G-2

ES TRANSMITTAL

ENGINEERING — SCIENCE, INC.
600 BANCROFT WAY
BERKELEY, CALIFORNIA 94710
(415) 548-7970

Date: DECEMBER 18 1987

ES Project No. NC049.10

IF MATERIAL NOT AS LISTED, PLEASE NOTIFY US AT ONCE

HOW MAILED:

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To: REGIONAL WATER QUALITY CONTROL BOARD
1111 JACKSON ST.
ROOM 6040
OAKLAND, CA 94607

Attn: GREG ZENTNER

Re:

WE ARE SENDING YOU

☒ ATTACHED ☐ UNDER SEPARATE COVER VIA ___

☐ SHOP DRAWINGS ☐ TRACINGS
☐ PRINTS ☐ CATALOGS
☒ DOCUMENTS ☐ COPY OF LETTER
☐ SPECIFICATIONS ☐ ___

B3 G52 2/17/88

COPIES	DATE	ITEM
		BENEFIT CAPITAL
1	12/18	SOIL REMEDIATION PLAN FOR THE SOUTHEASTERN CORNER OF THE
		1650 65th STREET PROPERTY EMERYVILLE CA
		/ACAMEDP

REMARKS

COPY TO

☐ File
☐ Author
☐ Reading File
☐ ___

SIGNED: Katherine A. Chesick

Katherine A. Chesick

(ES Berk 6 '78)

ES
ENGINEERING-SCIENCE, INC.

600 BANCROFT WAY
BERKELEY, CALIFORNIA 94710
(415) 548-7970

18 December 1987
Ref.: NC049.05

Alameda County Division
of Hazardous Materials
Department of Environmental Health
470 27th Street, Room 322
Oakland, California 94612

Attention: Ms. Elizabeth Rose

Subject: Soil Remediation Plan for the Southeastern Corner of the 1650 65th Street Property, Emeryville, California

INTRODUCTION

This letter report presents the plan for soil remediation for the 1650 65th Street Property in Emeryville, California. This plan was prepared as part of the ongoing site characterization and remedial action work being performed by Engineering-Science (ES) for Benefit Capital Corporation (BCC), the former site owner. The plan draws on information presented and developed by Engineering-Science in the Underground Fuel Storage Tank Site Investigation Report dated 18 September 1987 (Reference 1). The plan includes abandonment of a 30 foot monitoring well and removal of an estimated 60 cubic yards of contaminated soil associated with a former underground storage tank area.

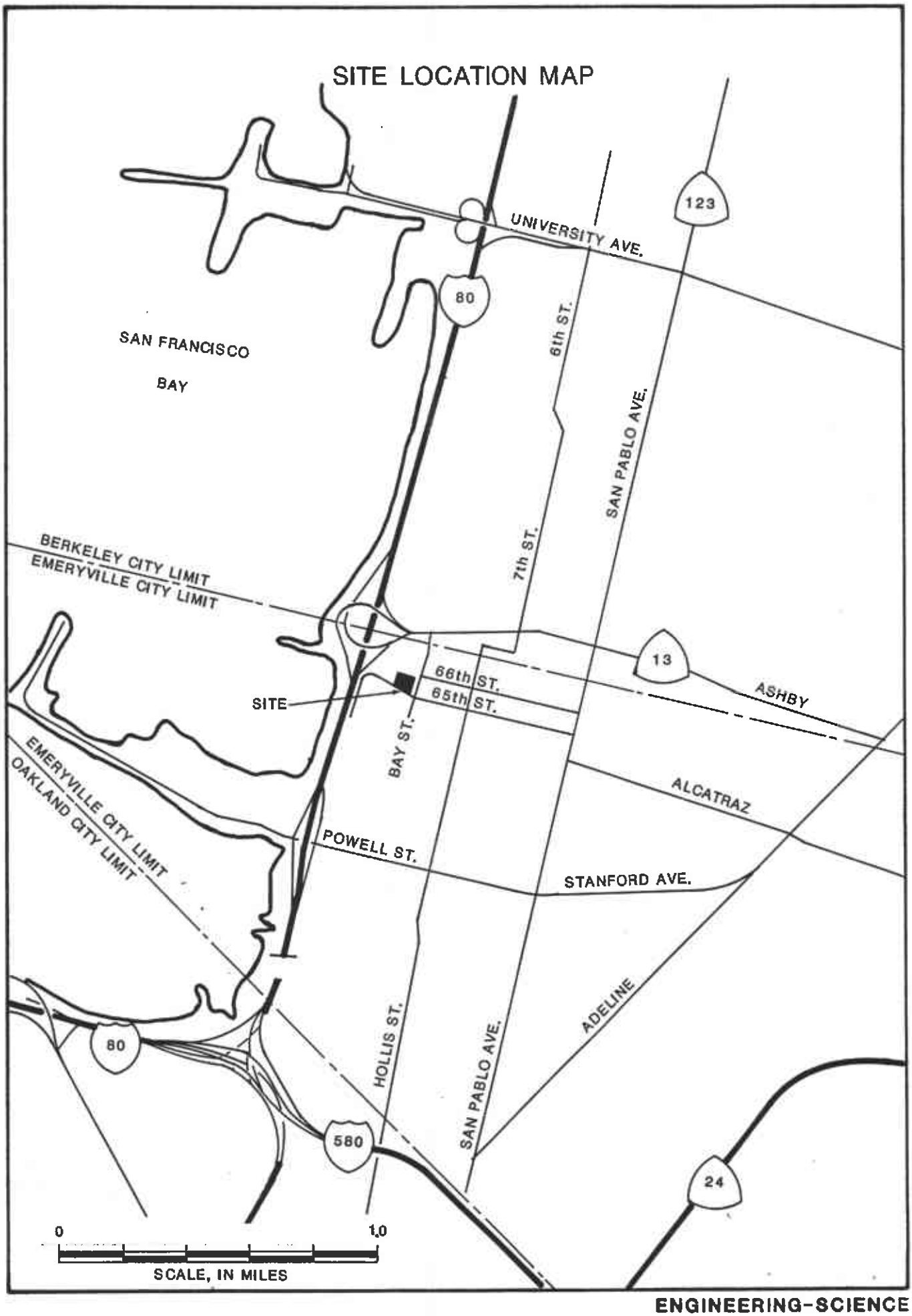
SITE LOCATION AND HISTORY

The 1650 65th Street property covers approximately 5.5 acres and is located in western Emeryville two blocks south of the Emeryville/Berkeley city boundary. Figure 1 is a site location map. Originally below sea level, the property was used as a municipal dump from the early 1940s to the mid 1950s. In the 1950s, the property was developed by construction of the existing warehouse. The property was then leased by Louis Stores, a supermarket company. In 1973, the warehouse was taken over by the United States Postal Service (USPS) as a repair and distribution center for postal service equipment. To date, the USPS leases the warehouse from Wareham Development, the current property owner. Figure 2 is a site plan of the 1650 65th Street property.

