SAN FRANCISCO FRENCH BREAD COMPANY

92 OCT -8 PM 2:33

October 6, 1992

Thomas Peacock
Dept. of Environmental Health
Hazardous Material Division
80 Swan Way, Room 200
Oakland, CA 94621

Re: **4070 San Pablo Avenue, Emeryville** ST ID 1509

Dear Mr. Peacock:

Enclosed please find a copy of the results of the test of the monitoring well at the above-referenced property. In light of the low level readings in the soil and the depth of the groundwater, it appears that the source of these readings may well be off-site. I would suggest that San Francisco French Bread Company only be required to continue monitoring in this well.

Please call me after you have reviewed this report.

Very truly yours,

SAN FRANCISCO FRENCH BREAD COMPANY

Peter H. Sher

PETER H. SHER
Vice President/General Counsel

PHS:lm
enclosure

EXECUTIVE OFFICES:
7801 EDGEWATER DR. · OAKLAND, CA 94621 · (415) 641-5511

September 30, 1992

SEACOR
Science & Engineering Analysis Corporation

Mr. Peter Sher
Vice President and General Counsel
San Francisco French Bread Company
7801 Edgewater Drive
Oakland, California 94621

RESULTS OF MONITORING WELL INSTALLATION AND SAMPLING, 4070 SAN PABLO AVENUE, EMERYVILLE, CALIFORNIA

Dear Mr. Sher:

INTRODUCTION

This letter report presents the results of a groundwater monitoring well installation and sampling program conducted by Science & Engineering Analysis Corporation (SEACOR) at a property located at 4070 San Pablo Avenue in Emeryville, California ("the site"). SEACOR provided these services on behalf of San Francisco French Bread Company, the former site owner, in accordance with SEACOR's proposal to San Francisco French Bread Company dated July 29, 1992.

The objective of the monitoring well installation and sampling was to evaluate hydrogeologic conditions and shallow groundwater quality in the immediate vicinity of two former 10,000-gallon underground storage tanks (USTs). The USTs were formerly used for the storage of gasoline and diesel fuel and were removed from the site in 1989.

SEACOR conducted the monitoring installation and sampling in general accordance with the procedures described in a Work Plan dated August 27, 1992. The Work Plan was submitted to the Alameda County Environmental Health Department (ACEHD) prior to beginning work.

SITE BACKGROUND

The site is located on the east side of San Pablo Avenue between 40th and 41st Streets at an elevation of approximately 40 feet above mean sea level (see Figure 1, Site Location Map). Land use in the immediate site vicinity is primarily commercial and industrial. The site is improved with two warehouse-type buildings. The southern building is currently occupied by Anderson Carpeting and the northern building by Tire Center, Inc. A site plan showing the existing configuration, including the location of the former USTs is attached as Figure 2.

Site background information provided herein is based on information provided to SEACOR by the San Francisco French Bread Company. The San Francisco French Bread Company, the former owner of the subject site operated two USTs at the site until 1989. The 10,000 gallon capacity USTs were buried side by side within a common excavation. One UST was used for storing gasoline and the other diesel fuel. Fill pipes for both were formerly located on the south side of the excavation. In 1989, Paradiso Construction Company (Paradiso) removed the two USTs; however, it is not known whether the USTs and piping were leak tested prior to removal.

Following removal of the USTs, soil and groundwater samples were collected from the open UST excavation by Clayton Environmental Consultants (Clayton). Mr. Dennis Byrne of the ACEHD was on-site during the sampling and directed sampling locations and chemical analyses required. Four soil samples were collected at a depth of 9 feet from the excavation sidewalls adjacent to the north and south end of each UST. Water was noted at a depth of 10 feet within the excavation at the time of sampling. Two groundwater samples were collected from water which flowed into depressions created by each UST bottom.

Analysis of sidewall soil samples indicated total petroleum hydrocarbon as gasoline (TPHg) concentrations up to 40 parts per million (ppm), TPH as diesel (TPHd) concentrations up to 70 ppm, and benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations up to 19 ppm. The highest analyte concentrations were detected in soil samples collected from the south side of the excavation. Both groundwater samples were reported and contain detectable fuel hydrocarbons at the following maximum concentrations: TPHg (200 ppm), benzene (24 ppm), toluene (35 ppm), ethylbenzene (2.9 ppm), and xylenes (18 ppm).

