

PROJECT REPORT

*Jun 20  
89*

SUBSURFACE SOIL  
INVESTIGATION

2801 MACARTHUR BOULEVARD  
OAKLAND, CALIFORNIA

*94602*

Prepared for

CALI FRANCE CORPORATION  
1904 FRANKLIN STREET, SUITE 501  
OAKLAND, CALIFORNIA 94612

Riedel Environmental Services, Inc.  
4138 Lakeside Drive  
Richmond, California 94806

RES Project No. 4004  
June 20, 1989



RIEDEL ENVIRONMENTAL  
SERVICES, INC.

San Francisco Region:  
4138 Lakeside Drive  
Richmond, California 94806  
(415) 222-7810  
FAX: (415) 222-6868

June 20, 1989

Mr. Nicholas Molnar  
Cali France Corporation  
1904 Franklin Street, Suite 501  
Oakland, California 94612

Reference: Subsurface Soil Investigation  
2801 MacArthur Boulevard  
Oakland, California  
RES Project No. 4004

Dear Mr. Molnar:

Riedel Environmental Services, Inc. (RES) is pleased to submit herewith its project report documenting the soil investigation conducted at the above-referenced site in Oakland, California.

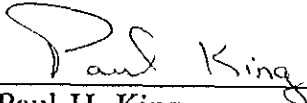
We have provided you with three copies so that you can forward one to Aniko Molnar and one to the local regulatory agency, as follows:


Mr. Larry Setow  
Alameda County Department of Environmental Health  
80 Swan Way  
Oakland, California 94621

If you have any question or require additional information about this report, please feel free to contact us.

Sincerely,

RIEDEL ENVIRONMENTAL SERVICES, INC.

  
\_\_\_\_\_  
Paul H. King  
Project Manager

  
\_\_\_\_\_  
Michael G. Burns  
Senior Project Manager

cc: File

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Figure 1 - Site Plan

Plate A - Exploratory Boring Log

Chain of Custody Record

Laboratory Analytical Results

## 1.0 INTRODUCTION

This project report documents the results of the RES subsurface soil investigation for the Cali France site located at 2801 MacArthur Boulevard in Oakland, California.

Three subsurface fuel storage tanks were removed from the site by RES on May 3, 1989. Laboratory analyses of soil samples collected from beneath the ends of each tank revealed a concentration of 480 milligrams per kilogram or parts per million (ppm) beneath the northwest corner of the western most tank (adjacent to the building).

The purpose of this investigation is to further assess the environmental conditions of the site by determining if the detected soil contamination extends laterally in the direction of the soil boring location and to a distance of approximately 10 feet from the excavation.

## 2.0 FIELD INVESTIGATION PROCEDURES

A single borehole was drilled at the location shown on Figure 1. Prior to commencement of drilling operations, the site was checked for the presence of underground and overhead utilities in the area of the borehole. The borehole was drilled using 6 inch outside diameter, continuous-flight, hollow-stem augers with a truck-mounted auger drill rig.

The borehole was logged by a RES professional in accordance with the Unified Soil Classification System and standard geologic techniques. Soil samples for logging purposes were collected from auger return materials and from soil samples collected by driving a split-spoon sampler into the bottom of the borehole beyond the lead auger. The sampling equipment was cleaned with a non-phosphate detergent solution prior to each use.

Soil samples for chemical analyses were collected from depths just below the base of the tank excavation, approximately 15 feet below grade (bg), to first encountered groundwater, 29-1/2 feet bg, at 5 foot depth intervals by driving a modified split-spoon sampler lined with brass sleeves into the bottom of the borehole beyond the lead auger. The soil samples were sealed into their brass sleeves with aluminum foil and end caps, placed on ice packs, and delivered directly to a State-certified hazardous waste testing laboratory along with the appropriate chain of custody documentation.

Upon completion of drilling operations, the borehole was backfilled to the surface with drill cuttings as it is intended that excavation in the northwest corner will extend to this location.

## 3.0 SITE HYDROGEOLOGIC CONDITIONS

The soil boring was located within 10 feet of the northwest corner of the excavation at the location shown on Figure 1. Subsurface conditions were explored to a total depth of 31 feet bg. The soil boring encountered clay and clayey sand to the total depth explored. A copy of the Exploratory Boring Log is included in this report.

Groundwater was first encountered at a depth of 29-1/2 feet bg. The depth to water was rechecked after 30 minutes and had not changed.

No petroleum product odors or discolorations were noted in any of the soil samples collected or in the auger return materials.