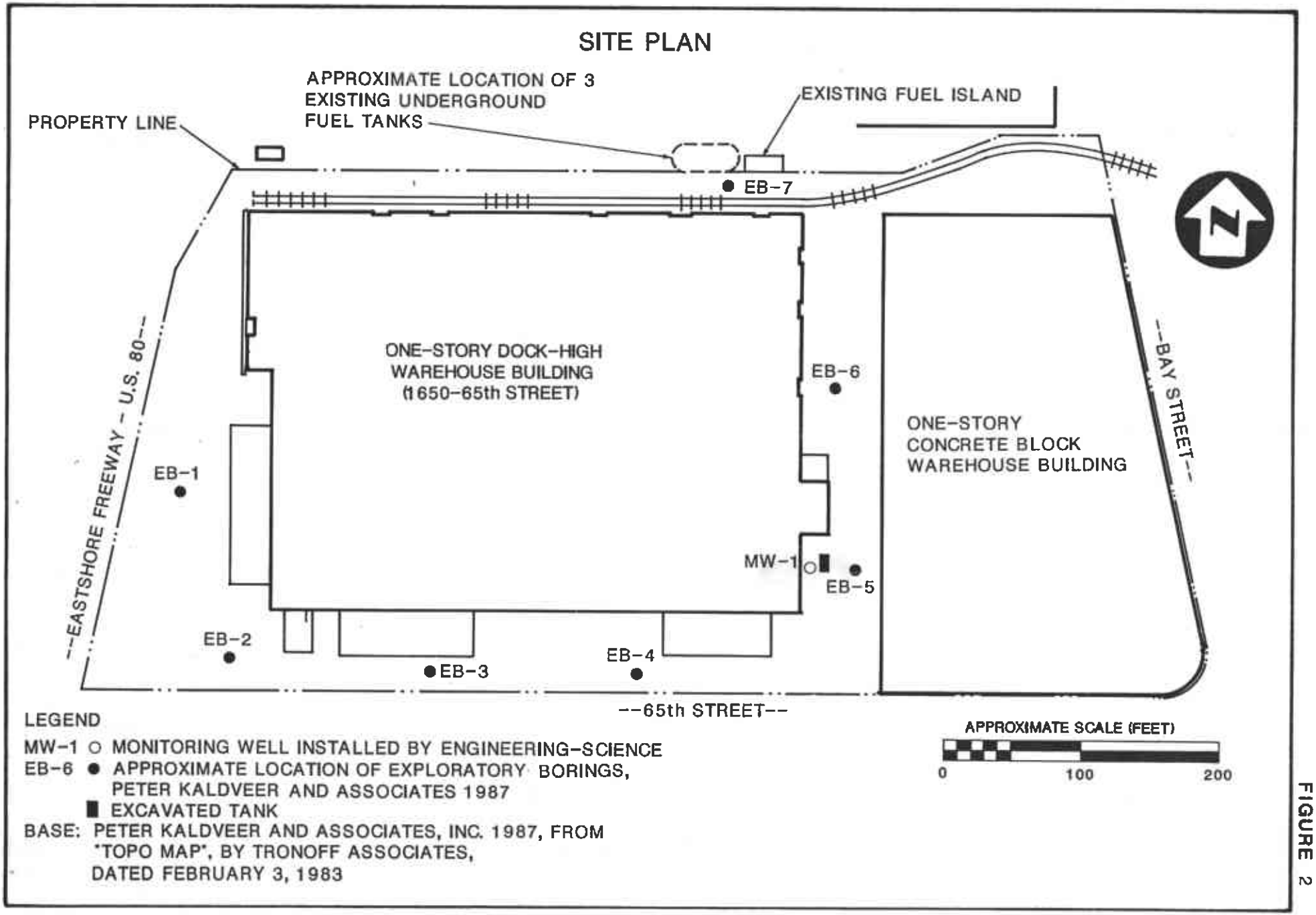
SITE CONTAMINATION

Soil contamination was discovered in the southeastern corner of the property during the removal of an underground storage tank (UST) on 2 July 1987 and the installation of a groundwater monitoring well, MW-1, on 27 July 1987. The 2,000-gallon UST is estimated to have been in place for

FIGURE 1



ENGINEERING-SCIENCE



ENGINEERING-SCIENCE

FIGURE 2

over 20 years, and is reported to have contained at various times both gasoline and waste oil. At the time of removal, neither the tank nor the piping exhibited signs of corrosion, although the product line fittings were rusty. The soil contamination is therefore interpreted to have been caused by leaks in the product line fittings.

Analytical results from soil samples taken from the site indicate contamination of soil by total fuel hydrocarbons (TFH) and lead. TFH levels were found to be highest roughly five feet west of the UST, with 170 mg/kg (gasoline) found in a soil sample taken from five feet below ground surface (sample MW-5) and 6,600 mg/kg (gasoline and diesel) found in a soil sample taken from ten feet below ground surface (sample MW-10). A soil sample taken from beneath the product line at a depth of three feet was found to contain 490 ppm TFH (sample FP- 1). Hydrocarbon contamination was not detected beneath the tank itself (samples N-1 and S-1). A groundwater sample collected from monitoring well MW-1 was found to contain 33 mg/l TFH. Figure 3 is a map showing locations of the UST, soil samples, and monitoring well MW-1.

Work performed at the site in early 1987 (Reference 2) revealed contamination in soil roughly 20 feet east of the UST. The soil sample, collected at depths of 7.5 and 9 feet, contained 200 mg/kg total hydrocarbons (see EB-5, ~~Figure 2~~).

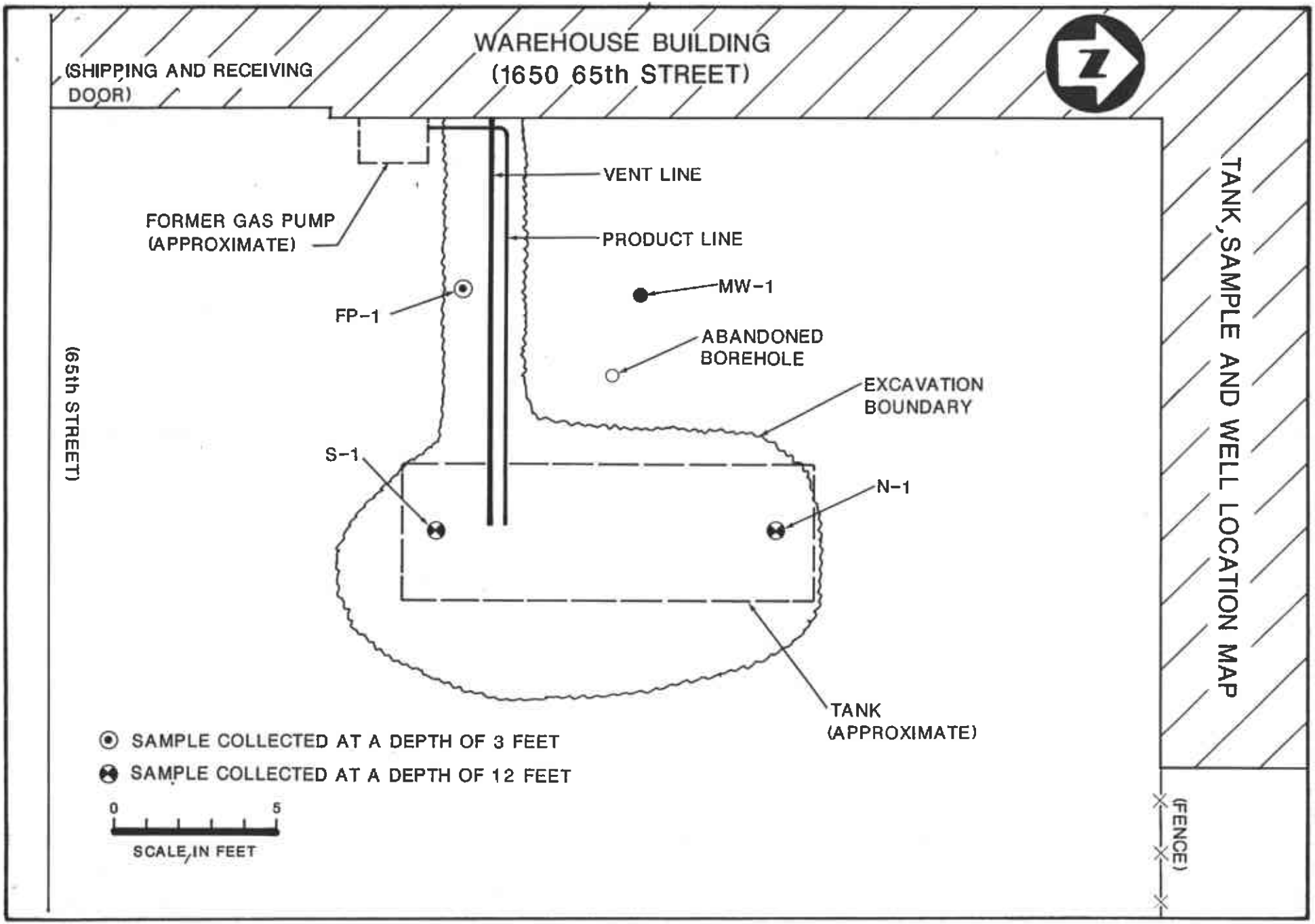
Analytical results are summarized in Table 1. Complete analytical results of all samples collected in the area to date are presented in Appendix A. Borehole logs are presented in Appendix B.

REMEDIAL ACTION PLAN

Soil remediation will be carried out in two phases. The first phase will consist of abandonment of monitoring well MW-1. The second phase will consist of excavation of the contaminated soil.

Phase 1 - Well Abandonment

Monitoring well MW-1 will be abandoned by pressure grouting prior to the onset of soil excavation. The well is 30 feet deep, with 21 feet of 2-inch inner diameter 0.010 slotted PVC casing. The grouting system will be set up by inserting a tremie pipe to the bottom of the well. The pipe will pass through the well cap, which initially will not be fastened on the well. A thin slurry of neat cement will be pumped through the tremie pipe until all water in the well has been displaced. The well cap will then be fastened onto the well casing. Grouting will continue by forcing grout through the slotted casing into the gravel pack. This will continue until no more grout can be pumped into the well. The grout will be allowed to set for a minimum of 24 hours prior to the start of soil excavation.



ENGINEERING-SCIENCE

FIGURE 3

TABLE 1

SUMMARY OF SOIL AND GROUNDWATER ANALYTICAL RESULTS

Sample I.D.	Depth (ft)	Matrix	Analysis: Total Fuel Hydrocarbons	Analysis: EPA Method 8020 Toluene (ppm)	Analysis: EPA Method 8020 Xylene (ppm)	Analysis: Lead (mg/kg, dry)
N-1	12	Soil	<.01 ppm	<.03	<.04	5
S-1	12	Soil	<.01 ppm	<.03	<.04	4.8
FP-1	3	Soil	490 ppm	0.90	23	36
MW-5*	5	Soil	170 mg/kg	NA	NA	NA
MW-10**	10	Soil	6,600 mg/kg	NA	NA	NA
MW-1		Water	33 mg/l	NA	NA	NA
EB-5	7.5, 9	Soil	200 mg/kg	NA	NA	NA

NA - not analyzed.
* All gas
** Gas, diesel, and waste oil

Phase 2 - Soil Excavation

Contaminated soil will be excavated and removed according to the specifications presented in Appendix C. Based on sampling and analytical results completed to date, ES estimates roughly 60 cubic yards of soil will need to be removed from the areas north of the product line and west of the excavated tank. The depth of the excavation is estimated to be a maximum of 12 feet, just above the level of groundwater at 12.2 feet below ground surface.

