December 18, 1991

Environmental Geosciences Engineering
a division of Water Resources Associates, Inc. Phoenix, Arizona

Mr. Len Overholser
Pacific Trust Company
1245 South Winchester Blvd.
San Jose, CA 95128

Subject: Supplemental Investigation at 21450 Mission Blvd., Alameda County (unincorporated), California

Dear Mr. Overholser:

This report presents the results of a second supplemental investigation, performed at the above referenced address, for evaluation of the vertical extent of diesel contamination in soil beneath the former location of an eighty (80) gallon diesel underground storage tank (UST). The supplemental investigation has been performed to comply with the requirements for case closure set forth by Pamela Evans of the Alameda County Health Care Services Agency (ACHCSA). In a letter dated August 14, 1991, Ms. Evans indicated that closure would be contingent upon demonstration of either 1) the presence of a continuous aquitard of at least five foot thickness beneath the site or 2) separation of deepest soil contamination and first groundwater by a distance of 20 feet. This investigation provides documentation that 1) the aquitard is of at least ten foot thickness, 2) deepest soil contamination and first groundwater are separated by a distance of at least 29 feet and 3) groundwater contains nondetectable levels of contamination.

SITE DESCRIPTION

The subject property lies in an unincorporated area of Alameda County, in close proximity to the Hayward City limits (Figure 1), at an approximate elevation of 85 feet above mean sea level. The topographic gradient is directed wet-southwest. The closest surface water is San Lorenzo Creek, which abuts against the east (upgradient) side of the property. The creek is an ephemeral, concrete-lined canal maintained by Alameda County Flood Control and Water Conservation District, and flows into San Francisco Bay. The site surface water drainage is controlled by the site grading and the storm water system.

Subsurface Conditions

A thorough analysis of site conditions has been presented in six previous documents [C.M. French, R.G.(1990)]; EIRRA Consultants (1990 and 1991 a,b,c); and EGE (1991)]. Previous borings have been extended to depths ranging from 10 to 65 feet below ground surface. In general, the site may be characterized by an upper sequence of sandy silt, which grades at depth to a fine well sorted sand and clayey sand. These soils are present to a depth of approximately 30 feet. The upper sequence is underlain by a distinctly

different lithology, composed of highly weathered, interbedded, clayey sand to clayey, gravelly sands to a depth of approximately 55 feet. A stiff clay was encountered below depths of 55 feet.

SCOPE OF WORK

All drilling activities were supervised by an E.G.E. hydrogeologist under the direct supervision of a California Certified Engineering Geologist (CEG). The ACHCSA was notified of boring activities prior to commencement of work.

Previous drilling (EIRRA, 1991c) to a depth of 27 feet beneath the former UST had encountered soil contamination ranging from 40 to 170 milligrams per kilogram (mg/kg) or parts per million (ppm), with an average of 69 ppm. For this supplemental investigation, one boring was drilled approximately seven feet from the center of the former UST, as shown in Figure 2. Soil sampling commenced at 30 feet, three feet below the deepest sample collected during the prior investigation (EIRRA, 1991c). The maximum depth obtained was 65.5 feet. The boring was advanced with a truck-mounted hydraulic-drive drill rig equipped with 8 inch diameter, continuous-flight, hollow-stem augers operated by Soil Exploration Services of Vacaville.

The boring was logged using the Unified Soil Classification System (see Attachment B) and discrete soil samples were collected at five-foot intervals, between 30.0 feet and 65.0 feet, with a California Modified Split-Spoon Sampler, driven 18 inches into undisturbed soil using a standard 30-inch drop of a 140-pound hammer. Soil samples were removed from the sampler promptly and the ends of the sample tubes were covered with aluminum foil and fitted with plastic caps. The sample tube was then marked and placed on ice for transport to a State-certified hazardous waste analytical laboratory under chain of custody documentation. Soil samples were subsequently analyzed for Total Petroleum Hydrocarbons as Diesel using EPA SW-846 Method 8015. As in previous deep borehole investigations of this site (French, 1990), no discernable level of contamination was encountered.

