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

March 30, 1998
StID # 239

REMEDIAL ACTION COMPLETION CERTIFICATION

Mr. Thomas Stenstrom c/o
The Kinder Co.
P.O. Box 13304, Stn. E
Oakland CA 94607

Mr. and Mrs. Joe Gallo
3055 55th Ave.
Oakland CA 94605

RE: Tri-City Cleaners, 2560 E. 14th St., Oakland CA 94601

Dear Mr. Stenstrom and Mr. & Mrs. Gallo:

This letter confirms the completion of site investigation and remedial action for the two 1000 gallon stoddard solvent underground tanks removed from 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 tank is greatly appreciated.

Based upon the available information and with provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank releases 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.

Please contact Barney Chan at (510) 567-6765 if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung
Director, Environmental Health

c: B. Chan, Hazardous Materials Division-files
Chuck Headlee, RWQCB
Mr. Dave Deaner, SWRCB Cleanup Fund
Mr. Leroy Griffin, City of Oakland OES, 505 14th St., Suite 702, Oakland CA 94612

RACC2560

01-1662

CALIFORNIA REGIONAL WATER

MAR 17 1998

QUALITY CONTROL BOARD

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION **Date:** March 5, 1998

Agency name: **Alameda County-HazMat** Address: **1131 Harbor Bay Parkway Rm 250, Alameda CA 94502**

City/State/Zip: **Alameda** Phone: **(510) 567-6700**

Responsible staff person: Barney Chan Title: **Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: Tri-City Cleaners

Site facility address: 2560 E. 14th St.(International Blvd.), Oakland 94601

RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: 239

ULR filing date: 11/5/92 SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
1. The Kinder Co. c/o c/o Thomas Stenstrom	P.O. Box 13304, Stn. E Oakland CA 94607	(510) 339-9061
2. Mr.& Mrs. Joe Gallo	3050 55th Ave. Oakland CA 94605	(510) 536-4040

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	1,000	stoddard solvent	Removed	9/24/90
2	1,000	stoddard solvent	Removed	10/31/90

III RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: presumed from holes in the tank

Site characterization complete? Yes

Date approved by oversight agency:

Monitoring Wells installed? no Number: NA

Proper screened interval? NA

Leaking Underground Fuel Storage Program

Highest GW depth: ~6.0' bgs Lowest depth: ~10.0 bgs
From 11/20/97 temporary borings, equilibrated DTW

Flow direction: assumed west-southwesterly from gradient at adjacent site @2530 E. 14th St. immediately north of subject site

Most sensitive current use: adjacent properties are residents and apartments

Are drinking water wells affected? No Aquifer name: NA

Is surface water affected? No Nearest affected SW name: NA

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

Report(s) on file? **Yes** Where is report(s)? Alameda County
1131 Harbor Bay Parkway,
Room 250, Alameda CA 94502-6577

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment of Disposal w/destination)	Date
Tanks	2-1,000 gallon	Disposed @ H&H Env. Services, SF	9/24/90 & 10/31/90
Piping	~100'underground	capped and left in-place	
Soil	75 cu yds	Disposed @ Zanker Material Recovery Systems, San Jose, CA	12/5/90

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before[1]	After[2]	Before[3]	After[4]
TPH (ss/naptha)	680	3300	ND	20,000
TPH (Diesel)	79	NA	2700	4,900
Benzene	ND	ND	ND	ND
Toluene	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND
Xylenes	0.068	ND	ND	ND
TPH mo	ND	NA	ND	
Others: PNAs		* ND		ND

Comments (Depth of Remediation, etc.):
1 From 10/31/90 soil sample from removal of second 1k UST
2 From soil samples after 12/20/90 overexcavation of both tank pits
3 Grab groundwater sample from pit EX-1 taken on 10/5/90
4 Grab groundwater sample from boring B1, 11/97
*** from soil samples from borings advanced on 11/97**

Leaking Underground Fuel Storage Tank Program

IV. **CLOSURE**

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

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

Site management requirements: An appropriate health and safety plan must be in place when performing any subsurface work in the area near the former USTs.

Should corrective action be reviewed if land use changes? Yes

Monitoring wells Decommisioned: NA

Number Decommisioned: NA Number Retained:

List enforcement actions taken: None

List enforcement actions rescinded: NA

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Barney M. Chan Title: Hazardous Materials Specialist

Signature: Barney M Chan Date: 3/30/98

Reviewed by

Name: Tom Peacock Title: Manager

Signature: Tom Peacock Date: 2-19-98

Name: Eva Chu Title: Hazardous Materials Specialist

Signature: Eva Chu Date: 1/7/98

VI. RWQCB NOTIFICATION

Date Submitted to RB: 3/17/98 RB Response: 3/25/98

RWQCB Staff Name: ~~Stephen Hill~~ Chuck Headlee Title: ~~ES IV Sup~~ AEG Date: 3/25/98

Chuck Headlee

VII. ADDITIONAL COMMENTS, DATA, ETC.

Tri-City Cleaners, a dry-cleaning business, has been located at this site since the mid-1960s. From the start of operations until the mid- to late 1980's, the plant used stoddard solvent as its cleaning solvent. It was kept in two 1000 gallon steel single-walled underground tanks in the rear (east) end of the site. Chlorinated solvents were never used as cleaning solvents. Several TPH analyses are mentioned in the reports for this site. For clarification, it is noted that Total Petroleum Hydrocarbons as gasoline (TPHg) represents compounds in the boiling range of C4-C12, petroleum naptha represents compounds in the boiling range of C10-C13, stoddard solvent represents compounds in the boiling range C9-C12 and mineral spirits represents compounds in the C7-C11 range. Thus, when these analytical results are reported, they represent very similar boiling range materials. The real difference in the above mentioned chemicals is that TPHg has significant BTEX while the others do not. It is noted that BTEX compounds are for the most part absent in the samples at this site.

Specific diagrams for the installation of the tanks and piping do not exist since the tanks were installed by the operator without a permit, a common practice in the 1960's.

In February 1990, prior to removing the underground tanks, soil samples were taken near the underground tanks and along the underground piping run at depths of 3 and 7 feet. See **Figure 1 and 1a** for the location of the site and these samples and **Table 1** for a summary of the analytical results. Although the soil samples did not indicate that a release had occurred, the location assumed for tank 2 (southern tank) was not correct, therefore, the samples for this tank were not entirely representative.

