

SUBSURFACE INVESTIGATION

1600 63RD STREET

EMERYVILLE, CALIFORNIA

November 22, 1994



November 22, 1994

9

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:

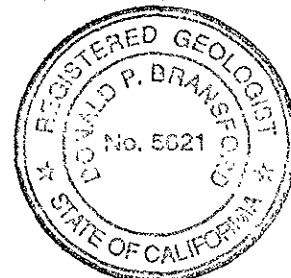
Enclosed is a report prepared by CERTIFIED Engineering & Testing Company, Incorporated (CERTIFIED), for the above referenced site. CERTIFIED was retained by Wareham Property Group to conduct a subsurface investigation at the above-referenced site.

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



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: S40120

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

*Alicia  
please  
insert*

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,

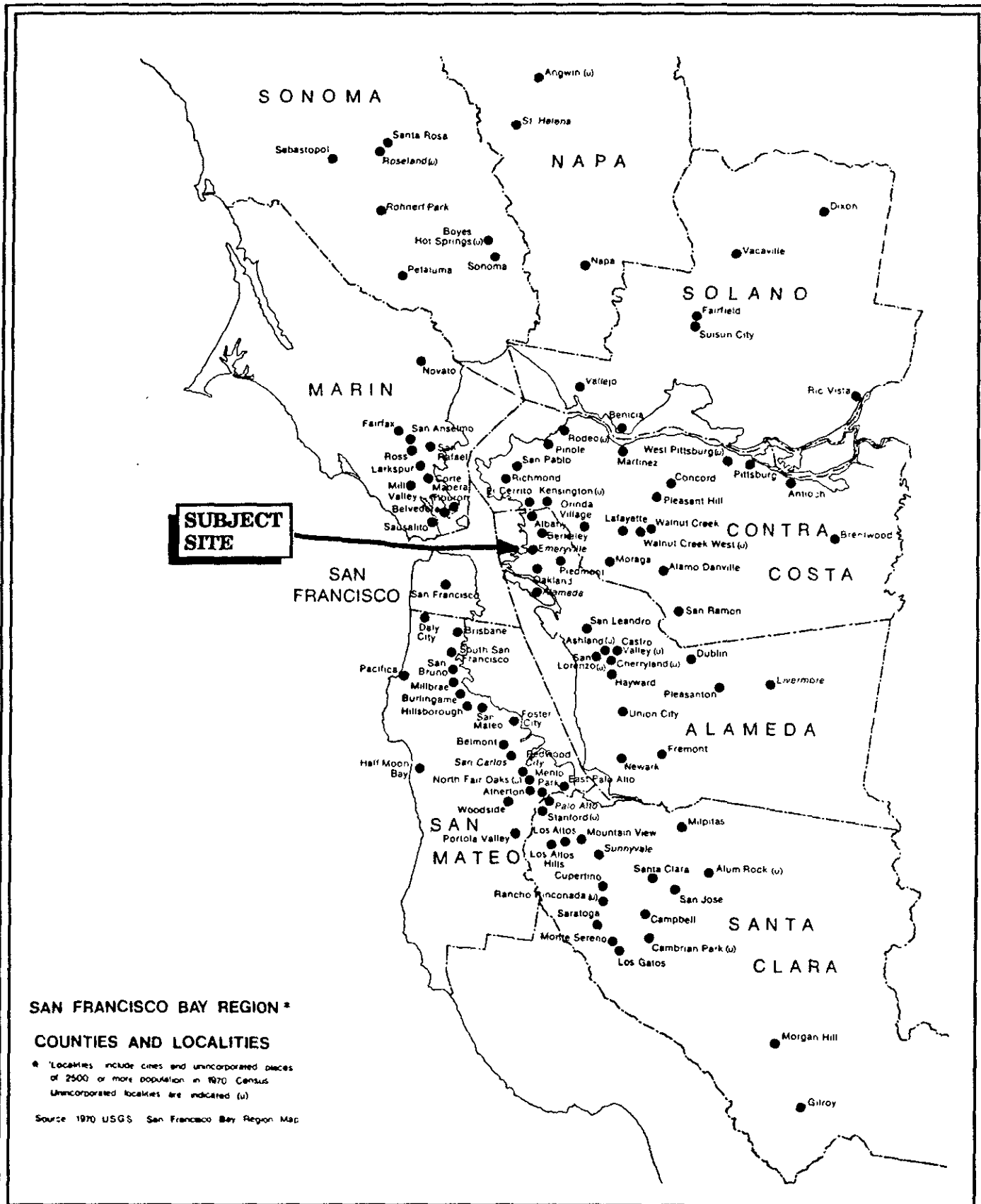
*Fred Hayden*

Fred Hayden  
Project Manager

Enclosure

*Memo*

*Don. Zanzford.  
\$2800  
Thurs 1:00*

