ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

January 6, 2006

Ms. Marie Schweickert
3834 Inverness Way
Livermore, CA 94551

Subject: Fuel Leak Case No. RO0002595, Schweickert Property, 515 South Livermore Avenue, Livermore, CA

Dear Ms. Schweickert:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Health (ACEH) is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site:

- Residual concentrations of up to 2,000 milligrams per kilogram (mg/kg) of total petroleum hydrocarbons as diesel remain in soil at the site.
- Residual concentrations of up to 1,500 micrograms per liter (µg/L) of total petroleum hydrocarbons as diesel remain in groundwater at the site.

If you have any questions, please call Jerry Wickham at (510) 567-6791. Thank you.

Sincerely,

Donna L. Drogos, P.E.
LOP and Toxics Program Manager

Enclosures:
1. Remedial Action Completion Certificate
2. Case Closure Summary

cc:

Cherie McCaulou (w/enc)
SF- Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Toru Okamoto (w/enc)
State Water Resources Control Board
UST Cleanup Fund
P.O. Box 944212
Sacramento, CA 94244-2120

Kevin Graves
State Water Resources Control Board
Division of Water Quality
P.O. Box 2231
Sacramento, CA 95812

David Boyers
State Water Resources Control Board
Office of Chief Counsel
1001 I Street, 22nd Floor
Sacramento, CA 95814

Danielle Stefani
Livermore-Pleasanton Fire Department
3560 Nevada Street
Pleasanton, CA 94566

Matt Katen, QIC 80201
Zone 7 Water Agency
100 North Canyons Parkway
Livermore, CA 94551

City of Livermore Planning Department
1052 South Livermore Avenue
Livermore, CA 94550

Robert Lauritzen
Gettler-Ryan Inc.
3140 Gold Camp Dr. #170
Rancho Cordova, CA 95670

Jerry Wickham (w/orig enc), D. Drogos (w/enc), R. Garcia (w/enc)

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(510) 567-6700
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January 6, 2006

Ms. Marie Schweickert
3834 Inverness Way
Livermore, CA 94551

REMEDIAL ACTION COMPLETION CERTIFICATE

Dear Ms. Schweickert:

Subject: Fuel Leak Case No. RO0002595, Schweickert Property, 515 South Livermore Avenue, Livermore, CA

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code.

Please contact our office if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung
Director
Alameda County Environmental Health

CASE CLOSURE SUMMARY
LEAKING UNDERGROUND FUEL STORAGE TANK - LOCAL OVERSIGHT PROGRAM

I. AGENCY INFORMATION

Date: November 10, 2005

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6791
Responsible Staff Person: Jerry Wickham	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Schweickert Property		
Site Facility Address: 515 South Livermore, Livermore, CA		
RB Case No.: --	Local Case No.: --	LOP Case No.: RO0002595
URF Filing Date: 10/15/03	SWEEPS No.: ---	APN: 097-0052-001-00

Responsible Parties	Addresses	Phone Numbers
Marie Schweickert	515 South Livermore, Avenue, Livermore, CA 94550	925-447-2532

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	350 gallon	Home heating fuel	Removed	July 29, 2003
Piping			Removed	July 29, 2003

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Unknown. No holes or cracks observed during removal.	
Site characterization complete? Yes	Date Approved By Oversight Agency: -----

Monitoring wells installed? Yes	Number: 6	Proper screened interval? Yes
Highest GW Depth Below Ground Surface: 21 feet	Lowest Depth: 32'	Flow Direction: Northwest
Most Sensitive Current Use: Potential drinking water source.		

Summary of Production Wells in Vicinity:
A total of 16 wells are located within 0.5 miles of the site (see Attachment 1). The nearest well is a municipal well located approximately 750 feet south (upgradient) of the site. This municipal well has a screen interval from 288 to 523 feet below ground surface (bgs). The closest downgradient well is a domestic well located approximately 1,000 feet northwest of the site. No construction details were available for this well. A second municipal well is located approximately 1,600 feet north northeast (cross gradient) of the site. This second municipal well has a screen interval from 192 to 492 feet bgs.

Are drinking water wells affected? No	Aquifer Name: Mocho II Subbasin, Livermore Basin
Is surface water affected? No	Nearest SW Name: Arroyo Mocho Creek is approximately 2,700 feet south of the site
Off-Site Beneficial Use Impacts (Addresses/Locations): No	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health (and Oakland Fire Department)

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	1 350-gallon UST	Removed	July 29, 2003
Piping	Unknown	Removed	July 29, 2003
Free Product	None	Not applicable	---
Soil	None	---	---
Groundwater	None	---	---

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP
(Please see Attachments 1 through 5 for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed
TPH (Diesel)	2,000	2,000	100,000(1)	1,500(1)
Oil & Grease	<0.005	<0.005	Not Analyzed	Not Analyzed
Benzene	<0.005	<0.005	<0.5	<0.5
Toluene	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	<0.005	<0.005	<0.005	<0.005
Xylenes	0.015	0.015	3.1	3.1
Heavy Metals	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed
MTBE **	<0.005(2)	<0.005(2)	<0.5(3)	<0.5(3)
Other (8240/8270)	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed

(1) A concentration of 100,000 µg/L of TPHd was detected in a grab groundwater sample collected from boring B-1 at a depth of approximately 45 to 50 feet bgs. Piezometer PZ-1 was installed immediately adjacent to boring B-1 and has a screen interval from approximately 30 to 40 feet bgs. The most recent groundwater sample collected from PZ-1 on October 12, 2005 contained 1,500 µg/L of TPHd.
(2) <0.005 mg/kg Tert-butyl alcohol; no other fuel oxygenates analyzed.
(3) <5.0 µg/L Tert-butyl alcohol; no other fuel oxygenates analyzed.

Site History and Description of Corrective Actions:

The site is a residential property that formerly contained a 350-gallon home heating oil underground storage tank (UST). The UST was reportedly installed in 1957 and used until 1960 when the furnace was converted to natural gas. The UST was removed on July 29, 2003. No holes, cracks, or other evidence of a release was observed in the UST during removal. One soil sample was collected at the base of the UST excavation approximately 5 feet below ground surface (bgs). No strong odors or discolored soil were observed in the excavation. Total petroleum hydrocarbons as diesel (TPHd) were detected in the excavation soil sample at a concentration of 36 milligrams per kilogram (mg/kg). BTEX and oil and grease were not detected in the excavation soil sample.

In November 2003, a soil boring was advanced to 50 feet bgs at the location of the former UST. Soil samples were collected at 10, 20, 30, and 40 feet bgs with TPHd detected at 65, 35, 2,000 and 330 mg/kg, respectively. A grab groundwater sample collected from the boring at 45 to 50 feet bgs contained 100,000 µg/L of TPHd. This elevated concentration of TPHd exceeds the solubility of home heating fuel and the elevated concentration is likely an artifact of the grab groundwater sampling method. A subsequent grab groundwater sample collected from 40 to 45 feet bgs in boring PZ-1, which was immediately adjacent to boring B-1, contained 10,000 µg/L of TPHd. During the most recent groundwater sampling event on October 12, 2005, the concentration of TPHd detected in groundwater collected from PZ-1 was 1,500 µg/L.

Three soil borings were advanced at the site in December 2004. Soil samples were collected at 10-foot intervals in the borings and grab groundwater samples were collected from 40 to 45 feet bgs. Six soil borings were advanced in January 2005 to depths up to 71 feet bgs. Soil samples were collected at 10-foot intervals and grab groundwater samples collected from 40 to 45 feet bgs in each of the borings. Piezometers consisting of 2-inch diameter pre-packed screens (PZ-1 through PZ-6) were installed at each of the six locations. Groundwater samples were collected from the piezometers on January 28, 2005, April 26, 2005, July 12, 2005, and October 12, 2005.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes No		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes No		
Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, it does not appear that the release would present a risk to human health based upon current land use and conditions.		
Site Management Requirements: None		
Should corrective action be reviewed if land use changes? No		
Was a deed restriction or deed notification filed? No		Date Recorded: --
Monitoring Wells Decommissioned: No	Number Decommissioned: 0	Number Retained: 6
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: None		

V. ADDITIONAL COMMENTS, DATA, ETC.

Considerations and/or Variances:

The site is located within the Mocho II Subbasin of the Livermore-Amador Groundwater Basin where groundwater is used as a source of drinking water. No groundwater samples have been collected below a depth of 50 feet bgs at the site. Based on the potential age of the release (prior to 1957) and groundwater level fluctuations within the Livermore-Amador Basin since 1957, there is a potential for fuel hydrocarbons to have migrated below 50 feet bgs. Soil samples collected at depths of 65 to 70 feet bgs from borings throughout the site had TPHd concentrations ranging from 1 to 81 mg/kg. Based on these soil analytical data, there does not appear to be a significant source of residual contamination below 50 feet bgs.

Fuel hydrocarbons in the TPHd range are present in groundwater less than 50 feet bgs within a limited area of the site near the former home heating fuel tank. Dissolved hydrocarbons extend less than 40 feet downgradient from the former home heating oil tank. Based on the limited distribution and low mobility of the home heating fuel hydrocarbons, the groundwater contamination will not affect existing water supply wells in the area and do not present a threat to future groundwater quality in the area.

Conclusion:

Alameda County Environmental Health staff believe that the low levels of residual contamination at the site do not pose a significant threat to water resources, public health and safety, and the environment based upon the information in our files to date. No further investigation or cleanup is necessary. ACEH staff recommend case closure for this site.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Jerry Wickham	Title: Hazardous Materials Specialist
Signature: Jerry Wickham	Date: 11/23/05
Approved by: Donna L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature:	Date: 11/23/05

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

VII. REGIONAL BOARD NOTIFICATION

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB:
Signature: C. McCaulou	Date: 12/6/05

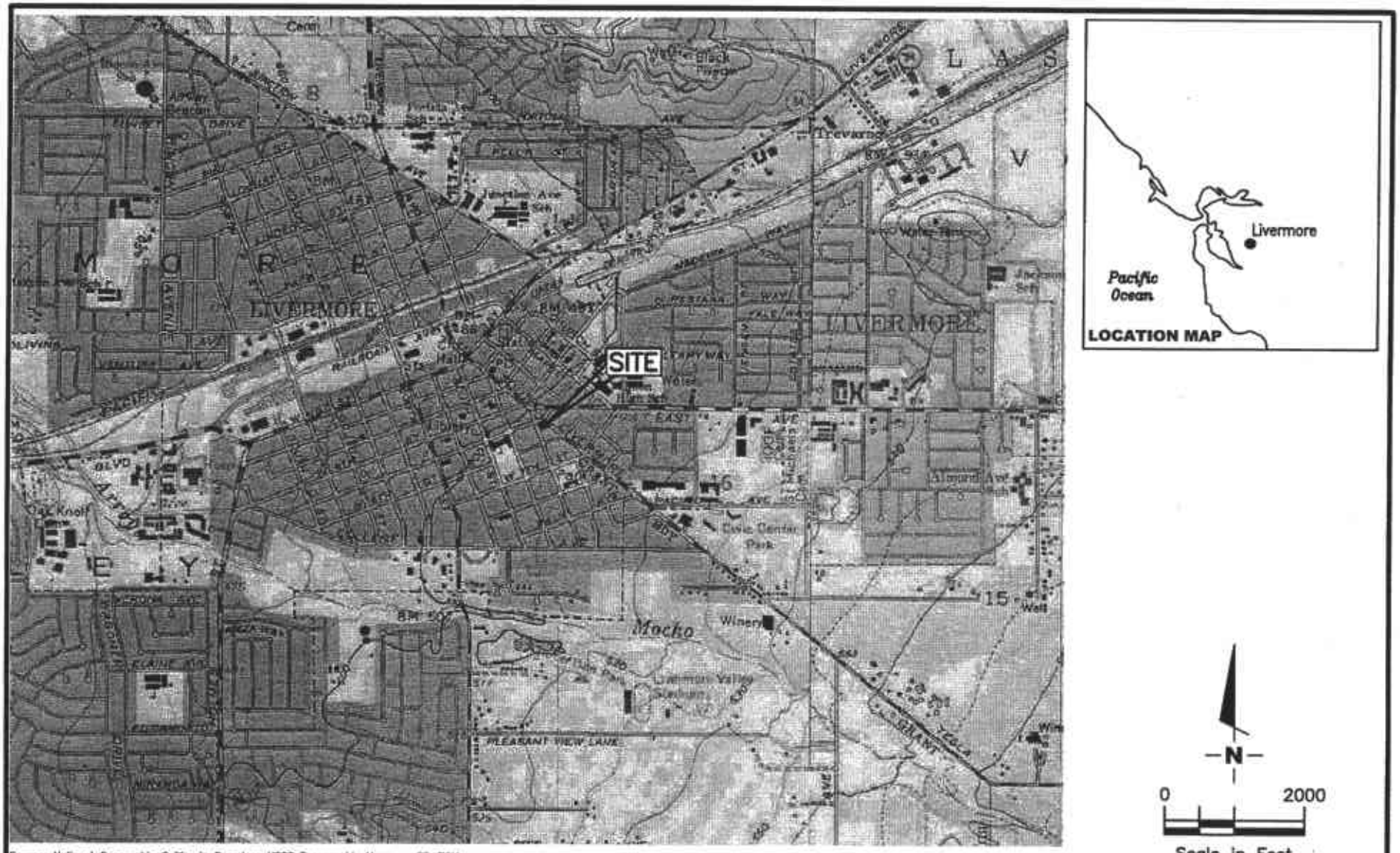
VIII. MONITORING WELL DECOMMISSIONING

Date Requested by ACEH:	Date of Well Decommissioning Report:	
All Monitoring Wells Decommissioned: Yes No	Number Decommissioned:	Number Retained:
Reason Wells Retained:		
Additional requirements for submittal of groundwater data from retained wells:		
ACEH Concurrence - Signature:		Date:

