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

REMEDIAL ACTION COMPLETION CERTIFICATION

RO-060 - 2300 Santa Clara Ave, Alameda, CA

November 5, 2001

Ms. Karen Petryna
Equiva Services
P.O. Box 7869
Burbank, CA 91510-7869

Corporate Secretary
Longs Drug Stores CA Inc
P.O. Box 5222
Walnut Creek, CA 94596

Dear Ms. Petryna, et al:

This letter confirms the completion of site investigation and corrective 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 tanks 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 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

cc: Chuck Headlee, RWQCB
Dave Deaner, SWRCB
files-ec (shell2-2)

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: September 17, 2001

Agency name: **Alameda County-HazMat**
City/State/Zip: **Alameda, CA 94502**
Responsible staff person: **Eva Chu**

Address: **1131 Harbor Bay Pkwy**
Phone: **(510) 567-6700**
Title: **Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: **Former Shell Service Station**
Site facility address: **2300 Santa Clara Ave, Alameda, CA 94501**
RB LUSTIS Case No: **N/A**
Local Case No./LOP Case No.: **RO0000060**
URF filing date:
SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
Karen Petryna **Equiva Services LLC** **P.O. Box 7869** **Burbank, CA 91510-7869** **(559) 645-9306**	**Corporate Secretary** **Longs Drug Stores CA Inc** **P.O. Box 5222** **Walnut Creek, CA 94596** **(925) 937-1170**	

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1-4	290	Gasoline	Removed	1939
5-7	1000	Gasoline	"	1950
8	550	"	"	1950
9	110	Waste oil	"	1950

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: **Unknown**
Site characterization complete? **YES**
Date approved by oversight agency: **7/10/01**
Monitoring Wells installed? **No** Number: **NA**
Proper screened interval? **NA**
Highest GW depth below ground surface: **Soil borings advanced at the site encountered first groundwater at 8 to 9.5 feet bgs.**
Flow direction: N to NE based on groundwater data from site across Santa Clara Ave
Most sensitive current use: Commercial
Are drinking water wells affected? No Aquifer name: East Bay Plain
Is surface water affected? No Nearest affected SW name: NA
Off-site beneficial use impacts (addresses/locations): None

Report(s) on file? **YES** Where is report(s) filed? **Alameda County Environmental Health**
1131 Harbor Bay Pkwy, Alameda, CA 94502

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment or Disposal w/destination)	Date
Tank	**9 USTs**	**Unknown disposal destination**	**1939 and 1950**
Soil & Groundwater		**No documentation of soil or groundwater removal**	

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm) Before[1]	Soil (ppm) After[2]	Water (ppb) Before[3]	Water (ppb) After[4]
TPH (Gas)	**<1.0**		**<50**	
TPH (Diesel)	**6.9**		**1,500**	
Benzene	**<.005**		**<50**	
Toluene	**<.005**		**.58**	
Ethylbenzene	**<.005**		**<50**	
Xylenes	**<.005**		**<50**	
MTBE	**<5.0**		**<2.5**	
Heavy Metals Pb	**<5.0**		**400**	
Other HVOCs	**ND**		**ND[5]**	

NOTE: 1 soil sample collected from soil borings advanced in 1/98
2 no known excavation at the site
3 grab groundwater samples from soil borings advanced in 1/98
4 no groundwater monitoring wells installed at the site
5 All VOCs were non-detect, except for 56ppb acetone. Acetone is a common lab contaminant

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? _____
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? _____
Does corrective action protect public health for current land use? **YES**
Site management requirements: **None**
Should corrective action be reviewed if land use changes? **YES**
Monitoring wells Decommissioned: **NA**
Number Decommissioned: **NA**
List enforcement actions taken: **NA**
List enforcement actions rescinded: **NA**

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: **Eva Chu** Title: **Haz Mat Specialist**

Signature: Date: 9/26/01

Reviewed by

Name: **Don Hwang** Title: **Haz Mat Specialist**

Signature: Date: 9/26/01

Name: **Susan Hugo** Title: **Acting Supervisor**

Signature: for Date: 9-24-01

VI. RWQCB NOTIFICATION

Date Submitted to RB: 9/28/01 RB Response: Concur

RWQCB Staff Name: **Chuck Headlee** Title: **AEG**

Signature: Chuck Headlee Date: 10/25/01

VII. ADDITIONAL COMMENTS, DATA, ETC.

The site is currently a section of a paved parking lot for Longs Drugs. From 1922 to 1950 the site was operating as a Shell Service Station. The first generation USTs (four) were removed in 1939. The second generation USTs (five) were removed in 1950, when the station was abandoned.

