



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

**REMEDIAL ACTION COMPLETION CERTIFICATION**

January 6, 1999

Mr. Norman Alberts  
Berkeley Land Company  
1211 Newell Avenue, #120  
Walnut Creek, CA 94596

**RE: STID # 4803 Berkeley Land Company**  
**5100 Telegraph Avenue, Oakland, California 94609**

Dear Mr. Alberts:

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: Chuck Headlee, San Francisco Bay RWQCB  
Dave Deaner, SWRCB, UST Cleanup Fund Program (with enclosure)  
Leroy Griffin, Oakland Fire Department  
Susan Hugo (2 copies of letter only)

ALAMEDA COUNTY<sup>4</sup>  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



ENVIRONMENTAL HEALTH SERVICES  
1131 Harbor Bay Parkway, Suite 250  
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January 6, 1999

Mr. Norman Alberts  
Berkeley Land Company  
1211 Newell Avenue, #120  
Walnut Creek, CA 94596

**RE: Fuel Leak Site Case Closure – Berkeley Land Company ( STID # 4803 )**  
**5100 Telegraph Avenue, Oakland, California 94609**

Dear Mr. Alberts:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 ( Article 4, Section 25299.37 [h] ). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Health Services, Local Oversight Program 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.

**Site Investigation and Cleanup Summary:**

Please be advised that the following conditions exist at the site:

- One hundred seventy parts per million (ppm) Total Petroleum Hydrocarbon (TPH) as Gasoline, 110 ppm TPH as kerosene, 67 ppm TPH as motor oil, 340 ppm oil and grease, 1.1 ppm ethyl benzene, 1.0 ppm toluene, 3.5 ppm xylene and 0.17 ppm tetrachloroethene remain in the soil at the site.
- Ten parts per billion (ppb) cis-1,2-dichloroethene, 86 ppb tetrachloroethene, 17 ppb trichloroethene and 1.4 ppb chloroform remain in the groundwater beneath the site.
- Prior to any construction activities at the site, a risk management plan must be submitted and approved by this agency.
- One groundwater monitoring well (MW-1) remains at the site and can not be located. The four remaining wells (MW-2 to MW-5) were properly decommissioned.

If you have any questions, please contact me at (510) 567-6780. Thank you.

Sincerely,

Susan L. Hugo, Hazardous Materials Specialist

Enclosures:

1. Case Closure Letter
2. Case Closure Summary

c: Leroy Griffin, Oakland Fire Department  
SH / files

**CASE CLOSURE SUMMARY**  
**Leaking Underground Fuel Storage Tank Program**

pb# 01-2444

ENVIRONMENTAL  
 PROTECTION

98 DEC 18 PM 0:46

**I. AGENCY INFORMATION**

Agency Name: Alameda County-HazMat  
 City/State/Zip: Alameda, CA 94502  
 Responsible Staff Person: Susan L. Hugo

Date: November 2, 1998  
 Address: 1131 Harbor Bay Parkway  
 Phone: (510) 567-6700  
 Title: Hazardous Materials Specialist

**II. CASE INFORMATION**

Site Facility Name: Berkeley Land Company  
 Site Facility Address: 5100 Telegraph Avenue, Oakland, CA 94609  
 RB LUSTIS Case No: N/A  
 URF Filing Date: ---

Local Case No./LOP Case No. 4803  
 SWEEPS No.: N/A

Responsible Parties:

Berkeley Land Company  
 Attn: Mr. Norman Alberts

Address:

1211 Newell Avenue, #120  
 Walnut Creek, CA 94596

Phone Numbers:

QUALITY CONTROL BOARD  
 DEC 14 1998  
 CALIFORNIA REGIONAL WATER

<u>Tank No:</u>	<u>Size in gal:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	500	Kerosene	Removed	10/6/95
2	500	Kerosene	Removed	10/11/95
3	500	Kerosene	Removed	10/23/95

**III. RELEASE AND SITE CHARACTERIZATION INFORMATION**

Cause and type of release: Unknown Site characterization complete: Yes  
 Date Approved by oversight agency: 3/2/94 Monitoring wells installed: Yes  
 Number: Five (5) Properly screened interval?: Yes  
 Highest GW depth below ground surface: 10.36 feet Lowest depth: 20.22 feet  
 Flow direction: West -Southwest Most sensitive current use: Commercial  
 Are drinking water wells affected: No Aquifer name: NA  
 Is surface water affected?: No Nearest affected SW name: NA  
 Off-site beneficial use impacts (address /location): Unknown Report (s) on file?: Yes  
 Where is report (s) filed?: Alameda County, 1131 Harbor Bay Parkway, Alameda, CA 94502

**Treatment and Disposal of Affected Materials:**

<u>Materials</u>	<u>Amount (Include units)</u>	<u>Action (Treatment /or Disposal with Destination)</u>	<u>Date</u>
Tanks	3 USTs,	Disposed at Erickson, Richmond, CA	10/95
Soil	1,950 tons	Disposed at Forward Land Fill, Manteca, CA; Remco, Richmond, CA & ECDC, East Carbon, Utah	1993-1996
Water	1,500 gallons	Reportedly disposed off site	Unknown

<u>Contaminant</u>	<u>Soil (ppm)</u>		<u>Water (ppb)</u>	
	<u>Before*</u>	<u>After**</u>	<u>Before***</u>	<u>After****</u>
TPH (gasoline)	2,300	170	340	nd
TPH (diesel)	nd	nd	nd	-
TPH (kerosene)	1,500	110	330	nd
TPH (motor oil)	-	67	nd	-
TOG	570	340	nd	nd
Benzene	nd	nd	5.7	nd
Ethyl benzene	3.6	1.1	3.6	nd
Toluene	nd	1.0	3.6	nd
Xylene	17	3.5	15	nd
Metals, solvents	See Additional Comments			

\*Soil sample BT(8) collected from bottom of tank on 10/23/95.  
 \*\*Confirmation sidewall samples (SW-1, SW-3, & SW-8) collected on 11/2-4/95.  
 \*\*\*Water samples collected from bottom of excavation on 11/1-4/95).  
 \*\*\*\*Groundwater sample collected from monitoring wells on the last sampling event (11/25/96).

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**CASE CLOSURE SUMMARY**  
**Leaking Underground Fuel Storage Tank Program**  
Page 2 of 3

**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: **Risk Management Plan must be submitted and approved by ACDEH prior to any future construction and /or change in land use due to presence of chlorinated solvents at site.**

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

Monitoring wells decommissioned: **Yes**

Number Decommissioned: **Four (4)**

Number Retained: **Well MW-1 can not be located.**

List enforcement actions taken: **None**

List enforcement action rescinded: **NA**

**V. LOCAL AGENCY REPRESENTATIVE DATA**

Name: Susan L. Hugo

Title: Hazardous Materials Specialist

Signature: *Susan L. Hugo* Date: *12-1-98*

**Reviewed by:**

Name: Thomas Peacock

Title: Manager, LOP

Signature: *Thomas Peacock* Date: *12-1-98*

Name: ~~Amir Gholami~~ DON HUANG

Title: Hazardous Materials Specialist

Signature: *Don Huang* Date: *12/1/98*

**VI. RWQCB NOTIFICATION**

Date Submitted to RB: *12-2-98* RB Response: *concur*

RWQCB Staff Name: Chuck Headlee

Title: Engineering Geologist

Signature: *Chuck Headlee* Date: *12/14/98*

**VII. ADDITIONAL COMMENTS**

The subject site was reported to have contained a street car barn for the "Key System," a former regional public transit system. The site is bounded by 51<sup>st</sup> Street to the north, Telegraph Avenue to the east, and Shattuck Street to the west. An old stream channel of Temescal Creek crosses beneath the site (see Figure 5). The stream was apparently confined to a buried concrete abandoned culvert prior to construction of the street car barn. Review of aerial photographs between 1947 to 1985 appear to indicate that the street car barn was no longer present at the site by 1950 and that the site remained as commercial property. All the former buildings were removed and the site has now been re-developed in to retail shops.

**CASE CLOSURE SUMMARY**  
**Leaking Underground Fuel Storage Tank Program**  
Page 3 of 3

In 1987, a site investigation was conducted which included drilling six exploratory borings B-1 to B-6 ( see figure 4) to depths between 2.5 feet to 15 feet bgs and the installation of one monitoring well (MW-1). Soil contamination was detected up to 5200 ppm Total Extractable Hydrocarbons (TEH), 13 ppm naphthalene and 31 ppb ethylbenzene. Groundwater sample showed up to 18 ppb tetrachloroethene but non-detect for semi-volatiles and TEH (see Table 6). Metals were detected in soil (up to 13 ppm arsenic, 36 ppm chromium, 70 ppm copper, 104 ppm lead, 0.6 ppm mercury, 49 ppm nickel and 160 ppm zinc) and in groundwater (up to 20 ppb arsenic, 140 ppb chromium, 60 ppb copper, 110 ppb nickel and 140 ppb zinc). The shallow surface soil at the site consists of fill and backfill materials composed of soil and debris. The fill deepens to approximately 17.5 feet bgs across the northwestern portion of the site.

In July 1993, as part of a property transfer, subsurface investigation was conducted to evaluate the extent of petroleum hydrocarbon and chlorinated solvent releases found in soil and groundwater at the site. Twenty-one (21) exploratory borings (E-B1 to EB-20; see Figure2) were drilled at the site to total depths ranging from 11.5 to 17.5 feet below grade. Contamination as high as 290 ppm TPH as diesel, 440 ppm TPH as gasoline, 0.027 ppm benzene, 1.4 ppm toluene, 2.6 ppm ethyl benzene, 5.9 ppm xylenes, 9,900 ppm TOG, 2.4 ppm tetrachloroethene and 1.9 ppm methyl naphthalene were detected in soil at the site. All contaminants were detected in soil samples collected between 11 feet to 16 feet bgs with the exception of TOG at 5 to 5.5 feet bgs. Groundwater samples collected from the five on-site wells installed prior to 1993 (date unknown) found no detectable level of TPH diesel, TPH gasoline, toluene, ethylbenzene, and xylene. Low concentration of benzene was detected in well MW-5 at 0.64 ppb. Chlorinated solvents were detected in groundwater as high as 24 ppb dichloroethene, 250 ppb tetrachloroethene, 11 ppb trichloroethene, and 3 ppb vinyl chloride.

In September 1993, soil removal was conducted in the areas impacted by petroleum hydrocarbons and chlorinated solvents. Approximately 325 tons of soil was excavated. Verification soil samples (see Figure 3; Table 3) showed no detectable level of petroleum hydrocarbon contaminants but very low levels of tetrachloroethene (0.050 ppm to 0.17 ppm) remain at the site. In addition 1,500 gallons of groundwater was pumped from the excavation prior to backfilling. On March 2, 1994, the County issued a closure letter that the tetrachloroethene (PCE) remaining at the site no longer poses a threat to human health but groundwater needs to be monitored for a year.

In October 1995, two underground storage tanks (USTs) were uncovered during construction activities at the site. The USTs were used to store kerosene and were removed in October 6, 1995. A 500-gallon kerosene UST (third tank uncovered at the site) was removed on October 23, 1995. Soil samples collected following the removal of the USTs showed up to 1500 ppm TPH as kerosene, 2300 ppm TPH gasoline, 570 ppm TOG, 3.6 ppm ethyl benzene, 17 ppm xylenes. Grab water sample showed up to 190 ppb TPH kerosene, 340 ppb TPH gasoline, 5.7 ppb benzene, 3.6 toluene, 3.6 ppb ethylbenzene and 15 ppb xylenes. Overexcavation was conducted around the former tank areas to a depth of 18 feet bgs (Figure1) and verification samples showed concentration listed in the above table (soil after cleanup). Groundwater samples collected from the wells consistently showed no detectable level of TPH kerosene, TOG, TPH gasoline, benzene, toluene, ethyl benzene and xylene. Low levels of chlorinated solvents in ground water remains at the site. Groundwater has been monitored since 1993 (see Table 9). Petroleum hydrocarbon was not detected in any of the remaining four wells. However, low levels of chlorinated solvents (18 ppb tetrachloroethene, 0.88 ppb trichloroethene, 1.4 ppb chloroform) groundwater remains at the site.

**No further investigations related to the USTs removed at the site are recommended since the site appears to meet the San Francisco Bay RWQCB's definition of a "low risk" soil and groundwater case:**

- 1) Aggressive source removal has occurred at the site. The tanks have been removed and approximately 1350 tons of soil removed from the site. In addition, 1500 gallons of groundwater were pumped prior to backfilling the excavation.
- 2) The extent of soil and groundwater contamination has been adequately characterized. Although petroleum hydrocarbons in soil and groundwater remain at the site, it does not appear to be an on going source. Groundwater data collected to date showed that the plume is stable and not migrating.
- 3) Analytical groundwater data collected for the site showed no significant impact to groundwater.
- 4) No water wells, deeper drinking water wells, surface water or other sensitive receptors are likely to be impacted.
- 5) The site does not appear to present a significant risk to human health and the environment.
- 6) A risk management plan is required to manage the residual contamination left at the site and will include notifying ACDEH and City Building and Planning Department prior to any construction, redevelopment and /or change in land use.

