

PIERS



Environmental  
Services

# Quarterly Groundwater Monitoring Report

For

1721 Webster Street  
Oakland, CA 94612

3-6-95

Prepared For:

Mr. Leland Douglas  
DOUGLAS PARKING



March 6, 1995  
Project No. 9432

Douglas Parking Company  
1721 Webster Street  
Oakland, CA 94612

Attention: Mr. Lee Douglas

Re: **Quarterly Monitoring Well Sampling Report**  
**1721 Webster Street, Oakland, CA 94612**  
**1st Quarter, 1995**

Dear Mr. Douglas;

This report describes the sampling of monitoring wells at the above referenced site.

### INTRODUCTION

This report presents quarterly groundwater monitoring data for **1721 Webster Street, Oakland, CA 94612**. PIER'S Environmental Services, Inc. (**PIERS**) was retained to perform this sampling of the site monitoring wells. This sampling event took place on February 22, 1995. Previous reports are on file with the Alameda County Dept. of Health regarding the site investigation and history. Three monitoring wells currently exist on-site. **Figure 1** shows the location of the wells and the site configuration.

### FIELD SAMPLING AND LABORATORY METHODS

The following table briefly describes the current well status:

OIC  
El H<sub>2</sub>O  
to MSL

**Table 1. Monitoring Well Sampling Data**

<b>Well No.</b>	<b>Depth</b>	<b>Depth to Water</b>	<b>Casing Elev ft.*</b>	<b>Damage</b>	<b>Floating Product</b>
MW-1	26.78	20.69 ✓	29.73	None	None
MW-2	49.50	18.49 ✓	27.10	None	None
MW-3	50.00	20.09 ✓	29.25	None	None

# - Elevation in feet above or below MSL, City of Oakland Datum.

The samplers proceeded to purge well volumes (a calculation was done for each well following depth to water sounding measurements) of groundwater from the well using a disposable bailer. The well was then allowed to re-charge. Between each well volume, conductivity, pH, and water temperature readings were obtained and noted on the **Groundwater Sampling Information Sheets** (see **Appendix A**). Once the stabilization of the readings were noted the sample was collected from the well. Purge water was stored on-site in barrels. The well sampling information sheet containing data on temperature, conductivity, pH, depth to water, and well volumes purged can be found in **Appendix A**. The legal chain-of-custody and a the Laboratory Analysis Results can be found in **Appendix B**.

A new disposable bailer was used to obtain each well groundwater sample which was placed in (2) 40ml vov clear glass bottles leaving no headspace, and immediately placed on ice for shipment to Hull Development Labs, Inc. in San Jose, California (a **State Certified Testing Lab**) under a legal chain-of-custody.

Hull Labs tested the groundwater samples using EPA Methods 8015M and 8020 for Total Petroleum Hydrocarbons as Gasoline (**TPHg**), Benzene, Toluene, Ethylbenzene and Xylene (**BTEX**).

**Groundwater Gradient**

Groundwater elevation contours were plotted from the measurements, to a known datum. The groundwater flow direction was measured and a gradient calculated. The regional groundwater flow gradient is generally north westerly. Measured gradient is represented on **Figure 1** attached hereto.

W-1

**ANALYTICAL LABORATORY RESULTS**

The analytical results of the groundwater samples revealed the following (see **Table 2**);

2-22-95

Table 2. Groundwater Sample Analytical Data

Well No.	TPHG	B	T	E	X
	----- all ----- ug/l -----				
MW-1	ND ✓	ND ✓	ND ✓	ND ✓	ND ✓
MW-2	98,000 ✓	8,400 ✓	16,000	2,000	2,600
MW-3	21,000 ✓	400 ✓	150	24	62

ND - None detected  
 NS - Not sampled  
 ug/l - micrograms per liter.

The laboratory analysis reports are presented in **Appendix B**.

**DISCUSSION**

Plots of groundwater elevation contours indicate an easterly flow @ approximately .008 ft. per foot.

MW-1 remains Non-Detect for all contaminates tested. Levels of TPH in MW-2 have increased significantly since the last sampling event. TPH constituents in MW-3 have significantly declined since the last sampling event. These concentration variations are attributed to residuals present and their movement caused by the recent heavy precipitation.

**MONITORING SCHEDULE**

A quarterly groundwater monitoring program is recommended to continue for this site.