Attachments:
1. Vicinity Map, Site Plan, Well Search Map, and Well Search Results Table (4 pages)
2. Potentiometric Map and TPH-D Concentration Map (2 pages)
3. Cross Sections (2 pages)
4. Soil and Groundwater Analytical Data (6 pages)
5. Boring Logs and Well Completion Diagrams (18 pages)

This document and the related CASE CLOSURE LETTER & REMEDIAL ACTION COMPLETION CERTIFICATE shall be retained by the lead agency as part of the official site file.

Post-it® Fax Note 7671	Date 12/6/05	# of pages ▶ 2
To Jerry Wickham	From Cherie McCaulou	
Co./Dept. ACEH	Co. RWQCB	
Phone #	Phone # 510-622-2342	
Fax # 510-337-9335	Fax # 510-622-2464	



Source: National Geographic California Seamless USGS Topographic Maps on CD-ROM.

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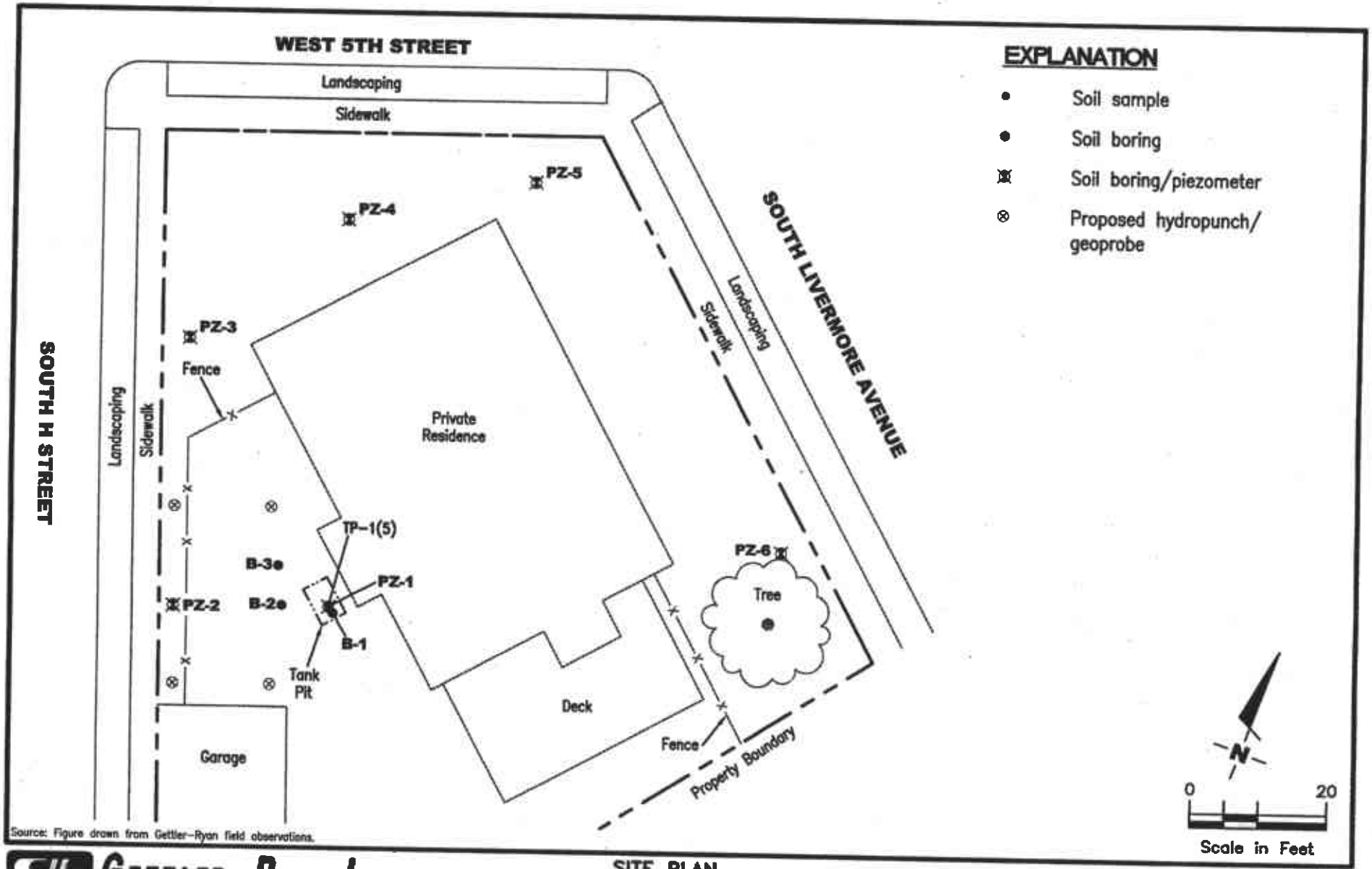
VICINITY MAP
Marie Schweickert Property
515 South Livermore Avenue
Livermore, California

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
948209		11/03	

FILE NAME: P:\ENVIRO\MARIE SCHWEICKERT PROPERTY\VIC-MARIE SCHWEICKERT.DWG | Layout Tab: Vic Map

ATTACHMENT 1



Source: Figure drawn from Gettler-Ryan field observations.

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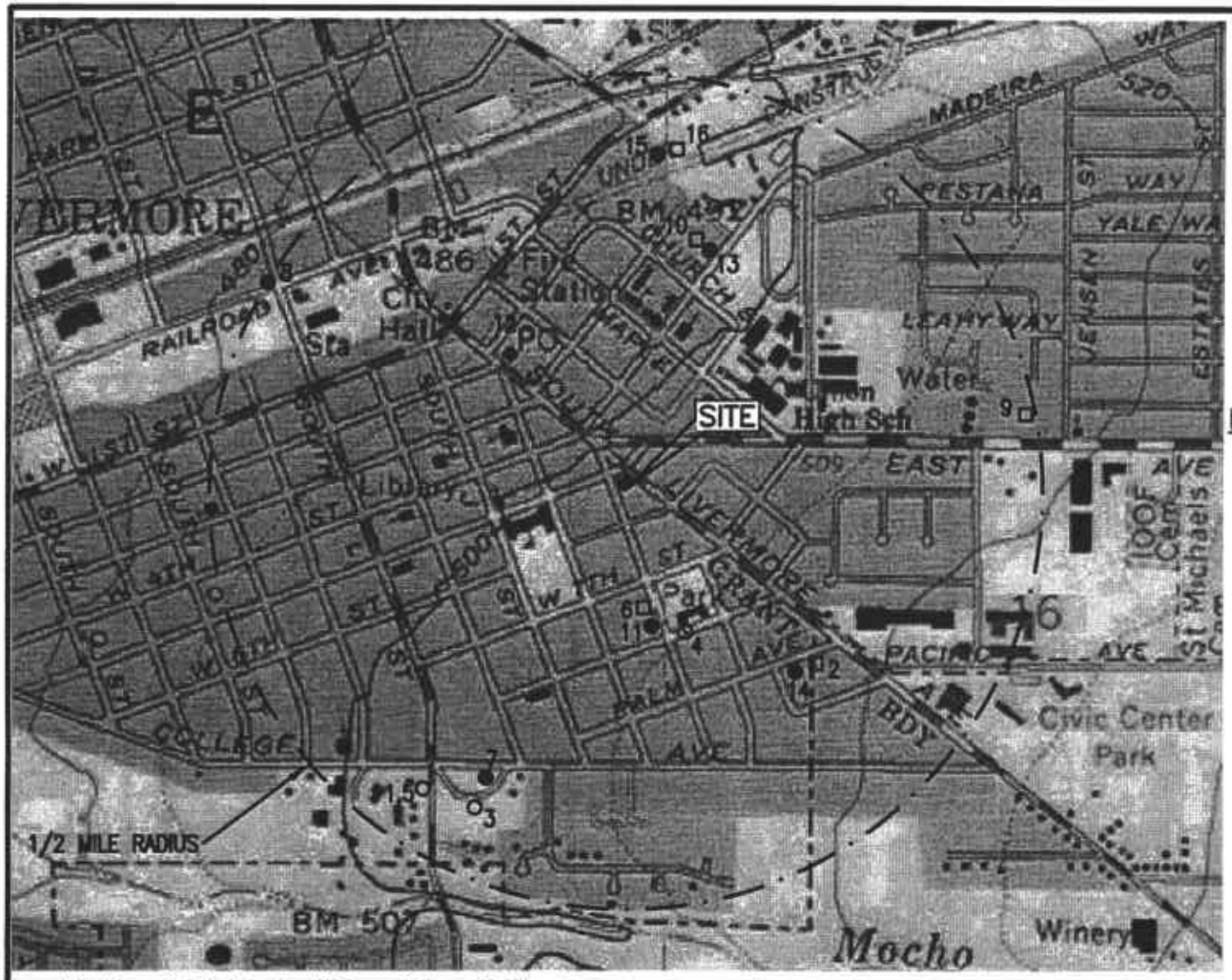
SITE PLAN
Marie Schweickert Property
515 South Livermore Avenue
Livermore, California

FIGURE
2

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
948209		2/05	

FILE NAME: P:\Enviro\Marie Schweickert Property\A03-MARIE SCHWEICKERT.DWG | Layout Tab: Site Plan



Source: National Geographic California Seamless USGS Topographic Maps on CD-ROM.