Berkeley Land Company  
 "Temescal Plaza"  
 51st Street & Telegraph Avenue  
 Oakland, California

**TABLE 1**

SUMMARY OF LABORATORY ANALYSES  
 SOIL

Date	Sample	Depth (feet)	TPH as Kerosene	TPH as Motor Oil	TOG	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes
10/23/95	BT(8)	8.0	1,500	--	570	ND	2,300*	ND	ND	3.6	17
11/02/95	SW-1	13.0	110	51	72	ND	140*	ND	1.0	1.1	3.5
	SW-2	13.0	23	13	ND	ND	9.7*	ND	ND	ND	0.14
	SW-3	13.0	3.6	67	ND	ND	3.0*	ND	0.013	0.017	0.061
	SW-4	13.0	22	12	ND	ND	62*	ND	0.40	0.46	1.4
11/03/95	SW-5	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
11/04/95	SW-6	17.0	77	ND	63	ND	170*	ND	ND	0.30	0.94
	SW-7	13.0	2.0	ND	ND	ND	3.2*	ND	ND	0.0085	0.025
	SW-8	14.0	19	60	340	ND	76*	ND	0.26	0.39	0.44

EPA Method 8010  
 Constituents

Sample	( $\mu\text{g}/\text{kg}$ )	Cadmium	Chromium	Lead	Nickel	Zinc
SW-1	ND	ND	24	10	28	39

\* Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be gasoline.  
 ND = Non-detectable.

-- Indicates analysis was not performed.

Results are in milligrams per kilogram (mg/kg), unless otherwise indicated.

Berkeley Land Company  
 "Temescal Plaza"  
 51st Street & Telegraph Avenue  
 Oakland, California

TABLE 2

SUMMARY OF LABORATORY ANALYSES  
 WATER

<u>Date</u>	<u>Sample</u>	<u>Depth to Water (feet)</u>	<u>TPH as Kerosene</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethylbenzene</u>	<u>Xylenes</u>	<u>TOG (mg/L)</u>
11/01/95	Water-E1	17.0	190	340	5.7	3.6	3.6	15	ND
11/04/95	Water-2	18.0	330	ND	ND	ND	ND	ND	ND

<u>Sample</u>	<u>TPH as Diesel</u>	<u>TPH as Motor Oil</u>	<u>Total Lead (mg/L)</u>	<u>Cadmium (mg/L)</u>	<u>Chromium (mg/L)</u>	<u>Nickel (mg/L)</u>	<u>Zinc (mg/L)</u>	<u>EPA Method 8010 Constituents</u>
Water E-1	ND	ND	ND	--	--	--	--	--
Water E-2	ND	ND	ND	ND	ND	ND	ND	ND*

\* EPA method 8010 constituents were all non-detectable, except for bromodichloromethane, 2-chloroethylvinyl ether, chloroform, and dibromochloromethane, detected at 8.3 µg/L, 4.3 µg/L, 18 µg/L, and 1.3 µg/L, respectively.

-- Indicates analysis was not performed.

ND = Non-detectable.

Results are in micrograms per liter (µg/L), unless otherwise indicated.

KEI-P93-0603.R2  
 November 9, 1993

**TABLE 3**

SUMMARY OF ANALYTICAL RESULTS  
 SOIL

<u>Date</u>	<u>Sample Number</u>	<u>Depth (feet)</u>	<u>TPH as Diesel</u>	<u>TOG</u>	<u>PCE (ppb)</u>	<u>2-Methyl-naphthalene (ppb)</u>
9/30/93	EB3-N*	16.5	ND	ND	--	ND
	EB3-S*	16.5	ND	ND	--	ND
	EB3-W*	16.5	ND	ND	--	ND
9/29/93	EB3-E*	16.5	ND	ND	--	ND
	EB6-N	14.5	--	570	--	--
	EB6-S	14.5	--	52	--	--
	EB6-E	14.5	--	680	--	--
10/15/93	EB6-N2	14.5	--	ND	--	--
	EB6-S2	14.5	--	ND	--	--
	EB6-E2	14.5	--	ND	--	--
9/29/93	EB8-N	8.0	--	ND	--	--
	EB8-S	8.0	--	ND	--	--
	EB8-W	8.0	--	ND	--	--
	EB8-E	8.0	--	ND	--	--
9/30/93	EB15-N	5.0	--	210	--	--
	EB15-S	5.0	--	ND	--	--
	EB15-W	5.0	--	54	--	--
	EB15-E	5.0	--	ND	--	--
10/15/93	EB15-N2	5.0	--	460	--	--
	EB15-W2	5.0	--	82	--	--
10/22/93	EB15-N3	5.0	--	ND	--	--
	EB15-W3	5.0	--	ND	--	--
9/30/93	EB16-N	7.0	--	ND	--	--
	EB16-S	7.0	--	ND	--	--
	EB16-W	7.0	--	ND	--	--
	EB16-E	7.0	--	ND	--	--
	EB20-N**	15.0	--	--	120	--
	EB20-S**	15.0	--	--	50	--
	EB20-W**	15.0	--	--	77	--
	EB20-E**	15.0	--	--	170	--



KEI-P93-0603.R2  
November 9, 1993

TABLE 3

SUMMARY OF ANALYTICAL RESULTS  
WATER

<u>Sample Number</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>	<u>TOG (ppm)</u>
(Collected on October 14, 1993)						
EB3-W*	ND	ND	ND	ND	1.7	ND

NOTE: The water sample was collected from the excavation. The results of the analysis may not be representative of formation water, and should be used for comparative informational purposes only.

ND = Non-detectable.

\* All EPA method 8270 and 8010 constituents were non-detectable, except for cis-1,2-dichloroethene, which was detected at a concentration of 0.98 ppb.

Results in parts per billion (ppb), unless otherwise indicated.

KEI-P93-0603.R1  
August 30, 1993

**PPM**

TABLE 4

SUMMARY OF LABORATORY ANALYSES  
SOIL (ppm)

<u>Date</u>	<u>Sample Number</u>	<u>TPH as Diesel</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>	<u>TOG</u>
7/28/93	EB1(5)	ND	ND	ND	ND	ND	ND	ND
	EB1(10)	ND	ND	ND	ND	ND	ND	ND
	EB1(15)	1.0♦	1.2	ND	0.0073	0.0060	0.016	ND
7/29/93	EB2(5.5)	--	ND	ND	ND	ND	ND	ND
	EB2(10.5)	--	ND	ND	ND	ND	ND	ND
	EB3(5)	5.9♦♦	2.7	0.013	0.012	0.016	0.051	270
	EB3(10.5)	8.2♦♦	10*	ND	ND	0.026	0.059	ND
	EB3(15.5)	290♦♦	440*	ND	1.4	2.6	5.9	70
7/28/93	EB4(5)	--	ND	ND	ND	ND	ND	ND
	EB4(10)	--	ND	ND	ND	ND	ND	ND
	EB4(15)	--	ND	ND	ND	ND	ND	ND
	EB5(5)	ND	ND	ND	ND	ND	ND	ND
	EB5(10)	ND	ND	ND	ND	ND	ND	ND
	EB5(15)	ND	ND	ND	ND	ND	ND	ND
	EB6A(5)	4.4♦♦	ND	ND	ND	ND	ND	ND
7/29/93	EB6B(10.5)	8.4♦♦	ND	ND	ND	ND	ND	1,700
	EB6B(14.5)	11.0♦♦	ND	ND	ND	ND	ND	210
	EB7(5)	--	ND	ND	ND	ND	ND	ND
	EB7(10)	--	ND	ND	ND	ND	ND	ND
	EB7(15)	--	ND	ND	ND	ND	ND	ND
	EB8(5.5)	--	ND	ND	ND	ND	ND	9,900
	EB8(11)	--	1.5	0.027	0.025	0.0063	0.030	1,200
	EB8(13)	--	1.1	0.019	0.016	0.0052	0.023	90
7/27/93	EB9(5)	ND	ND	ND	ND	ND	ND	ND
	EB9(10)	ND	ND	ND	ND	ND	ND	ND
7/26/93	EB10(10)	--	ND	ND	ND	ND	ND	ND
	EB10(14.5)	--	ND	ND	ND	ND	ND	ND
7/28/93	EB11(5.5)	ND	ND	ND	ND	ND	ND	ND
	EB11(10)	ND	ND	ND	ND	ND	ND	ND
	EB11(15)	ND	ND	ND	ND	ND	ND	ND

KEI-P93-0603.R1  
 August 30, 1993

TABLE 4 (Continued)

SUMMARY OF LABORATORY ANALYSES  
 SOIL

<u>Date</u>	<u>Sample Number</u>	<u>TPH as Diesel</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>	<u>TOG</u>
7/30/93	EB12(6)	ND	ND	ND	ND	ND	ND	ND
	EB12(10.5)	ND	ND	ND	ND	ND	ND	ND
	EB13(5.5)	--	ND	ND	ND	ND	ND	ND
	EB13(11)	--	ND	ND	ND	ND	ND	ND
7/28/93	EB14(5)	ND	ND	ND	ND	ND	ND	ND
	EB14(10)	ND	ND	ND	ND	ND	ND	ND
	EB14(13)	ND	ND	ND	ND	ND	ND	ND
	EB15(5)	--	ND	ND	ND	ND	ND	230
	EB15(12)	--	ND	ND	0.0071	0.0052	0.011	ND
	EB16(6.5)	--	ND	ND	ND	ND	0.0071	160
	EB16(10.5)	--	ND	ND	ND	ND	ND	190
	EB16(12)	--	ND	ND	ND	ND	ND	ND
7/29/93	EB17(5)	--	ND	ND	ND	ND	ND	ND
	EB17(10)	--	ND	ND	ND	ND	ND	ND
	EB17(15)	--	ND	ND	ND	ND	ND	ND
7/28/93	EB18(5)	ND	ND	ND	ND	ND	ND	ND
	EB18(10)	ND	ND	ND	ND	ND	ND	ND
	EB18(14.5)	ND	ND	ND	0.0053	ND	0.0065	ND
	EB19(7)	--	ND	ND	ND	ND	ND	ND
	EB19(12)	--	ND	ND	ND	ND	ND	ND
	EB19(15)	--	ND	ND	ND	0.0071	0.0052	0.011
7/30/93	EB20(5.5)	ND	ND	ND	ND	ND	ND	ND
	EB20(10.5)	1.9	ND	ND	ND	ND	ND	ND
	EB20(16)	ND	ND	ND	ND	ND	ND	ND

KEI-P93-0603.R1  
August 30, 1993

TABLE 5

SUMMARY OF LABORATORY ANALYSES  
SOIL (ppb)

<u>Date</u>	<u>Sample Number</u>	<u>Tetrachloroethene</u>	<u>2-Methylnapthalene</u>
7/28/93	EB1 (5)	ND	
	EB1 (10)	ND	ND
	EB1 (15)	ND	ND
7/29/93	EB3 (5)	ND	
	EB3 (10.5)	ND	ND
	EB3 (15.5)	ND	150
7/28/93	EB4 (5)	--	1,900
	EB4 (10)	--	ND
	EB4 (15)	--	ND
	EB5 (5)	ND	
	EB5 (10)	ND	--
	EB5 (15)	ND	--
7/29/93	EB6A (5)	ND	
	EB6B (10.5)	12	ND
	EB6B (14.5)	ND	ND
	EB9 (5)	ND	
	EB9 (10)	ND	--
7/28/93	EB11 (5.5)	ND	
	EB11 (10)	ND	ND
	EB11 (15)	ND	ND
7/30/93	EB12 (6)	ND	
	EB12 (10.5)	5.2	--
7/28/93	EB14 (5)	ND	
	EB14 (10)	ND	--
	EB14 (13)	ND	--
7/29/93	EB17 (5)	ND	
	EB17 (10)	ND	--
	EB17 (15)	ND	--
7/28/93	EB18 (5)	ND	
	EB18 (10)	ND	--
	EB18 (14.5)		--

KEI-P93-0603.R1  
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TABLE 5 (Continued)

SUMMARY OF LABORATORY ANALYSES  
SOIL

<u>Date</u>	<u>Sample Number</u>	<u>Tetrachloroethene</u>	<u>2-Methylnaphthalene</u>
7/30/93	EB20(5.5)	66	ND
	EB20(10.5)	770	ND
	EB20(16)	2,400	ND

NOTE: All EPA method 8010 and 8270 constituents were non-detectable in the soil samples analyzed, except as shown above.

