SUBSURFACE INVESTIGATION

1600 63RD STREET

EMERYVILLE, CALIFORNIA

November 22, 1994



November 22, 1994

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Mr. Dan Nourse Wareham Property Group 1600 63rd Street Emeryville, CA 94608

Subject:

Subsurface Investigation at 1600 63rd Street, Emeryville, California

(CERTIFIED file reference S40120)

Dear Mr. Nourse:

Enclosed is a report prepared by CERTIFIED Engineering & Testing Company, Incorporated (CERTIFIED), for the above referenced site. CERTIFIED was retained by Wareham Property Group to conduct a subsurface investigation at the above-referenced site.

If you have any questions or comments please call either of us at (415) 742-9900.

Sincerely,

Fred Hayden

Project Manager

Ind Hayde

Donald P. Bransford, R.G. 5621 Environmental Services Manager



SUBSURFACE INVESTIGATION 1600 63RD STREET EMERYVILLE, CALIFORNIA

Prepared for:

MR. DAN NOURSE WAREHAM PROPERTY GROUP 1600 63RD STREET EMERYVILLE, CA 94608

Prepared by:

CERTIFIED ENGINEERING & TESTING COMPANY, INCORPORATED 7000 MARINA BOULEVARD, 4TH FLOOR BRISBANE, CALIFORNIA 94005 (415-742-9900)

PROJECT NUMBER: \$40120

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Mr. Dan Nourse Wareham Property Group 1120 Nye Street Ste 400 San Rafael, California 94904 Plus

Subject:

Subsurface Investigation Report, 1600 63rd Street, Emeryville,

California (RECON project number S40120)

Dear Mr. Nourse:

Enclosed are two copies of the figures which were not included in the Report referred to above. Ms. Neal told me that it was satisfactory to mail them separately. My apologies for their unintentional omission from the report.

RECON appreciates the opportunity to assist the Wareham Property Group with their environmental projects. If you have any further questions regarding this report, please contact me at your convenience at (415) 742-9900.

Sincerely,

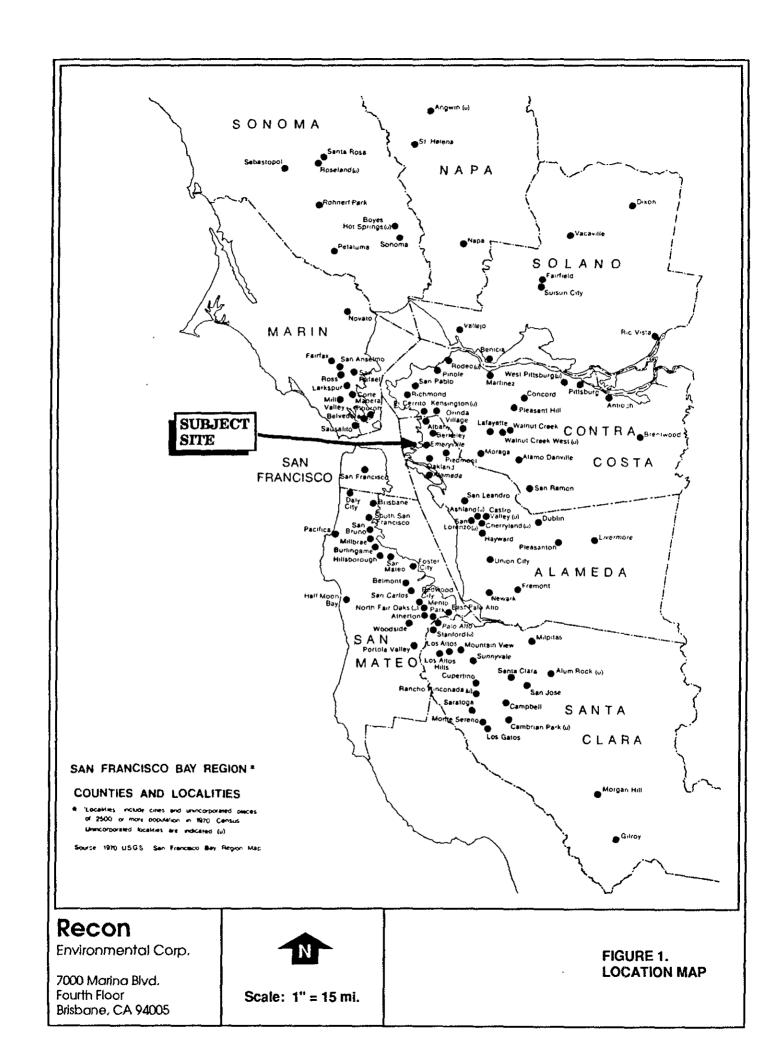
Fred Hayden

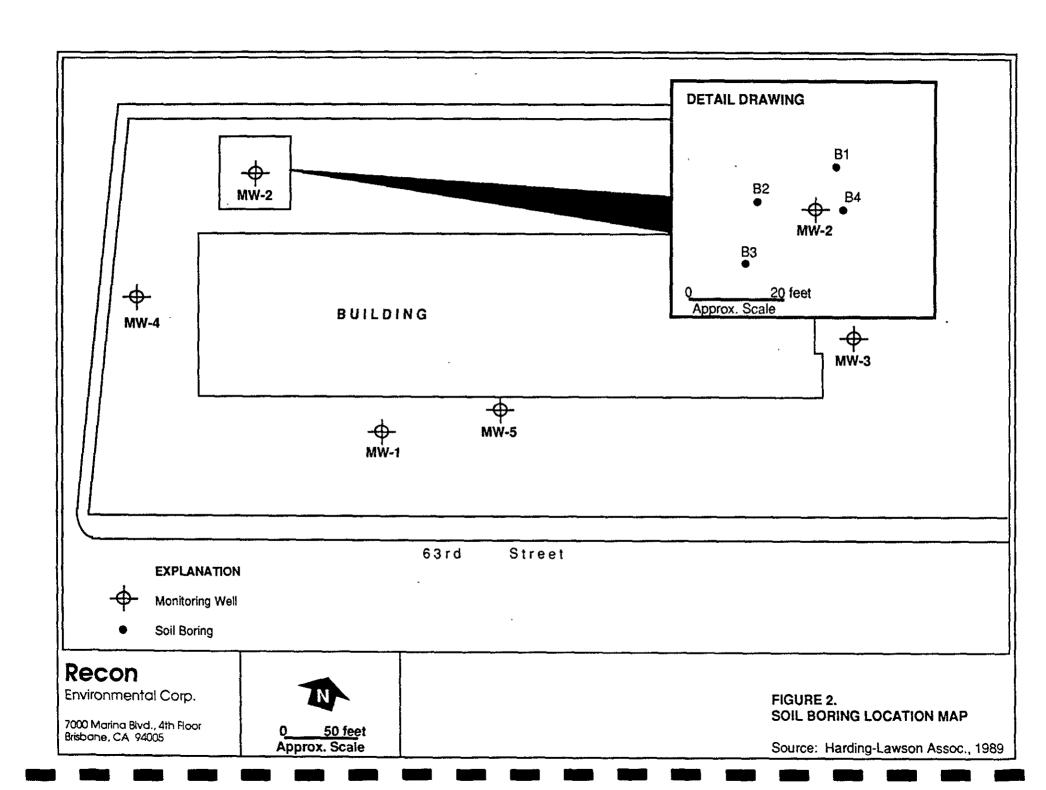
Project Manager

Enclosure

Dov. Barsford. Lrace, 1:00

7000 Marina Boulevard, 4th Floor, Brisbane, CA 94005 • (415) 742-9900 • Fax (415) 742-1033





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SUBSURFACE INVESTIGATION FEDERAL EXPRESS SITE, 1600 63RD STREET EMERYVILLE, CALIFORNIA

1.0 INTRODUCTION

This report has been prepared to present the results of a subsurface investigation conducted by CERTIFIED Engineering & Testing Company, Incorporated (CERTIFIED) at the Federal Express site at 1600 63rd Street (site) in the city of Emeryville, California (Figure 1). The work was performed on July 13, 1994, in general accordance with the proposal submitted to Wareham Property Group, dated June 17, 1994. The work was conducted at the request and authorization of Mr. Dan Nourse of Wareham Property Group. The work was conducted in order to evaluate soil conditions in the vicinity of an on-site well (MW-2 - Figure 2).

The site was formerly used as a tallow manufacturing plant which began operations in approximately 1914. This plant is reported to have been dismantled in 1987 (HLA, 1989). The site is currently occupied by Federal Express.

