

Kathleen 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
901 LINCOLN AVENUE
ALAMEDA, CALIFORNIA**

On this date two 10,000 gallon gasoline tanks and one 2,000 gallon diesel tank were removed. Subsequent sampling of surrounding soil within the tank pit excavation was performed in the presence of Inspector Kathleen Chesick of the Alameda County Department of Environmental Health.

FIELD OBSERVATIONS

A visual inspection of tank A (2,000 gallon diesel tank constructed of single walled steel) revealed that the tank had a mostly intact tar wrap and did not have any rusting, pitting or holes. The backfill material and soil underlying the tank did have a hydrocarbon odor or appear to be stained.

Tank B, the 10,000 gallon gasoline tank located at the eastern side of the tank pit, was also constructed of single walled steel and had a mostly intact tar wrap. No rusting, pitting or holes were noted upon inspection. A moderate hydrocarbon odor was noted in the backfill material near the non-fill end of the tank.

Tank C, the remaining 10,000 gallon gasoline tank was also constructed of single walled steel with a mostly intact tar wrap. A visual inspection of the tank did not reveal any holes, rusting or pitting. A moderate hydrocarbon odor was noted in the soil underlying the non-fill end of the tank.

RECEIVED
3/30/90

SAMPLING

Composite samples were collected from approximate 100 cubic yards of stockpiled soil generated during tank removal procedures. These composite samples were designated as sample #1A-D and sample #2A-D.

At the direction of Inspector Chesick, six soil samples were collected from depths approximately 12 to 18 inches beyond the backfill/native soil interface. Sample #3 was collected from the non-fill end of tank C, at a depth of 10.0 feet below grade. Sample #4 was taken at the fill end of tank C, also at a depth of 10.0 feet below grade.

Sample #5 was taken from the fill end of tank B, at a depth of 9.0 feet below grade. Sample #6 was taken at the non-fill end of tank B at a depth of 10.0 feet below grade.

Samples #7 and #8 were taken beneath opposite ends of tank A at a depth of 8.5 feet below grade.

Sample #9 was taken from a stockpile of soil approximately 3 cubic yards in size which had been excavated from the center of the tank pit at the request of Inspector Chesick. The soil was discolored and had a petroleum oil odor.

SAMPLE ANALYSIS

Samples #1A-D was analyzed for total petroleum hydrocarbons (TPH) calculated as gasoline, benzene, toluene, xylenes, and ethylbenzene (BTX&E).

Sample #2A-D was analyzed for TPH calculated as gasoline and BTX&E.

Sample #3 was analyzed for TPH calculated as gasoline and BTX&E.

Sample #4 was analyzed for TPH calculated as gasoline and BTX&E.

Sample #5 was analyzed for TPH calculated as gasoline and BTX&E.

Sample #6 was analyzed for TPH calculated as gasoline and BTX&E.

Sample #7 was analyzed for TPH as diesel.

Sample #8 was analyzed for TPH calculated as diesel, TPH as calculated gasoline, and BTX&E.

Samples #9 was analyzed for oil and grease.

RESULTS

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

Composite sample #1A-D contained TPH as gasoline at a concentration of 63 parts per million (ppm), benzene at 0.2 ppm, toluene at 0.2 ppm, xylenes at 2.8 ppm, and ethylbenzene at 0.3 ppm.

Composite sample #2A-D contained TPH as gasoline at a concentration of 12 ppm, benzene at 0.2 ppm, toluene at 0.3 ppm, xylenes at 1.0 ppm, and ethylbenzene at 0.1 ppm.

Sample #3 contained TPH as gasoline at a concentration of 540 ppm, benzene at 6.3 ppm, toluene at 0.4 ppm, xylenes at 42 ppm, and ethylbenzene at 5.1 ppm.

*→ Tank C
from non-fill
and*

Sample #4 contained TPH as gasoline at a concentration of 4.4 ppm, benzene at 0.5 ppm, toluene at 0.8 ppm, xylenes at 0.6 ppm, and ethylbenzene at 0.1 ppm.

Sample #5 contained benzene at 0.2 ppm and xylenes at 0.2 ppm.

Sample #6 contained TPH as gasoline at a concentration of 710 ppm, benzene at 1.8 ppm, toluene at 36 ppm, xylenes at 100 ppm, and ethylbenzene at 13 ppm.

*→ Tank B
from non-fill
and*

Sample #7 did not contain concentrations of TPH as diesel above the respective lower limit of detection.

Sample #8 contained benzene at a concentration of 0.2 ppm and xylenes at 0.1 ppm.