After the soil boring was completed and the bottom-most soil sample collected, a grab groundwater sample was obtained by lowering a clean, disposable, polyethylene bailer through the hollow stem of the drilling augers. The augers were lifted five feet, to the level of first encountered groundwater, and then left in place during the water sample acquisition to preclude sloughing of the boring walls and/or collapse of the boring and to provide a clean, smooth conduit through which the bailer could be introduced and

removed. Upon removing the bailer, the water sample was promptly transferred into two (2) 40-ml Volatile Organic Analysis (VOA) vials and one (1) one liter amber glass bottle, all preserved with hydrochloric acid (HCl), and placed on ice for transport to a State-certified hazardous waste analytical laboratory under chain of custody for analysis for TPHD using EPA SW-846 Method 8015.

No evidence of contamination of the water, such as hydrocarbon odor or sheen, was discerned. Following the collection of the water sample, the augers were pulled from the borehole and the soil boring was backfilled with bentonite chips in the interval 55.0 feet - 65.5 feet. The remainders of the annulus was pressure grouted with cement between 55.0 feet and the ground surface. No collapse of the annulus occurred.

Drilling augers and sampling equipment were steam cleaned or thoroughly scrubbed and rinsed with distilled water prior to being brought on site and between samplings. All cuttings and water from steam cleaning were placed in approved DOT drums, labeled, and stored on site pending the receipt of laboratory data and the development of an appropriate disposal protocol.

RESULTS OF LABORATORY ANALYSES

Eight (8) soil samples, collected between 30 and 65 feet, and one water sample were analyzed for Total Petroleum Hydrocarbons as Diesel (TPHD). None of these contained detectable levels of TPHD. The method detection limit for diesel in soil is 10 parts per million, and in water is 0.05 ppm. Copies of the results of certified laboratory analyses and chain of custody are presented in Attachment C.

CONCLUSIONS AND RECOMMENDATIONS

Soils and water encountered and sampled during the drilling of the additional soil boring were free of detectable concentrations of Total Petroleum Hydrocarbons as Diesel. The data and documentation provided herein have corroborated the opinions and evaluations, previously provided, concerning the absence of an impact to groundwater from this site. In consideration of the data acquired and developed to date, it is advised recommendation for case closure be formulated by the ACHCSA and granted by the RWQCB.

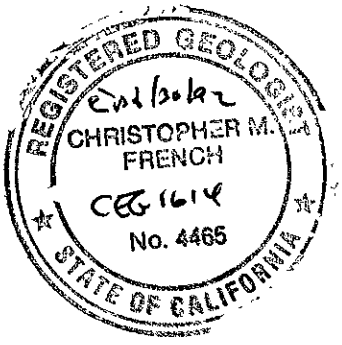
Should you have any questions regarding the information contained herein, or if we may otherwise be of assistance, please call.