-- Indicates analysis was not performed.

ND = Non-detectable.

Results in parts per billion (ppb), unless otherwise indicated.

**TABLE 6**

Soil Sample Analysis - Organics

Sample Location & Depth	Volatiles	Semi-Volatiles	Total Extractable Hydrocarbons
	EPA 8240 Results	EPA 8270 Results	
B1-3' & 7'	ND	ND	<30 mg/kg
B1-10' & 15'	ND	ND	<30 mg/kg
B2-4.5' & 7'	ND	ND	NA
B3-3' & 7'	ND	ND	NA
B4-2'	31 ug/kg Ethylbenzene	ND	5200 mg/kg
B5-3'	ND	13,000 ug/kg Napthalene	<1 mg/kg
B5-7'	ND	ND	NA
B6-2.5' & 5.5'	ND	ND	NA

ND - Not Detected

NA - Not Analyzed

< - symbol meaning not detected at or above the indicated detection limit.

4.3 ANALYTICAL RESULTS - WATER

The analytical results of water sample analysis are attached to this report as Appendix 1 and are presented in the tables below.

**TABLE 3**

Water Sample Analysis - Organics

<u>Parameter</u>	<u>Sample W-MW-1</u>
Volatiles	18 ug/l Tetrachloroethene
EPA 624 - 8240	
Semi-Volatiles	ND
EPA 625 - 8270	
Total Extractable Hydrocarbon	<1

ND - Not Detected

< Symbol meaning not detected at or above the indicated detection limit.

**TABLE 7**

Soil Sample Analysis - Metals

<u>Consistuent</u>	<u>Sample Location</u>							
	<u>B1</u> <u>3' &amp; 7'</u>	<u>B1</u> <u>10' &amp; 15'</u>	<u>B2</u> <u>4.5' &amp; 7'</u>	<u>B3</u> <u>3' &amp; 7'</u>	<u>B4</u> <u>2'</u>	<u>B5</u> <u>3'</u>	<u>B5</u> <u>7'</u>	<u>B6</u> <u>2.5' &amp; 5.5'</u>
Antimony	<1	<1	<1	<1	<1	<1	<1	<1
Arsenic	3	6	6	13	2	4	2	5
Beryllium	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium	<1	<1	<1	<1	<1	<1	<1	<1
Chromium	27	36	36	29	33	34	24	30
Copper	19	24	51	70	66	23	15	21
Lead	8	10	41	104	44	<2	6	6
Mercury	<.1	<.1	0.2	0.6	0.3	<.1	<.1	<.1
Nickel	37	49	44	43	32	34	23	36
Selenium	<1	<1	<1	<1	<1	<1	<1	<1
Silver	<1	<1	<1	<1	<1	<1	<1	<1
Thallium	<1	<1	<1	<1	<1	<1	<1	<1
Zinc	48	47	70	160	109	56	33	54

All results reported in mg/kg

< Symbol meaning not detected at or above the indicated detection limit.

4.3 ANALYTICAL RESULTS - WATER

The analytical results of water sample analysis are attached to this report as Appendix 1 and are presented in the tables below.

**TABLE 8**

Water Sample Analysis - Organics

<u>Parameter</u>	<u>Sample W-MW-1</u>
Volatiles	18 ug/l Tetrachloroethene
EPA 624 - 8240	
Semi-Volatiles	ND
EPA 625 - 8250	
Total Extractable Hydrocarbon	<1

ND - Not Detected

**TABLE 8.1**

Water Sample Analysis - Metals

<u>Constituent</u>	<u>Sample W-MW-1</u>	<u>Standard (1)</u>
Antimony	<0.01	--
Arsenic	0.02	0.5
Beryllium	<0.01	--
Cadmium	<0.01	0.01
Chromium	0.14	0.05
Copper	0.06	1.0
Lead	<0.02	0.05
Mercury	<0.001	0.002
Nickel	0.11	--
Selenium	<0.01	0.01
Silver	<0.01	0.05
Thallium	<0.01	--
Zinc	0.14	5.0

(1) Primary and Secondary Maximum Contaminant Levels

All results reported in mg/l.

< Symbol meaning not detected at or above the indicated detection limit



**Table 9**  
 Summary of Laboratory Analyses  
 Water

Date	Well #	TPH as		TPH as			Ethyl	
		Kerosene	TOG	Gasoline	Benzene	Toluene	benzene	Xylenes
11/25/96	MW1	WELL WAS INACCESSIBLE		ND	ND	ND	ND	ND
	MW2	--	ND	ND	ND	ND	ND	ND
	MW4	WELL WAS INACCESSIBLE						
	MW5	ND	ND	ND	ND	ND	ND	ND
8/30/96	MW1	--	ND	ND	ND	ND	ND	ND
	MW2	--	ND	ND	ND	ND	ND	ND
	MW4	WELL WAS INACCESSIBLE						
	MW5	64	ND	ND	ND	ND	ND	ND
5/21/96	MW1	--	ND	ND	ND	ND	ND	ND
	MW2	--	ND	ND	ND	ND	ND	ND
	MW3	WELL WAS DESTROYED ON FEBRUARY 29, 1996						
	MW4	WELL WAS INACCESSIBLE						
	MW5	200+	ND	ND	ND	ND	ND	ND
2/19/96	MW1	--	ND	ND	1.0	6.2	0.60	3.9
	MW2	--	ND	ND	0.82	4.8	0.52	3.5
	MW3	--	ND	ND	1.4	8.1	0.73	4.4
	MW4	WELL WAS INACCESSIBLE						
	MW5	ND	ND	ND	1.1	6.7	0.63	4.2
10/6/95	MW1	--	ND	69♦	ND	ND	ND	ND
	MW2	--	ND	ND	ND	ND	ND	ND
	MW3	--	ND	ND	ND	ND	ND	ND
	MW4	--	ND	ND	ND	ND	ND	ND
	MW5	--	ND	ND	ND	ND	ND	ND
9/18/95**	MW1	--	ND	81♦	ND	ND	ND	ND
	MW2	--	ND	ND	ND	ND	ND	ND
	MW3	--	ND	ND	ND	ND	ND	ND
	MW4	--	ND	ND	ND	ND	ND	ND
	MW5	--	ND	ND	ND	ND	ND	ND
8/24/95**	MW1	--	--	63	ND	1.1	ND	0.86
	MW2	--	--	ND	ND	0.57	ND	0.56
	MW3	--	--	ND	ND	0.50	ND	0.70
	MW4	--	--	ND	ND	0.53	ND	0.60
	MW5	--	--	ND	ND	0.81	ND	0.72

**Table 9**  
 Summary of Laboratory Analyses  
 Water

Date	Well #	TPH as Kerosene	TOG	TPH as Gasoline	Benzene	Toluene	Ethyl benzene	Xylenes
5/23/95	MW1	--	ND	100♦	ND	ND	ND	ND
	MW2	--	ND	ND	ND	ND	ND	ND
	MW3	--	ND	ND	ND	ND	ND	ND
	MW4	--	ND	ND	ND	ND	ND	ND
	MW5	--	ND	ND	ND	ND	ND	ND
2/25/95	MW1	--	ND	81♦	ND	ND	ND	ND
	MW2	--	ND	ND	ND	ND	ND	ND
	MW3	--	ND	ND	ND	ND	ND	ND
	MW4	--	ND	ND	ND	ND	ND	ND
	MW5	--	ND	ND	ND	ND	ND	ND
6/29/93	MW1*	--	ND	76♦	ND	ND	ND	ND
	MW2*	--	ND	ND	ND	ND	ND	ND
	MW3*	--	ND	ND	ND	ND	ND	ND
	MW4*	--	ND	ND	ND	ND	ND	ND
	MW5*	--	ND	ND	0.64	ND	ND	ND

♦ Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be gasoline.

\* TPH as diesel and all EPA method 8270 constituents were non-detectable.

\*\* TOG was sampled on September 8, 1995, instead of August 24, 1995. Furthermore, the analytical results of the ground water samples (toluene and xylenes) collected on August 24, 1995, were inconsistent with the previous analytical results for these wells.

+ Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a kerosene and non-kerosene mixture.

ND = Non-detectable.

-- Indicates analysis was not performed.

Results are in micrograms per liter (µg/L), except for TOG, which is in milligrams per liter (mg/L).

**Table 10**

Summary of Laboratory Analyses

~~SUB~~ WATER

Date	Sample Number	cis-1, 2-Dichloro-ethene	Tetrachloro-ethene	Trichloro-ethene	Vinyl Chloride	Chloroform
5/29/97	MW1	WELL WAS INACCESSIBLE				
	MW2	ND	18	0.88	ND	1.4
	MW4	WELL WAS INACCESSIBLE				
	MW5	10	86	17	ND	ND
2/27/97	MW1	ND	450	10	ND	ND
&	MW2♦♦	ND	17	68	ND	2.0
3/19/97	MW4	WELL WAS INACCESSIBLE				
	MW5	0.57	14	1.4	ND	ND
11/25/96	MW1	ND	18	60	ND	2.6
	MW2	ND	16	0.54	ND	2.8
	MW4	WELL WAS INACCESSIBLE				
	MW5	ND	ND	ND	ND	0.8
8/30/96	MW1	2.1	ND	4.4	ND	ND
	MW2	ND	10	1.1	ND	ND
	MW4	WELL WAS INACCESSIBLE				
	MW5♦	7.0	12	6.0	ND	ND
5/21/96	MW1+	4.1	ND	4.8	ND	53
	MW2++	ND	10	ND	ND	16
	MW3	WELL WAS DESTROYED ON FEBRUARY 29, 1996				
	MW4	WELL WAS INACCESSIBLE				
	MW5+++	14	15	8.3	ND	13
2/19/96	MW1	ND	8.7	ND	ND	2.9
	MW2	ND	8.0	ND	ND	2.6
	MW3	ND	ND	ND	ND	ND
	MW4	WELL WAS INACCESSIBLE				
	MW5	2.1	9.3	1.9	ND	ND
10/6/95	MW1	1.7	19	3.7	ND	1.3
	MW2	ND	8.9	1.0	ND	5.9
	MW3	5.7	13	6.2	ND	1.1
	MW4	5.4	12	6.1	ND	0.53
	MW5	9.1	8.2	5.3	ND	ND
8/24/95	MW1	3.4	240	5.0	ND	3.2
	MW2*	ND	28	1.1	ND	15
	MW3**	5.1	50	9	ND	0.78
	MW4	ND	9.7	ND	ND	2.4
	MW5**	17	49	11	ND	ND
8/26/97	MW-1	WELL WAS INACCESSIBLE				
	MW-2	ND	18	0.88	ND	1.4
	MW-4	WELL WAS INACCESSIBLE				
	MW-5	WELL OBSTRUCTED AT 4.80 FT BGS.				

**Table 30**  
 Summary of Laboratory Analyses  
 Soil WATER

Date	Sample Number	cis-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Chloroform
5/23/95	MW1	ND	450	ND	ND	ND
	MW2	ND	45	ND	ND	ND
	MW3	5.1	74	9.1	ND	ND
	MW4	ND	8.8	ND	ND	ND
	MW5	16	58	11	ND	ND
2/25/95	MW1	ND	360	ND	ND	ND
	MW2	ND	41	1.9	ND	ND
	MW3	6.9	52	9.4	ND	ND
	MW4	ND	6.4	ND	ND	ND
	MW5	8.3	25	6.6	ND	ND
6/29/93	MW1	ND	250	ND	ND	ND
	MW2	ND	78	ND	ND	ND
	MW3	5.5	130	11	ND	ND
	MW4	ND	16	0.68	ND	ND
	MW5	24	17	5.9	3.0	ND

All EPA method 8010 constituents were non-detectable, except for the above compounds.

- ◆ Trans-1,2-Dichloroethene was detected at a concentration of 0.60 µg/L.
- ◆◆ Chloroform was detected at a concentration of 7.0 µg/L.
- \* 1,1,1-Trichloroethane was detected at a concentration of 0.73 µg/L.
- \*\* Trans-1,2-Dichloroethene was detected at concentrations of 0.59 µg/L and 0.76 µg/L in MW3 and MW5, respectively.
- + Bromodichloromethane was detected at 19 mg/L and Dibromochloromethane at 5.7 µg/L.
- ++ Bromodichloromethane was detected at 5.8 µg/L and Dibromochloromethane at 3.3 µg/L.
- +++ Bromodichloromethane was detected at 5.0 µg/L and Dibromochloromethane at 4.3 µg/L.
- ND = Non-detectable.

