

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY

ALEX BRISCOE, Acting Director



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

November 5, 2009

Mr. Dick Groth  
Groth Brothers Auto Dealership  
4420 Mines Road  
Livermore, CA 94550

James and Diane Bordoni  
Bordoni Ranch LLC & Breen Valley Co.  
478 Sequoia Way  
Los Altos, CA 94024-7152

Subject: Fuel Leak Case No. RO0000217 and Geotracker ID T0600101656, Groth Brothers Oldsmobile, 59 South L Street, Livermore, CA 94550 – Case Closure

Dear Responsible Parties:

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. This case closure letter and the case closure summary can also be viewed on the State Water Resources Control Board's Geotracker website (<http://geotracker.swrcb.ca.gov>) and the Alameda County Environmental Health website (<http://www.acgov.org/aceh/index.htm>).

#### SITE INVESTIGATION AND CLEANUP SUMMARY

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

- Oil & Grease remains in soil at concentrations up to 1,100 ppm.
- This case closure is limited to the four former leaking USTs that were removed in October 1990; one 550-gallon gasoline UST located immediately north of the showroom, one 550-gallon waste oil UST located south of the service bay, and two 280-gallon motor oil USTs located inside the service bay. All environmental issues related to soil or groundwater contamination in other areas of the site are to be addressed as part of a Cleanup Program case (Geotracker Global ID SL0600147081) under the regulatory oversight of the San Francisco Bay Regional Water Quality Control Board (Water Board). The Water Board and responsible parties for the site have entered into a Voluntary Cleanup Program agreement to address environmental issues in the remaining areas of the site outside the USTs.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Donna L. Drogos".

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

Enclosures:

1. Remedial Action Completion Certification
2. Case Closure Summary

cc:

Cheryl Dizon, QIC 80201 (w/enc)  
Zone 7 Water Agency  
100 North Canyons Parkway  
Livermore, CA 94551

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

Danielle Stefani (w/enc)  
Livermore-Pleasanton Fire Department  
3560 Nevada Street,  
Pleasanton, CA 94566

City of Livermore Planning Department (w/enc),  
1052 South Livermore Avenue,  
Livermore, CA 94550

Craig Pelletier (w/o enc)  
Bureau Veritas  
2430 Camino Ramon, Suite 122  
San Ramon, CA 94583

D. Drogos (w/enc)  
Jerry Wickham (w/orig enc),  
Geotracker (w/enc)  
File (w/enc)



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**REMEDIAL ACTION COMPLETION CERTIFICATION**

November 5, 2009

Mr. Dick Groth  
Groth Brothers Auto Dealership  
4420 Mines Road  
Livermore, CA 94550

James and Diane Bordoni  
Bordoni Ranch LLC & Breen Valley Co.  
478 Sequoia Way  
Los Altos, CA 94024-7152

Subject: Fuel Leak Case No. RO0000217 and Geotracker ID T0600101656, Groth Brothers Oldsmobile, 59 South L Street, Livermore, CA 94550 – Case Closure

Dear Responsible Parties:

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 25296.10 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.3 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 25296.10 of the Health and Safety Code. Please contact our office if you have any questions regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ariu Levi'.

Ariu Levi  
Director  
Alameda County Environmental Health

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

**I. AGENCY INFORMATION**

Date: October 28, 2009

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: Senior Hazardous Materials Specialist

**II. CASE INFORMATION**

Site Facility Name: Groth Brothers Oldsmobile		
Site Facility Address: 59 South L Street, Livermore, CA 94550		
RB Case No.: 01-1788	STID No.: 2935	LOP Case No.: RO0000217
URF Filing Date: 10/11/1990	Geotracker ID: T0600101656	APN: 97-3-7-1
Responsible Parties	Addresses	Phone Numbers
Dick Groth, Groth Bros. Oldsmobile	4420 Mines Road, Livermore, CA 94555-9160	None
James and Diane Bordoni, Bordoni Ranch LLC & Green Valley Co.	478 Sequoia Way, Los Altos, CA 94024-7152	None

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	550 gallons	Gasoline	Removed	10/10/1990
2	550 gallons	Waste Oil	Removed	10/10/1990
3	280 gallons	Motor Oil	Closed in Place	10/1990
4	280 gallons	Motor Oil	Closed in Place	10/1990
Piping			Removed	10/10/1990

**III. RELEASE AND SITE CHARACTERIZATION INFORMATION**

Cause and Type of Release: Unknown. No holes, cracks, or other signs of failure were observed in the tanks during removal. Visible staining was observed in the fill area of the waste oil UST.		
Site characterization complete? Yes	Date Approved By Oversight Agency: ----	
Monitoring wells installed? Yes	Number: 1	Proper screened interval? Yes
Highest GW Depth Below Ground Surface: 17 feet bgs	Lowest Depth: 69 feet bgs	Flow Direction: West northwest
Most Sensitive Current Use: Drinking water source.		

Summary of Production Wells in Vicinity:	
<p>A total of five water supply wells are within ½-mile of the site (two municipal drinking water wells, two domestic wells, and one irrigation well). The nearest downgradient water supply well is a decommissioned Cal Water Service municipal supply well (CWS#3), which is located approximately 900 feet west of the site. Based on the crossgradient location, distance from the site, apparent limited impacts to groundwater from the four USTs, decommissioned supply well CWS#3 is not expected to be a receptor for releases from the four USTs. The nearest downgradient water supply well is Cal Water Service municipal supply well CWS#8, which is approximately 1,200 feet northwest of the site. Based on the distance from the site and apparent limited impacts to groundwater from the four USTs, supply well CWS#8 is not expected to be a receptor for releases from the four USTs.</p>	
Are drinking water wells affected? No	Aquifer Name: Mocho II Subbasin of Livermore-Amador Basin
Is surface water affected? No	Nearest SW Name: Arroyo Mocho is approximately 4,300 feet west of the site.
Off-Site Beneficial Use Impacts (Addresses/Locations): None	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health, Livermore-Pleasanton Fire Department, and the State Water Resources Control Board GeoTracker website

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL			
Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	2 tanks	Disposed off-site at H & H Service Company, 220 China Basin Street, San Francisco, CA	10/30/1990
Piping	Not reported	Disposed off-site at H & H Service Company, 220 China Basin Street, San Francisco, CA	10/30/1990
Free Product	----	----	----
Soil	4 cubic yards	Soil from waste oil tank excavation was disposed off-site at Vasco Road Landfill in Livermore	11/1991
Groundwater	----	----	----

**MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP**  
 (Please see Attachments 1 through 6 for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	<1(1)	<1(1)	160(2)	<50(2)
TPH (Diesel)	<100(1)	<100(1)	110(2)	<50(2)
TPH (Motor Oil)	870	870	NA(3)	NA(3)
Oil and Grease	1,100	1,100	10,000	10,000
Benzene	<0.005	<0.005	<0.5(2)	<0.5(2)
Toluene	<0.005	<0.005	<0.5(4)	3200(4)
Ethylbenzene	<0.005	<0.005	<0.5(2)	<0.5(2)
Xylenes	<0.005	<0.005	<0.5(2)	<0.5(2)
Heavy Metals (Pb, Cd, Cr, Ni, Zn)	72(5)	72(5)	61(6)	61(6)
MTBE	<0.005(7)	<0.005(7)	<5(8)	<5(8)
Other (8240/8270)	(9)	(9)	(10)	(10)

- (1) TPHg and TPHd not detected in soil samples from tank removals or soil borings for USTs. TPHg and TPHd detected at concentrations of 5,000 ppm and 1,600 ppm, respectively, in soil sample from BV-03 collected at 3.5 to 4.0 feet bgs in used oil room. Shallow soil contamination beneath the used oil room is not addressed in this case closure summary. Soil and groundwater contamination outside the four UST areas is to be addressed under regulatory oversight of the Water Board under case SL0600147081.
- (2) TPHg, TPHd, benzene, toluene, and xylenes not detected in groundwater from well MW-1, which was located adjacent to waste oil tank. TPHg and TPHd were detected at concentrations of 61,000 and 79,000 ppb, respectively, in grab groundwater sample from BV-24. Benzene, toluene, and xylenes were detected at concentrations of 3,100, 3,500, and 9,700 ppb, respectively, in grab groundwater sample from BV-24. Fuel hydrocarbon plume encountered in BV-24 appears to originate from Valley Gas site at 2008 1<sup>st</sup> Street. The fuel release at 2008 1<sup>st</sup> Street is not part of this case closure summary and is being addressed separately under ACEH case RO0000278 (Geotracker Global ID T0600100930).
- (3) TPHmo not analyzed in groundwater from well MW-1. TPHmo detected in grab groundwater sample from BV-27, which is located in the southwestern corner of the site near a former gasoline service station. Soil and groundwater contamination outside the four UST areas is not part of this case closure summary and is to be addressed under regulatory oversight of the Water Board under case SL0600147081.
- (4) Ethylbenzene not detected in groundwater from well MW-1, which was located adjacent to waste oil tank. Ethylbenzene detected at a concentration of 3,200 ppb in grab groundwater sample from BV-03. Fuel hydrocarbon plume encountered in BV-03 appears to originate from Valley Gas site at 2008 1<sup>st</sup> Street. The fuel release at 2008 1<sup>st</sup> Street is not part of this case closure summary and is being addressed separately under ACEH case RO0000278 (Geotracker Global ID T0600100930).
- (5) Lead = 72 ppm; cadmium <0.25 ppm; chromium = 63 ppm; nickel = 173 ppm; and zinc = 39.5 ppm.
- (6) Lead = 61 ppb; cadmium <5 ppb; chromium = 954 ppb; nickel = 3,700 ppb; and zinc = 562 ppb.
- (7) MTBE, TBA, DIPE, TAME, ETBE, EDB, and EDC not detected at various reporting limits.
- (8) MTBE <5ppb in groundwater from well MW-1. MTBE detected at a concentration of 1,200 ppb in grab groundwater sample from BV-24. Fuel hydrocarbon plume encountered in BV-24 appears to originate from Valley Gas site at 2008 1<sup>st</sup> Street. The fuel release at 2008 1<sup>st</sup> Street is not part of this case closure summary and is being addressed separately under ACEH case RO0000278 (Geotracker Global ID T0600100930). TBA, DIPE, TAME, ETBE, EDB, and EDC not detected at various reporting limits.
- (9) Tetrachlorethene (PCE) <0.001 ppm; 1,4-dichlorobenzene = 3.5 ppm; 1,2-dichlorobenzene = 31 ppm; and PCBs (Arochlor 1242) = 0.12 ppm. The VOCs in soil are to be considered in the Water Board Cleanup Program case SL0600147081.
- (10) PCE = 400 ppb; trichloroethene = 5.4 ppb; and vinyl chloride = 7.8 ppb. The VOCs in groundwater appear to be from an off-site source and not related to the waste oil UST at the site and are to be considered in the Water Board Cleanup Program case SL0600147081.

#### Site History and Description of Corrective Actions:

The site is a former automobile sales and repair facility consisting of four buildings including a showroom, offices, and service bays with associated asphalt-paved parking areas. Historic uses going back to 1884 include a mix of residential, commercial, and industrial activities. Land use on the southern portion of the site in the area of the former USTs includes a number of retail facilities as well as a fuel and feed shop, printing, gasoline service stations, and auto repair and service. Surrounding land use is commercial and the site is currently awaiting redevelopment.

Prior to October 1990, the site operated four USTs: one 550-gallon gasoline UST located immediately north of the showroom, one 550-gallon waste oil UST located south of the service bay, and two 280-gallon motor oil USTs located inside the service bay. This case closure is limited to the aforementioned four former leaking USTs and outlined as A (Former Gasoline UST), B (Former Waste Oil UST), and C (Two Closed in Place Motor Oil USTs) on Attachment 2 to this case closure summary. All environmental issues related to soil or groundwater contamination in other areas of the site are to be addressed as part of a Cleanup Program case (Geotracker Global ID SL0600147081) under the regulatory oversight of the San Francisco Bay Regional Water Quality Control Board (Water Board). The Water Board and responsible parties for the site have entered into a Voluntary Cleanup Program agreement to address environmental issues in the remaining areas of the site outside the USTs.

During the removal of the two USTs at 59 South L Street in October 1990, three USTs were removed from a nearby site located approximately one block east of the site at 2080 Railroad Avenue (corner of Railroad and K Street). The USTs at 59 South L Street and 2080 Railroad Avenue were removed under a common UST Closure Plan dated 7/24/1990 and also are reported jointly in historic removal reports and disposal documentation. This case closure summary applies only to the four USTs described above at 59 South L Street and does not apply to the 2080 Railroad Avenue USTs.

A plume of dissolved fuel hydrocarbons and oxygenates that originates from the Valley Gas service station at 1008 1<sup>st</sup> Street extends across a portion of the former automobile dealership at 59 L Street. This case closure does not apply to the fuel hydrocarbon and oxygenate plume originating from Valley Gas, which is to be addressed under ACEH fuel leak case RO0278 (Geotracker Global ID T0600100930).

On October 10, 1990, one gasoline and one waste oil UST was removed from the site. Soil sample GO-1 was collected from the native soil beneath the gasoline UST and analyzed for TPHg and BTEX. Fuel hydrocarbons were not detected in the soil sample. Soil sample GO-3 was collected from beneath the waste oil UST and analyzed for TPH as gasoline, TPH as diesel, TPH as motor oil, BTEX, total oil & grease, and VOCs. TPH as motor oil and total oil & grease were detected at concentrations of 870 ppm and 1,100 ppm, respectively. 1,4 dichlorobenzene and 1,2 dichlorobenzene were detected in soil sample GO-3 at concentrations of 2.5 ppm and 31 ppm, respectively. The waste oil tank pit was overexcavated to a depth of 10 feet bgs. However, confirmation soil samples were not collected after overexcavation.

In March 1991, angle boring TB-1 was advanced to collect soil samples beneath the closed in place motor oil USTs. Two soil samples collected from boring TB-1 contained TPH as motor oil at concentrations up to 260 ppm. The two motor oil USTs were closed in place by filling with concrete.

In April 1994, four soil borings (B-1 through B-4) were advanced in the area surrounding the former waste Oil UST. Boring B-4 was completed as a monitoring well (MW-1) that was installed to a depth of 45 feet bgs with 15 feet of screen. Groundwater was encountered at a depth of 34 feet bgs in MW-1. TPH was not detected in soil samples collected from the borings. The initial groundwater sample collected from MW-1 contained TPHg at a concentration of 110 ppb, tetrachloroethene (PCE) at a concentration of 400 ppb, and trichloroethene (TCE) at a concentration of 5 ppb.

Groundwater samples were collected from monitoring well MW-1 for four additional quarters from May 1995 until February 1996. TPH as gasoline and TPH as diesel were detected in the groundwater samples at concentrations up to 160 and 110 ppb, respectively. BTEX and MTBE were not detected in groundwater from MW-1. During the four quarterly groundwater monitoring events for well MW-1, PCE was detected at concentrations ranging from 150 to 300 ppb. PCE has also been detected in several monitoring wells in the surrounding area and is suspected to be from an off-site source.

In October 2004, Fugro West, Inc. advanced six soil borings across the site. TPH as gasoline, BTEX, MTBE, and VOCs were not detected in the soil samples. TPH as diesel and TPH as motor oil were detected in soil at concentrations below residential ESLs. A grab groundwater sample collected from soil boring Groth-2, which is located near the former gasoline UST and MW-1, contained TPH as gasoline and TPH as diesel at concentrations of 52,000 ppb and 29,000 ppb, respectively. The elevated concentrations of TPH as gasoline and TPH as diesel appear to be within the fuel hydrocarbon plume extending onto the site from Valley Gas at 2008 1<sup>st</sup> Street and do not appear to be related to releases from the four USTs on site.

In March 2007, Bureau Veritas conducted a soil and groundwater investigation across the site that included 28 soil borings. As part of the investigation, nine soil borings (BV-01 through BV-09) were advanced to a total depth of approximately 12 feet bgs to investigate vehicle hoists, oil sumps, and other site uses not previously investigated. Bureau Veritas also collected soil samples surrounding the automobile showroom (BV-21, BV-22, BV-23, and BV-24), which operated as a garage repair facility from about 1929 to 1963. Evidence of petroleum hydrocarbon impact was not identified or observed in the soil borings in the area of the vehicle repair shops, with the exception of the used oil room located on the southwest side of the service building (BV-03) and approximately 30 feet to the northeast of the former waste oil UST. TPH as gasoline and TPH as diesel were detected in a soil sample from BV-03 (3.5 -4.0 feet bgs) at concentrations of 5,000 ppm and 1,800 ppm, respectively. Soil in the area of BV-03 and the used oil room is to be addressed as part of Cleanup Program case SL0600147081 under the regulatory oversight of the Water Board and is not part of this case closure.

#### IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes		
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 the commercial land use and conditions.		
Site Management Requirements: No case management requirements for the four USTs addressed in this case closure summary. Please see Water Board Cleanup Program case SL0600147081 regarding potential case management requirements for the remainder of the site.		
Should corrective action be reviewed if land use changes? No review required for the four USTs addressed in this case closure summary. Please see Water Board Cleanup Program case SL0600147081 regarding potential land use considerations for the site.		
Was a deed restriction or deed notification filed? No		Date Recorded: --
Monitoring Wells Decommissioned: Yes	Number Decommissioned: 1	Number Retained: 0
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: --		



**V. ADDITIONAL COMMENTS, DATA, ETC.**


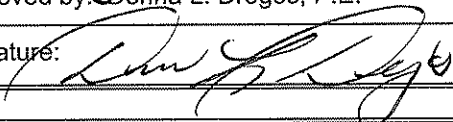
Considerations and/or Variances:

This case closure is limited to the four former leaking USTs that were removed in October 1990; one 550-gallon gasoline UST located immediately north of the showroom, one 550-gallon waste oil UST located south of the service bay, and two 280-gallon motor oil USTs located inside the service bay. All environmental issues related to soil or groundwater contamination in other areas of the site are to be addressed as part of a Cleanup Program case (Geotracker Global ID SL0600147081) under the regulatory oversight of the San Francisco Bay Regional Water Quality Control Board (Water Board). The Water Board and responsible parties for the site have entered into a Voluntary Cleanup Program agreement to address environmental issues in the remaining areas of the site outside the USTs.

Conclusion:

Alameda County Environmental Health staff believe that the levels of residual contamination do not pose a significant threat to water resources, public health and safety, and the environment based upon the information available 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: Senior Hazardous Materials Specialist
Signature: 	Date: 11/03/09
Approved by: Donna L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature: 	Date: 11/03/09

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: <i>Cherie McCaulou</i>	Date: 11/4/09

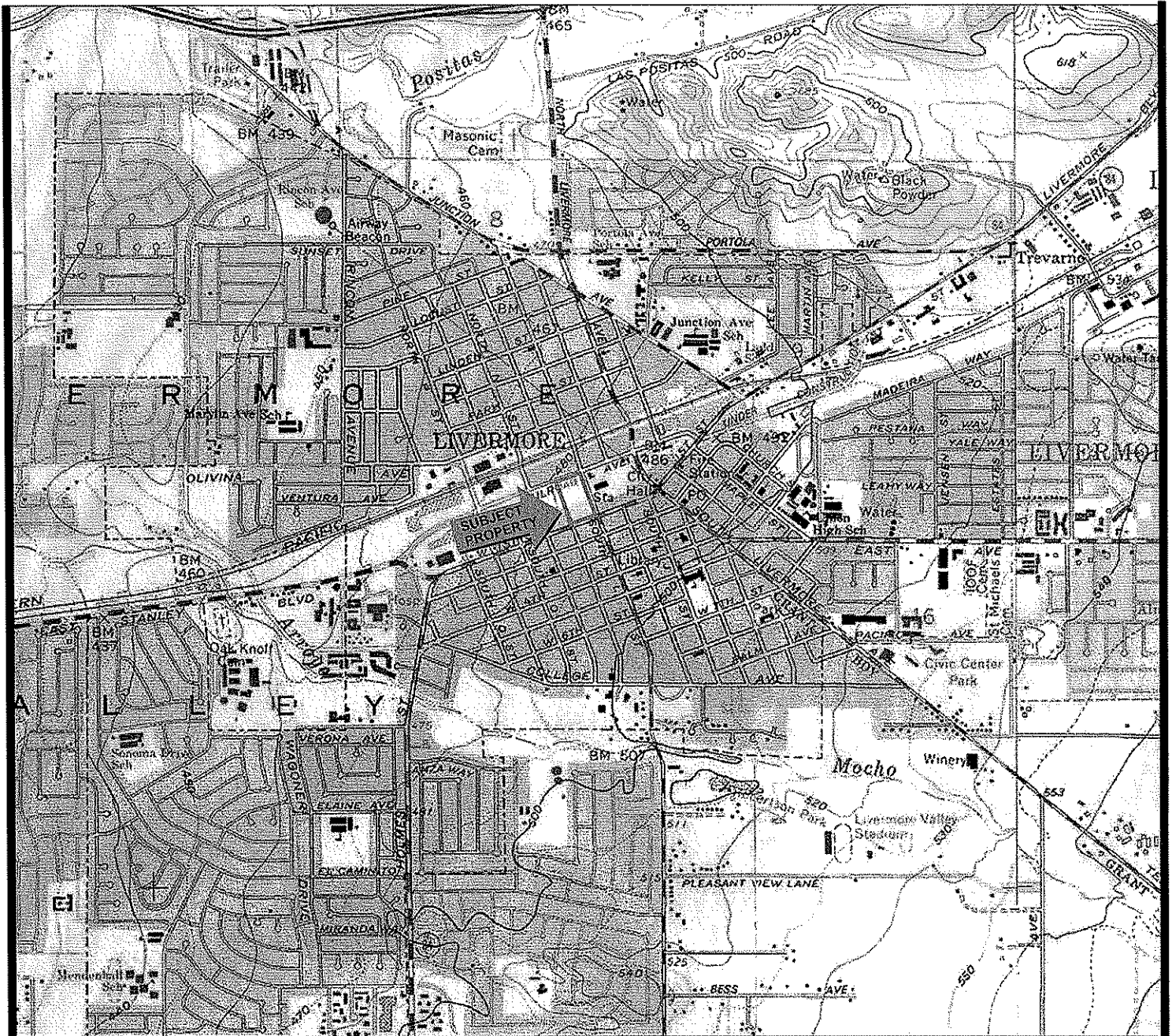
**VIII. MONITORING WELL DECOMMISSIONING**

Date Requested by ACEH: 11/30/1999	Date of Well Decommissioning Report: 08/26/2009	
All Monitoring Wells Decommissioned: Yes	Number Decommissioned: 1	Number Retained: 0
Reason Wells Retained: NA		
Additional requirements for submittal of groundwater data from retained wells: None		
ACEH Concurrence - Signature: <i>Jerry Wiselmann</i>	Date: 11/03/09	

Attachments:

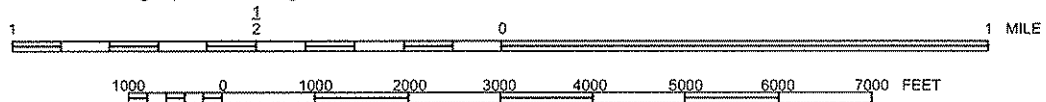
1. Site Vicinity Map (1 p)
2. Site Plan (1 p)
3. Sample and Boring Location Maps (5 pp)
4. Tank Removal Sample Location Maps (4 pp)
5. Soil Analytical Data (11 pp)
6. Groundwater Analytical Data (5 pp)
7. Boring Logs (18 pp)

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.



Source: TOPO! © 2000 National Geographic Holdings


Note: Location Information is Approximate



Portion of the 7.5-Minute Series Livermore, California  
 Quadrangle Topographic Map (Datum: NAD 27)  
 United States Department of the Interior  
 Geological Survey  
 1980 Photorevised from 1978



QUADRANGLE LOCATION

SUBJECT PROPERTY LOCATION	FIGURE	
57/59 South L Street Livermore, California	<b>1</b>	
Project No. 33107-007514.03		

# ATTACHMENT 1

**Legend:**

- ◆ Soil Boring (completed to 8' bgs)
- ⊕ Soil Boring (completed to 12' bgs)
- ☒ Soil/Groundwater Sample Location

(Residential)  
1948 Railroad Ave.

(Offices)  
1984  
Railroad Ave.

NORTH L STREET

(Retail)  
116 N. L Street

Machine Shop  
(1929)

RAILROAD AVENUE

Amador  
Motors  
(1956-1963)

(Residential)  
1809 Railroad Ave.

(Restaurant)  
2009 Railroad Ave.

Approximate  
Direction of  
Groundwater  
Flow

(Fidelity National Title)  
20-22 S. L Street

(Restaurant)  
50 S. L Street

SOUTH L STREET



(Bottle, Book,  
& Smoke Shop)  
62 S. L Street

1870 1st Street

Two Closed  
In-place USTs

Dom's  
(Retail)

Former Waste Oil UST  
(1940-1944)  
Gas Station

SOUTH M STREET

Body Shop  
Painting  
Paint Booth  
Auto Repair  
Paint Mixing  
Paint Shop  
Booth  
Platment  
Showroom  
Storage Containers  
Service  
Parts  
Old Service

(1884-1959)  
Sales Office

Former Gasoline  
UST

Printing  
(1944)

Garage  
(1929-  
1963)

(Valley Gas)  
2008 1st Street

BV-19  
BV-18  
BV-17  
BV-16  
BV-20  
BV-07  
BV-02  
BV-09  
BV-28  
BV-27

BV-01  
BV-08  
BV-21  
BV-03  
BV-06

BV-14  
BV-15  
BV-05  
BV-04

BV-22/BV-22A  
BV-23  
BV-24  
BV-26  
BV-25

BV-10  
BV-11

1859 1st Street  
(Under Construction)

1917 1st Street  
(Carpet One)

1931  
1st Street  
(Firestone)

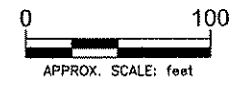
(Under Construction)

2017 1st Street  
(Donut Wheel)

**Base Legend:**

- ▨ Drain
- ⊞ Transformer
- Below Ground Hoist
- Above Ground Hoist
- Filled-in Sump

Note: Data based on Sanborn maps,  
aerial photos, and directory information.



**SITE PLAN WITH BORING LOCATIONS  
AND HISTORICAL FEATURES FROM  
1884 TO 1959**

57 / 59 SOUTH L STREET  
LIVERMORE, CALIFORNIA  
Project No. 33107-007514.03

Figure

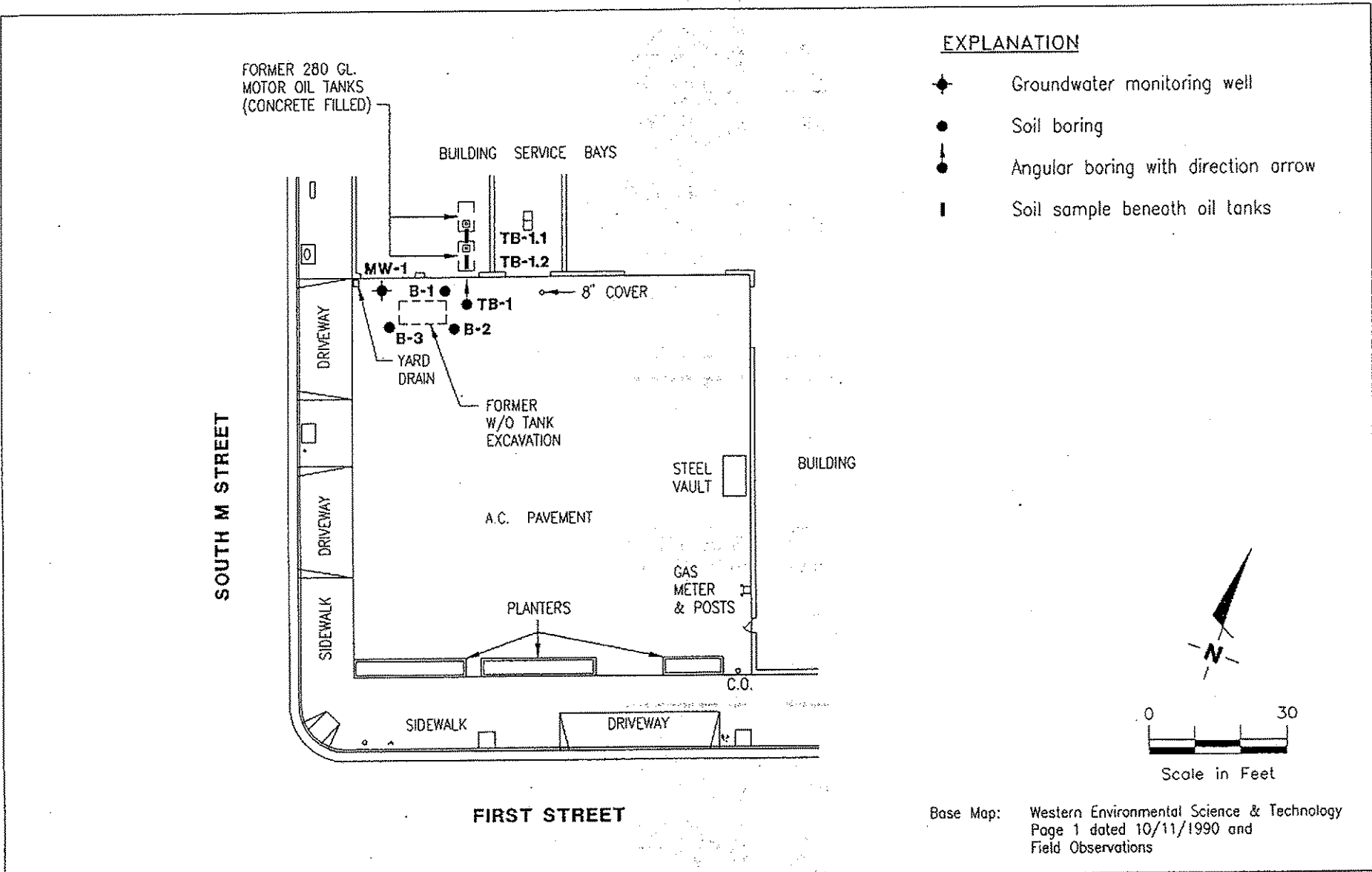
2

03/15/07



BUREAU OF ENVIRONMENTAL SERVICES

**ATTACHMENT 2**



**GSI** GeoStrategies Inc.

**SITE PLAN**  
Groth Brothers Oldsmobile-GMC  
59 South L Street  
Livermore, California

FIGURE  
**2**

JOB NUMBER  
613601-2

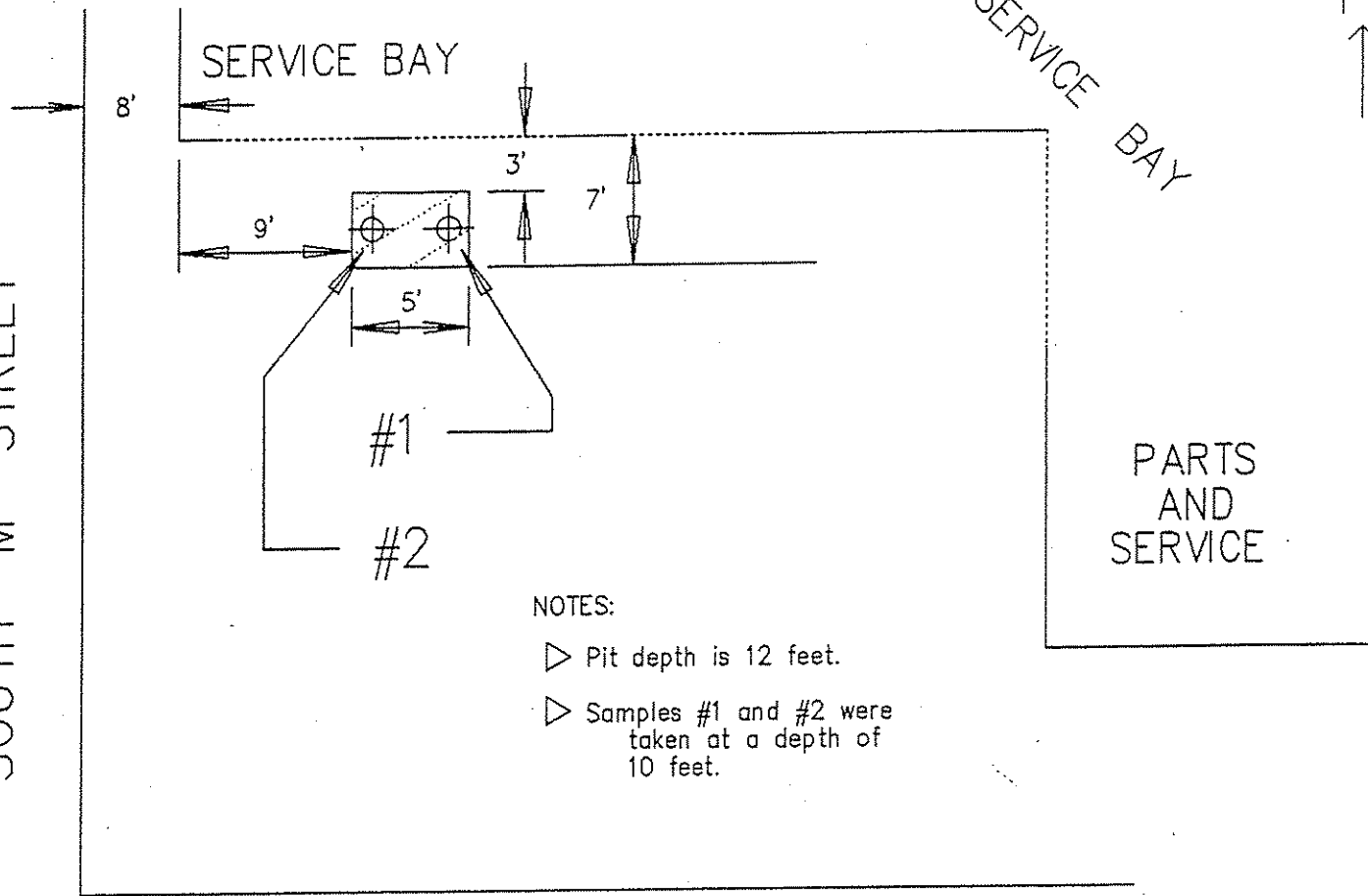
REVIEWED BY

DATE  
5/94

REVISED DATE

**ATTACHMENT 3**

SOUTH M STREET



NOTES:

- ▷ Pit depth is 12 feet.
- ▷ Samples #1 and #2 were taken at a depth of 10 feet.