An underground storage tank (UST) was removed from the site in 1988. Information concerning the contents of the UST could not be obtained. Five monitoring wells have been installed at the site. One monitoring well, MW-2, is located approximately 15 feet west of the former UST location. This well was last monitored in November 1992. A layer of free phase petroleum hydrocarbon approximately 0.03 feet thick was reported to be present on the water within the well. Groundwater samples collected from the well were reported to contain elevated concentrations of total petroleum hydrocarbons as gasoline (TPHg) and diesel (TPHd) (HLA, 1993; Table 1).

Groundwater is reported to be present at approximately 13.5 feet below the ground surface. The groundwater gradient at the site is reported to slope to the west to northwest (HLA, 1993.)

The objectives of the investigation summarized in this report were to assess the presence and concentration of petroleum hydrocarbons in the subsurface soils of the site in close proximity to well MW-2, and assess the concentrations of petroleum hydrocarbons within the groundwater in MW-2.

2.0 SCOPE OF WORK

In order to meet the objective, the scope of work included the following:

- Drilling of four soil borings to an approximate depth of 12 feet below the ground surface (BGS).
- Collection of groundwater samples from monitoring well MW-2
- Laboratory analysis of selected soil and groundwater samples for TPHd,
 TPHg and benzene, toluene, ethylbenzene and total xylenes (BTEX).
- Data evaluation and report preparation.

3.0 FIELD INVESTIGATION

Four soil borings were drilled on the site to evaluate the presence of elevated concentrations of petroleum hydrocarbons within the soil in the vicinity of well MW-2 (Figure 2). Drilling permits were obtained from the Zone 7 - Alameda County Flood Control and Water Conservation District. The soil borings were located five to fifteen feet from the location of well MW-2.

The borings were drilled by Precision Sampling of San Rafael, California. The borings were drilled by hydraulically pushing a two-inch diameter soil sampling device into the soil. The borings were advanced to depths of approximately 12 feet BGS. Soil samples were collected at approximately five-foot intervals beginning at approximately five feet BGS, to evaluate soil materials and subsurface conditions and for chemical analyses. Procedures used to drill the borings are contained in Appendix A.

In general, the lithologic materials encountered consisted of clayey sandy gravel with debris to approximately six feet BGS and silty or sandy clay to total depth of the borings (approximately 12 feet BGS). Staining, odors, or other evidence of the presence of potentially hazardous materials were not observed during drilling. Measurements of volatile organic compounds (VOC) concentrations measured using a portable photoionization detector (PID) in the field were judged to be low. Groundwater was not encountered during drilling.

A groundwater sample was collected from well MW-2. Depth to water was measured to be approximately seven feet BGS. Preparation for groundwater sample collection included purging approximately three well-casing volumes of groundwater from the monitoring well immediately prior to sample collection. Monitoring well purging was

accomplished by hand bailing. During the purging procedure measurements of temperature, specific conductance, and pH of the purge water were recorded (Appendix B). Once the temperature, specific conductance, and pH were judged to have stabilized and three casing volumes of groundwater removed, the groundwater level within the well was allowed to recover to at least approximately 80% of the prepurge level and a groundwater sample was collected from the monitoring well using a disposable polyethylene bailer. The location of well MW-2 is shown in Figure 2. A layer of free phase petroleum hydrocarbons approximately 0.02 feet thick was observed on the water in the bailer.

Groundwater samples were transferred from the bailer into laboratory-supplied containers, labeled for identification purposes, and stored on ice in an insulated chest pending delivery to the laboratory for analysis. Samples were collected, retained and transported to the laboratory using chain-of-custody procedures.

4.0 LABORATORY ANALYSES

The soil and water samples collected were submitted to Aqua-Air, of Weymouth, Massachusetts, a State of California-certified hazardous waste laboratory. Sample handling from collection to delivery to the laboratory was documented using chain of custody procedures, including the use of chain of custody forms.

Four soil samples were selected for analysis: samples B1-12, B2-12, B3-12 and B4-12 were collected from approximately 12 feet BGS from the interpreted capillary fringe. The samples were selected based on measurements of VOC concentrations using the PID.

The soil samples and groundwater samples were analyzed for TPHg and TPHd in general accordance with U.S. Environmental Protection Agency (EPA) Method No. modified 8015, and BTXE in general accordance with EPA Method No. 8020.

Table 2 presents the soil sample analyses for the four soil samples chosen for analyses. TPHg was not reported present in the samples analyzed. The laboratory has reported, however, that petroleum hydrocarbons with a peak pattern that resembles varsol was detected. The varsol concentration was not quantified.

Table 2 presents the results for the groundwater sample collected from well MW-2 and historical analytical results from November 19, 1992. The laboratory report is contained in Appendix B. The hydrocarbon present in the groundwater sample collected from well MW-2 was reported by the laboratory to be similar to #2 fuel oil. The laboratory report is contained in Appendix B.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Staining or odors were not noticed in the soil above the water table during drilling of the soil borings. What are judged to be generally low concentrations of BTEX were reported in the soil samples collected from the borings. TPHg and TPHd were not reported in the soil samples analyzed in concentrations exceeding the laboratory analytical detection limits. However, the TPHg analysis reported that the soil samples contain a petroleum hydrocarbons blend that resembles varsol (C8-C14), a petroleum distillate similar to mineral spirits. The concentration was not reported.

TPHg and BTEX were not reported in the groundwater sample collected from well MW-2. The hydrocarbon reported for the TPHd analysis was indicated by the laboratory to resemble #2 fuel oil. A thin layer of free phase petroleum hydrocarbon product was observed in the bailer during sampling of this well.

Based on the reported groundwater results, it is the judgment of CERTIFIED that petroleum hydrocarbons are present on the water table in the vicinity of well MW-2. Petroleum hydrocarbons are also judged to be present as a dissolved phase within the groundwater in the vicinity of this well. Petroleum hydrocarbons were also reported in the soil samples collected from the capillary fringe above the water table. Based on the presence of the petroleum hydrocarbons within the capillary fringe, it is judged that the petroleum hydrocarbons within the groundwater extend beyond the borings drilled by CERTIFIED. Should further information regarding the extent of the petroleum hydrocarbons within the groundwater be desired, it is recommended that groundwater samples be collected either from permanently installed groundwater monitoring wells or using Hydropunch®-type sampling techniques.

6.0 LIMITATIONS

Our professional services were performed, data evaluated, and recommendations prepared in accordance with generally-accepted geological/engineering principles and practices. The judgments, conclusions, and recommendations described in this report pertain to the conditions judged to be present or applicable at the time the work was performed. Future conditions may differ from those described herein and this report is not intended for use in future evaluations unless an update is conducted by a consultant familiar with subsurface investigations. Use of this report is provided to Wareham Development Group for their exclusive use and shall be subject to the terms and conditions in the applicable contract between Wareham Development Group and CERTIFIED. Any third party use of this report shall also be subject to the terms and conditions governing the work in the contract between UBS Asset Management, Inc., and CERTIFIED. Any unauthorized release or misuse of this report shall be without risk or liability to CERTIFIED.

Certain information contained in this report may have been rightfully provided to CERTIFIED by third parties or outside sources. CERTIFIED does not make any warranties or representations, whether expressed or implied, regarding the accuracy of such information, and shall not be held accountable or responsible in the event that any such inaccuracies are present.

7.0 REFERENCES

(HLA) Harding Lawson Associates, 1989, Groundwater Quality Investigation, 1600 63rd Street, Emeryville, California (report dated October 2, 1989).

HLA, 1992, Groundwater Monitoring Report, 1600 63rd Street, Emeryville, California (report dated February 16, 1993).

TABLE 1. Analytical Results -Soil Borings (1)

	B1-12	B2-12	B3-12	B4-12
benzene	0.011	0.013	0.010	<0.005
toluene	0.100	0.038	0.100	0.018
ethylbenzene	0.140	0.040	0.140	0.017
xylenes	0.260	0.120	0.470	0.100
TPH as gasoline (2)	< 2.00	< 2.00	< 2.00	< 2.00
TPH as diesel	< 2.00	< 2.00	< 2.00	< 2.00

Notes:

- 1. Results reported in milligrams per kilogram.
- 2. The samples are reported by the laboratory to contain petroleum hydrocarbons with a distillation range similar to gasoline. They are reported to contain a petroleum peak pattern which resembles varsol.