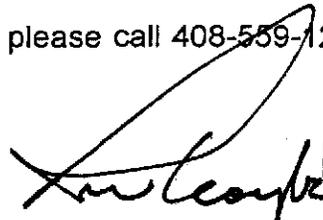
**LIMITATIONS**

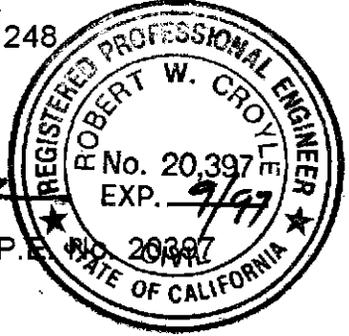
This quarterly sampling and report for this site was performed using recommended current guidance documents of the Regional Water Quality Control Board and the State. The statement, conclusions, and recommendations are based on present site conditions. Conditional changes may occur through time by natural or manmade processes on this or adjacent properties. PIERS Environmental Services, Inc. is not responsible for laboratory errors and no warranty or guarantee is implied thereon.

If you have any questions concerning this report, please call 408-559-1248

Sincerely,  
PIERS Environmental Services, Inc.

  
Stuart G. Solomon, Principal

  
Robert Croyle, R.P.E.



**Attachments:**

Table 1. Monitoring Well Sampling Data (within report)

Table 2. Groundwater Sample Analytical Data (within report)

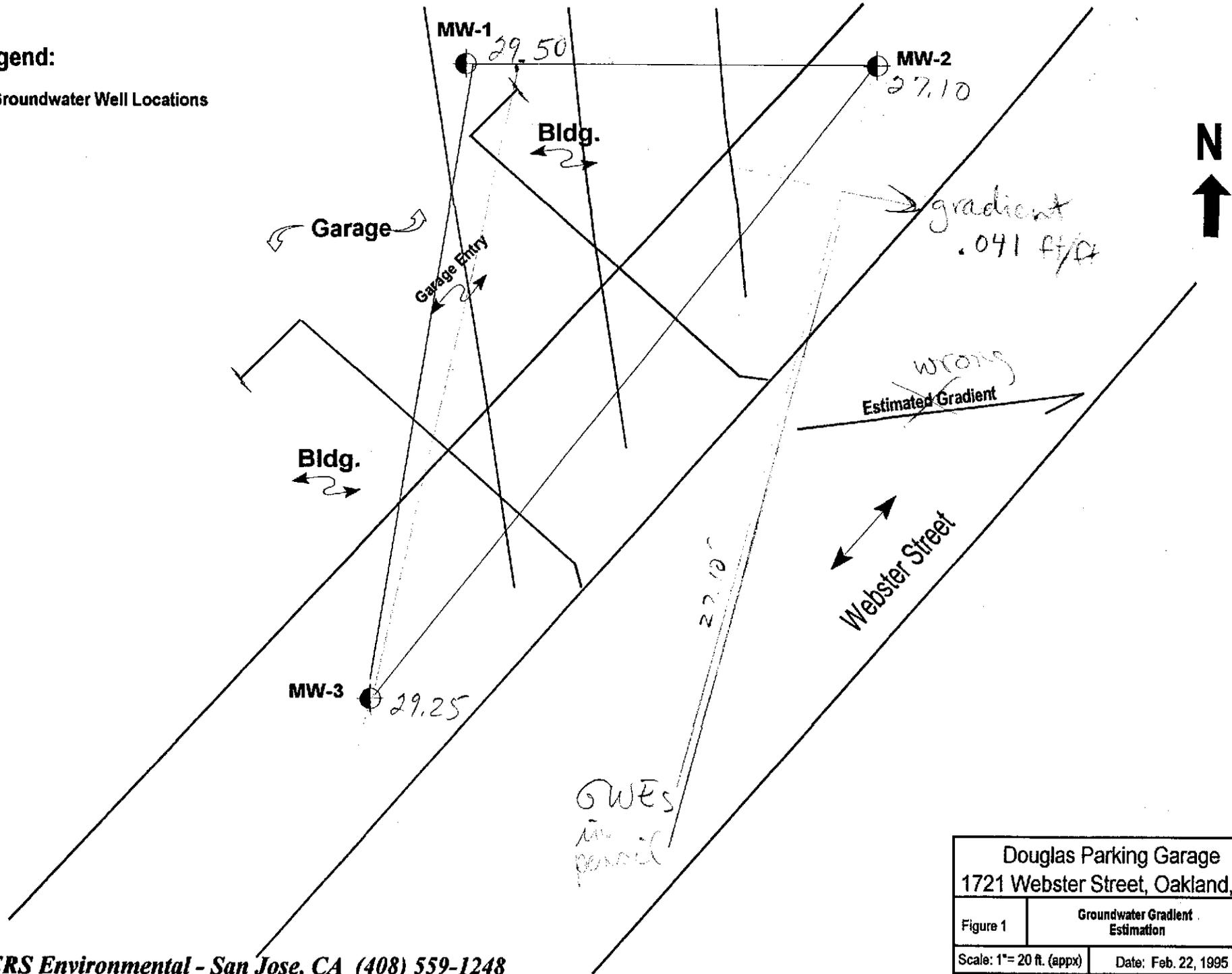
Figure 1. Site Map with Well Locations and Contour Map