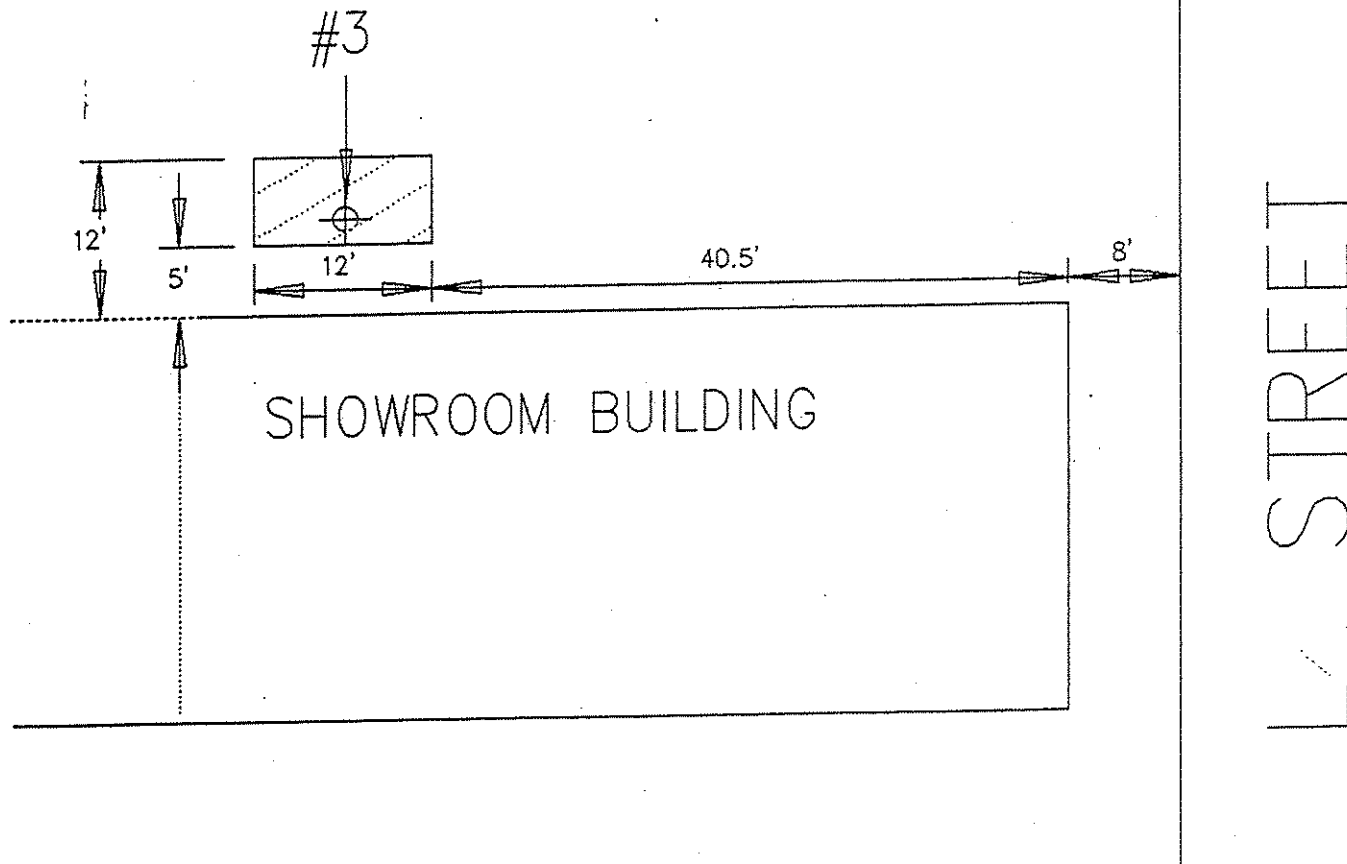
FIRST STREET

GROTH BROS. OLDS. (SCOTT)  
59 SOUTH L STREET  
LIVERMORE, CALIFORNIA

SLOG#: 1921  
DATE: 10/25/1990  
PAGE 1

**WEST** Western Environmental  
Science & Technology  
1046 Olive Drive #3, Davis, CA 95616  
Phone: (916) 75

**ATTACHMENT 4**



NOTE:

▷ Sample #3 was taken at a depth of 10 feet.

GROTH BROS. OLDS. (SCOTT)  
 59 SOUTH L STREET  
 LIVERMORE, CALIFORNIA

SLOG#: 1921  
 DATE: 10/25/1990  
 PAGE 2

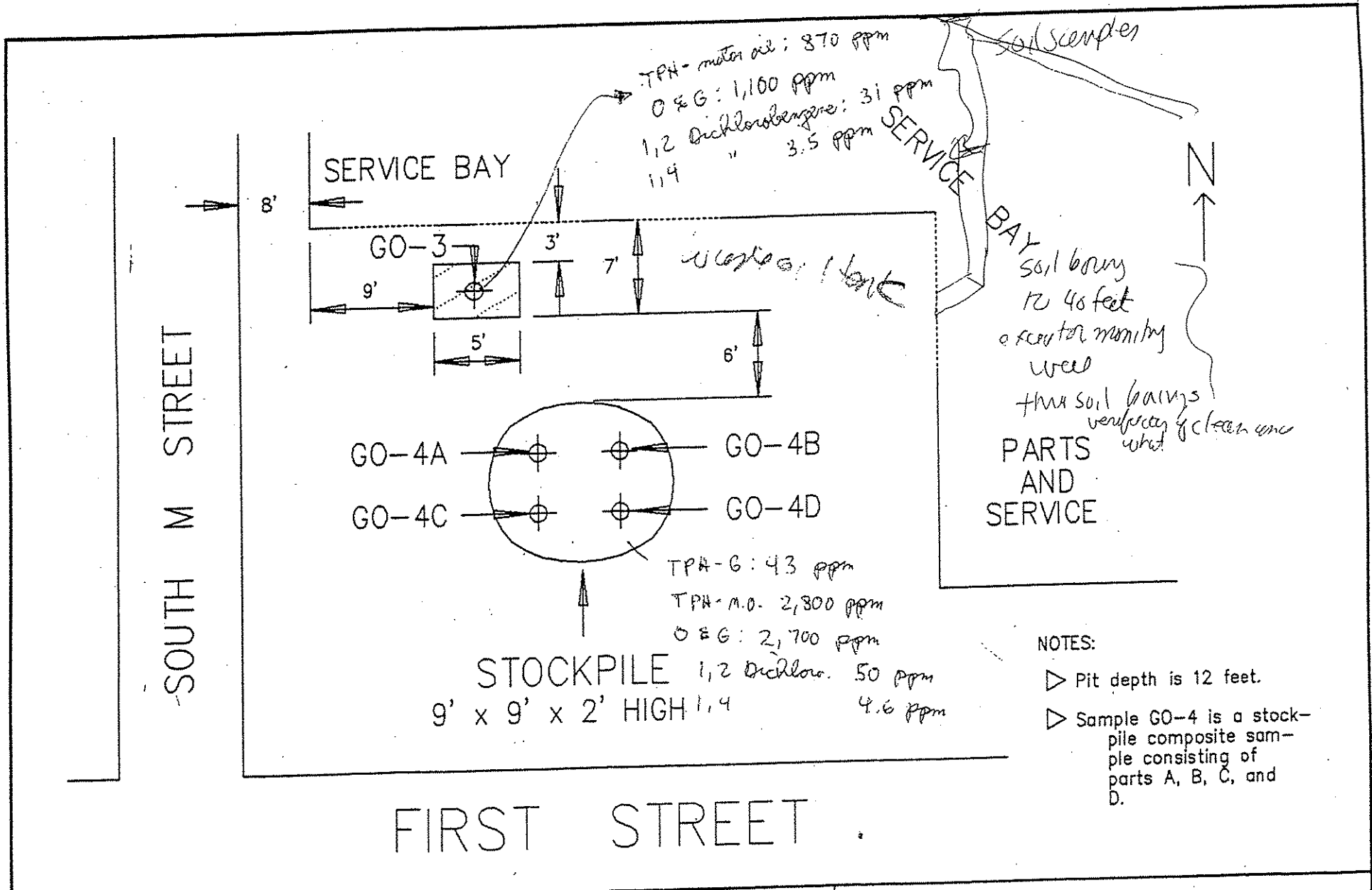


Western Environmental  
 Science & Technology

1046 Olive Drive #3, Davis, CA 95616

Phone: (916) 753-9500

Drawn by: TGT



**NOTES:**

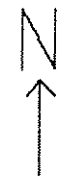
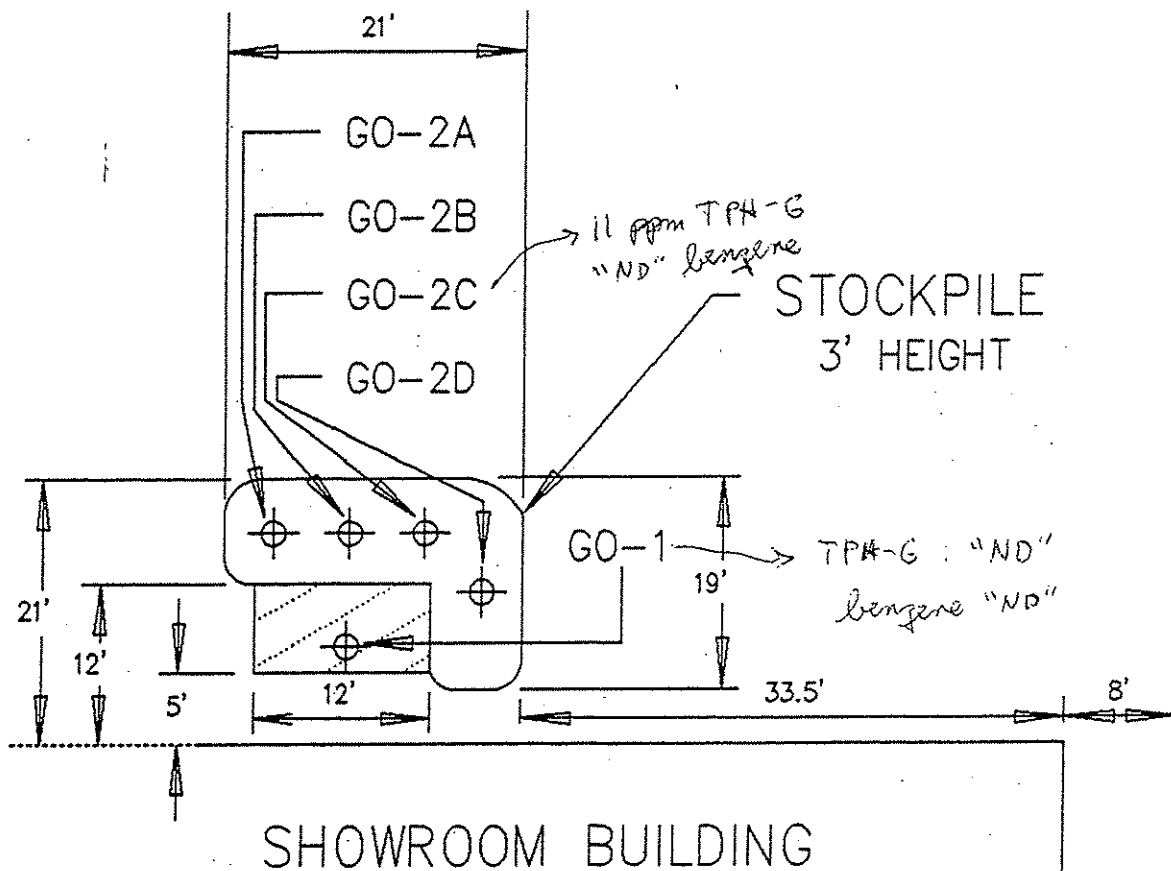
- ▷ Pit depth is 12 feet.
- ▷ Sample GO-4 is a stock-pile composite sam-ple consisting of parts A, B, C, and D.

GROTH BROS. OLDS. (SCOTT)  
 59 SOUTH L STREET  
 LIVERMORE, CALIFORNIA

SLOG#: 1877  
 DATE: 10/11/1990  
 PAGE 1

**WEST** Western Environmental  
 Science & Technology  
 1046 Olive Drive #3, Davis, CA 95616  
 Phone: (916) 753-9500  
 Drawn by: TGT





NOTES:

- ▷ Sample GO-1 was taken at a depth of 7.5 feet.
- ▷ Sample GO-2 is a stockpile composite consisting of parts A, B, C, and D.

GROTH BROS. OLDS. (SCOTT)  
 59 SOUTH L STREET  
 LIVERMORE, CALIFORNIA

SLOG#: 1877  
 DATE: 10/11/1990  
 PAGE 2

**WEST** Western Environmental  
 Science & Technology  
 1046 Olive Drive #3, Davis, CA 95616  
 Phone: (916) 753-9500

Drawn by: TGT

**Legend:**  
 + Soil Boring (completed to 8' bgs)  
 ⊕ Soil Boring (completed to 12' bgs)  
 □ Soil/Groundwater Sample Location  
 --- Inferred Extent of Total Chlorinated VOCs

PCE = tetrachloroethene  
 TCE = trichloroethene  
 cis-1,2 DCE = cis-1,2 dichloroethene  
 trans-1,2 DCE = trans-1,2 dichloroethene  
 Total VOCs = Total Chlorinated VOCs  
 VOCs = Volatile Organic Compounds

**Notes:**  
 1. Concentrations in micrograms per liter or parts per billion.  
 2. Samples collected on 3/8/2007 and 3/9/2007.  
 3. BV-22A collected from 43-45' below ground surface.

