NA			
Heavy metals	NA			
8270				ND

Comments (Depth of Remediation, etc.): "Before" soil samples are from beneath UST. . . * from initial soil stockpile. . . # "After" soil samples are from the borings drilled. "Before" water samples are from onsite wells; "after" water samples are from downgradient hydropunches.

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: **NA**

Should corrective action be reviewed if land use changes? *** **NO**, because the value is below the risk-based screening level value in ASTM's look up table. This is based on 7.4 mg/L diesel left in place (worst case) in gw below the site. Diesel is 13% naphthalene; so .0013 x 7.4 mg/L = .00962 mg/L, which is well below the value of 10.6 mg/L (gw-vapor intrusion fm gw to bldgs). This means a risk assessment need not be conducted.

Monitoring wells Decommissioned: **YES**
Number Decommissioned: **3** Number Retained: **0**
List enforcement actions taken: **none**
List enforcement actions rescinded: **none**

Leaking Underground Fuel Storage Tank Program

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Jennifer Eberle Title: Hazardous Materials Specialist
Signature: *J Eberle* Date: *4-25-95*

Reviewed by
Name: Eva Chu Title: Hazardous Materials Specialist
Signature: *E Chu* Date: *5/1/95*

Name: Amy Leech Title: Hazardous Materials Specialist
Signature: *A Leech* Date: *5/4/95*

VI. RWQCB NOTIFICATION

Date Submitted to RWQCB: *5-5-95* RB Response: *Approved*
RWQCB Staff Name: Kevin Graves Title: AWRCE
Signature: *K Graves* Date: *6/5/95*

VII. ADDITIONAL COMMENTS, DATA, ETC.

A fuel oil UST was removed on 7/24/92. County inspector Don Hwang reported kerosene leaking from hole punctured by backhoe during removal on 7/24/92. One soil sample was collected under the UST, 2' into native soil, which was stained olive and had an odor. Results: 8100 ppm TPHd, ND benzene, some TEX. The stockpile had up to 7800 ppm TPHd, ND benzene, and some TEX.

Prior to tank removal, the entire site had been excavated to a depth of approx 8-10' bgs. Subsequent to tank removal, approximately 100 yd³ of soil were excavated and offhauled to BFI Vasco Rd. landfill in Livermore. Soils were removed to the depth of groundwater, approx. 26'bgs. No confirmatory soil samples were taken. To prevent caving, the lower portion of the tank pit was backfilled w/excavated soil which did not show visible signs of contamination, which raised this portion of the site to a depth of approx. 20'bgs. Subsequently, the remainder of the tank pit was backfilled to the level of the remainder of the site (approx 8-10' below street grade) w/clean fill in May 1993.

Three SBs were installed in June 93, and developed as (temporary) wells. Soils sampled within the borehole were largely ND for TPHd and BTEX except B3, which contained significant concentrations at 20.5' and 26'bgs, which translates to approx. 30.5' and 36' below street surface (see attached table). No benzene was detected. Groundwater had low concs of TPHd in B1 and B2, but had 79,000 ppb TPHd in B3; benzene was again ND.

Leaking Underground Fuel Storage Tank Program

GW was again sampled on 4/21/94; TPHd had decreased to 7,400 ppb in B3 (benzene was 1 ppb), and was ND in B1 and 200 ppb in B2 (see attached table). PAHs were not detected fm B-3. An angle boring was placed approx. 3' away from B3, and was angled below Franklin St. on 5/16/94. The 4 soil samples collected were ND for TPHd and BTEX. The deepest soil sample (B4-6C) was taken approx 4' below the gw table. The results of the angle boring indicated that soil contamination had not spread laterally from B3 in the downgradient direction.

GW flow direction was determined on 7 separate occasions, and was found to range between N-NW and N-NE. If gw contamination from B3 had migrated, it would likely have been detected in gw in B4. However, another investigation was conducted to confirm that gw contamination had not migrated. Two hydropunches were conducted on 11/3/94 in Franklin St. near 12th St. (see attached map). GW results: ND TPHg, ND BTEX, 170 ppb and 260 ppb TPH-d. Although TPH-d was detected, these are extremely low concentrations, and are well below the values in ASTM's risk-based screening levels, which are a basis for requesting a risk assessment. In addition, extensive on-site source removal was conducted.