Results are in micrograms per liter (µg/L), unless otherwise indicated.

**Table II**  
 Summary of Monitoring Data

Well #	Ground Water Elevation (feet)	Depth to Water (feet)*	Total Well Depth (feet)*	Product Thickness (feet)	Sheen	Water Purged (gallons)
--------	-------------------------------	------------------------	--------------------------	--------------------------	-------	------------------------

**(Monitored and Sampled on May 29, 1997)**

MW1	WELL WAS INACCESSIBLE					
MW2	94.92	15.85	21.85	0	No	3
MW3	WELL WAS DESTROYED					
MW4	WELL WAS INACCESSIBLE					
MW5	**	20.22	36.66	0	No	9

**(Monitored and Sampled on March 19, 1997)**

MW1	99.33	15.83	23.06	0	No	4
-----	-------	-------	-------	---	----	---

**(Monitored and Sampled on February 27, 1997)**

MW1	WELL WAS INACCESSIBLE					
MW2	96.33	14.44	23.78	0	No	7
MW3	WELL WAS DESTROYED					
MW4	WELL WAS INACCESSIBLE					
MW5	**	11.38	28.35	0	No	13

Well #	Top of Casing Elevation (feet)**
--------	----------------------------------

MW1	115.16
MW2	110.77
MW4	108.00
MW5	**

◆ The depth to water level and total well depth measurements were taken from the top of the well casings.

\* Based on the City of Oakland Benchmark #2874 (elevation = 116.41 feet MSL).

\*\* The top portion of the well casing is bent; therefore, the top of casing elevation and the ground water elevation are not available.

**TABLE 12**

SUMMARY OF MONITORING DATA

<u>Well #</u>	<u>Ground Water Elevation (feet)</u>	<u>Depth to Water (feet)</u>	<u>Product Thickness (feet)</u>	<u>Sheen</u>	<u>Water Purged (gallons)</u>
(Monitored and Sampled on June 29, 1993)					
MW1	99.04	16.55	0	No	6
MW2	95.29	15.98	0	No	6
MW3	94.72	17.27	0	No	8
MW4	96.30	12.15	0	No	12
MW5	93.99	13.45	0	No	11
(Monitored and Developed on June 22, 1993)					
MW1	99.10	16.49	0	--	50
MW2	95.35	15.92	0	--	45
MW3	94.72	17.72	0	--	40
MW4	96.33	12.12	0	--	50
MW5	89.63	17.81	0	--	30

<u>Well #</u>	<u>Surface Elevation* (feet)</u>
MW1	115.59
MW2	111.27
MW3	112.44
MW4	108.45
MW5	107.44

-- Sheen determination was not performed.

\* The elevation of the tops of the well covers have been surveyed relation to MSL, per City of Oakland Benchmark #2874 (elevation = 116.41 MSL.)

**TABLE 12**

SUMMARY OF MONITORING DATA

<u>Well #</u>	<u>Ground Water Elevation (feet)</u>	<u>Depth to Water (feet)†</u>	<u>Product Thickness (feet)</u>	<u>Sheen</u>	<u>Water Purged (gallons)</u>	<u>Well Depth (feet)†</u>
<b>(Monitored and Sampled on September 18, 1995)</b>						
MW1	99.12	16.04	0	No	5.5	23.45
MW2	96.07	14.70	0	No	6.5	24.00
MW3	94.72	17.12	0	No	8.5	28.94
MW4	96.15	11.85	0	No	12	29.07
MW5	93.87	13.09	0	No	10.5	28.59
<b>(Monitored and Sampled on September 8, 1995)</b>						
MW1	99.41	15.75	0	No	6	23.97
MW2	96.24	14.53	0	No	6	24.10
MW3	95.79	16.05	0	No	5.5	28.63
MW4	96.84	11.16	0	No	12	29.06
MW5	94.84	12.12	0	No	11.5	28.63
<b>(Monitored and Sampled on August 24, 1995)</b>						
MW1	99.18	15.98	0	No	6	23.85
MW2	96.13	14.64	0	No	6.5	23.92
MW3	94.34	17.50	0	No	8	28.91
MW4	96.77	11.23	0	No	12	29.11
MW5	93.91	13.05	0	No	12	28.57
<b>(Monitored and Sampled on May 23, 1995)</b>						
MW1	99.13	16.03	0	No	5.5	23.87
MW2	96.25	14.52	0	No	6.5	23.97
MW3	94.88	16.96	0	No	8.5	28.94
MW4	97.13	10.87	0	No	12.5	29.13
MW5	94.06	12.90	0	No	11	28.58
<b>(Monitored and Sampled on February 25, 1995)</b>						
MW1	99.24	15.92	0	No	5.5	23.86
MW2	96.84	13.92	0	No	7.0	23.92
MW3	94.95	16.89	0	No	8.5	28.91
MW4	97.64	10.86	0	No	13.0	29.11
MW5	94.08	12.88	0	No	11.0	28.56

**TABLE 12**

SUMMARY OF MONITORING DATA

<u>Well #</u>	<u>Ground Water Elevation (feet)</u>	<u>Depth to Water (feet)♦</u>	<u>Product Thickness (feet)</u>	<u>Sheen</u>	<u>Water Purged (gallons)</u>	<u>Well Depth (feet)♦</u>
(Monitored and Sampled on October 6, 1995)						
MW1	98.99	16.17	0	No	5.5	23.95
MW2	95.86	14.91	0	No	6.5	24.10
MW3	94.82	17.02	0	No	4.5	23.65
MW4	95.61	12.39	0	No	12	29.08
MW5	93.94	13.02	0	No	11	28.62

<u>Well #</u>	<u>Top of Casing Elevation (feet)*</u>
MW1	115.16
MW2	110.77
MW3	111.84
MW4	108.00
MW5	106.96

♦ The depth to water level and total well depth measurements were taken from the top of the well casings.

\* Based on the City of Oakland Benchmark #2874 (elevation = 116.41 feet MSL).



**TABLE 12**

SUMMARY OF MONITORING DATA

<u>Well #</u>	<u>Ground Water Elevation (feet)</u>	<u>Depth to Water (feet)♦</u>	<u>Product Thickness (feet)</u>	<u>Sheen</u>	<u>Water Purged (gallons)</u>	<u>Well Depth (feet)♦</u>
(Monitored and Sampled on February 19, 1996)						
MW1	99.56	15.60	0	No	6	23.70
MW2	97.92	12.85	0	No	8	24.10
MW3	95.77	16.07	0	No	8.5	28.60
MW4	WELL WAS INACCESSIBLE					
MW5	**	12.48	0	No	11	28.53

<u>Well #</u>	<u>Top of Casing Elevation (feet)*</u>
MW1	115.16
MW2	110.77
MW3	111.84
MW4	108.00
MW5	106.96

- ♦ The depth to water level and total well depth measurements were taken from the top of the well casings.
- \* Based on the City of Oakland Benchmark #2874 (elevation = 116.41 feet MSL).
- \*\* Damaged/bent casing.

**TABLE 12**

SUMMARY OF MONITORING DATA

<u>Well #</u>	<u>Ground Water Elevation (feet)</u>	<u>Depth to Water (feet)♦</u>	<u>Product Thickness (feet)</u>	<u>Sheen</u>	<u>Water Purged (gallons)</u>	<u>Well Depth (feet)♦</u>
(Monitored and Sampled on May 21, 1996)						
MW1	99.41	15.75	0	No	5	23.58
MW2	97.48	13.29	0	No	7.5	23.88
MW3	DESTROYED					
MW4	WELL WAS INACCESSIBLE					
MW5	94.41	12.55	0	No	11	28.40

<u>Well #</u>	<u>Top of Casing Elevation (feet)*</u>
MW1	115.16
MW2	110.77
MW3	111.84
MW4	108.00
MW5	106.96

- ♦ The depth to water level and total well depth measurements were taken from the top of the well casings.
- \* Based on the City of Oakland Benchmark #2874 (elevation = 116.41 feet MSL).

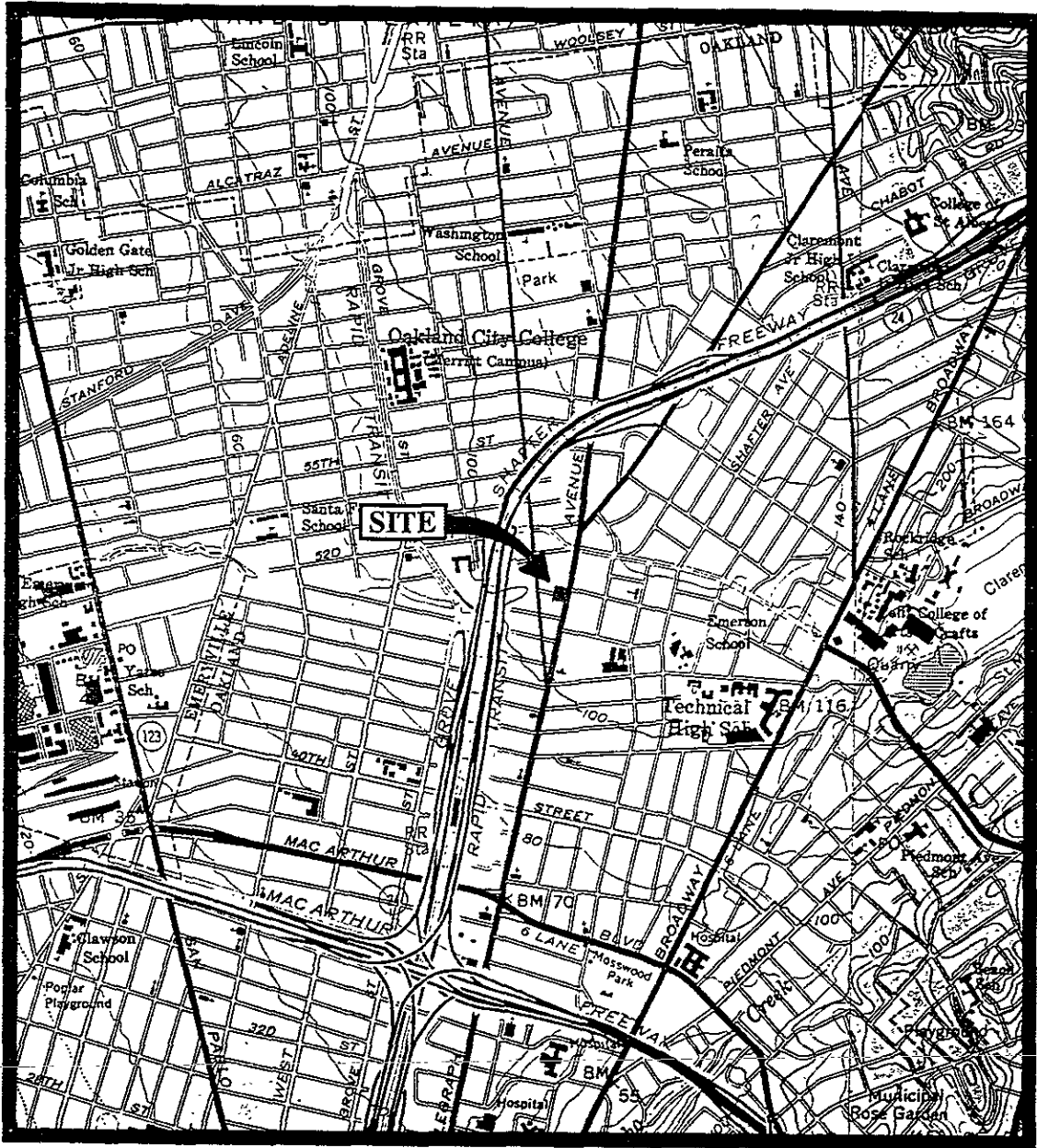
**TABLE 12**

SUMMARY OF MONITORING DATA

<u>Well #</u>	<u>Ground Water Elevation (feet)</u>	<u>Depth to Water (feet)♦</u>	<u>Product Thickness (feet)</u>	<u>Sheen</u>	<u>Water Purged (gallons)</u>	<u>Well Depth (feet)♦</u>
(Monitored and Sampled on August 30, 1996)						
MW1	99.11	16.05	0	No	6.5	23.51
MW2	96.05	14.72	0	No	7.5	23.79
MW3	DESTROYED					
MW4	WELL WAS INACCESSIBLE					
MW5	**	12.25	0	No	14	28.38

<u>Well #</u>	<u>Top of Casing Elevation (feet)*</u>
MW1	115.16
MW2	110.77
MW3	111.84
MW4	108.00
MW5	**

- ♦ The depth to water level and total well depth measurements were taken from the top of the well casings.
- \* Based on the City of Oakland Benchmark #2874 (elevation = 116.41 feet MSL).
- \*\* The top portion of the well casing is bent; therefore, the top of casing elevation and the ground water elevation are not available.