TABLE 2. Analytical Results -Monitoring Well MW-2 (1)

	November 19, 1992 (2)	July 13, 1994
benzene	<0.0003	<0.001
toluene	0.0014	<0.001
ethylbenzene	<0.0003	<0.001
xylenes	0.0015	<0.001
TPH as gasoline	0.59	<2
TPH as diesel	22	6 (3)

Notes:

- 1. Results reported in milligrams per liter.
- 2. Source: HLA, 1993.
- 3. Reported by the laboratory to resemble #2 fuel oil.

APPENDIX A DRILLING PROCEDURES

DRILLING PROCEDURES

The procedures that were used for drilling soil borings and collecting soil samples are presented below.

- Permits for drilling of the soil boring installations were obtained from Zone 7 -Alameda County Flood Control and Water Conservation District.
- Soil borings were advanced to depths of approximately 12 feet below the ground surface using an two-inch outer diameter hollow-stem hydraulic hammer.
- The augers were washed with a hot water pressure washer prior to drilling.
- Soil descriptions, sample type and depth, and related drilling information were recorded on a boring log.
- Soil samples were collected at selected depth intervals, at significant changes in lithology, or wherever lithologic information was desired, using California-modified split-barrel samplers.
- The samplers were washed between sample intervals using a bristle brush with Alconox solution followed by two tap water rinses and a deionized water rinse.
 The samplers were dried by air or with paper towels prior to sampling.
- Soil samples were collected in six-inch long, stainless steel sample tubes inserted inside the samplers. Prior to use, the sample tubes were washed and dried by air or with paper towels.
- Samplers were driven using a hydraulic hammer driven sampling device within the hollow stem sampler.
- Following retrieval of the sampler, the middle sample tube (or first sample tube if the middle sample tube was not filled with soil) was removed from the sampler, the ends covered with aluminum foil and capped with PVC end caps. Each sample was labeled with the sample number, date, project number, and samplers initials.
- Soil in the lowest sample tube (where available) was used to describe the lithology and measure volatile organic compound (VOC) concentrations.
- Samples retained for laboratory analysis were placed in ziplock bags and stored on ice in an insulated chest cooled to a temperature of approximately 4 degrees Celsius.

- Chain of custody procedures, including the use of chain of custody forms, were used to document sample handling and transport from collection to delivery to the laboratory for analysis.
- Soil from the drilling operations was placed in D.O.T.-approved 5-gallon buckets and stored at the site.
- The soil boring holes were backfilled with a cement grout slurry to a depth of approximately one-half foot below the ground surface. Asphalt patch was placed to grade surface.

APPENDIX B GROUNDWATER MONITOR WELL SAMPLING AND FIELD DATA SHEET

! CERTIFIED ENGINEERING & TESTING CO., INC. Environmental Consultants

Groundwater Monitor Well Sampling & Field Data Sheet

Sampling & Fie	ia Data Olicet	
1/00 /	3 rd St. Em. pull Date:	7/13/94 Time:
Location No. 1600 C	2 3 1 C tres miles les	<u> </u>
Sample No. MW2(a-c	MWZE Weather:	111 03010
Project/Client: Warch	SIM KISSELFIG CINONIC CONTINUE	S CO OLIVE
Location: 1000		
Job No. SYCD	Personne	el F. Hayden/Precision San
J66 No		3 ./
· · · · · · · · · · · · · · · · · · ·		
WELL INFORMATION Casing, Dia.: 4 196	Intake,	
() Stainless Steel	Diameter:	folume of 2" and 4" Casing in Gallons
	() Stainless Steel	
() Steel	() Steel	
DY PVC	() PVC ** {	
() Teflon	() Tellon Gais. 35]	
() Other 713	() Other	
Water Level: 7.12	Well Conditions:	
Total Depth:	Well Clean to Bottom	e was carred
Measuring Device		
() M-Scope	Wall in Good Condition	
() Other		
Volume of Water in	(A) yes, () no	7 W/4 Come
Casing	Surface Protection:	
Datum:	Clean (x) yes. () no	/
() Top of Surf. Casing	Condition	19 20 20 40 10 60
(X) Top of Well Casing		Amends of Water in West (Feet)
() Other	Lock () yes, () no	
The Patrice		
Purging Data: Method:	Tubing/ope	Purging Equipment
() Bladder Pump	() Tellon	() Dedicated
	() Polypropylene	() Prepared Off-Site
(≯Bailer () Submersible Pump	Maylon	() Field Cleaned
() Peristellic Pumo	() Orner	
() Other	Pumping Rate	Time Series Data
	Flansed Time	Measurement 1 2 3 4
Materials: "	Elapsed Time Volume Pumped 24 Gallins	Well Volumes
Pump/Bailer	Well Evacuated () yes. (Vino	Water Temp. 72 74 74
() Tellon	Number of Well Volumes	ph , 42 44 4.4
() Stainless Steel	Purged 372	Other Com 1750 2300 1900
() PVC	roiges	
() Other		
Sampling Data:		Dhusiasi a Chaminal Data
Method:	() Tellon	Physical & Chemical Data:
() Bladder Pump	() Polypropylene	Appearance:
()) Bailer	(X-Nylon	() Clear
() Submersible Pump	() Other	() Turbid
() Peristaltic Pump	Sampling Equipment	() Color
() Other	₩ Dedicated	() Immiscible Product
Materials: Pump/Bailer	() Prepared Off-Site	() Other
() Teflon	() Field Cleaned	Filed Condition of Sample
() Staintess Steel	Metals Sample Field Filtered	Temp
()PVC	() Yes	pH 4.4
() Other	FA No	Other cond 1966
Materials: Tubing/rope	· · Method	

Centification:

APPENDIX C LABORATORY ANALYTICAL REPORTS

Aqua Air (A2) Analytical Corp.
25 Mathewson Drive
Weymouth, Massachusetts 02189
Telephone (617) 337-7887

Fax (617) 337-8237
MA-MA069, CT-PH0119, RI-A45, MD-MD194, NJ-59744, CA-1425

Laboratory Report

	Prepared	for	
--	----------	-----	--

CERTIFIED - SAN FRANCISCO

Report Date Date Received 8/03/94 7/14/94

70000 Marina Blvd.

CA 94005-0000

Customer No. 94

8888-0 9407-00136.

Brisbane CA S Fred Hayden/Don Barnsford

Eard

Invoice No.

TB0000

Permit No. Cust. P.O.

Project No. S40120

Sampled Date Sampled Time 7/13/94 00:00

Subject: Laboratory Results

Quality Control Results

w . n.ufmad	Method	Results	Units	MDL	Tech	Analy. Date	Dup % Rec Spk % Re	Std. % Rec
Test Performed	• • • •						*****	

B1-7

B1-12

Petroleum Hydrocarbons	MODIFIED 8015	ND	mg/Kg	2	LS	7/22/94	-
Volatile Aromatics 8020	EPA 8020, SW-846			25	L.S	7/21/94	l l
Methyl-T-butyl ether	EPA 8020	NA	ug/Kg	25	LO	•	ł.
Benzene	EPA 8020	11	ug/Kg	5	LS	7/21/94	- !
Toluene	EPA 8020	100	ug/Kg	5	LS	7/21/94	1
·	EPA 8020	ND	ug/Kg	5	LS	7/21/94	
Chlorobenzene	-	000		£	LS	7/21/94	- 1
Total Xylenes	EPA 8020	260	ug/Kg			• •	- 1
1,3-Dichlorobenzene	EPA 8020	ND	ug/Kg	5	LS	7/21/94	Į.
•	EPA 8020	ND	ug/Kg	5	LS	7/21/94	
1,2-Dichlorobenzene	-	NO		5	LS	7/21/94	- 1
1,4-Dichlorobenzene	EPA 8020	ND	ug/Kg	_		•	1
Ethylbenzene	EPA 8020	140	ug/Kg	5	LS	7/21/94	ļ

B2-7

82-12

Petroleum Hydrocarbons	MODIFIED 8015	ND	mg/Kg	2	LS	7/22/94	
Volatile Aromatics 8020	EPA 8020, SW-846						- 1
Methyl-T-butyl ether	EPA 8020	NA	ug/Kg	25	LS	7/21/94	- 1
Benzene	EPA 8020	13	ug/Kg	5	LS	7/21/94	į
Toluene	EPA 8020	38	ug/Kg	5	LS	7/21/94	i

---- Continued on Next Page ----

Aqua Air (A2) Analytical Corp.

Laboratory Report

CERTIFIED - SAN FRANCISCO Work Order No. 9407-00136.