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WELL SEARCH MAP - 1/2 MILE RADIUS
Marie Schweickert Property
515 South Livermore Avenue
Livermore, California

FIGURE
3

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
948209.3		4/04	

FILE NAME: P:\ENVIRO\MARIE SCHWEICKERT PROPERTY\VIC-MARIE SCHWEICKERT.DWG | Layout Tab: Well Search 4-04

Table 2 - 0.5 Mile Well Search Results

Schwieckert Residence

515 South Livermore Avenue

Livermore, California

Map ID[1]	Well Owner	Well Location	State Well ID	Well Use	Year Installed	Screened Interval (ft)
1	Livermore Sanitarium[1]	954 S. L Street	03S02E16E1	Domestic	1932	--
2	California Water Service Co.	210 ft west of S Livermore Avenue & 20 ft south of Palm Avenue	03S02E16B1	Municipal	1944	140 to 390
3	First Baptist Church	2021 College Ave (300 ft southeast of College & L Streets)	03S02E16E6	Domestic	1982	280 to 360
4	Pacific Gas & Electric	Eighth and H Streets	03S02E16C3	Cathodic	1976	--
5	Livermore Sanitarium[1]	Church & L Streets	03S02E16G1	Domestic	1958	112 to 360
6	California Water Service Co.	787 S. H Street	03S02E16C	Municipal	1958	288 to 523
7	Zone 7 Water Agency	330 ft east of S. L Street & 30 ft south of College Avenue	03S02E16E44	Monitoring	1997	35 to 40
8	Woodward-Clyde	187 N. L Street	03S02E8R3-R5	3 monitoring	1982	38 to 55.5
9	California Water Service Co.	100 ft north of East Avenue & 300 ft west of Jensen Street	03S02E9Q1	Municipal	1952	180 to 492
10	California Water Service Co.	2778 4th St (75 ft north of 4th Street & 120 ft west of Wood Street)	03S02E9P1	Municipal	1956	192 to 492
11	USGS[2]	app. 150 ft north of 8th Street & app. 40 ft west of S H Street	03S02E16C1	Monitoring	--	--
12	Angler's Ranch Water Co	app. 130 ft west of Mcleod Street & app. 240 ft north of 3rd Street	03S02E9N	Domestic	--	--
13	USGS[2]	app. 90 ft north of 4th Street & 120 ft west of Wood Street	03S02E9P1	Monitoring	--	--
14	USGS[2]	app. 280 ft west of S Livermore Avenue & app. 70 ft south of Palm Avenue	03S02E16B1	Monitoring	--	--
15	USGS[2]	app. 230 ft north of 1st Street & app. 470 ft east of Old 1st Street	03S02E9L1	Monitoring	--	--
16	California Water Service Co.	app. 230 ft north of 1st Street & app. 470 ft east of Old 1st Street	03S02E9L1	Municipal	--	--
UTL	Mrs. Eric Rasmussen	East Avenue	03S02E16A8	Domestic	1957	--

Notes

ft = feet

USGS = United States Geological Survey

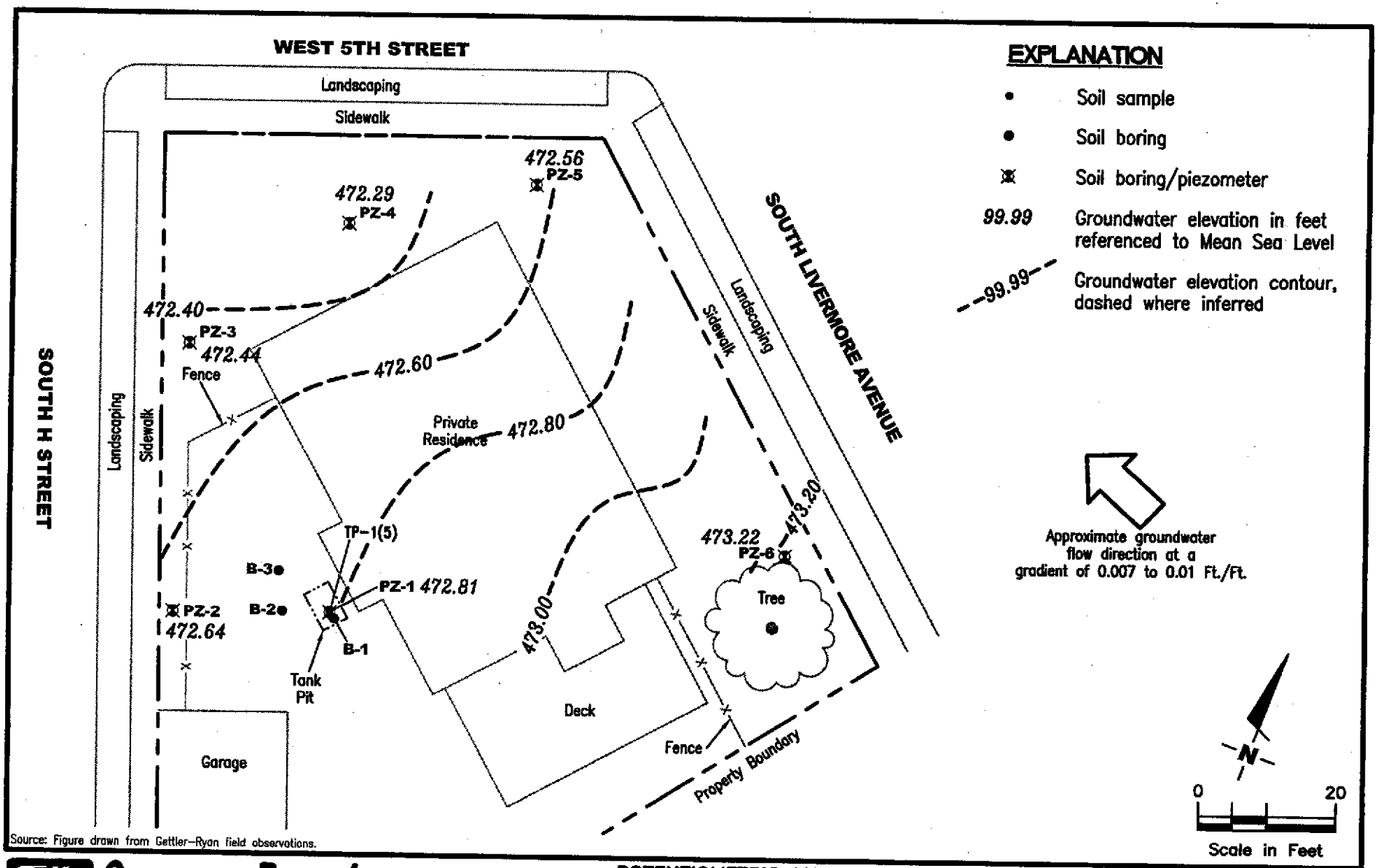
UTL = Unable to locate

Well data in this table obtained from available files at the DWR on March 26, 2004, Zone 7 Water Agency records, and Environmental Data Resources records.

[1]Well location numbers correspond to Figure 1.

[1] No longer exists-status of well is unknown

[2] Well location coincides with California Water Service Co. well location and may be California Water Service Co. well that was monitored by USGS



Source: Figure drawn from Gettler-Ryan field observations.

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POTENTIOMETRIC MAP
Marie Schweickert Property
515 South Livermore Avenue
Livermore, California

FIGURE
1

PROJECT NUMBER
948209

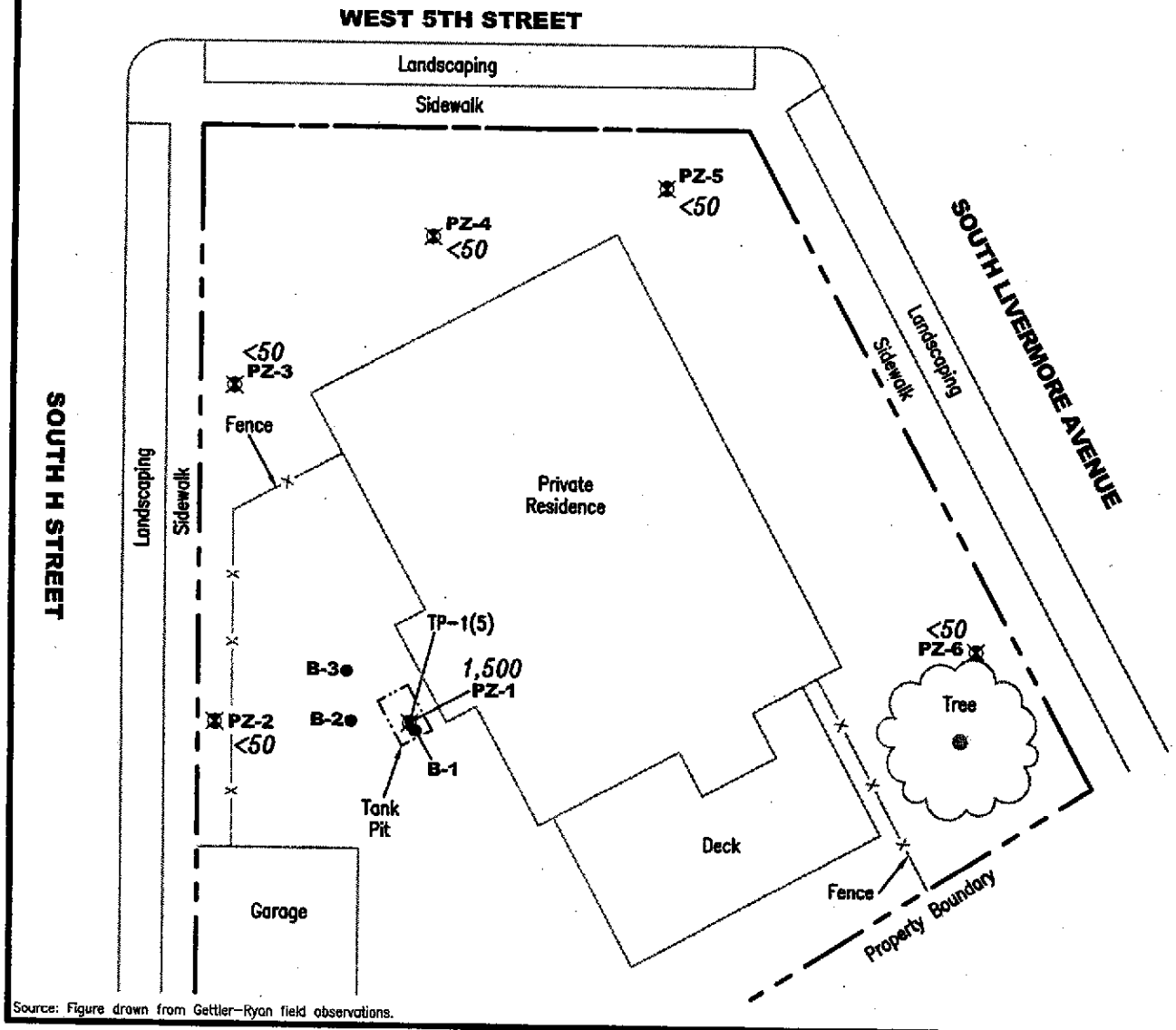
REVIEWED BY

DATE
October 12, 2005

REVISED DATE

FILE NAME: P:\Enviro\Marie Schweickert Property\A05-MARIE SCHWEICKERT.DWG | Layout Tab: Pot3-OCT

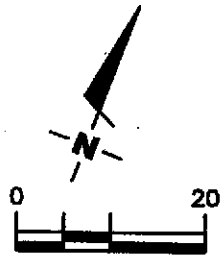
ATTACHMENT 2



EXPLANATION

- • Soil sample
- ● Soil boring
- ⊠ Soil boring/piezometer
- *100* TPH–D (Total Petroleum Hydrocarbons as Diesel) concentrations in ppb

NOTE: No purge groundwater samples were collected on October 12, 2005



Scale in Feet

Source: Figure drawn from Gettler–Ryan field observations.