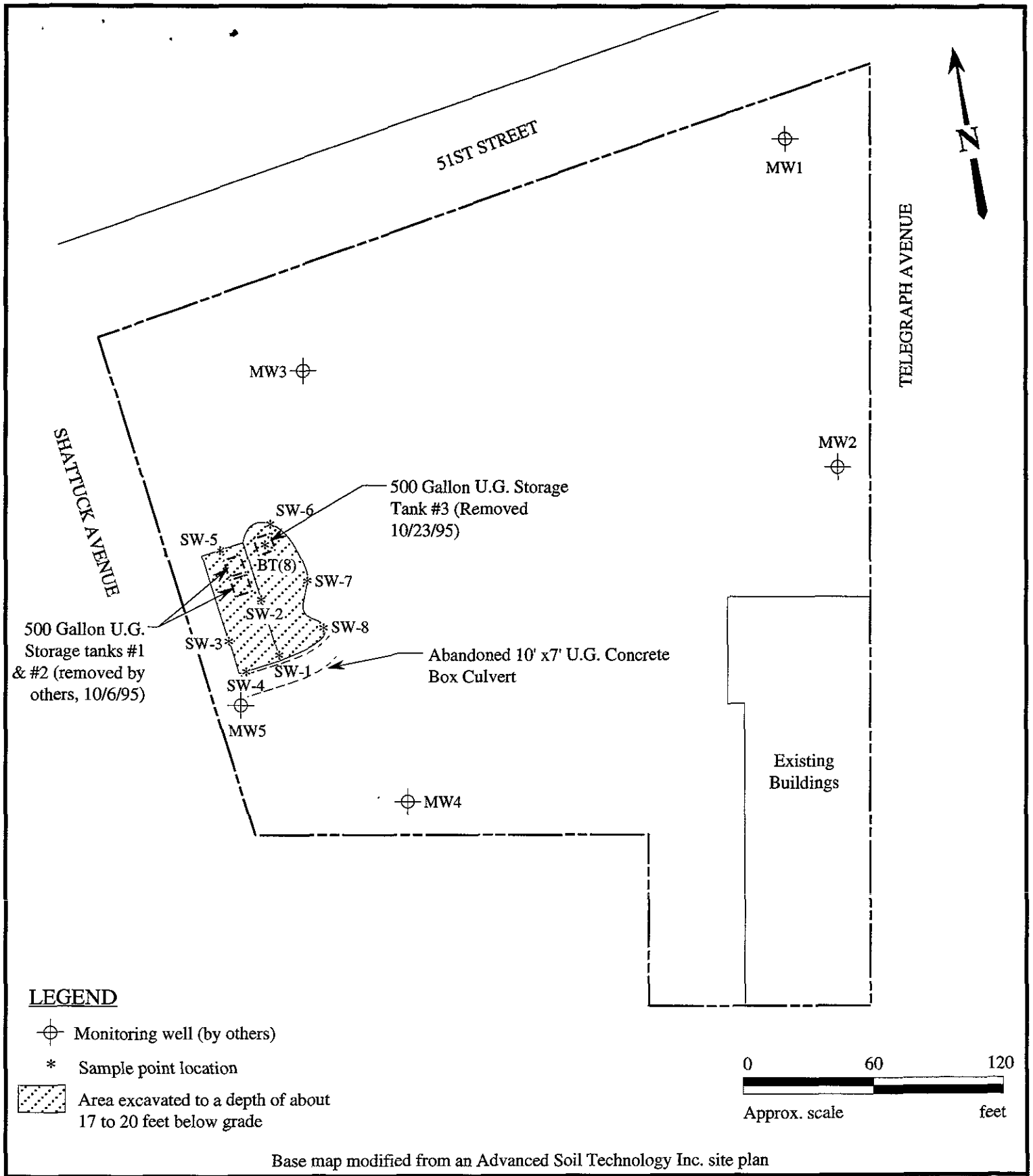
Base modified from 7.5 minute U.S.G.S. Oakland East and West Quadrangles  
(both photorevised 1980)



**KAPREALIAN ENGINEERING  
INCORPORATED**

**BERKELEY LAND COMPANY  
51ST STREET & TELEGRAPH AVE.  
OAKLAND, CALIFORNIA**

**LOCATION  
MAP**



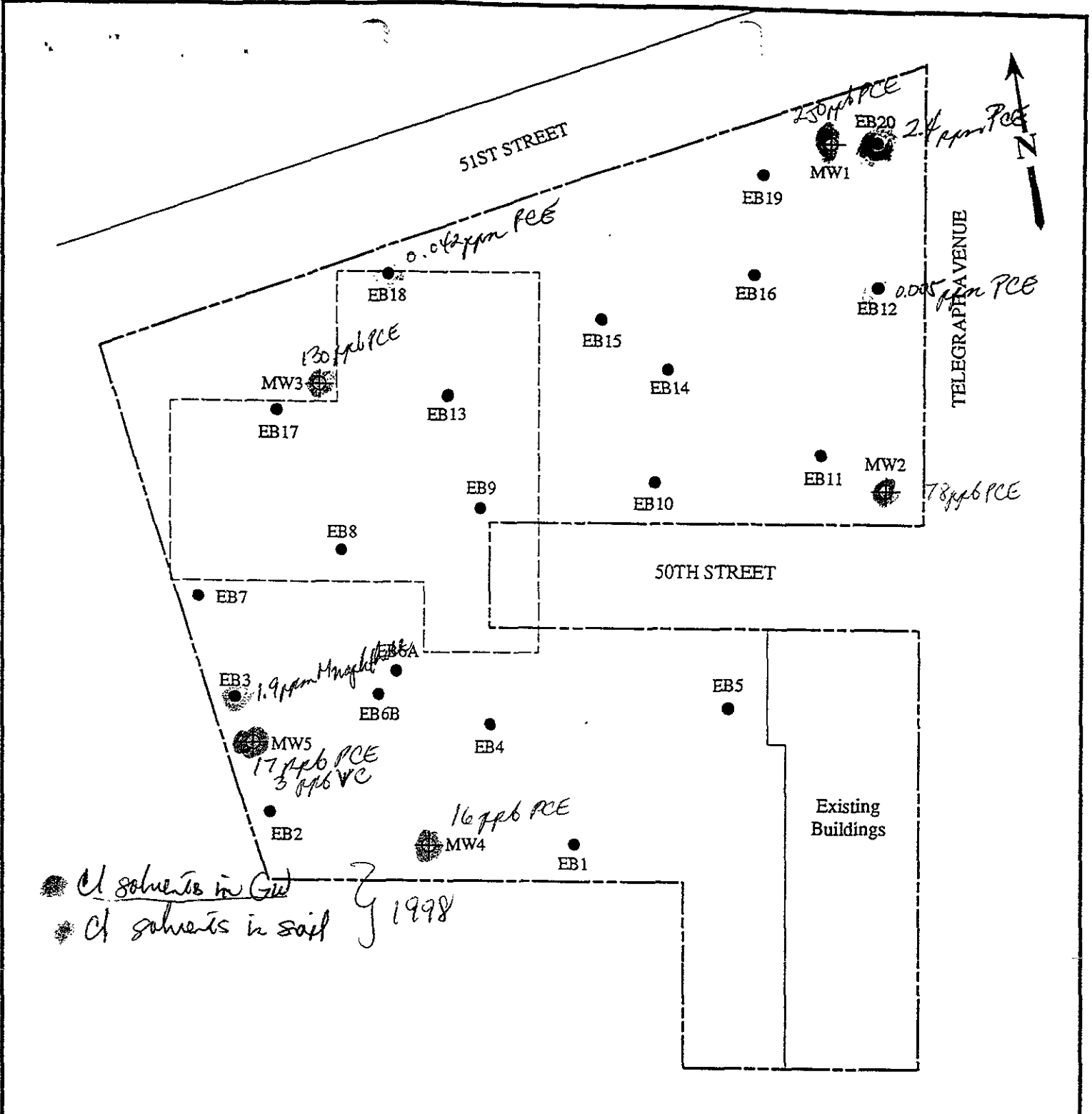
Base map modified from an Advanced Soil Technology Inc. site plan

**SOIL SAMPLE POINT AND MONITORING WELL LOCATION MAP**



**BERKELEY LAND COMPANY  
51ST STREET & TELEGRAPH AVE.  
OAKLAND, CALIFORNIA**

**FIGURE  
1**



● Cl solvents in GW  
 ● Cl solvents in soil 7/1998

**LEGEND**

● Exploratory boring (by KEI)

⊕ Monitoring well (by others)

0 60 120  
 Approx. scale feet

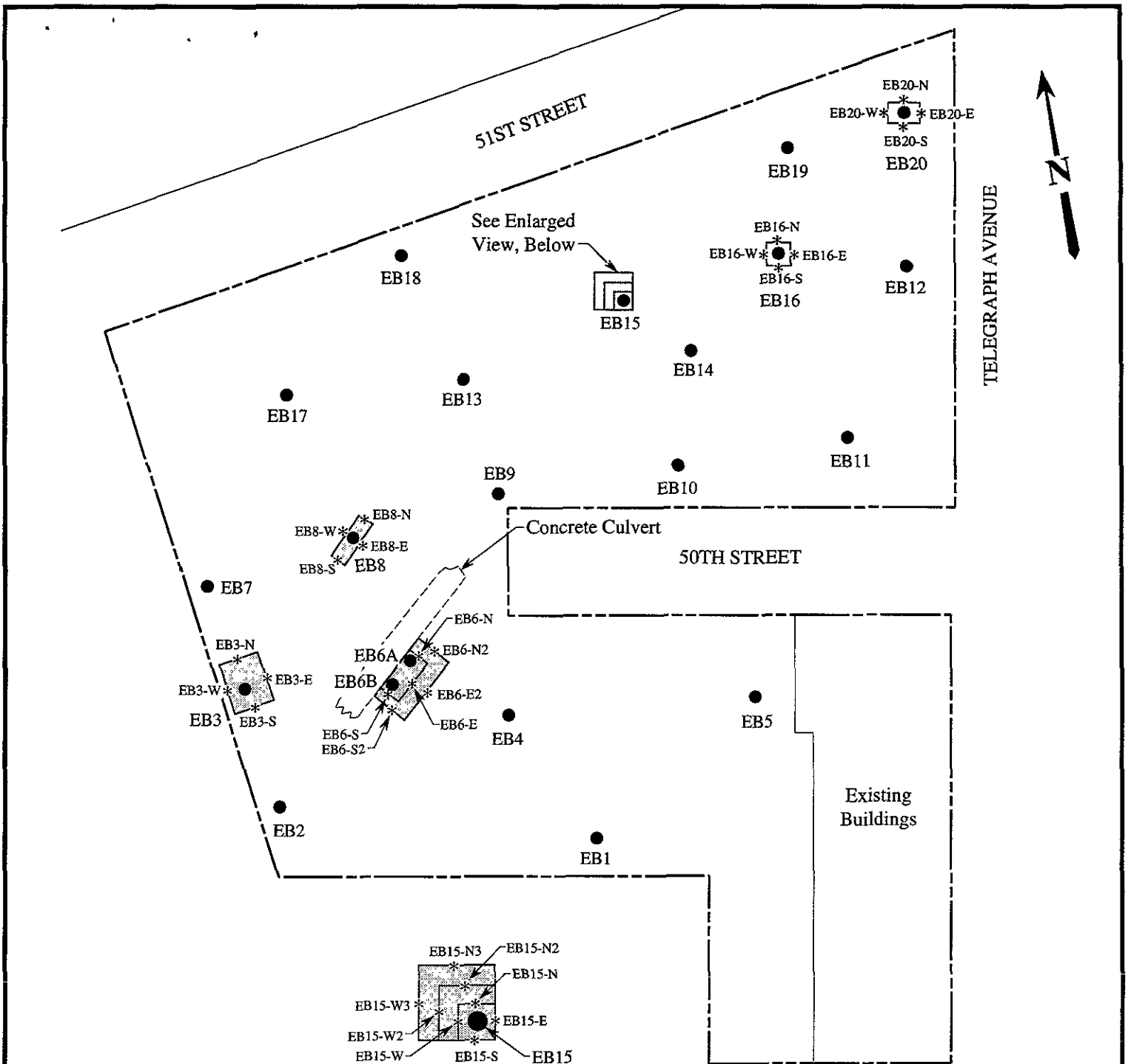
Base map modified from an Advanced Soil Technology Inc. site plan