Volatile Aromatics 602

---- Continued on Next Page ----

Report Date 8/03/94 Quality Control Results

Test Performed	Method R	Results	Un 	its 	MDL	Te	ch 	Analy. Date	Dup %	Rec	Spk % Rec	Std. %	Re
82-12													
Ch Langhanzana	EPA 8020		ND	ug/Kg		5	LS	7/21/94	İ				
Chlorobenzene Total Xylenes	EPA 8020		120	ug/Kg		5	LS	7/21/94					
1,3-Dichlorobenzene	EPA 8020		ND	ug/Kg		5	LS	7/21/94	1				
1,2-Dichlorobenzene	EPA 8020		ND	ug/Kg		5	LS	7/21/94	1				
1,4-Dichlorobenzene	EPA 8020		ND	ug/Kg		5	LS	7/21/94					
Ethylbenzene	EPA 8020		40	ug/Kg		5	LS	7/21/94					
B3-7													
B3-12								- 100 f0 .	1				
Petroleum Hydrocarbons	MODIFIED 8015		ND	mg/Kg		2	LS	7/22/94	1 .				
Volatile Aromatics 8020	EPA 8020, SW-846			,,,		o.e	10	7 /21 /0/	İ				
Methyl-T-butyl ether	EPA 8020		NA	ug/Kg		25 r	LS	7/21/94	}				
Benzene	EPA 8020		10	ug/Kg		5	LS LS	7/21/94 7/21/94	i				
Toluene	EPA 8020		100	ug/Kg		5 5	LS	7/21/94	i				
Chlorobenzene	EPA 8020		ND	ug/Kg		5	LS	7/21/94	1				
Total Xylenes	EPA 8020		470	ug/Kg		5	LS	7/21/94	i .				
1,3-Dichlorobenzene	EPA 8020		ND	ug/Kg		5	LS	7/21/94	i				
1,2-Dichlorobenzene	EPA 8020		ND	ug/Kg		5	LS	7/21/94	Ì				
1,4-Dichlorobenzene	EPA 8020		ND	ug/Kg		5		7/21/94	ì				
Ethylbenzene	EPA 8020		140	ug/Kg		v	£3	7721754	ı				
B4-7													
84-12													
Petroleum Hydrocarbons	MODIFIED 8015		ND	mg/Kg	ļ	2	LS	7/22/94					
Volatile Aromatics 8020	EPA 8020, SW-840	6											
Methyl-T-butyl ether	EPA 8020		NA	ug/Kg			LS		1				
Benzene	EPA 8020		ND	ug/Kg			LS		-				
Toluene	EPA 8020		18	ug/K		5			l.				
Chlorobenzene	EPA 8020		ND	ug/K		5			!				
Total Xylenes	EPA 8020		100	ug/K		5]				
1,3-Dichlorobenzene	EPA 8020		ND	ug/K		5			l l				
1,2-Dichlorobenzeme	EPA 8020		ND	ug/K		5			1				
1,4-Dichlorobenzene	EPA 8020		ND	ug/K		5			İ				
Ethylbenzene	EPA 8020		17	ug/K	g	5	LS	7/21/94	1				
MW2 (9-C)													

Laboratory Report

CERTIFIED - SAN FRANCISCO Work Order No. 9407-00136. Report Date 8/03/94 Quality Control Results

 	Test Performed	Method	Results	Uni	its 	MDL.	T(ech	Analy. Date	Dup % Rec	Spk % Rec	Std. % Rec
	MW2 (9-C)											
ì	Methyl-T-butyl ether	EPA 602		NA	ug/L		5	LS	7/21/94			
		EPA 602		2	ug/L		1	LS	7/21/94	1		
	Benzene Toluene	EPA 602		5	ug/L		1	LS	7/21/94	ļ		
	Chlorobenzene	EPA 602		4	ug/L		1	LS	7/21/94			
	Total Xylenes	EPA 602		24	ug/L		1	LS	7/21/94	į		
ı	1,3-Dichlorobenzene	EPA 602		ND	ug/L		1	LS	7/21/94	1		
	1,2-Dichlorobenzene	EPA 602		ND	ug/L		1	LS	7/21/94	ļ		
	1,4-Dichlorobenzene	EPA 602		ND	ug/L		1	LS	1/21/94			
	Ethylbenzene	EPA 602		7	ug/L		1	LS	7/21/94	ļ		
1	Petroleum Hydrocarbons	MODIFIED 8015		ND	mg/L		2	L.S	7/22/94	ı		
,	MW2E											
1	Petroleum Hydrocarbons	MODIFIED 8015		6.0	mg/L		2	LS	7/22/94	l		

^{*} Samples .2, .4, .6, .8, .9 do not contain a petroleum hydrocarbon blend with a distillation range similar to gasoline. They do contain a petroleum peak pattern which resembles varsol.

^{*} Sample .10 contains a petroleum hydrocarbon blend with a distillation range similar to #2 fuel oil. Quantitation limit elevated due to extract dilution prior to analysis. Extract diluted due to the presence of target compounds.

Laboratory Report

CERTIFIED - SAN FRANCISCO Work Order No. 9407-00136. Report Date 8/03/94 Quality Control Results

To the best of my knowledge this report is true and accurate.

Authorized by:

John J. Sulkowski Manager, Laboratory Services

CHAIN OF CUSTODY RECORD

|--|--|

Certified Engineering & Testing* Company

25 Mathewson Drive • Weymouth, MA 02189 (617) 337-7887 • Fax (617) 337-8237

SAMPLE SERIES #: 90	0]	136
SAMPLE SERIES #: /		

Environm	ental Consultants & A SHP GROUP	Laborator COMPANY	ry Service Y	es ;			Drive • V 7887 • Fa			39							D	UE D	ATE		7	-27-94
(company: Certifico-Brisbane 7000 Marina Blud Brisane CA 94005							SAMPLE TYPE TO WATER COOK 3. SLUDGE					ANALYSES									
CLIENT	PHONE #: (4/5) P.O. #: Free	75 eD (Z ~ 9	910 FAX	15	155	7421 Surns	033	CONTA P - PLA G - GLA	STIC		E /	10 m			//					/	
CERTIFIED PI	ROJECT #: _S Y			cc	NTAINEF	· · · · · · · · · · · · · · · · · · ·	SAMI	PLING	V - VO		78°/	*	9	//	//	//	/,	/,	Ι,	/,	/,	
SAMPLE #	SAMPLE IDENTIFICATION		SAMPLE TYPE	SIZE	TYPE	#	DATE	TIME		K		Y /	/ ,	//	//	//		/		/,	Ι,	COMMENTS
l	B1-7		5011				7/13/24	,														HOLD
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3	B2-7	_	-	<u> </u>	our m	<u> </u>				` .			-	\perp	_	-	-					(toub
4	B2-12	-			ONUN	<u>l</u> 	 			X			+	_		-						HOLD
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7	B4-7			 - 	الماتاط			,		<i>/</i> ·			\top		-							HELD
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RELINQUISH	HED BY:	DAT	re:	17	RECEIVE	D BY:				NTE:				×	i R	EG	NAL CO	۱R	IAY A	PPLY)		

THE WAREHAM PROPERTY GROUP,



June 29, 1995

Ms. Susan Hugo Alameda County Environmental Health Department Division of Environmental Protection 1131 Harbor Bay Parkway, #250 Alameda, CA 94502-6577

RE: 1600 63rd Street, Emeryville, CA - Notice of Violation

Dear Mr. Peacock:

Enclosed please find the latest groundwater monitoring report dated November 22, 1995 on the aforementioned property.

Please call me when you have finished reviewing the report.

Sincerely,

Daniel M. Nourse, for

THE WAREHAM PROPERTY GROUP

Dan Hourse an

DN/an

1120 Nye Street Suite 400 San Rafael, CA 94901 415 457-4964 FAX 415 459-4605



20 My 30 M 321

November 22, 1994

Mr. Dan Nourse Wareham Property Group 1600 63rd Street Emeryville, CA 94608

Subject:

Subsurface Investigation at 1600 63rd Street, Emeryville, California

(CERTIFIED file reference S40120)

Dear Mr. Nourse:

Enclosed is a report prepared by CERTIFIED Engineering & Testing Company, Incorporated (CERTIFIED), for the above referenced site. CERTIFIED was retained by Wareham Property Group to conduct a subsurface investigation at the above-referenced site.

If you have any questions or comments please call either of us at (415) 742-9900.