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TPH–D CONCENTRATION MAP
Marie Schweickert Property
515 South Livermore Avenue
Livermore, California

FIGURE
2

PROJECT NUMBER
948209

REVIEWED BY

DATE
October 12, 2005

REVISED DATE

FILE NAME: P:\Enviro\Marie Schweickert Property\A05–MARIE SCHWEICKERT.DWG | Layout Tab: Tphd3–OCT

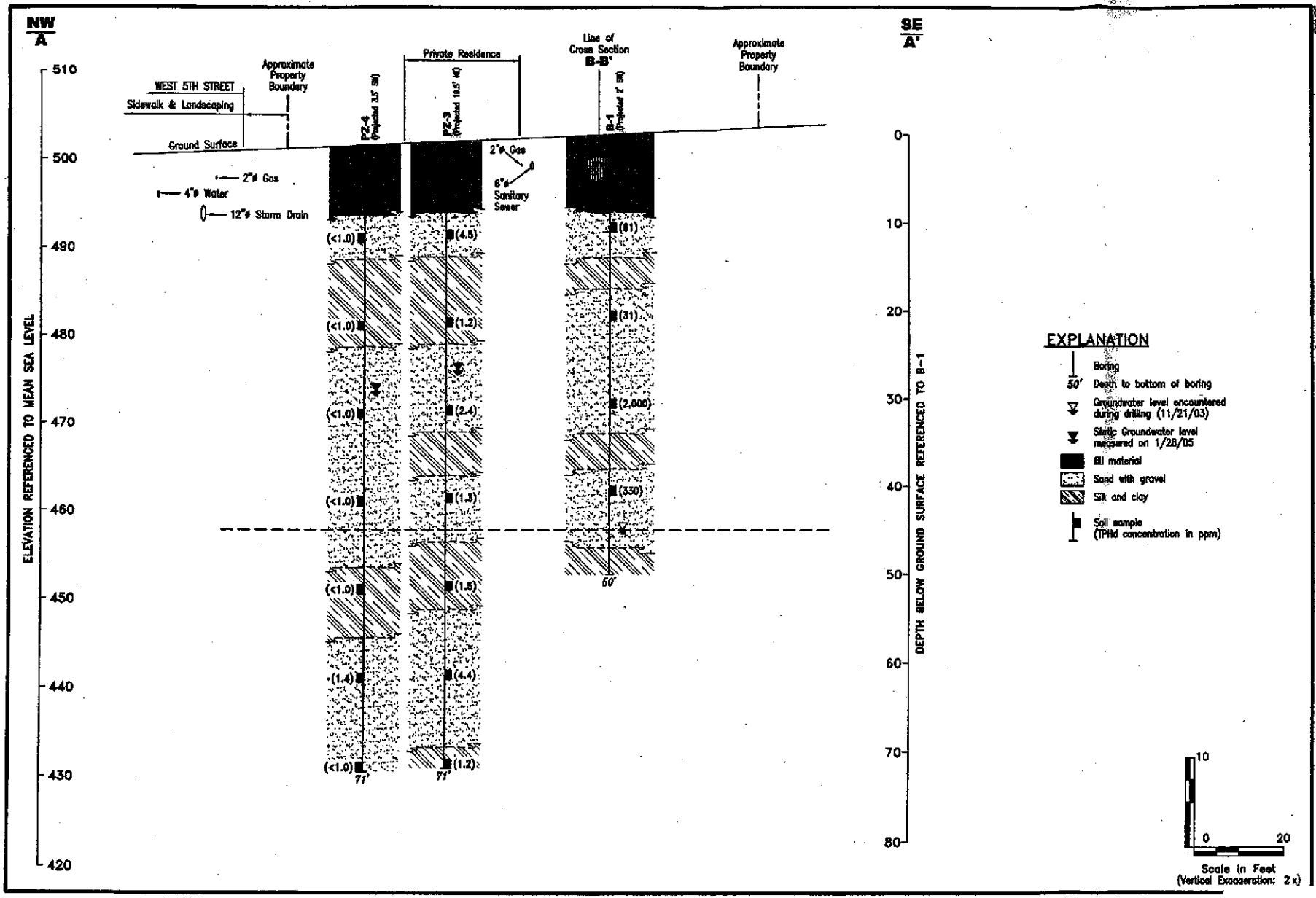

FIGURE 3

CROSS SECTION A-A'
Marie Schweickert Property
515 South Livermore Avenue
Livermore, California

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PROJECT NUMBER 548209.3
REVIEWED BY
DATE 02/05
REVISED DATE

FILE NAME: P:\Entro\Marie Schweickert Property\VA3-MARIE SCHWEICKERT.DWG | Layout Tab: X-sect A 04-05

ATTACHMENT 3

CROSS SECTION B–B'
Marie Schweickert Property
515 South Livermore Avenue
Livermore, California

FIGURE 4

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PROJECT NUMBER 948209.3
REVIEWED BY
DATE 02/05
REVISED DATE

FILE NAME: P:\enviro\Marie Schweickert Property\XAD-MARIE SCHWEICKERT.DWG | Layout Tab: X-sect B 04-04

Table 1 - Soil and Groundwater Chemical Analytical Results

Marie Schweickert Property
515 South Livermore Ave.
Livermore, California

Sample ID	Sample Depth (ft)	Sample Date	TPHd (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	MtBE (ppm)	TBA (ppm)	O&G (ppm)
Historical Soil Data										
TP-1(5)	5.0	7/29/2003	36	<0.0050	<0.0050	<0.0050	<0.0050	----	----	<0.0050
Comp-1(A,B,C,D)	---	7/29/2003	29	<0.0050	<0.0050	<0.0050	<0.0050	----	----	<0.0050
B1-10.0	10.0	11/21/2003	65/61*	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	----
B1-20.0	20.0	11/21/2003	35/31*	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	----
B1-30.0	30.0	11/21/2003	1,900/2,000*	<0.0050	<0.0050	<0.0050	0.015	<0.0050	<0.010	----
B1-40.0	40.0	11/21/2003	350/330*	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	----
Soil Boring B-2										
B2-5	5.0	12/2/2004	2.2[1]	----	----	----	----	----	----	----
B2-10	10	12/2/2004	3.6[1]	----	----	----	----	----	----	----
B2-20	20	12/2/2004	2.3[1]	----	----	----	----	----	----	----
B2-30	30	12/2/2004	74	----	----	----	----	----	----	----
B2-40	40	12/3/2004	1.4[1]	----	----	----	----	----	----	----
B2-50	50	12/3/2004	<1.0	----	----	----	----	----	----	----
B2-60	60	12/3/2004	60	----	----	----	----	----	----	----
B2-70	70	12/3/2004	11/12*	----	----	----	----	----	----	----
Soil Boring B-3										
B3-5	5.0	12/17/2004	2.9[1]	----	----	----	----	----	----	----
B3-10	10	12/17/2004	2.3[1]	----	----	----	----	----	----	----

ATTACHMENT 4

Table 1 - Soil and Groundwater Chemical Analytical Results

Marie Schweickert Property
515 South Livermore Ave.
Livermore, California

Sample ID	Sample Depth (ft)	Sample Date	TPHd (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	MtBE (ppm)	TBA (ppm)	O&G (ppm)
Soil Boring B-3 (con't)										
B3-20	20	12/17/2004	3.9	----	----	----	----	----	----	----
B3-30	30	12/17/2004	2.1[1]	----	----	----	----	----	----	----
B3-40	40	12/17/2004	3.5[1]	----	----	----	----	----	----	----
B3-50	50	12/17/2004	3.4	----	----	----	----	----	----	----
B3-60	60	12/17/2004	14	----	----	----	----	----	----	----
B3-65	65	12/17/2004	81	----	----	----	----	----	----	----
Soil Boring PZ-1										
PZ1-50	50	12/2/2004	1.0	----	----	----	----	----	----	----
PZ1-60	60	12/2/2004	320	----	----	----	----	----	----	----
PZ1-70	70	12/2/2004	7.0/7.0*	----	----	----	----	----	----	----
Soil Boring PZ-2										
PZ2-5	5.0	1/13/2005	<1.0	----	----	----	----	----	----	----
PZ2-10	10	1/13/2005	5.6[1]	----	----	----	----	----	----	----
PZ2-20	20	1/13/2005	2.4[1]	----	----	----	----	----	----	----
PZ2-30	30	1/13/2005	<1.0	----	----	----	----	----	----	----
PZ2-40	40	1/13/2005	<1.0	----	----	----	----	----	----	----
PZ2-50	50	1/13/2005	<1.0	----	----	----	----	----	----	----
PZ2-60	60	1/13/2005	2.0[1]	----	----	----	----	----	----	----
PZ2-70	70	1/13/2005	3.9[1]	----	----	----	----	----	----	----
Soil Boring PZ-3										
PZ3-5	5.0	1/14/2005	5.2[1]	----	----	----	----	----	----	----
PZ3-10	10	1/14/2005	4.5[1]	----	----	----	----	----	----	----
PZ3-20	20	1/14/2005	1.2[1]	----	----	----	----	----	----	----

Table 1 - Soil and Groundwater Chemical Analytical Results

Marie Schweickert Property
515 South Livermore Ave.
Livermore, California

Sample ID	Sample Depth (ft)	Sample Date	TPHd (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	MtBE (ppm)	TBA (ppm)	O&G (ppm)
Soil Boring PZ-3 (con't)										
PZ3-30	30	1/14/2005	2.4[1]	----	----	----	----	----	----	----
PZ3-40	40	1/14/2005	1.3[1]	----	----	----	----	----	----	----
PZ3-50	50	1/14/2005	1.5[1]	----	----	----	----	----	----	----
PZ3-60	60	1/14/2005	4.4[1]	----	----	----	----	----	----	----
PZ3-70	70	1/14/2005	1.2[1]	----	----	----	----	----	----	----
Soil Boring PZ-4										
PZ4-10	10	1/17/2005	<1.0	----	----	----	----	----	----	----
PZ4-20	20	1/17/2005	<1.0	----	----	----	----	----	----	----
PZ4-30	30	1/17/2005	<1.0	----	----	----	----	----	----	----
PZ4-40	40	1/17/2005	<1.0	----	----	----	----	----	----	----
PZ4-50	50	1/17/2005	<1.0	----	----	----	----	----	----	----
PZ4-60	60	1/17/2005	1.4[1]	----	----	----	----	----	----	----
PZ4-70	70	1/17/2005	<1.0	----	----	----	----	----	----	----
Soil Boring PZ-5										
PZ5-10	10	1/18/2005	<1.0	----	----	----	----	----	----	----
PZ5-20	20	1/18/2005	<1.0	----	----	----	----	----	----	----
PZ5-30	30	1/18/2005	<1.0	----	----	----	----	----	----	----
PZ5-40	40	1/18/2005	<1.0	----	----	----	----	----	----	----
PZ5-50	50	1/18/2005	<1.0	----	----	----	----	----	----	----
PZ5-60	60	1/18/2005	1.3[1]	----	----	----	----	----	----	----
Soil Boring PZ-6										
PZ6-10	10	1/24/2005	2.9[1]	----	----	----	----	----	----	----
PZ6-20	20	1/24/2005	1.5[1]	----	----	----	----	----	----	----
PZ6-30	30	1/24/2005	1.5[1]	----	----	----	----	----	----	----
PZ6-40	40	1/24/2005	<1.0	----	----	----	----	----	----	----

Table 1 - Soil and Groundwater Chemical Analytical Results

Marie Schweickert Property
515 South Livermore Ave.
Livermore, California

Sample ID	Sample Depth (ft)	Sample Date	TPHd (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	MtBE (ppm)	TBA (ppm)	O&G (ppm)
Soil Boring PZ-6 (cont't)										
PZ6-50	50	1/24/2005	1.2[1]	----	----	----	----	----	----	----
PZ6-60	60	1/24/2005	1.9[1]	----	----	----	----	----	----	----
PZ6-65	65	1/24/2005	1.9[1]	----	----	----	----	----	----	----

Sample ID	Screen Interval (ft)	Sample Date	TPHd (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)	MtBE (ppb)	TBA (ppb)
Historical Groundwater Data									
B-1	45-50	11/21/2003	100,000*	<0.50	<0.0050	<0.0050	3.1	<0.50	<5.0
Grab Groundwater Data									
B-2	40-45	12/3/2004	7,100	----	----	----	----	----	----
B-3	40-45	12/17/2004	370	----	----	----	----	----	----
PZ-1	40-45	12/2/2004	10,000	----	----	----	----	----	----
PZ-2	40-45	1/13/2005	220	----	----	----	----	----	----
PZ-3	40-45	1/14/2005	<50	----	----	----	----	----	----
PZ-4	40-45	1/17/2005	79[1]	----	----	----	----	----	----
PZ-5	40-45	1/18/2005	69[1]	----	----	----	----	----	----
PZ-6	40-45	1/24/2005	<50	----	----	----	----	----	----

Explanation:
TPHd = Total Petroleum Hydrocarbons as diesel
BTEX = Benzene, toluene, ethylbezene, xylenes
MtBE = Methyl tert-butyl ether
TBA = tert-Butyl alcohol
ppm = parts per million
ppb = parts per billion
--- = not analyzed
* = TPHd (silica gel)

Analytical Methods:
TPHd by EPA Method 8015
BTEX, MtBE and TBA by EPA Method 8260B

Analytical Laboratory:
Kiff Analytical (ELAP # 2236)

[1] Hydrocarbons reported as TPHd in this sample do not exhibit a typical diesel chromatographic pattern.