Soil will be excavated until all traces of contamination are removed; contaminated soil will be detected in the field by use of a photoionization detector and by visual and olfactory means. Soil samples will then be collected from the sidewalls and base of the excavation for analysis to ascertain if the residual hydrocarbon concentrations are of regulatory and/or health risk concern. Sampling protocol will consist of driving a clean brass sampling tube into soil removed from the excavation by backhoe. The tubes will be capped with non-reactive materials, refrigerated and transported to the analytical laboratory. Samples will be composited as appropriate and analyzed by gas chromatography/flame ionization detection (GC/FID) for total petroleum hydrocarbons (gasoline,diesel and waste oil components), and by EPA Method 7421 for lead. A suite of analyses including EPA Method 8240, Standard Methods 503A and E, and EPA Method 8080 for PCBs will be run on one sample when soil has been excavated to below agency limits for total petroleum hydrocarbons and lead. All analyses will be performed on 24-hour turnaround.

Soil excavation will be complete when total petroleum hydrocarbons are below 1,000 ppm, lead is below 5 ppm lead and other contaminant concentrations are below levels acceptable to the Alameda County Health Department and the Regional Water Quality Control Board.

Should you have any questions or comments, please do not hesitate to call.

Sincerely,

Katherine Chesick

Katherine A. Chesick
Project Manager

Dan B. McCullar. R. G.
Senior Hydrogeologist

KAC/dkm/360.8

cc: Ron Schwartz/Anthony Duckworth, Benefit Capital Corporation
Mark Scher/Dan Nourse, Wareham Development
Greg Zentner, RWQCB
Rick Makdisi

REFERENCES

1. Engineering-Science, Inc., 1987, Underground Fuel Storage Tank Site Investigation near the Southeast Corner of the Warehouse Building, 1650 65th Street Property, Emeryville, California.

2. Peter Kaldveer and Associates, Inc., 1987, Site Characterization and Preliminary Soil Testing 1650 65th Street Warehouse Emeryville, California.

TMA
Thermo Analytical Inc.

TMA/Norcal
1400 53rd Street
Suite 460
Emeryville, CA 94608-2946
(415) 652-2300

April 23, 19872

Peter Kaldveer & Associates Inc.
425 Roland Way
Oakland, CA 94621

Attention: Dawn Rinaldi

Report #1710-43 PO # Sample Chain of Custody Form

Site Location: 1650 65th St., Warehouse

Subject: Three (3) soil samples submitted on April 13, 1987 for routine 608 pesticides, one (1) soil sample for gasoline and one (1) soil sample for total hydrocarbon response analyses; three samples for lead, zinc, and phenols analysis; three samples for aromatics analysis.

Procedure: The samples are analyzed for chlorinated pesticides by following a modified EPA Method 608 procedure. The samples are extracted three (3) times with methylene chloride. The solvent is removed from the combined extracts. The sample is placed into hexane and cleaned up on a Florisil column prior to injection into a gas chromatograph fitted with a Ni63 electron capture detector. Quantitation is performed against a solution made from known concentrations of chlorinated pesticides.

The sample is analyzed for total hydrocarbon response or gasoline by following the method described in Attachment 2, Analytical Procedures for Fuel Leak Investigations. The sample is concentrated on a Tekmar LSC-2 automatic sample concentrator prior to injection into a gas chromatograph fitted with a flame ionization detector. Quantitation is performed, as total hydrocarbon response, against solutions made from a known concentrations of heptane-isooctane (55/45) for total hydrocarbon or gasoline. The limit of detection for this method of analysis is one part per million (mg/kg), for either analyte.

The metals, concentration are measured using atonic spectroscopic techniques (atomic absorption). The procedures are derived (based on) from U.S. Environmental Protection Agency methods. The samples are analyzed for phenols by following a modified EPA method 8040 procedure.

The aromatic levels are determined by following a modified EPA Method 602 procedure. The volatile components of the samples are concentrated with a Tekmar LSC-2 automatic sample concentrator prior to injection into a gas chromatograph fitted with a photoionization detector. Quantitation is performed against solutions made from known concentrations of aromatic compounds. The limit of detection is 400 parts per billion (ug/kg), unless stated otherwise.

The pesticides results are summarized in Table I, while Table II shows the fuel and metals results. Table III reveals the phenol results, while Table IV shows the volatile aromatic results.

Submitted by:

Robert B. Flay
Manager, Organics Department

RBF:ltm

TABLE I

Concentration (ug/kg)*

Compound	Boring 1, 7' and 71/2' and Boring 2 6' and 1	Boring 3 8' and Boring 4 6' and 7'	Boring 5, 71/2' and 9'and 6, 71/2 and 9'
a-BHC	ND(80)	ND(100)	ND(10)
g-BHC	ND(40)	ND(50)	ND(5)
b-BHC	ND(150)	ND(200)	ND(20)
Heptachlor	ND(80)	ND(100)	ND(10)
D-BHC	ND(150)	ND(200)	ND(10)
Aldrin	ND(80)	ND(100)	ND(10)
Heptachlor Epoxide	ND(80)	ND(100)	ND(10)
a-Endosulfan	ND(80)	ND(100)	ND(10)
DDE - pp'	ND(80)	ND(100)	ND(10)
Dieldrin	ND(80)	ND(100)	ND(10)
Endrin	ND(150)	ND(200)	ND(20)
DDD - pp'	ND(150)	ND(200)	ND(20)
B-Endosulfan	ND(80)	ND(100)	ND(10)
DDT - pp'	ND(300)	ND(450)	ND(40)
Endrin Aldehyde	ND(400)	ND(550)	ND(50)
Endosulfan Sulfate	ND(500)	ND(700)	ND(60)
Chlordane	ND(1500)	ND(2000)	ND(170)
Toxaphene	ND(16)	ND(20)	ND(20)
PCB 1248	2600	ND(450)	ND(40)

* wet weight basis

ND = None Detected. The limits of detection are in ( ).

Table II

Concentration (mg/kg)*

TMA/	Client ID	Gasoline	Total Hydrocarbon Response	Lead
1710-43-12	Boring 7,6'	3.6	--	--
1710-43-23	Boring 5, 7.5' and 9' composite	--	~~1200~~	--
1710-43-16	Boring 1, 7' and 7.5'; Boring 2, 6' and 7'composite	--	--	130
1710-43-21	Boring 3, 8' and Boring 4,6' and 7'composite	--	--	200
1710-43-27	Boring 5, 7.5' and 9' and boring 6, 7.5' and 9'	--	--	120

TMA/	Client ID	Zinc
1710-43-16	Boring 1, 7' and 7.5'; Boring 2, 6' and 7'composite	350
1710-43-21	Boring 3, 8' and Boring 4,6' and 7'composite	320
1710-43-27	Boring 5, 7.5' and 9' and boring 6, 7.5' and 9'	450

* wet weight basis

Table III

Concentration (mg/kg)*

Compound	Boring 1, 7'and 7.5'; Boring 2,6' and 7'	Boring 3,8' Boring 4,6' and 7'	Boring 5,71/2' and 9'; Boring 6,71/2' and 9'
Phenol	ND(Ø.7)	ND(Ø.7)	ND(Ø.7)
2-Chlorophenol	ND(Ø.7)	ND(Ø.7)	ND(Ø.7)
2,4-Dichlorophenol	3.2	ND(Ø.7)	ND(Ø.7)
2,6-Dichlorophenol	ND(Ø.7)	ND(Ø.7)	ND(Ø.7)
Trichlorophenols	ND(Ø.7)	ND(Ø.7)	ND(Ø.7)
Tetrachlorophenols	ND(Ø.7)	ND(Ø.7)	ND(Ø.7)
Pentachlorophenol	ND(Ø.7)	ND(Ø.7)	ND(Ø.7)
Cresol (methyl phenols)	ND(Ø.7)	ND(Ø.7)	ND(Ø.7)
4,6-Dinitro-o-cresol	ND(Ø.7)	ND(Ø.7)	ND(Ø.7)
4-Chloro-3-methylphenol	ND(Ø.7)	ND(Ø.7)	ND(Ø.7)
2,4-Dimethylphenol	ND(Ø.7)	ND(Ø.7)	ND(Ø.7)
2-Nitrophenol	ND(Ø.7)	ND(Ø.7)	ND(Ø.7)
4-Nitrophenol	ND(Ø.7)	ND(Ø.7)	ND(Ø.7)
2,4-Dinitrophenol	ND(Ø.7)	ND(Ø.7)	ND(Ø.7)
2-sec-Butyl-4,6-dinitro-phenol (DNPH)	ND(Ø.7)	ND(Ø.7)	ND(Ø.7)
2-Cyclohexyl-4,6-dinitro-phenol	ND(Ø.7)	ND(Ø.7)	ND(Ø.7)
2-Methyl-4,6-dinitro-phenol	ND(Ø.7)	ND(Ø.7)	ND(Ø.7)

* wet weight basis

Table IV

Concentration (mg/kg)*

Compound	Boring 1,7' and 71/2';Boring 2,6 and 7'	Boring 3,8'; Boring 4,6'and 7'	Boring 5,71/2' and 9';Boring 6,71/2' and 9'
Benzene	<Ø.6	<Ø.6	5.5
Chlorobenzene	<Ø.4	<Ø.4	<Ø.4
1,2 Dichlorobenzne	<Ø.4	<Ø.4	<Ø.4
1,3 Dichlorobenzene	<Ø.4	<Ø.4	<Ø.4
1,4 dichlorobenzene	<Ø.4	<Ø.4	<Ø.4
Ethyl benzene	<Ø.4	<Ø.4	<Ø.4
Toluene	<Ø.4	<Ø.4	37
Xylenes	<Ø.4	<Ø.4	69

* wet weight basis

TMA
Thermo Analytical Inc.