Appendices: A. Groundwater Sampling Information Sheets

B. Chemical Analytical Data and Chain-of-Custody Forms

**Legend:**

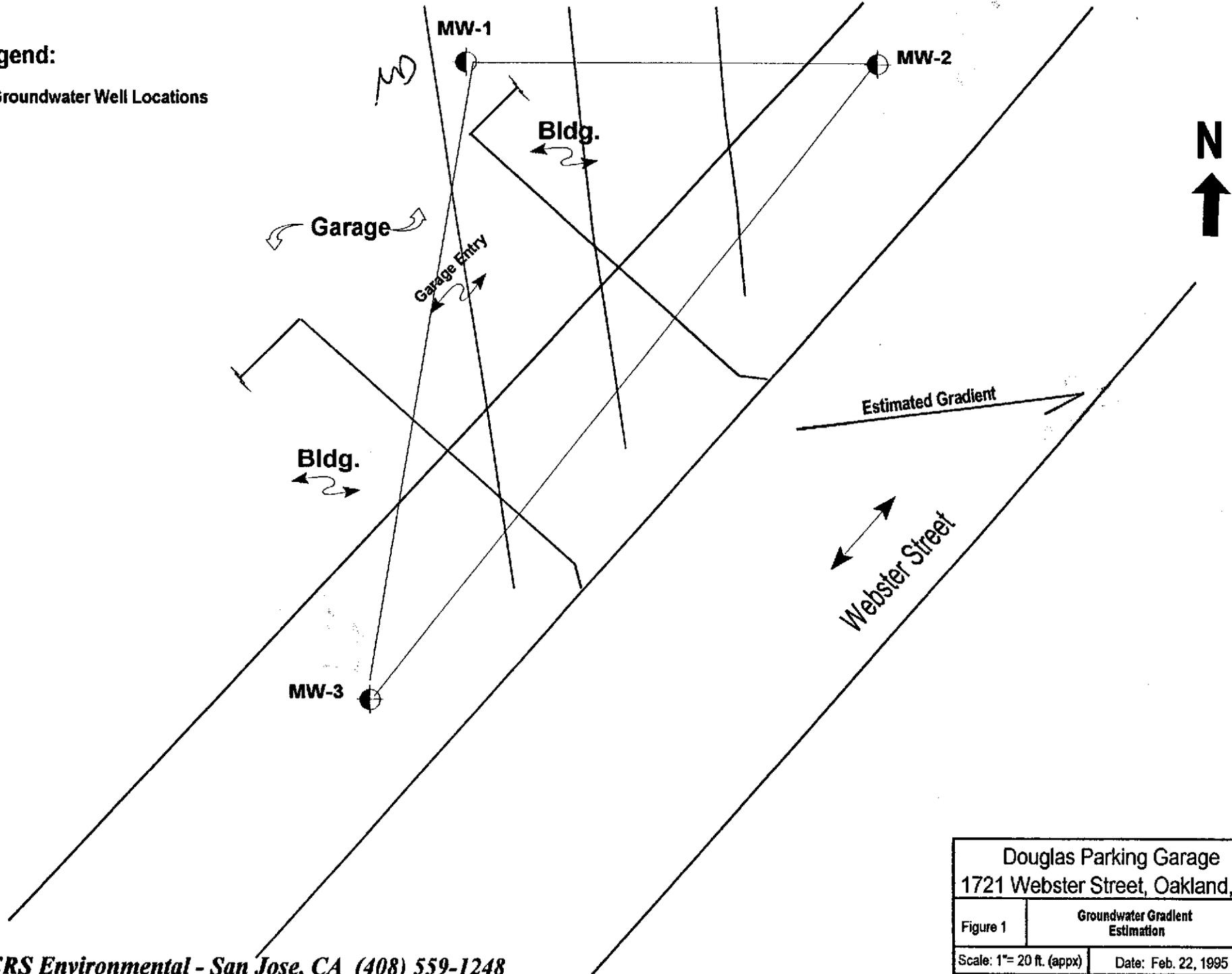
● Groundwater Well Locations



Douglas Parking Garage 1721 Webster Street, Oakland, CA	
Figure 1	Groundwater Gradient Estimation
Scale: 1" = 20 ft. (appx)	Date: Feb. 22, 1995

**Legend:**

● Groundwater Well Locations



Douglas Parking Garage 1721 Webster Street, Oakland, CA	
Figure 1	Groundwater Gradient Estimation
Scale: 1"= 20 ft. (appx)	Date: Feb. 22, 1995

**APPENDIX A**

**Groundwater Sampling Information Sheets**

1	GEN-TECH ENVIRONMENTAL		1936 CAMDEN AVE #1, SAN JOSE, CA 95124					408-559-1248		
2										
3	WATER-QUALITY SAMPLING INFORMATION									
4										
5	Project Name	Douglas Webster St.				Project No.	9432			
6	Date	2-22-95				Sample No.	MW# 2-6WS			
7	Samplers Name	Chris Solomon								
8	Sampling Location	1721 Webster St. Oak.								
9	Sampling Method	Disp. Bailor								
10	Analyses Requested									
11	Number/Types of Sample Bottles used									
12	Method of Shipment									
13										
14	GROUND WATER				SURFACE WATER					
15	Well No.	MW# 1			Stream Width					
16	Well Diameter (in.)	2"			Stream Depth					
17	Depth to Water Static (ft.)	20.69'			Stream Velocity					
18	Water in Well Box	NONE			Rained Recently					
19	Well Depth (ft.)	26.78'			Other					
20	Height of Water	6.09'								
21	Column in Well	.974			✓	2-inch casing = 0.16 gal/ft				
22	Water Volume in Well	.974 gals			4-inch casing = 0.65 gal/ft					