On September 24 and October 31, 1990 the two underground tanks were removed from the site. The northernmost tank lay east-west and was removed first. Two soil samples were taken at the ends of the tank along with a grab groundwater sample. Analytical results were ND for TPH as naptha and BTEX for all soil and groundwater samples except for low levels of xylene and ethylbenzene in the soil samples. Since a moderate petroleum odor was noticed in the sample from the west end of the tank, an additional soil and grab groundwater sample was taken on **October 5, 1990** from the west end of the tankpit. For some reason, these samples were analyzed for TPHmo, TPHd and BTEX, not TPHss. This time, the samples exhibited 6.5 mg/kg TPHd in the soil sample and 2.7 mg/l in the groundwater sample. The southernmost tank (#2) lay north-south at the west end of Tank 1. It was removed on October 31, 1990. No water was encountered in this excavation. Soil samples were collected from each end of the tank at a depth of 8'. TPHd (up to 79 ppm) and TPH as naptha (up to 690 ppm) were detected in both soil samples. See **Table 2** for a summary of the analytical results and **Figure 2** for sample locations.

On December 20, 1990 the tank pits were overexcavated into one large pit. The extent of excavation was limited due to the confined space in the rear yard. The pit was excavated down to 12′ and six confirmatory soil samples were taken. Five of the samples were sidewall samples and one was taken from the center of former Tank #2. These soil samples were analyzed for TPHn and BTEX. Up to 3300 ppm TPHn was detected in the southernmost soil sample, (EX2 S 12′), however, no BTEX was exhibited in the samples. These results again confirm the release was from stoddard solvent. See **Figure 3** for the location of the overexcavation samples.

During the time this investigation occurred, the adjacent property north of this site was developed into an apartment housing complex. This site, originally a car wash, had experienced a gasoline release from USTs which had been remediated and received site closure. Access to further investigate this site was restricted by the new development. It required a limited access rig which entered the property from the backyard of a rear residence.

To determine the limits soil and groundwater contamination four borings were proposed, three within and one upgradient of the former tank pits. These locations were selected because of the confined and limited space at the site. On **November 20, 1990**, borings B2 through B4 were advanced near the boundaries of the former tank pit and B1 advanced upgradient to the former tanks. Soil samples were taken at or below first encountered groundwater. Temporary 0.5" diameter slotted casings were installed within each boring to a depth approximately 2′ below first encountered groundwater and grab water samples collected. Both soil and groundwater samples were analyzed for TPHd, TPHg, TPHss, BTEX and PNAs. Although some of the samples were taken within the tank backfill and therefore had expectedly low TPH contamination, sample B4 was advanced to a depth of 15′ and exhibited very low TPHd, TPHg results and ND for TPHss, BTEX and PNAs. All grab groundwater samples were low to ND for all analytes except the sample from B1. This sample, upgradient of the tank pit, exhibited 4.9 mg/l TPHd, 21 mg/l TPHg and 20 mg/l TPHss. BTEX and PNAs were ND. The reported TPHg in B1 is from the TPHss release. The reported TPHd may also be from the TPHss since the TPHd reported had lighter hydrocarbons than the standard. Recall, TPHd quantifies chemicals in the C12-C22 range and TPHss quantifies chemicals in the C9-C12 range. The consultant theorized that this high concentration of TPHss in B1 is from sediment observed in the groundwater sample. See **Figure 4** for the location of these borings and **Tables 3 and 4** for the results of soil and groundwater samples.

Because of the low toxicity associated with TPHss and the incomplete exposure pathways, further delineation of the groundwater plume was not warranted.

This site is recommended for closure as a "low risk groundwater case" based upon the following:

* The sources, underground tanks and contaminated soil to the extent possible, have been removed.

* The site has been adequately characterized, given the existing physical constraints . Further site characterization is not warranted due to the low toxicity of TPHss and the absence of BTEX.

* With the exception of the upgradient direction, grab groundwater samples indicate that the contaminant plume is stable and not migrating.

* No drinking water wells are reported within 1 mile of this site. Visual inspection of neighboring sites did not identify any wells or basements.

* No chemicals with known carcinogenicity or toxicity were observed in soil or groundwater.

* Downgradient of the USTs lies a newly developed apartment complex where any volatile migration would be impeded by the vapor barrier and foundation required for this building. The former monitoring well, MW-12, on the neighboring site, ~ 50' downgradient to the former Tri-City USTs was monitored on two occasions and exhibited ND for TVH (TPHg). This suggests that the plume is not migrating. See **Plate 1, Figure 5 and Table 5 for the gradient, current site conditions, former monitoring well locations and monitoring data** for the adjacent property.