Across the street from the subject site, in the northeast direction, is the former Bill Chun Service Station. This former service station is downgradient (with respect to groundwater flow direction) of the former Shell service station. A groundwater monitoring well (MW-8) and temporary sampling point (P7), installed for Bill Chun, immediately adjacent to the Shell site, contained elevated concentrations of TPHg, TPHd, and BTEX (see Fig 3, Table 3, 4). In 1998, a subsurface investigation was conducted for the Shell site to determine if it was the source of hydrocarbons detected in well MW-8.

Eight soil borings, GP-A to GP-H, were advanced at the site to 13 feet bgs. Select soil and grab groundwater samples were analyzed for total lead, TPHd, TPHg, BTEX, MTBE, or VOCs. The soil and groundwater samples contained unremarkable concentrations of petroleum hydrocarbons, except for boring GP-H which revealed 1,500ppb TPHd. Because GP-H is upgradient of the former Shell Station, these impacts are likely from an off-site source. Lead was not detected in the soil samples, but was detected in all the grab groundwater samples in concentrations ranging from 15 to 400ppb. The explanation for this range of concentration is unclear, however, for the most part, lead concentrations were below the MCLs. (See Fig 1,2, and Table 1, 2)

It does not appear the fuel release from the former USTs has significantly impacted groundwater quality beneath the site. Permanent groundwater monitoring wells are not warranted.

In summary, case closure is recommended because:

- the leak and ongoing sources have been removed;
- the site has been adequately characterized;
- the dissolved hydrocarbon plume is not migrating;
- no water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted;
  A well survey was conducted for the former Bill Chun Service Station which identified one inactive drinking-water supply well at Alameda High School, located approximately 400 feet southwest of the site. The nearest surface water body is at least 2,600 feet from the site.
- the site presents no significant risk to human health or the environment.

