



(Formerly GROWTH/WRA)

SAN FRANCISCO DISTRICT
536 Stone Road, Suite J
Benicia, CA 94510
(707) 745-0171
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THIRD QUARTER MONITORING REPORT

PROJECT SITE

**HILL LUMBER COMPANY
1259 BRIGHTON AVENUE
ALBANY, CALIFORNIA**

PREPARED FOR:

**MR. RALPH HILL
HILL LUMBER COMPANY
1259 BRIGHTON AVENUE
ALBANY, CALIFORNIA**

GROWTH Project # 94-157-1660

February 3, 1995



(*Formerly CEC/WRA*)

February 3, 1995

REF: 157-1660

Mr. Ralph Hill
Hill Lumber Company
1259 Brighton Ave.
Albany, CA 94706
(510) 525-1000

SUBJECT: THIRD QUARTER GROUNDWATER SAMPLING RESULTS FOR THREE MONITORING WELLS LOCATED AT 1259 BRIGHTON AVENUE, ALBANY, CALIFORNIA.

Dear Mr. Hill:

Enclosed is a copy of the third quarter groundwater monitoring results from the January 31, 1995 sampling of monitoring wells, MW-1, MW-2, and MW-3, (Formerly Piezometer 3), located at 1259 Brighton Avenue, Albany, California. Three samples were collected from the three monitor wells and analyzed for TPH-D, TPH-G, and BTEX. The laboratory results were Non-detectable for TPH-G, and BTEX for Monitor wells MW-1, MW-2, and MW-3. A trace amount of TPH-D, (52 ppb) was found in MW-1 only. The sampling results revealed non-detectable levels of TPH-D in MW-2, and MW-3 a decrease of TPH-D in MW-1 of 78 ppb, and for both wells.

The next quarterly sampling is scheduled for April 31, 1995. If you have any questions in regard to this report, please call GROWTH at (707) 745-0171.

Respectfully,

James H. Robbins
Project Manager

Enclosure:

cc: Susan Hugo, Alameda County Health Agency
Dale Hudson, Albany Unified School District
Gregory Mix, Land Planning Consultants, Inc
Sang-Jin Nam, Lozano Smith Smith Woliver & Behrens
Alberta Steele
Jerome Blank Realty
Richard J. Breitwieser

WESTERN REGION
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1.0 INTRODUCTION

1.1 Site location and description

The site is located at 1259 Brighton Avenue, Albany, California (see Figure 1). El Cerrito Creek is approximately 350 feet north of the assessment site, and San Francisco Bay is located approximately one-mile to the west. The site is situated adjacent to the BART line tracks and path way to the west. The assessment site is currently occupied by the City of Albany Corporation and contains two monitoring wells and one piezometer, (See Figure 2).

1.2 Background

The assessment site was used as a lumber yard and retail lumber store since 1922.

From the 1930's to the 1950's, the lumber yard operated a 500-gallon underground leaded gasoline tank located in the loading dock area adjacent to the east side of the building.

From the 1950's to 1991, Hill Lumber maintained a 1,000-gallon underground gasoline tank located below the sidewalk adjacent to Brighton Avenue.

On April 17, 1991, SEMCO, Inc., of Modesto, California, removed both tanks. TPH-G concentration levels below the 500-gallon tank ranged between 210 to 890 ppm. TPH-G concentration levels below the 1,000-gallon tank ranged between 2 and 3,700 ppm. The excavations were backfilled to grade with pea gravel and repaved.