Sincerely,

Fred Hayden

Project Manager

Donald P. Bransford, R.G. 5621 Environmental Services Manager accomplished by hand bailing. During the purging procedure measurements of temperature, specific conductance, and pH of the purge water were recorded (Appendix B). Once the temperature, specific conductance, and pH were judged to have stabilized and three casing volumes of groundwater removed, the groundwater level within the well was allowed to recover to at least approximately 80% of the prepurge level and a groundwater sample was collected from the monitoring well using a disposable polyethylene bailer. The location of well MW-2 is shown in Figure 2. A layer of free phase petroleum hydrocarbons approximately 0.02 feet thick was observed on the water in the bailer.

Groundwater samples were transferred from the bailer into laboratory-supplied containers, labeled for identification purposes, and stored on ice in an insulated chest pending delivery to the laboratory for analysis. Samples were collected, retained and transported to the laboratory using chain-of-custody procedures.

4.0 LABORATORY ANALYSES

The soil and water samples collected were submitted to Aqua-Air, of Weymouth, Massachusetts, a State of California-certified hazardous waste laboratory. Sample handling from collection to delivery to the laboratory was documented using chain of custody procedures, including the use of chain of custody forms.

Four soil samples were selected for analysis: samples B1-12, B2-12, B3-12 and B4-12 were collected from approximately 12 feet BGS from the interpreted capillary fringe. The samples were selected based on measurements of VOC concentrations using the PID.

The soil samples and groundwater samples were analyzed for TPHg and TPHd in general accordance with U.S. Environmental Protection Agency (EPA) Method No. modified 8015, and BTXE in general accordance with EPA Method No. 8020.

Table 2 presents the soil sample analyses for the four soil samples chosen for analyses. TPHg was not reported present in the samples analyzed. The laboratory has reported, however, that petroleum hydrocarbons with a peak pattern that resembles varsol was detected. The varsol concentration was not quantified.

Table 2 presents the results for the groundwater sample collected from well MW-2 and historical analytical results from November 19, 1992. The laboratory report is contained in Appendix B. The hydrocarbon present in the groundwater sample collected from well MW-2 was reported by the laboratory to be similar to #2 fuel oil. The laboratory report is contained in Appendix B.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Staining or odors were not noticed in the soil above the water table during drilling of the soil borings. What are judged to be generally low concentrations of BTEX were reported in the soil samples collected from the borings. TPHg and TPHd were not reported in the soil samples analyzed in concentrations exceeding the laboratory analytical detection limits. However, the TPHg analysis reported that the soil samples contain a petroleum hydrocarbons blend that resembles varsol (C8-C14), a petroleum distillate similar to mineral spirits. The concentration was not reported.

TPHg and BTEX were not reported in the groundwater sample collected from well MW-2. The hydrocarbon reported for the TPHd analysis was indicated by the laboratory to resemble #2 fuel oil. A thin layer of free phase petroleum hydrocarbon product was observed in the bailer during sampling of this well.

Based on the reported groundwater results, it is the judgment of CERTIFIED that petroleum hydrocarbons are present on the water table in the vicinity of well MW-2. Petroleum hydrocarbons are also judged to be present as a dissolved phase within the groundwater in the vicinity of this well. Petroleum hydrocarbons were also reported in the soil samples collected from the capillary fringe above the water table. Based on the presence of the petroleum hydrocarbons within the capillary fringe, it is judged that the petroleum hydrocarbons within the groundwater extend beyond the borings drilled by CERTIFIED. Should further information regarding the extent of the petroleum hydrocarbons within the groundwater be desired, it is recommended that groundwater samples be collected either from permanently installed groundwater monitoring wells or using Hydropunch®-type sampling techniques.

6.0 LIMITATIONS

Our professional services were performed, data evaluated, and recommendations prepared in accordance with generally-accepted geological/engineering principles and practices. The judgments, conclusions, and recommendations described in this report pertain to the conditions judged to be present or applicable at the time the work was performed. Future conditions may differ from those described herein and this report is not intended for use in future evaluations unless an update is conducted by a consultant familiar with subsurface investigations. Use of this report is provided to Wareham Development Group for their exclusive use and shall be subject to the terms and conditions in the applicable contract between Wareham Development Group and CERTIFIED. Any third party use of this report shall also be subject to the terms and conditions governing the work in the contract between UBS Asset Management, Inc., and CERTIFIED. Any unauthorized release or misuse of this report shall be without risk or liability to CERTIFIED.

S40120

Certain information contained in this report may have been rightfully provided to CERTIFIED by third parties or outside sources. CERTIFIED does not make any warranties or representations, whether expressed or implied, regarding the accuracy of such information, and shall not be held accountable or responsible in the event that any such inaccuracies are present.

7.0 REFERENCES

- (HLA) Harding Lawson Associates, 1989, Groundwater Quality Investigation, 1600 63rd Street, Emeryville, California (report dated October 2, 1989).
- HLA, 1992, Groundwater Monitoring Report, 1600 63rd Street, Emeryville, California (report dated February 16, 1993).

TABLE 1. Analytical Results -Soil Borings (1)

	B1-12	B2-12	B3-12	B4-12
benzene	0.011	0.013	0.010	<0.005
toluene	0.100	0.038	0.100	0.018
ethylbenzene	0.140	0.040	0.140	0.017
xylenes	0.260	0.120	0.470	0.100
TPH as gasoline (2)	< 2.00	< 2.00	< 2.00	< 2.00
TPH as diesel	< 2.00	< 2.00	< 2.00	< 2.00

Notes:

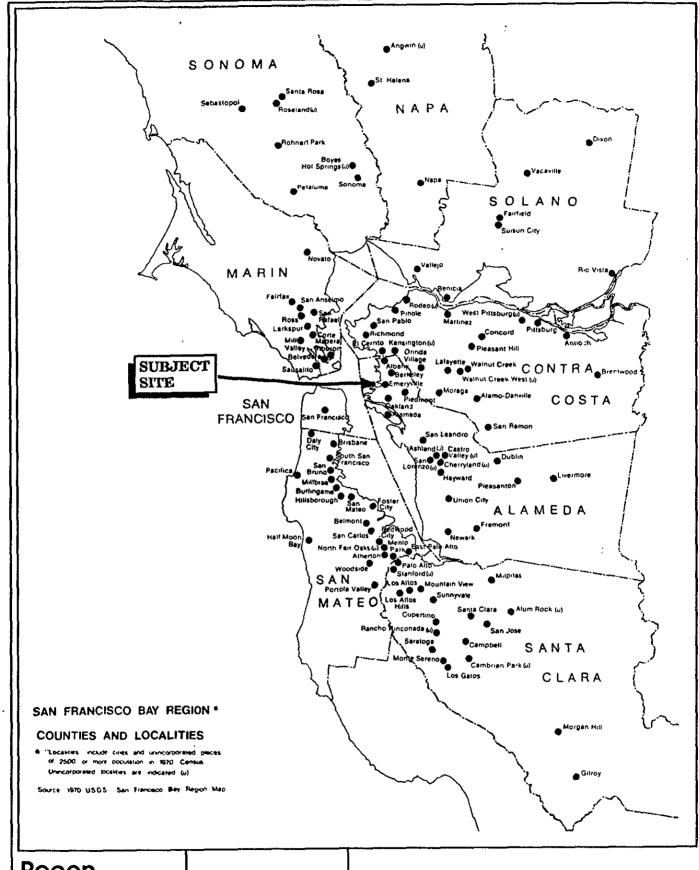
- 1. Results reported in milligrams per kilogram.
- 2. The samples are reported by the laboratory to contain petroleum hydrocarbons with a distillation range similar to gasoline. They are reported to contain a petroleum peak pattern which resembles varsol.

TABLE 2. Analytical Results -Monitoring Well MW-2 (1)

	November 19, 1992 (2)	July 13, 1994
benzene	<0.0003	<0.001
toluene	0.0014	<0.001
ethylbenzene	<0.0003	<0.001
xylenes	0.0015	<0.001
TPH as gasoline	0.59	<2
TPH as diesel	22	6 (3)

Notes:

- 1. Results reported in milligrams per liter.
- 2. Source: HLA, 1993.
- 3. Reported by the laboratory to resemble #2 fuel oil.