TMA/Norcal
2030 Wright Avenue
Richmond, CA 94804-0040
(415) 235-2633

July 20, 1987

Engineering Science
600 Bancroft Way
Berkeley, CA 94710

Attention: Mr. Wang

Dear Mr. Wang:

Please find enclosed the analytical report for fuel analysis from our Los Angeles based laboratory, TMA/ARLI. TMA/ARLI is certified by the State of California for hazardous waste testing by Gas Chromatography. TMA/Norcal is certified in many of the other categories including inorganics, GC/MS and pesticides. Completion of our certification for fuel and general GC should be quite soon.

The results for lead analysis and percent moisture are as follows:

Sample Identification Client	TMA/Norcal	Lead mg/kg dry	Moisture %
N-1	2226-40-2	5.0	11.0
S-1	2226-40-4	4.8	1.7
FP-1	2226-40-6	36	7.53

Please contact me if you have any questions regarding this report.

Sincerely,

Mary Janney
Program Manager

MJ/dss

Enclosure

Received: 07/06/87 07/15/87 11:43:33

REPORT TMA/NORCAL
TO 2030 Wright Ave
Richmond, CA 94804

ATTEN Sample Control

CLIENT TMA NORCAL SAMPLES 3
COMPANY TMA/NORCAL
FACILITY

WORK ID Project No. 2226-40
TAKEN By Unknown
TRANS By Federal Express
TYPE Soils
P.O. # 6463
INVOICE under separate cover

PREPARED Thermo Analytical, Inc.
BY 160 Taylor Street
Monrovia, CA 91016

ATTEN
PHONE 818-357-3247

CERTIFIED BY

CONTACT JSC

This report is for the sole and exclusive use of the client to whom it is addressed. Samples not destroyed in testing are retained a maximum of thirty (30) days unless otherwise requested.

Data Reported by Telecon 7/9/87

SAMPLE IDENTIFICATION

01 N-1
02 S-1
03 FP-1

TEST CODES and NAMES used on this report

8015M Fuels-Total Hydrocarbons
8020 Aromatic Volatile Organics

Received: 07/06/87
Results by Sample

SAMPLE ID N-1 FRACTION 01A TEST CODE 8015M NAME Fuels-Total Hydrocarbons
Date & Time Collected not specified Category

MODIFIED 8015 - FUEL HYDROCARBONS

COMPOUND	RESULT	DET LIMIT
C5 - C12 Hydrocarbons	ND	0.1
C10 - C16 Hydrocarbons	ND	0.1
C9 - C22 Hydrocarbons	ND	0.1
C9 - C14 Hydrocarbons	ND	0.1

ANALYST YY
DATE INJECTED 07/07/87
DILUTION FACTOR 1.00
VERIFIED JSC

NOTE: All results reported in ppm unless otherwise specified
ND = Not detected at the specified limits

Received: 07/06/87 Results by Sample

SAMPLE ID N-1 FRACTION 01A TEST CODE 8020 NAME Aromatic Volatile Organics
Date & Time Collected not specified Category

8020 AROMATIC VOLATILE ORGANICS

COMPOUND	RESULT	DET LIMIT
Benzene	ND	0.03
Chlorobenzene	ND	0.03
1,2-Dichlorobenzene	ND	0.04
1,3-Dichlorobenzene	ND	0.04
1,4-Dichlorobenzene	ND	0.04
Ethylbenzene	ND	0.04
Toluene	ND	0.03
Xylenes (Dimethylbenzenes)	ND	0.04

ANALYST MLH
DATE INJECTD 07/07/87
DILUTION FACTOR 1.00
VERIFIED JSC

NOTE: All results reported in ppm unless otherwise specified
ND = Not detected at the specified limits

Received: 07/06/87 Results by Sample

SAMPLE ID S-1 FRACTION 02A TEST CODE 8015M NAME Fuels-Total Hydrocarbons
Date & Time Collected not specified Category

MODIFIED 8015 - FUEL HYDROCARBONS

COMPOUND	RESULT	DET LIMIT
C5 - C12 Hydrocarbons	ND	0.1
C10 - C16 Hydrocarbons	ND	0.1
C9 - C22 Hydrocarbons	ND	0.1
C9 - C14 Hydrocarbons	ND	0.1

ANALYST YY
DATE INJECTED 07/07/87
DILUTION FACTOR 1.00
VERIFIED JSC

NOTE: All results reported in ppm unless otherwise specified
ND = Not detected at the specified limits

Received: 07/06/87 Results by Sample

SAMPLE ID S-1 FRACTION 02A TEST CODE 8020 NAME Aromatic Volatile Organics

Date & Time Collected not specified Category

8020 AROMATIC VOLATILE ORGANICS

COMPOUND	RESULT	DET LIMIT
Benzene	ND	0.03
Chlorobenzene	ND	0.03
1,2-Dichlorobenzene	ND	0.04
1,3-Dichlorobenzene	ND	0.04
1,4-Dichlorobenzene	ND	0.04
Ethylbenzene	ND	0.04
Toluene	ND	0.03
Xylenes (Dimethylbenzenes)	ND	0.04

ANALYST MLH
DATE INJECTD 07/07/87
DILUTION FACTOR 1.00
VERIFIED JSC

NOTE: All results reported in ppm unless otherwise specified
ND = Not detected at the specified limits

Received: 07/06/87 Results by Sample

SAMPLE ID FP-1 FRACTION 03A TEST CODE 8015M NAME Fuels-Total Hydrocarbons
Date & Time Collected not specified Category

MODIFIED 8015 - FUEL HYDROCARBONS

COMPOUND	RESULT	DET LIMIT
C5 - C12 Hydrocarbons	ND	0.1
C10 - C16 Hydrocarbons	ND	0.1
C9 - C22 Hydrocarbons	ND	0.1
C9 - C14 Hydrocarbons	490.	0.1

ANALYST YY
DATE INJECTED 07/07/87
DILUTION FACTOR 1.00
VERIFIED JSC

NOTE: All results reported in ppm unless otherwise specified
ND = Not detected at the specified limits

Received: 07/06/87 Results by Sample

SAMPLE ID FP-1 FRACTION 03A TEST CODE 8020 NAME Aromatic Volatile Organics
Date & Time Collected not specified Category

8020 AROMATIC VOLATILE ORGANICS

COMPOUND	RESULT	DET LIMIT
Benzene	ND	1.0
Chlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.1
1,3-Dichlorobenzene	ND	1.1
1,4-Dichlorobenzene	ND	1.1
Ethylbenzene	ND	1.1
Toluene	0.90	0.90
Xylenes (Dimethylbenzenes)	23.	1.1

ANALYST MLH
DATE INJECTD 07/07/87
DILUTION FACTOR 1.00
VERIFIED JSC

NOTE: All results reported in ppm unless otherwise specified
ND = Not detected at the specified limits

Received: 07/06/87 07/15/87 11:43:33

TMA/NORCAL

Three soil samples from project 2226-40 were submitted for analysis on a rush basis. The soils were extracted and analyzed for fuel hydrocarbons by the modified 8015 method, and also for aromatic 8020 compounds. The sample labled "FP-1" was found to contain approximately 490 ppm of a C9 - C14 petroleum hydrocarbon - possibly Stoddard's Solvent. This solvent was used for the quantitation. The sample was also found to contain xylene iomers, which was confirmed by GC/MS. The results are attached.

