

EXCAVATION AND SAMPLING PROCEDURES

*OKADA PROPERTY
16109 ASHLAND AVENUE
SAN LEANDRO, CALIFORNIA*

BY

ENVIRONMENTAL EXPERTS, INC.

September 1990

TABLE OF CONTENTS

<u>Section</u>		<u>Page</u>
1.0	Introduction	
	1.1 Site History	
	1.2 Purpose and Scop	
	1.3 Site Description	
2.0	Field Procedure	6
	2.1 Excavation Procedures	6
	2.2 Sampling Procedures	
3.0	Laboratory Analysis	
4.0	Results	10
5.0	Recommendations	12
6.0	Certification	12
	Figures	
	Appendix	

LIST OF TABLES

Table

- 1 Summary of soil sampling results due to tank excavations.
- 2 Summary of soil sampling results due to monitoring wells installations.
- 3 Summary of soil sampling results due to soil borings installation.

LIST OF FIGURES

Figure

1. Site Vicinity Map.
2. Soil Borings and Monitoring Wells Location Map.
3. Excavation and sample locations for the Previous Oil Tank Area.

EXCAVATION AND SAMPLING PROCEDURES

**OKADA PROPERTY
16109 ASHLAND AVENUE
SAN LEANDRO, CALIFORNIA**

1.0 INTRODUCTION

This report summarizes the activities and results of Environmental Experts, Inc. (EEI) excavation and sampling of the impacted soils at the Okada property located at 16109 Ashland Avenue in San Leandro, California.

1.1 SITE HISTORY

Two underground storage tanks were excavated from the property by Ericson, Inc. under the supervision of Terrasearch Inc. on February 10, 1989. The two tanks, 250-gallon gasoline tank and 3,000-gallon fuel oil tank, were inspected visually upon removal. The gasoline tank appeared in a very good condition, while the oil tank revealed small holes in the bottom and a few small cracks along the sides. Ground water was encountered in the excavation pits at a depth of 6.5 feet in the gasoline tank pit, and 7 to 7.5 feet in the oil tank pit.

One soil sample and one ground water sample were collected from the gasoline tank pit. Three soil samples and one ground water sample were collected from the oil tank pit. Laboratory results for the collected samples are tabulated below in Table 1.

TABLE 1

Sample (No.)	Depth (Ft.)	Lead	TPH-G	TPH-D	TOG	B	T	E	X
A- Soil (Concentrations in Parts Per Million (PPM))									
<u>Gasoline Tank</u>									
7.5-8'	7.5-8.0'	20	N.D.	N/A.	N/A.	N.D.	N.D.	N.D.	N.D.
<u>Oil Tank</u>									
5.5-6'A	5.5-6.0'	22	28	4100	2000	N.D.	N.D.	0.1	0.4
5.5-6'B	5.5-6.0'	22	N.D.	220	1100	N.D.	N.D.	N.D.	N.D.
5.5-6'C	5.5-6.0'	13	N.D.	10	60	N.D.	N.D.	N.D.	N.D.
B- GROUND WATER (Concentrations in Part Per Billion (PPB))									
<u>Gas Tank</u>									
6.5-7'	6.5-7.0'	N.D.	740	N/A.	N/A.	N.D.	N.D.	3.0	2.0
<u>Oil Tank</u>									
7.5'	7.5'	N.D.	N/A.	60,000	44,000	N/A	N/A	N/A	N/A

LEGEND:

- TPH-G = Total Petroleum Hydrocarbons as Gasoline.
- TPH-D = Total Petroleum Hydrocarbons as Diesel.
- TOG = Total Oil and Grease.
- B = Benzene.
- T = Toluene.
- E = Ethylbenzene.
- X = Xylenes.
- N.D. = Not Detected by Instrument Used for Analysis.
- N/A. = Not Analysed.

TABLE 3

Sample Location	Sample Depth (Ft)	TPH-D (PPM)
<i>Soil Samples Due to Soil Borings</i>		
EB1.1	5.0'	2.5
EB1.2	10.0'	2.4
EB1.3	15.0'	3.9
EB2.1	5.0'	2.6
EB2.2	10.0'	3.0
EB2.3	15.0'	4.8
EB3.4	3.0'	3.1
EB3.1	5.0'	N.D.
EB3.2	10.0'	3.2
EB3.3	15.0'	3.0

1.2 PURPOSE AND SCOPE

By reviewing the soil sampling results, the only soil samples showing concentrations of petroleum hydrocarbons above 100 ppm were found at the excavation pit for the oil tank. The environmental assessment began by installing monitoring wells in the vicinity of the oil tank area followed by soil borings. All samples collected from the soil borings indicate the non-presence or low levels of petroleum hydrocarbons.