Recon

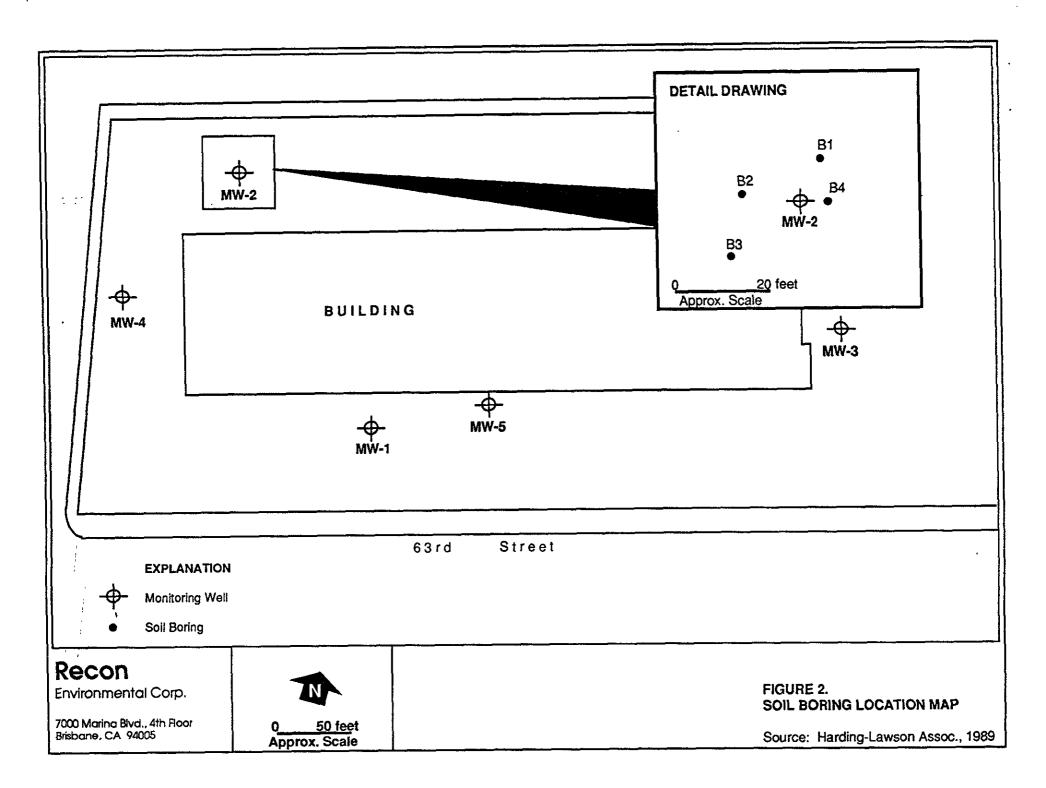
Environmental Corp.

7000 Marina Blvd. Fourth Floor Brisbane, CA 94005



Scale: 1" = 15 mi.

FIGURE 1. LOCATION MAP



APPENDIX A DRILLING PROCEDURES

DRILLING PROCEDURES

The procedures that were used for drilling soil borings and collecting soil samples are presented below.

- Permits for drilling of the soil boring installations were obtained from Zone 7 -Alameda County Flood Control and Water Conservation District.
- Soil borings were advanced to depths of approximately 12 feet below the ground surface using an two-inch outer diameter hollow-stem hydraulic hammer.
- The augers were washed with a hot water pressure washer prior to drilling.
- Soil descriptions, sample type and depth, and related drilling information were recorded on a boring log.
- Soil samples were collected at selected depth intervals, at significant changes in lithology, or wherever lithologic information was desired, using California-modified split-barrel samplers.
- The samplers were washed between sample intervals using a bristle brush with Alconox solution followed by two tap water rinses and a deionized water rinse.
 The samplers were dried by air or with paper towels prior to sampling.
- Soil samples were collected in six-inch long, stainless steel sample tubes inserted inside the samplers. Prior to use, the sample tubes were washed and dried by air or with paper towels.
- Samplers were driven using a hydraulic hammer driven sampling device within the hollow stem sampler.
- Following retrieval of the sampler, the middle sample tube (or first sample tube if the middle sample tube was not filled with soil) was removed from the sampler, the ends covered with aluminum foil and capped with PVC end caps. Each sample was labeled with the sample number, date, project number, and samplers initials.
- Soil in the lowest sample tube (where available) was used to describe the lithology and measure volatile organic compound (VOC) concentrations.
- Samples retained for laboratory analysis were placed in ziplock bags and stored on ice in an insulated chest cooled to a temperature of approximately 4 degrees Celsius.

- Chain of custody procedures, including the use of chain of custody forms, were used to document sample handling and transport from collection to delivery to the laboratory for analysis.
- Soil from the drilling operations was placed in D.O.T.-approved 5-gallon buckets and stored at the site.
- The soil boring holes were backfilled with a cement grout slurry to a depth of approximately one-half foot below the ground surface. Asphalt patch was placed to grade surface.

11										,
ÍΓ	<u>.</u>						eger	nđ		Job No.: S40120 Location: 1600 63rd Street Emeryville, CA
	Re	con					GV GP GM	V 1	ML CL OL	Drilling Hydraulic Hammer Boring # B3
	Envi	ronme	ntal C	orp.		***	GC	2 8	図 OL	
ļ							SM SP SM	٧ ا	MH	Drilling Crew: Michael & Jose Drilling Geologist: Fred Hayden Time: Sampling Method: Brass Sleeves 8:30 AM
							SM SC		Ø OH ■ Pt	Sampling Method: Brass Sleeves 8:30 AM Casing/Sand/Seal Depth: N/A N/A N/A
					}	Elevation				Casing/Sand/Seal Depth: N/A N/A N/A Date 7/13/94 Depth to Water/Time: N/A
Ì	T.	e e	e .	\ 's).	ţħ	eet	3S te	Surface Conditions: Asphatt
,	Recovery	Sample Type	Sample No.	Blows/ 6 in.	PID	Sample No.	Depth	in F	USGS	Soil Description:
	- X			ļ			1	F		ASPHALT with base Gravels
		 					2			
(<u> </u>	<u> </u>	<u> </u>			<u> </u>		
j							3		GP	Grayish brown slightly moist Sandy GRAVEL.
1							4			
			<u> </u>					}-		
ı]			5			
					•		6	-		
1	ļ	 -		<u> </u>			7			Reddish brown slightly moist Sandy CLAY.
ĺ		ļ		 	0.0	B3-7		<u> </u>	CT	Readish brown signify hioist dandy deat.
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i	 	 	 	 	 		1	-		í
	<u> </u>				0.0	<u> </u>	10	Ĭ_		
ł							17	\ 	sc	Greenish gray Clayey moist SAND with Gravel.
	ļ	 	 	 	70	B3-12	12	, L		
ì		 		 	ļ		-	-	-	
				1			13	上	1	TD @ 12' No groundwater encountered.
(1				14	1	-	
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Γ	·		<u> </u>			L	ege				Job No.: S40120 Location: 1600 63rd Street : Emeryville, CA						
	Rec						GI GI	V N N N	3	ML CL	Drilling Hydraulic Hammer Boring # Method: B2						
	Enviro	nment	al Corp				GI GC	C E	즤	OL	Drilling Company: Precision Sheet # 1						
						 1	SV	v E		мн	Drilling Crew: Michael & Jose Drilling Geologist: Fred Hayden Time: Sampling Method: Brass Sleeves 8:30 AM						
						777 5350	SV SP SN SC	1	Ķ	CH	Sampling Method: Brass Sleeves 8:30 AM						
						***	SC			Pt	Sampling Method: Brass Sleeves 8:30 AM Casing/Sand/Seal Depth: N/A N/A N/A						
					1	Elevation				-	Data 7/10/04						
-	<u>}</u>	e Sie				æ	γ	 } .e	Depth to Water/Time: N/A Date 7/13/ Surface Conditions: Asphalt								
	Recovery	Sample Type	Sample No.	Blows/ 6 in.	PID	Sample No.	Dep	in Feet	Į ž	Code	Soil Description:						
F	*						1				ASPHALT with base Gravels.						
							2	-	H								
H		·					١,	厂									
							3		Ħ	GP	Brownish green, ashy green and reddish brown, slightly moist, Sandy GRAVEL.						
Γ							4	┝			Salldy Grinvell.						
┞						<u></u>	5		間		Becomes mottled black a green with Clay at 5 feet.						
-								┢	目								
					0.0		6		M		,						
						B2-7	7	-	Ø	CL	Greenish slightly moist Sandy CLAY.						
ľ		·· <u> </u>					8		M								
1					-		9	上									
ŀ		 		ļ		 	1	-			Becomes whitish green with Clay and some coarse Sand						
					20		10				(old product odor)						
ſ		<u>-</u> ::					11	1	¥								
-				 	83	B2-12	12			SC/ GC	1						
-							1	-		L	TD @ 40! No groundwater anonymtered						
1			<u> </u>	 	 		13		-		TD @ 12' No groundwater encountered.						
							14	1	1								
							15	5	1								
f				1			10]								
ŀ			 	-	 	 	12	-	1		1						
			<u> </u>	<u> </u>	 		$\frac{1}{2}$	-	7								
							18		1		-						
							1	9	$\frac{1}{2}$								
-			1.	 	 -	1	2	0]								