Table 1

Grab Groundwater Monitoring Data[+]

Schwieckert Residence

515 S. Livermore Avenue

Livermore, California

Sample ID	Sample Date	TOC (feet)	DTW (feet)	SPH Thickness (feet)	GWE (feet)	TPHd (ppb)	Ferrous Fe (mg/L)	Total Alkalinity (mg/L)	Carbon Dioxide (mg/L)	Sulfide (mg/L)	Methane (mg/L)	Total Manganese (µg/L)	Dissolved Manganese (µg/L)	Dissolved Oxygen (mg/L)	ORP (mV)	Nitrate (mg/L)	Sulfate (mg/L)
PZ-1	1/28/05	504.29	28.15	0.00	476.14	1,800	--	--	--	--	--	--	--	--	--	--	--
	4/26/05	504.29	22.49	0.00	481.80	7,700	--	--	--	--	--	--	--	--	--	--	--
	7/12/05	504.29	27.02	0.00	477.27	1,600	<0.10	390	38	1.6	0.066	1,600	1,600	4.5	440	24	51
	10/12/05	504.29	31.48	0.00	472.81	1,500	--	--	--	--	--	--	--	--	--	--	--
PZ-2	1/28/05	503.40	27.58	0.00	475.82	93	--	--	--	--	--	--	--	--	--	--	--
	4/26/05	503.40	21.83	0.00	481.57	<50	--	--	--	--	--	--	--	--	--	--	--
	7/12/05	503.40	26.45	0.00	476.95	<50	<0.10	370	35	1.6	0.00063	1,600	1,100	3.3	450	15	63
	10/12/05	503.40	30.76	0.00	472.64	<50	--	--	--	--	--	--	--	--	--	--	--
PZ-3	1/28/05	503.44	27.77	0.00	475.67	83	--	--	--	--	--	--	--	--	--	--	--
	4/26/05	503.44	21.93	0.00	481.51	76[1]	--	--	--	--	--	--	--	--	--	--	--
	7/12/05	503.44	26.63	0.00	476.81	<50	<0.10	400	30	2.0	0.0025	110	100	5.0	440	22	81
	10/12/05	503.44	31.00	0.00	472.44	<50	--	--	--	--	--	--	--	--	--	--	--
PZ-4	1/28/05	504.00	28.52	0.00	475.48	76	--	--	--	--	--	--	--	--	--	--	--
	4/26/05	504.00	22.69	0.00	481.31	<50	--	--	--	--	--	--	--	--	--	--	--
	7/12/05	504.00	27.38	0.00	476.62	<50	<0.10	350	22	2.4	<0.0004	86	<10	3.1	440	39	63
	10/12/05	504.00	31.71	0.00	472.29	<50	--	--	--	--	--	--	--	--	--	--	--
PZ-5	1/28/05	502.98	27.13	0.00	475.85	210	--	--	--	--	--	--	--	--	--	--	--
	4/26/05	502.98	21.32	0.00	481.66	<50	--	--	--	--	--	--	--	--	--	--	--
	7/12/05	502.98	25.99	0.00	476.99	<50	<0.10	350	26	2.4	<0.0004	120	45	5.1	440	31	76
	10/12/05	502.98	30.42	0.00	472.56	<50	--	--	--	--	--	--	--	--	--	--	--
PZ-6	1/28/05	504.23	27.57	0.00	476.66	250	--	--	--	--	--	--	--	--	--	--	--
	4/26/05	504.23	21.80	0.00	482.43	<50	--	--	--	--	--	--	--	--	--	--	--
	7/12/05	504.23	26.47	0.00	477.76	<50	<0.10	390	37	2.4	0.00043	54	46	5.5	460	37	120
	10/12/05	504.23	31.01	0.00	473.22	<50	--	--	--	--	--	--	--	--	--	--	--

Table 1
Grab Groundwater Monitoring Data[+]
Schwieckert Residence
515 S. Livermore Avenue
Livermore, California

Explanations
+ = no purge groundwater sampling
ppb = parts per billion
mg/L = milligrams per liter
µg/L = micrograms per liter
mV = millivolts
TPHd = Total Petroleum Hydrocarbons as diesel
ORP = Oxidation-Reduction Potential
SPH = Separate Phase Hydrocarbon
TOC = Top of Casing elevation measured relative to mean sea level
DTW = Depth to Water
-- = Not Analyzed
TOC surveyed by Morrow Surveying (PLS 5161) on February 7, 2005
[1]Hydrocarbons reported as TPHd in this sample do not exhibit a typical Diesel chromatographic pattern. There are discrete peaks which may or may not be petroleum related.

Analytical Laboratory:
1/28/05, 4/26/05 & 10/12/05: Kiff Analytical (ELAP# 2236)
7/12/05: California Laboratory Services (ELAP #1233)

Analytical Methods:
TPHd by EPA Method 8015M
Total Alkalinity by EPA Method 310.1
Carbon Dioxide by SM 4500C
Dissolved Oxygen by EPA Method 360.1
Ferrous Fe by SM 3500-Fe D
Nitrate as NO3 & Sulfate as SO4 by EPA Method 300.0
ORP by SM 2580
Sulfide by EPA Method 376.1
Total & Dissolved Manganese by EPA Method 200.7

Gettler-Ryan, Inc.

Log of Boring B-1

PROJECT: *Marie Schweickert Property*	LOCATION: *515 South Livermore Avenue, Livermore, CA*
GR PROJECT NO.: *948209.1*	SURFACE ELEVATION: *N/A*
DATE STARTED: *11/21/03*	WL (ft. bgs): *45* DATE: *11/21/03* TIME: *12:00*
DATE FINISHED: *11/21/03*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *1" Direct Push*	TOTAL DEPTH: *50 feet*
DRILLING COMPANY: *Vironex Drilling*	GEOLOGIST: *Bob Lauretzen*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						Sand and gravel (fill).	Boring backfilled with neat cement to ground surface.
8	3	B1-10.0			SP	POORLY GRADED SAND WITH GRAVEL (SP) – dark grayish brown (2.5Y 4/2), dry to moist, medium dense; 80% sand, 15% gravel, 5% silt.	
16	0	B1-15.0			ML	SILT (ML) – light olive brown (2.5Y 5/6), moist, stiff; 100% silt, some sand and gravel.	
					SP	POORLY GRADED SAND WITH GRAVEL (SP) – light olive brown (2.5Y 5/6), moist, medium dense; 80% sand, 20% gravel, some silt.	
20	0	B1-20.0					
24	0	B1-25.0					
28							

JOB NUMBER: *948209.1*

ATTACHMENT 5

Gettler-Ryan, Inc.

Log of Boring B-1

PROJECT: *Marie Schweickert Property*

LOCATION: *515 South Livermore Avenue, Livermore, CA*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
					SP		
	0	B1-30.0					
32						Color changes to dark grayish brown (2.5Y 4/2) at 32 feet bgs.	
					ML	SILT (ML) - light olive brown (2.5Y 5/6), moist, medium stiff; 90% silt, 10% clay, trace fine sand.	
	0	B1-35.0					
36							
					SP	POORLY GRADED SAND WITH GRAVEL (SP) - dark grayish brown (2.5Y 4/2), moist, medium dense; 55% sand, 45% gravel.	
40	0	B1-40.0					
44						▽ At 45 feet becomes wet.	
					ML	SILT WITH CLAY (ML) - dark grayish brown (2.5Y 4/2), moist to wet, medium stiff; 80% silt, 20% clay.	
48							
						Bottom of boring at 50 feet bgs.	
52							
56							
60							

JOB NUMBER: *948209.1*

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FAX: (925) 551-7888

Log of B-2

PROJECT NUMBER: 948209.04	DATE STARTED: 12-02-04
PROJECT NAME: Marie Schwieckert Residence	DATE COMPLETED: 12-03-04
LOCATION: 515 S. Livermore Ave., Livermore, CA	DEPTH TO WATER: 35 feet DATE: 12-03-03 TIME: 11:55
DRILLING METHOD: Direct Push - 1 1/4"	TOTAL DEPTH: 71 feet
SAMPLING METHOD: Core Sampler	LOGGED BY: Geoffrey D. Risse
	DRILLER: Fisch Environmental Exploration Service

DEPTH (ft. bgl)	BLOWS / 1/2 ft	PDI (ppm)	SAMPLE NO.	RECOVERY	GRAPHIC LOG	U.S.C.S.	GEOLOGIC DESCRIPTION
5	-	0	B2-5				Fill, dry, loose
10	-	0	B2-10				Fill, dry, loose
15	-	0	B2-15			CL	CLAY (CL), brown (7.5YR 4/3), dry, soft, 80% clay, 20% silt
20	-	0	B2-20			GP	Poorly graded GRAVEL with SILT and SAND (GP), brown (7.5YR 4/2), moist, medium dense, 60% gravel, 30% sand, 10% silt
25						GP	
30	-	0	B2-30			GP	Poorly graded GRAVEL with SAND (GP), brown (7.5YR 4/3), dry, medium dense, 70% gravel, 30% sand
35	-	0	B2-35			GC	CLAYEY GRAVEL (GC), brown (7.5YR 4/2), saturated, medium dense, 70% gravel, 20% clay, 10% silt

WELL DIAGRAM

Boring backfilled to 1 foot bgs with neat cement completed to ground surface with native soil

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Log of B-2

PROJECT NUMBER: 948209.04	DATE STARTED: 12-02-04
PROJECT NAME: Marie Schwieckert Residence	DATE COMPLETED: 12-03-04
LOCATION: 515 S. Livermore Ave., Livermore, CA	DEPTH TO WATER: 35 feet DATE: 12-02-03 TIME: 11:55
DRILLING METHOD: Direct Push - 1 1/4"	TOTAL DEPTH: 71 feet
SAMPLING METHOD: Core Sampler	LOGGED BY: Geoffrey D. Risse
	DRILLER: Fisch Environmental Exploration Services

DEPTH (ft. bgl)	BLOWS / 1/2 ft	PID (ppm)	SAMPLE NO.	RECOVERY	GRAPHIC LOG	U.S.C.S.	GEOLOGIC DESCRIPTION
40	-	0	B2-40			GM	SILTY GRAVEL (GM), brown (7.5YR 4/3), saturated, medium dense, 80% fine to coarse gravel, 20% silt hit refusal at 39 feet, moved over 1 foot and advanced second hole to 40 feet, collected grab GW sample at 40 feet
45	-	0	B2-45			GM	same as above
50	-	0	B2-50			CL	CLAY (CL), brown (7.5YR 4/3), saturated, stiff, 90% clay, 10% silt color change at 50' to grey and strong odor, stiff, 70% clay, 30% silt (5/N)
55	-	0	B2-55			GC	CLAYEY GRAVELY (GC), reddish brown (7.5YR 4/2), saturated, dense, 70% fine to coarse gravel, 30% clay, faint odor
60	-	0	B2-60			CL	GRAVELLY CLAY (GC), brown (7.5YR 4/2), saturated, very dense, 80% clay, 20% medium to coarse gravel
65	-	0	B2-65			GC	CLAYEY GRAVELY (GC), reddish brown (7.5YR 4/2), saturated, very dense, 70% gravel, 30% silt
70	-	0	B2-70			CL	CLAY (GC), reddish brown (7.5YR 4/2), saturated, very dense, 90% clay, 10% coarse gravel
							Bottom of bore hole at 71 feet

WELL DIAGRAM

Boring backfilled to 1 foot bgs with neat cement completed to ground surface with native soil

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Log of B-3

PROJECT NUMBER: 948209.04	DATE STARTED: 12-17-04
PROJECT NAME: Marie Schwieckert Residence	DATE COMPLETED: 12-17-04
LOCATION: 515 S. Livermore Ave., Livermore, CA	DEPTH TO WATER: 35 feet DATE: 12-17-03 TIME: 09:46
DRILLING METHOD: Direct Push - 1 1/4"	TOTAL DEPTH: 65.5 feet
SAMPLING METHOD: Core Sampler	LOGGED BY: Geoffrey D. Risse
	DRILLER: Fisch Environmental Exploration Service