A letter from Paradiso to the ACEHD dated August 29, 1989, stated that the UST excavation was purged of water three times and a total of approximately 5,000 gallons of water was removed and disposed of as hazardous waste through H&H Shipping Company in San Francisco, California. According to the August 29, 1989 letter, a water sample from the excavation was collected and chemically analyzed following purging and "shows that the contaminated water was purged from the Site through this process." Analysis of this water sample showed TPHg at a concentration of 0.54 ppm and BTEX at concentrations of 73, 25, 68, and 86 parts per billion (ppb), respectively. Paradiso's August 29, 1989 letter also stated that soil removed from the UST excavation was being aerated on-site and would be used to backfill the excavation once hydrocarbon concentrations were confirmed to be significant. No further information regarding the site was provided.

MONITORING WELL INSTALLATION

Prior to initiating drilling activities, the proposed well boring location was cleared for underground utilities by California Utility Surveys of San Leandro, California. One groundwater monitoring well (MW-1) was installed on the western (downgradient) side of the former UST excavation, within 5 feet of the excavation limit (figure 2). A groundwater flow direction towards the west was confirmed by SEACOR based on groundwater elevation data at three nearby sites. The names and locations of the three specific sites for which SEACOR reviewed information was presented in SEACOR's August 27, 1992 Work Plan.

Monitoring well installation was performed by West Hazmat Drilling Corporation on September 4, 1992, under the direction of a SEACOR geologist. The wellbore for the monitoring well was drilled using a truck-mounted drilling rig equipped with 8-inch diameter hollow stem augers. During advancement of the borehole, soil samples for lithologic description and possible chemical analysis were collected approximately every 2 feet from 4.5 feet below ground surface (bgs) to the total depth of the boring (25 feet) using a Modified California sampler fitted with three 6-inch long brass tubes.

Soils encountered were described in accordance with the Unified Soil Classification System (USCS) and a boring log of soil types was maintained. A representative sample from each sample interval was screened in the field for the presence of volatile organic compounds (VOCs) using a photo-ionization detector (PID). The results of the PID screening were recorded directly on the boring log. A copy of the boring log is included as an attachment to this report.

One soil sample collected from directly above first encountered groundwater were selected for chemical analysis. The exposed ends of the brass tube selected for chemical analysis was covered with aluminum foil, fitted with plastic end caps, and taped to the brass tube to minimize moisture and contaminant loss. The sample was labeled to designate boring location, depth, and date and time collected and stored in a cooler containing ice for shipment to the analytical laboratory. The soil sample was submitted to National Environmental Testing, Inc. (NET Pacific) of Santa Rosa, California for analysis of total petroleum hydrocarbons as gasoline (TPHg) according to EPA method 5030/8015, modified, total petroleum hydrocarbons as diesel (TPHd) according to EPA method 3550/8015, modified, benzene, toluene, ethylbenzene, and xylenes (BTEX) according to EPA method 8020, and total lead according to EPA method 7421.

After drilling and soil sampling was completed, the monitoring well was installed in the borehole through the hollow stem of the augers. The well casing consisted of 2-inch diameter PVC with flush-jointed connections. Well screen with 0.020-inch slots was placed adjacent to the upper water-bearing zone. A sand pack was placed adjacent to the entire well screen and extended two feet above the top of the screen. Bentonite pellets was placed 2 feet above the top of the sand pack and hydrated with potable water. The annular space above the bentonite seal was grouted to the ground surface with neat cement containing approximately 3 to 5 percent bentonite. The well was completed at grade in a traffic-rated utility vault and fitted with a locking water-tight well cap. Well completion details are included in the attached boring log.

Soil cuttings generated during advancement of the wellbore were placed in a DOT approved 55-gallon drum and temporarily stored on-site.

MONITORING WELL DEVELOPMENT AND SAMPLING

Well development and sampling was performed by SEACOR on September 11, 1992. Prior to well development, the depth to groundwater and depth of well were measured using an electronic water level indicator. Well development was accomplished by bailing with a clean PVC bailer to remove fine sand and suspended sediment from the well. During development, the pH, temperature, and electrical conductivity of the discharge water was measured and recorded. Stabilization of these parameters was used as an indicator that fresh formation water was entering the well casing. A total of 9 casing volumes of water (approximately 23 gallons) were removed from the well.

