

*Katherine Chesick*



**ENVIRONMENTAL BIO-SYSTEMS, INC.**

Innovative Solutions for a Better Environment

March 23, 1990

Zaccor Corporation  
791 Hamilton Avenue  
Menlo Park, California 94025

Attention: Mr. Gary Zaccor

The following documentation concerns the initial tank removal sampling and assessment performed by Environmental Bio-Systems, Inc. for Zaccor Corporation, on March 1, 1990 at:

**ALAMEDA CELLARS  
2425 ENCINAL  
ALAMEDA, CALIFORNIA**

On this date two 10,000 gallon gasoline tanks were removed. Subsequent sampling of surrounding soil within the tank pit excavation was performed in the presence of Inspector Katherine Chesick of the Alameda County Department of Environmental Health.

**FIELD OBSERVATIONS**

Tank A was constructed of single walled steel with a tar wrap that was approximately 70% intact at the time of removal. A visual inspection of the tank did not reveal any rusting, pitting or holes. The backfill material underlying the tank was stained and had a strong hydrocarbon odor.

Tank B was constructed of single walled steel and had a mostly intact tar wrap. No rusting, pitting or holes were noted upon inspection. Hydrocarbon staining and a strong hydrocarbon odor was noted in the backfill material and native soil underlying the tank.

Water was present in the southern corner of the tank pit at a depth of approximately 11.0 feet below grade upon removal of the tanks.

**RECEIVED**  
3/32/90

### **SAMPLING**

Composite samples were collected from the approximate 75 cubic yards of stockpiled soil generated during tank removal procedures. These composite samples were designated as sample #1A-E and sample #4A-B.

At the discretion of Inspector Chesick, one soil sample was collected from the southeastern wall of the tank pit at a depth of 8.0 feet below grade (sample #2) and one soil sample (sample #3) was collected from the northeastern wall of the pit at a depth of 8.0 feet below grade. Sloughing of the walls of the tank pit disallowed the collection of interface samples and samples from the southwestern and northwestern walls of the pit..

### **SAMPLE ANALYSIS**

All samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline, benzene, toluene, xylenes, and ethylbenzene (BTX&E).

### **SAMPLING METHODOLOGY**

Composite soil samples were collected from the stockpiled material in accordance with Bay Area Air Quality Management District (BAAQMD) guidelines.

Soil sample material from the tank pit was removed using a backhoe bucket. After removing the first 3 to 4 inches of soil just above the teeth of the bucket, presumably slough, samples were contained by driving clean brass tubes (1.92" x 6") into the exposed layer of soil. Soil was packed into the tubes to eliminate the possibility of headspace. Thus prepared, the ends of the tubes were wrapped with aluminum foil and sealed with plastic caps. After removing excess foil, electrical tape was applied to the seams between cap and tube in an effort to reduce the evaporative loss of volatile constituents.

The samples were placed in cooler on ice and transported under chain of custody documentation to Mobile Chem Labs, Inc., a certified hazardous materials testing laboratory (HMTL #289)

Analytical methods used by Mobile Chem Labs, Inc. were consistent with procedures presented in EPA document SW-846.

## **RESULTS**

The certified analytical report documenting the findings of sample analyses has been attached to this report.

Composite sample #1A-E contained TPH as gasoline at a concentration of 770 parts per million (ppm), benzene at 9.7 ppm, toluene at 57 ppm, xylenes at 110 ppm, and ethylbenzene at 23 ppm.

Sample #2 contained TPH as gasoline at a concentration of 1,500 ppm, benzene at 15 ppm, toluene at 0.5 ppm, xylenes at 32 ppm, and ethylbenzene at 18 ppm.

Sample #3 contained TPH as gasoline at a concentration of 58 ppm, benzene at 0.3 ppm, toluene at 0.1 ppm, xylenes at 0.8 ppm, and ethylbenzene at 0.4 ppm.

Composite sample #4A-B contained TPH as gasoline at a concentration of 330 ppm, benzene at 5.0 ppm, toluene at 24 ppm, xylenes at 37 ppm, and ethylbenzene at 7.2 ppm.

## **RECOMMENDATIONS**

The State Water Resources Control Board document, Leaking Underground Fuel Tank Field Manual (LUFT), supported by the San Francisco Regional Water Quality Control Board (SFRWQCB), defines acceptable limits and appropriate actions in dealing with tank removal and associated contamination.

The presence of fuel hydrocarbons in excess of 100 ppm in sample #2 necessitates further excavation of affected soils and a subsequent investigation of the impact of hydrocarbons on the shallow water bearing zone beneath the site. Excavation of soils containing concentrations of hydrocarbons in excess of 100 ppm should be performed until certified laboratory analysis confirms that acceptable levels have been attained or until additional excavation is no longer feasible.