DEPTH (ft. bgl)	BLOWS / 1/2 ft	PDI (ppm)	SAMPLE NO.	RECOVERY	GRAPHIC LOG	U.S.C.S.	GEOLOGIC DESCRIPTION	WELL DIAGRAM
5	-	0	B3-5				Fill, dry, loose (gravel)	Boring backfilled to 1 foot bgs with neat cement completed to ground surface with native soil
10	-	0	B3-10			GP	GRAVEL with SAND (GP), brown (7.5YR 4/4)dry, loose, 85% gravel, 15% sand	
15	-	0	B3-15			CL	CLAY (CL), brown (7.5YR 4/4), moist, medium stiff, 70% clay, 30% silt	
20	-	0	B3-20			GM	SILTY GRAVEL (GM), brown (7.5YR 4/3), dry, medium dense, 80% fine to coarse gravel, 20% silt	
25	-	0	B3-25			GM	same as above, dense	
30	-	0	B3-30			GM	same as above, moist, 10% fine sand	
35	-	0	B3-35			CL	GRAVELLY CLAY (CL), reddish brown (5YR 4/4), saturated, stiff, 70% clay, 20% fine to medium gravel, 10% silt	

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Log of B-3

PROJECT NUMBER: 948209.04	DATE STARTED: 12-172-04
PROJECT NAME: Marie Schwieckert Residence	DATE COMPLETED: 12-17-04
LOCATION: 515 S. Livermore Ave., Livermore, CA	DEPTH TO WATER: 35 feet DATE: 12-17-03 TIME: 09:46
DRILLING METHOD: Direct Push - 1 1/4"	TOTAL DEPTH: 65.5 feet
SAMPLING METHOD: Core Sampler	LOGGED BY: Geoffrey D. Risse
	DRILLER: Fisch Environmental Exploration Services

DEPTH (ft. bgl)	BLOWS / 1/2 ft	PDI (ppm)	SAMPLE NO.	RECOVERY	GRAPHIC LOG	U.S.C.S.	GEOLOGIC DESCRIPTION	WELL DIAGRAM
						CL		Boring backfilled to 1 foot bgs with neat cement completed to ground surface with native soil
40	-	0	B3-40			SP	SAND with GRAVEL and SILT (SP), reddish brown (2.5YR 4/4), saturated, stiff, 80% sand, 10% silt, 10% gravel	
			B-3 water				grab GW sample collected at 44 feet	
45	-	0	B3-45			ML	SILT (ML), brown (10YR 4/3), saturated, stiff, 80% silt, 20% clay	
50	-	0	B3-50			GP	Poorly graded GRAVEL with SILT and SAND (GP), Brown (7.5YR 4/4), saturated, dense, 70% fine to medium gravel, 20% sand, 10% silt	
55	-	4	B3-55			CL	CLAY (CL), greyish brown (10YR 5/2), saturated, stiff, 80% clay, 15% sand, 5% silt, faint odor	
60	-	11	B3-60			CL	same as above, grey (5/N), strong odor	
						CL	Hard drilling - between 61 and 64 feet, strong odor	
65	-	8	B3-65			GP	Poorly graded GRAVEL (GP), brown (7.5YR 4/4), dry, very dense, 85% fine to medium gravel, 10% sand, 5% silt	
							refusal at 65.5'	
							Bottom of bore hole at 65.5 feet	
70								

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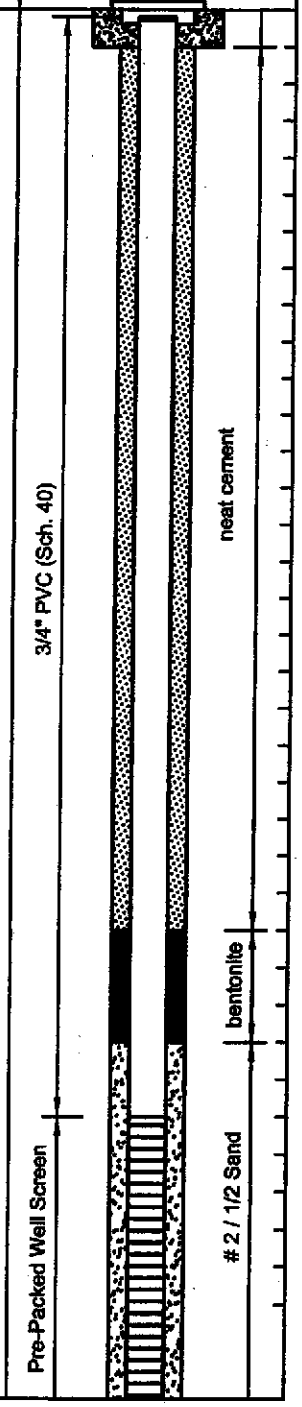
Log of PZ-1

PROJECT NUMBER: 948209.04	DATE STARTED: 12-02-04
PROJECT NAME: Marie Schwieckert Residence	DATE COMPLETED: 12-03-04
LOCATION: 515 S. Livermore Ave., Livermore, CA	DEPTH TO WATER: 40 feet DATE: 12-02-03 TIME: 09:09
DRILLING METHOD: Direct Push - 1 1/4"	TOTAL DEPTH: 71 feet TOC Elevation: 504.29 feet
SAMPLING METHOD: Core Sampler	LOGGED BY: Geoffrey D. Risse
	DRILLER: Fisch Environmental Exploration Service

DEPTH (ft. bgl)	BLOWS / 1/2 ft.	PDI (ppm)	SAMPLE NO.	RECOVERY	GRAPHIC LOG	U.S.C.S.	GEOLOGIC DESCRIPTION
							upper 40 feet not logged due to proximity to B-1
35							water measured at 35 feet 12-03-04 at 10:00

WELL DIAGRAM



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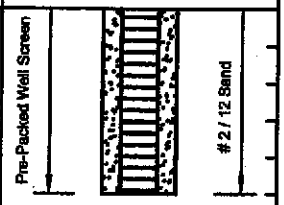
Log of PZ-1

PROJECT NUMBER: 948209.04	DATE STARTED: 12-02-04
PROJECT NAME: Marie Schwieckert Residence	DATE COMPLETED: 12-03-04
LOCATION: 515 S. Livermore Ave., Livermore, CA	DEPTH TO WATER: 40 feet DATE: 12-02-03 TIME: 09:09
DRILLING METHOD: Direct Push - 1 1/4"	TOTAL DEPTH: 71 feet TOC Elevation: 504.29 feet
SAMPLING METHOD: Core Sampled	LOGGED BY: Geoffrey D. Risse
	DRILLER: Fisch Environmental Exploration Services

DEPTH (ft. bgl)	BLOWS / 12 in	PDI (ppm)	SAMPLE NO.	RECOVERY	GRAPHIC LOG	U.S.C.S.	GEOLOGIC DESCRIPTION
							upper 40 feet not logged due to proximity to B-1
40	–	–	PZ1-40			GC	CLAYEY GRAVEL (GC), grey (6/N), saturated, medium dense, 70% gravel, 20% silt, 10% sand, strong Hydrocarbon odor
			PZ-1 Water				collected grab GW sample at 44 feet
45	–	–	PZ1-45			CL	CLAY (CL), grey (6/N), saturated, medium stiff, 80% clay, 15% silt, 5% sand
50	–	–	PZ1-50			CL	CLAY (CL), reddish brown (2.5YR 4/3), saturated, medium stiff, 80% clay, 20% silt, faint odor
						GP	Poorly graded GRAVEL with SILT (GP), grey (6/N), saturated, dense, 80% gravel, 10% silt, 10% sand, faint odor
55	–	–	PZ1-55			CL	CLAY (CL), reddish brown (2.5YR 4/3), saturated, stiff, 80% clay, 20% silt
60	–	–	PZ1-60			GM	SILT GRAVEL (GM), Grey (6/N), saturated, very dense, 80% gravel, 20% silt
65	–	–	PZ1-65			GP	Poorly graded GRAVEL with SAND (GP), reddish brown (2.5YR 4/3), moist, very dense, 70% gravel, 25% sand, 5% silt
70	–	–	PZ1-70			GP	same as above
							Bottom of bore hole at 71 feet

WELL DIAGRAM



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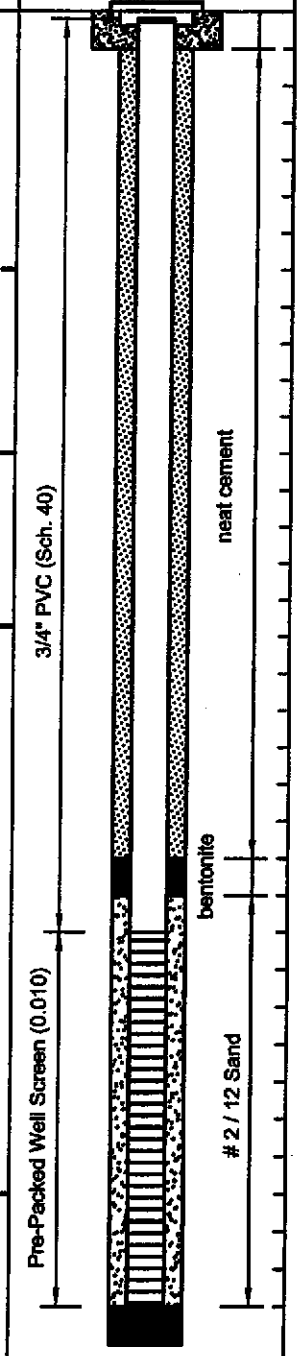
FAX: (925) 551-7888

Log of PZ-2

PROJECT NUMBER: 948209.04	DATE STARTED: 01-13-05
PROJECT NAME: Marie Schwieckert Residence	DATE COMPLETED: 01-13-05
LOCATION: 515 S. Livermore Ave., Livermore, CA	DEPTH TO WATER: 30 feet DATE: 01-13-05 TIME: 09:11
DRILLING METHOD: Direct Push - 1 1/4"	TOTAL DEPTH: 71 feet TOC Elevation: 503.40 feet
SAMPLING METHOD: Core Sampler	LOGGED BY: Geoffrey D. Risse
	DRILLER: Fisch Environmental Exploration Service

DEPTH (ft. bgl)	BLOWS / 1/2 ft	PID (ppm)	SAMPLE NO.	RECOVERY	GRAPHIC LOG	U.S.C.S.	GEOLOGIC DESCRIPTION
5		0	PZ-2 -5				Fill, dry, loose (gravel)
10		0	PZ-2 -10			GP	GRAVEL with SAND (GP), dry, loose, 85% gravel, 15% sand
15		0	PZ-2 -15			ML	SILT (ML), dark brown (7.5YR 3/2), moist, medium stiff, 80% silt, 15% clay, 5% fine sand
20		0	PZ-2 -20			SP	SAND with SILT (SP), reddish brown (2.5YR 4/3), moist, medium dense, 90% fine sand, 10% silt
25		0	PZ-2 -25			SP	same as above
							water measured at 28.20 feet 01-13-05 at 15:00
30		0	PZ-2 -30			SP	same as above - saturated
35		0	PZ-2 -35			SM	SILTY SAND (SM), light brown (7.5YR 6/3), saturated, dense, 70% fine to medium sand, 30% silt

WELL DIAGRAM



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Log of PZ-2

PROJECT NUMBER: 948209.04	DATE STARTED: 01-13-05
PROJECT NAME: Marie Schwieckert Residence	DATE COMPLETED: 01-13-05
LOCATION: 515 S. Livermore Ave., Livermore, CA	DEPTH TO WATER: 30 feet DATE: 01-13-05 TIME: 09:11
DRILLING METHOD: Direct Push - 1 1/4"	TOTAL DEPTH: 71 feet TOC Elevation: 503.40 feet
SAMPLING METHOD: Core Sampler	LOGGED BY: Geoffrey D. Risse
	DRILLER: Fisch Environmental Exploration Service

DEPTH (ft. bgl)	BLOWS / 1/2 ft.	PID (ppm)	SAMPLE NO.	RECOVERY	GRAPHIC LOG	U.S.C.S.	GEOLOGIC DESCRIPTION
40		0	PZ-2 -40			SM	SILTY SAND (SM), brown (7.5YR 4/2), saturated, dense, 70% fine to medium sand, 20% silt, 10% fine gravel
			PZ-2 water				collected grab GW sample at 44 feet
45							sample refusal at 45 feet, '
50		0	PZ-2 -50			ML	SILT (ML), dark brown (7.5YR 3/2), saturated, very stiff, 90% silt, 10% clay
55		0	PZ-2 -55			SP	SAND with SILT (SP), light brown (7.5YR 6/3), saturated, very dense, fine to coarse sand, 90% sand, 10% silt
60		0	PZ-2 -60			SP	same as above
65		0	PZ-2 -65			ML	SILT (ML), dark brown (7.5YR 3/2), saturated, very stiff, 95% silt, 5% clay
70		0	PZ-2 -70			ML	same as above - moist
							Bottom of bore hole at 71 feet