Following completion of well development, a water sample was collected by lowering a clean teflon bailer into the well casing. Water samples were transferred directly from the bailer into

laboratory supplied sample containers and labeled. Samples were stored in a cooler containing ice for shipment to the analytical laboratory. The groundwater sample was submitted to NET Pacific for analysis of TPHg and BTEX according to EPA methods 8015, modified, and 602, respectively.

Water removed from the well during well development was placed in a DOT approved 55-gallon drum and temporarily stored on-site.

HYDROGEOLOGIC CONDITIONS

The upper 13.5 feet of soils encountered at MW-1 were fine-grained sediments consisting of approximately 4 feet of a black to grey fine sandy silt underlain by a very dark gray to greenish grey silty clay with lesser and variable amounts of gravel. A reddish-brown gravelly clayey sand unit was encountered from 13.5 feet to the total depth explored (25 feet). Elevated PID readings and product odor was noted in soil samples collected within the upper 13.5 feet.

Saturated soil conditions were first encountered within the reddish-brown sand at a depth of approximately 20.5 feet below ground surface. One week after completion of the monitoring well, the groundwater level was measured at a depth of 9.1 feet below the top of PVC casing. The rise in water level suggests that groundwater present within the reddish-brown sand unit occurs under semi-confined to confined conditions.

During the UST removal in 1989, groundwater was reported to be standing in the open excavation at a depth of approximately 10 feet. Groundwater was not encountered in the boring advanced during this investigation until a depth of approximately 20.5 feet. This difference in depth to first encountered groundwater could be due to declining water levels, or groundwater encountered in the open excavation in 1989 may have been a perched groundwater zone which is not currently saturated.

CHEMICAL TESTING RESULTS

Soil

The soil sample analyzed from boring MW-1 was reported to contain no detectable concentrations of TPHg and TPHd. Benzene and toluene were detected in the soil sample at concentrations of 7.8 and 6.1 parts per billion (ppb), respectively. Ethylbenzene and xylenes were not detected above the laboratory reporting limit of 2.5 ppb. Total lead was detected in the soil sample at a concentration of 4.9 parts per million (ppm). A copy of the analytical laboratory report is attached.

Groundwater

The groundwater sample analyzed from well MW-1 was reported to contain TPHg and TPHd at concentrations of 1.4 and 0.2 ppm, respectively. The laboratory reported that the positive result for TPHd appears to be due to the presence of a lighter fuel (e.g. gasoline) rather than

diesel. BTEX were also detected in the water sample at concentrations of 470, 43, 45, and 100 ppb, respectively. A copy of the analytical laboratory report is attached.

DISCUSSION OF FINDINGS

The results of SEACOR's investigation confirms the presence of detectable levels of fuel hydrocarbons in native soil and shallow groundwater directly downgradient from the former USTs. Fuel hydrocarbon concentrations detected in the soil sample analyzed during this investigation were significantly lower than those concentrations measured in soil samples collected from the excavation sidewalls in 1989. Hydrocarbon concentrations detected in the soil sample are judged to be insignificant. However, it should be noted that the soil sample collected during this investigation may be from a depth below the seasonally-high water table level.

TPHg and BTEX concentrations detected in the groundwater sample from well MW-1 are significantly lower than concentrations measured in water samples collected from the open excavation in 1989.

If you have any questions or comments regarding this report, please feel free to contact us at (415) 882-1485.