Very truly yours,

ENVIRONMENTAL GEOSCIENCES ENGINEERING

Valentin Constantinescu

Valentin Constantinescu, M.Sc.
Senior Project Hydrogeologist



Christopher M. French, C.E.G., R.E.A.
Senior Environmental Scientist

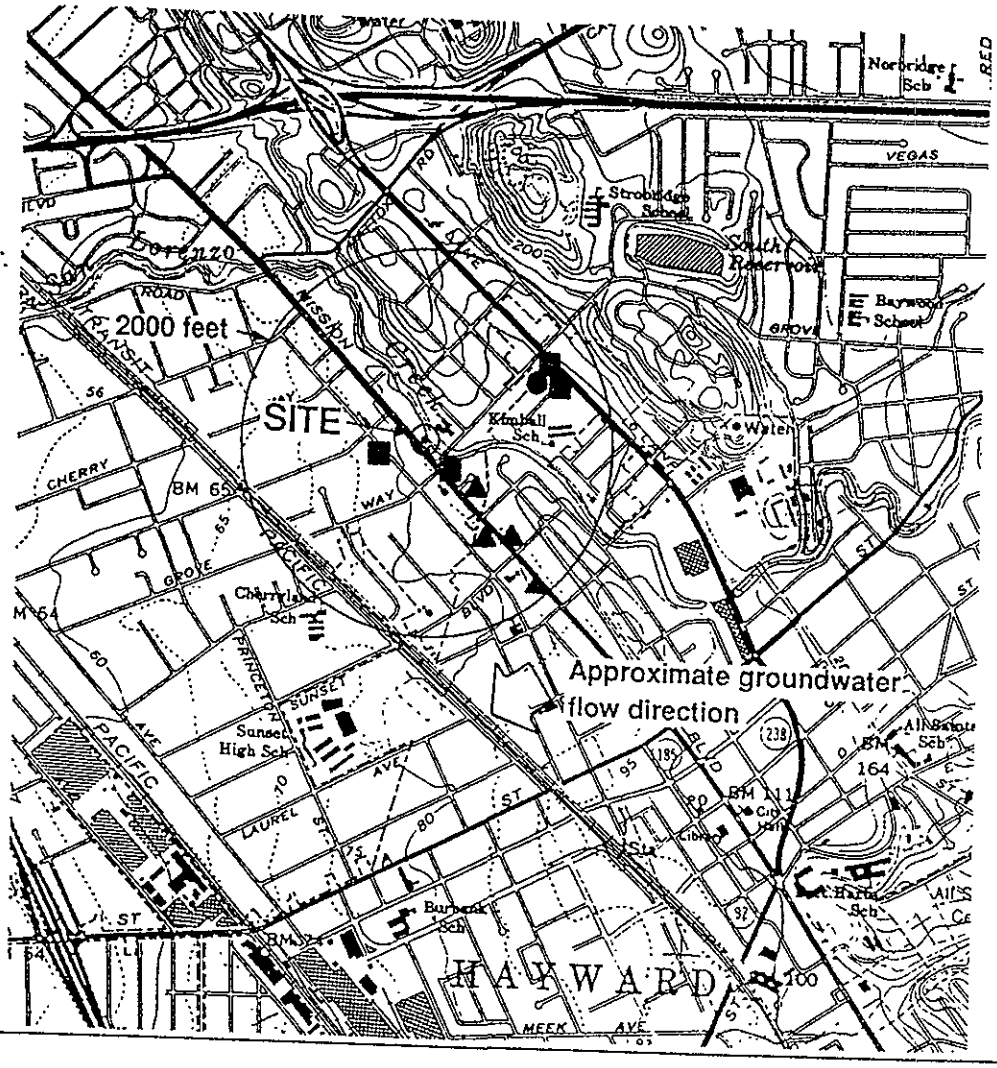
VC/CMF/nr

cc: file

Attachments (3)