**EXPLORATORY BORING AND MONITORING WELL LOCATION MAP**



**BERKELEY FARMS  
 51ST STREET & TELEGRAPH AVE.  
 OAKLAND, CALIFORNIA**

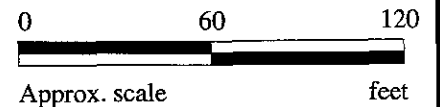
**FIGURE  
 2**



**LEGEND**

- Exploratory boring (by KED)
- \* Sample point location
- ▨ Area of excavation

Enlarged View of  
EB15, above



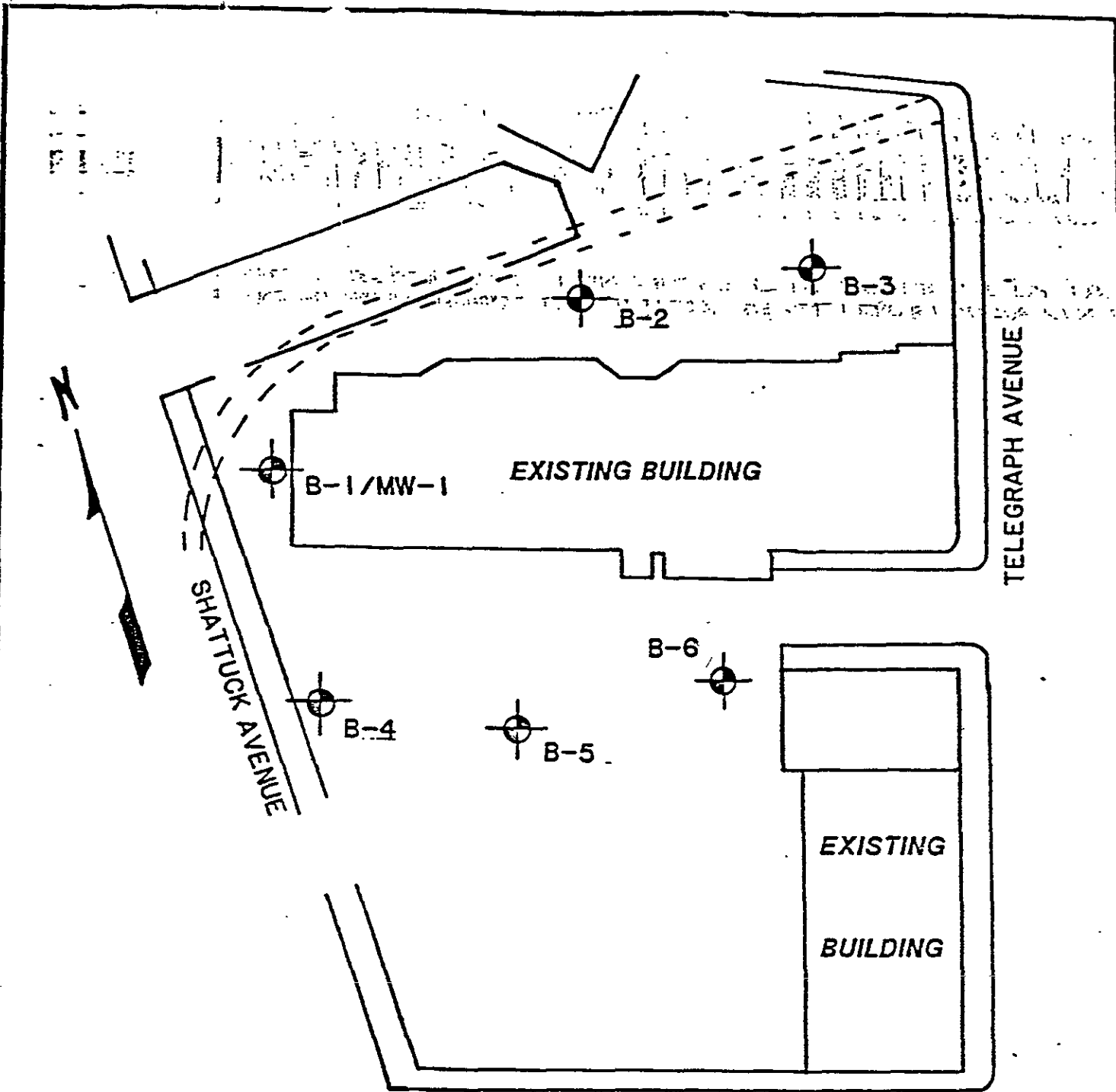
Base map modified from an Advanced Soil Technology Inc. site plan

**SAMPLE POINT LOCATION MAP**



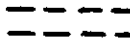


**BERKELEY LAND COMPANY  
51ST STREET & TELEGRAPH AVE.  
OAKLAND, CALIFORNIA**

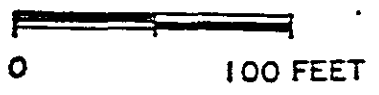
**FIGURE  
3**



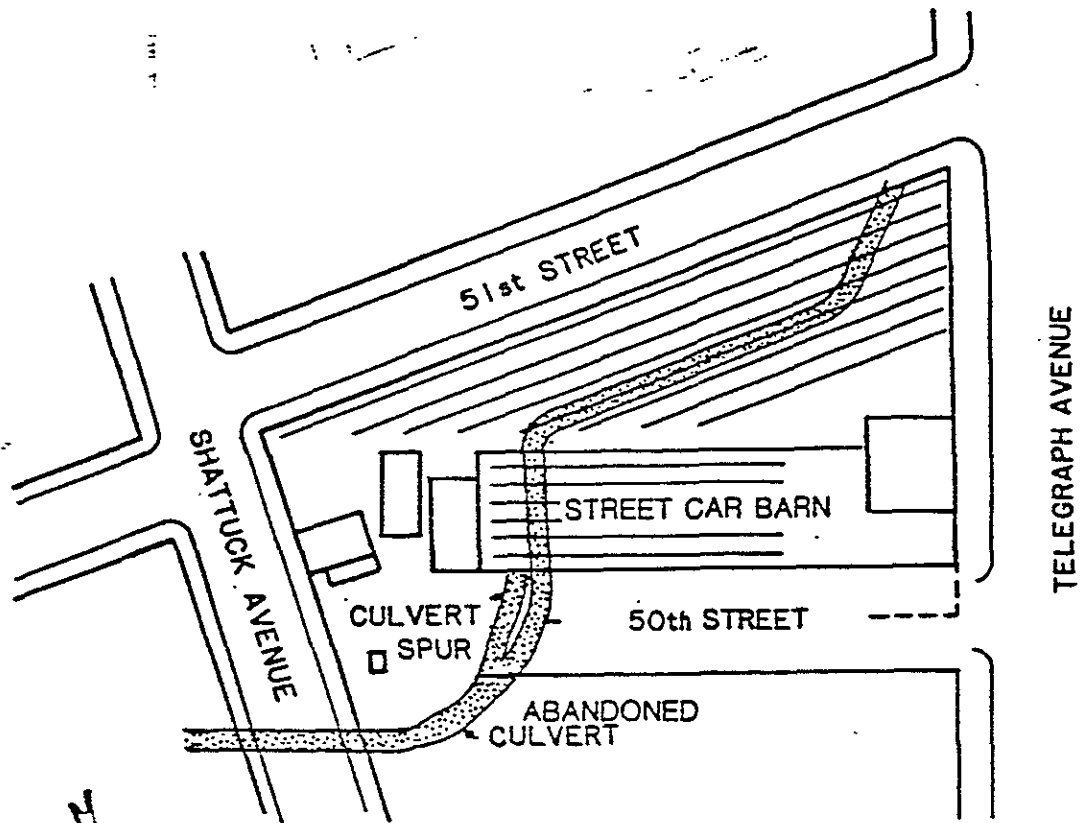
**LEGEND**

- 
**MW-1**  
 MONITORING WELL
- 
**B-2**  
 SOIL BORING
- 
 EXISTING CULVERT EASEMENT

APPROXIMATE SCALE







SCALE: 1"=100'

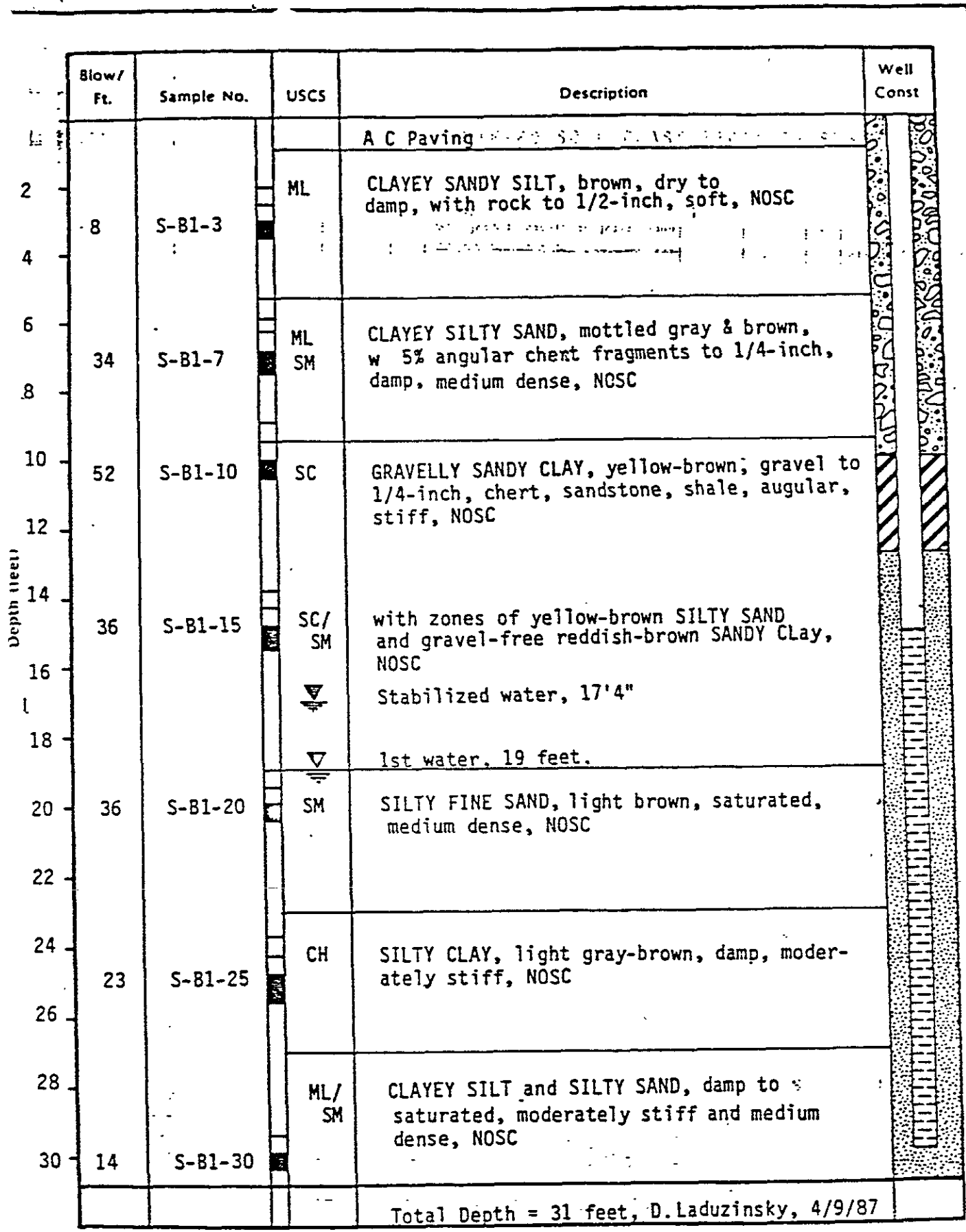
SOURCE: CITY OF OAKLAND SITE PLAN

S.F.-O. TERMINAL RYS.

Maint. of Way & Bldgs. Dept.