Sincerely yours,

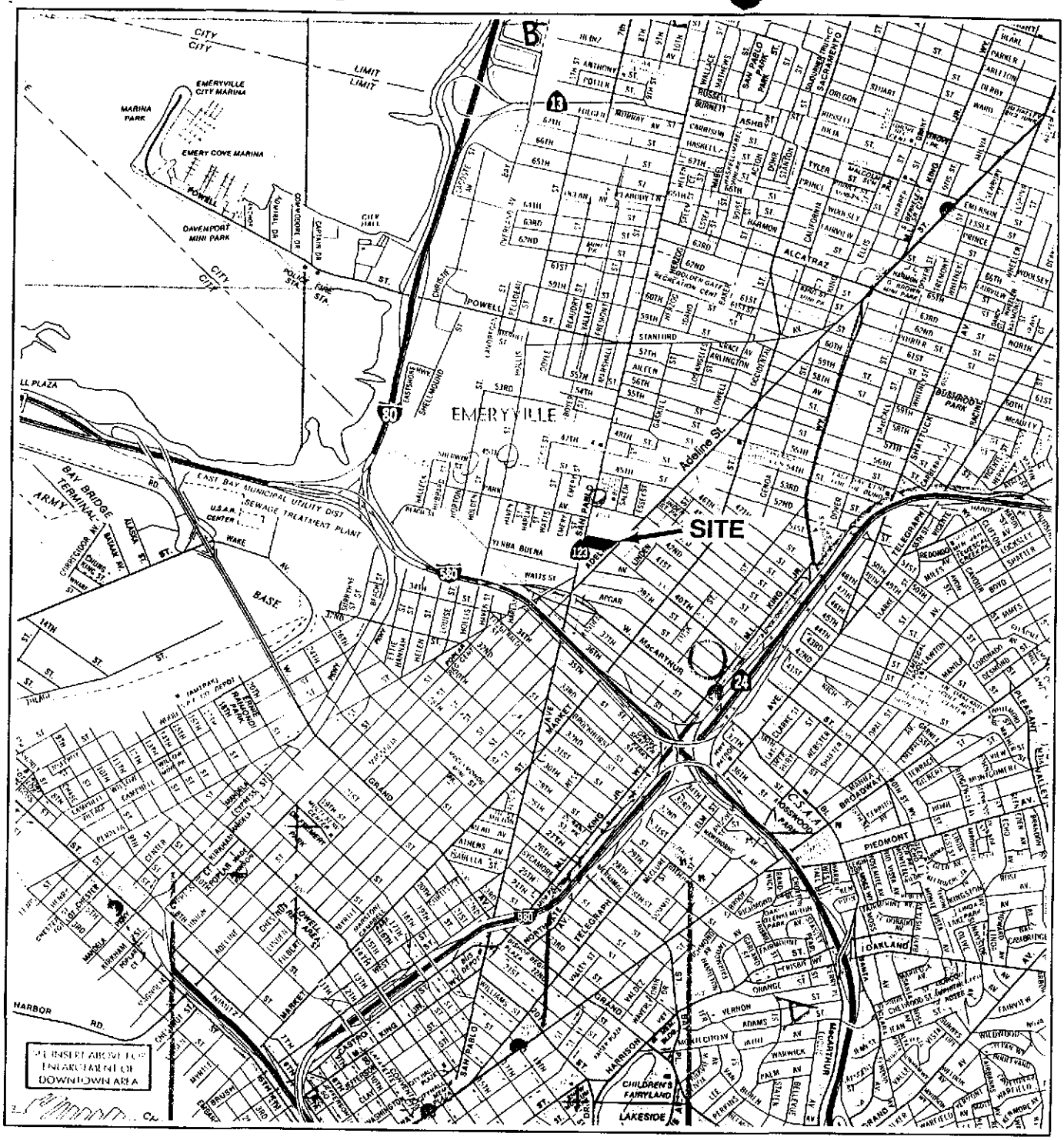
Science & Engineering Analysts Corporation

REGISTERED GEOLOGIST
BRUCE SCARBROUGH
No. 4931
STATE OF CALIFORNIA

Bruce E. Scarbrough, R.G.
Project Manager

James G. Ritchie, R.G.
Principal Geologist

attachments
Figure 1: Site Location Map
Figure 2: Site Plan
Boring Log and Well Construction Details
Analytical Laboratory Reports