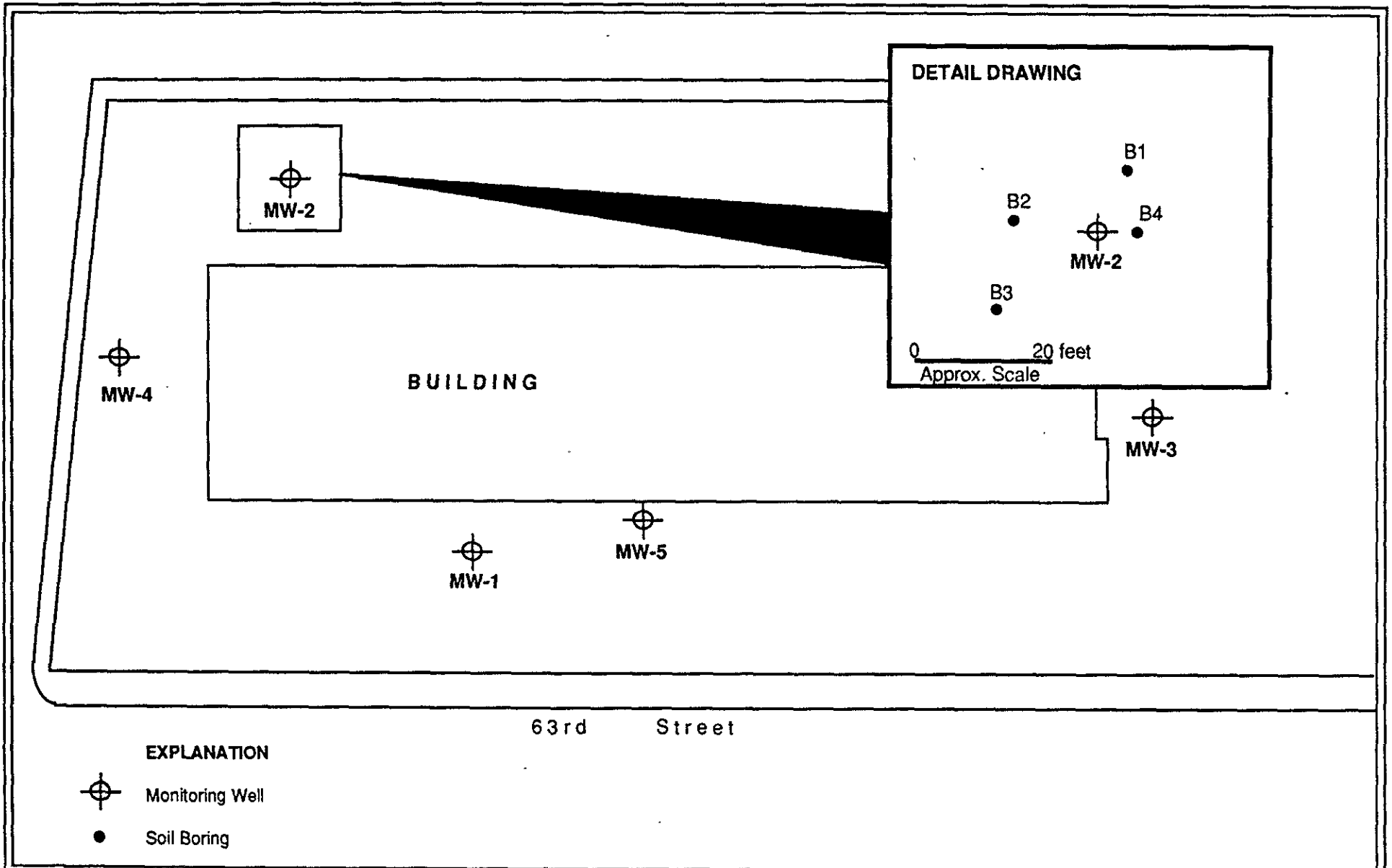


**Recon**  
 Environmental Corp.  
 7000 Marina Blvd.  
 Fourth Floor  
 Brisbane, CA 94005



Scale: 1" = 15 mi.

**FIGURE 1.**  
**LOCATION MAP**



**Recon**

Environmental Corp.

7000 Marina Blvd., 4th Floor  
Brisbane, CA 94005



0 50 feet  
Approx. Scale

**FIGURE 2.**  
**SOIL BORING LOCATION MAP**

Source: Harding-Lawson Assoc., 1989








**Recon**  
Environmental Corp.

Legend

-  GW
-  GP
-  GM
-  GC
-  ML
-  CL
-  OL
-  SW
-  SP
-  SM
-  SC
-  MH
-  CH
-  OH
-  Pt

Job No.: S40120		Location: 1600 63rd Street Emeryville, CA	
Drilling Method: Hydraulic Hammer			Boring # <b>B3</b>
Drilling Company: Precision			Sheet # 1
Drilling Crew: Michael & Jose			Drilling Time: 8:30 AM
Geologist: Fred Hayden			
Sampling Method: Brass Sleeves			Date 7/13/94
Casing/Sand/Seal Depth:		N/A	
Depth to Water/Time:		N/A	