Legend										Job No.: S40120 Location: 1600 63rd Street Emeryville, CA									
Re	con					GV GI	, ×	M	/L	Drilling Hydraulic F Method: Drilling Company: F	Boring # B4								
	onment	al Corp				GN GC	v S	d c)L	Drilling Company: F		Sheet # 1							
								_		Drilling Crew: Mic	Drilling								
1					<u> </u>	SV SP SM		Š	H.	Geologist: Fred Hayo	ien				Time:				
1					847 888	SC				Sampling Method: B	AI/A	8:30 AM							
]				,	ecel rottevol ²			• •	`	Casing/Sand/Seal De		N/A	N/A	N/A	Date 7/13/94				
<u></u>	ω	e e	5	1	Elevation:					Depth to Water/ Time.									
Recovery	Sample Type	Sample No.	Blows/ 6 in.	& \	Sample No.	Depth	ii R	nscs.	ğ	Surface Conditions: Asphalt Soil Description:									
- R	S	S				1	-	H_	{										
						1				ASPHALT with base Gravels.									
}						2		-											
ļ ——						3			Ì						i				
						3		9	3C	Dark brown slightly black stains, brick fr			, Sand	y GRA	vel,				
		 			i	4	\vdash		ł	Diddle didning and in	g								
 	 					5													
 	 	ļ							ł										
•					:	6		才											
				5.0	B4-7	7		3	CL	Reddish brown sligh									
-	 					8													
<u> </u>	 	ļ																	
						9				Blackish green slightly Sandy CLAY, and Clayey									
				10		10				SAND.									
	 	<u> </u>				11	\vdash	***************************************	<u>.</u>		-··· -		اد باد،	/-\-/-	and adam				
] ''			CL/ SC	Bluish green moist : brownish mottlings.	Siny S	ANL	Van Ci	ау (ою г					
				130	B4-12	12		. Š			,. <u>.</u>								
-	 	†				13				TD @ 12' No groun	dwater	encol	unterec	s,´					
	 	 					H		Ì										
				 		14				!									
						15	-												
 	†		<u> </u>			16				<u>:</u>									
}		 				1													
						17													
]		18	3						_						
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ĺ		1''		[20)		•	Ì									

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								Job No.: S40120 Location: 1600 63rd Street								
			.,	. — —	eger	nd		Job No.: \$40120	Locatio			ville, C	4			
1	econ				. 	GV GP GN GC	Y	<u>अ</u>	ML CL	Drilling Hydraulic H Method:		Boring # B1				
Env	Ironmen	tal Corp),		***	GC	<u> </u>	점	OL	Drilling Company: F	Sheet # 1					
					-			3	мн	Drilling Crew: Mich	Drilling					
1						SV SP SM			ĊĤ	Geologist: Fred Hayd Sampling Method: Br	өл				Time:	
						SC			Pt	Sampling Method: Br	ass Sie	eves	41/4	A1/A	8:30 AM	
					Elevation	•		_	•	Casing/Sand/Seal Dep		V/A N/A	N/A	N/A	Date 7/13/94	
-	1	T								Depth to Water/Time:		Date //13/94				
Recovery	Sample Type	Sample No.	Blows/ 6 in.	PID	Sample No.	Depth	Fee	15GS	Code	Surface Conditions:						
Res	8,	8	18 9		S	ļ,	. I			Soi						
									٠	ASPHALT with base						
						2	_	 								
ļ		 														
	<u> </u>	<u> </u>				3			GC	Reddish brown, sligt (slight reddish brown	htly mois	st, Cla	yey S	andy (SRAVEL	
	1					4				(slight teadish prowi	i, Uaik	euoisii staiitj				
ļ		 														
				20		5										
						6			CL	Dark brown to green (old product odor).	AY					
		<u> </u>				7										
 	 	<u> </u>	<u> </u>	49	B1-7											
1		}	}		}	8				Becomes dull whitist	3 5 ft					
				50		9				Decolles out within). . (1.					
-	 			 -			\vdash									
		l	<u></u>			10										
		Ţ				11	<u> </u> _									
		 				12			SC	Brown and green mo	oist Clay	ey S	AND,	old pro	duct odor.	
		<u> </u>		85	B1-12	֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓				TD @ 12' No ground	water er	ncoun	itered.			
			į			13	}_	-								
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						15	-	1								
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APPENDIX B GROUNDWATER MONITOR WELL SAMPLING AND FIELD DATA SHEET

Groundwater Monitor Well Sampling & Field Data Sheet

- Carry Pring		
	3 rd St. Emergilloste:	7/13/94 Time:
Sample No. MW2(a-c	Condition	ns Warm
Project/Client: Warch	- V- V- V- V- V- V- V- V- V- V- V- V- V-	
Location: 1600 6	~~~	el F. Handen/Precision Son
Job No. 54012	O Personni	EL L' HOLDEN LASCITION DE
		<u> </u>
WELL INFORMATION		
Casing, Dia.: 4 1969	Intake.	
() Stainless Steel	Diameter:	/olume of 2" and 4" Casing in Gallons
() Steel	() Stainless Steel	
	() Steel	
PS PVC	() PVC	
() Tellon	() Tellon Gala . at]	
() Other 712	() Other	
Water Level: 7.12	Well Conditions:	
Total Depth: 20	Well Clean to Bottom 25	a was come
Measuring Device	() yes. (N) no »	
() M-Scope	with the Coord Coordinan	
() Other	M vae /) no	
Volume of Water in	Surface Protection:	* wa come
Casing	Clean Wyes. () no	
Datum:	Condition	
() Top of Surf. Casing	•	10 20 20 40 10 40
(A) Top of Well Casing	Lock () yes. () no	designate of Water in West (Feet)
() Other	2004 ()) 501 ()	
Puraine Data:		
Method:	Tubing/tope	Purging Equipment
() Bladder Pump	() Tellon	() Dedicated
(D) Bailer	() Polypropylene	() Prepared Off-Site
() Submersible Pump	M Nylon	() Field Cleaned
() Peristaltic Pump	() Other	
() Other	Pumping Rate	Time Series Data
Meterials:	Financed Time	Measurement 1, 2 3 4
Pump/Bailer	Volume Pumped 29 gallons	Well Volumes
() Tellon	Well Evacuated () Yes: (Xino	Water Temp. 72 74 74
() Stainless Steel	Number of Well Volumes	PH 4.2 4.4
()PVC	Purged 3/2	Other Can 1750 2300 1900
() Other		
•		
Sampling Data:	() Tellon	Physical & Chemical Data:
Method:	() Polypropylene	Appearance:
() Bladder Pump	() Aylon	() Clear
()) Beiler	() Other	() Turbid
() Submersible Pump	Sampling Equipment	() Color
() Peristattic Pump	₩ Dedicated	() Immiscible Product
Materials: Pump/Bailer	() Prepared Off-Sile	() Other
() Tellon	() Field Cleaned	Filed Condition of Sample
() Tellon () Stainless Steel	Metals Sample Field Filtered	Temp
	▼	
	() Yes	oH V.Y
() PVC	() Yes MANO	Other Comb 1900
() Other Materials: Tubing/rope	() Yes %4.No 	Other cond 1900

Certification:
This sample was collected and handled in accordance with standard regulatory and corporate procedures

APPENDIX C LABORATORY ANALYTICAL REPORTS

Aqua Air (A2) Analytical Corp. 25 Mathewson Drive Weymouth, Massachusetts 02189 Telephone (617) 337-7887 Fax (617) 337-8237