ATTACHMENT A

Figures



Source: USGS Hayward 7 1/2 min.
topographic quadrangle map
Photorevised 1980

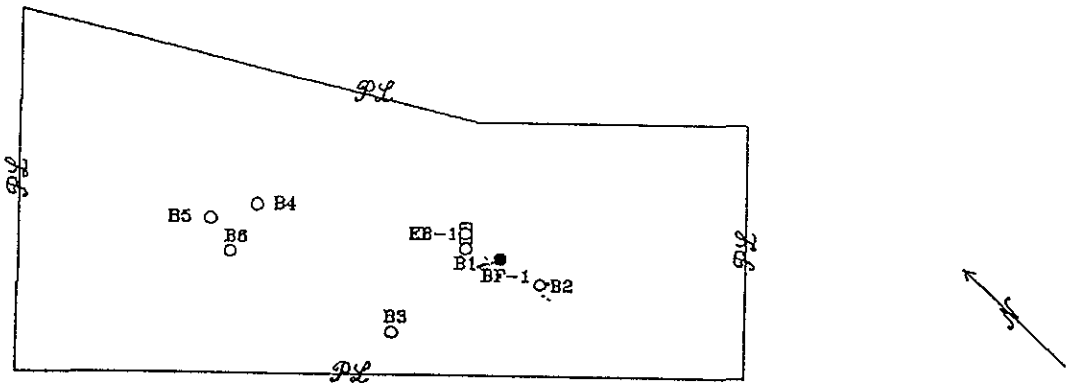
EXPLANATION

- ■ Luft site
- ▲ RCRA site
- ● ASPIS site

N

0 2000 Feet

Environmental Geosciences Engineering a division of Water Resources Associates, Inc. Phoenix, Arizona		Pacific Trust Company	Figure
Project No. 8910	Drawn by: V. C.	SITE LOCATION MAP	1
Date: 12/17/91	Checked by: C. M. P.		



LEGEND

- ○ Previous soil boring location and designation
- ● Present soil boring location and designation
- ▯ Underground storage tank (removed)
- PL Property line

Source: "Proposed Improvements, Service Station 7-636, 21450 East 14th St (Mission Blvd.) Dated 2/28/54 Alameda County Public Works Agency

Environmental Geosciences Engineering a division of Water Resources Associates, Inc. Phoenix, Arizona		Pacific Trust Company Supplemental Investigation Boring Location Map
Project No. 8910	**Drawn by:** V. C.	Figure 2
Date: 12/17/91	**Checked by:** C. M. F.	

ATTACHMENT B

Lithologic Log

SOIL BORING LOG

PROJECT: PACIFIC TRUST BORING NO.: BF-1
PROJECT NO.: 8910 PROJECT MANAGER: C. M. FRENCH
LOGGED BY: V. CONSTANTINESCU EDITED BY: C. M. F.
DATE DRILLED 12-6-1991 DRILLED BY SES DRILLING
DRILLING METHOD H.S. Auger SAMPLE METHOD Split Spoon

Depth Below Surface	Samples Collected INT	Samples Collected Sample No.	SOIL DESCRIPTION (Color, Grain size, Texture, Consistency, Moisture, Odor)	Unified Soil Classification	Log	Blows /6"	Well Construction Details
0			ASPHALT; SILTY SAND; brown; 40% silt and clay; very fine to fine; dry; no odor.	SM			
5							
10			CLAYEY SAND; brown; dry; no odor.	SC			
15			SILTY SAND; yellowish brown; 30% silt; very well sorted; dry; no odor.	SM			
20			SILTY SAND; brown, very fine to fine; increase clay content; no odor.				
25							
30		BF1-30	SANDY CLAY; brown; dry; no odor.	CL		3, 3, 5	
			CLAYEY SAND; brown; loose; dry; no odor.	SC			
35		BF1-35	SAND; yellowish brown; medium dense; dry; no odor.			3, 6, 14	
40		BF1-40	GRAVELLY SAND; yellowish brown; medium dense; 30% gravel; 5% silt; very moist; no odor.	SW		6, 7, 10	
45		BF1-45	@43'; DRILLING STIFF; GRAVEL GRAVELLY SAND, CLAYEY; brown; 10% clay; 60% sand; 30% gravel; dense; moist to	GW		14, 16, 19	
50		BF1-50	tension saturated; no odor. CLAYEY GRAVEL; brown; 30% silt and clay; 20% sand; 50% gravel; dense; tension saturated; no odor.	GC		14, 20, 22	

SOIL BORING LOG

PROJECT: PACIFIC TRUST BORING NO.: BF-1
PROJECT NO.: 8910 PROJECT MANAGER: C. M. FRENCH
LOGGED BY: V. CONSTANTINESCU EDITED BY: C. M. F.
DATE DRILLED 12-6-1991 DRILLED BY SES DRILLING
DRILLING METHOD H.S. Auger SAMPLE METHOD Split Spoon