Elevation:

Recovery	Sample Type	Sample No.	Blows/ 6 in.	PID	Sample No.	Depth in Feet	USGS Code	Soil Description:
						1		ASPHALT with base Gravels
						2		
						3	GP	Grayish brown slightly moist Sandy GRAVEL.
						4		
						5		
				0.0	B3-7	7	CL	Reddish brown slightly moist Sandy CLAY.
						8		
						9		
				0.0		10		
						11	SC	Greenish gray Clayey moist SAND with Gravel.
				70	B3-12	12		
						13		TD @ 12' No groundwater encountered.
						14		
						15		
						16		
						17		
						18		
						19		
						20		



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 pre-purge 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
xylene	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

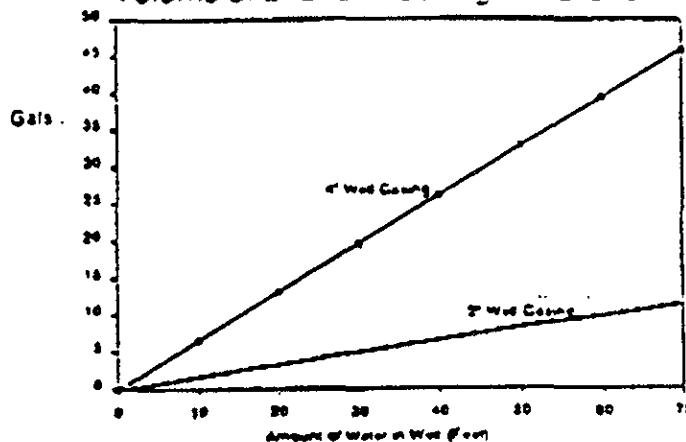
# Groundwater Monitor Well Sampling & Field Data Sheet

Location No. 1600 63rd St, Emeryville Date: 7/13/94 Time: \_\_\_\_\_  
 Sample No. MW2(a-c) & MW2E Weather: \_\_\_\_\_  
 Project/Client: Wareham Property Group Conditions Warm  
 Location: 1600 63rd, Emeryville Air Temperature \_\_\_\_\_  
 Job No. 54012c Personnel F. Hayden / Precision Sampling

### WELL INFORMATION

Casing, Dia.: 4 inch Intake, Diameter: \_\_\_\_\_  
 Stainless Steel  Stainless Steel  
 Steel  Steel  
 PVC  PVC  
 Teflon  Teflon  
 Other \_\_\_\_\_  Other \_\_\_\_\_  
 Water Level: 7.12  
 Total Depth: 20  
 Measuring Device  
 M-Scope  Well Clean to Bottom  
 Other \_\_\_\_\_  yes,  no  
 Volume of Water in Casing  Well in Good Condition  
 Datum:  yes,  no  
 Top of Surf. Casing  Surface Protection:  
 Top of Well Casing  Clean  Condition \_\_\_\_\_  
 Other \_\_\_\_\_  Lock  yes,  no

Volume of 2" and 4" Casing in Gallons



### Purging Data:

Method:  Bladder Pump  Tubing/Rope  Teflon  
 Bailor  Polypropylene  
 Submersible Pump  Nylon  
 Peristaltic Pump  Other \_\_\_\_\_  
 Other \_\_\_\_\_  
 Materials: Pump/Bailor  
 Teflon  
 Stainless Steel  
 PVC  
 Other \_\_\_\_\_  
 Pumping Rate \_\_\_\_\_  
 Elapsed Time \_\_\_\_\_  
 Volume Pumped 24 gallons  
 Well Evacuated  yes,  no  
 Number of Well Volumes Purged 3 1/2  
 Purging Equipment  
 Dedicated  
 Prepared Off-Site  
 Field Cleaned  
 Time Series Data  

Measurement	1	2	3	4
Well Volumes	1			
Water Temp.	72	74	74	
pH	4.2	4.4	4.4	
Other cond	1750	2300	1900	

### Sampling Data:

Method:  Bladder Pump  Teflon  
 Bailor  Polypropylene  
 Submersible Pump  Nylon  
 Peristaltic Pump  Other \_\_\_\_\_  
 Other \_\_\_\_\_  
 Materials: Pump/Bailor  
 Teflon  
 Stainless Steel  
 PVC  
 Other \_\_\_\_\_  
 Materials: Tubing/rope  Method \_\_\_\_\_  
 Sampling Equipment  
 Dedicated  
 Prepared Off-Site  
 Field Cleaned  
 Metals Sample Field Filtered  
 Yes  
 No  
 Physical & Chemical Data:  
 Appearance:  
 Clear  
 Turbid  
 Color \_\_\_\_\_  
 Immiscible Product  
 Other \_\_\_\_\_  
 Filed Condition of Sample  
 Temp 74  
 pH 4.4  
 Other cond 1900