23	Well Head Elevation						5-inch casing = 1.02 gal/ft			
24	Redevelop. Well Depth						6-inch casing = 1.47 gal/ft			
25	Silt Removal									
26										
27		TIME	DEPTH TO	VOLUME	TEMP.	C. 700 PH	COND.	OTHER	REMARKS	
28			WATER (FEET)	WITHDRAWN	( F )	(S.U.)	(MHOS/CM)	X VOL.		
29		1:21	20.69'	0	66.9	6.43	6.28	X 0	Clear, NO ODER	
30		1:27	/	1.0	67.0	6.56	5.50	X 1		
31		1:29	/	2.0	66.7	6.64	4.97	X 2	Turbid, Still NO ODER	
32		1:31	/	3.0	66.9	6.71	4.63	X 3		
33		1:34	21.20'	4.0	66.6	6.78	4.78	X 4	Reaching Stallo	
34										
35										
36										
37										
38										
39										
40	COMMENTS:									
41										

GEN-TECH ENVIRONMENTAL 1936 CAMDEN AVE #1, SAN JOSE, CA 95124 408-550-1248

WATER-QUALITY SAMPLING INFORMATION

Project Name Douglas Webster St. Project No. 9432  
 Date 2-22-95 Sample No. MU#2-6US  
 Samplers Name Chris Solomon  
 Sampling Location 1721 Webster St. OAK.  
 Sampling Method Disp. Bailen  
 Analyses Requested Tph-6, Beter  
 Number/Types of Sample Bottles used 2-40ml vials  
 Method of Shipment Packed on Ice

GROUND WATER		SURFACE WATER	
Well No.	MU#2	Stream Width	
Well Diameter (in.)	2"	Stream Depth	
Depth to Water Static (ft.)	18.49'	Stream Velocity	
Water in Well Box	None	Rained Recently	
Well Depth (ft.)	27.19'	Other	
Height of Water	8.70'		
Column in Well	1.390	2-inch casing = 0.16 gal/ft	
Water Volume in Well	1.390 gals	4-inch casing = 0.65 gal/ft	
Well Head Elevation		5-inch casing = 1.02 gal/ft	
Redevelop. Well Depth		6-inch casing = 1.47 gal/ft	
Silt Removal			