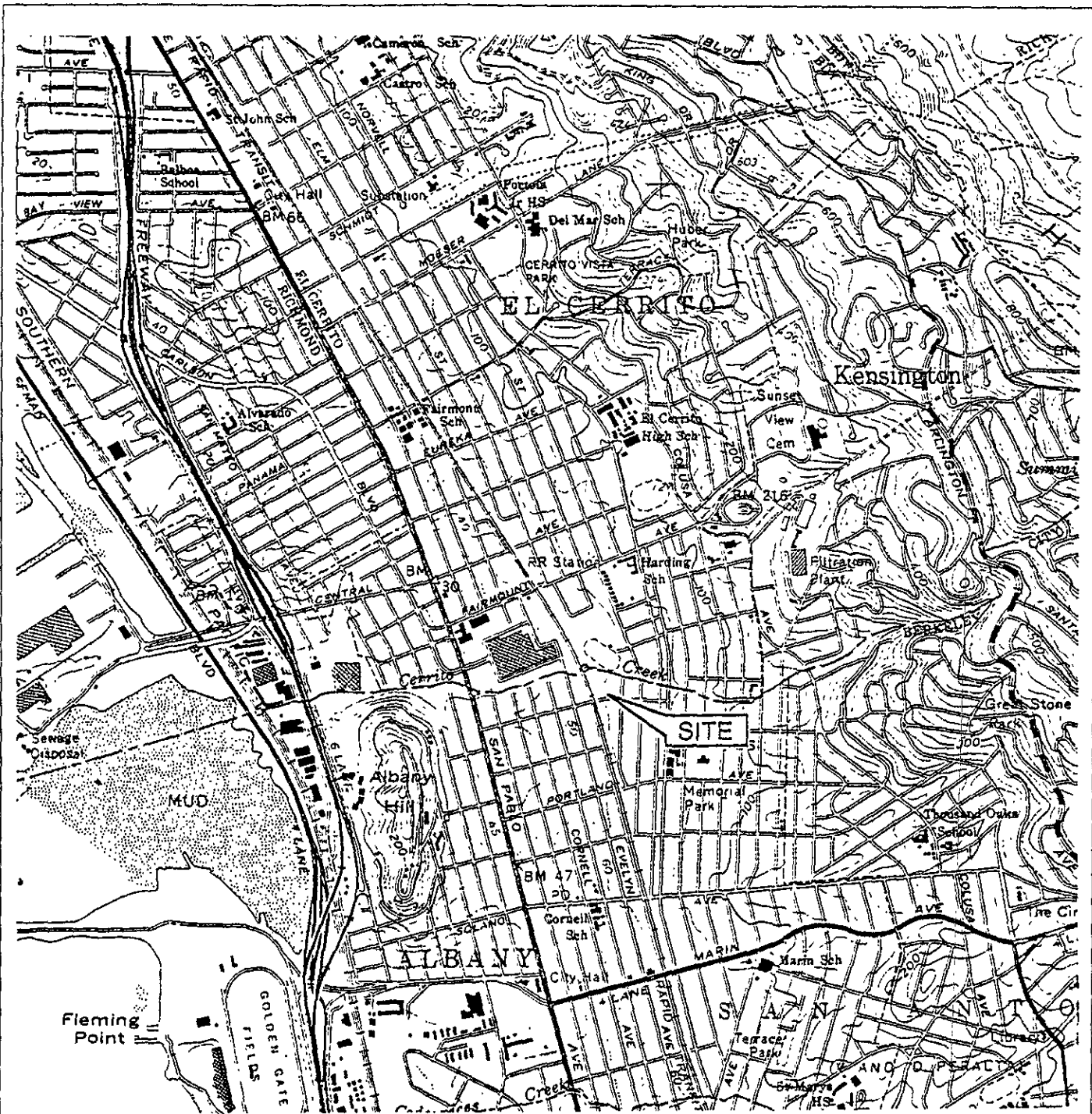
On July 11, 1991, Certified Environmental Consulting, Inc. (GROWTH), drilled 4 borings within approximately 10 feet of the tank excavations. GROWTH concluded that the soil contamination was limited to 2 small areas extending approximately 2 to 4 feet around each tank. GROWTH collected an uncased water sample from the area of the former 1,000-gallon tank. The water sample revealed the presence of TPH-G (2,925 ppb) and Benzene (59 ppb).

On June 17, 1992, GROWTH submitted a work plan for monitoring well installation and remediation at the assessment site.

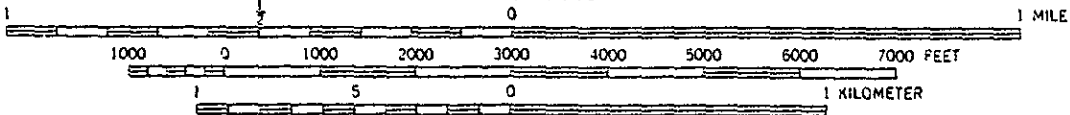
On September 17, 1992, GROWTH submitted a soil remediation report. The report indicated that the contaminated soil was successfully removed, with the exception of small amounts of inaccessible contaminated soil below the warehouse and office building foundations, a gas line on Hill Lumber property, and below a buried water conduit on BART property. Monitoring wells were not installed at the assessment site.