BV-19	3/9/2007
PCE	<0.5
TCE	1.1
cis-1,2 DCE	2.4
trans-1,2 DCE	<0.5
Vinyl Chloride	<0.5
<b>Total VOCs</b>	<b>3.5</b>

BV-21	3/9/2007
PCE	31
TCE	<0.5
cis-1,2 DCE	<0.5
trans-1,2 DCE	<0.5
Vinyl Chloride	<0.5
<b>Total VOCs</b>	<b>31</b>

BV-22	3/9/2007	BV-22A	3/9/2007
PCE	38	PCE	4.2
TCE	1.0	TCE	<2.5
cis-1,2 DCE	0.65	cis-1,2 DCE	12
trans-1,2 DCE	<0.5	trans-1,2 DCE	<2.5
Vinyl Chloride	<0.5	Vinyl Chloride	7.8
<b>Total VOCs</b>	<b>39.65</b>	<b>Total VOCs</b>	<b>24</b>

BV-23	3/9/2007
PCE	<50
TCE	<50
cis-1,2 DCE	<50
trans-1,2 DCE	<50
Vinyl Chloride	<50
<b>Total VOCs</b>	<b>0.0</b>

BV-24	3/8/2007
PCE	<50
TCE	<50
cis-1,2 DCE	65
trans-1,2 DCE	<50
Vinyl Chloride	<50
<b>Total VOCs</b>	<b>65</b>

BV-25	3/8/2007
PCE	3.7
TCE	2.7
cis-1,2 DCE	22
trans-1,2 DCE	1.0
Vinyl Chloride	<0.5
<b>Total VOCs</b>	<b>29.4</b>

BV-20	3/9/2007
PCE	30
TCE	0.63
cis-1,2 DCE	0.74
trans-1,2 DCE	<0.5
Vinyl Chloride	<0.5
<b>Total VOCs</b>	<b>31.37</b>

BV-28	3/8/2007
PCE	0.71
TCE	<0.5
cis-1,2 DCE	<0.5
trans-1,2 DCE	<0.5
Vinyl Chloride	<0.5
<b>Total VOCs</b>	<b>0.71</b>

BV-27	3/8/2007
PCE	<0.5
TCE	<0.5
cis-1,2 DCE	<0.5
trans-1,2 DCE	<0.5
Vinyl Chloride	<0.5
<b>Total VOCs</b>	<b>0.0</b>


BV-26	3/8/2007
PCE	5.1
TCE	0.67
cis-1,2 DCE	4.2
trans-1,2 DCE	<0.5
Vinyl Chloride	<0.5
<b>Total VOCs</b>	<b>9.97</b>

**Base Legend:**  
 □ Drain  
 □ Transformer  
 □ Below Ground Hoist  
 □ Above Ground Hoist  
 • Filled-in Sump

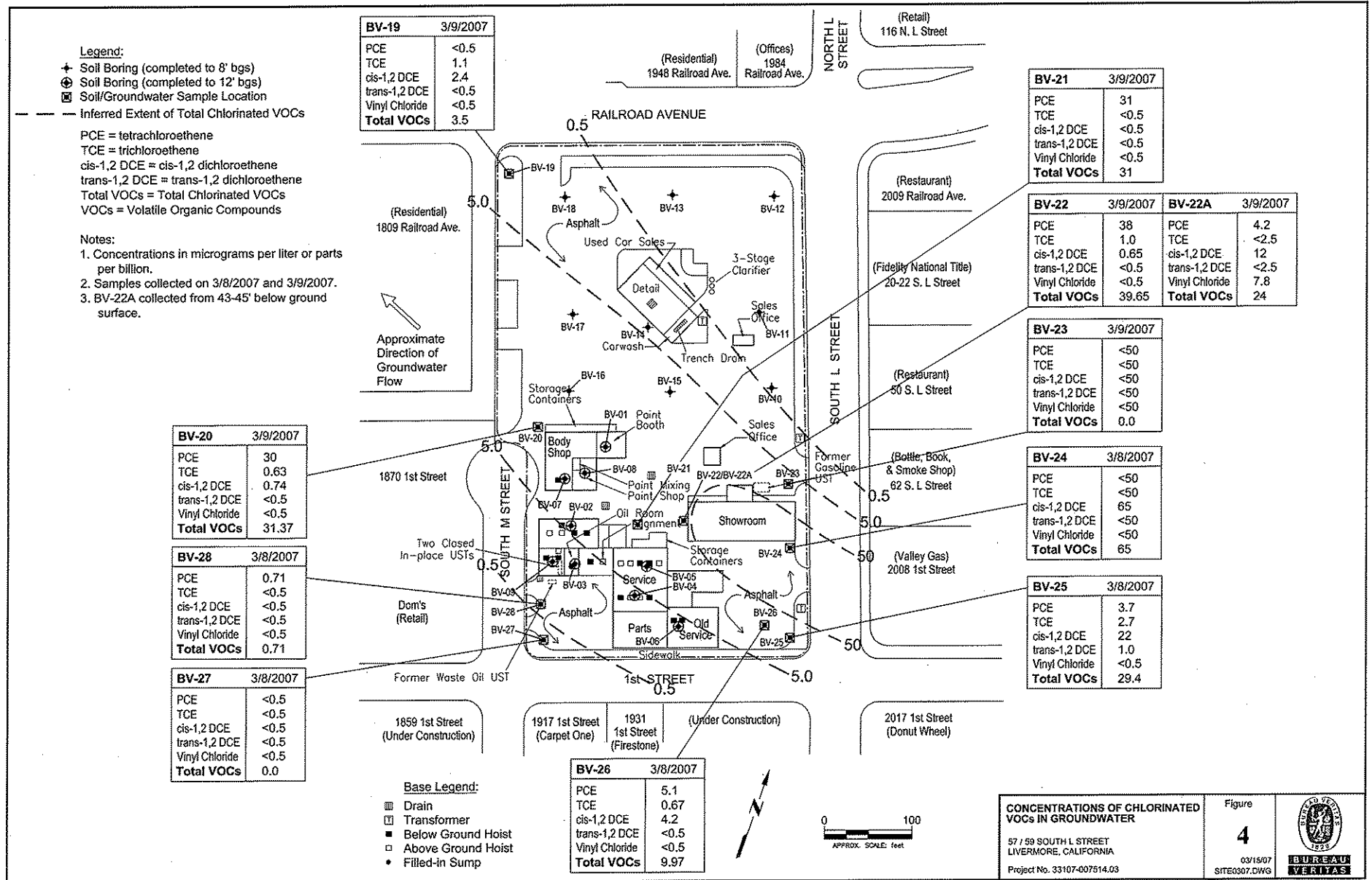
**CONCENTRATIONS OF CHLORINATED VOCs IN GROUNDWATER**

57 / 59 SOUTH L STREET  
 LIVERMORE, CALIFORNIA  
 Project No. 33187-007514.03

Figure  
**4**  
 03/15/07  
 SITE0307.DWG



**BUREAU  
 VERITAS**



**Legend:**

- + Soil Boring (completed to 8' bgs)
- ⊕ Soil Boring (completed to 12' bgs)
- ☒ Soil/Groundwater Sample Location
- - - Approximate Extent of TPH-g
- - - Approximate Extent of MTBE
- - - Approximate Extent of Benzene
- Approximate Limit of Source Zone

MTBE = methyl tert butyl ether  
 TPH = Total Petroleum Hydrocarbons  
 TPH-g = TPH as gasoline  
 TPH-d = TPH as diesel  
 TPH-mo = TPH as motor oil

**Notes:**

1. Concentrations in micrograms per liter or parts per billion.
2. Samples collected on 3/8/2007 and 3/9/2007.
3. BV-22A collected from 43-45' below ground surface.
4. Approximate limit of source zone was obtained from Field investigation for Source Zone Remediation Report by Golder Associates Inc, June 6, 2006.

BV-19	3/9/2007
Benzene	3.5
MTBE	29
TPH-g	1,500
TPH-d	1,600
TPH-mo	<250

BV-21	3/9/2007
Benzene	<0.5
MTBE	<0.5
TPH-g	<50
TPH-d	<50
TPH-mo	<250

BV-22	3/9/2007	BV-22A	3/9/2007
Benzene	<0.5	Benzene	<2.5
MTBE	<0.5	MTBE	<2.5
TPH-g	62.1	TPH-g	9,300
TPH-d	<50	TPH-d	64,000
TPH-mo	350	TPH-mo	<12,000

BV-23	3/9/2007
Benzene	1,100
MTBE	90
TPH-g	50,000
TPH-d	43,000
TPH-mo	720

BV-24	3/8/2007
Benzene	3,100
MTBE	1,200
TPH-g	61,000
TPH-d	79,000
TPH-mo	<12,000

BV-25	3/8/2007
Benzene	1.0
MTBE	<0.5
TPH-g	700
TPH-d	290
TPH-mo	<250

BV-20	3/9/2007
Benzene	<0.5
MTBE	<0.5
TPH-g	64
TPH-d	<50
TPH-mo	<250

BV-28	3/8/2007
Benzene	<0.5
MTBE	<0.5
TPH-g	<50
TPH-d	<50
TPH-mo	<250

BV-27	3/8/2007
Benzene	<0.5
MTBE	<0.5
TPH-g	<50
TPH-d	290
TPH-mo	1,600

BV-26	3/8/2007
Benzene	<0.5
MTBE	<0.5
TPH-g	<50
TPH-d	110
TPH-mo	1,200

**Base Legend:**

- ☐ Drain
- ☐ Transformer
- ☐ Below Ground Hoist
- ☐ Above Ground Hoist
- Filled-in Sump



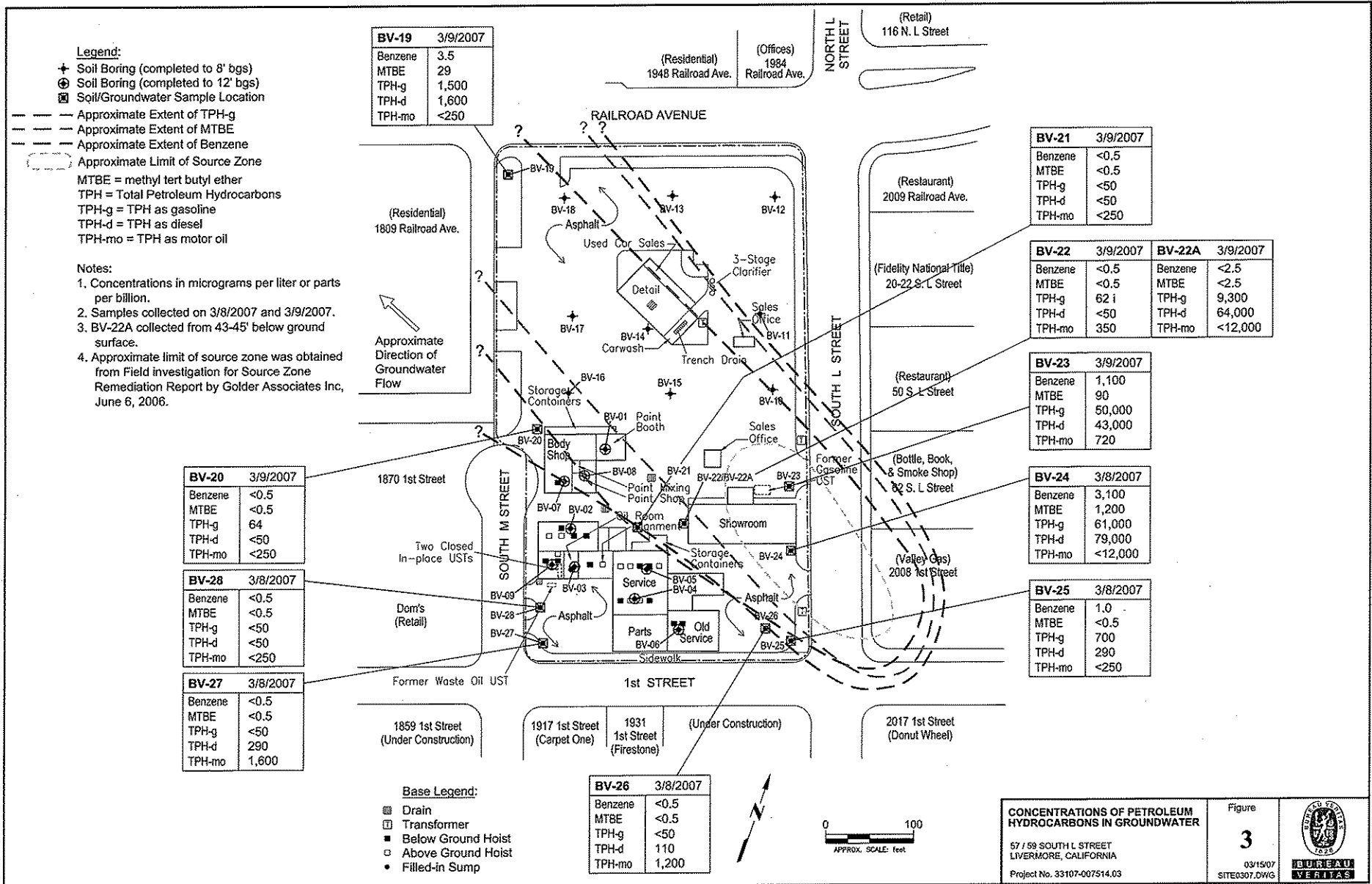
**CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER**

57 / 59 SOUTH L STREET  
 LIVERMORE, CALIFORNIA  
 Project No. 33107-007514.03

Figure

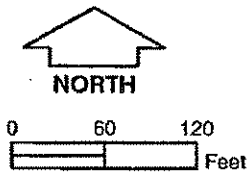
**3**

03/15/07  
 SITE0307.DWG









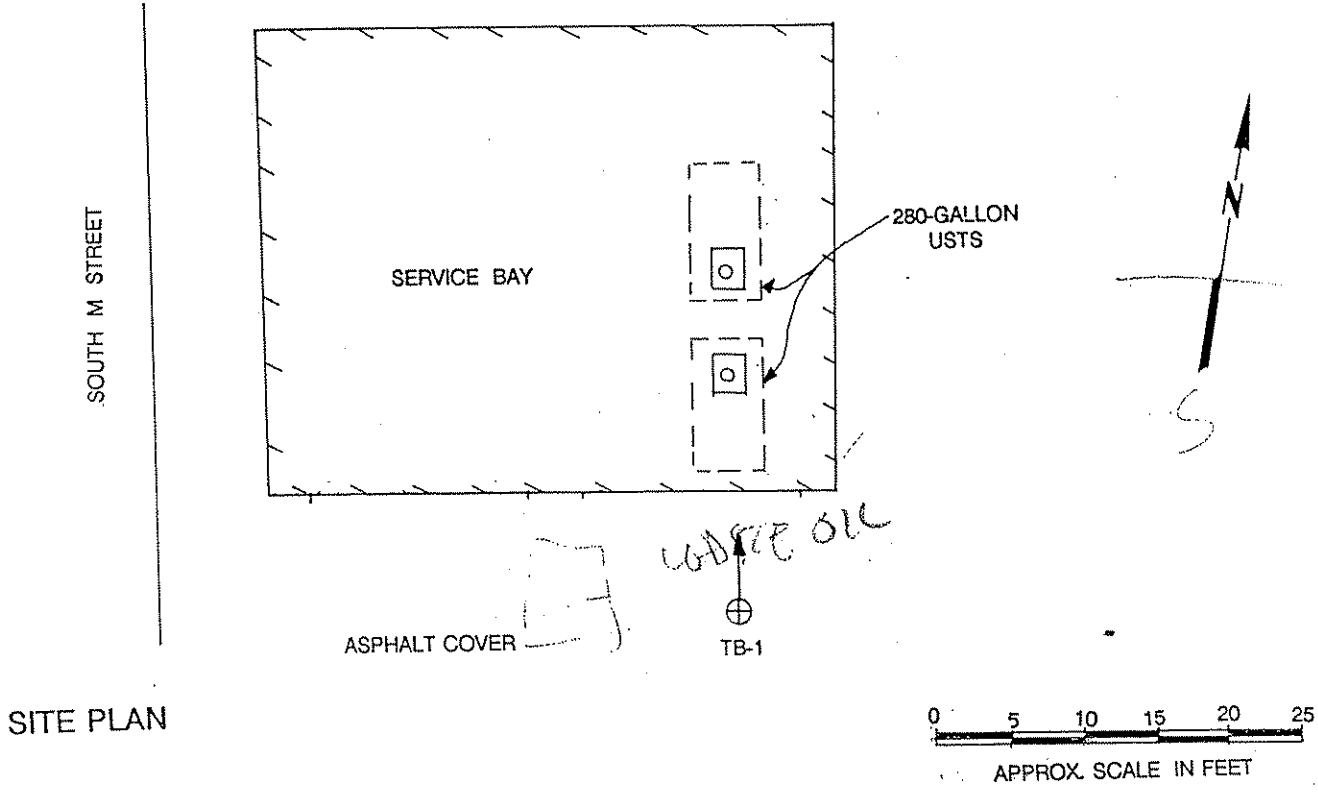
SOURCE: Aerial photo, May 2001, provided by City of Livermore.