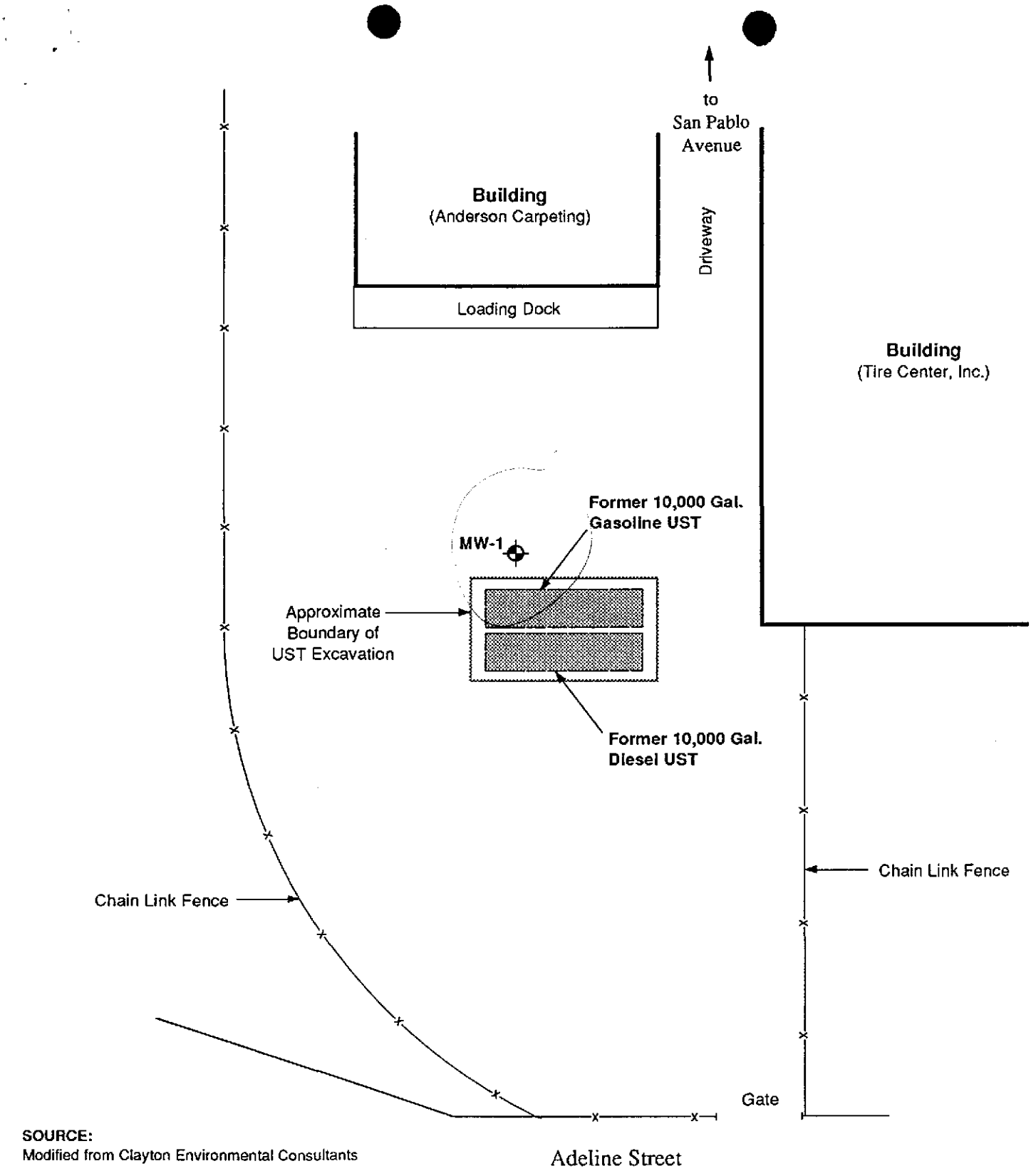
SOURCE:
California State Automobile Association
Oakland, Berkeley, Alameda, 2/91

0 4000 Feet

N

SITE LOCATION MAP
4070 San Pablo Avenue
Emeryville, California
Figure 1

SEACOR
SJN 70007-004-01



SOURCE:
Modified from Clayton Environmental Consultants

N

0 40 Feet

LEGEND

Monitoring Well Location

SITE PLAN
4070 San Pablo Avenue
Emeryville, California
Figure 2

SEACOR
SJN 70007-004-01

Unified Soil Classification System

Major Divisions			Symbols	Typical Names
Coarse Grained Soils (more than half of soil > no. 200 sieve size)	Gravels (More than half 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	Sandy gravels, gravel-sand-silt mixtures
			GC	Clayey gravels, gravel-sand-clay mixtures
	Sands (More than half 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	Inorganic silts and very fine sands, rock flour silty or clayey fine sands or clayey silts with slight plasticity
Fine Grained Soils (more than half of soil < no. 200 sieve size)	Silts and Clays LL = < 50		ML	Inorganic silts and very fine sands, rock flour, silty fine sands or clayey silts with slight plasticity
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
			OL	Organic silts and organic silty clays of low plasticity
	Silts and Clays LL = > 50		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 high plasticity, organic silty clays, organic silts
Highly Organic Soils			Pt	Peat and other highly organic soils