MA-MA069, CT-PH0119, RI-A45, MD-MD194, NJ-59744, CA-1425

Laboratory Report

Prepa	red for	•								
CERTIFIED - SA 70000 Marina B	N FRANCISCO lvd.						Report Date Re	Date eceived		8/03/94 7/14/94
Brisbane Fred Hayden/Do	CA 94005 n Barnsford	5-00	00				Custome Work On Invoice	der No.	9	8888-0 407-00136. LB0000
Permit No. Cust. P.O. Project No. S	40120				Sampled Sampled	d Date d Time		7/13/94 00:00		
Subject: Labo	ratory Results									
							(Quality	Contro	ol Results
Test Performed	Method Results	Un	nits	MDL	Tec	h	Analy. Bate		Spk & Rec	Std. % Rec
4						-				
B1-7										
81~12										
Petroleum Hydrocarbons	MODIFIED 8015	ND	mg/Kg		2 L	S	7/22/94	1		
Volatile Aromatics 8020	EPA 8020, SW-846							1		
Methyl-T-butyl ether	EPA 8020	NA	ug/Kg				7/21/94	1		
Benzene	EPA 8020	11	ug/Kg		5 l		7/21/94	1		
Toluene	EPA 8020	100	ug/Kg		5 L			i I		
Chlorobenzene	EPA 8020	ND	ug/Kg		5 I			{ 		
Total Xylenes	EPA 8020	260	ug/Kg		5 (Į.		
1,3-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 1			§		
1,2-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 (Į t		
1,4-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 1		, ,	f		
Ethylbenzene	EPA 8020	140	ug/Kg		5 (LS	7/21/94	-		
82-7										
B2-12										
Petroleum Hydrocarbons	MODIFIED 8015 EPA 8020, SW-846	ND	mg/Kg		2	LS	7/22/94			
Volatile Aromatics 8020	EPA 8020	NA	ug/Kg	1	25	L.S	7/21/94			
Methyl-T-butyl ether	EPA 8020	13	ug/Kg		5	LS	7/21/94	!		
Benzene Toluene	EPA 8020	38			5	LS	7/21/94	1	-	
To tache										

---- Continued on Next Page ----

Aqua Air (A2) Analytical Corp.

Laboratory Report

CERTIFIED - SAN FRANCISCO Work Order No. 9407-00136. Report Date 8/03/94 Quality Control Results

Test Performed	Method	Results	Units		MDL	Tech		Analy. Date		Dup % Rec	Spk % Rec	Std. % Re	
B2-12													
	EPA 8020		ND	ug/Kg		5	LS	7/21/94	ļ				
Chlorobenzene	EPA 8020		120	ug/Kg			LS	7/21/94	i				
Total Xylenes			ND	ug/Kg			LS	7/21/94	Ĺ				
1,3-Dichlorobenzene	EPA 8020		ND	ug/Kg			LS	7/21/94	Ĺ				
1,2-Dichlorobenzene	EPA 8020		ND	ug/Kg			LS	7/21/94	i				
1,4-Dichlorobenzene	EPA 8020		40	ug/Kg			LS	7/21/94	i				
Ethylbenzene	EPA 8020		40	ug/ ng		•		,,					
83-7													
B3-12													
Petroleum Hydrocarbons	MODIFIED 8015		ND	mg/Kg		2	LS	7/22/94	-				
Volatile Aromatics 8020	EPA 8020, SW-84	6						7 (05 (04	1				
Methyl-T-butyl ether	EPA 8020		NA	ug/Kg		25	LS	7/21/94	}				
Benzene	EPA 8020		10	ug/Kg		5	LS	7/21/94	1				
Toluene	EPA 8020		100	ug/Kg		5	LS	7/21/94	į				
Chlorobenzene	EPA 8020		ND	ug/Kg		5	LS	7/21/94	ļ				
Total Xylenes	EPA 8020		470	ug/Kg		5	LS	7/21/94	1				
1,3-Dichlorobenzene	EPA 8020		ND	ug/Kg		5	LS						
1,2-Dichlorobenzene	EPA 8020		ND	ug/Kg		5	LS		ļ				
1,4-Dichlorobenzene	EPA 8020		ND	ug/Kg		5	LS	• -	ļ				
Ethylbenzene	EPA 8020		140	ug/Kg		5	LS	7/21/94	1		•		
84-7													
B4-12													
Petroleum Hydrocarbons	MODIFIED 8015		ND	mg/Kg	ļ	2	LS	7/22/94	1				
Volatile Aromatics 8020	EPA 8020, SW-84	16						7 (04 (04	1				
Methyl-T-butyl ether	EPA 8020		NA	ug/Kg			LS		ŀ				
8enzen e	EPA 8020		ND	ug/Kg			LS		ŀ				
To luen e	EPA 8020		18	ug/Kg		5			į				
Chlorobenzene	EPA 8020		ND	ug/Kg		5			Ì				
Total Xylenes	EPA 8020		100	ug/Kg		5			ļ				
1,3-Dichlorobenzene	EPA 8020		ND	ug/Kg		5		* -	ļ				
1,2-Dichlorobenzene	EPA 8020		ND	ug/Kg		5				<u>.</u>			
1,4-Dichlorobenzene	EPA 8020		ND	ug/Kg		5			ł				
Ethylbenzene	EPA 8020		17	ug/Kg	;	5	LS	7/21/94					
MW2 (9-C)													
Volatile Aromatics 602											-		

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Laboratory Report

CERTIFIED - SAN FRANCISCO Work Order No. 9407-00136. Report Date 8/03/94 Quality Control Results

Test Performed	Method	Results	Units		MDL T		ech	Analy. Date	Dup % Rec Spk % Rec	Std. % Rec
MW2 (9-C)										
Methyl-T-butyl ether	EPA 602		NA	ug/L		5	LS	7/21/94	1	
Benzene	EPA 602		2	ug/L		1	LS	7/21/94	i	
Toluene	EPA 602		5	ug/L		1	LS	7/21/94		
Chlorobenzene	EPA 602		4	ug/L		1	LS	7/21/94		
Total Xylenes	EPA 602		24	ug/L		1	LS	7/21/94	!	
1.3-Dichlorobenzene	EPA 602		ND	ug/L		1	LS	7/21/94	!	
1.2-Dichiorobenzene	EPA 602		ND	ug/L		1	LS	7/21/94	!	
1,4-Dichlorobenzene	EPA 602		ND	ug/L		1	LS	7/21/94	ļ	
Ethylbenzene	EPA 602		7	ug/L		1	LS	7/21/94	1	
Petroleum Hydrocarbons	MODIFIED 8015		ND	mg/L		2	LS	7/22/94	ļ	
MW2E	•									
Petroleum Hydrocarbons	MODIFIED 8015		6.0	mg/L		2	LS	7/22/94	1	

^{*} Samples .2, .4, .6, .8, .9 do not contain a petroleum hydrocarbon blend with a distillation range similar to gasoline. They do contain a petroleum peak pattern which resembles varsol.

^{*} Sample .10 contains a petroleum hydrocarbon blend with a distillation range similar to #2 fuel oil. Quantitation limit elevated due to extract dilution prior to analysis. Extract diluted due to the presence of target compounds.

Laboratory Report

CERTIFIED - SAN FRANCISCO Work Order No. 9407-00136. Report Date 8/03/94 Quality Control Results

To the best of my knowledge this report is true and accurate.

Authorized by:

John J. Sulkowski Manager, Laboratory Services

Chain of Claroli RECORD

Environmental Consultants & I	aboratory Service		tified E 5 Mathew (617) 3	vson [Veymout	n, MA 021					SAMPL					07_136
COMPANY: Le	o Mu	O-B	27 t	9V	le		WA WA				ANALYSES						
B~ PHONE #: (4/5)	- 0 <u>3</u> 3	2 SOIL 3. SLUDGE 4. OIL															
P.O. #: CLIENT CONTACT: Free CERTIFIED PROJECT #: S4	CONTAINER TYPE P - PLASTIC G - GLASS V - VOA																
CERTIFIED CLIENT	PLING	PRESERVA	— <u></u> ∕ऽ	\checkmark	//		//	//			/ /	/ /					
SAMPLE SAMPLE # IDENTIFICATIO	SAMPLE TYPE	SIZE	TYPE	#	DATE	TIME			% /	//	///	///	//	//		/,	COMMENTS
1 81-7	Scil			1	lishy	-								1			HOLD
2 B1-12			Morri		412/1			X						1			•
3 B2-7		\	pres														HOLD
4 32-12	_	,	מעדם	1				λ									
5 B3-7		1 1	للنابه	ì				1									HOLD
6 33-13	-		Sura	1				×									- 7
7 B4-7			braij	ì													年でり
8 84-12	>		pren	i				X									
9 MW2 Cc	(- C) 23/cm	40m1		3			HCL	X									33
0 MWZ F		18		1	1			L X									6
																	2
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RELINQUISHED BY:	BY:			DATE:					(ADDITIONAL COST MAY APPLY) REGULAR								
	TIME:							(10 BUSINESS DAYS)									

Shade areas for laboratory use only Retain Pink copy and submit White and Yellow copies to the Laboratory