The County (JE) discussed these results w/Kevin Graves of RWQCB on 12/5/94. He gave his verbal approval to close the case.

from floor of excavation (not street)

TABLE 3
CHEMICAL ANALYSIS RESULTS FOR SOIL SAMPLES
 LEE FAMILY BENEVOLENT ASSOCIATION PROPERTY
 387 12TH STREET, OAKLAND, CALIFORNIA

Boring No. & Sample Date	Sample ID	Depth (ft)	TPHd (diesel) (mg/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Ethylbenzene (ug/kg)	Total Xylenes (ug/kg)	EPA 8240 (ug/kg)	EPA 8270 (ug/kg)
06/06/93	B1-1C	11.0	ND	ND	ND	ND	ND	---	---
	B1-2C	16.0	ND	ND	ND	ND	ND	---	---
	B1-3B	20.5	ND	ND	9	ND	ND	---	---
06/06/93	B2-1C	6.0	ND	ND	ND	ND	ND	---	---
	B2-2C	11.0	ND	ND	5	ND	ND	---	---
	B2-3C	16.0	ND	ND	20	ND	ND	---	---
	B2-4C	21.0	ND	ND	ND	ND	ND	---	---
06/06/93	B3-1C	11.0	ND	ND	7	ND	ND	---	---
	B3-2C	18.0	31*	ND	63	ND	ND	---	---
	B3-3B	20.5	760	ND**	410	230	320	---	---
	B3-4C	26.0	5300	ND**	70	100	200	---	---
05/16/94	B4-1C	6.0 #	ND ✓	ND ✓	ND ✓	ND ✓	ND ✓	---	---
	B4-2C	10.0 #	ND ✓	ND ✓	ND ✓	ND ✓	ND ✓	---	---
	B4-4C	21.0 #	ND ✓	ND ✓	ND ✓	ND ✓	ND ✓	---	---
	B4-6C	30.5 #	ND ✓	ND ✓	ND ✓	ND ✓	ND ✓	ND ✓	ND ✓

Notes

- Not analyzed
- ND Not detected
- * Oil also detected at concentration of 58 mg/kg
- ** Limit of detection 50 ug/kg due to elevated TPH concentration
- # Borehole depth in angled soil boring (45 degrees from vertical). Equivalent vertical depths for samples B4-1C, B4-2C, B4-4C, and B4-6C are 4.2, 7.1, 14.8, and 21.6 feet, respectively.

Detection limits (except where otherwise noted):

- TPHd -- 1 mg/kg
- Benzene -- 5 ug/kg
- Toluene -- 5 ug/kg
- Ethylbenzene -- 5 ug/kg
- Total Xylenes -- 5 ug/kg
- EPA Method 8240 -- see laboratory analysis report
- EPA Method 8270 -- see laboratory analysis report

21.6' = ~ 4' below water

TABLE 2
CHEMICAL ANALYSIS RESULTS FOR GROUNDWATER
SAMPLES COLLECTED IN SITE MONITORING WELLS
 LEE FAMILY BENEVOLENT ASSOCIATION PROPERTY
 387 12TH STREET, OAKLAND, CALIFORNIA

Sampling Location	Sampling Date	TPHd (diesel) (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	EPA 8240 (ug/L)	EPA 8270 (ug/L)
B1	06/07/93	0.07	ND	4	ND	ND	---	---
B1 (dup.)	06/07/93	0.09	ND	3	ND	ND	---	---
B1	04/21/94 ✓	ND ✓	ND ✓	ND ✓	ND ✓	ND ✓	---	---
B2	06/07/93	0.3 ✓	ND ✓	1	ND ✓	ND ✓	---	---
B2	04/21/94	0.2 ✓	ND ✓	ND ✓	ND ✓	ND ✓	---	---
B3	06/07/93	79	ND	4	57	70	---	---
B3	04/21/94	7.4 ✓	1 ✓	2 ✓	24 ✓	ND ✓	21 ✓	ND ✓
					<i>nearly the same</i>		(Ethylbenzene)	
California MCL*		---	1	100**	680	1750		

Notes

- Not analyzed/not available
- ND Not detected
- * California Department of Health Services Maximum Contaminant Level for drinking water.
- ** Action Level. No MCL exists (unregulated chemical).