### Certification:

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

APPENDIX C  
LABORATORY ANALYTICAL REPORTS





## L a b o r a t o r y   R e p o r t

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. % Rec
B2-12									
Chlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
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			
1,2-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
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									
Petroleum Hydrocarbons	MODIFIED 8015	ND	mg/Kg		2 LS	7/22/94			
Volatile Aromatics 8020	EPA 8020, SW-846								
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			
Toluene	EPA 8020	100	ug/Kg		5 LS	7/21/94			
Chlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
Total Xylenes	EPA 8020	470	ug/Kg		5 LS	7/21/94			
1,3-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
1,2-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
1,4-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
Ethylbenzene	EPA 8020	140	ug/Kg		5 LS	7/21/94			
B4-7									
B4-12									
Petroleum Hydrocarbons	MODIFIED 8015	ND	mg/Kg		2 LS	7/22/94			
Volatile Aromatics 8020	EPA 8020, SW-846								
Methyl-T-butyl ether	EPA 8020	NA	ug/Kg		25 LS	7/21/94			
Benzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
Toluene	EPA 8020	18	ug/Kg		5 LS	7/21/94			
Chlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
Total Xylenes	EPA 8020	100	ug/Kg		5 LS	7/21/94			
1,3-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
1,2-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
1,4-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
Ethylbenzene	EPA 8020	17	ug/Kg		5 LS	7/21/94			
MW2 (9-C)									
Volatile Aromatics 602									

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

L a b o r a t o r y R e p o r t

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. % Rec
MW2 (9-C)									
Methyl-T-butyl ether	EPA 602	NA	ug/L		5 LS	7/21/94			
Benzene	EPA 602	2	ug/L		1 LS	7/21/94			
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-Dichlorobenzene	EPA 602	ND	ug/L		1 LS	7/21/94			
1,4-Dichlorobenzene	EPA 602	ND	ug/L		1 LS	7/21/94			
Ethylbenzene	EPA 602	7	ug/L		1 LS	7/21/94			
Petroleum Hydrocarbons	MODIFIED 8015	ND	mg/L		2 LS	7/22/94			
MW2E									
Petroleum Hydrocarbons	MODIFIED 8015	6.0	mg/L		2 LS	7/22/94			

\* 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.

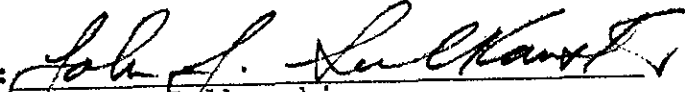
L a b o r a t o r y   R e p o r t

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



THE WAREHAM PROPERTY GROUP

LOP 147

EMERYVILLE  
25 JUN 1995 11:21

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,

*Dan Nourse an*

Daniel M. Nourse, for  
**THE WAREHAM PROPERTY GROUP**

DN/an

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



ENVIRONMENTAL  
FBI  
95 JUN 30 PM 2:24

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:

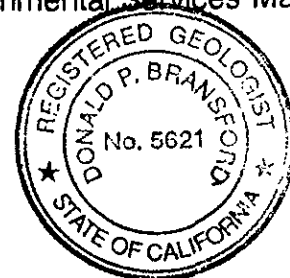
Enclosed is a report prepared by CERTIFIED Engineering & Testing Company, Incorporated (CERTIFIED), for the above referenced site. CERTIFIED was retained by Wareham Property Group to conduct a subsurface investigation at the above-referenced site.

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 pre-purge 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:

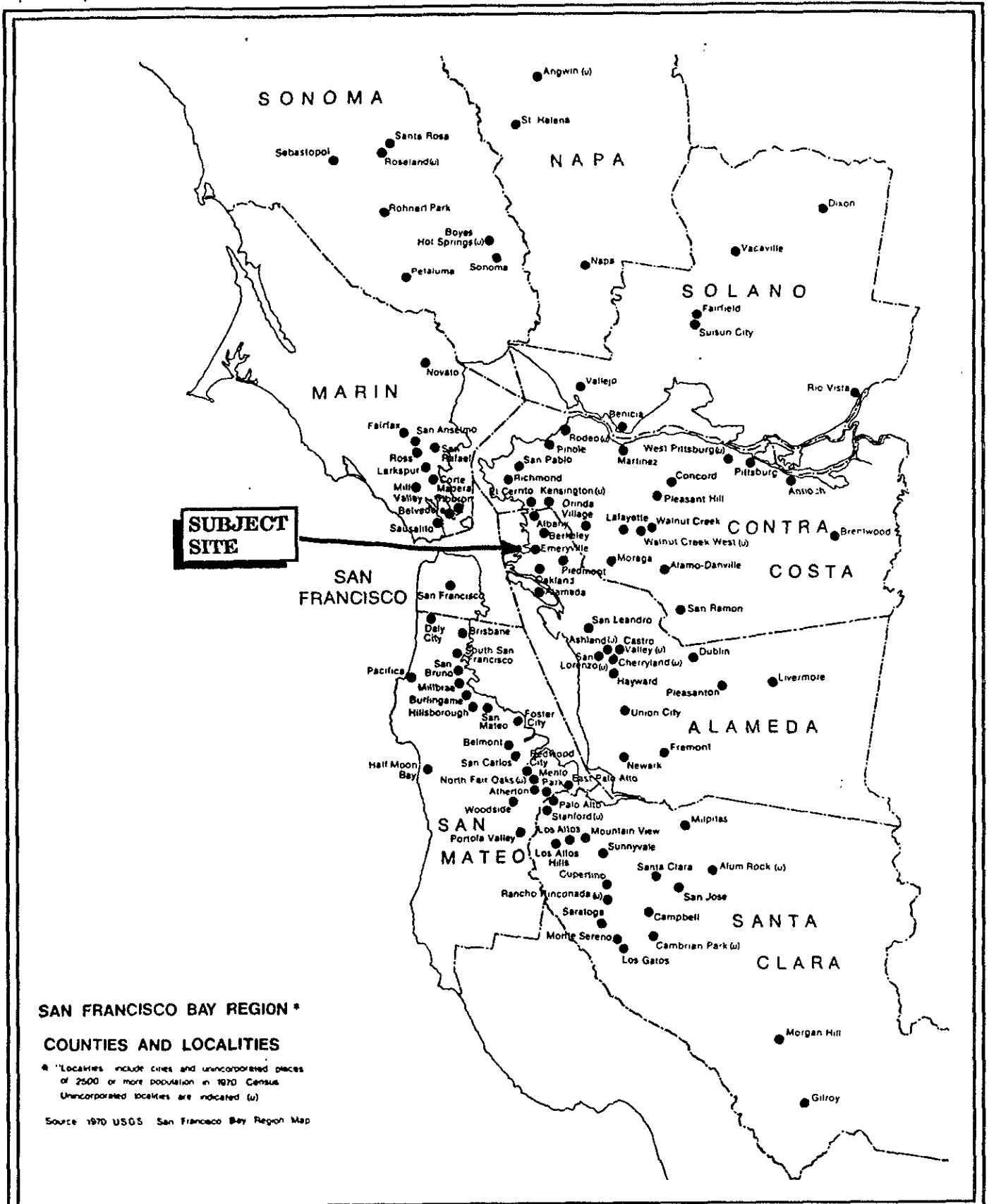
1. Results reported in milligrams per kilogram.
2. The samples are reported by the laboratory to contain petroleum hydrocarbons with a distillation range similar to gasoline. They are reported to contain a petroleum peak pattern which resembles varsol.

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
xylene	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.