Since the contaminated soils due to the previous existance of the oil tank were defined in the northern, western, and southern vicinity of the tank pit, it was necessary to define the extent of contamination in the eastern vicinity of the tank and remove the source of contamination that may impact the ground water.

The suspected area of contamination was excavate, and soil samples

were obtained to confirm the non-presence of petroleum hydrocarbons in the soils. Chemical analysis of the soil samples were conducted by Chromalab, Inc. at their certified environmental laboratory in San Ramon, California. All soil samples were analysed for Total Petroleum Hydrocarbons as diesel (TPH-D) including Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX), and Total Oil and Grease (TOG) following EPA Test Methods 3550/8015, 3550/8020, and 503 D&E, respectively.

Field activities and available information regarding chemical analysis results and conclusions are summerized below.

1.3 SITE DESCRIPTION

The site is located in the city of San Leandro on 16109 Ashland Avenue and consists of approximately 16 acres. The site is currently under construction, grading, and contains one excavation pit for the previous oil tank. The excavation area is fenced by a chain link fence. The site is in the middle of housing (houses and apartment complexes) community and intended to be developed for residential purposes.

2.0 FIELD PROCEDURES

2.1 EXCAVATION PROCEDURES

The ground water level in MW-1, adjacent to the former oil tank, was measured. Citation Homes subcontracted a general contractors to perform the excavation of the contaminated soils. An engineer from EEI was present to supervise excavation operations and collect the necessary soil samples.

Since the areas north, west and south of the excavation pit were drilled, sampled, and showed very low presence of petroleum hydrocarbons, it was necessary to excavate the bottom and east areas of the excavation pit. Figure 3, attached, shows the extent of the new excavation that occurred on August 29, 1990. The soils were excavated up to ground water level. A PID device was used in the field to direct the extent of the excavation.

The excavated soils were segregated to what believe to be clean and contaminated soils. Any soils below 4 feet in depth were stockpiled in a different area. A total of approximately 40 cubic yards were excavated. Both clean and contaminated soils were stockpiled separately on visqueen sheets and fully covered, when excavation was completed, by visqueen sheets. The visqueen cover was secured on the soil stockpiles by placing old tires on top of the sheets.

When excavation was assumed to be satisfactory, six soil samples were obtained from the excavation walls, few inches above the ground water-soil interface (6.5 to 7 feet in depth). The locations of the soil samples are drawn in Figure 3. Soil samples were collected by pushing a clean brass sleeve into the soils collected in the bucket of the backhoe. The brass sleeve was then capped, taped, labeled, and placed immediately in a cooler with ice. Samples were then delivered for the laboratory for chemical analysis along with the proper chain of custody documentation.

2.2 LABORATORY ANALYSIS

A total of six soil samples were collected and analysed by Chromalab, Inc. in their certified environmental laboratory in San Ramon, California. The samples were analysed individually for Total Petroleum Hydrocarbons as diesel (TPH-D) including Benzene, Toluene, Ethylebenzene, and Xylenes (BTEX), and Total Oil and Grease (TOG) following EPA Test Methods 3550/8015, 3550/8020, and 503 D&E.

3.0 RESULTS

A hard copy of the analytical results as recieved from the laboratory is attached with the chain of custody documentation. All soil samples show TPH as diesel including BTEX, and TOG concentrations below the instrument detection limits.

4.0 RECOMMENDATIONS

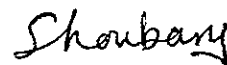
Environmental Experts, Inc. believes that the excavation of the contaminated soils was satisfactory. The excavated soils should be handeled properly following the Alameda County Department of Health Services recommendations.

5.0 CERTIFICATION

I declare, under the penalty of the perjury that, to the best of my knowledge, all statements and information above, are true and correct.