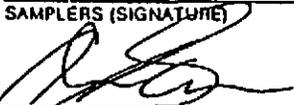
TIME	DEPTH TO WATER (FEET)	VOLUME WITHDRAWN	TEMP. (F)	PH (S.U.)	COND. (MHOS/CM)	OTHER	REMARKS
1:56	18.49'	0	66.5	6.44	6.55	X	Strong Gas ODER, Clear
2:00	/	1.5	68.7	6.53	6.86	X	Turbid, Slight Flating product
2:03	/	3.0	68.8	6.53	6.56	X	2
2:05	/	4.5	68.7	6.54	6.40	X	3 Grey, Turbid w/ odor
2:09	18.72'	6.0	68.6	6.61	6.61	X	4 Stable, for sample

COMMENTS:

A	B	C	D	E	F	G	H	I	J	K	L
1	GEN-TECH ENVIRONMENTAL			1936 CAMDEN AVE. #1, SAN JOSE, CA 95124						408-550-1248	
2											
3	WATER-QUALITY SAMPLING INFORMATION										
4											
5	Project Name	Douglas Webster St.				Project No.	9432				
6	Date	2-22-95				Sample No.	MW#3 - GUS				
7	Samplers Name	Chris Solomon									
8	Sampling Location	1722 Douglas St. Oak.									
9	Sampling Method	Disp. Bailen									
10	Analyses Requested	Tph - 6 / Beter									
11	Number/Types of Sample Bottles used	2-40 ml vials									
12	Method of Shipment	Packed on Ice									
13											
14	GROUND WATER					SURFACE WATER					
15	Well No.	MW#3				Stream Width					
16	Well Diameter (in.)	2"				Stream Depth					
17	Depth to Water Static (ft.)	20.09'				Stream Velocity					
18	Water in Well Box	None				Rained Recently					
19	Well Depth (ft.)	28.17'				Other					
20	Height of Water	8.08'									
21	Column in Well	1.288				2-inch casing = 0.16 gal/ft					
22	Water Volume in Well	1.288 gals				4-inch casing = 0.65 gal/ft					
23	Well Head Elevation					5-inch casing = 1.02 gal/ft					
24	Redevelop. Well Depth					6-inch casing = 1.47 gal/ft					
25	Silt Removal										
26											
27		TIME	DEPTH TO WATER (FEET)	VOLUME WITHDRAWN	TEMP. (F)	G-700 PH (S.U.)	X 100 COND. (MHOS/CM)	OTHER		REMARKS	
28								X	VOL		
29		2:32	20.09'	0	66.9	6.64	3.38	X	0	Clear, Slight ODER	
30		2:36	/	1.0	67.3	6.69	3.26	X	1		
31		2:38	/	2.0	67.6	6.70	3.24	X	2	Very turbid	
32		2:40	/	3.0	67.7	6.71	3.18	X	3		
33		2:43	20.20	4.0	67.3	6.70	3.17	X	4	Stable	
34											
35											
36											
37											
38											
39											
40	COMMENTS:										
41											

**APPENDIX B**  
**CHEMICAL ANALYTICAL DATA AND**  
**CHAIN-OF-CUSTODY FORMS**

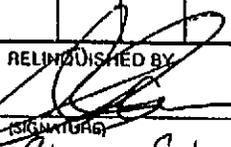
PROJ. MGR. Stuart Salomon  
 COMPANY G.T.E.  
 ADDRESS 1936 Camden Ave Sw #1  
San Jose, CA 95124

SAMPLERS (SIGNATURE)  (PHONE NO.) (408) 559-1220

### ANALYSIS REPORT

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)	METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)	NUMBER OF CONTAINERS	
MW#1-GWS	2-22-98	1:40	water			X																2
MW#2-GWS	"	2:12	"			X																2
MW#3-GWS	"	2:48	"			X																2

PROJECT INFORMATION		SAMPLE RECEIPT			
PROJECT NAME: <u>Douglas Webster St.</u>		TOTAL NO. OF CONTAINERS <u>6</u>		RECD GOOD CONDITION/COLD	
PROJECT NUMBER <u># 9432</u>		HEAD SPACE		CONFORMS TO RECORD	
P.O. #		TAT		STANDARD S-DAY	
SPECIAL INSTRUCTIONS/COMMENTS:		24		48 72 OTHER	