Sample #9 contained oil and grease at a concentration of 960 ppm. ← *Stockpile*

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 samples #3 and #6 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 peizometers 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.

Based on the analytical results for sample #1A-D and #2A-D, the approximate 100 cubic yards of stockpiled material is eligible for disposal at an accepting class III landfill.

3/23/90

ZACCOR CORP. @
ALAMEDA CELLARS
ALAMEDA, CA

6

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:

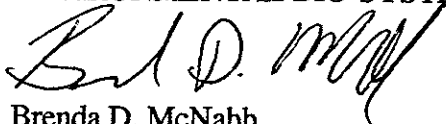
Water Quality Control Board
San Francisco Bay Region
1800 Harrison Street
Room 700
Oakland, CA 94612
ATTN: Fuel Leaks Division

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

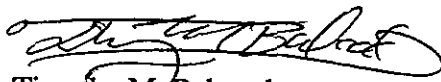
County of Alameda
Department of Environmental Health
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, CA 94621
ATTN: Katherine Chesick

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

ENVIRONMENTAL BIO-SYSTEMS, INC. #003-102

BUILDING

#2 A-D

#1 A-

TANK A

#8@8.5' #7@8.5'

TANK C

#3@10' #4@10'

TANK B

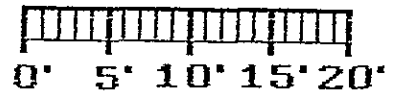
#5@10' #5@9'

#9

SIDEWALK

LINCOLN AVE.

ZACCOR CORP. @
ALAMEDA
CELLARS
901 LINCOLN AVE
ALAMEDA, CA.
3/1/90



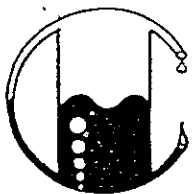
SAMPLING METHODOLOGY

Composite soil samples were collected from the stockpiled material in accordance with Bay Area Air Quality Management Guidelines.

Soil sample material was removed from the pit in 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.



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: 03-01-90

Sample Number

V003001

Sample Description

Alameda Cellars - Alameda
901 Lincoln Ave.
Comp # 1 A-D SOIL

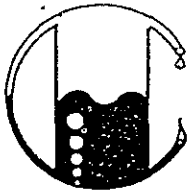
ANALYSIS

	Detection Limit	Sample Results
	----- ppm	----- ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	63
Benzene	0.1	0.2
Toluene	0.1	0.2
Xylenes	0.1	2.8
Ethylbenzene	0.1	0.3

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

MOBILE CHEM LABS

Royce A. V. Distanciel
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: 03-01-90

Sample Number

V003002

Sample Description

Alemeda Cellars - Alemeda
901 Lincoln Ave.
Comp # 2 A-D SOIL

ANALYSIS

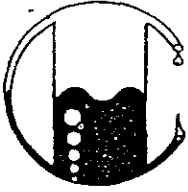
	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	12
Benzene	0.1	0.2
Toluene	0.1	0.3
Xylenes	0.1	1.0
Ethylbenzene	0.1	0.1

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

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Ronald G. Evans

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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: 03-01-90

Sample Number

V003003

Sample Description

Alemeda Cellars - Alemeda
901 Lincoln Ave.
3 SOIL

ANALYSIS

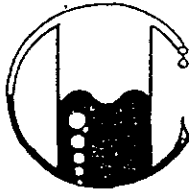
	Detection Limit	Sample Results
	----- ppm	----- ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	540
Benzene	0.1	6.3
Toluene	0.1	0.4
Xylenes	0.1	42
Ethylbenzene	0.1	5.1

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

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Attn: Timothy Babcock
Environmental Scientist

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

Sample Number

V003004

Sample Description

Alameda Cellars - Alameda
901 Lincoln Ave.
4 SOIL

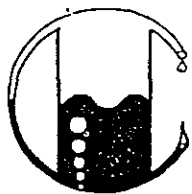
ANALYSIS

	Detection Limit ----- ppm	Sample Results ----- ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	4.4
Benzene	0.1	0.5
Toluene	0.1	0.8
Xylenes	0.1	0.6
Ethylbenzene	0.1	0.1

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

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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: 03-01-90

Sample Number

V003005

Sample Description

Alemeda Cellars - Alemeda
901 Lincoln Ave.
5 SOIL

ANALYSIS

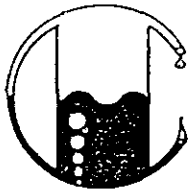
	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.1	0.2
Toluene	0.1	<0.1
Xylenes	0.1	0.2
Ethylbenzene	0.1	<0.1