WELL DIAGRAM

Concrete Vault

Backfilled with bentonite from 71' to 35'

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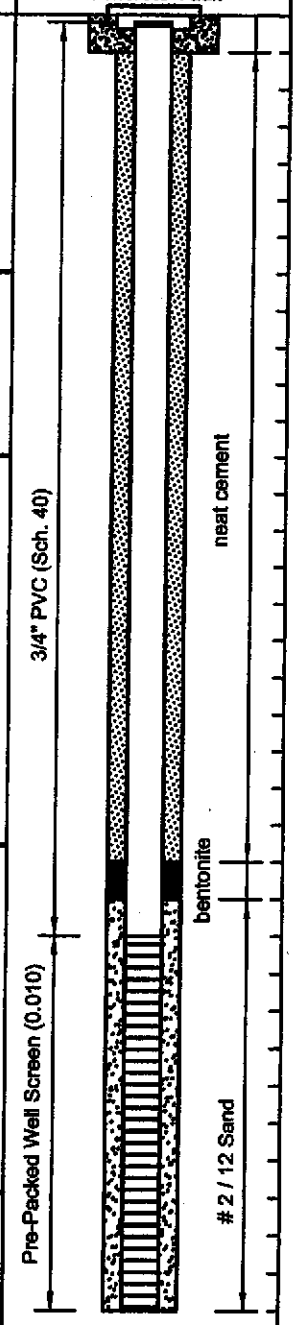
Log of PZ-3

PROJECT NUMBER: 948209.04	DATE STARTED: 01-14-05
PROJECT NAME: Marie Schwieckert Residence	DATE COMPLETED: 01-14-05
LOCATION: 515 S. Livermore Ave., Livermore, CA	DEPTH TO WATER: 35 feet DATE: 01-14-05 TIME: 09:17
DRILLING METHOD: Direct Push - 1 1/4"	TOTAL DEPTH: 71 feet TOC Elevation: 503.44 feet
SAMPLING METHOD: Core Sampler	LOGGED BY: Geoffrey D. Risse
	DRILLER: Fisch Environmental Exploration Service

DEPTH (ft. bgl)	BLOWS / 1/2 ft.	PID (ppm)	SAMPLE NO.	RECOVERY	GRAPHIC LOG	U.S.C.S.	GEOLOGIC DESCRIPTION
5		0	PZ-3 -5				Fill, dry, loose (gravel)
10		0	PZ-3 -10			GP	GRAVEL with SILT (GP), dry, loose, 85% gravel, 15% silt
15		0	PZ-3 -15			ML	SILT (ML), dark brown (7.5YR 3/3), moist, medium stiff, 90% silt, 10% clay
20		0	PZ-3 -20			ML	same as above
25		0	PZ-3 -25			SP	SAND with GRAVEL (SP), light brown (7.5YR 6/3), moist, dense, 90% fine sand, 10% gravel
							water measured at 26.20 feet 01-14-05 at 15:00
30		0	PZ-3 -30			SP	same as above
35		0	PZ-3 -35			ML	SANDY SILT (ML), saturated, 70% sitt, 30% fine sand

WELL DIAGRAM



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Log of PZ-3

PROJECT NUMBER: 948209.04	DATE STARTED: 01-14-05
PROJECT NAME: Marie Schwieckert Residence	DATE COMPLETED: 01-14-05
LOCATION: 515 S. Livermore Ave., Livermore, CA	DEPTH TO WATER: 35 feet DATE: 01-14-05 TIME: 09:17
DRILLING METHOD: Direct Push - 1 1/4"	TOTAL DEPTH: 71 feet TOC Elevation: 503.44 feet
SAMPLING METHOD: Core Sampler	LOGGED BY: Geoffrey D. Risse
	DRILLER: Fisch Environmental Exploration Service

DEPTH (ft. bgl)	BLOWS / 1/2 ft	PDI (ppm)	SAMPLE NO.	RECOVERY	GRAPHIC LOG	U.S.C.S.	GEOLOGIC DESCRIPTION	WELL DIAGRAM
						ML		
40		0	PZ-3 -40			SP	Poorly graded SAND with SILT (SP), light brown (7.5YR 6/3), saturated, medium dense, 90% fine to coarse sand, 10% silt	
			PZ-3 water				collected grab GW sample at 44 feet	
45		0	PZ-3 -45			SP	same as above	
						ML	SILT (ML), dark brown (7.5YR 3/2), saturated, stiff, 90% clay, 10% silt	
50		0	PZ-3 -50			ML	same as above	
55		0	PZ-3 -55			SP	SAND with SILT (SP), brown (7.5YR 4/3), saturated, very dense, 90% fine sand, 10% silt	
60		0	PZ-3 -60			SP	same as above	
65		0	PZ-3 -65			SP	same as above	
70		0	PZ-3 -70			CL	CLAY (CL), reddish brown (5YR 4/4), moist, very stiff, 85% clay, 15% silt	
							Bottom of bore hole at 71 feet	

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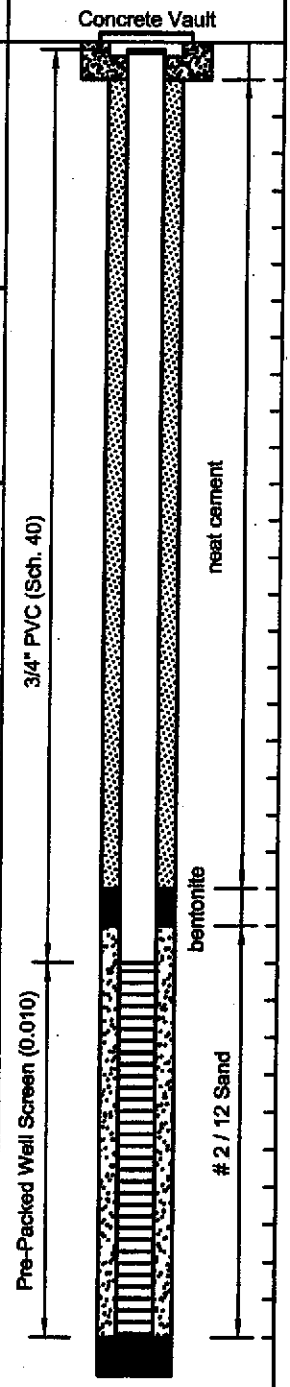
Log of PZ-4

PROJECT NUMBER: 948209.04	DATE STARTED: 01-17-05
PROJECT NAME: Marie Schwieckert Residence	DATE COMPLETED: 01-173-05
LOCATION: 515 S. Livermore Ave., Livermore, CA	DEPTH TO WATER: 30 feet DATE: 01-17-05 TIME: 09:07
DRILLING METHOD: Direct Push - 1 1/4"	TOTAL DEPTH: 71 feet TOC Elevation: 504.00 feet
SAMPLING METHOD: Core Sampler	LOGGED BY: Geoffrey D. Risse
	DRILLER: Fisch Environmental Exploration Service

DEPTH (ft. bgl)	BLOWS / 1/2 ft	PDI (ppm)	SAMPLE NO.	RECOVERY	GRAPHIC LOG	U.S.C.S.	GEOLOGIC DESCRIPTION
							grass and topsoil
5		0	PZ-4 -5				Fill, dry, loose (gravel)
10		0	PZ-4 -10			SP	SAND with GRAVEL (SP), dry, loose, 90% fine sand, 10% gravel
15		0	PZ-4 -15			ML	SILT (ML), dark brown (10YR 3/3), moist, soft, 90% silt, 10% clay
20		0	PZ-4 -20			ML	same as above - 10% fine sand
25		0	PZ-4 -25			SP	SAND with GRAVEL and SILT (SP), reddish brown (5YR 4/4), moist, dense, 80% sand, 10% gravel, 10% silt
							water measured at 28.20 feet 01-17-05 at 15:00
30		0	PZ-4 -30			SP	same as above
35		0	PZ-4 -35			SP	same as above, increase in silt content to 15%



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Log of PZ-4

PROJECT NUMBER: 948209.04	DATE STARTED: 01-17-05
PROJECT NAME: Marie Schwieckert Residence	DATE COMPLETED: 01-17-05
LOCATION: 515 S. Livermore Ave., Livermore, CA	DEPTH TO WATER: 30 feet DATE: 01-17-05 TIME: 09:07
DRILLING METHOD: Direct Push - 1 1/4"	TOTAL DEPTH: 71 feet TOC Elevation: 504.00 feet
SAMPLING METHOD: Core Sampler	LOGGED BY: Geoffrey D. Risse
	DRILLER: Fisch Environmental Exploration Service

DEPTH (ft. bgl)	BLOWS / 1/2 ft	PID (ppm)	SAMPLE NO.	RECOVERY	GRAPHIC LOG	U.S.C.S.	GEOLOGIC DESCRIPTION	WELL DIAGRAM
								Concrete Vault
								Backfilled with bentonite from 71' to 35'
40		0	PZ-4 -40			SM	SILTY SAND (SM), brown (7.5YR 5/3), saturated, dense, 80% fine sand, 20% silt	
			PZ-4 water				collected grab GW sample at 42 feet	
45							sample refusal at 45 feet	
50		0	PZ-4 -50			CL	CLAY (CL), light brown (7.5YR 6/4), saturated, medium stiff, 90% clay, 10% silt	
55		0	PZ-4 -55			CL	same as above	
						SM	SILTY SAND (SM), light brown (7.5YR 6/4), saturated, medium dense, 70% fine sand, 20% silt, 10% fine gravel	
60		0	PZ-4 -60			SP	SAND with GRAVEL and SILT (SP), reddish brown (7.5YR 4/4), saturated, dense, 80% fine sand, 10% gravel, 10% silt	
65		0	PZ-4 -65			SM	SILTY SAND (SM), brown (7.5YR 5/4), moist, dense, 70% fine sand, 25% silt, 5% fine to medium gravel	
70		0	PZ-4 -70			SM	same as above - very dense	
							Bottom of bore hole at 71 feet	

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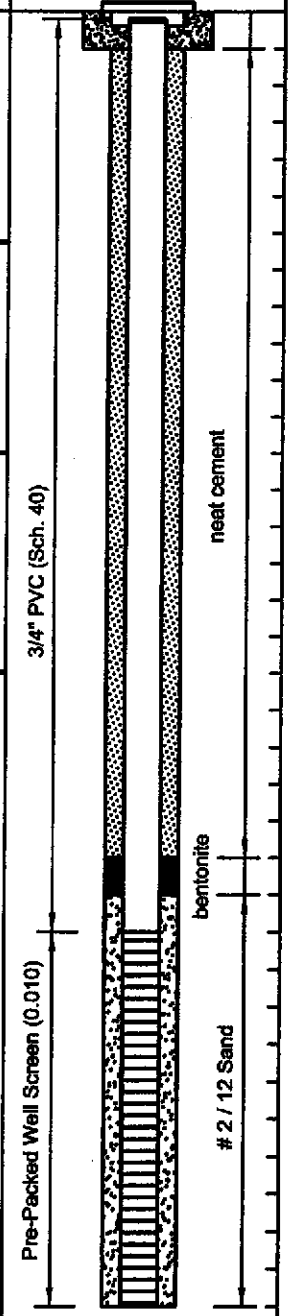
Log of PZ-5

PROJECT NUMBER: 948209.04	DATE STARTED: 01-18-05
PROJECT NAME: Marie Schwieckert Residence	DATE COMPLETED: 01-18-05
LOCATION: 515 S. Livermore Ave., Livermore, CA	DEPTH TO WATER: 30 feet DATE: 01-18-05 TIME: 09:00
DRILLING METHOD: Direct Push - 1 1/4"	TOTAL DEPTH: 61 feet TOC Elevation: 502.98 feet
SAMPLING METHOD: Core Sampler	LOGGED BY: Geoffrey D. Risse
	DRILLER: Fisch Environmental Exploration Service