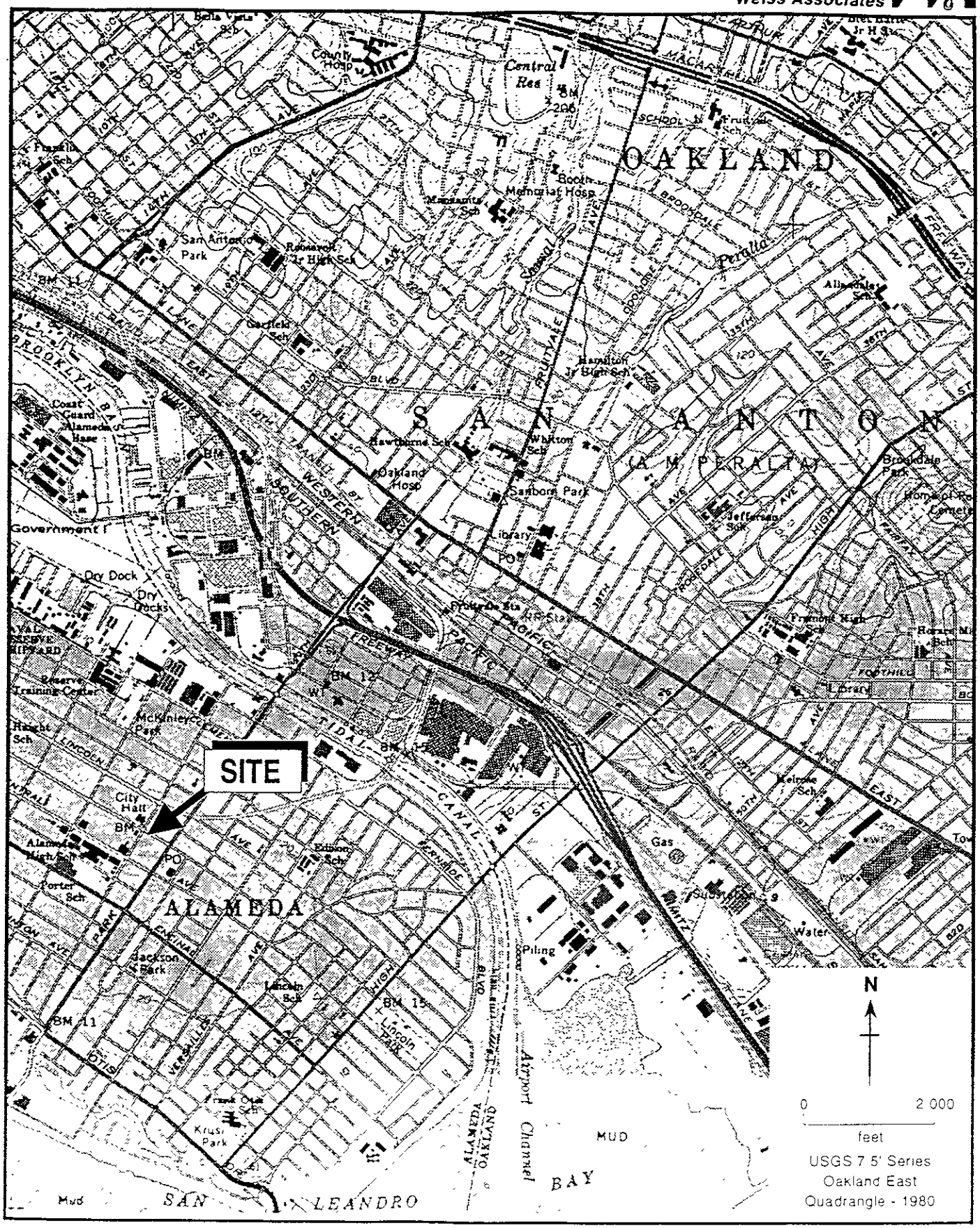
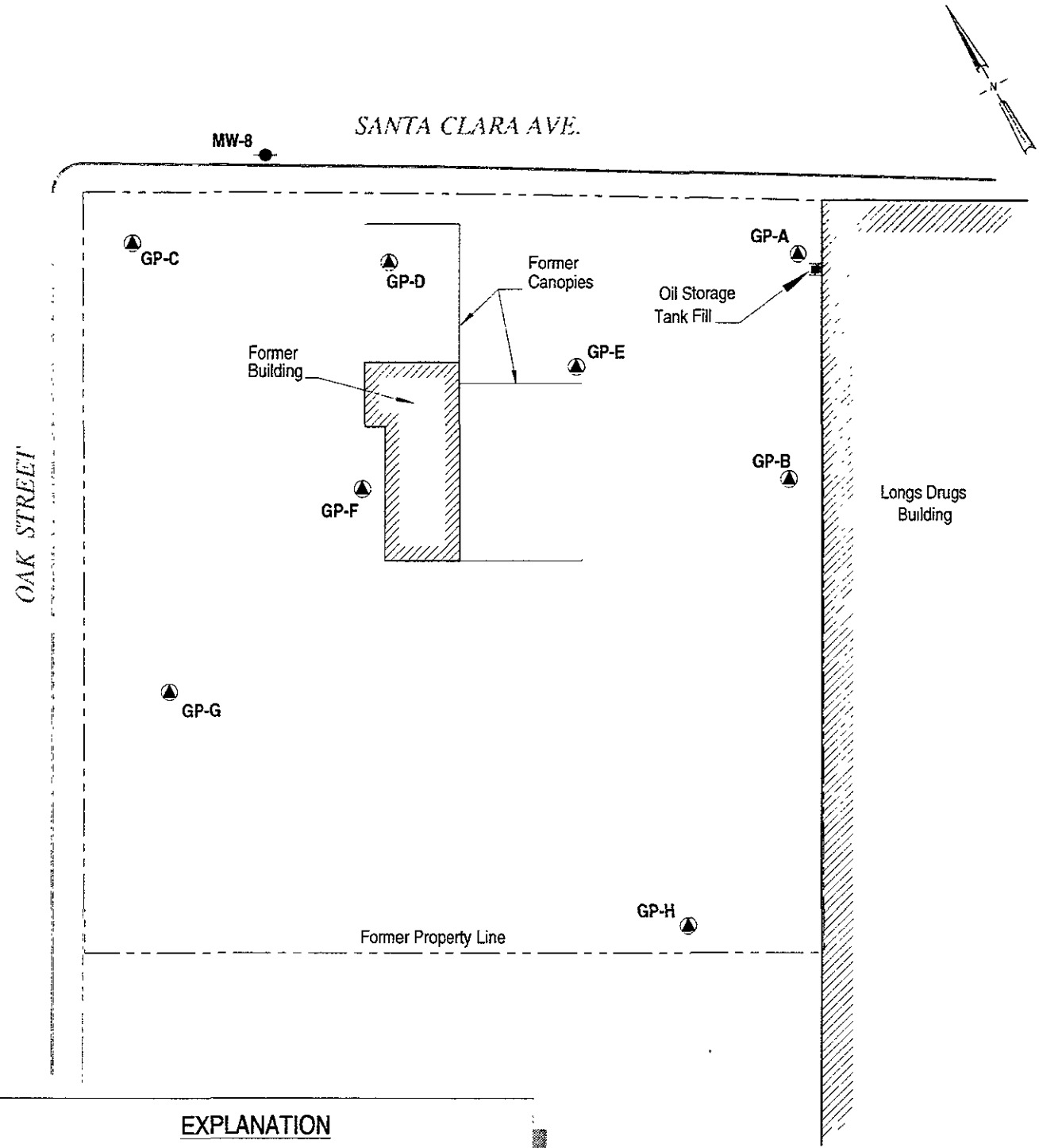