On November 17, 1992, GROWTH submitted a letter to Ms. Susan Hugo, of the Alameda County Health Agency, indicating the results of the stockpile sampling at the site.

On March 3, 1993, GROWTH submitted a letter to Mr. Ralph Hill indicating that the stockpiled soil was no longer considered hazardous.



SCALE 1:24000



CONTOUR INTERVAL 20 FEET

SITE LOCATION MAP

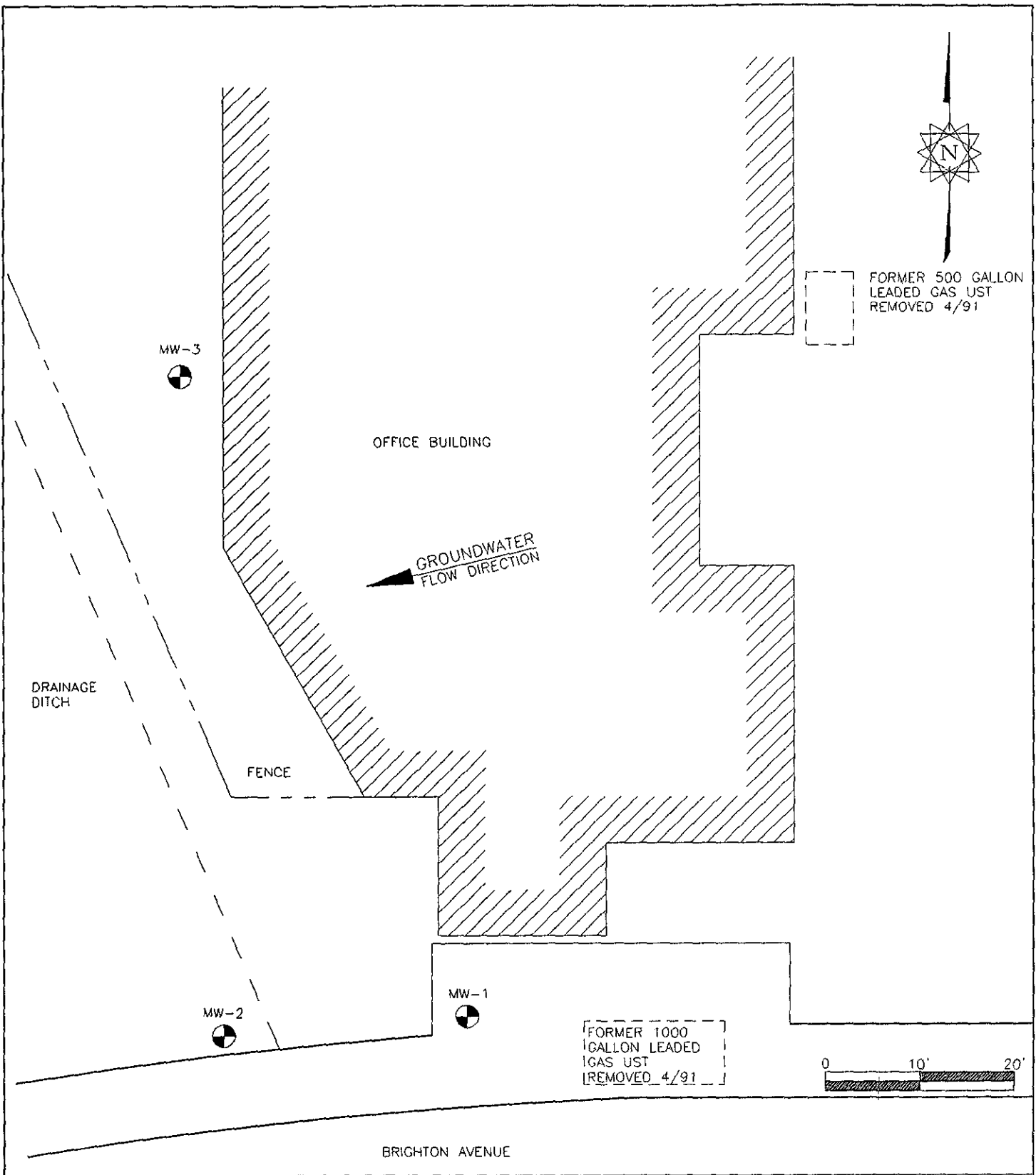
**HILL LUMBER
1259 BRIGHTON AVENUE ALBANY, CA**