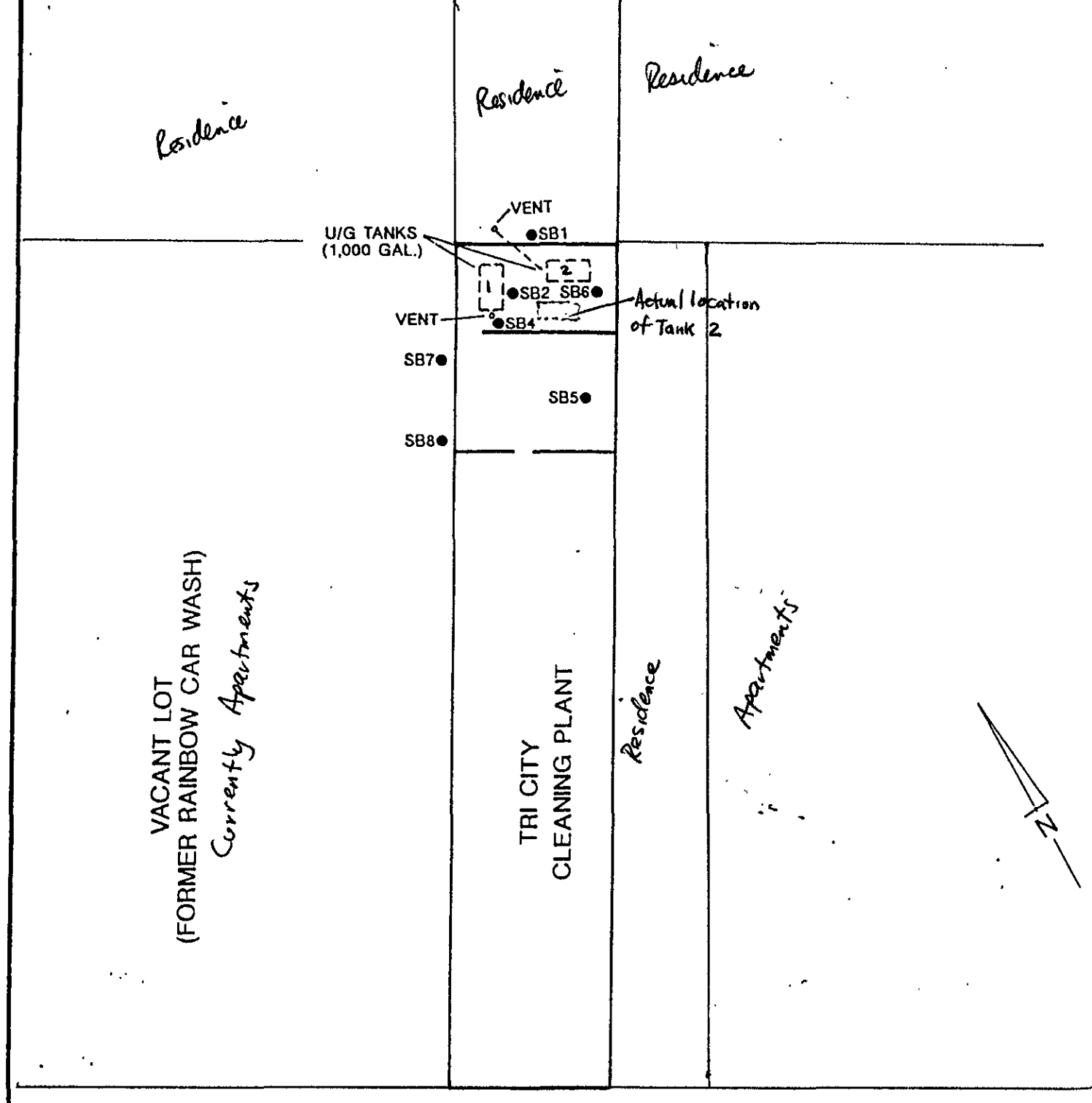


Fig. 1

SITE PLAN

0 FEET 25

TRI CITY
OAKLAND, CALIFORNIA

ML 2/90

GROUNDWATER
TECHNOLOGY, INC

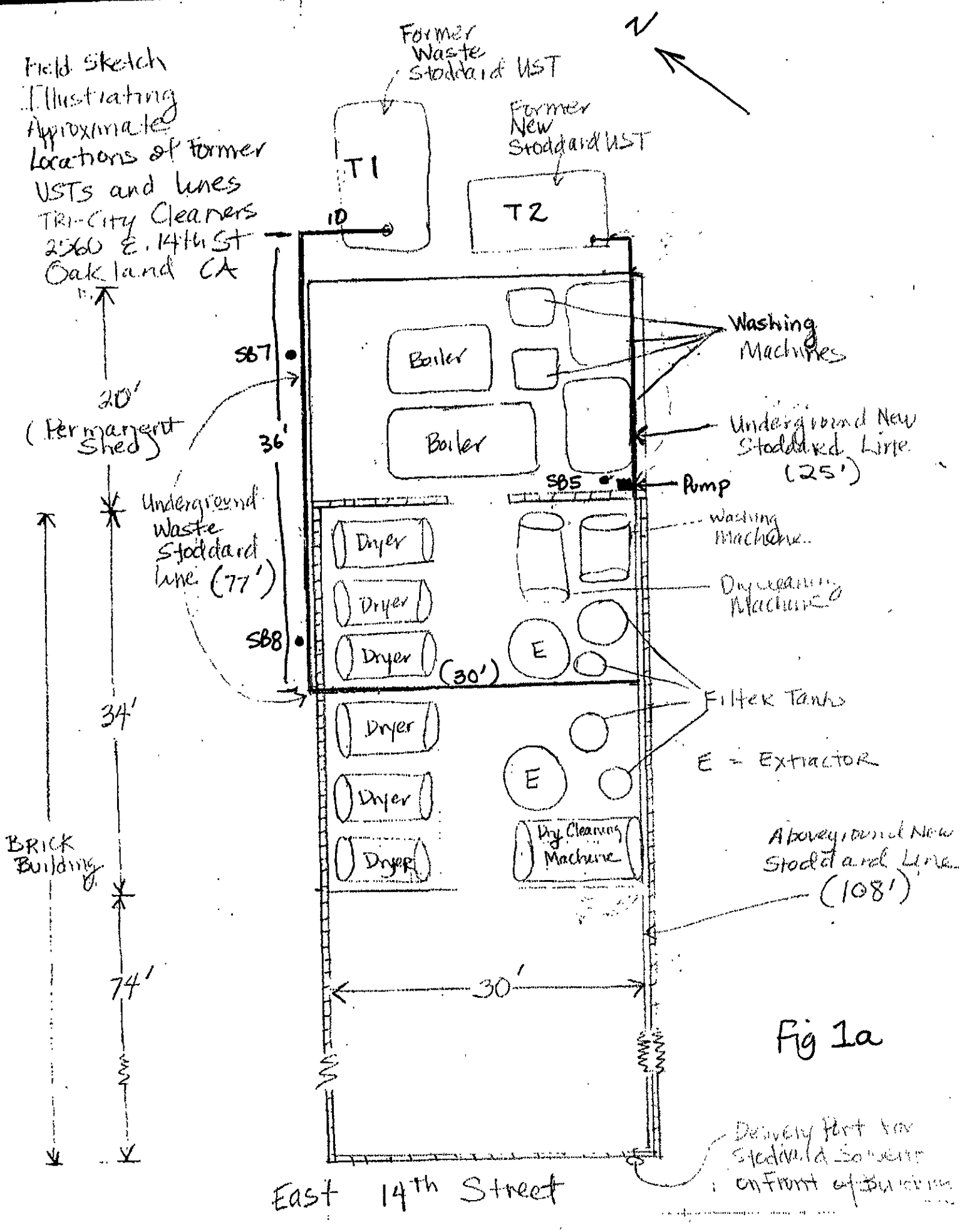

Field Sketch Illustrating Approximate Locations of former USTs and Lines
TRI-City Cleaners
2360 E. 14th St
Oakland CA
N
Former Waste Stoddard UST
Former New Stoddard UST
T1
T2
ID
SB7
SB8
SB5
Boiler
Boiler
Washing Machines
Underground New Stoddard Line (25')
Pump
Washing Machine
Dry cleaning Machine
Dryer
Dryer
Dryer
Dryer
Dryer
Dryer
E
E
(30')
Filter Tanks
E = Extractor
Dry Cleaning Machine
Above ground New Stoddard Line (108')
20' (Permanent Shed)
36'
34'
74'
30'
BRICK Building
Underground Waste Stoddard line (77')
East 14th Street
Fig 1a