Grain Size Chart

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 7.76
coarse	3" to 3/4"	7.62 to 4.76
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 and Clay	Below No. 200	Below 0.074

Sample Designation

SB-1-4 Sample for Chemical Analysis

Sample Interval

Sample Interval (No recovery)

First Encountered Water (during drilling)

Stabilized Water Elevation (9/11/92)

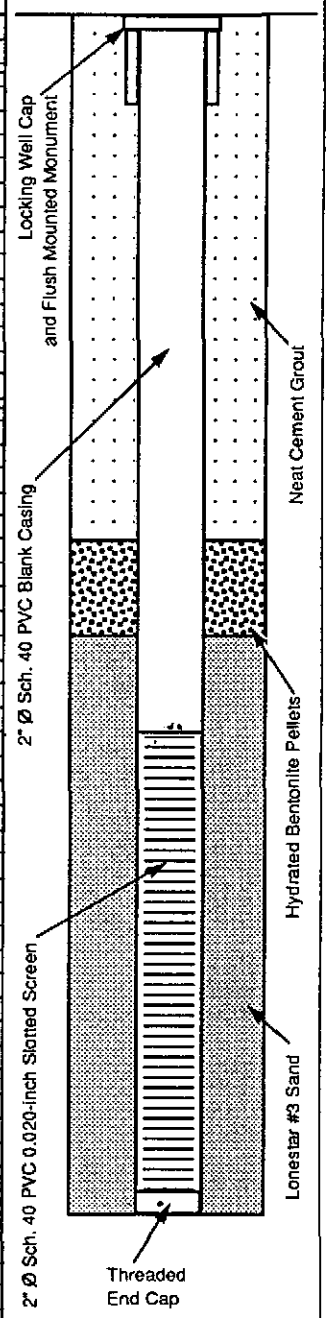
SEACOR

Project: **San Francisco French Bread - 4070 San Pablo Ave., Emeryville, CA**			Log of Boring/ Monitoring Well: Page 1 of 1
Boring Location: **See Figure 2**		Project No.: **70007-004-01**	**MW-1**
Subcontractor and Equipment: West Hazmat, CME 65		Logged By : BR	
Sampling Method: Split Spoon Sampler	Monitoring Device: OVM 580B		Comments : Hand Augered to 4.5 Feet
Start Date/ Time: 9/4/92 // 7:40	Finish Date/ Time: 9/4/92 // 11:15		
First Water (BGS) : 20.5 Feet	Stabilized Water Level (BGS) : 9.1 Feet		

Surface Elevation: Casing Top Elevation:

Sample Number	Blows/foot	PID (ppm)	Depth (feet)	USCS Symbol	LITHOLOGIC DESCRIPTION
			0		Asphalt Pavement
			1		Gravel Baserock
		342	2		BLACK FINE SANDY SILT (ML), trace clay, micaceous, dry, faint product odor
			3		
			4		Grades with dark gray color and strong product odor
MW-1-1	23	1033	5		DARK GRAY SILTY CLAY (CL), trace fine rounded gravel, dry, strong product odor
			6		
			7		
			8		
MW-1-2	22	254	9		GREENISH GRAY GRAVELLY CLAY (CL), trace fine sand, 30% fine gravel, sub to well rounded, moist
			10		
			11		
			12		Grades with black color and less gravel
			13		
			14		
MW-1-3	43	12	15		REDDISH BROWN GRAVELLY CLAYEY SAND (SC), stiff, moist, faint product odor
			16		
			17		
			18		Grades with no product odor and less gravel, moist, (80% fine sand, 15% clay, 5% fine gravel)
MW-1-4	21	0	19		
			20		
MW-1-5	20	30	21		Becomes wet at 20.5 feet
			22		
			23		
			24		
	32	0	25		
			26		**NOTES:**
			27		1) Boring completed to 25 feet on 9/4/92
			28		2) 2-inch schedule 40 PVC monitoring well installed on 9/4/92
			29		3) Screen 25-15 feet Sand 25-13 feet Bentonite 13-11 feet Cement/5% bentonite 11-surface
			30		