BROWN AND CALDWELL LABORATORIES
1255 POWELL STREET EMERYVILLE, CA 94608 • (415) 428-2300

ANALYTICAL REPORT

LOG NO: E87-07-508

Received: 27 JUL 87
Reported: 30 JUL 87

Ms. Katherine Chesick
Engineering Science
600 Bancroft Way
Berkeley, California 94710

Project: NG049

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-508-1	MW-5', 1650 65th Street	27 JUL 87
07-508-2	MW-10', 1650 65th Street	27 JUL 87

PARAMETER	07-508-1	07-508-2
Total Fuel Hydrocarbons, mg/kg	170	6600

D. A. McLean, Laboratory Director

BROWN AND CALDWELL LABORATORIES
1255 POWELL STREET EMERYVILLE, CA 94608 • (415) 428-2300

ANALYTICAL REPORT

LOG NO: E87-07-520

Received: 28 JUL 87
Reported: 30 JUL 87

Ms. Kathleen Chesick
Engineering Science
600 Bancroft Way
Berkeley, California 94710

Project: N0049.02

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, WATER SAMPLES	DATE SAMPLED
07-520-1	MW-1	28 JUL 87

PARAMETER	07-520-1
Total Fuel Hydrocarbons, mg/L	33

D. A. McLean, Laboratory Director

CLIENT BENEFIT CAPITAL CORPORATION

LOCATION 1650 65th STREET EMERYVILLE, CALIFORNIA

DATE 27 JULY 1987

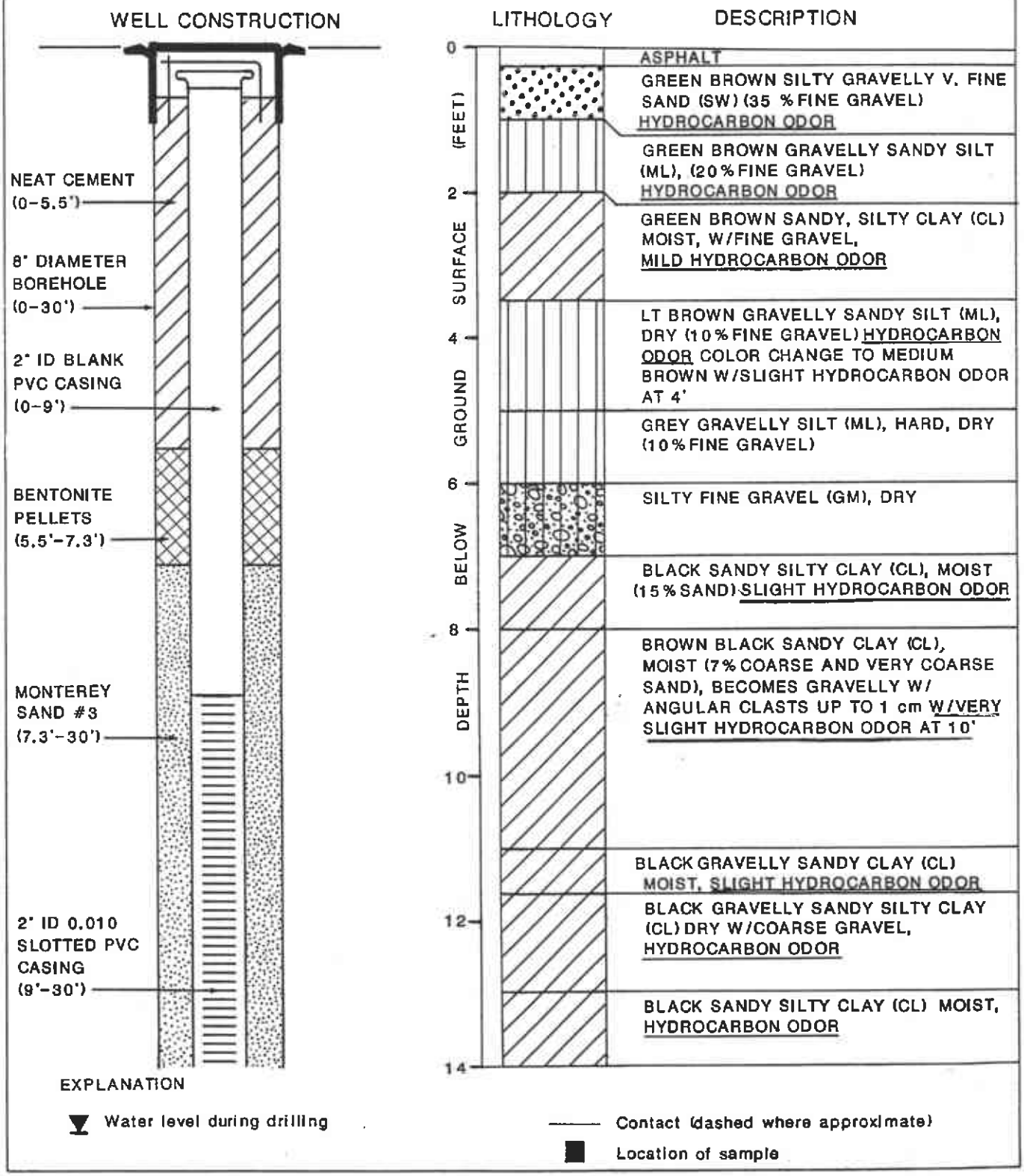
GEOLOGIST K. CHESICK

TEST HOLE NUMBER MW-1

DRILLER AQUA SCIENCE ENGINEERS, INC.

DRILLING METHOD HOLLOW STEM AUGER

HOLE DIAMETER 8-INCH



CLIENT BENEFIT CAPITAL CORPORATION

LOCATION 1650 65th STREET EMERYVILLE, CALIFORNIA

DATE 27 JULY 1987

GEOLOGIST K. CHESICK

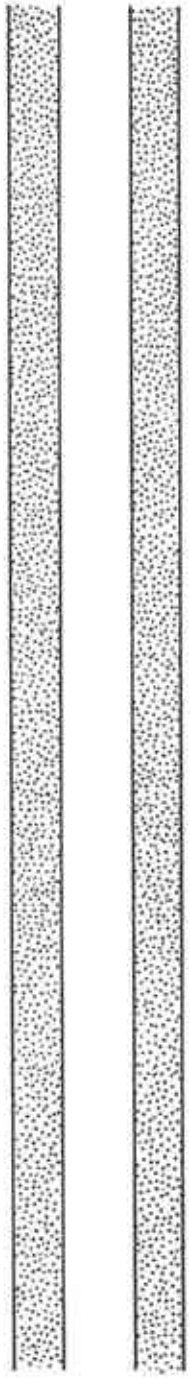
TEST HOLE NUMBER MW-1

DRILLER AQUA SCIENCE ENGINEERS INC.

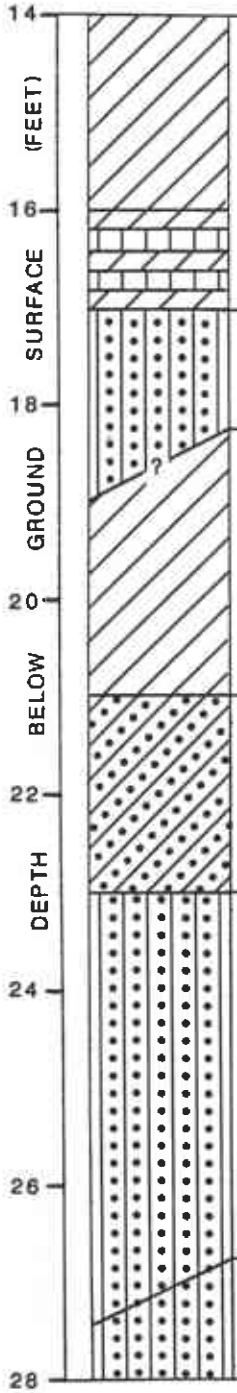
DRILLING METHOD HOLLOW STEM AUGER

HOLE DIAMETER 8-INCH

WELL CONSTRUCTION



LITHOLOGY



DESCRIPTION

AS ABOVE W/BROWN GREEN SANDY SILTSTONE

BLACK FINE GRAVELLY MED. COARSE SILTY SAND (SM), SATURATED, MILD GASOLINE ODOR

BLACK SANDY CLAY (CL)

BLACK CLAYEY SAND (SC)

BLACK CLAYEY SILTY SAND (SM) HYDROCARBON ODOR, COMES UP AS STIFF SLURRY

BLACK SILTY SAND (SM)

EXPLANATION

▼ Water level during drilling

——— Contact (dashed where approximate)

■ Location of sample

CLIENT BENEFIT CAPITAL CORPORATION

LOCATION 1650 65th STREET EMERYVILLE, CALIFORNIA

DATE 27 JULY 1987

GEOLOGIST K. CHESICK

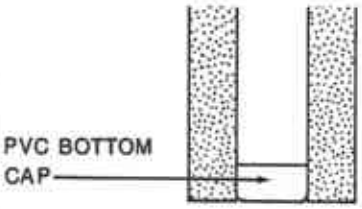
TEST HOLE NUMBER MW-1

DRILLER AQUA SCIENCE ENGINEERS INC.