#### 4.0 LABORATORY ANALYTICAL PROCEDURES AND RESULTS

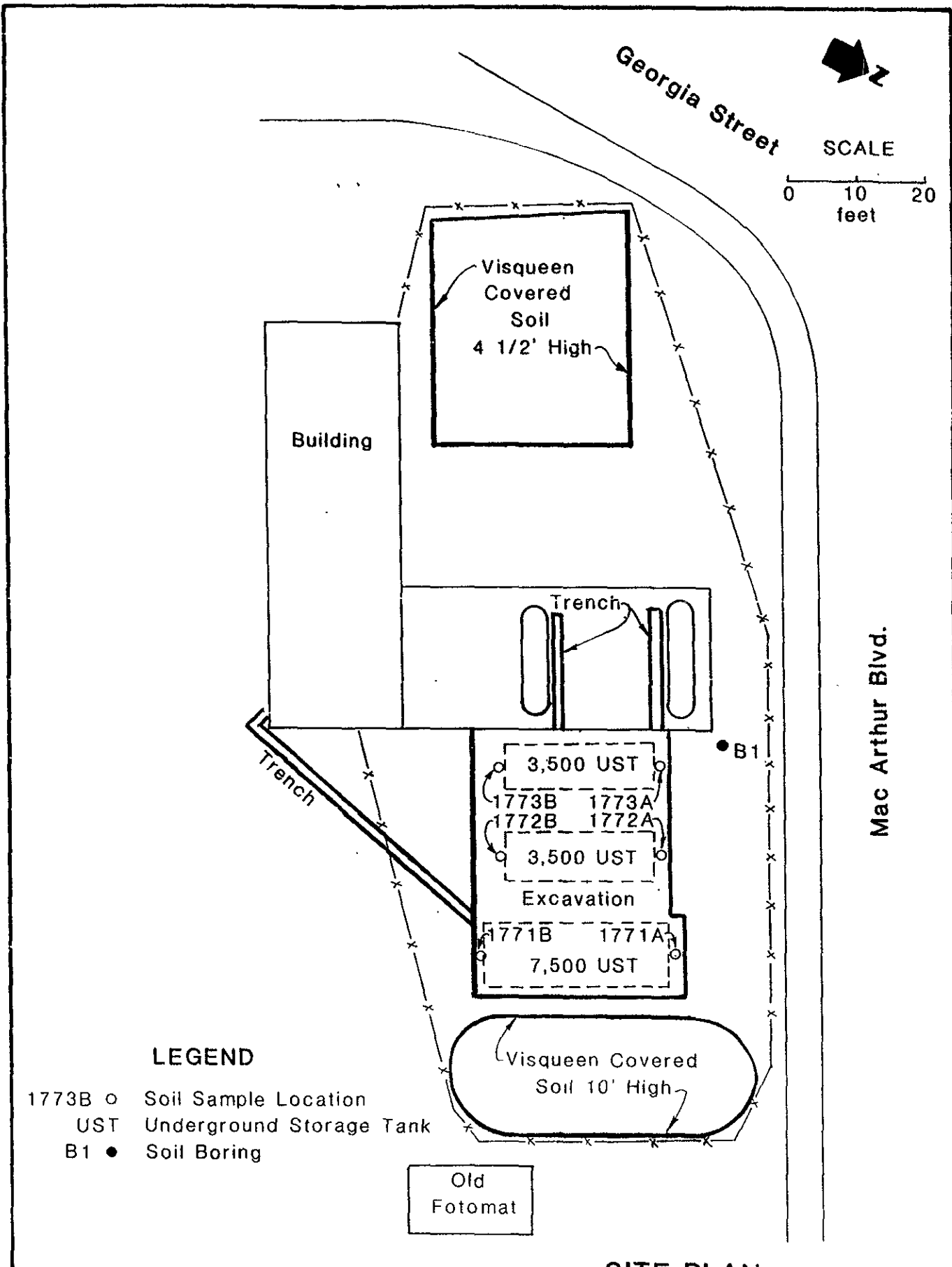
Soil samples collected at the 20, 25, and 30 foot depth intervals were analyzed for the presence of total petroleum hydrocarbons (TPH) as gasoline, and benzene, toluene, xylene, and ethyl benzene (BTXE) compounds by EPA methods 5030, 8015, and 8020. No TPH or BTXE compounds were detected. Copies of the chain of custody and analytical results are also included in this report.