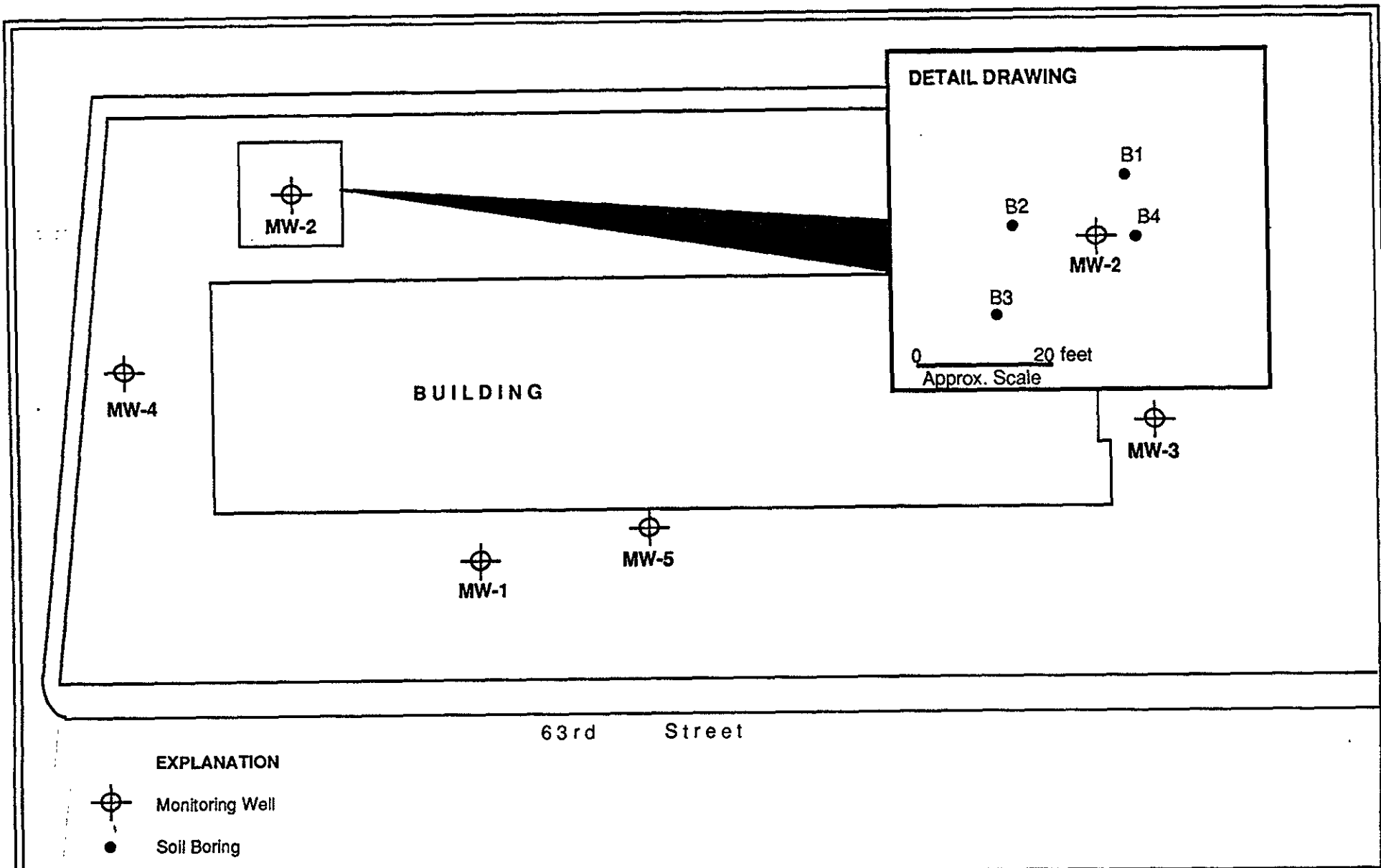


**Recon**  
 Environmental Corp.  
 7000 Marina Blvd.  
 Fourth Floor  
 Brisbane, CA 94005



Scale: 1" = 15 mi.

**FIGURE 1.**  
**LOCATION MAP**



**Recon**  
Environmental Corp.

7000 Marina Blvd., 4th Floor  
Brisbane, CA 94005



0 50 feet  
Approx. Scale

**FIGURE 2.**  
**SOIL BORING LOCATION MAP**

Source: Harding-Lawson Assoc., 1989

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.

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Environmental Corp.

**Legend**

	GW		ML
	GP		CL
	GM		OL
	GC		
	SW		MH
	SP		CH
	SM		OH
	SC		Pt

Job No.: S40120	Location: 1600 63rd Street Emeryville, CA		
Drilling Method: Hydraulic Hammer	Drilling Company: Precision		Boring # B3
Drilling Crew: Michael & Jose	Geologist: Fred Hayden		Sheet # 1
Sampling Method: Brass Sleeves	Casing/Sand/Seal Depth: N/A   N/A   N/A		Drilling Time: 8:30 AM
Depth to Water/Time: N/A	Date 7/13/94		

Elevation:

Surface Conditions: Asphalt
Soil Description:

Recovery	Sample Type	Sample No.	Blows/6 in.	PID	Sample No.	Depth in Feet	USGS Code	Soil Description
						1		ASPHALT with base Gravels
						2		
						3	GP	Grayish brown slightly moist Sandy GRAVEL.
						4		
						5		
				0.0	B3-7	6		
						7	CL	Reddish brown slightly moist Sandy CLAY.
						8		
						9		
				0.0		10		
						11	SC	Greenish gray Clayey moist SAND with Gravel.
				70	B3-12	12		
						13		TD @ 12' No groundwater encountered.
						14		
						15		
						16		
						17		
						18		
						19		
						20		







APPENDIX B

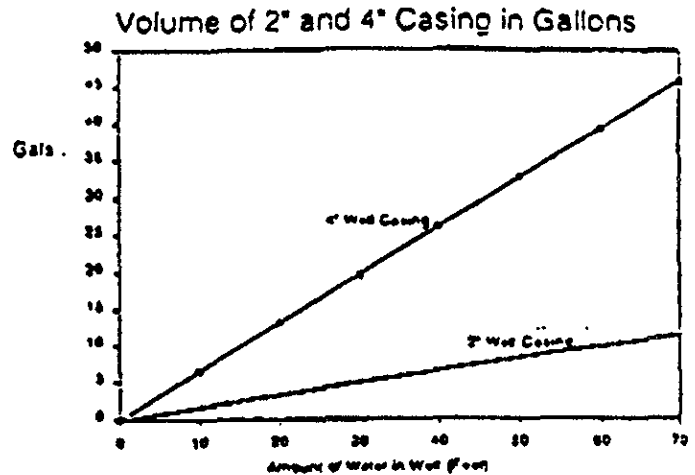
GROUNDWATER MONITOR WELL SAMPLING AND FIELD DATA SHEET

# Groundwater Monitor Well Sampling & Field Data Sheet

Location No. 1600 63rd St, Emeryville Date: 7/13/94 Time: \_\_\_\_\_  
 Sample No. MW2(a-c) & MW2E Weather: \_\_\_\_\_  
 Project/Client: Wareham Property Group Conditions: Warm  
 Location: 1600 63rd, Emeryville Air Temperature \_\_\_\_\_  
 Job No. 540120 Personnel: F. Hayden / Precision Sampling