Table 1: Previous Analytical Results
Tri City Cleaners
2530 East 14th Street
Oakland, CA

Soil Sample Results(mg/kg)

Location	Consultant	Depth (feet)	Date	TPH as Mineral Spirits	TPH as Naptha	TPH as Diesel	TPH as Motor Oil	Benzene	Toluene	Xylenes	Ethylbenzene
SB1	Groundwater Tech.	5	2/5/90	<10	NA	NA	NA	<0.5	<0.5	<0.5	<0.5
SB2	Groundwater Tech.	7	2/5/90	<10	NA	NA	NA	<0.5	<0.5	<0.5	<0.5
SB4	Groundwater Tech.	7	2/5/90	<10	NA	NA	NA	<0.5	<0.5	<0.5	<0.5
SB5	Groundwater Tech.	3	2/5/90	<10	NA	NA	NA	<0.5	<0.5	<0.5	<0.5
SB6	Groundwater Tech.	7	2/5/90	<10	NA	NA	NA	<0.5	<0.5	<0.5	<0.5
SB7	Groundwater Tech.	3	2/5/90	<10	NA	NA	NA	<0.5	<0.5	<0.5	<0.5
SB8	Groundwater Tech.	3	2/5/90	<10	NA	NA	NA	<0.5	<0.5	<0.5	<0.5
EX-1 W (1st rnd)	Reay	9	9/24/90	NA	<10	NA	NA	<0.0025	<0.0025	**0.026**	**0.0097**
EX-1 E (1st rnd)	Reay	9	9/24/90	NA	<10	NA	NA	<0.0025	<0.0025	**0.011**	**0.006**
EX-1 W (2nd rnd)	Reay	9	10/5/90	NA	NA	**6.5**	<10	<0.0025	<0.0025	<0.0025	<0.0025
EX-1 E	Reay	12	12/20/90	NA	**980**[A]	NA	NA	<0.0025	<0.0025	<0.0025	<0.0025
EX-1 W	Reay	12	12/20/90	NA	**1900**[A]	NA	NA	<0.0025	<0.0025	<0.0025	<0.0025
EX-2 N	Reay	8	10/31/90	NA	**220**[A]	**21**	<10	<0.0025	<0.0025	<0.0025	<0.0025
EX-2 S	Reay	8	10/31/90	NA	**680**[A]	**79**	<10	<0.0025	<0.0025	**0.068**	<0.0025
EX-2 S	Reay	12	12/20/90	NA	**3300**[A]	NA	NA	<0.0025	<0.0025	<0.0025	<0.0025
EX-2 S	Reay	15	12/20/90	NA	**1.5**[A]	NA	NA	<0.0025	<0.0025	<0.0025	<0.0025
EX-2 E Sidewall	Reay	12	12/20/90	NA	**600**[A]	NA	NA	<0.0025	<0.0025	<0.0025	<0.0025
EX-2 W Sidewall	Reay	12	12/20/90	NA	**340**[A]	NA	NA	<0.0025	<0.0025	<0.0025	<0.0025

Groundwater Sample Results(ug/L)

Location	Consultant	Depth (feet)	Date	TPH as Mineral Spirits	TPH as Naptha	TPH as Diesel	TPH as Motor Oil	Benzene	Toluene	Xylenes	Ethylbenzene
EX-1	Reay		9/24/90	NA	<50[B]	NA	NA	<0.005	<0.005	<0.005	<0.005
EX-1	Reay		10/5/90	NA	<50	**2,700**	<500	<0.5	<0.5	<0.5	<0.5

Footnotes:

A: Naptha sample provided to the laboratory for these samples.

B: Laboratory data indicates this sample had a positive hydrocarbon response that was heavier than gas. [it should be noted that a naptha standard was not provided to the laboratory for this sample].