Depth Below Surface	Samples Collected: INT	Samples Collected: Sample No.	SOIL DESCRIPTION: Color, Grain size, Texture, Consistency, Moisture, Odor	Unified Soil Classification	Log	Blows / 6"	Well Construction Details
			CLAY; yellowish brown; moist; no odor.	GC			
55		BF1-55	CLAY; brown; stiff; moist; no odor.			5, 6, 8	
			Encountered groundwater.	CL			
60		BF1-60	CLAY; gray; very stiff; wet; no odor.			5, 8, 12	
65		BF1-65	CLAY; gray; very stiff; wet; no odor.			4, 7, 10	

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
5997 PARKSIDE DRIVE • PLEASANTON, CALIFORNIA 94588 • (510) 484-2600

5 December 1991

Environmental Geosciences Engineering
200 Brown Road, Suite 210
Fremont, CA 94539

Gentlemen:

Enclosed is Drilling permit 91676 for a contamination investigation at 21450 Mission Boulevard in Hayward for Pacific Trust.

If you have any questions, please contact Wyman Hong or me at 484-2600.

Very truly yours,

Craig A. Mayfield

Craig A. Mayfield
Water Resources Engineer

WH:mm
Enc.

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE ♦ PLEASANTON, CALIFORNIA 94588 ♦ (415) 484-2600

GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT
21450 MISSION BLVD.
HAYWARD, CA

CLIENT
Name PACIFIC TRUST COMPANY
Address 1245 S. WINCHESTER Phone (408) 244-9605
City SAN JOSE, CA Zip CA 95128

APPLICANT
Name E.G.E. - A DIVISION OF WATER RESOURCES ASSOCIATES, INC.
Address 200 BROWN RD. Phone (510) 770-5733
City FREMONT Zip CA 94539

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	___	General	___
Water Supply	___	Contamination	X
Monitoring	___	Well Destruction	___

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other N/A
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

DRILLER'S LICENSE NO. C-57 # 582696

WELL PROJECTS
Drill Hole Diameter ___ in. Maximum
Casing Diameter ___ in. Depth ___ ft.
Surface Seal Depth ___ ft. Number ___

GEOTECHNICAL PROJECTS
Number of Borings 1 Maximum
Hole Diameter 8 in. Depth 60 ft.

ESTIMATED STARTING DATE 12-6-91
ESTIMATED COMPLETION DATE 12-6-91

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Valentin Gonstantinov Date 12-4-91

FOR OFFICE USE

PERMIT NUMBER 91676
LOCATION NUMBER

PERMIT CONDITIONS

Circled Permit Requirements Apply

A. GENERAL
(1.) A permit application should be submitted so as arrive at the Zone 7 office five days prior proposed starting date.
2. Submit to Zone 7 within 60 days after completi of permitted work the original Department Water Resources Water Well Drillers Report equivalent for well projects, or drilling lo and location sketch for geotechnical projects.
(3.) Permit is void if project not begun within days of approval date.

B. WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal an industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth specially approved. Minimum seal depth fo monitoring wells is the maximum depth practicab or 20 feet.

(C.) GEOTECHNICAL. Backfill bore hole with compacted cut tings or heavy bentonite and upper two feet with com pacted material. In areas of known or suspecte contamination, tremied cement grout shall be used place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concret placed by tremie.

E. WELL DESTRUCTION. See attached.

Approved Wyman Hong Date 4 Dec 91
Wyman Hong

121989

ATTACHMENT C

Certified Analytical Report and Chain of Custody Documentation

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 84566
CLIENT: ENVIRONMENTAL GEOSCIENCES ENG.
CLIENT JOB NO.: PAC

DATE RECEIVED: 12/06/91
DATE REPORTED: 12/11/91
DATE SAMPLED : 12/06/91

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS
by Modified EPA SW-846 Method 8015

LAB #	Sample Identification	Concentration (mg/kg) Diesel Range
1	BF1-30	ND<10
2	BF1-35	ND<10
3	BF1-40	ND<10
4	BF1-45	ND<10
5	BF1-50	ND<10
6	BF1-55	ND<10
7	BF1-60	ND<10
8	BF1-65	ND<10

mg/kg - parts per million (ppm)