#### 5.0 DISCUSSION

Based on the analytical results, the extent of soil contamination appears to be confined to the northwest corner of the base of the excavation. Upon approval and/or comment by Mr. Larry Setow of the local regulatory agency, Alameda County Department of Environmental Health, RES will complete the tank removal portion of this project by excavating the visibly contaminated soils in the northwest corner of the excavation and segregating them in a separate stockpile. Soil samples will be collected from the new base of the excavation and analyzed for TPH and BTXE compounds to confirm that the remaining contaminated soil has been removed. The excavation will then be backfilled in accordance with the original scope of work.

RES Proposal No. R9-5083, dated May 31, 1989, proposes the removal of an on-site waste oil tank. Upon your approval, the waste oil tank can be removed concurrently with the excavation backfilling operations.

**ATTACHMENTS**



6/19/89



**RIEDEL ENVIRONMENTAL SERVICES, INC.** Richmond, California

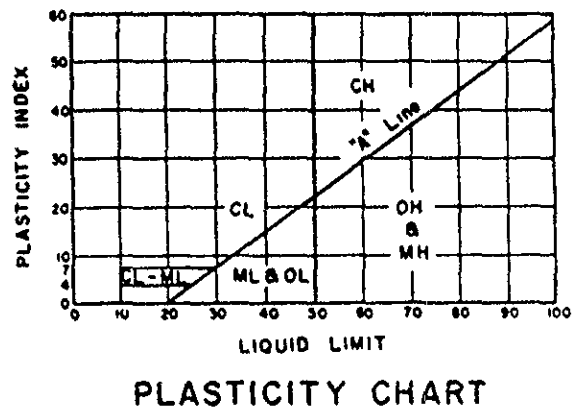
**SITE PLAN**  
**Cali France Corporation**  
 Proj. No. 4004

FIGURE  
**1**

MAJOR DIVISIONS		SYMBOLS	TYPICAL SOIL DESCRIPTIONS
COARSE GRAINED SOILS (More than 1/2 of soil > no. 200 sieve size)	<u>GRAVELS</u> (More than 1/2 of coarse fraction > no. 4 sieve size)	GW	Well graded gravels or gravel-sand mixtures, little or no fines
		GP	Poorly graded gravels or gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	<u>SANDS</u> (More than 1/2 of coarse fraction < no. 4 sieve size)	SW	Well graded sands or gravelly sands, little or no fines
		SP	Poorly graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
FINE GRAINED SOILS (More than 1/2 of soil < no. 200 sieve size)	<u>SILTS &amp; CLAYS</u> <u>LL &lt; 50</u>	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL	Organic silts and organic silty clays of low plasticity
	<u>SILTS &amp; CLAYS</u> <u>LL &gt; 50</u>	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of medium to high plasticity, organic silty clays, organic silts
HIGHLY ORGANIC SOILS	Pt	Peat and other highly organic soils	

**CLASSIFICATION CHART**  
(Unified Soil Classification System)

CLASSIFICATION	RANGE OF GRAIN SIZES	
	U.S. Standard Sieve Size	Grain Size in Millimeters
BOULDERS	Above 12"	Above 305
COBBLES	12" to 3"	305 to 76.2
GRAVEL	3" to No. 4	76.2 to 4.76
	coarse 3" to 3/4"	76.2 to 19.1
	fine 3/4" to No. 4	19.1 to 4.76
SAND	No. 4 to No. 200	4.76 to 0.074
	coarse No. 4 to No. 10	4.76 to 2.00
	medium No. 10 to No. 40	2.00 to 0.420
	fine No. 40 to No. 200	0.420 to 0.074
SILT & CLAY	Below No. 200	Below 0.074



GRAIN SIZE CHART

**METHOD OF SOIL CLASSIFICATION**



LEGEND FOR EXPLORATORY BORING LOGS

(2.5Y, 4/2)

Denotes color as field checked to Munsell Soil Color Charts (1975 Edition).



Denotes bag sample from drill cuttings.



Denotes sample taken with a split-spoon



Denotes sample taken with a shelly tube



Denotes length of drill core recovery.



Denotes length of core recovery from CME sampler and its number.



Denotes stabilized water level in well.



Denotes first encountered water during drilling.