FIGURE 1



Growth

Growth Environmental Services, Inc.
538 Stone Road, Suite J
Benicia, CA 94510
(707) 745-0171 FAX (707) 745-0183



HILL LUMBER COMPANY
 1259 BRIGHTON AVENUE, ALBANY, CA
 MONITORING WELL LOCATIONS


 **Growth**
 Growth Environmental Services, Inc.
 536 Stone Road, Suite J
 Benicia, CA 94510
 (707) 745-0171 FAX (707) 745-0163

FIGURE 2

JOB # 92-157-1660

On July 14, 1994, GROWTH (formerly GROWTH/WRA) submitted a report on the installation of two monitoring wells , and one piezometer at the assessment site. The laboratory analysis indicated non-detectable results for TPH-G, and BTEX; however, trace levels (110 ppb) of TPH-D were registered in MW-1.

On October 20, 1994, GROWTH submitted a Second Quarter Monitoring report. In that report GROWTH noted a slight increase of TPH-D in MW-1, (130 ppb), and a minor amount in MW-2, (93 ppb). GROWTH recommended that Piezometer MW-3 be included in the next round of sampling, due to detection of TPH-D in monitoring well MW-2.

1.3 GEOLOGY AND HYDROGEOLOGY

Geology

The site rests on Quaternary Holocene younger alluvium deposits (Qa), consisting of unconsolidated, moderately sorted, sand and silt, with sandy silty clays down to approximately 18.0 feet. Underlying the younger alluvium at a depth of approximately 18 to 25 feet are undivided bedrock units (TKJu) of Tertiary, Cretaceous, and Jurassic age. These units consist of highly weathered, highly fractured, and friable sandstone and shale.

Hydrogeology

The site is located within the East Bay Plain. The East Bay Plain covers an area of approximately 114 square miles. Two types of geologic units are found in the East Bay Plain: Consolidated rocks ranging in age from Jurassic to Tertiary; and unconsolidated deposits of Pleistocene and Holocene age. The consolidated rocks are more than 10,000 feet thick. The unconsolidated deposits are a maximum thickness of approximately 1,100 feet.

The groundwater basin of the East Bay Plain consists of a random sequence of sand and gravel aquifers interspaced with clay and silt aquicludes. The inferred Groundwater direction is to the west-northwest, towards the direction of the San Francisco Bay. Groundwater was encountered below the assessment site at a depth of approximately 10.5 feet below grade surface (bgs).

Source:

Preliminary Geologic Map of the Richmond Quadrangle, Alameda, and Contra Costa Counties, California. Dibble, Jr., 1980.

1.3 GEOLOGY AND HYDROGEOLOGY

Geology

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Source:

Preliminary Geologic Map of the Richmond Quadrangle, Alameda, and Contra Costa Counties, California. Dibble, Jr., 1980.

2.0 GROUNDWATER SAMPLING

2.1 GROUNDWATER ELEVATION MEASUREMENTS

Groundwater elevations were measured for wells MW-1, MW-2 and MW-3 on January 31, 1995. The static groundwater elevation was recorded on Sample Event Data Sheets for the January quarterly sampling and are presented in Appendix A.

The sampling and the calculation of the groundwater flow direction were derived from the January 31, 1995 readings. Groundwater elevation data is shown on Figure 2. The groundwater flow direction remains towards the southwest. The hydraulic gradient was calculated at 0.020 feet per foot. The water level rose an average of 1.29 feet since the second quarter measurements taken in October of 1994.

Water level measurements will be collected during the next sampling event to monitor any fluctuations in groundwater flow direction and gradient. Table 1 contains the monitor well elevations, static water levels and groundwater surface elevations.