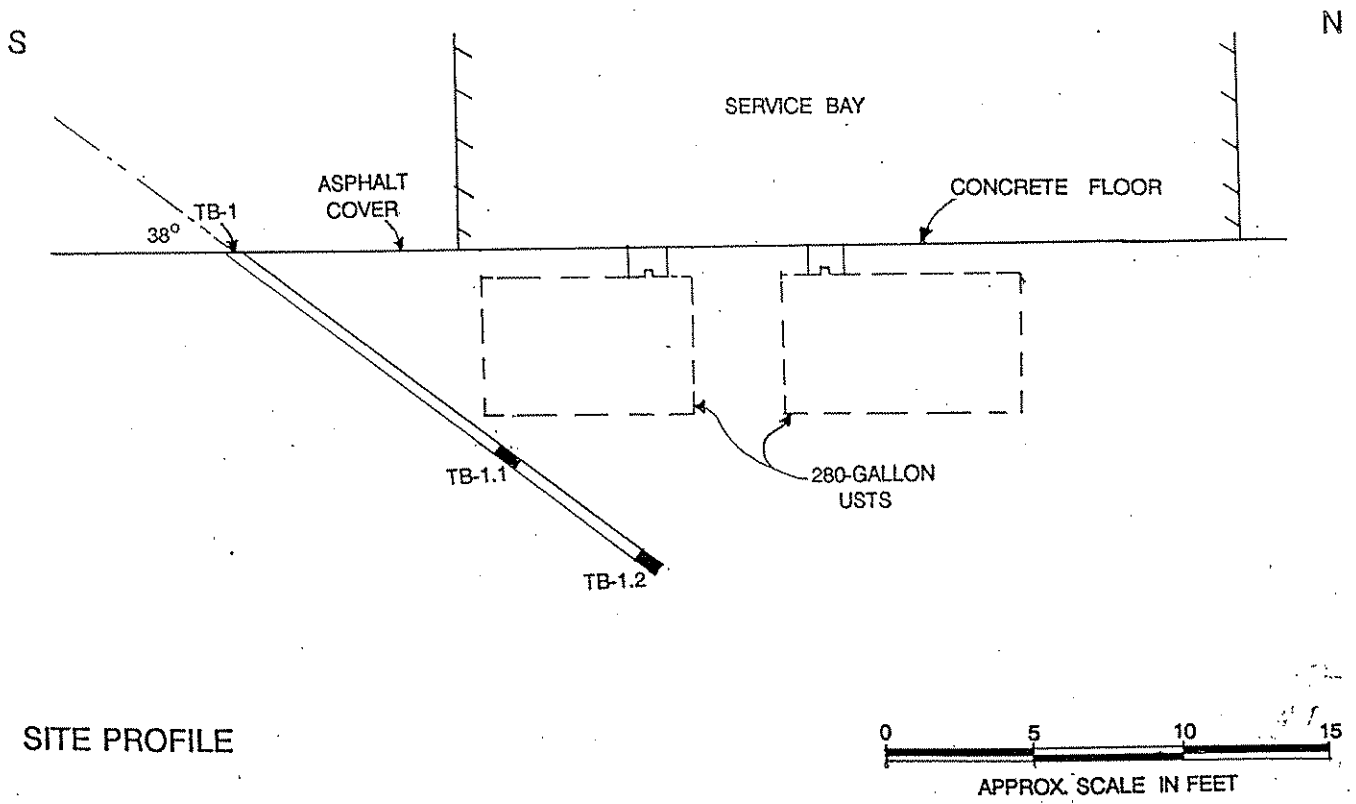
**SITE PLAN**  
Groth Brothers Chevrolet  
Livermore, California

LEGEND

-  GROTH-6 PROBE LOCATIONS
-  MW-1 MONITORING WELL LOCATION
-  AREA INCLUDED IN GEOPHYSICAL SURVEY
-  SITE



SITE PLAN



SITE PROFILE

DESIGN BY		CHECKED BY		<p>FIGURE 1 SITE PLAN &amp; PROFILE CWEC 20511-001-01</p>	APPROVED	
SURVEY BY		SCALE			DATE	
DRAWN BY	JEG	DWG. NO.			4-25-91	

**TABLE 1**  
**Soil Analytical Results - TPH, PAHs, VOCs, PCBs and OC Pesticides**  
 57/59 South L Street  
 Livermore California

Soil Sample ID	Sample Depth (feet bgs)	Sample Date	TPH-g (mg/kg)	TPH-d (mg/kg)	TPH-mo (mg/kg)	PAHs (mg/kg)	1,2-Dichloro-benzene (mg/kg)	4-Isopropyl toluene (mg/kg)	1,2,4-TMB (mg/kg)	1,3,5-TMB (mg/kg)	Other VOCs (mg/kg)	Arochlor 1242 (mg/kg)	Total PCBs (mg/kg)	OC Pesticides (mg/kg)
BV-01	7.5-8.0'	3/8/2007	<1.0	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	ND	<0.025	<0.025	NA
BV-02	9.5-10.0'	3/8/2007	<1.0	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	ND	<0.025	<0.025	NA
BV-03	3.5-4.0'	3/8/2007	5,000 g	1,800 n,g	420	NA	22	7.5	23	7.6	ND	0.12	0.12	NA
BV-03	11.5-12.0'	3/8/2007	<1.0	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	ND	<0.025	<0.025	NA
BV-04	9.5-10.0'	3/8/2007	<1.0	4.4 g,b	13	NA	<0.005	<0.005	<0.005	<0.005	ND	<0.025	<0.025	NA
BV-05	7.5-8.0'	3/8/2007	<1.0	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	ND	<0.025	<0.025	NA
BV-06	7.5-8.0'	3/8/2007	<1.0	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	ND	<0.025	<0.025	NA
BV-07	11.5-12.0'	3/8/2007	<1.0	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	ND	<0.025	<0.025	NA
BV-08	7.5-8.0'	3/8/2007	<1.0	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	ND	<0.025	<0.025	NA
BV-09	7.5-8.0'	3/8/2007	<1.0	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	ND	<0.025	<0.025	NA
BV-10,11,12	1.5-2.0'	3/9/2007	<1.0	19 g,b	90	ND	NA	NA	NA	NA	NA	<5.0	<5.0	ND
BV-10,11,12	7.5-8.0'	3/9/2007	<1.0	<1.0	<5.0	ND	NA	NA	NA	NA	NA	<0.050	<0.050	ND
BV-13,14-15	1.5-2.0'	3/9/2007	<1.0	9.2 g,b	66	ND	NA	NA	NA	NA	NA	<5.0	<5.0	ND
BV-13,14-15	7.5-8.0'	3/9/2007	<1.0	<1.0	<5.0	ND	NA	NA	NA	NA	NA	<0.025	<0.025	ND
BV-16,17,18	1.5-2.0'	3/9/2007	<1.0	43 g,b	190	ND	NA	NA	NA	NA	NA	<25	<25	ND
BV-16,17,18	7.5-8.0'	3/9/2007	<1.0	<1.0	<5.0	ND	NA	NA	NA	NA	NA	<0.025	<0.025	ND
BV-19	3.5-4.0'	3/9/2007	<1.0	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	ND	NA	NA	NA
BV-20	3.5-4.0'	3/9/2007	<1.0	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	ND	NA	NA	NA
BV-21	3.5-4.0'	3/9/2007	<1.0	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	ND	NA	NA	NA
BV-22	5.5-6.0'	3/9/2007	<1.0	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	ND	NA	NA	NA
BV-23	9.5-10.0'	3/9/2007	<1.0	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	ND	NA	NA	NA
BV-24	5.5-6.0'	3/8/2007	<1.0	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	ND	NA	NA	NA
BV-25	19.5-20.0'	3/8/2007	<1.0	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	ND	NA	NA	NA
BV-26	15.5-16.0'	3/8/2007	<1.0	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	ND	NA	NA	NA
BV-27	11.5-12.0'	3/8/2007	<1.0	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	ND	NA	NA	NA
BV-28	15.5-16.0'	3/8/2007	<1.0	<1.0	<5.0	NA	<0.005	<0.005	<0.005	<0.005	ND	NA	NA	NA
<b>RWQCB ESL</b>			<b>100</b>	<b>100</b>	<b>500</b>	<b>--</b>	<b>1,1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.22</b>	<b>0.22</b>	<b>--</b>

**Notes:**

Sample depths in feet below ground surface (bgs).  
 Analytical results are reported in milligrams per kilogram (mg/kg) or parts per million (ppm).  
 TPH-g = Total petroleum hydrocarbons quantified as gasoline.  
 TPH-d = Total petroleum hydrocarbons quantified as diesel.  
 TPH-mo = Total petroleum hydrocarbons quantified as motor oil.  
 TPH-d and TPH-mo analyzed using USEPA Method 8015M with Silica Gel Cleanup.  
 VOCs analyzed using USEPA Method 8260B  
 PCBs = Polychlorinated bi-phenols; analyzed by USEPA Method 8082A  
 OC Pesticides = Organochlorine pesticides; analyzed by USEPA Method 8081B  
 <1.0 = Not detected at specified detection limit.  
 g = oil range compounds are significant  
 n = stoddard solvent/mineral oil  
 ND = Not detected  
 NA = Not analyzed for this compound.  
 RWQCB ESL = Regional Water Quality Control Board - San Francisco Bay Region Environmental Screening Level, for residential land use (Table A, RWQCB, February 2005).

TABLE 1  
RESULTS OF LABORATORY ANALYSES  
OF SOIL SAMPLES  
Groth Brothers Oldsmobile-GMC  
Livermore, California

Sample ID	TPH-G (PPM)	TPH-D (PPM)	TPH-MO (PPM)	TOG (PPM)	VOCs (PPM)	Cd (PPM)	Cr (PPM)	Ni (PPM)	Pb (PPM)	Zn (PPM)
<u>April 26, 1994</u>										
B1-16	<0.5	<10	<10	<5.0	5*	<0.25	56.8	173	4.0	37.1
B2-16	<0.5	<10	<10	7.8	<5	<0.25	54.7	122	4.0	37.2
B3-16	<0.5	<10	<10	5.8	17*	<0.25	32.6	82.3	3.7	37.6
B4-35.5	<0.5	<10	<10	<5.0	8*	<0.25	63.3+	135+	4.4+	39.5++
Method Blank	<0.5	<10	<10	<5	5*	<0.25	<0.50	<2.0	<2.0	<1.0

All results shown in parts per million (PPM).

TPH-G = Total petroleum hydrocarbons as gasoline using EPA Method 8015 (modified).

TPH-D = Total petroleum hydrocarbons as diesel using EPA Method 8015 (modified).

TPH-MO = Total petroleum hydrocarbons as motor oil using EPA Method 8015 (modified).

TOG = Total oil and grease using EPA Method 418.1.

VOCs = Volatile organic compounds using EPA Method 8240.

Metals Cd (cadmium), Cr (chromium), Ni (nickel), Pb (lead), and zinc (Zn) using EPA Method 6010.

NA = Not analyzed

\* = The laboratory reported values for methylene chloride and acetone that are near the method blank contamination levels are laboratory contaminants. Analyte other than methylene chloride or acetone were not detected in these samples.

Title 26 Metals (Hazardous Waste Levels-TTLC)

Cd: 100 ppm

Cr: 2,500 ppm

Ni: 2,000 ppm

Pb: 1,000 ppm

Zn: 5,000 ppm

Sample Identification:

B2-16



Sample Depth in Feet  
Soil Boring

Table 2  
Summary of Analytical Results - Soil  
Groth Bros. Chevrolet  
Livermore, California

Analyte	Units	GROTH-1	GROTH-1	GROTH-2	GROTH-2	GROTH-3	GROTH-4	GROTH-4	GROTH-5	GROTH-6	TTLc	ESL <sup>1</sup>	ESL <sup>2</sup>	ESL <sup>3</sup>
		@2.5'	@8.5'	@10.0'	@30.0'	@8.0'	@4.0'	@11.0'	3.5'	@1.0'		Residential Land Use	Commercial Land Use	Direct Contact for Trench/Construction Worker
TPHd <sup>4</sup>	mg/Kg	--	<1.0	<1.0	<b>5.1</b>	<b>2.0</b>	--	<b>49</b>	<b>14</b>	<b>7.8</b>		100	5,800	23,000
TPHmo <sup>4</sup>	mg/Kg	--	<50	<50	<50	<b>56</b>	--	<b>230</b>	<b>84</b>	<b>75</b>		500	5,800	23,000
TPHg	mg/Kg	--	<1.0	<1.0	--	<1.0	--	--	<1.0	--		100	5,800	23,000
Benzene	mg/Kg	--	<0.0050	<0.0050	--	<0.0050	--	--	<0.0050	--		0.18	0.38	17
Ethylbenzene	mg/Kg	--	<0.0050	<0.0050	--	<0.0050	--	--	<0.0050	--		9	19	400
Toluene	mg/Kg	--	<0.0050	<0.0050	--	<0.0050	--	--	<0.0050	--		130	440	650
Xylenes	mg/Kg	--	<0.0050	<0.0050	--	<0.0050	--	--	<0.0050	--		54	180	420
Methyl-tert-butyl-ether (MTBE)	mg/Kg	--	<0.0050	<0.0050	--	<0.0050	--	--	<0.0050	--		31	70	2,800
HVOCs	ug/Kg	--	ND	ND	ND	ND	--	ND	ND	ND				
Metals														
Antimony	mg/Kg	--	--	<2.0	--	<2.0	--	--	--	--	500	6.3	40	310
Arsenic	mg/Kg	<b>3.5</b>	--	<b>3.6</b>	--	<b>2.5</b>	<b>5.2</b>	--	<b>4.4</b>	<b>4.2</b>	500	5.5	5.5	16
Barium	mg/Kg	--	--	<b>82</b>	--	<b>92</b>	--	--	--	--	10,000	750	1,500	2,500
Beryllium	mg/Kg	--	--	<0.5	--	<0.5	--	--	--	--	75	4.0	8	98
Cadmium	mg/Kg	--	--	<0.5	--	<0.5	--	--	--	--	100	1.7	7.4	38
Chromium	mg/Kg	--	--	<b>40</b>	--	<b>28</b>	--	--	--	--	2,500	750 <sup>1</sup>	750 <sup>1</sup>	1,200,000
Cobalt	mg/Kg	--	--	<b>8.1</b>	--	<b>6.2</b>	--	--	--	--	8,000	40	80	94
Copper	mg/Kg	--	--	<b>19</b>	--	<b>17</b>	--	--	--	--	2,500	230	230	31,000
Lead	mg/Kg	<b>24</b>	--	<b>4.3</b>	--	<b>3.5</b>	<b>24</b>	--	<b>14</b>	<b>72</b>	1,000	200	750	750
Molybdenum	mg/Kg	--	--	<1.0	--	<1.0	--	--	--	--	3,500	40	40	3,900
Nickel	mg/Kg	--	--	<b>93</b>	--	<b>40</b>	--	--	--	--	2,000	150	150	1,000
Selenium	mg/Kg	--	--	<2.0	--	<2.0	--	--	--	--	100	10	10	3,900
Silver	mg/Kg	--	--	<1.0	--	<1.0	--	--	--	--	500	20	40	3,900
Thallium	mg/Kg	--	--	<1.0	--	<1.0	--	--	--	--	700	1.0	13	51
Vanadium	mg/Kg	--	--	<b>18</b>	--	<b>21</b>	--	--	--	--	2,400	110	200	5,400
Zinc	mg/Kg	--	--	<b>31</b>	--	<b>29</b>	--	--	--	--	5,000	600	600	230,000
Mercury	mg/Kg	--	--	<0.050	--	<0.050	--	--	--	--	20	2.5	10	110

Notes:

Samples obtained October 26, 2004

< = not detected at or above the listed analytical

mg/Kg = milligrams per kilogram

-- = Not Analyzed

Detected concentrations are shown in **Bold**

TTLc = Total Threshold Limit Concentration

ND = Not Detected except for analytes listed below

ESL = Environmental Screening Levels established by the SFBRWQCB

<sup>1</sup>Table A-1 of SFRWQCB Guidance (2003); direct exposure

<sup>2</sup>Table A-2 of SFRWQCB Guidance (2003); direct exposure

<sup>3</sup>Table K-3 of SFRWQCB Guidance (2003); direct exposure

<sup>4</sup> using silica gel cleanup

TPHd = Total Petroleum Hydrocarbons as diesel fuel

TPHmo = Total Petroleum Hydrocarbons as motor oil

TPHg = Total Petroleum Hydrocarbons as gasoline

HVOCs = Halogenated volatile organic compounds



**TABLE 2**  
**Soil Analytical Results - RCRA Metals**  
 57/59 South L Street  
 Livermore, California

Soil Sample ID	Sample Depth (feet bgs)	Sample Date	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)
BV-10,11,12	1.5-2.0'	3/9/2007	10	210	<0.25	61	82	0.28	<0.5	<0.5
BV-10,11,12	7.5-8.0'	3/9/2007	3.2	150	<0.25	52	17	0.1	<0.5	<0.5
BV-13,14-15	1.5-2.0'	3/9/2007	10	170	<0.25	83	53	0.19	<0.5	<0.5
BV-13,14-15	7.5-8.0'	3/9/2007	3.9	110	<0.25	58	5.3	0.056	<0.5	<0.5
BV-16,17,18	1.5-2.0'	3/9/2007	18	180	<0.25	46	950	0.26	<0.5	<0.5
BV-16	1.5-2.0'	3/9/2007	4.7	NA	NA	NA	320	NA	NA	NA
BV-17	1.5-2.0'	3/9/2007	12	NA	NA	NA	92	NA	NA	NA
BV-18	1.5-2.0'	3/9/2007	48	NA	NA	NA	4,900	NA	NA	NA
BV-16,17,18	7.5-8.0'	3/9/2007	4.9	200	<0.25	69	6.8	0.1	<0.5	<0.5
<b>RWQCB ESL</b>			<b>5.5</b>	<b>750</b>	<b>1.7</b>	<b>58</b>	<b>150</b>	<b>3.7</b>	<b>10</b>	<b>20</b>

**Notes:**

Sample depths in feet below ground surface (bgs).