DRILLING METHOD HOLLOW STEM AUGER

HOLE DIAMETER 8-INCH

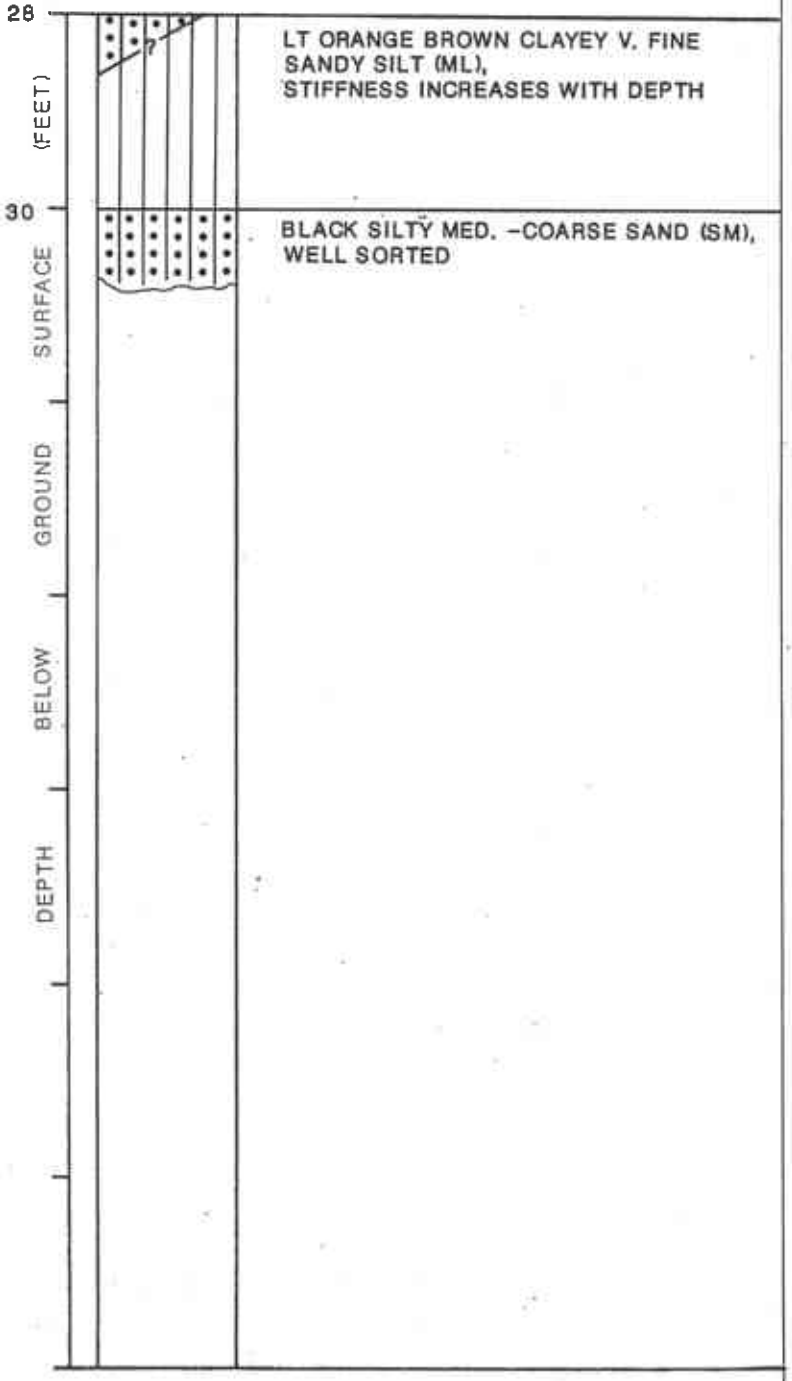
WELL CONSTRUCTION



BOTTOM OF BORING

LITHOLOGY

DESCRIPTION



EXPLANATION

▼ Water level during drilling

—— Contact (dashed where approximate)

■ Location of sample

CLIENT BENEFIT CAPITAL CORPORATION

LOCATION 1650 65th STREET EMERYVILLE, CALIFORNIA

DATE 27 JULY 1987

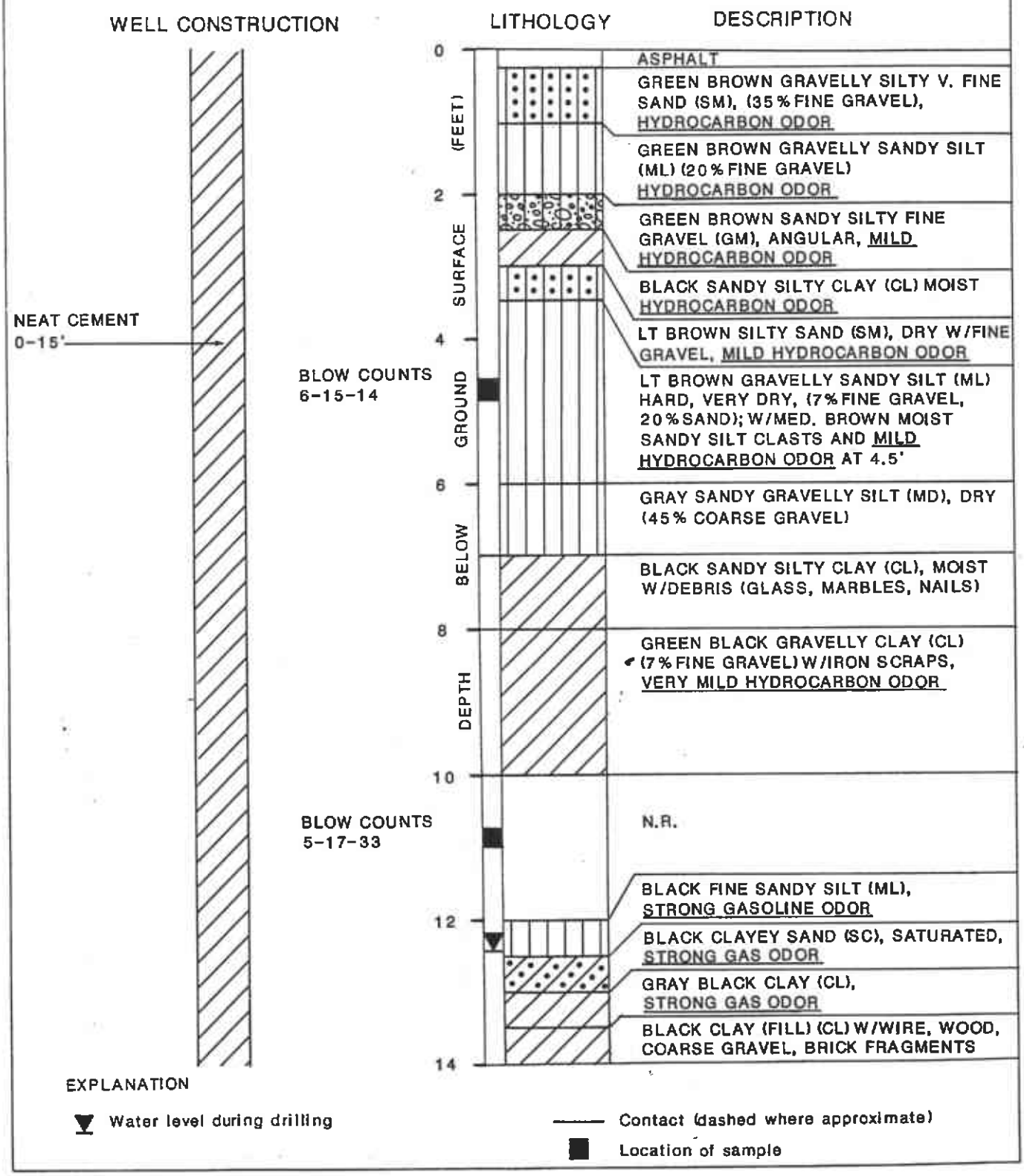
GEOLOGIST K. CHESICK

TEST HOLE NUMBER ABANDONED BOREHOLE

DRILLER AQUA SCIENCE ENGINEERS, INC.

DRILLING METHOD HOLLOW STEM AUGER

HOLE DIAMETER 8-INCH



EXPLANATION

▼ Water level during drilling

——— Contact (dashed where approximate)

■ Location of sample

CLIENT BENEFIT CAPITAL CORPORATION

LOCATION 1650 65th STREET EMERYVILLE, CALIFORNIA

DATE 27 JULY 1987

GEOLOGIST K. CHESICK

TEST HOLE NUMBER ABANDONED BOREHOLE

DRILLER AQUA SCIENCE ENGINEERS INC.

DRILLING METHOD HOLLOW STEM AUGER

HOLE DIAMETER 8-INCH

WELL CONSTRUCTION

BOTTOM OF BOREHOLE

LITHOLOGY

DESCRIPTION

DEPTH BELOW GROUND SURFACE (FEET)

14

16

BOTTOM OF BOREHOLE

N.R.

BLACK SILTY SAND (SM), SATURATED, WELL SORTED, MED. GRAINED
GASOLINE ODOR

BOREHOLE ABANDONED DUE TO WIRE WRAPPED AROUND PLUG IN DRILL BIT

EXPLANATION

▼ Water level during drilling

——— Contact (dashed where approximate)

■ Location of sample

NC049.10

Specifications for the

Removal and Disposal of Contaminated Soil
Southeast of the Warehouse Building
at 1650 65th Street
Emeryville, California

Benefit Capital Corporation (Owner)

PART 1. GENERAL

1.01 Description. Provide all equipment, labor, materials, tools and incidentals to excavate and dispose of contaminated soil. This soil, contaminated with petroleum hydrocarbons and lead, shall be disposed of in a Class I hazardous waste landfill. Soil contamination resulted from leakage of gasoline, diesel, and motor oil from a former underground storage tank and associated piping.

1.02 Insurance and Terms and Conditions. The contractor shall hold insurance coverage in accordance with this article and shall provide thirty days' notice to Wareham Development, the property owner, in the event of a material change in coverage or cancellation.

A. The contractor shall carry workers' compensation insurance in compliance with the applicable state and federal laws.
B. The contractor shall carry comprehensive automobile liability insurance with property damage provisions.
C. The contractor shall carry comprehensive general liability insurance with a $1,000,000 limit.
D. The contractor shall comply with the terms and conditions set forth in Attachment A.