### WELL INFORMATION

Casing, Dia.: 4 inch Intake, Diameter: \_\_\_\_\_  
 Stainless Steel  
 Steel  
 PVC  
 Teflon  
 Other \_\_\_\_\_  
 Water Level: 7.12  
 Total Depth: 20  
 Measuring Device  
 M-Scope  
 Other \_\_\_\_\_  
 Volume of Water in Casing \_\_\_\_\_  
 Datum:  
 Top of Surf. Casing  
 Top of Well Casing  
 Other \_\_\_\_\_  
 Well Conditions:  
 Well Clean to Bottom  
 yes,  no  
 Well in Good Condition  
 yes,  no  
 Surface Protection:  
 Clean  yes,  no  
 Condition \_\_\_\_\_  
 Lock  yes,  no



### Purging Data:

Method:  
 Bladder Pump  
 Bailor  
 Submersible Pump  
 Peristaltic Pump  
 Other \_\_\_\_\_  
 Materials:  
 Pump/Bailor  
 Teflon  
 Stainless Steel  
 PVC  
 Other \_\_\_\_\_  
 Tubing/Rope  
 Teflon  
 Polypropylene  
 Nylon  
 Other \_\_\_\_\_  
 Pumping Rate \_\_\_\_\_  
 Elapsed Time \_\_\_\_\_  
 Volume Pumped 29 gallons  
 Well Evacuated  yes,  no  
 Number of Well Volumes \_\_\_\_\_  
 Purged 3 1/2  
 Purging Equipment  
 Dedicated  
 Prepared Off-Site  
 Field Cleaned  
 Time Series Data  

Measurement:	1	2	3	4
Well Volumes	1			
Water Temp.	7.2	7.4	7.4	
pH	4.2	4.4	4.4	
Other cond	1750	2300	1900	

### Sampling Data:

Method:  
 Bladder Pump  
 Bailor  
 Submersible Pump  
 Peristaltic Pump  
 Other \_\_\_\_\_  
 Materials: Pump/Bailor  
 Teflon  
 Stainless Steel  
 PVC  
 Other \_\_\_\_\_  
 Materials: Tubing/rope  
 Teflon  
 Polypropylene  
 Nylon  
 Other \_\_\_\_\_  
 Sampling Equipment  
 Dedicated  
 Prepared Off-Site  
 Field Cleaned  
 Metals Sample Field Filtered  
 Yes  
 No  
 Method \_\_\_\_\_  
 Physical & Chemical Data:  
 Appearance:  
 Clear  
 Turbid  
 Color \_\_\_\_\_  
 Immiscible Product  
 Other \_\_\_\_\_  
 Filed Condition of Sample  
 Temp 74  
 pH 4.4  
 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

L a b o r a t o r y   R e p o r t

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

CERTIFIED - SAN FRANCISCO  
 70000 Marina Blvd.

Brisbane CA 94005-0000  
 Fred Hayden/Don Barnsford

Permit No.  
 Cust. P.O.  
 Project No. S40120

Report Date 8/03/94  
 Date Received 7/14/94  
 Customer No. 8888-0  
 Work Order No. 9407-00136.  
 Invoice No. LB0000  
 Sampled Date 7/13/94  
 Sampled Time 00:00

Subject: Laboratory Results

Quality Control Results

Test Performed	Method	Results	Units	MDL	Tech	Analy. Date	Dup % Rec	Spk % Rec	Std. % Rec
B1-7									
B1-12									
Petroleum Hydrocarbons	MODIFIED 8015	ND	mg/Kg		2 LS	7/22/94			
Volatile Aromatics 8020	EPA 8020, SW-846								
Methyl-T-butyl ether	EPA 8020	NA	ug/Kg		25 LS	7/21/94			
Benzene	EPA 8020	11	ug/Kg		5 LS	7/21/94			
Toluene	EPA 8020	100	ug/Kg		5 LS	7/21/94			
Chlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
Total Xylenes	EPA 8020	260	ug/Kg		5 LS	7/21/94			
1,3-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
1,2-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
1,4-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
Ethylbenzene	EPA 8020	140	ug/Kg		5 LS	7/21/94			
B2-7									
B2-12									
Petroleum Hydrocarbons	MODIFIED 8015	ND	mg/Kg		2 LS	7/22/94			
Volatile Aromatics 8020	EPA 8020, SW-846								
Methyl-T-butyl ether	EPA 8020	NA	ug/Kg		25 LS	7/21/94			
Benzene	EPA 8020	13	ug/Kg		5 LS	7/21/94			
Toluene	EPA 8020	38	ug/Kg		5 LS	7/21/94			