DEPTH (ft. bgl)	BLOWS / 1/2 ft	PID (ppm)	SAMPLE NO.	RECOVERY	GRAPHIC LOG	U.S.C.S.	GEOLOGIC DESCRIPTION
							grass, topsoil
5		0	PZ-5 -5				Fill, dry, loose (gravel)
10		0	PZ-5 -10			SP	SAND with GRAVEL (SP), dry, loose, 90% fine sand, 10% gravel
15		0	PZ-5 -15			ML	SILT (ML), brown (7.5YR 5/3), moist, soft, 90% silt, 10% clay
20		0	PZ-5 -20			SM	SILTY SAND (SM), brown (7.5YR 4/3), moist, medium dense, 80% fine to medium sand, 15% silt, 5% gravel
25		0	PZ-5 -25			SM	same as above
							water measured at 26.00 feet 01-18-05 at 14:00
30		0	PZ-5 -30			SM	same as above - saturated
35		0	PZ-5 -35			SM	same as above



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FAX: (925) 551-7888

Log of PZ-5

	DATE STARTED: 01-18-05
PROJECT NUMBER: 948209.04	DATE COMPLETED: 01-18-05
PROJECT NAME: Marie Schwieckert Residence	DEPTH TO WATER: 30 feet DATE: 01-18-05 TIME: 09:00
LOCATION: 515 S. Livermore Ave., Livermore, CA	TOTAL DEPTH: 61 feet TOC Elevation: 502.98 feet
DRILLING METHOD: Direct Push - 1 1/4"	LOGGED BY: Geoffrey D. Risse
SAMPLING METHOD: Core Sampler	DRILLER: Fisch Environmental Exploration Service

DEPTH (ft. bgl)	BLOWS / 1/2 ft	PDI (ppm)	SAMPLE NO.	RECOVERY	GRAPHIC LOG	U.S.C.S.	GEOLOGIC DESCRIPTION	WELL DIAGRAM
40		0	PZ-5 -40			SM	SILTY SAND (SM), light brown (7.5YR 6/3), saturated, medium dense, 80% fine to medium sand, 20% silt	
			PZ-5 water				collected grab GW sample at 42 feet	
45		0	PZ-5 -45			ML	SILT (ML), dark brown (7.5YR 3/2), saturated, stiff, 90% silt, 10% clay	
50		0	PZ-5 -50			ML	same as above - stiff	
55		0	PZ-5 -55			SP	Poorly graded SAND with SILT and GRAVEL (SP), light brown (7.5YR 6/4), saturated, dense, 70% fine to coarse sand, 20% fine to medium gravel, 10% silt	
60		0	PZ-5 -60			SP	same as above - very dense	
							Bottom of bore hole at 61 feet	
							Refusal at 61 feet - due to gravel	
65								
70								

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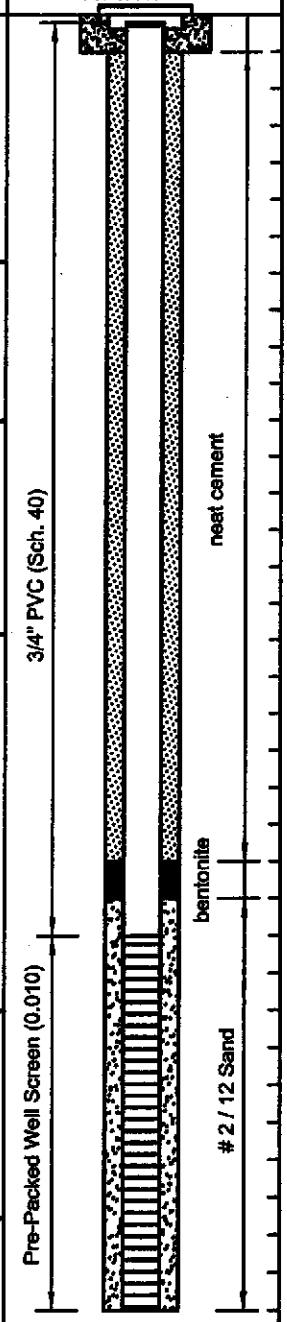
Log of PZ-6

PROJECT NUMBER: 948209.04	DATE STARTED: 01-24-05
PROJECT NAME: Marie Schwieckert Residence	DATE COMPLETED: 01-24-05
LOCATION: 515 S. Livermore Ave., Livermore, CA	DEPTH TO WATER: 30 feet DATE: 01-24-05 TIME: 09:30
DRILLING METHOD: Direct Push - 1 1/4"	TOTAL DEPTH: 65 feet TOC Elevation: 504.23 feet
SAMPLING METHOD: Core Sampler	LOGGED BY: Geoffrey D. Risse
	DRILLER: Fisch Environmental Exploration Service

DEPTH (ft. bgl)	BLOWS / 1/2 ft.	PDI (ppm)	SAMPLE NO.	RECOVERY	GRAPHIC LOG	U.S.C.S.	GEOLOGIC DESCRIPTION
							topsoil
5		0	PZ-6 -5				Fill, moist, loose (gravel)
10		0	PZ-6 -10			GP	GRAVEL with SAND (GP), moist, loose, 85% gravel, 15% sand
15		0	PZ-6 -15			ML	SILT (ML), brown (7.5YR 4/2), moist, soft, 95% silt, 5% fine sand
20		0	PZ-6 -20			SP	SAND with SILT (SP), light brown (7.5YR 6/3), moist, dense, 90% fine sand, 10% silt
25		0	PZ-6 -25			SP	same as above
							encountered water at 30 feet
30		0	PZ-6 -30			SM	SILTY SAND (SM), brown (7.5YR 4/3), saturated, dense, 80% fine to medium sand, 20% silt
35		0	PZ-6 -35			SP	Poorly graded SAND with GRAVEL (SP), light brown (7.5YR 6/3), saturated, medium dense, 70% fine to medium sand, 15% gravel, 10% silt



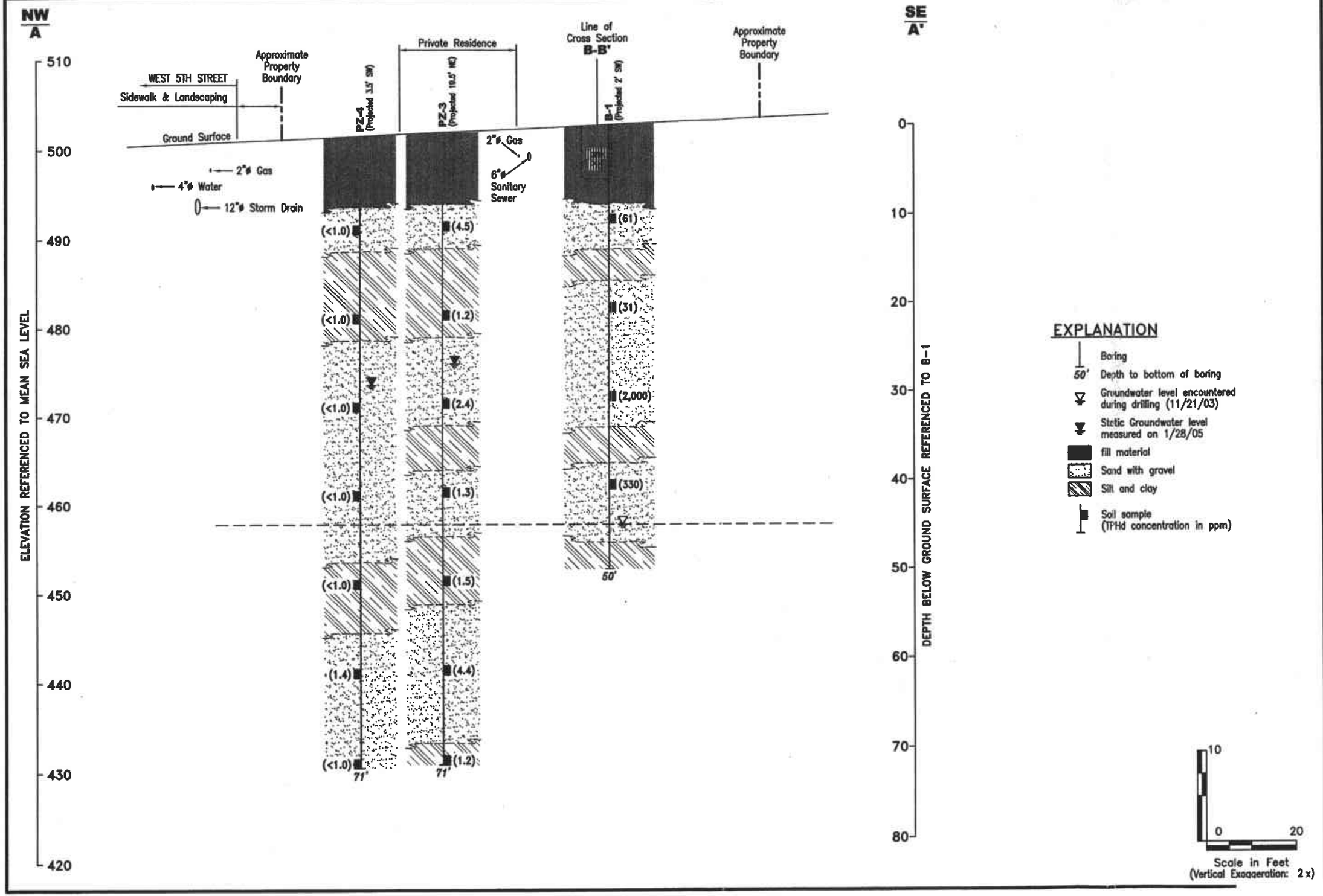


FIGURE 3

CROSS SECTION A-A'
Marie Schweickert Property
515 South Livermore Avenue
Livermore, California

REVISED DATE

GETTLER - RYAN INC.
6747 Sierra Court, Suite J
Dublin, CA 94568
(925) 551-7555

PROJECT NUMBER
)48209.3

REVIEWED BY

DATE
02/05

LE NAME: P:\Enviro\Marie Schweickert Property\MAS-MARIE SCHWEICKERT.DWG | Layout Tab: X-sect A 04-04

ATTACHMENT 3

SW
B

NE
B'

SOUTH H STREET

Sidewalk

Sidewalk & Landscaping

Approximate Property Boundary

PZ-2 (Projected 2.7° NW)

Fence

Line of Cross Section A-A'

B-3 (Projected 3.5° SE)

B-1 (Projected 3° NW)

Pit

Private Residence

Deck

Fence

Approximate Property Boundary

PZ-6 (Projected 7.5° SE)

SOUTH LIVERMORE AVENUE

Sidewalk & Landscaping

Sidewalk

Ground Surface

2"ø Gas

8"ø Sanitary Sewer

8"ø Water

8"ø Sanitary Sewer

6"ø Water

8"ø Gas

30"ø Storm Drain

DEPTH BELOW GROUND SURFACE REFERENCED TO B-1

0
10
20
30
40
50
60
70
80

ELEVATION REFERENCED TO MEAN SEA LEVEL

510
500
490
480
470
460
450
440
430

(5.6) (2.3) (61)

(2.4) (3.9) (31)

(<1.0) (2.1) (2,000)

(<1.0) (3.5) (330)

50'

(<1.0) (3.4)

(2.0) (14) (81)

65.5'

(3.9)

71'

(2.9)

(1.5)

(1.5)

(<1.0)

(1.2)

(1.9)

(1.9)

65'

EXPLANATION

- Boring
- 60' Depth to bottom of boring
- Groundwater level encountered during drilling (11/21/03)
- Static Groundwater level measured on 1/28/05
- fill material
- Sand with gravel
- Silt and clay
- Soil sample (TPHd concentration in ppm)

10
0
20

Scale in Feet
(Vertical Exaggeration: 2 x)

FIGURE 4

CROSS SECTION B-B'
Marie Schweickert Property
515 South Livermore Avenue
Livermore, California

REVISED DATE

GETTLER-RYAN INC.
6747 Sierra Court, Suite J
Dublin, CA 94568
(925) 551-7555

PROJECT NUMBER
948209.3

REVIEWED BY

DATE
02/05

FILE NAME: P:\Enviro\Marie Schweickert Property\WA3-MARIE SCHWEICKERT.DWG | Layout Tab: X-sect B 04-04