NA Not analyzed for this constituent

FIGURE 2

SITE MAP

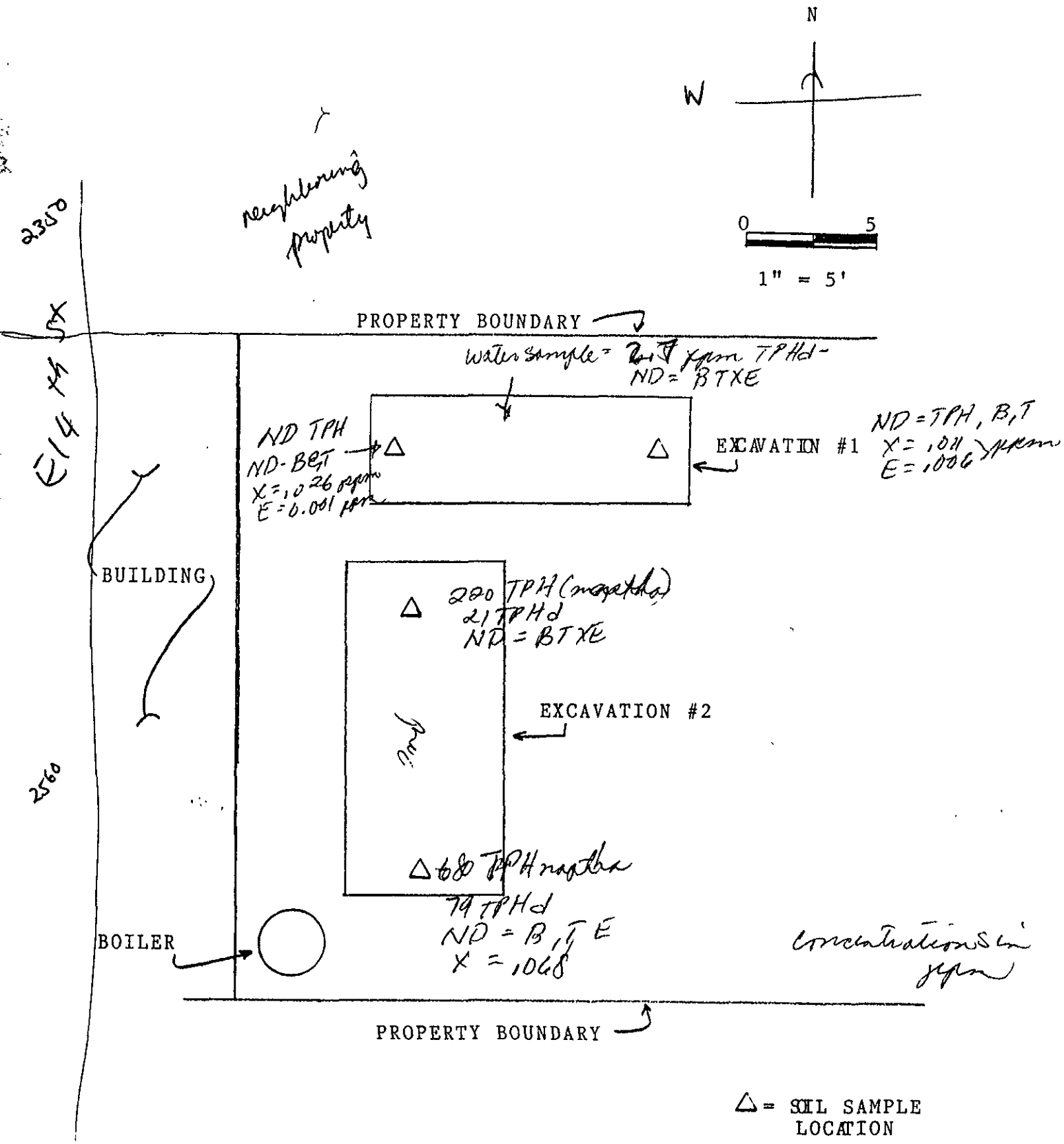


TABLE 2

SOIL AND WATER SAMPLE ANALYTICAL RESULTS
TRI CITY CLEANERS
(PPM)

SOIL

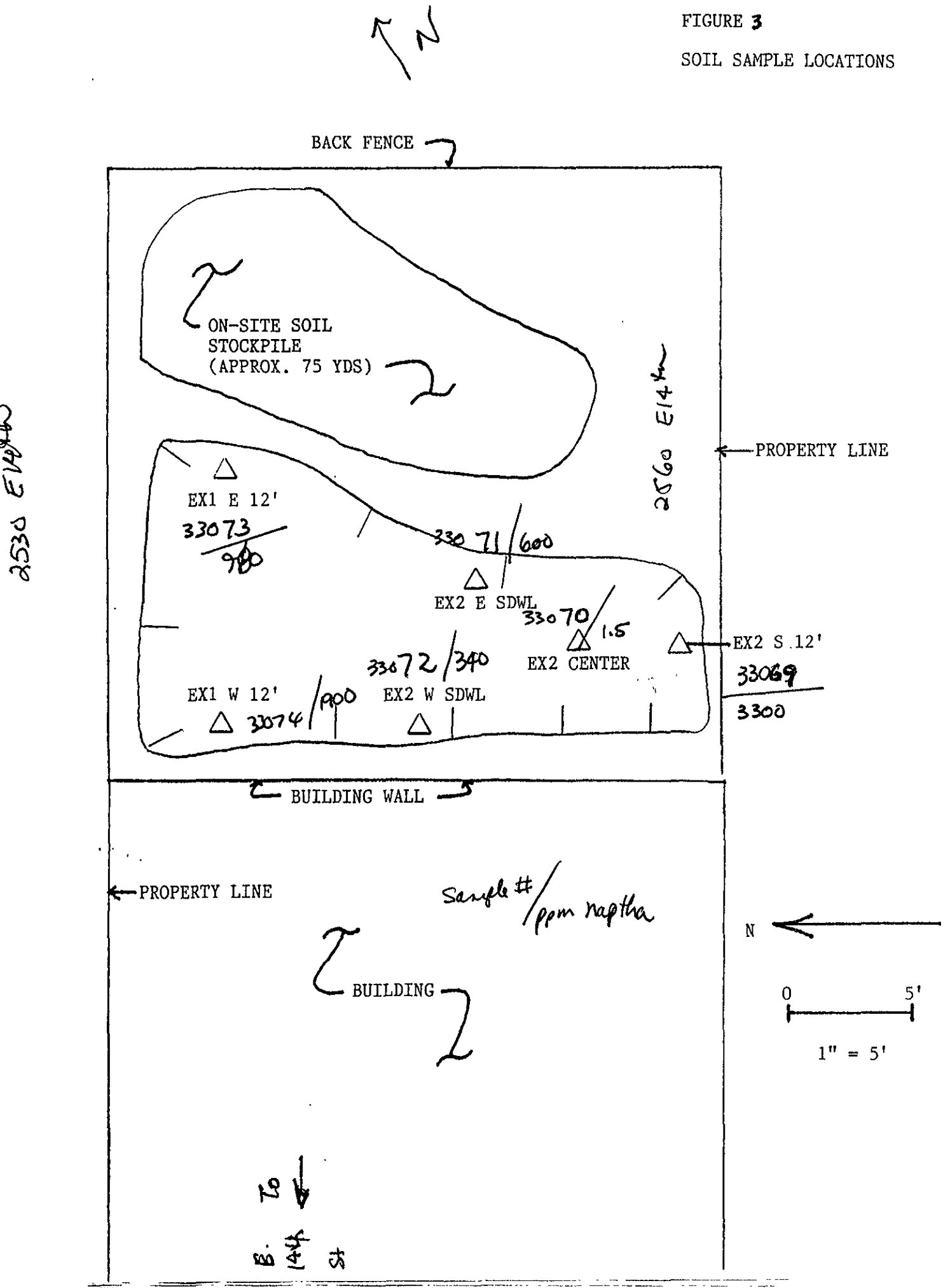
Sample Date	Sample Location	TPH	Benzene	Toluene	Xylene	E.benzene
9/24/90	Ex-1 W (1st Rnd)	ND (n)	ND	ND	0.026	0.001
9/24/90	Ex-1 E (1st Rnd)	ND (n)	ND	ND	0.011	0.006
10/5/90	Ex-1 W (2nd Rnd)	6.5(d) ND (mo)	ND	ND	ND	ND
10/31/90	Ex-2 N	220(n) 21(d)	ND	ND	ND	ND
10/31/90	Ex-2 S	680(n) 79(d)	ND	ND	0.068	ND
	RL	10(n) 1(d)	0.0025	0.0025	0.0025	0.0025
	Ex-1 (1st)	nd (n)	ND	ND	ND	ND
10/5/90	Ex-1 (2nd)	2.7(d) ND (mo)	ND	ND	ND	ND
	Ex-2	Water not encountered				
	RL	0.05(n&d)	0.0005	0.0005	0.0005	0.0005