In accordance with the LUFT manual, investigatory actions would include the installation of at least one groundwater monitoring well within ten feet of the former tank pit for the collection of groundwater quality data. Also in accordance with LUFT guidelines, a minimum of three groundwater reference points are necessary in order to determine groundwater flow direction beneath the site. This requirement may be satisfied by the installation of two additional groundwater reference points, either piezometers or wells. The three reference points will allow triangulation and subsequent determination of groundwater gradient. Properly installed and screened wells located on adjacent properties (if any) may qualify as eligible reference points.

Analytical results for sample #1A-E and #4A-B, the approximate 75 cubic yards of stockpiled material, indicate that this material contains concentrations of hydrocarbons which exceed acceptable limits for disposal at a class III landfill. We recommend, therefore, that this material be aerated on site in accordance with BAAQMD guidelines until residual levels of hydrocarbons have been diminished to acceptable levels for class III landfill disposal.

3/23/90

ZACCOR CORP. @  
ALAMEDA CELLARS  
ALAMEDA, CA

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### REPORTAGE

Copies of the sampling report, the chain of custody, and the certified analytical report should be submitted to the SFRWQCB, the Alameda County Water District, and the Alameda County Department of Environmental Health.

The following addresses have been listed for your convenience:


Water Quality Control Board  
San Francisco Bay Region  
1800 Harrison Street  
Room 700  
Oakland, CA 94612  
ATTN: Fuel Leaks Division

Alameda County Water District  
P.O. Box 5110  
43885 S. Grimmer Blvd.  
Fremont, CA 94537  
ATTN: Linda Spencer

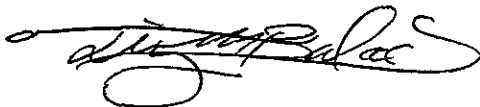
County of Alameda  
Department of Environmental Health  
Hazardous Materials Program  
80 Swan Way, Room 200  
Oakland, CA 94621  
ATTN: Katherine Chesick

If you have any questions, or if I may be of service please contact me at (415) 429-9988.

Sincerely,  
ENVIRONMENTAL BIO-SYSTEMS, INC.



Brenda D. McNabb  
Project Manager



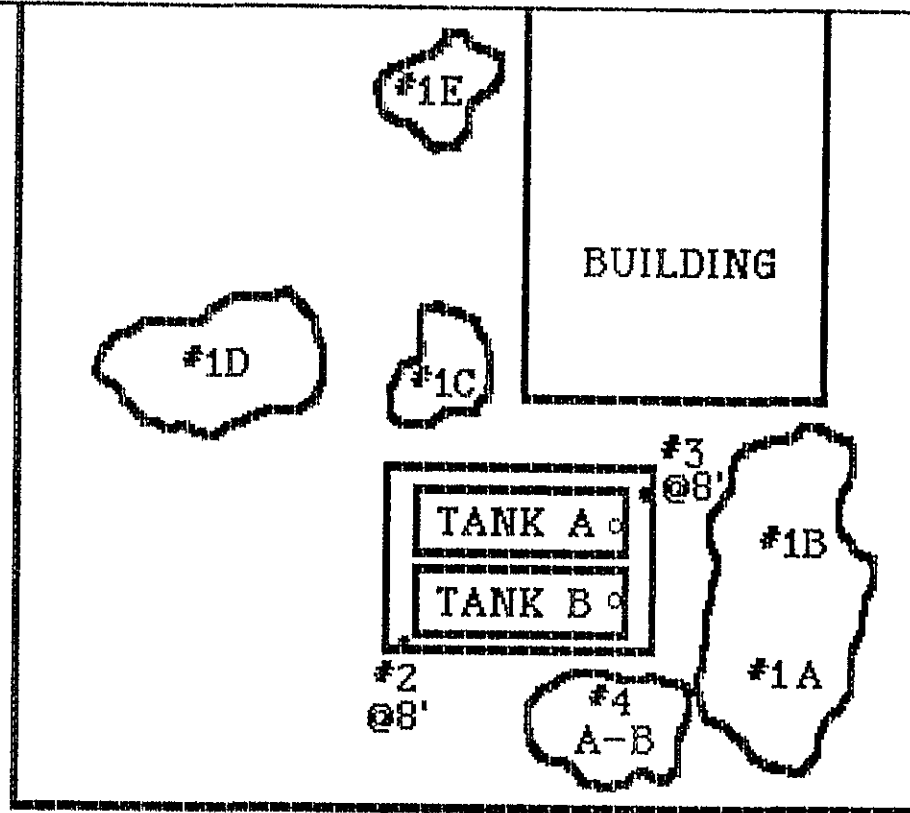
Timothy M. Babcock  
Environmental Scientist

BDM



0' 20' 40'

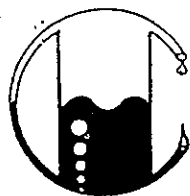
ENCINAL AVE.



PROPERTY LINE

PARK AVE.