2.2 MONITORING WELL SAMPLING

Monitoring Wells MW-1, MW-2, and MW-3, were sampled on January 31, 1995. The wells were sampled after purging at least three well casing volumes from the well and allowing the water level to recover to at least 80% of the original static level. Temperature, electrical conductivity, and pH were monitored during purging to verify that water had been removed from well casing storage and that well water was representative of the aquifer. The sampling event data sheets are presented in Appendix A.

Samples were collected using disposable teflon bailers at each well location. Each of the water samples were contained in three 40-milliliter VOA vials for TPH(G) & BTEX analysis, and one 1-liter amber bottle, for TPH(D) analysis. The samples were labeled and stored on ice until delivered, under chain-of-custody procedures, to McCampbell Analytical, Inc. of Pacheco, California, a State-certified analytical laboratory. Sample MW-1, MW-2, and MW-3 were analyzed for total petroleum hydrocarbons in the gasoline range (TPH-G) and for benzene, toluene, ethylbenzene, and xylenes, (BTEX) using GCFID 5030/EPA Method 8015/8020 and total petroleum hydrocarbons in the diesel range (TPH-D) using GCFID 3550/EPA Method 8015.

TABLE 1

**Groundwater Elevation Data
January 31, 1995
1259 Brighton Avenue, Albany, California**

WELL	WELL DIAMETER (Inches)	TOP OF CASING (Feet)	DEPTH TO WATER (Feet)	STATIC WATER LEVEL (Feet)
MW-1	2	61.77	8.03	53.74
MW-2	2	61.37	8.15	53.22
MW-3	2	60.47	6.91	53.56

3.0 ANALYTICAL RESULTS

3.1 MONITORING WELL SAMPLING ANALYTICAL RESULTS

Historical and current analytical results of the January 1995 sampling are included in Table 2. The laboratory analytical data sheets and chain-of-custody records for the January sampling are included as Appendix A. The detection limits for TPH-G and TPH-D analyses are 50 ug/L (ppb) and for the BTEX analysis 0.5 ug/L.

The analytical results for MW-1, MW-2, and MW-3 revealed minor levels of TPH-D, (52 ppb) in MW-1. All three wells revealed no detectable concentrations of TPH- G and Benzene. The analytical results indicated a 78 ppb decrease in TPH-D for MW-1, and a 93 ppb decrease for MW-2.

TABLE 2

Historical and Current sampling results for Hill Lumber Company

WELL NUMBER	SAMPLE DATE	TPH-Diesel ug/L	TPH-Gas ug/L	Benzene ug/L	Toluene ug/L	Ethyl Benzene ug/L	Xylene ug/L
MW-1	7/13/94	110	ND	ND	ND	ND	ND
	10/10/94	130	ND	ND	ND	ND	ND
	1/31/95	52	ND	ND	ND	ND	ND
MW-2	7/13/94	ND	ND	ND	ND	ND	1.0
	10/10/94	93	ND	ND	ND	ND	ND
	1/31/95	ND	ND	ND	ND	ND	ND
MW-3	7/13/94	ND	ND	ND	ND	ND	ND
	10/10/94	NT	NT	NT	NT	NT	NT
	1/31/95	ND	ND	ND	ND	ND	ND
*California Department of Health Services primary maximum contamination level for drinking water.		None Listed	None Listed	1.0	1000	680	1750

* Marshall, J.B., 1989, A Compilation of Water Quality Goals, Staff Report of the California Regional Water Quality Control Board, Central Valley Region, 15 p.

ND = Non-detectable levels

NT = Not Tested

4.0 RECOMMENDATIONS

Continued quarterly monitoring of wells MW-1, MW-2, and MW-3 is recommended. Analytical results for monitoring well MW-1 continue to show a decrease of TPH-D. MW-2 TPH-D levels show non-detectable readings. All three wells continue to display non-detectable readings for TPH-G, and BTEX. The TPH-D readings are considered trace detection levels. GROWTH recommends that sampling of all three wells continue into the fourth quarter.

5.0 SCHEDULE OF ACTIVITIES FOR NEXT QUARTER

5.1 GROUNDWATER ELEVATION MEASUREMENT

The on-site wells will be sounded and the groundwater levels will be used to calculate the groundwater gradient and flow direction for each quarter. Water samples will again be taken along with water level measurements. The hydraulic gradient will also be calculated for the month of April 1995, and will be presented in the next quarterly report.