Date:





Blow/ FL	Sample No.	USCS	DESCRIPTION	WELL CONST.
			AC Paving	
1		ML	SANDY SILT, with abundant 2" rock, wood debris and old brick, dry, moderately stiff, odor of rotting wood.	
2				
3	27	SM/ CL	Mixed SANDY CLAY and SILTY SAND no sample recovery, rock in sampler, damp, moderately stiff and medium dense	
4	16	ML	CLAYEY SANDY SILT, dark brown, damp, moderately stiff, possible slight organic odor	
5	S-B2-4.5			
6		SC	SANDY CLAY, dark yellow-brown, damp, moderately stiff, NO SC	
7	12	S-B2-7		
			Total Depth = 7.5 feet Logged by D. Laduzinsky 4/10/87	

Depth In Feet	Blow/ Ft.	Sample No.	USCS	DESCRIPTION	WELL CONST.
0				AC Paving	
1			ML	CLAYEY SILT, black, with rock and debris, damp, soft to moderately stiff, NOSC	
2			SC	CLAYEY SAND, brown, with rock, old brick, and asphalt debris, damp, medium dense, NOSC, (rock in sample tip)	
3	50/4"	S-B3-3			
4					
5					
6			CL/ SC	CLAYEY SAND AND SANDY CLAY, with old brick and asphalt rubble, damp, NOSC	
7	26	S-B3-7			
				Total Depth = 7.5 feet Logged by D. Laduzinsky 4/10/87	

J.H. KLEINFELDER & ASSOCIATES  
 GEOTECHNICAL CONSULTANTS • MATERIALS TESTING  
 LAND AND WATER RESOURCES



PACIFIC RIM DEVELOPMENT  
 CONVENIENCE CENTER, 51st & TELEGRAPH  
 OAKLAND, CALIFORNIA

BORING LOG NO. B-3

FIGURE  
 8

PROJECT NO. 10-1689-01

Depth In Feet

Blow/ Ft.	Sample No.	USCS	DESCRIPTION	WELL CONST.
			AC Paving	
1				
2	35	S-B4-2	SP GRAVELLY SAND, blue, damp, gravel to 1" diameter, medium dense, hydrocarbon odor.	
3				
4				
5			Drilled to refusal at 5 feet due to rock and debris; attempted 4 borings; all refused	
			Total Depth = 5 feet Logged by D. Laduzinsky 4/10/87	



Depth in feet	Blow/Fl.	Sample No.	USCS	DESCRIPTION	WELL CONST.
0				AC Paving	
1					
2			GH	SILTY CLAY, black, damp, moderately stiff, slight hydrocarbon odor, waste oil type odor from borehole	
3	21	S-B5-3			
4					
5					
6			CL	SANDY CLAY, yellow-brown, damp to moist, moderately stiff; NOSC	
7	28	S-B5-7			
8					
9					
10	33	S-B5-10		mottled light gray and reddish brown, damp, with angular chert to 1/4-inch, NOSC	
				Total Depth = 10.5 feet Logged by D. Laduzinsky 4/10/87	

Blow/ ft.	Sample No.	USCS	DESCRIPTION	WELL CONST.
			AC Paving	
5	S-B6-2.5	ML	CLAYEY SANDY SILT, black, dry to damp, soft, NOSC	
		CL	SANDY CLAY, mottled gray & reddish brown, with 5% angular chert to 1/8-inch diameter, damp, moderately stiff, NOSC	
			Total Depth = 6.0 feet Logged by D. Laduzinsky 4/10/87	



## BORING LOG

Project No. KEI-P93-0603	Boring Diameter 4"	Logged By <i>JGG</i> D.L. <i>LEG 1633</i>
	Casing Diameter N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 28, 1993
Boring No. <b>EB1</b>	Drilling Method Solid-Stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		Silt, sand and gravel (fill).
			ML	Clayey silt, stiff, moist, very dark grayish brown.
7/13/17		5	CL	Sandy clay, trace gravel to 3/8 inch in diameter, very stiff, moist, dark yellowish brown.
		10	GC	Clayey gravel with sand, medium dense to dense. moist, dark brown.
12/15/22		15	CL	Silty clay, estimated at 10-15% sand, locally with trace gravel, very stiff, moist, olive brown and dark yellowish brown, mottled.
6/12/15		15	GC	Clayey gravel with sand, medium dense, very moist, olive brown.
TOTAL DEPTH: 15.5'				
		20		



# BORING LOG

Project No. KEI-P93-0603	Boring Diameter 4"	Logged By <i>J66</i> J.G. <i>LEG 16 33</i>
	Casing Diameter N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 29, 1993
Boring No. <b>EB2</b>	Drilling Method Solid-Stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		
				Sand, silt, and gravel with bricks, concrete and debris (fill).
4/4/5		5	GP-GC	Poorly graded gravel with clay, estimated at 20% clay and 10% sand, angular gravel to 2.5 inches in diameter, moist, loose, brown (fill).
5/7/7		10	ML	Clayey silt, estimated at 20% clay and trace to 10% fine-grained sand, very stiff, wet to locally saturated, dark gray.
	▽	15		Clayey silt, as above except saturated.
				TOTAL DEPTH: 15'
		20		

## BORING LOG

Project No. KEI-P93-0603	Boring Diameter 4" Casing Diameter N/A	Logged By <i>JGG</i> J.G. <i>CEG 1633</i>
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 29, 1993
Boring No. <b>EB3</b>	Drilling Method Soild-Stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		Clayey gravel with sand, medium dense to dense, dry to slightly moist, light brown to brown (fill).
5/7/10		5	GP-GC	Poorly graded gravel with clay, estimated at 10-20% clay, medium dense, moist, brown, gravel to 1 inch in diameter (fill).
3/4/5		10	SP	Poorly graded sand, fine-grained, trace gravel, loose, moist, dark grayish brown.
		15	CL-SC	Sandy clay and clayey sand, very stiff/medium dense, moist, dark gray, very dark gray, and brown.
6/9/15		15	GP-GC	Poorly graded gravel with clay, estimated at 10% clay, medium dense, moist, greenish gray matrix, gravel very weathered and decomposed.
TOTAL DEPTH: 16.5'				
		20		

## BORING LOG

Project No. KEI-P93-0603	Boring Diameter    4"	Logged By D.L. <i>JGG CEG1633</i>
	Casing Diameter    N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 28, 1993
Boring No. <b>EB4</b>	Drilling Method Solid-Stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		Silt, sand, and gravel, dense, dry to slightly, moist (fill).
			ML	Clayey silt, estimated at 35-45% clay, stiff, moist, very dark grayish brown to black.
7/13/19		5	GP-GC	Poorly graded gravel with clay, estimated at 15-30% clay, gravel to 1-1/2 inches in diameter, medium dense to dense, moist, very dark grayish brown.
			CL	Clay with silt, estimated at 5-10% gravel, very stiff, moist, olive brown and strong brown, mottled, with root holes.
9/12/19		10	ML	Clayey silt, estimated at 30-40% clay, trace sand, very stiff to hard, moist, olive brown and strong brown, mottled.
			CL	Sandy clay, very stiff to hard, moist, olive brown and strong brown, mottled, with iron oxide staining.
10/15/21		15		TOTAL DEPTH: 15.5'
		20		

## BORING LOG

Project No. KEI-P93-0603	Boring Diameter 4"	Logged By D.L. <i>JGG- CEG 1633</i>
	Casing Diameter N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 28, 1993
Boring No. <b>EB5</b>	Drilling Method Solid-Stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		Silt, sand, and gravel, dense, dry to slightly moist (fill).
			ML	Clayey silt, estimated at 35-45% clay, stiff, moist, very dark grayish brown to black.
9/13/18		5	CL	Silty clay, trace fine-grained sand, very stiff to hard, moist, olive brown.
			GC	Gravel with clay, estimated at 20-25% clay, angular to rounded gravel to 1-1/2 inches in diameter, medium dense to dense, moist, olive brown.
10/15/21		10		
			ML	Clayey silt, estimated at 10-15% sand, stiff to very stiff, moist, olive brown and strong brown, mottled.
6/7/19		15		
				TOTAL DEPTH: 15.5'
		20		

## BORING LOG

Project No. KEI-P93-0603	Boring Diameter     4"	Logged By J.G. <i>JCG</i> <i>CEG 1633</i>
	Casing Diameter     N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 29, 1993
Boring No. <b>EB6A</b>	Drilling Method Solid-Stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		
				Sand, silt, and gravel with concrete, bricks and debris (fill).
			GC	Gravel with clay and silt, estimated at up to 20% clay and silt and 10% sand, angular gravel to over 3 inches in diameter, moist, medium dense to very dense (fill).
5/6/12-1"		5		Very slow drilling - concrete?
				TOTAL DEPTH: 5'7"
		10		
		15		
		20		

## BORING LOG

Project No. KEI-P93-0603	Boring Diameter    4"	Logged By <i>JGG</i> I.G. <i>CEG 1633</i>
	Casing Diameter    N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 29, 1993
Boring No. <b>EB6B</b>	Drilling Method Solid-Stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		
				Sand, silt, and gravel with concrete, bricks and debris (fill).
		5	GC	Gravel with clay and silt, estimated at up to 20% clay and silt and 10% sand, angular gravel to over 3 inches in diameter, moist, medium dense to very dense (fill).
7/43		10		Poor recovery. Gravel as above except loose.
		15	GC	Boulder. Gravel as above except saturated (fill?).
				TOTAL DEPTH: 15'
		20		

# BORING LOG

Project No. KEI-P93-0603	Boring Diameter 4"	Logged By JGG I.G. CEG 16 33
	Casing Diameter N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 29, 1993
Boring No. <b>EB7</b>	Drilling Method Solid-Stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		Sand, silt, and gravel with bricks, concrete, and debris (fill).
7/10/13		5	ML	Clayey silt, estimated at 10-15% clay and trace to 10% gravel, very stiff, slightly moist, iron-oxide staining, dark green and reddish brown, mottled.
9/12/25		10		Clayey silt as above except no gravel, moist, hard.
15/16/23		15	GP	Sandy gravel, estimated at 30% fine-grained sand and trace clay, dense, moist, grayish brown with iron-oxide staining, gravels highly weathered and decomposed.
				TOTAL DEPTH: 16'
		20		

## BORING LOG

Project No. KEI-P93-0603	Boring Diameter    4"	Logged By <i>JGG</i> J.G. <i>CEG 1633</i>
	Casing Diameter    N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 29, 1993
Boring No. <b>EB8</b>	Drilling Method    Solid-Stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		Silt, sand, and gravel with bricks, concrete, glass, and other debris (fill).
4/5/5		5	SP	Gravelly sand, fine-grained, estimated at up to 40% gravel, glass, charcoal, and paper debris. loose, slightly moist, brown (fill).
6/8/11		10	GC	(No recovery)  (Poor recovery.) Clayey gravel with sand and debris, moist, dense, brown (fill).
12/14/20		15	SP	Gravelly sand, fine-grained, estimated at trace to 10% silt and clay, dense, very moist, orangish brown, with iron-oxide staining.
		20		TOTAL DEPTH: 14'



## BORING LOG

Project No. KEI-P93-0603	Boring Diameter    4"	Logged By J.G. <i>JGG</i> <i>CEG 1633</i>
	Casing Diameter    N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 27, 1993
Boring No. <b>EB9</b>	Drilling Method Solid-Stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		Silt, sand, and gravel with brick, concrete, and debris (fill).
3/3/4		5	SP	Fine-grained sand, loose, brown (alluvium?).
4/4/6		10		Fine-grained sand as above except moist, mottled, iron-oxide staining.
7/12/11	▽	15		Coarse-grained gravelly sand, medium dense, saturated.
				TOTAL DEPTH: 16'
		20		

## BORING LOG

<b>Project No.</b> KEI-P93-0603	<b>Boring Diameter</b> 4" <b>Casing Diameter</b> N/A	<b>Logged By</b> JGG I.G. CEG/633
<b>Project Name</b> Berkeley Farms 51st. & Telegraph, Oakland	<b>Well Cover Elevation</b> N/A	<b>Date Drilled</b> July 26, 1993
<b>Boring No.</b> EB10	<b>Drilling Method</b> Enviro Core Percussion Soil Coring	<b>Drilling Company</b> Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		Silt, sand, and gravel with brick, concrete, and debris (fill).
			ML	Clayey silt, estimated at 35-40% clay, stiff, moist, black (fill).
		5	GM	[No sample recovery between 4 - 7 feet] Silty gravel with sand (fill).
				[No sample recovery between 7-10 feet]
		10	ML	Sandy silt, estimated at 5-10% clay, stiff, moist, olive brown.
				Clayey silt, estimated at 5-10% gravel, stiff, moist, grayish brown and strong brown mottled.
		15		
				TOTAL DEPTH: 16'
		20		

## BORING LOG

Project No. KEI-P93-0603	Boring Diameter     4"	Logged By J.G. <i>JG6</i> <i>CEG/1693</i>
	Casing Diameter     N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 28, 1993
Boring No. <b>EB11</b>	Drilling Method Solid-stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		
		5		Silt, sand, and gravel, very dense, dry to moist, pocketed with black silty clay, with bricks and concrete debris (fill).
7/12/19		5	CL	Silty clay, estimated at 5-10% sand and gravel to 3/4 inch in diameter, hard, moist, very dark grayish brown, with strong iron-oxide staining.
		10		
7/13/17		10	ML	Silt with clay, trace sand and gravel, very stiff, friable, moist, olive brown and grayish brown, mottled, with iron-oxide staining.
		15		
6/11/18		15	CL	Clay with silt, very stiff, moist, olive brown and strong brown mottled, with an estimated 10-15% sand below 13.5 feet.
		15		
7/13/20		15		Silty clay, estimated 10-15% sand, very stiff to hard, moist, olive brown and strong brown, mottled.
		20		TOTAL DEPTH: 16'