Detection limits:

- TPHd -- 0.05 mg/L
- Benzene -- 0.5 ug/L
- Toluene -- 0.5 ug/L
- Ethylbenzene -- 0.5 ug/L
- Total Xylenes -- 2 ug/L, except 4/21/94 sample from B3 - 5 ug/L
- EPA Method 8240 -- see laboratory analysis report
- EPA Method 8270 -- see laboratory analysis report

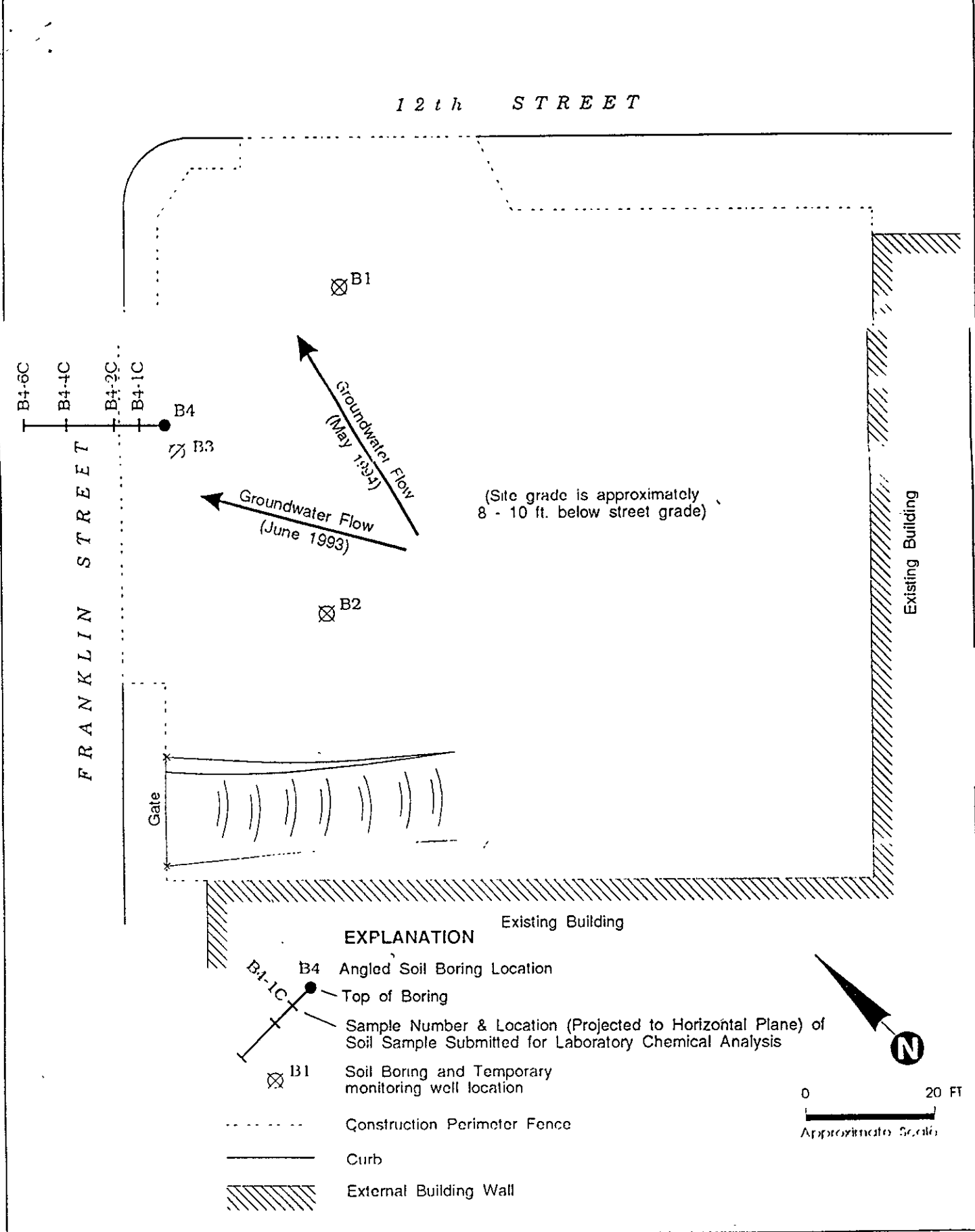


Figure 2 : SITE PLAN SHOWING GROUNDWATER FLOW DIRECTION AND RECENT SOIL SAMPLING LOCATIONS

TABLE 1
GROUNDWATER ELEVATION DATA SUMMARY
 LEE FAMILY BENEVOLENT ASSOCIATION PROPERTY
 387 12TH STREET, OAKLAND, CALIFORNIA

Well No. T.O.C. Elev.	B1 102.54	B2 101.79	B3 102.44			
Date	Depth to Water	Relative GW Elev.*	Depth to Water	Relative GW Elev.*	Depth to Water	Relative GW Elev.*
Phase I						
06/17/93	18.78	83.76	18.00	83.79	18.70	83.74
06/24/93	18.82	83.72	18.05	83.74	18.76	83.68
07/01/93	18.86	83.68	18.10	83.69	18.81	83.63
Phase II						
04/21/94	19.40	83.14	18.61	83.18	19.29	83.15
05/12/94	19.38	83.16	18.58	83.21	19.27	83.17
05/13/94	19.42	83.12	18.62	83.17	19.31	83.13
05/16/94	19.41	83.13	18.61	83.18	19.30	83.14

* Elevation relative to arbitrary datum.