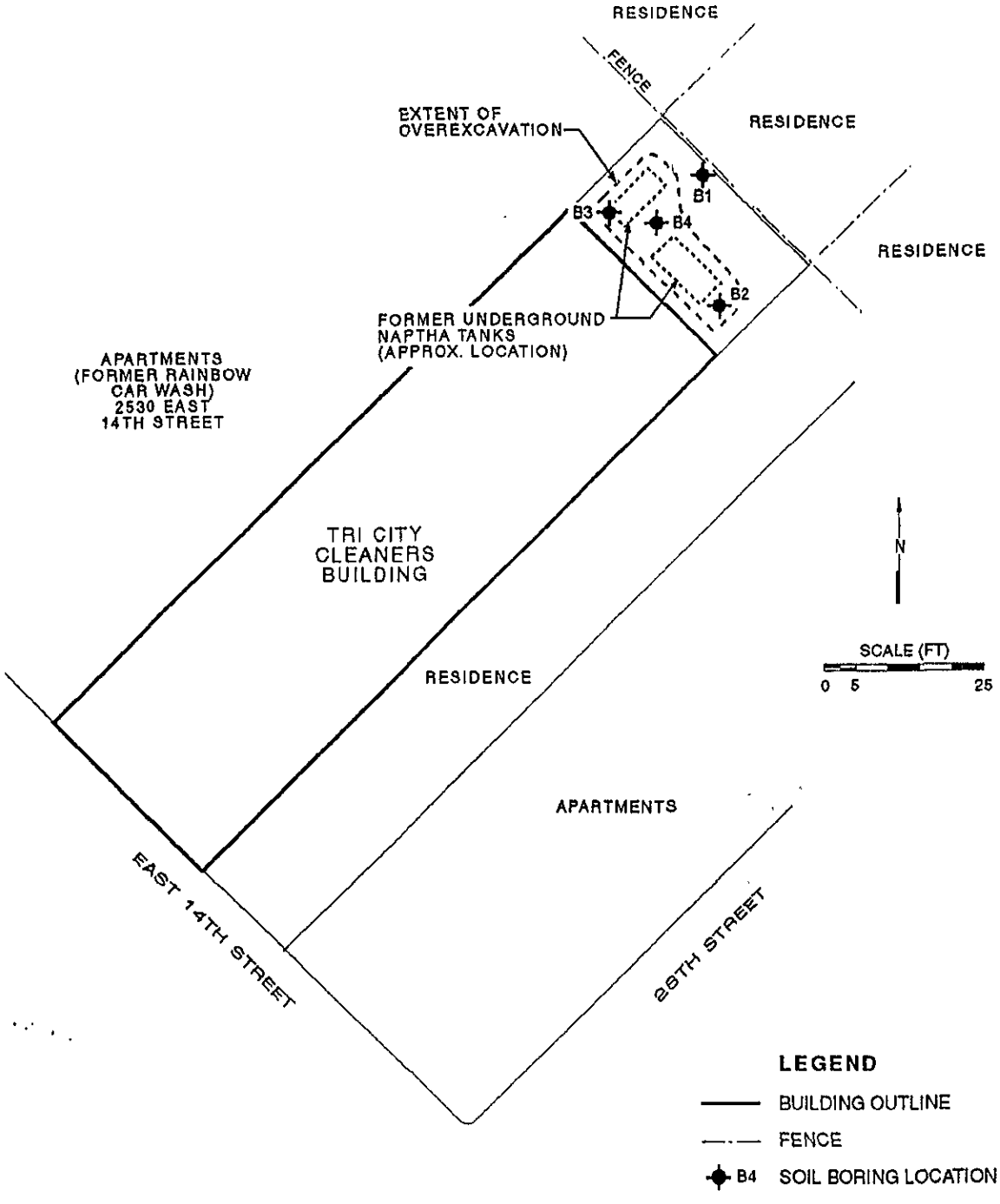
WATER

ND - Not detected at laboratory reporting limit
(d) - Total Petroleum Hydrocarbon as diesel
(n) - TPH as naptha
RL - Laboratory reporting limit

FIGURE 3

SOIL SAMPLE LOCATIONS





MENACK/Associates 5319 Miles Avenue Oakland, California 94618 Phone/Fax: (510) 547-6120	FIGURE 4 LOCATION MAP OF SOIL BORINGS	Tri City Cleaners 2560 East 14th Street Oakland, CA JOB NUMBER: 703 | DEC. 1997

Table 3. Petroleum Hydrocarbons in Groundwater (ug/L)[A]

Tri-City Cleaners
2560 East 14th Street
Oakland, CA

11/20/97

Location	TPH as Diesel	TPH as Gasoline	TPH as Stoddard Solvent	BTEX	PNA's
B1	4900[YL]	21000[YH]	20000	<0.5	<94
B2	<50	95[YH]	93	<0.5	<9.4
B3	<50	62[YH]	61	<0.5	<9.4
B4	<50	<50	<50	<0.5	<9.5

Footnotes:

A: The sample chromatograms were compared to Stoddard Solvent, gasoline, mineral spirits, naptha, kerosene, diesel, fuel oil #6, and lubricating oil. The laboratory results indicate that Stoddard Solvent is present at the site. Diesel and gasoline results were reported due to quality control requirements.