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

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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

V003006

Sample Description

Alameda Cellars - Alameda
901 Lincoln Ave.
6 SOIL

ANALYSIS

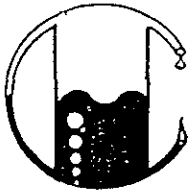
	Detection Limit	Sample Results
	----- ppm	----- ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	710
Benzene	0.1	1.8
Toluene	0.1	36
Xylenes	0.1	100
Ethylbenzene	0.1	13

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

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Environmental Bio-Systems
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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

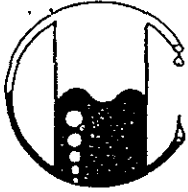
Sample Number	Sample Description	Detection Limit	SOIL Total Petroleum Hydrocarbons as Diesel
-----	-----	-----	-----
		ppm	ppm
	Alemeda Cellars - Alemeda 901 Lincoln Ave.		
V030007	# 7	5	<5
V030008	# 8	5	<5

Note: Analysis was performed using EPA methods 3550 and TPH LUFT

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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

V003008

Sample Description

Alemeda Cellars - Alemeda
901 Lincoln Ave.
8 SOIL

ANALYSIS

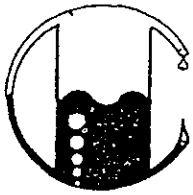
	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.1	0.2
Toluene	0.1	<0.1
Xylenes	0.1	0.1
Ethylbenzene	0.1	<0.1

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

MOBILE CHEM LABS

Joyce A. Districano

for Ronald G. Evans
Lab Director



MOBILE CHEM LABS INC.

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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	Sample Description	Detection Limit	SOIL <i>→ Stockpiled</i> Total Recoverable Hydrocarbons as Oil & Grease by I.R.
-----	-----	-----	-----
		ppm	ppm
V030013	Alemeda Cellars - Alemeda 901 Lincoln Ave. # 9	50	960

Note:EPA 3550 / 418.1 Total Petroleum Hydrocarbons by Infrared Spectrophotometry. Sonication extraction in Trichlorotrifluoroethane with Silica Gel Clean-Up followed by determination using infrared spectrophotometry

MOBILE CHEM LABS

Jayce A. U. Distman

Ronald G. Evans
Lab Director

ENVIRONMENTAL BIO-SYSTEMS, INC.
 30028 INDUSTRIAL PKWY., S.W.
 HAYWARD, CA. 94544
 (415) 429-9988

CHAIN OF CUSTODY

SITE ADDRESS:

CLIENT:

Alameda Cellars

Zaccor Corp.

901 Lincoln Ave.

EBS #: 003-102

Alameda, CA

DATE SAMPLED: 3/1/90

LABORATORY: Mobile Chem HMTL#: 289

SAMPLE #	MATRIX	ANALYSIS	TURNAROUND
----------	--------	----------	------------

023006
 Comp. #1
 Comp. #2

#1A-D	Soil	TPH as Gasoline, BTEX	Immediate
-------	------	-----------------------	-----------

#2A-D		↓ ↓ ↓	
-------	--	-------	--

#3		TPH as Gasoline, BTEX	
----	--	-----------------------	--

#4		↓ ↓ ↓	
----	--	-------	--

#5		↓ ↓ ↓	
----	--	-------	--

#6		↓ ↓ ↓	
----	--	-------	--

Sampling Performed By Brenda D. McHabb

Sampling Completed At 10:05 (AM/PM)

Released By: [Signature]

Accepted By: [Signature]

Time/Date
10:45 AM
3/1/90

ENVIRONMENTAL BIO-SYSTEMS, INC.
30028 INDUSTRIAL PKWY., S.W.
WILLYARD, CA. 94544
(415) 429-9988

CHAIN OF CUSTODY

SITE ADDRESS:

Alameda Cellars

CLIENT:

Zaccor Corp.

901 Lincoln Ave

EBS #: 003-102

Alameda, CA

DATE SAMPLED: 3/1/90

LABORATORY: Mobile Chem

HMTL#: 289

SAMPLE #

MATRIX

ANALYSIS

TURNAROUND

#7 Soil TPH as Diesel

#8 Soil TPH as Diesel, TPH as Gasoline, BTEX

one sample #9 ~~Soil~~ EPA 418.1 (Petrol Oil)
3/1/90

Sampling Performed By

Brenda D. McHobb

Sampling Completed At

10:05 AM PM

Released By:

Paul D. McHobb

Accepted By:

Gary Rogers

Time/Date

10:45 am

3/1/90

---/---/---

---/---/---