Analytical results are reported in milligrams per kilogram (mg/kg) or parts per million (ppm).

RCRA Metals analyzed using USEPA 6000/7000 Series Methods

<1.0 = Not detected at specified detection limit.

NA = Not analyzed for this compound

**RWQCB ESL** = Regional Water Quality Control Board - San Francisco Bay Region

Environmental Screening Level, for residential land use (Table A, RWQCB, February 2005).

RCRA = Resource Conservation Recovery Act

### Description of Subsurface Soils

During drilling and sampling, the well boring was logged and classified according to the Unified Soil Classification System (USCS). Soils encountered during drilling were similar throughout and consisted of gray to gray brown clayey gravel (USCS GC). The gravel consisted of 1/8-inch to 2-inch pebbles and cobbles in a silt and clay matrix. No hydrocarbon staining or odor was observed in any subsurface soils. A boring log for the angle boring is contained in Appendix A.

### Laboratory Analysis of Soil Samples

Both soil samples were analyzed for the following constituents: (1) Total Petroleum Hydrocarbons (TPH) as diesel, motor oil, jet fuel/kerosene (EPA Method 8015 Modified); and (2) Benzene, Toluene, Xylenes, and Ethylbenzene (BTXE) (EPA Method 8020) using Western Environmental Science and Technology (WEST), a California certified analytical laboratory.

### Analytical Results

Analytical results of the two soil samples are summarized in Table 1. Laboratory data reports and chain-of-custody records are included in Appendix B.

Sample ID	Auger Depth (ft)	Vertical Depth (ft)	Constituent (ppm)				
			Motor Oil	Benzene	Toluene	Xylenes	Ethylbenzene
TB-1.1	13	8	88	ND	ND	ND	ND
TB-1.2	18	11	260	ND	ND	ND	ND
Detection Limit			10	0.005	0.005	0.005	0.005

ND = Not detected

### Discussion

Analytical results of the two angle boring samples indicate elevated levels of motor oil TPH beneath the two USTs. However, the environmental risk associated with this motor



October 15, 1990  
Sample Log 1877

Sample: G0-3

From : Project # 106457-58559-72-7001 (Groth Bros.)  
Received October 11, 1990  
Matrix : Soil

--all concentrations are units of mg/kg--

8010 - Halogenated Volatile Organics

Parameter /	(Reporting Limit)	Measured Value
Chloromethane	(0.01)	<0.01
Chloroethane	(0.01)	<0.01
Vinyl Chloride	(0.01)	<0.01
Bromomethane	(0.01)	<0.01
Trichlorofluoromethane	(.001)	<.001
1,1-Dichloroethene	(.001)	<.001
Dichloromethane	(0.02)	<0.02
t-1,2-Dichloroethene	(.001)	<.001
1,1-Dichloroethane	(.001)	<.001
Chloroform	(.002)	<.002
1,1,1-Trichloroethane	(.001)	<.001
1,2-Dichloroethane	(.001)	<.001
Carbon Tetrachloride	(.001)	<.001
1,2-Dichloropropane	(.001)	<.001
Trichloroethene	(.001)	<.001
Bromodichloromethane	(.001)	<.001
2-Chloroethylvinyl Ether	(0.01)	<0.01
c-1,3-Dichloropropene	(.001)	<.001
t-1,3-Dichloropropene	(.001)	<.001
1,1,2-Trichloroethane	(.001)	<.001
Tetrachloroethene	(.001)	<.001
Dibromochloromethane	(.001)	<.001
Chlorobenzene	(.001)	<.001
Bromoform	(.001)	<.001
1,1,2,2-Tetrachloroethane	(.001)	<.001
1,4-Dichlorobenzene	(.001)	3.5
1,3-Dichlorobenzene	(0.50)	<0.50
1,2-Dichlorobenzene	(.001)	31

ESL 600  
Direct exposure



October 26, 1990  
Sample Log 1921

Sample: 3



From : Groth Brothers  
Received : 10/25/90  
Matrix : Soil

--all concentrations are units of mg/kg--

Parameter / (Reporting Limit)	Measured Value
Benzene (.005)	<.005
Toluene (.005)	<.005
Ethylbenzene (.005)	<.005
Total Xylenes (.005)	<.005
TPH as Gasoline (.5)	<.5

INORGANIC ANALYSIS DATA SHEET  
ANAMETRIX, INC. (408) 432-8192

Anamatrix I.D.: 9405020-01  
 Client I.D.: MW-1  
 Project I.D.: 6136.01  
 Matrix: WATER  
 Reporting Unit: ug/L

Date Sampled : 05/02/94  
 Analyst :   
 Supervisor :   
 Date Released : 05/20/94  
 Instrument I.D. : ICP1

ANALYTE-METHOD	DATE PREPARED	DATE ANALYZED	REPORT LIMIT	DIL. FACTOR	RESULT	Q
Cadmium-6010	05/06/94	05/09/94	5.0	1	ND	
Chromium-6010	05/06/94	05/09/94	10.0	1	954	
Lead-6010	05/06/94	05/20/94	40.0	1	66.1	
Nickel-6010	05/06/94	05/09/94	40.0	1	3700	
Zinc-6010	05/06/94	05/09/94	20.0	1	562	

COMMENT:



October 26, 1990  
Sample Log 1921

Sample: 1

From : Groth Brothers  
Received : 10/25/90  
Matrix : Soil

--all concentrations are units of mg/kg--

Parameter / (Reporting Limit)	Measured Value
Benzene (.005)	<.005
Toluene (.005)	<.005
Ethylbenzene (.005)	<.005
Total Xylenes (.005)	<.005
Chlorobenzene (.005)	<.005
1,2-Dichlorobenzene (.005)	<.005
1,3-Dichlorobenzene (.005)	<.005
1,4-Dichlorobenzene (.005)	<.005



October 26, 1990  
Sample Log 1921

Sample: 2

From : Groth Brothers  
Received : 10/25/90  
Matrix : Soil

--all concentrations are units of mg/kg--

Parameter / (Reporting Limit)	Measured Value
Benzene (.005)	<.005
Toluene (.005)	<.005
Ethylbenzene (.005)	<.005
Total Xylenes (.005)	<.005
Chlorobenzene (.005)	<.005
1,2-Dichlorobenzene (.005)	<.005
1,3-Dichlorobenzene (.005)	<.005
1,4-Dichlorobenzene (.005)	<.005



October 15, 1990  
Sample Log 1877

Sample: G0-3

From : Project # 106457-58559-72-7001 (Groth Bros.)

Received : October 11, 1990

Matrix : Soil

--all concentrations are units of mg/kg--

Parameter / (Reporting Limit)	Measured Value
Benzene (.005)	<.005
Toluene (.005)	<.005
Ethylbenzene (.005)	<.005
Total Xylenes (.005)	<.005
TPH as Gasoline (.5)	<.5
Extractable TPH (10)	Diesel : <100* Motor Oil : 870
Oil and Grease (50)	1100

\* Increased Reporting Limit due to high concentration of Motor Oil in sample.



**TABLE 3**  
**Grab-Groundwater Analytical Results - TPH**

57/59 South L Street  
 Livermore, California

Sample ID	Sample Date	TPH-g (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)
BV-19	3/9/2007	1,500 m,i	1,600 k,i	<250
BV-20	3/9/2007	64 f,i	<50 i	<250
BV-21	3/9/2007	<50 i	<50 i	<250
BV-22	3/9/2007	62 i	<50 g,i	350
BV-22A	3/9/2007	9,300 b,m,h,i	64,000 n,h,i	<12,000
BV-23	3/9/2007	50,000 a,h,i	43,000 d,h,i	720
BV-24	3/8/2007	61,000 a,h,i	79,000 d,h,i	<12,000
BV-25	3/8/2007	700 m	290 n,i	<250
BV-26	3/8/2007	<50 i	110 g,b,i	1,200
BV-27	3/8/2007	<50 i	290 g,b,i	1,600
BV-28	3/8/2007	<50 i	<50 i	<250
<b>RWQCB ESL</b>		<b>100</b>	<b>100</b>	<b>100</b>

**Notes:**

Sample depths in feet below ground surface (bgs).

Analytical results are reported in micrograms per liter (µg/L) or parts per billion (ppb).

TPH-g = Total petroleum hydrocarbons quantified as gasoline.

TPH-d = Total petroleum hydrocarbons quantified as diesel.

TPH-mo = Total petroleum hydrocarbons quantified as motor oil.

TPH-d and TPH-mo analyzed using USEPA Method 8015M with Silica Gel Cleanup.

VOCs analyzed using USEPA Method 8260B

<1.0 = Not detected at specified detection limit.

a = unmodified or weakly modified diesel is significant

b = heavier gasoline range hydrocarbons are significant

d = gasoline range compounds are significant

f = one to a few isolated peaks present

g = oil range compounds are significant

h = lighter than water immiscible sheen/product is present

i = liquid sample that contains greater than ~1 vol.% sediment.

k = kerosene/kerosene range

m = fuel oil

n = stoddard solvent/mineral oil

**RWQCB ESL** = Regional Water Quality Control Board - San Francisco Bay Region Environmental

Screening Level where groundwater is a potential source of drinking water

(Table A, RWQCB, February 2005).

**TABLE 4**  
**Grab-Groundwater Analytical Results - VOCs**  
57/59 South L Street  
Livermore, California

Sample ID	Sample Date	Benzene (µg/L)	n-Butyl benzene (µg/L)	sec-Butyl benzene (µg/L)	tert-Butyl benzene (µg/L)	n-propyl benzene (µg/L)	Ethyl-benzene (µg/L)	Isopropyl-benzene (µg/L)	MTBE (µg/L)	Napthalene (µg/L)	Toluene (µg/L)	1,2,4-TMB (µg/L)	1,3,5 TMB (µg/L)	Total Xylenes (µg/L)	cis-1,2 DCE (µg/L)	TCE (µg/L)	PCE (µg/L)	Vinyl Chloride (µg/L)
BV-19	3/9/2007	3.5	2.3	1.1	2.9	0.95	0.86	<0.5	29	<0.5	<0.5	0.77	<0.5	1.6	2.4	1.1	<0.5	<0.5
BV-20	3/9/2007	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.74	0.63	30	<0.5
BV-21	3/9/2007	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	31	<0.5
BV-22	3/9/2007	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.65	1.0	38	<0.5
BV-22A	3/9/2007	<2.5	56	24	<2.5	66	25	42	<2.5	<2.5	<2.5	<2.5	3.5	2.5	12	<2.5	4.2	7.8
BV-23	3/9/2007	1,100	160	<50	<50	510	3,400	180	90	490	220	1,500	540	4,200	<50	<50	<50	<50
BV-24	3/8/2007	3,100	140	72	<50	460	3,500	100	1,200	660	340	2,100	660	9,700	65	<50	<50	<50
BV-25	3/8/2007	1.0	1.3	1.8	1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	22	2.7	3.7	<0.5
BV-26	3/8/2007	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.2	0.67	5.1	<0.5
BV-27	3/8/2007	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BV-28	3/8/2007	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.71	<0.5
<b>RWQCB ESL</b>		1.0	--	--	--	--	30	--	5.0	17	40	--	--	20	6.0	5.0	5.0	0.5
<b>DHS MCL</b>		1.0	--	--	--	--	300	--	13	--	150	5.0	--	1,750	6.0	5.0	5.0	0.5

**Notes:**

VOCs = Volatile organic compounds

DCE = Dichloroethene

PCE = Tetrachlorethene

TCE = Trichloroethene

TMB = Trimethylbenzene

MTBE = Methyl tert butyl ether

Analytical results are reported in micrograms per liter (µg/L) or parts per billion (ppb).

<0.005 = Not detected at specified detection limit.

ND = Not detected at the laboratory method detection limit.

VOCs analyzed by USEPA Method 8260B.

**RWQCB ESL** = Regional Water Quality Control Board - San Francisco Bay Region Environmental Screening Level,

Groundwater (Table A, 2005) where groundwater is a potential source of drinking water.

**DHS MCL** = California Department of Health Services Maximum Contaminant Level - A Compilation of Water Quality Goals, August 2003.

-- = No regulatory limit established for this analyte.

Bolded and shaded indicates where RWQCB ESL and/or DHS MCL was exceeded for this analyte.

TABLE 1  
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS  
(ppb<sup>1</sup>)

Sample ID Name	Date	TPHD	TPHG	Methyl t-Butyl Ether	Benzene	Toluene	Ethyl-benzene	Xylenes	Oil & Grease
MW-1	05/01/95 <sup>2</sup>	<50	160	NA	<0.50	<0.50	<0.50	<1.5	<5,000
	08/02/95 <sup>3</sup>	110	160	<5.0	<0.50	<0.50	<0.50	<1.5	<5,000
	11/01/95 <sup>4</sup>	<50	110	<5.0	<0.50	<0.50	<0.50	<1.5	<5,000
	02/05/96 <sup>5</sup>	<50	<50	<5.0	<0.50	<0.50	<0.50	<1.5	10,000
MW-2 <sup>6</sup>	05/01/95	NA <sup>7</sup>	<50	NA	<0.50	<0.50	<0.50	<1.5	NA
	08/02/95	NA	<50	<5.0	<0.50	<0.50	<0.50	<1.5	NA
	11/01/95	NA	<50	<5.0	<0.50	<0.50	<0.50	<1.5	NA
	02/05/96	NA	<50	<5.0	<0.50	<0.50	<0.50	<1.5	NA

<sup>1</sup> PARTS PER BILLION

<sup>2</sup> ALSO ANALYZED BY EPA METHOD 8240. TRICHLOROETHENE AND TETRACHLOROETHENE WERE DETECTED AT CONCENTRATIONS OF 5.4 ppb AND 210 ppb, RESPECTIVELY.

<sup>3</sup> EPA METHOD 8240 DETECTED TETRACHLOROETHENE AT CONCENTRATIONS OF 150 ppb.

<sup>4</sup> EPA METHOD 8240 DETECTED TETRACHLOROETHENE AT CONCENTRATIONS OF 300 ppb.

<sup>5</sup> EPA METHOD 8240 DETECTED TETRACHLOROETHENE AT CONCENTRATIONS OF 210 ppb.