Y: Sample exhibits fuel pattern which does not resemble standard

H: Heavier hydrocarbons than indicated standard

L: Lighter hydrocarbons than indicated standard

Table 4 Petroleum Hydrocarbons in Soil (mg/kg)[A]

Tri-City Cleaners
2560 East 14th Street
Oakland, CA

11/20/97

Location	Depth (feet)	TPH as Diesel	TPH as Gasoline	TPH as Stoddard Solvent	BTEX	PNA's
B1	8	8.2[YL]	160[YH]	260	<250	<50
B2	11	7.3[YL]	76[YH]	120	<250	<50
B3	3	2.2[Y]	<1	<1	<5	<50
B3	7	3.9[Y]	<1	<1	<5	<50
B4	3	1.9[Y]	<1	<1	<5	<50
B4	11	6.9[YL]	56[YH]	88	<130	<50
B4	13	2.8[YL]	1.7[YH]	<1	<5	<50
B4	15	2.6[Y]	3[YH]	<1	<5	<50

Footnotes

A: The sample chromatograms were compared to Stoddard Solvent, gasoline, mineral spirits, naptha, kerosene, diesel, fuel oil #6, and lubricating oil. The laboratory results indicate that Stoddard Solvent is present at the site. Diesel and gasoline results were reported due to quality control requirements.

Y: Sample exhibits fuel pattern which does not resemble standard

H: Heavier hydrocarbons than indicated standard

L: Lighter hydrocarbons than indicated standard

Sample Location	Boring Depth (feet)	TEH (mg/kg)	TVH (mg/kg)	Benzene (µg/kg)	Toluene (µg/kg)	Ethyl-Benzene (µg/kg)	Xylenes (µg/kg)
MW-15	9.5	91	140	200	2,000	2,900	15,000
MW-16	8.0	14	500	<300	1,700	8,400	48,000
MW-17	8.0	<1	<1	<5	<5	<5	<5

d.l. high due to dilution

2530 E14th St Monitoring Data

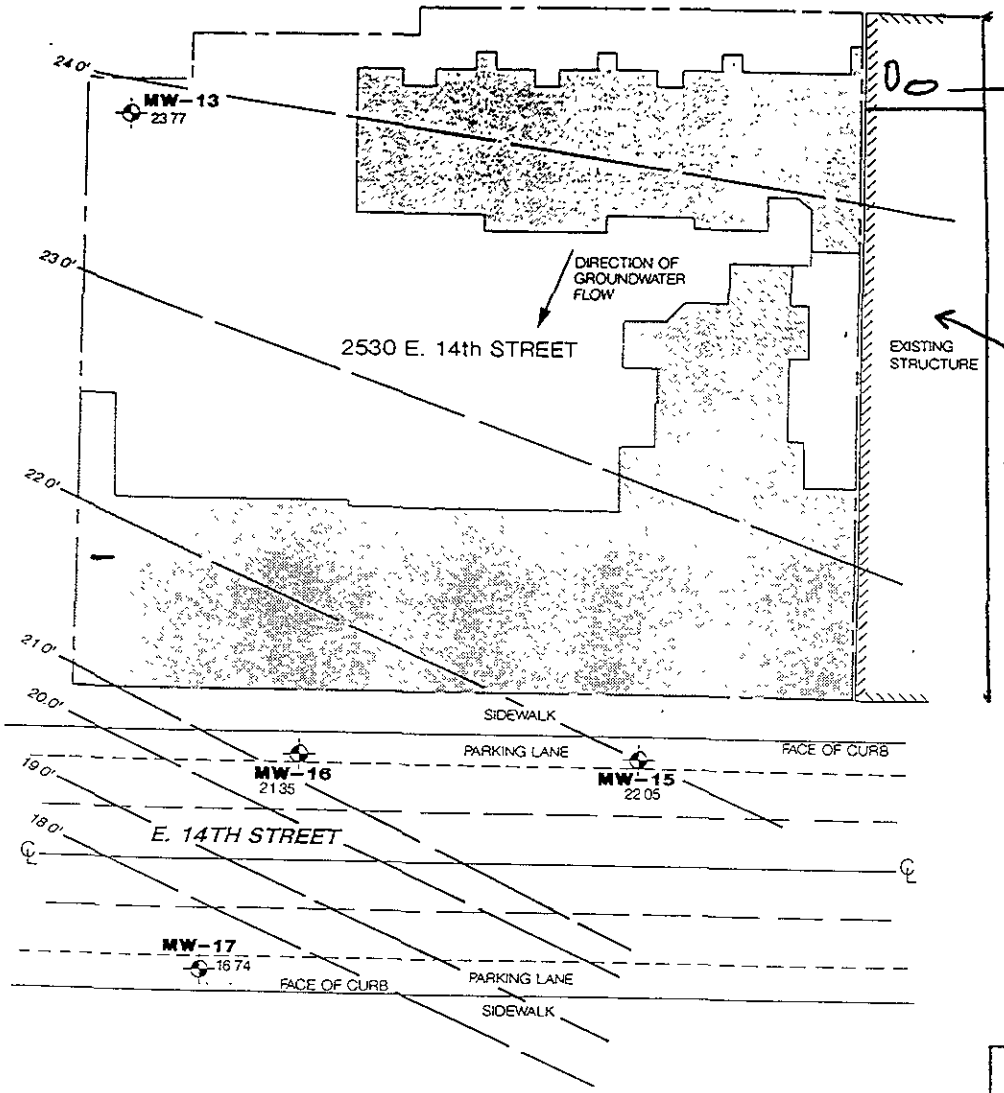
Table 5

Contaminant Concentrations in Groundwater

Sample Location	Date	TEH (µg/l)	TVH (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Xylenes (µg/l)
MW-12	3/30/90	-	<50	<1	<1	<1	<1
	8/28/91	-	<50	<0.5	<0.5	<0.5	<0.5
	Abandoned 1991						
MW-13	3/30/90	<50	<50	<1	<1	<1	<1
	8/28/91	-	<50	<0.5	<0.5	<0.5	<0.5
	1/24/94	<50	<50	<0.5	<0.5	<0.5	<0.5
	6/10/94	<50	<50	<0.5	<0.5	<0.5	<0.5
MW-14	3/30/90	-	820	<1	<1	<1	89
	8/28/91	-	230	11	6.2	7.2	20
	Abandoned 1991						
MW-15	6/10/94	440	6,000	150	150	26	940
MW-16	6/10/94	150	3,400	28	84	75	560
MW-17	6/10/94	<50	<50	<0.5	<0.5	<0.5	<0.5