Figure 1 Former Shell Oil Service Station, 2300 Santa Clara Avenue, Alameda, California



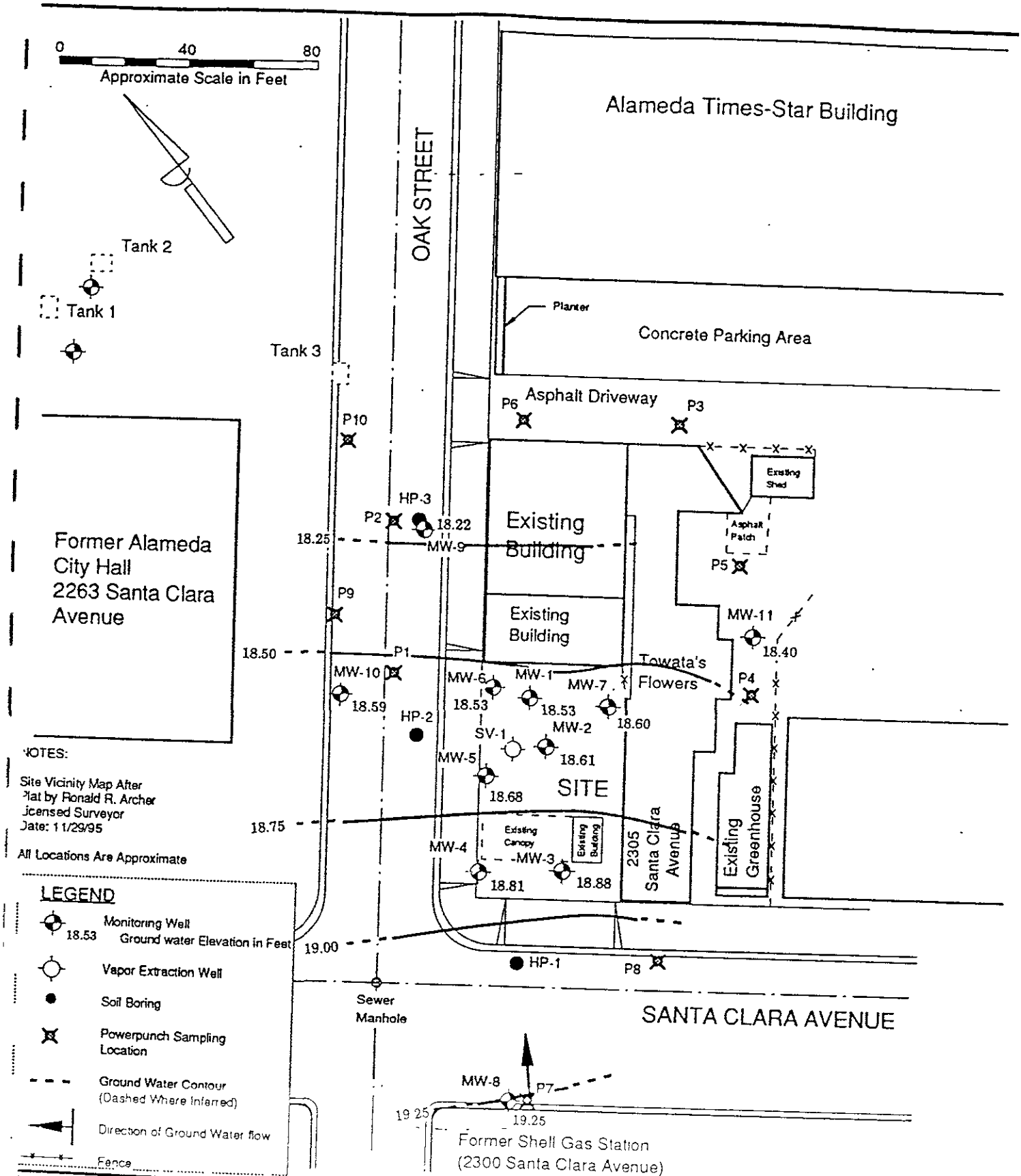
CAMBRIA
Environmental Technology, Inc.