T.O.C. - Top of casing
 GW - Ground Water

*Casing sticks out
 ~2' over ground*

*DTW fm bottom of excavation
 or 8-10' below street grade.*

EXPLANATION



Soil Boring Location



B-1 Abandoned Monitoring Well



B-4 Previously Drilled Angle Boring

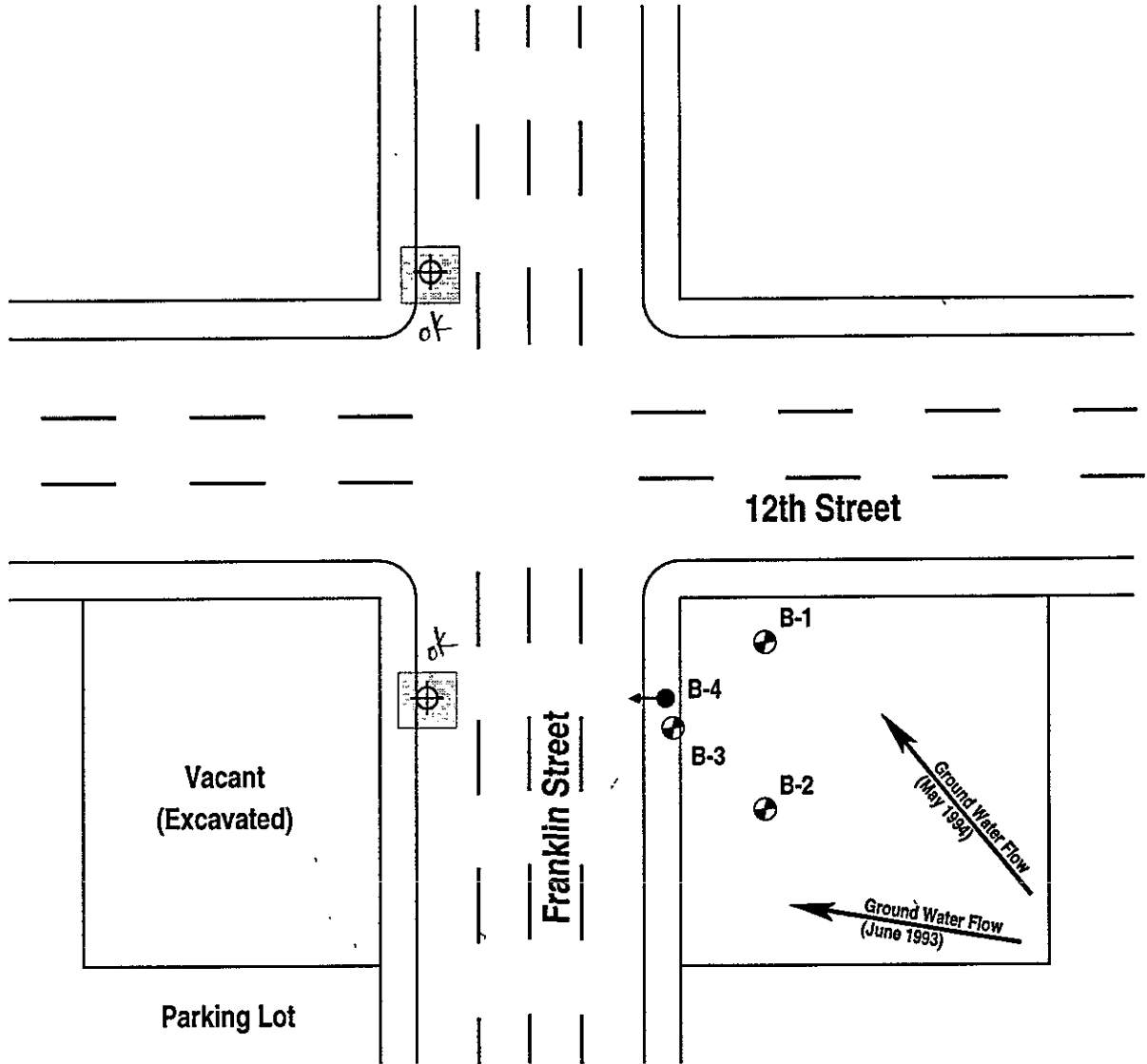


Figure 1. Soil Boring Locations - 387 12th Street, Oakland, California