<sup>6</sup> TRIP BLANK

<sup>7</sup> NOT ANALYZED

TABLE 2  
RESULTS OF LABORATORY ANALYSES  
OF WATER SAMPLES  
Groth Brothers Oldsmobile-GMC  
Livermore, California

Sample ID	TPH-G (PPB)	TPH-D (PPB)	TPH-MO (PPB)	TOG (PPM)	VOCs (PPB)	Cd (PPB)	Cr (PPB)	Ni (PPB)	Pb (PPB)	Zn (PPB)
<u>May 2, 1994</u>										
MW-1	110*	<50	<100	<5.0	PCE (400)** TCE (5)**	<5.0	954	3,700	66.1	562
Trip Blank	<50	<50	<100	<5.0	<5	NA	NA	NA	NA	NA

All results shown in parts per million (PPB), with the exception of TOG which is reported in parts per million (PPM).

TPH-G = Total petroleum hydrocarbons as gasoline using EPA Method 8015 (modified).

TPH-D = Total petroleum hydrocarbons as diesel using EPA Method 8015 (modified).

TPH-MO = Total petroleum hydrocarbons as motor oil using EPA Method 8015 (modified).

TOG = Total oil and grease using Standard Method 5520 B&F.

VOCs = Volatile organic compounds using EPA Method 8240.

Metals Cd (cadmium), Cr (chromium), Ni (nickel), Pb (lead), and zinc (Zn) using EPA Method 6010.

NA = Not analyzed.

\* = The concentration reported as gasoline is primarily due to the presence of a discrete peak not indicative of gasoline.

\*\* = In addition to the PCE and TCE detected in the groundwater sample, the laboratory reported values for methylene chloride and acetone that are near the method blank contamination levels, and are laboratory contaminants.

MCLs for Drinking Water (CRWQCB, 1991) (There is no MCL for Ni)

TCE: 5 ppb  
PCE: 5 ppb  
Cd: 10 ppb  
Cr: 50 ppb  
Pb: 50 ppb  
Zn: 5,000 ppb

Sample Identification:

MW-1

|

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Monitoring Well

**Table 3**  
**Summary of Analytical Results - Grab Groundwater**  
**Groth Bros. Chevrolet**  
**Livermore, California**

Analyte	Sample Location	MW-1	GROTH-2	ESL	ESL
				Residential Land Use	Commercial Land Use
<b>Hydrocarbons</b>	<b>Units</b>				
TPHd <sup>1</sup>	µg/l	<50	<b>29,000</b>	NE	NE
TPHmo <sup>1</sup>	µg/l	<500	<5,000	NE	NE
TPHg	µg/l	<50	<b>52,000</b>	NE	NE
Benzene	µg/l	<0.5	<b>1,300</b>	1,900	6,400
Toluene	µg/l	<0.5	<b>3,200</b>	530,000	530,000
Ethylbenzene	µg/l	<0.5	<b>210</b>	52,000	180,000
Xylenes	µg/l	<0.5	<b>3,000</b>	160,000	160,000
Methyl-tert-butyl-ether (MTBE)	µg/l	<5	<b>3,600</b>	48,000	160,000
<b>HVOCs</b>		<b>ND</b>	<b>ND</b>		
Tetrachloroethene (PCE)	µg/l	56	<0.5	520	1,700
cis-1,2-Dichloroethene (DCE)	µg/l	<20	<b>26</b>	20,000	55,000

**Notes:**

Samples obtained October 26, 2004

TPHd = Total Petroleum Hydrocarbons as diesel fuel

TPHmo = Total Petroleum Hydrocarbons as motor oil

TPHg = Total Petroleum Hydrocarbons as gasoline

HVOCs = Halogenated volatile organic compounds

<sup>1</sup> = using silica gel cleanup

< = not detected at or above the listed analytical reporting limit

Detected concentrations are **Bold**

µg/l = micrograms per liter

ND = Not Detected except for analytes listed below

ESL = Environmental Screening Levels established by the SFRWQCB

Table E1a of the SFRWQCBs Groundwater Screening Levels for Evaluation of Potential Indoor-Air Impacts

NE = Not Established



GeoStrategies, Inc.

# Log of Boring B-1

PROJECT: *Groth Brothers*

LOCATION: *59 South L Street, Livermore, CA*

GSI PROJECT NO.: *6136.01*

SURFACE ELEVATION:

DATE STARTED: *4/26/94*

WL (ft. bgs):      DATE:      TIME:

DATE FINISHED: *4/26/94*

WL (ft. bgs):      DATE:      TIME:

DRILLING METHOD: *7.5 in. Hollow Stem Auger*

TOTAL DEPTH: *16 Feet*

DRILLING COMPANY: *Exploration Geoservices*

GEOLOGIST: *RDC*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						ML	2" ASPHALT	
						GW	SILT (ML) - very dark brown (10YR 2/2), damp, low plasticity, 80% silt, 35% clay, 5% coarse gravel with sand.	Boring backfilled 15 to 16 feet with bentonite, surface to 15 feet with 10 sack cement/slurry with 5% bentonite.
5	0	13	BI-6.5				WELL GRADED GRAVEL WITH SAND (GW) - very dark grayish brown (10YR 5/2), damp, medium dense, 50% medium to coarse gravel, 45% medium grained sand, 5% silt.	
10	0	40	BI-11				WELL GRADED GRAVEL WITH SAND (GW) - dark brown (10YR 3/3), moist, dense, 55% coarse gravel, 40% medium sand, 5% silt.	
15	0	34	BI-16				WELL GRADED GRAVEL WITH SAND (GW) - very grayish brown (10YR 4/2), moist, dense, 55% coarse gravel, 40% medium sand, 5% silt.	
							bottom of boring at 16.0 feet. 4/26/94	
							(* = converted to equivalent standard penetration blows/ft.)	
20								
25								
30								
35								

JOB NUMBER: 6136.01



PROJECT: Groth Brothers

LOCATION: 59 South L Street, Livermore, CA

GSI PROJECT NO.: 6136.01

SURFACE ELEVATION:

DATE STARTED: 4/26/94

WL (ft. bgs): DATE: TIME:

DATE FINISHED: 4/26/94

WL (ft. bgs): DATE: TIME:

DRILLING METHOD: 7.5 in. Hollow Stem Auger

TOTAL DEPTH: 16 Feet

DRILLING COMPANY: Exploration Geoservices

GEOLOGIST: RDC

DEPTH feet	PI0 (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						ML	2" ASPHALT	
						GW	SILT (ML) - very dark brown (10YR 2/2), damp, low plasticity, 65% silt, 30% clay, 5% medium sand.	Boring backfilled 15 to 16 feet with bentonite, surface to 15 feet with 10 sack cement/slurry with 5% bentonite.
5	0	10	B2-6				WELL GRADED GRAVEL WITH SAND (GW) - very dark grayish brown (10YR 5/2), damp, loose to medium dense, 50% coarse gravel, 45% medium sand, 5% silt.	
10	0	15	B2-11				WELL GRADED GRAVEL WITH SAND (GW) - dark gray (10YR 4/1), moist, medium dense, 55% coarse gravel, 40% medium to coarse sand, 5% silt.	
15	0	45	B2-16				WELL GRADED GRAVEL WITH SAND (GW) - dark brown (10YR 3/3), moist, dense, 50% coarse gravel, 40% medium to coarse sand, 10% silt.	
							bottom of boring at 16.0 feet. 4/26/94	
20							(* = converted to equivalent standard penetration blows/ft.)	
25								
30								
35								



PROJECT: Groth Brothers

LOCATION: 59 South L Street, Livermore, CA

GSI PROJECT NO.: 6136.01

SURFACE ELEVATION:

DATE STARTED: 4/26/94

WL (ft. bgs): DATE: TIME:

DATE FINISHED: 4/26/94

WL (ft. bgs): DATE: TIME:

DRILLING METHOD: 7.5 in. Hollow Stem Auger

TOTAL DEPTH: 16 Feet

DRILLING COMPANY: Exploration Geoservices

GEOLOGIST: RDC

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						ML	2" ASPHALT	
						GP	SILT (ML) - very dark brown (10YR 2/2), damp, low plasticity, 60% silt, 35% clay, 5% medium sand, concrete cobbles.	Boring backfilled 15 to 16 feet with bentonite, surface to 15 feet with 10 sack cement/sand slurry with 5% bentonite.
5	0	8	B3-6			GP	POORLY GRADED GRAVEL WITH SAND (GP) - very dark grayish brown (10YR 3/2), damp, loose, 50% fine to coarse gravel, 45% medium to coarse sand, 5% silt.	
10	0	20	B3-11			GM	SILTY GRAVEL WITH SAND (GM) - dark brown (10YR 3/3), moist, medium dense, 50% fine to coarse gravel, 35% medium to coarse sand, 15% silt.	
15	0	52	B3-16			GM	SANDY GRAVEL WITH SILT (GM) - dark brown (10YR 3/3), moist, very dense, 50% fine to coarse gravel, 35% medium to coarse sand, 15% silt.	
							bottom of boring at 16.0 feet. 4/26/94	
							(* = converted to equivalent standard penetration blows/ft.)	
20								
25								
30								
35								





GeoStrategies, Inc.

# Log of Boring B-4/MW-1

PROJECT: Groth Brothers

LOCATION: 59 South L Street, Livermore, CA

GSI PROJECT NO.: 6136.01

SURFACE ELEVATION:

DATE STARTED: 4/26/94

WL (ft. bgs): 36 DATE: 4/26/94 TIME: 12:00

DATE FINISHED: 4/26/94

WL (ft. bgs): 34 DATE: 4/26/94 TIME: 12:10

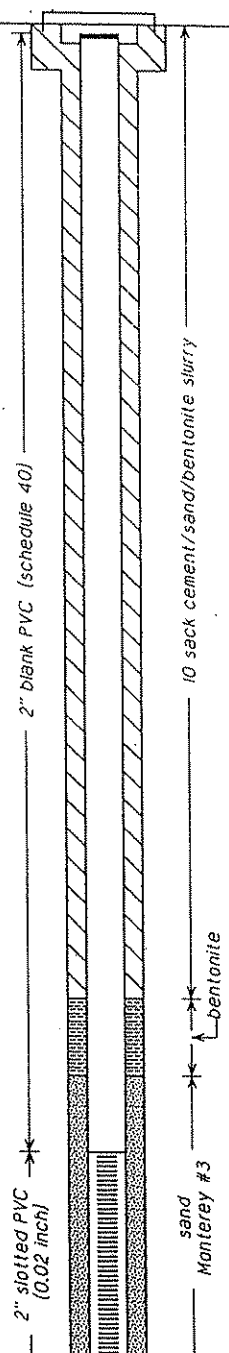
DRILLING METHOD: 8.5 in. Hollow Stem Auger

TOTAL DEPTH: 46 Feet

DRILLING COMPANY: Exploration Geoservices

GEOLOGIST: RDC

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
						ML	2" ASPHALT	
						GM	SILT (ML) - very dark brown (10YR 2/2), damp, low plasticity, 80% silt, 35% clay, 5% coarse gravel with sand.	
5	0	2	B4-5.5			GM	SILTY GRAVEL WITH SAND (GM) - dark grayish brown (10YR 3/2), damp, very loose, 45% fine to medium gravel, 40% medium to coarse sand, 10% silt, 5% clay.	
10	0	7	B4-10.5			GM	SILTY GRAVEL WITH SAND (GM) - dark brown (10YR 3/3), moist, loose, 50% fine to coarse gravel, 35% medium sand 15% silt.	
15	0	19	B4-15.5			GM	SILTY GRAVEL WITH SAND (GM) - dark brown (10YR 3/2), moist, medium dense, 50% fine to coarse gravel, 35% medium to coarse sand, 15% silt.	
20	0	10	B4-20.5			GM	SILTY GRAVEL WITH SAND (GM) - dark brown (10YR 3/3), moist, loose to medium dense, 50% fine to coarse grained gravel, 35% medium to coarse sand, 15% silt.	
						ML	SILT (ML) - dark yellowish brown (10YR 5/8), moist, stiff, low plasticity, 75% silt, 25% clay.	
25	0	67	B4-25.5			GM	SILTY GRAVEL WITH SAND (GM) - dark brown (10YR 3/3), moist, very dense, 45% fine to coarse gravel, 30% medium to coarse sand, 25% silt.	
30	0	57	B4-30.5			GM	SILTY GRAVEL WITH SAND (GM) - dark grayish brown (10YR 4/2), moist, very dense, 45% medium to coarse gravel, 35% medium to coarse sand, 20% silt.	
35								





PROJECT: Groth Brothers

LOCATION: 59 South L Street, Livermore, CA

DEPTH feet	PTD (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
0	0	32	B4-35.5	□	●●●●●	GM	<p>▽</p> <p>SILTY GRAVEL WITH SAND (GM) - yellowish brown (10YR 5/4), saturated, dense, 50% fine to coarse gravel, 35% medium to coarse sand, 10% silt, %5 clay.</p>	<p>2' slotted PVC (0.02 inch)</p> <p>sand Monterey #3</p> <p>ben-tonite</p>
40	0	54	B4-40.5	□	●●●●●	GP		
45	0	80	B4-45	□	●●●●●		<p>POORLY GRADED GRAVEL WITH SAND (GP) - grayish brown (10YR 3/2), saturated, dense, 65% medium to coarse gravel, 30% medium to coarse sand, 5% silt.</p> <p>bottom of boring at 46.0 feet. 4/26/94</p> <p>(* = converted to equivalent standard penetration blows/ft.)</p>	

DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO.	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE	OVN(IPID) (ppm)	LOCATION: N 38 E 122 SURFACE EL: ft +/- (rel. 3DDiff datum)	MATERIAL DESCRIPTION	OTHER TESTS
0		1					Sandy Lean CLAY with gravel (CL): stiff, brown, moist, fine to coarse-grained, fine sub-d, no odor, no staining	
5		2			0		Clayey SAND with gravel (SC): medium dense, brown, no odor, no staining	
		3			1		Clayey SAND with gravel (SC): medium dense, brown, moist, fine to coarse-grained, fine sub-d, no odor	
10		4			1.1		- increasing gravel	
					1			
					0			
15		5			0.7		Silty CLAY (CL-ML): soft, brown	
					0		Clayey SAND with gravel (SC): medium dense, brown, moist, fine to coarse-grained, fine sub-d, no odor	
					0		Silty CLAY with sand (CL-CH): stiff, brown, moist, fine to coarse-grained, soft pockets	
20		6			0			
					0			
					0			
25		7			0		Silty CLAY with sand (CL): stiff, brown, moist	
					0		- interbedded with gravelly sandy clay lenses	
					0			
					0			
30		8			0			
35								
40								

BORING DEPTH: 30.0 ft  
 DEPTH TO WATER: Not encountered  
 BACKFILL: Grout  
 COMPLETION DATE: October 26, 2004  
 NOTES: 1. Terms and symbols defined on Plate A-1.

DRILLING METHOD: 2-in. dia. Direct Push  
 RIG TYPE: Geoprobe  
 DRILLED BY: Virconex, Tim Shane  
 LOGGED BY: M Pleva

**LOG OF GROTH-1**  
 Groth Brothers Chevrolet  
 Livermore, California

DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO.	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE	OVNMPID (ppm)	LOCATION: N 38 E 122	OTHER TESTS
						SURFACE EL: ft +/- (rel. 3DDiff datum)	
MATERIAL DESCRIPTION							
						Asphalt:	
		1	X		0	Silty, clayey SAND (SC-SM): medium dense, brown, moist to wet, fine to coarse-grained, with trace gravel, perched water, no odors, no staining	
5		2	X		0	- sandy silty clay with gravel	
					0.1	Silty GRAVEL with sand (GM): medium dense, brown, moist, fine sub-a, fine to coarse-grained, no odor, no staining	
10		3	X		0.6		
					0.3	- moist to wet	
15		4	X		0.6		
					0	SILT with sand (ML): very hard, reddish brown, moist, with clay, with soft pockets	
					0	Silty GRAVEL with sand (GM): medium dense, brown, moist, fine sub-a, fine to coarse-grained, no odor, no staining	
20		5	X		0		
					0	Silty GRAVEL with sand (GM): very hard, moist to wet, fine sub-a to sub-r, with fine to coarse grained sand	
					0	- very hard	
					0	SILT (ML): stiff, olive brown, moist to wet	
25		6	X		0		
					0		
30		7	X		77.7	Silty GRAVEL with sand (GM): medium dense, HC odors, green staining	
						SILT (ML): stiff, olive brown, moist to wet	
					0.8	Silty GRAVEL with sand (GM): medium dense, HC odors, green staining	
35		8	X		12.2		
					56.1		
					13.7		
40		9	X		29		
					120.1		

BORING DEPTH: 40.0 ft  
 DEPTH TO WATER: 35.3 ft  
 BACKFILL: Grout  
 COMPLETION DATE: October 26, 2004  
 NOTES: 1. Terms and symbols defined on Plate A-1.  
 Water had HC odor and sheen.