RELINQUISHED BY  CHRIS SALOMON G.T.E.	1. 4:09 (TIME) 2-22-98 (DATE)	RELINQUISHED BY <u>Cheryl Trillo</u> CHERYL TRILLO GTE	2. 7/23 (TIME) (DATE)	RELINQUISHED BY	(SIGNATURE)	(TIME)	(DATE)
RECEIVED BY <u>Cheryl Trillo</u> CHERYL TRILLO GTE	1. 8:04 (TIME) 7/23/98 (DATE)	RECEIVED BY <u>Ruben Ornelas</u> RUBEN ORNELAS AERO	2. 1436 (TIME) 7/23/98 (DATE)	RECEIVED BY (LABORATORY)	(SIGNATURE)	(TIME)	(DATE)



# Hull Development Labs, Inc.

Attn: Stuart Solomon  
 Gen-Tech Environmental  
 2242 Camden Ave., Suite 202  
 San Jose, CA 95124

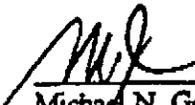
Date:	3/3/95
Date Received:	2/23/95
Date Analyzed:	2/25/95
Project Name:	Douglas Webster Street ✓
Project Number	9432
Sampled By:	Client

## Certified Analytical Report

### Water Sample Analysis:

Test	MW #1 GWS	MW#2 GWS	MW#3 GWS	Units	MDL	EPA Method #
Sample Matrix	Water	Water	Water			
Sample Date	02/22/95	02/22/95	02/22/95			
Sample Time	1:40	2:12	2:48			
Lab #	B2815	B2816	B2817			
DF-Gas	1	500	40			
TPH-Gas	ND	98,000	21,000	µg/liter	50.0 µg/l	8015M
Benzene	ND	8,400	400	µg/liter	0.3 µg/l	8020
Toluene	ND	16,000	150	µg/liter	0.3 µg/l	8020
Ethyl Benzene	ND	2,000	24	µg/liter	0.3 µg/l	8020
Xylenes	ND	2,600	62	µg/liter	0.3 µg/l	8020

1.  $PQL = DF \times MDL$
2. Analysis performed by Hull Development Labs, Inc. (CAELAP #1369)

  
 Michael N. Golden, Lab Director

DF=Dilution Factor  
 MDL=Method Detection Limit

PQL=Practical Quantitation Limit  
 ND=None Detected at or above PQL

HULL DEVELOPMENT LABS INC.

1149 Minnesota ave  
San Jose, CA 95125QUALITY CONTROL RESULTS SUMMARY  
FOR GASOLINE ANALYSIS

GASOLINE

QC sample No.: BLANK SPIKE &amp; DUP

Date analyzed: 02-25-95

Matrix: WATER

Units: ug/L

Dilution factor: 1

COMPOUND	SA	SR	MS	MS	MSD	MSD	RPD	QC LIMITS (ADVISORY)	
	ug/L	ug/L	ug/L	PR	ug/L	PR		RPD	PR
GASOLINE	484	0	484	100	501	104	4	25	50-150

MS = Spike sample

NC = Not calculated

MSD = Spike sample duplicate

SR = Sample result

\*\* = Out of limits

SA = Spike added

$$RPD = 100 \times (MS - MSD) / ((MS + MSD) / 2)$$

$$PR = 100 \times ((MS \text{ or } MSD) - SR) / SA$$

FORM III VOL

HULL DEVELOPMENT LABS INC.

1149 Minnesota ave  
San Jose CA 95125QUALITY CONTROL RESULTS SUMMARY  
BTEX

QC sample No.: BLANK SPIKE &amp; DUP

Date analyzed: 02-25-95

Matrix: WATER

Units: ug/L

Dilution factor: 1

COMPOUND	SA	SR	MS	MS	MSD	MSD	RPD	QC LIMITS (ADVISORY)	
	ug/L	ug/L	ug/L	PR	ug/L	PR		RPD	PR
BENZENE	20	0	22	110	22	110	0	25	50-150
TOLUENE	20	0	20	100	21	105	5	25	50-150

MS = Spike sample

NC = Not calculated

MSD = Spike sample duplicate

SR = Sample result

\*\* = Out of limits

SA = Spike added

$$RPD = 100 \times (MS - MSD) / ((MS + MSD) / 2)$$

$$PR = 100 \times ((MS \text{ or } MSD) - SR) / SA$$

FORM III VOL