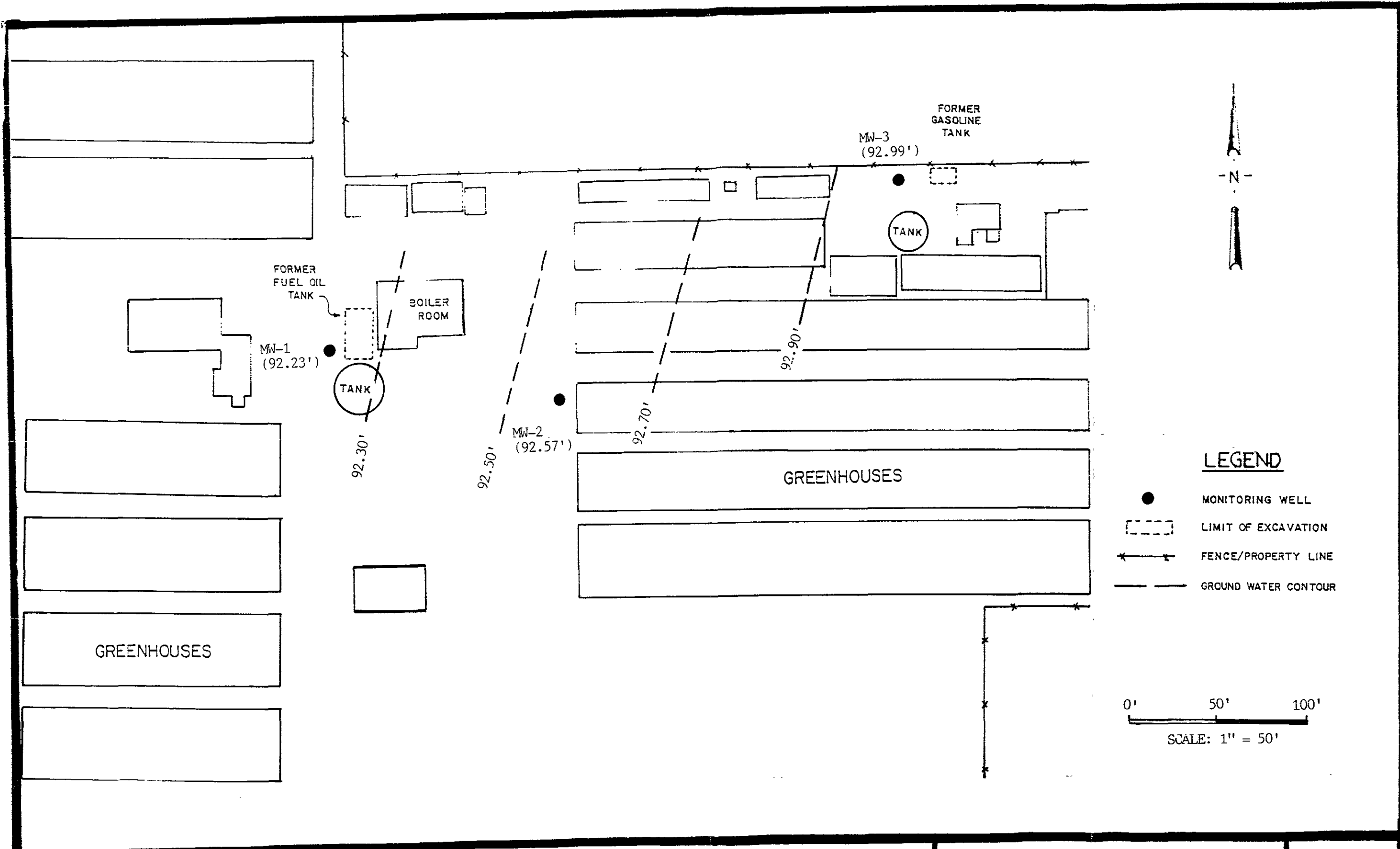


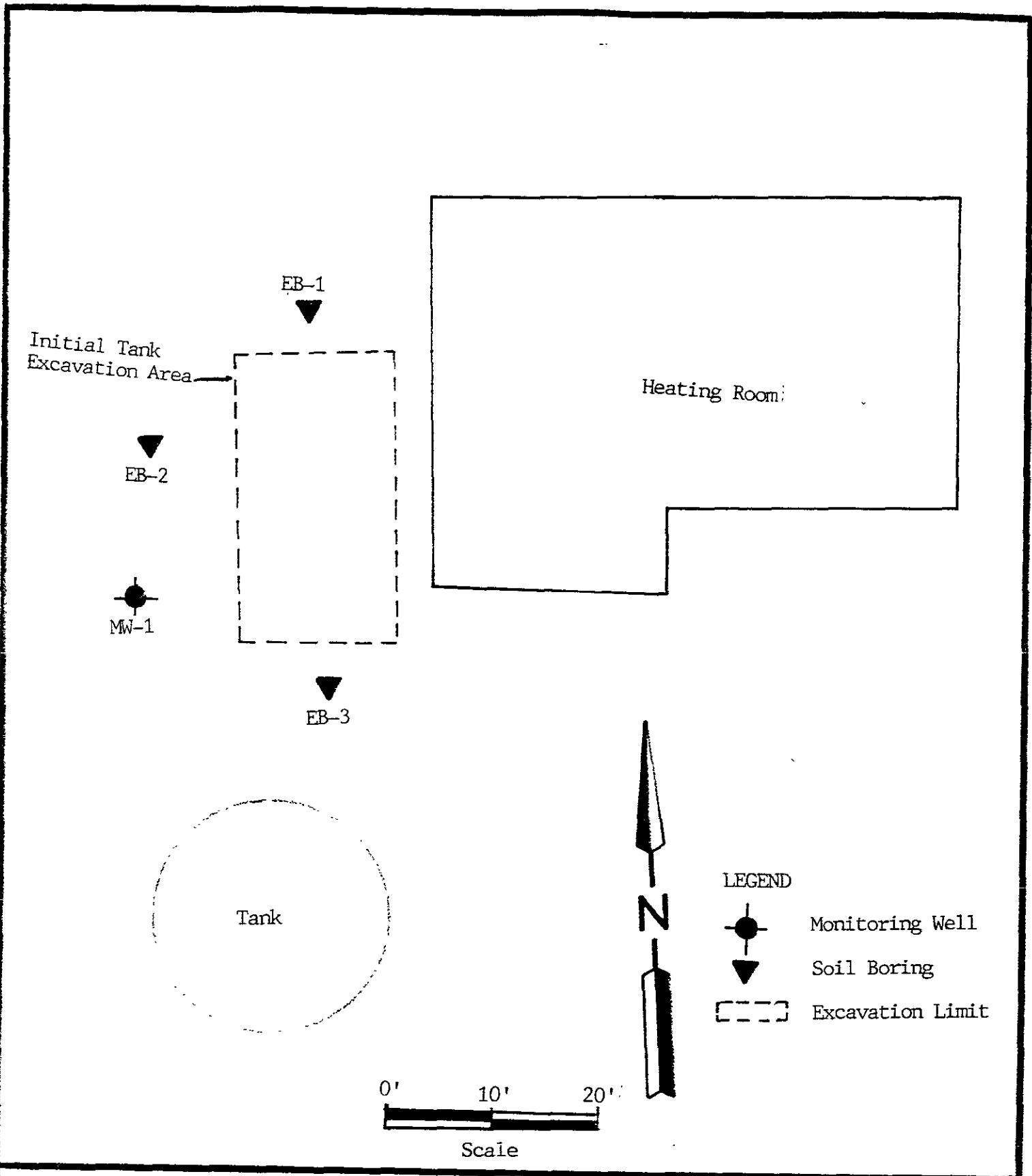
*Rasmi El-Jurf, MSCE, REA
Senior Project Engineer*