5.2 QUARTERLY SAMPLING

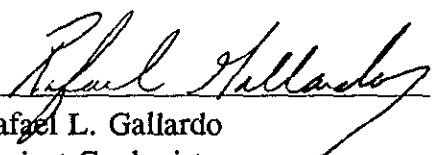
The next quarterly sampling event will occur the fourth week in April, 1995. The quarterly report will present the results of the April sampling and the groundwater gradient calculations.


6.0 LIMITATIONS

This report has been prepared in accordance with generally accepted environmental, geological and engineering practices. No warranty, either expressed or implied, is made as to the professional advice presented herein. The analysis, conclusions and recommendations contained in this report are based upon site conditions as they existed at the time of the investigation and they are subject to change.

The conclusions presented in this report are professional opinions based solely upon visual observations of the site and vicinity, and interpretation of available information as described in this report. The scope of services performed in execution of this investigation may not be appropriate to satisfy the needs of other users and any use or reuse of this document or its findings, conclusions or recommendations presented herein is at the sole risk of said user.




Rafael L. Gallardo
Project Geologist


Stanley L. Klemetson, Ph.D., P.E.
Director of Engineering
P.E. No. 40087

APPENDIX A
ANALYTICAL DATA SHEETS
AND
CHAIN-OF-CUSTODY RECORDS
FOR MONITORING WELL SAMPLING
JANUARY 31, 1995

SAMPLING EVENT DATA SHEET

(fill out completely)

WELL OR LOCATION MW-1

PROJECT Hill Lumber EVENT 3rd Quarter SAMPLER Gallardo DATE 1-31-95

Well / Hydrologic statistics	Action	Time	Pump rate	IWL (low yield)	
<p>Well type <u>MW</u> (MW, EW, etc.)</p> <p>diameter <u>2"</u> equals <u> </u> gal/ft. casing</p> <p>SWL <u>8.03</u> (if above screen)</p> <p>packer intake bailer depth <u> </u> ft. (circle one)</p> <p>SWL <u>27.30</u> (if in screen)</p> <p>measured T.D. <u>27.30</u> <u>28</u> T.D. (as built)</p> <p>TOP</p> <p>BOP</p>	Start pump / Begin	11:03	84 HZ		
	Stop				
	Sampled				
	(Final IWL)				
	Purge calculation				
$\frac{163 \text{ gal/ft.} \times 19.3 \text{ ft.}}{\text{SWL to BOP or packer to BOP}} = \frac{3.15 \text{ gals} \times 3}{\text{one volume}} = \frac{9.4 \text{ gals.}}{\text{purge volume - 3 casings}}$					
Head purge calculation (Airlift only)					
$\frac{\text{gal/ft.} \times \text{ft.}}{\text{packer to SWL}} = \text{gals.}$					

Equipment Used / Sampling Method / Description of Event:

- SWL Taken at 9:20 am
- Grundfos BMI/MPI 2" submersible (rented)
- Generator (rented)
- Hydac
- 1 Disposable Bailer w/tip
- 30' Tubing

Actual gallons purged	<u>10</u>
Actual volumes purged	<u>3</u>
Well yield (see below)	<u>Hy</u>
COC #	<u> </u>
Sample I.D.	<u> </u>
Analysis	<u> </u>
Lab	<u> </u>

Additional comments:

- Nothing unusual
- Good producer

Gallons purged *	TEMP °C / °F (circle one)	EC (µs / cm)	PH	TURBIDITY (NTU)	HEAD (FT)	TIME
1. 3	62.5	430	4.97	N/A	8.05	@ 11:10
2. 6	62.7	460	4.86	N/A	8.425	@ 11:20
3. 10	64.3	480	5.10	N/A	8.10	@ 11:30
4.					8.025	@ 11:36
5.						

* Take measurement at approximately each casing volume purged.

⊕ HY - Minimal W.L. drop MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump.