DRILLING METHOD: 2-in. dia. Direct Push  
 RIG TYPE: Geoprobe  
 DRILLED BY: Vironex, Tim Shane  
 LOGGED BY: M Pleva

**LOG OF GROTH-2**  
 Groth Brothers Chevrolet  
 Livermore, California

DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO.	SAMPLER TYPE	SAMPLER BLOW/COUNT/ PRESSURE	OVM/PID (ppm)	LOCATION: N 38 E 122	OTHER TESTS
						SURFACE EL: ft +/- (rel. 2DGPS datum)	
						MATERIAL DESCRIPTION	
						Asphalt	
		1			0	Silty SAND with gravel (SM): medium dense, brown, moist, no odor, no staining (FILL)	
5		2			0		
		3			0		
10							
15							
20							
25							
30							
35							
40							

BORING DEPTH: 8.0 ft  
 DEPTH TO WATER: Not encountered  
 BACKFILL: Grout  
 COMPLETION DATE: October 26, 2004  
 NOTES: 1. Terms and symbols defined on Plate A-1.  
 Ground water @ 35.65' in MW-1 (2"). 3 vol = 4 gal.

DRILLING METHOD: 2-in. dia. Direct Push  
 RIG TYPE: Geoprobe  
 DRILLED BY: Vironex, Tim Shane  
 LOGGED BY: M Pleva

**LOG OF GROTH-3**  
 Groth Brothers Chevrolet  
 Livermore, California

DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO.	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE	OVM/PIID (ppm)	LOCATION:	OTHER TESTS
						SURFACE EL: ft +/- (rel. datum)	
MATERIAL DESCRIPTION							
						Concrete:	
						SILT with gravel (ML): light brown, dry to damp, fine to coarse-grained trace sand, dark brown when wet	
		1			1.1		
		2			1.3		
5							
		3			13.7		
		4			0.2		
10		5			0.2		
					8.7		
					19.4		
					0		
					0		
15		6			0		
					1.9		
					0		
					0		
20		7			0		
						Gravelly clayey SILT with sand (ML): hard, brown, damp, no odors, no staining	
					0		
					0		
					0		
25		8			0		
						- clayey @ 23'	
						Silty CLAY (CL-ML): stiff, brown, moist, with sand and gravel	
					0.3		
30		9					
35							
40							

BORING DEPTH: 40.0 ft  
 DEPTH TO WATER: Not encountered  
 BACKFILL: Grout  
 COMPLETION DATE: October 26, 2004  
 NOTES: 1. Terms and symbols defined on Plate A-1.  
 Could not advance sampler, went to 40' using hydropunch.

DRILLING METHOD: 2-in. dia. Direct Push

RIG TYPE: Geoprobe  
 DRILLED BY: Vironex, Tim Shane  
 LOGGED BY: M Pleva

**LOG OF GROTH-4**  
 Groth Brothers Chevrolet  
 Livermore, California

DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO.	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE	OVM/PI/D (ppm)	LOCATION:	OTHER TESTS
						SURFACE EL: ft +/- (rel. datum)	
MATERIAL DESCRIPTION							
						Silty SAND with gravel (SM): medium dense, brown, dry to moist, fine to coarse-grained, fine sub-a	
		1			0		
		2			0		
		3			0		
5							
10							
15							
20							
25							
30							
35							
40							

BORING DEPTH: 8.0 ft  
 DEPTH TO WATER: Not encountered  
 BACKFILL: Grout  
 COMPLETION DATE: October 26, 2004  
 NOTES: 1. Terms and symbols defined on Plate A-1.

DRILLING METHOD: 2-in. dia. Direct Push  
 RIG TYPE: Geoprobe  
 DRILLED BY: Vironex, Tim Shane  
 LOGGED BY: M Pieva

**LOG OF GROTH-5**  
 Groth Brothers Chevrolet  
 Livermore, California

DEPTH, ft	MATERIAL SYMBOL	SAMPLE NO.	SAMPLER TYPE	SAMPLER BLOW COUNT/ PRESSURE	OVM/PIID (ppm)	LOCATION:	OTHER TESTS
						SURFACE EL: ft +/- (rel. datum)	
MATERIAL DESCRIPTION							
0		1	⊗		0	Silty SAND with gravel (SM): medium dense, brown, damp to moist, fine to coarse-grained, fine, sub-a, no odors, no staining	
5		2	⊗		0		
8		3	⊗		0		
10							
15							
20							
25							
30							
35							
40							

BORING DEPTH: 8.0 ft  
 DEPTH TO WATER: Not encountered  
 BACKFILL: Grout  
 COMPLETION DATE: October 26, 2004  
 NOTES: 1. Terms and symbols defined on Plate A-1.

DRILLING METHOD: 2-in. dia. Direct Push

RIG TYPE: Geoprobe  
 DRILLED BY: Vironex, Tim Shane  
 LOGGED BY: M Pleva

**LOG OF GROTH-6**  
 Groth Brothers Chevrolet  
 Livermore, California





BUREAU VERITAS



# LOG OF SOIL BORING

Project No.: 33107-007514.02	BORING NO.: BV-03
Project Name: 57 and 59 South L Street	
Location: Livermore, CALIFORNIA	
Logged By: C. Redford / J. Wilson	
Start Date: 3-8-07	Start Time: :1005 Elevation (ft, msl):
Finish Date: 3-8-07	Finish Time: :1055 Boring Diameter (in): 2
Driller: ECA	Drill Method: Direct Push
Hammer Weight: N/A	Drop: N/A
Borehole Completion Data: Neat cement Grout	
Depth To $\nabla$ (ft)	Depth To $\nabla$ (ft)
Time:	Time:
Date:	Date:

SAMPLE INTERVAL	SAMPLE RECOVERY (in)	SAMPLE ID	PID READING (ppm)	TIME	DEPTH (ft)	SAMPLE GRAPHIC LOG	USCS	DESCRIPTION
					1			Concrete
					2		ML	GRAVELLY SILT, dark brown to black, dense, damp, heavy petroleum odor
4842	3.5	189	1030		3			Silt, black, medium dense, damp, heavy petroleum odor
					4			trace gravel fill
					5			
					6		GM	SANDY GRAVEL, tan-brown, medium dense, some coarse sand, damp, trace petroleum odor
4842	2.5	188	1040		7			
					8			
					9			
					10			SANDY GRAVEL, tan-brown, medium dense, some coarse sand, damp, trace petroleum
					11			No petroleum odor
4842	11.5	180	1050		12		EO3	
					13			
					14			
					15			
					16			
					17			Note: Small sample very heavy petroleum odor 0-4'
					18			
					19			



BUREAU VERITAS



# LOG OF SOIL BORING

Project No.: 33107-007514.02	BORING NO. BU-09
Project Name: 57 and 59 South L Street	
Location: Livermore, CALIFORNIA	
Logged By: C. Schubert / J. Wilson	
Start Date: 3-8-07	Start Time: :15:15 Elevation (ft, msl):
Finish Date: 3-8-07	Finish Time: :15:40 Boring Diameter (in): 2
Driller: ECA	Drill Method: Direct Push
Hammer Weight: N/A	Drop: N/A
Borehole Completion Data: Next Cement Grout	
Depth To $\nabla$ (ft)	Depth To $\nabla$ (ft)
Time:	Time:
Date:	Date:

SAMPLE INTERVAL	SAMPLE RECOVERY (in)	SAMPLE ID	PID READING (ppm)	TIME	DEPTH (ft)	SAMPLE GRAPHIC LOG	USCS	DESCRIPTION
					1		ML	~ 3" concrete + 3" base rock
					2			
					3			Silt w/ gravel, brown, m-dense, damp, no odor
48	30	3.5	0.0	1520	4			
					5			
					6			
					7		Gm	Silty Gravel w/ coarse sand, tan, dry-damp loose No odor
48	24	7.5	0.0	1525	8			
					9			
					10			dry
					11			
48	42	11.5	0.0	1530	12			damp m-dense
					13		EOB	EOB @ 12' bgs
					14			
					15			
					16			
					17			
					18			
					19			



BUREAU VERITAS



# LOG OF SOIL BORING

Project No.: 33107-007514.02  
Project Name: 57 and 59 South L Street  
Location: Livermore, CALIFORNIA  
Logged By: C. Bratton / J. Wilson

BORING NO.  
BV-02

Start Date: 3-8-07 Start Time: :415 Elevation (ft, msl):  
Finish Date: 3-8-07 Finish Time: :950 Boring Diameter (in): 2

Driller: ECA Drill Method: Direct Push  
Hammer Weight: N/A Drop: N/A

Borehole Completion Data: Neat cement grout

Depth To $\nabla$ (ft)		Depth To $\nabla$ (ft)	
Time:		Time:	
Date:		Date:	

SAMPLE INTERVAL	SAMPLE RECOVERY (in)	SAMPLE ID	PID READING (ppm)	TIME	DEPTH (ft)	GRAPHIC LOG	USCS	DESCRIPTION
					1		ML	Concrete to m 3' Silt, brown, m-dense, dry to damp, trace to little gravel, no odor. Full mercury
					2			
					3			
48	30	3.5	0.0	925	4			
					5			
					6			Silt, brown, m-dense; w/ gravel (1.5%), damp no odor. Full
					7			
48	42	0.5	0.0	930	8			
					9			
		9.5		940	10		GM	Silty gravel, tan-brown, m-dense, damp, trace sands, no odor
					11			
48	48	11.5	0.0	945	12			
					13		EOB	EOB @ 12' bgs
					14			
					15			
					16			
					17			
					18			
					19			



BUREAU VERITAS



# LOG OF SOIL BORING

Project No.: 33107-007574.02		BORING NO. <b>TV-23</b>	
Project Name: 57 and 59 South L Street			
Location: Livermore, CALIFORNIA			
Logged By: <i>Cherrie Johnson</i>			
Start Date: 3/9/7	Start Time: 0800	Elevation (ft, msl):	
Finish Date: 3/9/7	Finish Time: 1110	Boring Diameter (in): 2	
Driller: ECA		Drill Method: Direct Push	
Hammer Weight: N/A		Drop: N/A	
Borehole Completion Data: <i>Neutement Grant</i>			
Depth To $\nabla$ (ft)		Depth To $\nabla$ (ft)	
Time:		Time:	
Date:		Date:	

SAMPLE INTERVAL	SAMPLE RECOVERY (in)	SAMPLE ID	PID READINGS (ppm)	TIME	DEPTH (ft)	SAMPLE GRAPHIC LOG	USCS	DESCRIPTION
				0810	1		GP	Asphalt Base rock GRAVEL, FILL, some silt, gray. loose, dry, no odor
	1.5		0.0	0815	2			<i>deleted</i> No Recovery 2' - 6'
					3		ML	GENERALLY SILT, tan brown, loose, dry, no odor FILL
					4			
					5			
32	28.4	5.5	0.0	0815	6			
					7			
					8		GM	little sand, SILTY GRAVEL brown, or dense trace to little clay, damp, no odor
					9			
48	42	7.5	0.0	0820	10			
					11			
					12			brown dense, little sand, trace clay, damp, no odor
					13			
48	48	13.5	0.0	0825	14			hard drilling; hole sloughs at 13'
					15			dense, little sandy, little clay, some orange oxide staining, damp to moist, no odor
24	48	15.5	0.0	0830	16			CORRO → hole sloughs at 9'
					17			
					18			Drive hydroprobe to 35' bgs for water sample
					19			



# LOG OF SOIL BORING

Project No.: 33107-007514.03  
 Project Name: 57159 S. L St.  
 Location: Livermore, CA  
 Logged By: [Signature]

BORING NO.

IV-23

SAMPLE INTERVAL	SAMPLE RECOVERY (in)	SAMPLE ID	PID READING (ppm)	TIME	DEPTH (ft)	SAMPLE	GRAPHIC LOG	USCS	DESCRIPTION
-	-	-		0855	21				<p>Drive hydropunch to 35' bgs due to repetitive attempts to take soil only to get slough entering hole at 9-13' bgs.</p>
					22				
					23				
					24				
					25				
					26				
					27				
					28				
					29				
					30				
					31				<p>Expose screen 31-35' bgs</p> <p>0900 - no water encountered; pull up on screen approx 3-4 feet; Hydrologs noted as we check for water; allow for water to enter hole</p> <p>0910 - no water</p>
					32				
					33				
					34				
					35				
				0920	36				<p>Drive hydropunch to 40' bgs; screen opened 37-41</p> <p>@940 - no water - allow to set.</p> <p>move to IV-22</p> <p>1110 - collect soil sample - showed no water strong gasoline odor.</p>
					37				
					38				
					39				
					40				
				0920	41				<p>End of 41'</p> <p>Backfilled hole w/ water and grout.</p>
					42				
					43				
					44				



BUREAU VERITAS



# LOG OF SOIL BORING

Project No.: 33107-007514.02  
Project Name: 57 and 59 South L Street  
Location: Livermore, CALIFORNIA  
Logged By: C. Pedraza / J. Wilson

BORING NO.  
BV-24

Start Date: 3/8/17 Start Time: 1500 Elevation (ft, msl):  
Finish Date: 3/9/17 Finish Time: 1610 Boring Diameter (in): 2

Driller: ECA Drill Method: Direct Push  
Hammer Weight: N/A Drop: N/A

Borehole Completion Data: Neat cement grout

Depth To $\nabla$ (ft)	35'	Depth To $\nabla$ (ft)	
Time:	1600	Time:	
Date:	3/8/17	Date:	

SAMPLE INTERVAL	SAMPLE RECOVERY (m)	SAMPLE ID	PID READING (ppm)	TIME	DEPTH (ft)	GRAPHIC LOG	USCS	DESCRIPTION
				1500	0			Asphaltite 3"
					1		ML	GENERALLY SILT, brown, loose, dry, no odor Fill
					2			Some organics
					3			SOFT claylike
					4			
					5			
72	48	5.5	0.0	1504	6			brown, dry, no odor - predominantly SILT
					7		GM	SILTY GRAVEL, tan - light brown, loose, dry, no odor
					8			
					9			
48	48	9.5	0.0	1509	10			No recovery 10-13'
					11			
					12			
					13			
					14			
					15			clay, loose, orange oxide staining, damp, no odor
72	36	15.5	0.0	1514	16			
					17			
					18			
					19		CL	SILTY CLAY, brown, m. soft to stiff, trace gravel, damp, no odor



Clayton  
GROUP SERVICES

LOG OF  
SOIL BORING

Project No.: 33107-007514.03  
Project Name: 57/59 S. L Street  
Location: Lumberton, LA  
Logged By: C. G. Carter

BORING NO.

BV-24

SAMPLE INTERVAL	SAMPLE RECOVERY (%)	SAMPLE ID	PID READING (ppm)	TIME	DEPTH (ft)	GRAPHIC LOG	USCS	DESCRIPTION
60	48	20.5	0.0	1520	21		CL	SILTY CLAY, dk brown, <sup>no</sup> stiff, damp, no odor
					22		GM	GRAY SILT, brown, med. dense, damp, no odor
					23			
					24		CL	SILTY CLAY, brown, stiff, trace gravel, damp, no odor
48	48	24.5	0.0	1523	25			
					26		GM	GRAY SILT - brown, damp to damp, loose, no odor
					27			
					28		CL	SILTY CLAY, brown / gray mottled, some black mottling, stiff, damp to moist, no odor
					29			
60	48	-	12.5	1535	30			
					31			Done Hydropanch to 35' bgs: open screen 31-25' bgs. - no H <sub>2</sub> O
					32			
					33			
					34			
-	-	-	-	1540	35			Advance punch to 40': open screen 36-40'
					36			Collect soil sample @ 1605 for TPH + VOC's
					37			
					38			
					39			
-	-	-	-	1600	40			EOB @ 40' bgs
					41			- back filled hole w/ neat cement
					42			gravel
					43			
					44			