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

## L a b o r a t o r y   R e p o r t

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. % Rec
4 B2-12									
Chlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
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			
1,2-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
1,4-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
Ethylbenzene	EPA 8020	40	ug/Kg		5 LS	7/21/94			
5 B3-7									
B3-12									
Petroleum Hydrocarbons	MODIFIED 8015	ND	mg/Kg		2 LS	7/22/94			
Volatile Aromatics 8020	EPA 8020, SW-846								
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			
Toluene	EPA 8020	100	ug/Kg		5 LS	7/21/94			
Chlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
Total Xylenes	EPA 8020	470	ug/Kg		5 LS	7/21/94			
1,3-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
1,2-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
1,4-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
Ethylbenzene	EPA 8020	140	ug/Kg		5 LS	7/21/94			
B4-7									
B4-12									
Petroleum Hydrocarbons	MODIFIED 8015	ND	mg/Kg		2 LS	7/22/94			
Volatile Aromatics 8020	EPA 8020, SW-846								
Methyl-T-butyl ether	EPA 8020	NA	ug/Kg		25 LS	7/21/94			
Benzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
Toluene	EPA 8020	18	ug/Kg		5 LS	7/21/94			
Chlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
Total Xylenes	EPA 8020	100	ug/Kg		5 LS	7/21/94			
1,3-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
1,2-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
1,4-Dichlorobenzene	EPA 8020	ND	ug/Kg		5 LS	7/21/94			
Ethylbenzene	EPA 8020	17	ug/Kg		5 LS	7/21/94			
MW2 (9-C)									
Volatile Aromatics 602									

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## L a b o r a t o r y R e p o r t

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. % Rec
9 MW2 (9-C)									
Methyl-T-butyl ether	EPA 602	NA	ug/L		5 LS	7/21/94			
Benzene	EPA 602	2	ug/L		1 LS	7/21/94			
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-Dichlorobenzene	EPA 602	ND	ug/L		1 LS	7/21/94			
1,4-Dichlorobenzene	EPA 602	ND	ug/L		1 LS	7/21/94			
Ethylbenzene	EPA 602	7	ug/L		1 LS	7/21/94			
Petroleum Hydrocarbons	MODIFIED 8015	ND	mg/L		2 LS	7/22/94			
1 MW2E									
Petroleum Hydrocarbons	MODIFIED 8015	6.0	mg/L		2 LS	7/22/94			

\* 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.

L a b o r a t o r y   R e p o r t

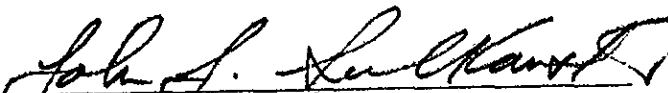
CERTIFIED - SAN FRANCISCO  
Work Order No.      9407-00136.

Report Date      8/03/94  
Quality Control Results

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

Authorized by:

  
John J. Sulkowski  
Manager, Laboratory Services

# CHAIN OF CUSTODY RECORD



Environmental Consultants & Laboratory Services  
A **STP** GROUP COMPANY

**Certified Engineering & Testing\* Company**  
25 Mathewson Drive • Weymouth, MA 02189  
(617) 337-7887 • Fax (617) 337-8237

SAMPLE SERIES #: 94-07-13C

DUE DATE: 7-27-94

COMPANY: Certified - Brisbane  
2000 Marine Blvd  
Brisbane CA 94005  
PHONE #: (415) 252-9900 FAX #: (415) 742-1033  
P.O. #: \_\_\_\_\_  
CLIENT CONTACT: Fred Hayden / Don Barnstorf  
CERTIFIED PROJECT #: 540120

- SAMPLE TYPE
- 1. WATER
  - 2. SOIL
  - 3. SLUDGE
  - 4. OIL

- CONTAINER TYPE
- P - PLASTIC
  - G - GLASS
  - V - VOA

ANALYSES

TPH9 (BTEX)  
TPH10 (BTEX)

CERTIFIED SAMPLE #	CLIENT SAMPLE IDENTIFICATION	SAMPLE TYPE	CONTAINER			SAMPLING		PRESERVATIVES	ANALYSES										COMMENTS	
			SIZE	TYPE	#	DATE	TIME													
1	B1-7	soil					7/13/94												HOLD	
2	B1-12			brass	1			X												
3	B2-7			brass	1														HOLD	
4	B2-12			brass	1			X												
5	B3-7			brass	1														HOLD	
6	B3-12			brass	1			X											HOLD	
7	B4-7			brass	1														HOLD	
8	B4-12			brass	1			X												
9	MW2 (g-c)	water	40ml		3			HCL X												
10	MW2 E		1 l		1				X											AM 10 51

RELINQUISHED BY: Fred Hayden DATE: 7/13/94 TIME: 1520  
RECEIVED BY: [Signature] DATE: 7/13/94 TIME: 1651

RELINQUISHED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_  
RECEIVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

SPECIAL INSTRUCTIONS:  
 RUSH DATE REQUIRED  
(ADDITIONAL COST MAY APPLY)  
 REGULAR  
(10 BUSINESS DAYS)

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