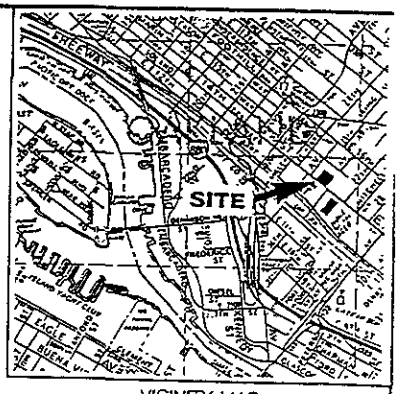
Recheck these conc vs. Risk assessment

µg/l = Micrograms per liter = parts per billion
µg/kg = Micrograms per kilogram
mg/kg = Milligrams per kilogram
TEH = Total Extractable Hydrocarbons
TVH = Total Volatile Hydrocarbons
<1 = Chemical not present at a concentration greater than laboratory detection limit stated
- = Test not requested



Former Stoddard USTs

2560 E.14th St
Tri City Cleaners.



VICINITY MAP

- MONITORING WELL
- BUILDING
- GROUNDWATER ELEVATION CONTOURS (FEET) 12/20/94
- 22.05 GROUNDWATER ELEVATION (FEET) 3/14/95

APPROXIMATE SCALE (feet)
0 30 60

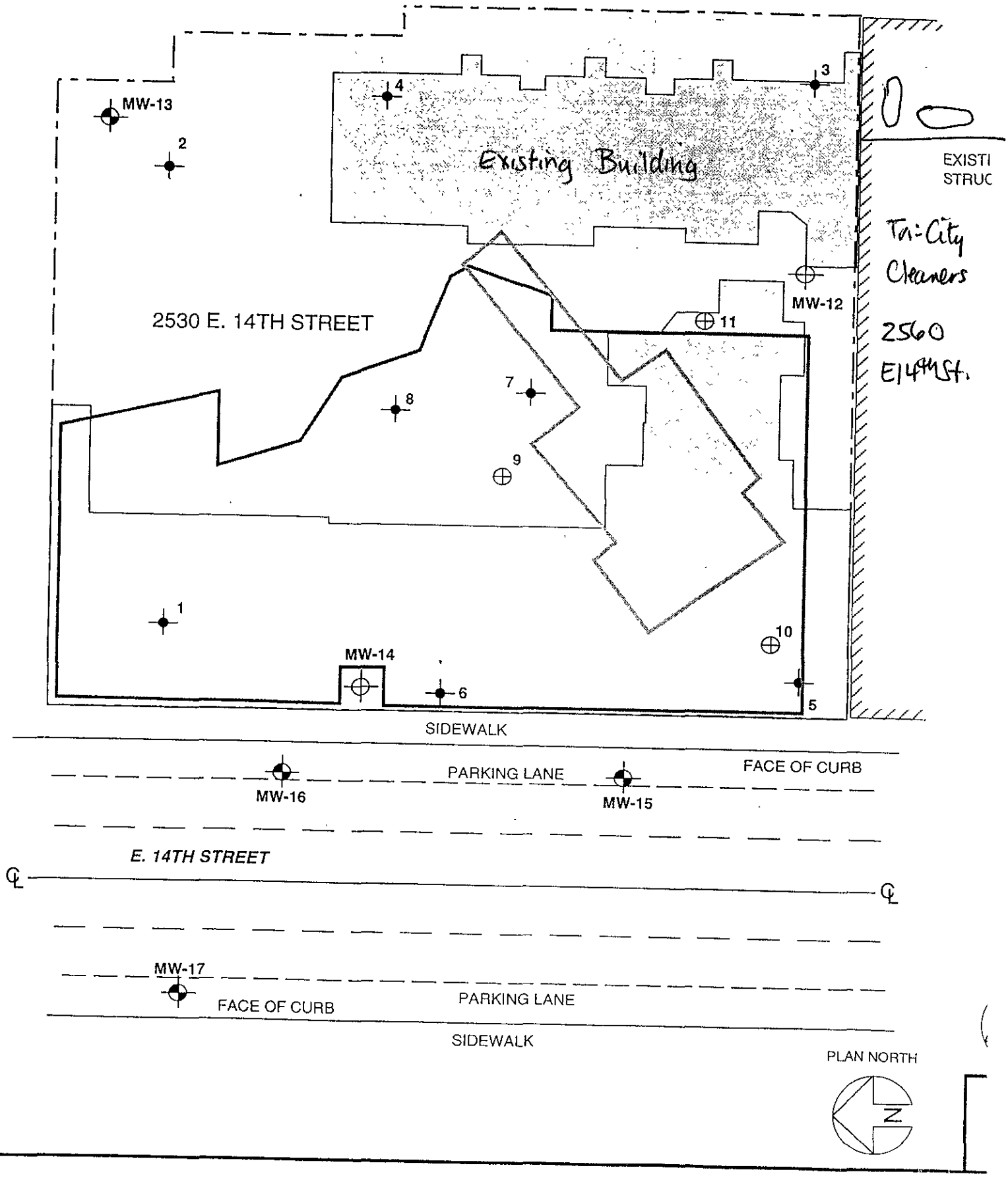
SITE PLAN

Subsurface Consultants

2530 E. 14TH STREET – OAKLAND CA

JOB NUMBER	DATE	APPROVED	PLATE
406.011	3/20/95	MWC	1

Fig 5


MW-13
2
4
3
Existing Building
EXISTI
STRUC
Tri-City
Cleaners
2560
E14THST.
2530 E. 14TH STREET
MW-12
11
7
8
9
1
10
MW-14
6
5
SIDEWALK
PARKING LANE
FACE OF CURB
MW-16
MW-15
E. 14TH STREET
MW-17
FACE OF CURB
PARKING LANE
SIDEWALK
PLAN NORTH
N