1.03 Contamination Characterization. Known petroleum hydrocarbon concentrations range from 170 to 6,600 mg/kg. These analytical results will be augmented by additional sampling at the base and sidewalls of the excavation during and following completion of soil excavation. All sampling and analytical work will be performed by the Owner's consultant, Engineering-Science, Inc. To allow time for the laboratory analyses, the excavation Contractor will be required to cease operations for up to 48 hours. The Contractor shall include two such stoppages in the Work and these shall be included in the Bid Schedule prices. As long as contamination persists, the Contractor shall continue to excavate as directed by the Owner's consultant and wait the required 48-hour period for each associated sampling and analysis event.

PART 2. PRODUCTS (not used)

PART 3. EXECUTION

3.01 Area of Soil to Be Excavated. The area requiring excavation is located in the paved area southeast of the warehouse building as shown in Figures 1 and 2. The excavation will cover approximately 120 square feet and extend to a depth of 12 feet. Excavation will remove about 60 cubic yards of soil. Figure 2 shows the excavation area. Figure 3 is a schematic cross-section of the excavation area.

3.02 Soil Excavation. All labor and equipment necessary to complete the removal of the soil shall be consistent with local, state and federal health and safety codes. Permits required shall be the responsibility of the contractor. The excavated contaminated soil shall be stored in the yard area. The material shall be placed on a plastic liner overlaying the existing concrete slab. The liner shall be minimum 10 mils thick and be made of CPE, HDPE, or EPDM. The edges shall be elevated at least four inches to prevent any precipitation run-on or run-off. Increased elevation of the edges will be required if soils are stockpiled on the sloped area. At the end of each day the stockpiled soil shall be completely covered with plastic. The edges shall be weighted to prevent the plastic from shifting or blowing away. The contractor shall be responsible for the cleanup of the work area each day.

3.03 Excavation Considerations. The contractor shall use the following information during soil excavation:

A. Brick, glass, wood, and iron debris, found during monitoring well installation, exist in the excavation area, possibly originating from the early 1940's to the mid 1950's, when the site was used as a municipal dump.

B. The excavation will extend into uncompacted soil and sand resulting from the underground storage tank removal and excavation backfill performed on 2 July 1987.

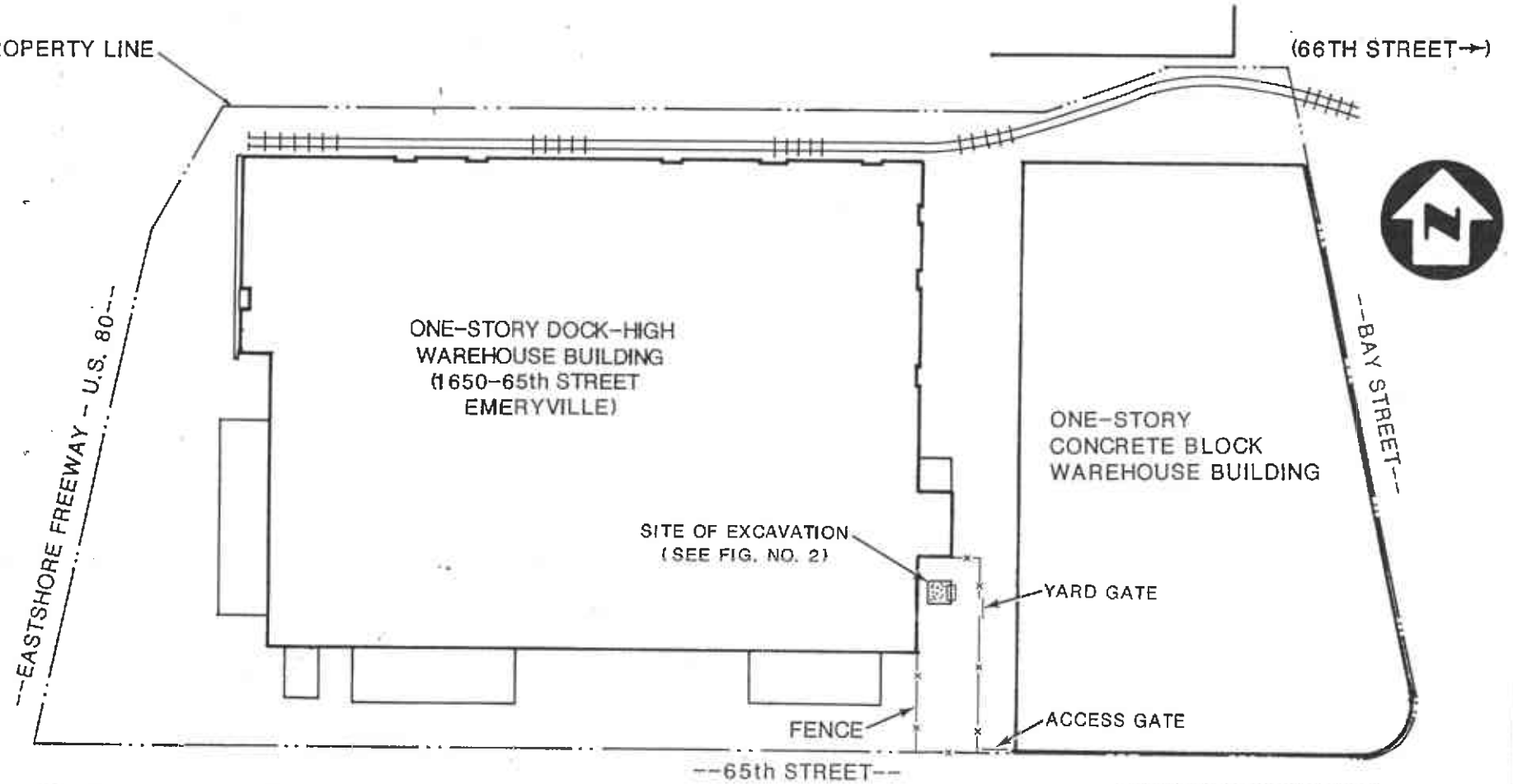
C. The excavation may extend to groundwater, but not below. The water table is roughly 12.3 feet below ground surface.

D. Two 8-inch diameter cement plugs (grouted monitoring well and grouted borehole), extending to depths of 17' and 30', exist in the excavation area. Plugs may be handled by any method which facilitates soil excavation. If cement plugs are knocked out as excavation progresses, upon completion of soil removal the contractor shall dig out three additional feet of the cement plugs plus additional soil to create a pit roughly 3.0 feet in diameter. Neat cement shall be used to fill the pit to excavation grade.

E. Excavation shall not occur within 3 feet of the warehouse building except under the guidance of the Owner.

F. The sides of the excavation shall be as nearly vertical as the soil will stand. The actual excavation shall be vertical, with natural sloughing to follow. The building shall be underpinned if so directed by the Owner. Required underpinning will be paid for as an

SITE PLAN OF 1650 65TH STREET PROPERTY



LEGEND

- SOIL AREA REQUIRING REMEDIATION EXCAVATION
- EXCAVATED TANK LOCATION

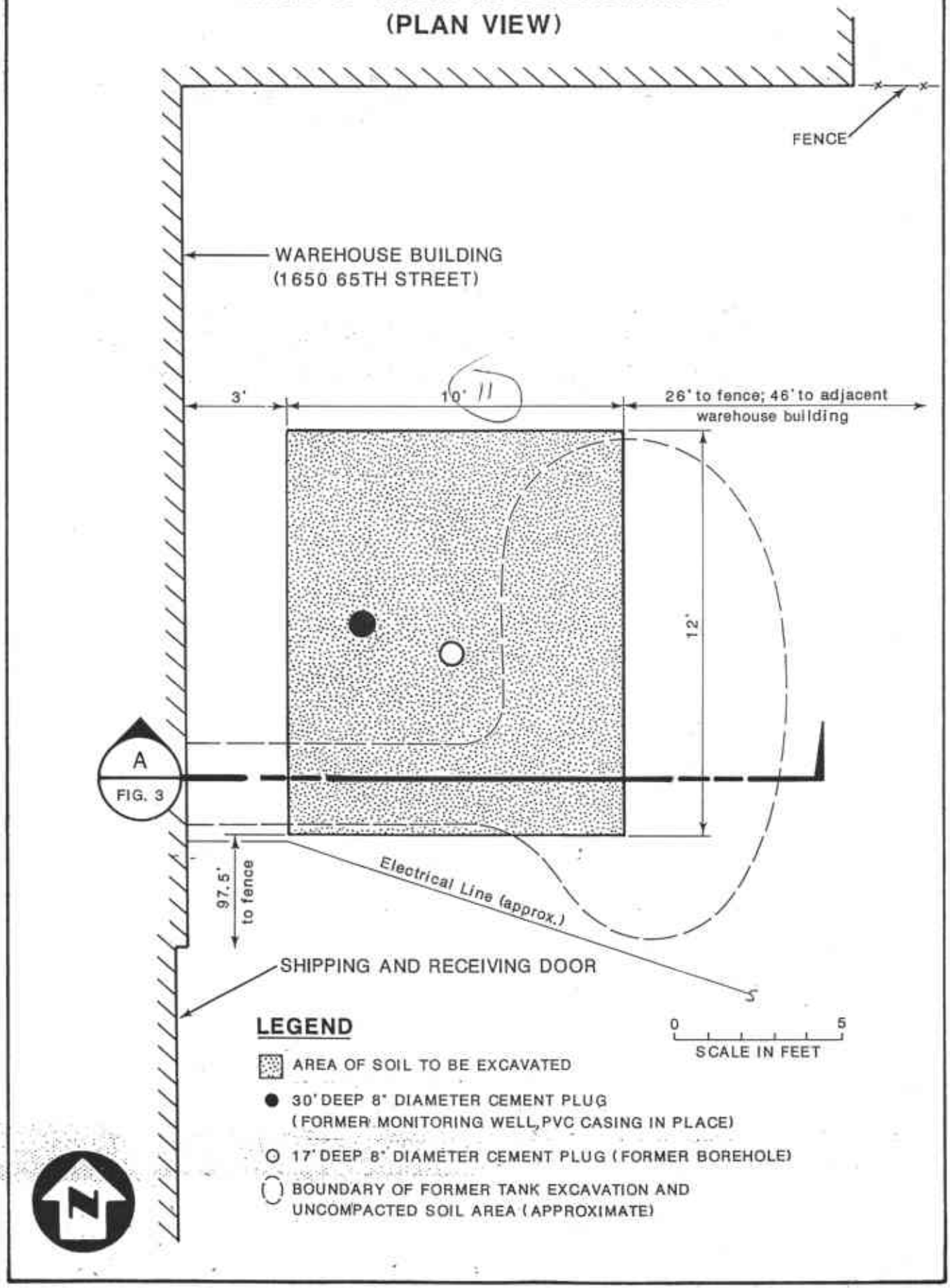
BASE: PETER KALDVEER AND ASSOCIATES, INC. 1987, FROM "TOPO MAP", BY TRONOFF ASSOCIATES, DATED FEBRUARY 3, 1983