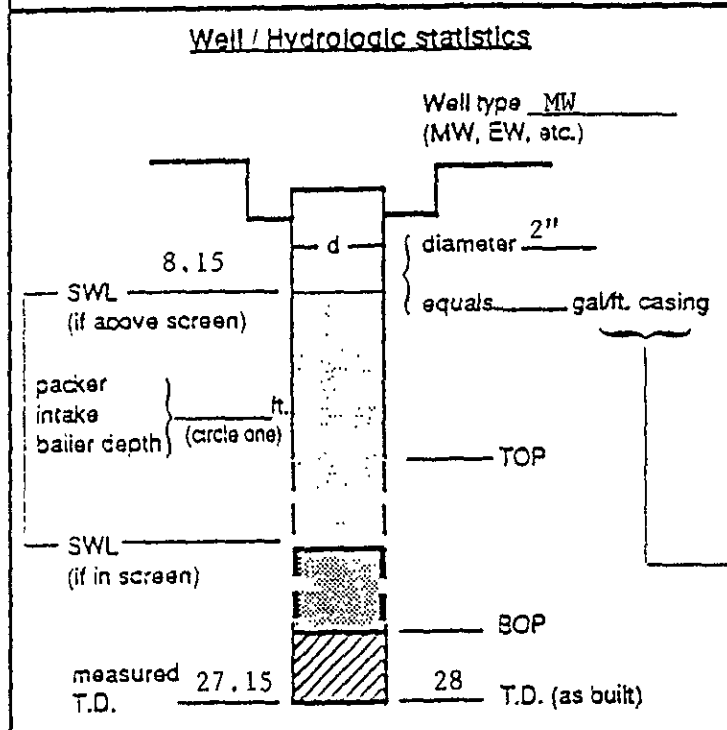
LY - Able to purge 3 volumes by returning later or next day. VLY - Minimal recharge - unable to purge 3 volumes.

SAMPLING EVENT DATA SHEET

(fill out completely)

WELL OR LOCATION MW 2

PROJECT Hill Lumber EVENT 3rd Quarter SAMPLER Gallardo DATE 1-31-95



Action	Time	Pump rate	IWL (low yield)
Start pump / Begin	9:48		
Stop			
Sampled (Final IWL)			
Purge calculation			
$163 \text{ gal/ft.} \times 19 \text{ ft.} = 3.1 \text{ gals} \times 3 = 9.3 \text{ gals.}$			
Head purge calculation (Airlift only)			
$\text{gal/ft.} \times \text{ft.} = \text{gals.}$			

Equipment Used / Sampling Method / Description of Event:

SWL taken @ 9:17 am

- GrundFos BMI/MPI 2" submersible set @ 89 Hz (rented)
- MQ Multi Quip 3600 Hz Generator (rented)
- Hydac
- 2 Tyvac Gloves
- 28' Tubing
- 1 Disposable Bailer and Tip

Actual gallons purged	<u>9.3</u>
Actual volumes purged	<u>3</u>
Well yield (see below)	<u>HY-MY</u>
COC #	
Sample I.D.	Analysis Lab
MW-2	TPH-D McCampbell
	TPH-G
	BTEX

Additional comments:

Well head was under water. Well case was bailed prior to purging.

- overcast (foggy) 62 F
- The ground surface was very wet.
- Water running clear after 4.5 gallons purged

Gallons purged	TEMP °C / °F (circle one)	EC (µs / cm)	PH	TURBIDITY (NTU)	HEAD (Ft)
1. 3.0	64.5	730	4.02	N/A	9:53 12.30'
2. 6.0	64.6	700	4.03	N/A	10:04 12.45'
3. 9.3	69	880	4.06		10:14 12.39'
4.					@10:15 10.40'
5.					@10:30 8.3'

* Take measurement at approximately each casing volume purged.