Boring Abandonment/ Well Construction Details



SEACOR

Reviewed by: _____ Date: _____

Revised by: _____ Date: _____

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Bruce Scarborough
Seacor
100 Pine St., Ste 2025
San Francisco, CA 94111

Date: 09/24/1992
NET Client Acct. No: 74000
NET Pacific Job No: 92.48142
Received: 09/09/1992

Client Reference Information

Project No: 70007-004-01

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

Enclosure(s)

Ref: Project No: 70007-004-01

SAMPLE DESCRIPTION: MW1-18.5'
Date Taken: 09/04/1992
Time Taken: 08:40
LAB Job No: (-136145)

Parameter	Method	Reporting Limit	Results	Units
Lead (GFAA)	EPA 7421	0.2	4.9	mg/Kg
TPH (Gas/BTXE,Solid)				
METHOD 5030 (GC,FID)			--	
DATE ANALYZED			09-16-92	
DILUTION FACTOR*			1	
as Gasoline	5030	1	ND	mg/Kg
METHOD 8020 (GC,Solid)			--	
DATE ANALYZED			09-16-92	
DILUTION FACTOR*			1	
Benzene	8020	2.5	7.8	ug/Kg
Ethylbenzene	8020	2.5	ND	ug/Kg
Toluene	8020	2.5	6.1	ug/Kg
Xylenes (Total)	8020	2.5	ND	ug/Kg
SURROGATE RESULTS			--	
Bromofluorobenzene	5030		82	% Rec.
METHOD 3550 (GC,FID)				
DILUTION FACTOR*			1	
DATE EXTRACTED			09-18-92	
DATE ANALYZED			09-21-92	
as Diesel	3550	1	ND	mg/Kg

Ref: Project No: 70007-004-01

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Gasoline	1.0	mg/Kg	90	ND	88	89	1.0
Benzene	2.5	ug/Kg	102	ND	95	91	4.2
Toluene	2.5	ug/Kg	99	ND	99	97	2.4
Diesel	1	mg/Kg	86	ND	84	88	5.1
Motor Oil	10	mg/Kg	87	ND	N/A	N/A	N/A
COMMENT: Blank Results were ND on other analytes tested.							
Lead	0.2	mg/Kg	103	ND	106	106	<1

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KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

Chain-of-Custody Number: A 8367

SEACOR Chain-of-Custody Record

Address
100 Pine Street Suite 2025
S.F. CA
(415) 296-7877

8610

Project # 20007-004-01 Task # 00
Project Manager Bruce Scarborough
Laboratory NET
Turn-around time: Normal

Sampler's Name: Bob Robitaille
Sampler's Signature:

Analysis Request

Sample ID	Date	Time	Matrix	TPHg/BTEX 8015 (modified)/8020	TPHd 8015 (modified)	TPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCB's 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals			Hold	Comments/ Instructions	Number of Containers
				x								x							
MW1-6'	9-4-92	0805	Soil														X		1
MW1-10'	↓	0810	↓														X		1
MW1-15'		0825															X		1
MW1-18.5'		0940		X								X							1
MW1-21.5'		0849															X		1
																		CUSTODY SEALED 9/8/92 @ 1900 MW1 seals intact A-L	

Special Instructions/Comments:

Relinquished by:
Sign
Print Bob Robitaille
Company SEACOR
Time ____ Date ____

Received by:
Sign Mary Tavani
Print M. TAVANI
Company NET
Time 2:13 Date 9/8/92

Relinquished by:
Sign Mary Tavani
Print M. TAVANI
Company NET
Time 1900 Date 9/8/92

Received by:
Sign Anny Lope
Print Anny Lope
Company NET
Time 0800 Date 9/9/92

Sample Receipt

Total no. of containers	5
Chain of custody seals:	Y
Rec'd good condition/cold:	Y
Conforms to record:	Y