## BORING LOG

Project No. KEI-P93-0603	Boring Diameter    4"	Logged By <i>JGG</i> J.G. <i>LEG 1633</i>
	Casing Diameter    N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 30, 1993
Boring No. <b>EB12</b>	Drilling Method    Solid-Stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		Sand, silt, clay, and gravel with bricks, concrete, and debris (fill).
9/13/16		5	ML	Silt with clay, estimated at 15% clay, very stiff, slightly moist, greenish brown mottled with iron-oxide staining, disturbed?
9/17/19		10	GP	Silt as above, except trace to 10% clay, very moist, undisturbed.
8/8/11	▽	15	SM	Poorly graded gravelly sand, estimated at 40% subrounded gravel to 1/2 inch in diameter, medium dense, saturated, brown, with iron-oxide staining, sand is medium-grained.
TOTAL DEPTH: 16'				
		20		

## BORING LOG

Project No. KEI-P93-0603	Boring Diameter    4"	Logged By <i>JGG</i> J.G. <i>LEG1633</i>
	Casing Diameter    N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 30, 1993
Boring No. <b>EB13</b>	Drilling Method Solid-Stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		
			GM	Silty gravel with sand, very dense, dry to moist, very dark grayish brown, pocketed with black silty clay (fill).
4/4/6		5	SM	Sand with silt and gravel, estimated at 20-30% silt, 10-15% gravel, and trace charcoal, medium dense, moist, brown (fill).
			GM	Silty gravel with sand, estimated at 30% silt and 20% sand, pocketed with gray silty clay, medium dense, very moist, saturated at 11 feet, brown.
5/7/11		10		
				TOTAL DEPTH: 11.5'
		15		
		20		


## BORING LOG

Project No. KEI-P93-0603	Boring Diameter    4"	Logged By <i>JGG</i> D.L. <i>LEG1633</i>
	Casing Diameter    N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 28, 1993
Boring No. <b>EB14</b>	Drilling Method Solid-Stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		
		5	ML	Silt, sand, and gravel, very dense, dry to moist, with bricks and concrete debris (fill).  Gravelly silt with sand, firm to stiff, moist, very dark grayish brown to black, disturbed (fill).
4/4/5		10	CL	Sandy clay, estimated at 10-15% gravel, stiff to very stiff, moist, grayish brown and strong brown, mottled.
3/6/11		15		Silty clay, trace gravel, stiff to very stiff, moist, olive brown and strong brown, mottled.
5/9/16		20		
TOTAL DEPTH: 13.5'				

# BORING LOG

Project No. KEI-P93-0603	Boring Diameter 4"	Logged By D.L. <i>JGG LE6/633</i>
	Casing Diameter N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 28, 1993
Boring No. <b>EB15</b>	Drilling Method Solid-Stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		
		5	GW	Silt, sand, and gravel, trace clay, dense to very dense, dry to moist, pocketed with black silty clay (fill).  Well graded gravel with sand, estimated at 5-10% silt, loose to medium dense, slightly moist, very dark grayish brown (fill).
5/7/9		10	GM	(Very poor recovery.) Silty gravel with sand, pocketed with silty and clayey soils, loose, moist, variable color (fill).
3/4/4		11.5		Silty gravel, as above except grading to wet, black below 11.5 feet, (fill).
3/5/6				
		15		TOTAL DEPTH: 12.5'
		20		

## BORING LOG

Project No. KEI-P93-0603	Boring Diameter    4"	Logged By <i>JGG</i> J.G. <i>CEG/633</i>
	Casing Diameter    N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 29, 1993
Boring No. <b>EB 16</b>	Drilling Method Solid-Stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		Silt, sand, and gravel, bricks, concrete, and other debris (fill).
5/7/8 (Slough in Sampler)		5	GM	Silty gravel with sand and clay, medium dense, moist, dark brown (fill).
5/6/5				Sampler blocked by large gravel, poor recovery.
9/11/12		10		Sandy gravel, estimated at 30-40% sand and up to 10% silt, dense, moist, brown, gravel is angular, to 1-1/2 inches in diameter, wood fragments (fill).
10/10/10			CL	Gravelly clay, subrounded gravel to 1-1/2 inches in diameter, very stiff, moist, brown.
6/6/7			SP	Gravelly coarse-grained sand, medium dense, wet, brown, gravel is subrounded, to 1/2 inch in diameter.
				TOTAL DEPTH: 12.5'
		15		
		20		



## BORING LOG

Project No. KEI-P93-0603	Boring Diameter 4"	Logged By J.G. <i>JGG</i> <i>CEG1633</i>
	Casing Diameter N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 29, 1993
Boring No. <b>EB17</b>	Drilling Method Solid-Stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		
				Sand, gravel, and silt, with concrete, bricks, and debris (fill).
5/7/13		5	ML	Clayey silt with gravel, estimated at up to 20% subrounded gravel to 5/8 inch in diameter, very stiff, slightly moist, light brown.
8/10/13		10	GP	Poorly graded gravel with sand, estimated at 20-30% fine-grained sand and 5-10% silt and clay, gravel highly weathered and decomposed, medium dense, slightly moist, light brown, iron-oxide stained.
				Gravel with sand as above, except wet.
5/7/9		15	ML	Silt with sand and clay, estimated at 20% fine-grained sand and 15-20% clay, very stiff, very moist to wet, brown, mottled.
				TOTAL DEPTH: 16'
		20		

## BORING LOG

Project No. KEI-P93-0603	Boring Diameter    4"	Logged By <i>JGG</i> D.L. <i>CEG 1633</i>
	Casing Diameter    N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 28, 1993
Boring No. <b>EB 18</b>	Drilling Method Solid-stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		Silt, sand, and gravel with bricks and concrete debris (fill).
			ML	Clayey silt, estimated at 35-45% clay, stiff, moist, black.
5/7/13		5	CL	Silty clay, estimated at 10-15% sand and gravel to 3/8 inch in diameter. stiff to very stiff, moist, dark yellowish brown.
		10	GM	Silty gravel with sand, trace clay, angular to rounded gravel to 1-3/4 inches in diameter, medium dense, moist, dark yellowish brown.
8/12/15		15		Silty gravel with sand, estimated at 15% silt and trace clay, medium dense, very moist, brown.
<b>TOTAL DEPTH: 15.5'</b>				
		20		


## BORING LOG

Project No. KEI-P93-0603	Boring Diameter 4"	Logged By D.L. <i>JGG</i> <i>CEG1633</i>
	Casing Diameter N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 28, 1993
Boring No. <b>EB 19</b>	Drilling Method Solid-stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		
3/3/4		5	GM	Silt, sand, and gravel with bricks, concrete and other debris, very dense (fill).  [Very poor recovery at 4-1/2 feet, about 3 inches.] Silty gravel with sand, loose, moist, dark brown (fill).
3/4/4			ML	Sandy silt, firm to medium stiff, moist, dark brown, sand is fine-grained.
3/3/4		10	GM	[Very poor recovery at 9-1/2 feet.] Silty gravel with sand.
5/5/6			SM	Silty sand, loose to medium dense, moist, dark brown.
			GW	Well graded gravel with sand, estimated at 5-10% silt, medium dense, moist, dark brown.
5/9/12		15	ML	Clayey silt, estimated at 5-10% sand, stiff to very stiff, moist, olive brown and strong brown, mottled.
				TOTAL DEPTH: 16'
		20		

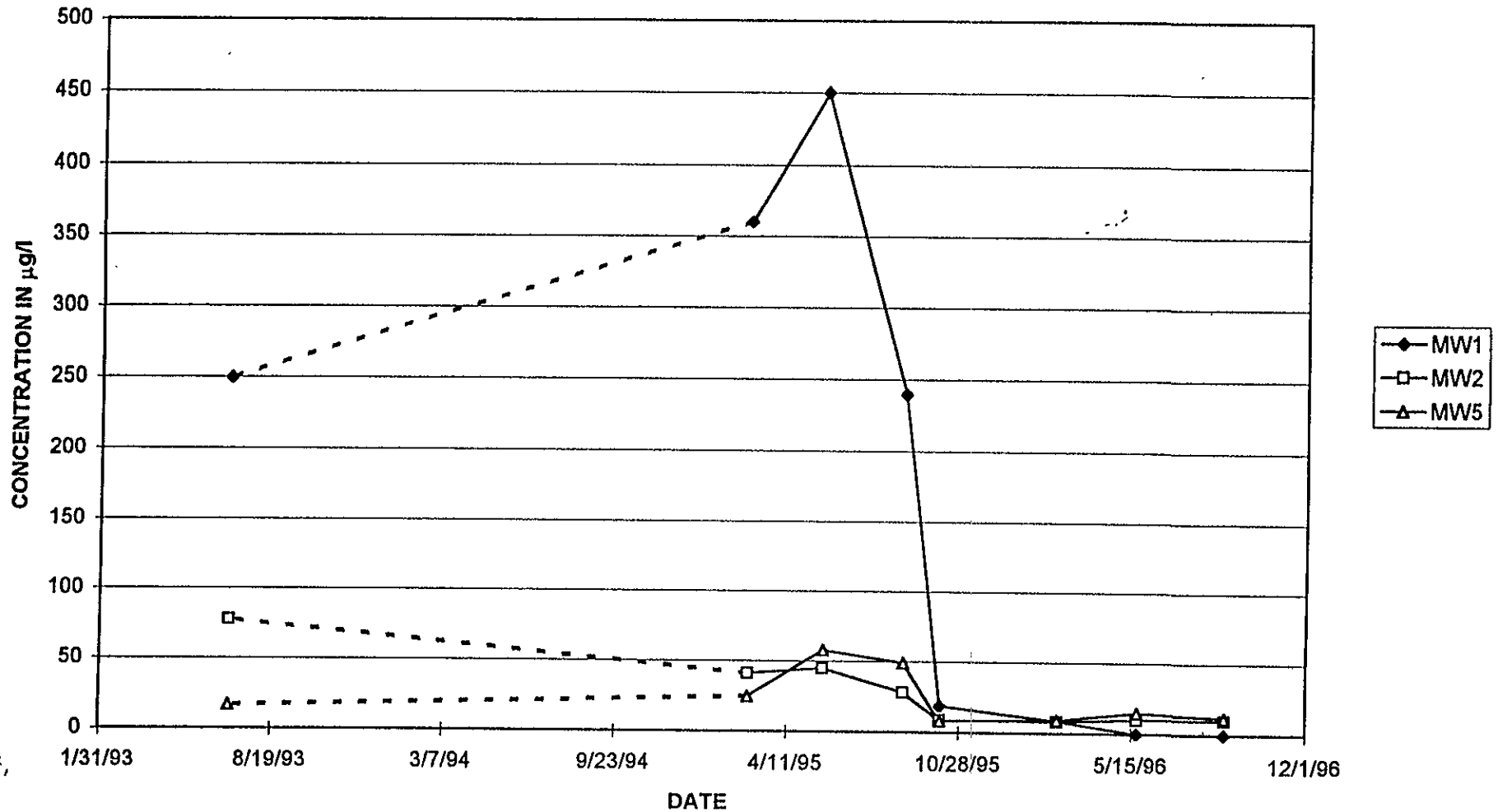
## BORING LOG

Project No. KEI-P93-0603	Boring Diameter 4"	Logged By J.G.
	Casing Diameter N/A	
Project Name Berkeley Farms 51st. & Telegraph, Oakland	Well Cover Elevation N/A	Date Drilled July 30, 1993 <i>JGG</i> <i>CEG 1633</i>
Boring No. <b>EB20</b>	Drilling Method Solid-stem Flight Auger	Drilling Company Clear Heart Construction

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		Sand, silt, clay, and gravel with bricks, concrete, and debris (fill).
5/4/3		5	GP	Gravel with sand, estimated at 20-30% fine-grained sand, gravel to 3 inches in diameter, local pockets of silty clay, loose, slightly moist, brown (fill).
4/4/6		10	ML	Gravelly silt with sand, estimated at 30% gravel, 25% sand, and trace clay, stiff, moist, brown, gravel to 2 inches in diameter (fill).
13/19/14		15	GW	Gravel with silt and sand, estimated at up to 40% silt and sand and trace to 10% clay, wet to saturated, brown (fill).
				TOTAL DEPTH: 17.5'
		20		

BERKELEY LAND COMPANY  
(TEMISCAL PLAZA)  
51ST STREET TELEGRAPH AVENUE  
OAKLAND, CA

### TETRACHLOROETHENE CONCENTRATION TREND



GRAPH 1