Method Detection Limit for Diesel in Soil: 10 mg/kg

QAQC Summary:

Daily Standard run at 200mg/L: RPD Gasoline = N/A
RPD Diesel = 1
MS/MSD Average Recovery = 97%: Duplicate RPD = 6

Richard Srna, Ph.D.
(for)
Laboratory Director

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 84566
CLIENT: ENVIRONMENTAL GEOSCIENCES ENG.
CLIENT JOB NO.: PAC

DATE RECEIVED: 12/06/91
DATE REPORTED: 12/11/91
DATE SAMPLED : 12/06/91

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS
by Modified EPA SW-846 Method 8015

LAB #	Sample Identification	Concentration (mg/L) Diesel Range
9	WBF1	ND<0.05

mg/L - parts per million (ppm)

Method Detection Limit for Diesel in Water: 0.05 mg/L

QAQC Summary:

Daily Standard run at 200mg/L: RPD Gasoline = N/A
RPD Diesel = 6
MS/MSD Average Recovery = 120%: Duplicate RPD = 3

Richard Srna, Ph.D.
Laboratory Director

Environmental Geosciences Engineering
a division of Water Resources Associates Inc Phoenix Arizona

94566

CHAIN OF CUSTODY

DATE: 12/6/91 PAGE: 1 OF 2

PROJ. MGR. VALENTIN CONSTANTINESCO
COMPANY E.G.E.
ADDRESS 200 Brown Road, Suite 210
Fremont, California 94539
(510) 770-5733 Telefax (510)770-5752

SAMPLER'S SIGNATURE Valentin
PHONE NO. (510) 770-5733

ANALYSIS REQUEST

	SAMPLE I.D.	DATE	TIME	MATRIX	TPHG	TPHG & BTEX	TPHD	BTEX	O & G	METALS Cd,Cr Pb,Zn Ni	HALOCARBONS PURGEABLE	ORGANICS VOLATILE	ORGANIC LEAD	TOTAL LEAD	SOLUBLE LEAD					NUMBER OF CONTAINERS
1	BF1-30	12/6/91	10:05	SOIL/WATER			X													1
2	BF1-35	12/6/91	10:15	SOIL/WATER			X													1
3	BF1-40	12/6/91	10:30	SOIL/WATER			X													1
4	BF1-45	12/6/91	10:40	SOIL/WATER			X													1
5	BF1-50	12/6/91	10:55	SOIL/WATER			X													1
6	BF1-55	12/6/91	11:15	SOIL/WATER			X													1
7	BF1-60	12/6/91	11:30	SOIL			X													1
8	BF1-65	12/6/91	11:55	SOIL			X													1
10	W:BF1	12/6/91	13:00	WATER			X													3

Please initial:
Samples Stored in ice RW
Appropriate containers RW
Samples preserved RW
VOA's without headspace RW
Comments:

PROJECT INFORMATION:
DAC

LABORATORY INSTRUCTIONS/COMMENTS:
Turn Around Time (Circle One)
Same Day 24 Hrs 48 Hrs
72 Hrs (Normal)
1 Liter BOTTLE AND VOA'S PRESERVED WITH HCl

ANALYTICAL LABORATORY
CITY

RELINQUISHED BY:
Signature: Valentin Constantinescu
Printed Name: VALENTIN CONSTANTINESCO
Company: E.G.E.
Time 15:30 Date 12/6/91

RECEIVED BY:
Signature: Robert Lewis
Printed Name: Robert Lewis
Company: E-Press-It
Time 12:20 Date 12-6-91

RELINQUISHED BY:
Signature: Robert Lewis
Printed Name: Robert Lewis
Company: Express It
Time 1640 Date 12-06-91

RECEIVED BY:
Signature: Robert Watson
Printed Name: Robert Watson
Company: Superior MTI
Time 1700 Date 12/6/91

RELINQUISHED BY:
Signature
Printed Name
Company
Time Date

RECEIVED BY:
Signature
Printed Name
Company
Time Date