**ZACCOR CORP. @  
ALAMEDA CELLARS  
2425 ENCINAL AVE.  
ALAMEDA, CA  
3/1/90**



# MOBILE CHEM LABS INC.

1678 Reliez Valley Road  
Lafayette, CA 94549 • (415) 945-1266

Environmental Bio-Systems  
30028 Industrial Pkway. S.W.  
Hayward, CA 94544-6904  
Attn: Timothy Babcock  
Environmental Scientist

Date Sampled: 03-01-90  
Date Received: 03-01-90  
Date Reported: 03-02-90

Sample Number

V030009

Sample Description

Alemeda Cellars - Alemeda  
2425 Encinal  
Comp 1 A-E SOIL

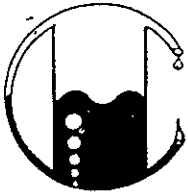
ANALYSIS

	<u>Detection Limit</u>	<u>Sample Results</u>
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	770
Benzene	0.1	9.7
Toluene	0.1	57
Xylenes	0.1	110
Ethylbenzene	0.1	23

Note: Analysis was performed using EPA methods 5030 and TPH LUFT  
with method 8020 used for BTX distinction.

MOBILE CHEM LABS

*Ronald G. Evans*  
for Ronald G. Evans  
Lab Director



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30028 Industrial Pkway. S.W.  
Hayward, CA 94544-6904  
Attn: Timothy Babcock  
Environmental Scientist

Date Sampled: 03-01-90  
Date Received: 03-01-90  
Date Reported: 03-02-90

Sample Number

-----  
V030010

Sample Description

-----  
Alameda Cellars - Alameda  
2425 Encinal  
# 2 SOIL

ANALYSIS

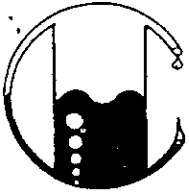
	Detection Limit	Sample Results
	----- ppm	----- ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	1,500
Benzene	0.1	15
Toluene	0.1	0.5
Xylenes	0.1	32
Ethylbenzene	0.1	18

Note: Analysis was performed using EPA methods 5030 and TPH LUFT  
with method 8020 used for BTX distinction.

MOBILE CHEM LABS

*Joyce A. Dishneau*

*JG*  
Ronald G. Evans  
Lab Director



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Hayward, CA 94544-6904  
Attn: Timothy Babcock  
Environmental Scientist

Date Sampled: 03-01-90  
Date Received: 03-01-90  
Date Reported: 03-02-90

Sample Number

-----  
V030011

Sample Description

-----  
Alemeda Cellars - Alemeda  
2425 Encinal  
# 3 SOIL

ANALYSIS

	Detection Limit	Sample Results
	----- ppm	----- ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	58
Benzene	0.1	0.3
Toluene	0.1	0.1
Xylenes	0.1	0.8
Ethylbenzene	0.1	0.4

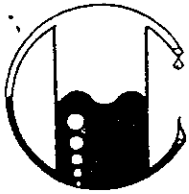
Note: Analysis was performed using EPA methods 5030 and TPH LUFT  
with method 8020 used for ETX distinction.

MOBILE CHEM LABS

*Joyce A V Dishneau*

*for* Ronald G. Evans  
Lab Director





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Environmental Bio-Systems  
30028 Industrial Pkway. S.W.  
Hayward, CA 94544-6904  
Attn: Timothy Babcock  
Environmental Scientist

Date Sampled: 03-01-90  
Date Received: 03-01-90  
Date Reported: 03-02-90

Sample Number

-----  
V030012

Sample Description

-----  
Alameda Cellars - Alameda  
2425 Encinal  
Comp # 4 A-B SOIL

ANALYSIS

	Detection Limit	Sample Results
	----- ppm	----- ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	330
Benzene	0.1	5.0
Toluene	0.1	24
Xylenes	0.1	37
Ethylbenzene	0.1	7.2

Note: Analysis was performed using EPA methods 5030 and TPH LUFT  
with method 8020 used for BTX distinction.

MOBILE CHEM LABS

*Joyce A. V. Deschamps*

*for*  
Ronald G. Evans  
Lab Director

ENVIRONMENTAL BIO-SYSTEMS, INC.  
30028 INDUSTRIAL PKWY., S.W.  
HAYWARD, CA. 94544  
(415) 422-2988

CHAIN OF CUSTODY

SITE ADDRESS:

Alameda Cellco  
2425 Encinal  
Alameda, CA

CLIENT:

Zaccor Corp.  
EBS #: 003-103  
DATE SAMPLED: 3/1/90

LABORATORY: Mobile Chem. IIMTL#: 289

SAMPLE #    MATRIX    ANALYSIS    TURNAROUND

5  
Comp  
1030009  
10  
11  
2  
Comp  
12

SAMPLE #	MATRIX	ANALYSIS	TURNAROUND
#1A-E	Soil	TPH as Gasoline, BTEX	
#2	↓	↓	↓
#3	↓	↓	↓
#4A-B	↓	↓	↓

Sampling Performed By Brenda D. McNabb

Sampling Completed At 1:00 AM (PM)

Released By: [Signature] Accepted By: [Signature] Time/Date  
1:15pm  
3/1/90  
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\_\_\_\_\_  
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