# LOG OF EXPLORATORY BORING

PROJECT NUMBER: 4004  
 PROJECT NAME: CaliFrance  
 BY: MGB            DATE: 6-12-89

BORING NO. B1  
 PAGE 1 OF 1

EXPLOSI-METER READING	POCKET PENETRO-METER (TSF)	PENETRA-TION (Blows/ Ft.)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO-GRAPHIC COLUMN	DESCRIPTION
				0		ASPHALT(3") & GRAVEL FILL (3")	
	4.0	31		5	CL	CLAY	CLAY; brown (7.5YR,4/4); silty; 10-15% fine to medium sand; firm to stiff; damp; no product odor.
	3.6	27		10	SC	CLAYEY SAND	@4-1/2': mottled brown and olive (5Y,4/3); 20-30% fine to coarse sand; occasional rootholes; no product odor. CLAYEY SAND; strong brown (7.5YR, 4/6); fine to coarse grained; 20-40% fines; very stiff; damp; no product odor.
nd	4.5	35		15	CL	CLAY	CLAY; strong brown (7.5YR,4/6); silty; 10-15% fine to coarse sand; hard; damp; no product odor
nd		48		20	SC	CLAYEY SAND	CLAYEY SAND; olive (5Y,4/4); fine coarse grained; 10-15% fines; dense; damp; no product odor.
nd	4.2	38		25	CL	CLAY	@24-1/2': CLAYEY SAND to SANDY CLAY; fine to medium grained; very stiff/dense; damp; no product odor.
nd		66	▽▽	30	CL	CLAY	@29-1/2': brown (10YR,4/3); fine to coarse grained; 10-15% fines; very dense; wet; no product odor. BOTTOM OF BOREHOLE AT 31 FEET.
				40			

Drilled by 6-inch hollow-stem, continuous-flight auger; samples collected with 2-inch modified California split-spoon sampler. Borehole backfilled with cuttings to surface.



RIEDEL ENVIRONMENTAL  
 SERVICES, INC



**RIEDEL ENVIRONMENTAL SERVICES, INC.**

San Francisco Region:  
P.O. Box 2433  
Richmond, California 94802  
(415) 222-7810  
FAX - (415) 222-6868

**Chain of Custody Report**

Attention to: Michael G. Burns Project Name: Califrance  
Telephone: 415-222-7810 Project Location: Oakland, CA

Project Number 4004

**Sample Tracking**

Sample Collection:  
Date 6-12-88 Time \_\_\_\_\_ a.m./p.m.  
Collected by: Michael G. Burns

Relinquished by: (Signature) <i>[Signature]</i>	Date / Time <u>6/12/88</u> <u>4:12</u>	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) <u>Hedi Ernst</u>	Date / Time <u>6/12/88</u> <u>5:50 PM</u>	Remarks	

**II. Turnaround Status**

8 hr 1 Work Day 2 Work Days 3 Work Days  5 Work Days 10 Work Days 15 Work Days

Sample Description	Number/Type of Containers	Analyses Requested
<u>B1-20</u>	<u>brass sleeve</u>	<u>Gas BTEX by EPA 5030, 8015, 8020</u>
<u>B1-25</u>	<u>" "</u>	<u>Gas BTEX by EPA 5030, 8015, 8020</u>
<u>B1-30</u>	<u>" "</u>	<u>Gas BTEX by EPA 5030, 8015, 8020</u>



# SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063  
(415) 364-9600 • FAX (415) 364-9233

Riedel Environmental Services 4138 Lakeside Drive Richmond, CA 94806 Attention: Michael Burns	Client Project ID: #4004, CallFrance, Oakland Matrix Descript: Soil Analysis Method: EPA 5030/8015/8020 First Sample #: 906-1382	Sampled: Jun 12, 1989 Received: Jun 12, 1989 Analyzed: Jun 14, 1989 Reported: Jun 16, 1989
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## TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
906-1382	B1-20	N.D.	N.D.	N.D.	N.D.	N.D.
906-1383	B1-25	N.D.	N.D.	N.D.	N.D.	N.D.
906-1384	B1-30	N.D.	N.D.	N.D.	N.D.	N.D.

Detection Limits:	1.0	0.05	0.1	0.1	0.1
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.  
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Arthur G. Burton  
Laboratory Director



# SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063  
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Riedel Environmental Services  
4138 Lakeside Drive  
Richmond, CA 94806  
Attention: Michael Burns

Client Project ID: #4004, CaliFrance, Oakland

QC Sample Group: 9061382-4

Reported: Jun 16, 1989

## QUALITY CONTROL DATA REPORT

**ANALYTE** Ethyl Benzene

Method: EPA 8020  
Analyst: A. MirafTAB  
Reporting Units: ppm  
Date Analyzed: Jun 14, 1989  
QC Sample #: 9061223

Sample Conc.: 0.0

Spike Conc. Added: 0.20

Conc. Matrix Spike: 0.22

Matrix Spike % Recovery: 110.0

Conc. Matrix Spike Dup.: 0.20

Matrix Spike Duplicate % Recovery: 100.0

Relative % Difference: 9.5

SEQUOIA ANALYTICAL

Arthur G. Burton  
Laboratory Director

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$