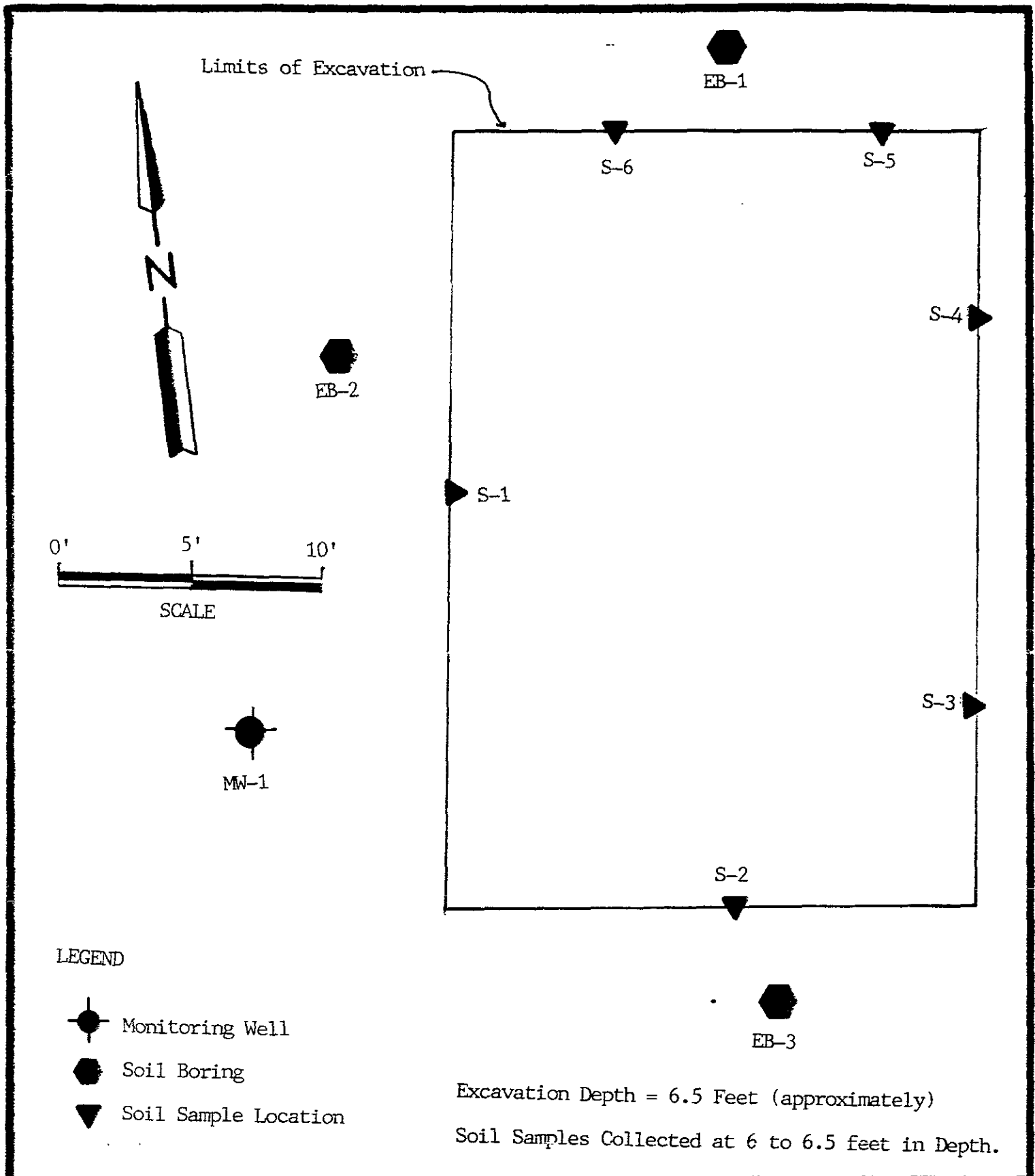


*Youssef El-Shoubary, Ph. D., REA
Engineering Program Manager*

FIGURES







APPENDIX A

CHROMALAB, INC.

Analytical Laboratory
Specializing in GC-GC/MS

- Environmental Analysis
- Hazardous Waste (#E694)
- Drinking Water (#955)
- Waste Water
- Consultation

September 5, 1990

ChromaLab File No.: 0890251

ENVIRONMENTAL EXPERTS, INC.

Attn: Rasmi El-Jurf

RE: Six soil samples for BTEX, Diesel and Oil & Grease analyses

Project Name: CITATION

Date Sampled: Aug. 29, 1990

Date Submitted: Aug. 29, 1990

Date Extracted: 8/31-9/4/90

Date Analyzed: 8/31-9/4/90

RESULTS:

Sample No.	Diesel (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethyl Benzene (µg/Kg)	Total Xylenes (µg/Kg)	Oil & Grease (mg/Kg)
S-1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
S-2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
S-3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
S-5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
S-6	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
BLANK SPIKE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
RECOVERY	98.9%	86.1%	92.5%	94.4%	93.5%	----
DUP. SPIKE						
RECOVERY	94.4%	92.5%	107.9%	102.5%	89.1%	----
DETECTION						
LIMIT	5	5	5	5	5	50
METHOD OF ANALYSIS	3550/ 8015		8020	8020	8020	503 D&E

ChromaLab, Inc.



David Duong
Senior Chemist



Eric Tam
Laboratory Director