ENGINEERING-SCIENCE

FIGURE 1

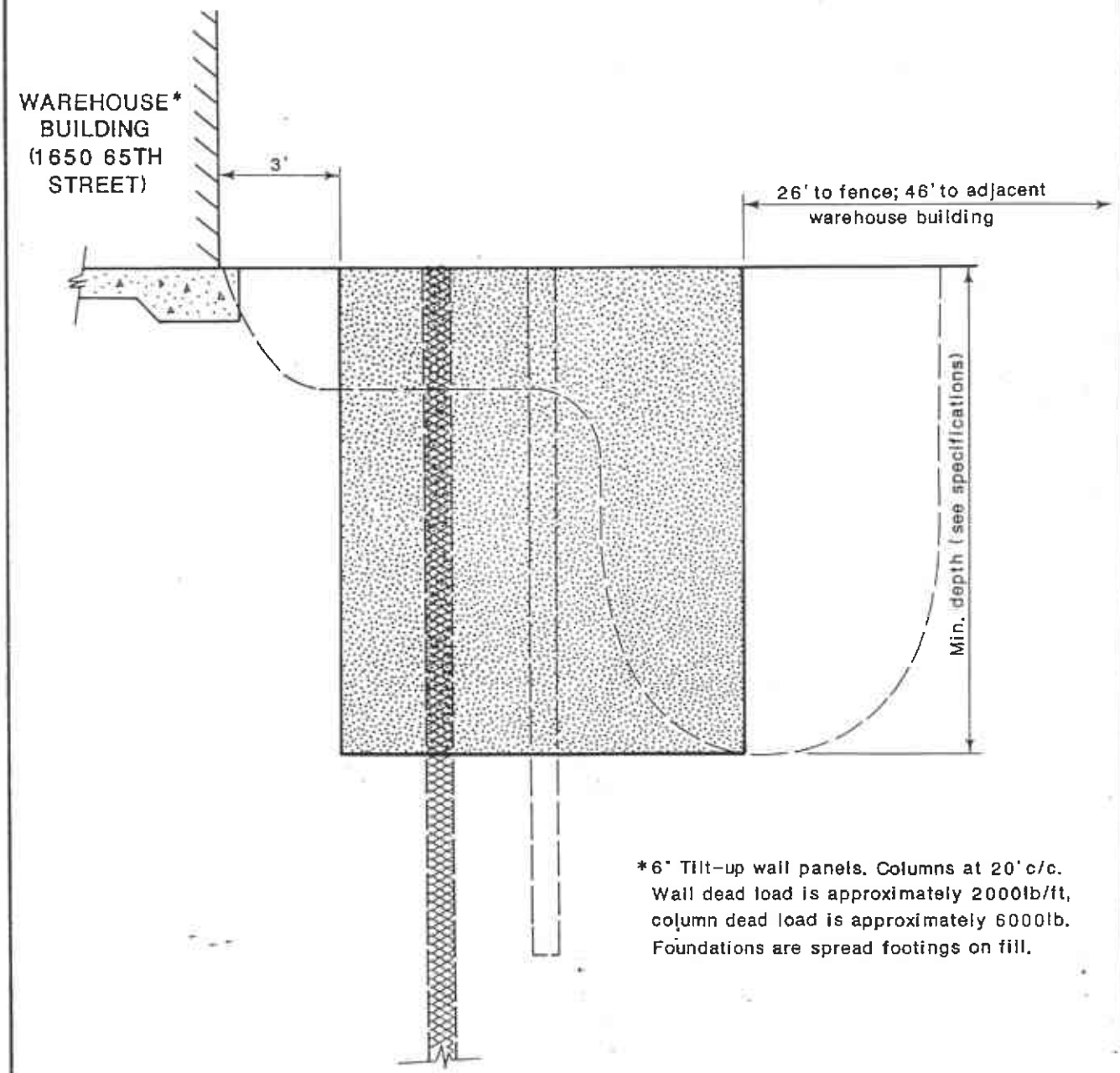
FIGURE 2

DETAIL OF AREA TO BE EXCAVATED
(PLAN VIEW)



ENGINEERING-SCIENCE

DETAIL OF AREA TO BE EXCAVATED (CROSS SECTION)



*6" Tilt-up wall panels. Columns at 20' c/c. Wall dead load is approximately 2000lb/ft, column dead load is approximately 6000lb. Foundations are spread footings on fill.

SECTION A
FIG. 2

LEGEND

- AREA OF SOIL TO BE EXCAVATED
- 30' DEEP 8" DIAMETER CEMENT PLUG
- 17' DEEP 8" DIAMETER CEMENTED PLUG
- BOUNDARY OF FORMER TANK EXCAVATION AND UNCOMPACTED SOIL AREA (APPROXIMATE)

0 5
SCALE IN FEET

Extra, with the payment being cost, plus a negotiated overhead, plus 15 percent profit.

3.04 Temporary Fencing. Should the access gate or the yard gate be insufficient to permit access of equipment to the excavation site, fence sections may be removed to permit access. If fencing is removed, temporary fencing shall be erected at the end of each day to protect the site. Following completion of the work itemized herein, all fencing must be restored in kind.

3.05 Soil Removal and Disposal. The excavated soil that is stored in the yard area shall be removed after excavation is declared complete by the Owner. All records, including the hazardous waste manifests from the hauling trucks and the disposal site, shall be provided to the Owner.

3.06 Backfill. Backfill material shall be Type E as defined in Section 19-3.06 of the Caltrans Standard Specifications, July 1984 edition. Compact to 90 percent relative compaction. Compaction shall be measured as a check at the discretion of the Owner using California Test No. 216.

3.07 Paving. 8 inches of Class 2 Aggregate Base, conforming to Cal-Trans Standard Specifications, shall be placed in a single lift at optimum moisture ±1.5 percent, and compacted by 10 complete passes of a 10 ton smooth roller. The subgrade shall be primed with an SC liquid asphalt applied at the rate of 0.3 gal/sq. yd., surfaced with 2" minimum of asphaltic concrete, compacted and fog sealed.

PART 4. MEASUREMENT AND PAYMENT

4.01 Soil Excavation. The bid shall be on a base-bid lump sum basis to perform the work required to excavate and stockpile 60 cubic yards of contaminated soil on the plastic liner provided by the excavation Contractor and to backfill the excavation according to paragraph 3.06 above. Add or deduct unit costs are to be provided for as follows:

- Unit price per additional or fewer cubic yards of soil to be excavated, stockpiled, and backfilled.

4.02 Soil Removal and Disposal. The bid shall be on a base-bid lump sum basis to perform the work required to load the 60 cubic yards of soil into trucks, including the plastic liner, and remove and dispose of the material as specified hereinabove. Add or deduct unit costs are to be provided for as follows:

- Unit price per additional or fewer cubic yards of soil to be removed and disposed of.

4.03 Measurement. The Owner's consultant will survey the excavation before and after excavation to determine soil yardage excavated. This yardage shall be the basis for payment as regards any required base-bid adjustments.

4.04 Health and Safety Plan. A Health and Safety Plan conforming to requirements of the Occupational Safety and Health Administration (OSHA) shall be prepared by the contractor, and three copies shall be submitted prior to the start of work on site.

END OF SPECIFICATIONS