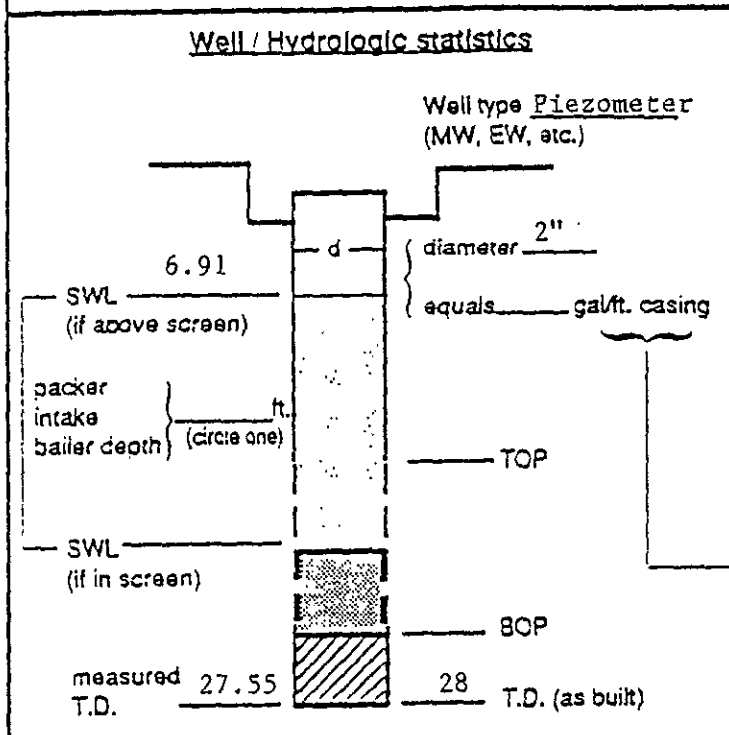
⊕ **HY** - Minimal W.L. drop **MY** - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump. **LY** - Able to purge 3 volumes by returning later or next day. **VLY** - Minimal recharge - unable to purge 3 volumes.

SAMPLING EVENT DATA SHEET

(fill out completely)

WELL OR LOCATION MW-3

PROJECT Hill Lumber EVENT 3rd Quarter SAMPLER Gallardo DATE 1-3-95



Action	Time	Pump rate	IWL (low yield)
Start pump / Begin	12:55	77Hz	
Stop			
Sampled			
(Final IWL)			
Purge calculation			
$.163 \text{ gal/ft.} \cdot 20.64 \text{ ft.} = 3.4 \text{ gals} \times 3 = 10.1 \text{ gals.}$			
SWL to BOP or packer to BOP one volume purge volume-3 casings			
Head purge calculation (Airlift only)			
gal/ft. <u> </u> ft. <u> </u> gals. <u> </u> packer to SWL			

Equipment Used / Sampling Method / Description of Event:

- SWL Taken @ 9:15 am
- 2" GrundFos submersible Pump w/Control Box
- Hydac
- Generator
- 2 Gloves
- 35' Tubing

Actual gallons purged	<u>10.1</u>
Actual volumes purged	<u>3</u>
Well yield (see below)	<u>MY</u>
COC #	<u> </u>
Sample I.D.	Analysis Lab

Additional comments:

- Sun Partially out - 65
- Frequency of pump was changed several times in order to drain water out of well.
- Sample taken @ 8.15' @ 2:30 pm

Gallons purged	TEMP °C / °F (circle one)	EC (µs / cm)	PH	TURBIDITY (NTU)	HEAD (Ft)	TIME
1. 3.3	67.7	890	4.3	N/A	12.4	1:03
2. 3.3	67.9	850	4.4	N/A	14.6	1:16
3. 3.4	68.4	890	4.7	N/A	16.35	1:25
4.					14.20	1:45
5.					13.05	1:55

* Take measurement at approximately each casing volume purged.

⊕ HY - Minimal W.L. drop MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump. LY - Able to purge 3 volumes by returning later or next day. VLY - Minimal recharge - unable to purge 3 volumes.

Growth Environmental Services 536 Stone Road, Ste. J Benicia, CA 94510-1016	Client Project ID: # 157-1660; Hill Lumber	Date Sampled: 01/31/95
	Client Contact: Rafael Gallardo	Date Received: 01/31/95
	Client P.O: 1342	Date Extracted: 01/31/95
		Date Analyzed: 01/31/95

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d) ⁺	% Recovery Surrogate
43971	MW-1	W	52.b	105
43972	MW-2	W	ND	103
43973	MW-3	W	ND	104
Detection Limit unless otherwise stated: ND means Not Detected	W		50 ug/L	
	S		10 mg/kg	

*water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; surrogate and sample peaks co-elute or surrogate peak is on elevated baseline

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) modified diesel?; light(CL) or heavy(CH) diesel compounds are significant; d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel(?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible phase is present.