Client:
Client Contact:
Client Phone Number:

Date 09 / 04 / 92 Page 1 of 1

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Bruce Scarborough
Seacor
100 Pine St., Ste 2025
San Francisco, CA 94111

Date: 09/24/1992
NET Client Acct. No: 74000
NET Pacific Job No: 92.48243
Received: 09/15/1992

Client Reference Information

Projects: 70007-003-01 & 70007-004-01

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

for:
Jules Skamarack
Laboratory Manager

Enclosure(s)

Ref: Projects: 70007-003-01 & 70007-004-01

SAMPLE DESCRIPTION: MW-1E
Date Taken: 09/11/1992
Time Taken: 15:10
LAB Job No: (-136600)

Parameter	Method	Reporting Limit	Results	Units
TPH (Gas/BTXE,Liquid)				
METHOD 5030 (GC,FID)			--	
DATE ANALYZED			09-17-92	
DILUTION FACTOR*			10	
as Gasoline	5030	0.05	1.4	mg/L
METHOD 8020 (GC,Liquid)			--	
DATE ANALYZED			09-18-92	
DILUTION FACTOR*			1	
Benzene	8020	0.5	470	ug/L
Ethylbenzene	8020	0.5	43	ug/L
Toluene	8020	0.5	45	ug/L
Xylenes (Total)	8020	0.5	100	ug/L
SURROGATE RESULTS			--	
Bromofluorobenzene	5030		118	% Rec.
METHOD 3510 (GC,FID)				
DILUTION FACTOR*			1	
DATE EXTRACTED			09-17-92	
DATE ANALYZED			09-18-92	
as **Diesel**	3510	0.05	**0.20****	mg/L

** The positive result for Petroleum Hydrocarbons as Diesel appears to be due to the presence of lighter hydrocarbon rather than Diesel.

Ref: Projects: 70007-003-01 & 70007-004-01

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Gasoline	0.05	mg/L	88	ND	87	90	3.4
Benzene	0.5	ug/L	96	ND	97	91	5.7
Toluene	0.5	ug/L	101	ND	97	101	4.3
Gasoline	0.05	mg/L	87	ND	82	88	7.1
Benzene	0.5	ug/L	95	ND	93	112	19
Toluene	0.5	ug/L	99	ND	93	101	7.5
Diesel	0.05	mg/L	107	ND	59	68	15
Motor Oil	0.5	mg/L	85	ND	N/A	N/A	N/A

COMMENT: Blank Results were ND on other analytes tested.

NET®

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

Chain-of-Custody Number: A 8580

SEACOR Chain-of-Custody Record

8714

Address: SEACOR
PINE ST.
SAN FRANCISCO, CA.

Project # 70007-003-01 / 70007-004-01 Task # _____
Project Manager B.S.
Laboratory NET PACIFIC.
Turn-around time: _____

Sampler's Name: R. RAVELO
Sampler's Signature: [signature]

Analysis Request

Sample ID	Date	Time	Matrix	TPHg/BTEX 8015 (modified)/8020	TPHd 8015 (modified)	TPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCB's 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals				Comments/ Instructions	Number of Containers
MW-1E	9/11/92	15:10	W	X	X													2 voas w/ headspace. A.L.	4
MW-1W	9/11/92	11:17	W	X															3

CUSTODY SEALED 9/14/92 @ 1900 MWT seals intact A.L.

Special Instructions/Comments:

Relinquished by:
Sign [signature]
Print R. RAVELO
Company SEACOR
Time 3:00 pm Date 9/14/92

Received by:
Sign [signature]
Print JASON BOHN
Company NET
Time 3:00 pm Date 9/14

Relinquished by:
Sign [signature]
Print M. TAVANI
Company NET
Time 1900 Date 9/14/92

Received by:
Sign [signature]
Print Anay Lape
Company NET
Time 0800 Date 9/15/92

Sample Receipt

Total no. of containers	7
Chain of custody seals:	Y
Rec'd good condition/cold:	Y
Conforms to record:	Y

Client: _____
Client Contact: _____
Client Phone Number: _____

Date 9 / 14 / 92 Page 1 of 1