Former Shell Service Station
2300 Santa Clara Avenue
Alameda, California

Site Map With
GeoProbe Boring Locations

FIGURE
1

FIG 2



FUGRO

DRAWN BY	J Scruggs
DATE	January 4, 1996
REVISED BY	J Paradis
DATE	January 19 1996

GROUND WATER POTENTIOMETRIC SURFACE MAP November 29, 1995

Former Bill Chun Service Station
2301 Santa Clara Avenue
Alameda, CA

FIGURE 3

PROJECT NUMBER
95-37-0431

Table 1. Soil **Analytical Data** - Former Shell Service Station WIC# 204-0072-0908, 2300 Santa Clara Avenue, Alameda, California

Sample ID and Depth	Date Sampled	Lead	TPHd	TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	VOCs
		←				(mg/kg)			→	(µg/kg)
GP-A 5.0'	1/26/98	<5.0	5.7[d]	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	---
GP-A-9.0'	1/26/98	---	1.9	<1.0	---	---	---	---	---	---
GP-B-6.0'	1/26/98	<5.0	6.9	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	---
GP-C-6.0'	1/26/98	<0.25	2.1	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	ND
GP-C-10.0'	1/26/98	---	1.7	<1.0	---	---	---	---	---	---
GP-D-6.0'	1/26/98	<5.0	4.5	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	ND
GP-E-6.0'[a]	1/26/98	<5.0	1.0	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	ND
GP-E-10.0'	1/26/98	---	<1.0	<1.0	---	---	---	---	---	---
GP-F-5.0'	1/26/98	<5.0	2.1	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	ND
GP-G-7.0'[b]	1/26/98	<5.0	6.0	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	---
GP-H-6.0'	1/26/98	<5.0	3.1	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	ND
GP-H-9.5'	1/26/98	---	5.4, 1.6[c]	<1.0	---	---	---	---	---	ND[d]

Abbreviations and Notes:

Lead by EPA Method 6010
TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method 8015
TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
MTBE = Methyl tert-butyl ether by EPA Method 8020
Benzene, Toluene, Ethylbenzene, and Xylenes by EPA Method 8020
VOCs = Volatile organic compounds by EPA Method 8240
mg/kg = Milligrams per kilogram
µg/kg = Micrograms per kilogram
<n = Below detection limit of n mg/kg
--- = Not analyzed
ND = No VOCs were detected; see laboratory analytical report for specific detection limits
a = This sample ID is incorrectly reported as GPE-E-6.0' in the laboratory analytical report
b = This sample matrix is incorrectly reported as liquid in the laboratory analytical report
c = This sample was analyzed for TPHd twice; both results are presented
d = Sample analyzed out of hold time

Table 2. Ground Water Analytical Data - Former Shell Service Station WIC# 204-0072-0908, 2300 Santa Clara Avenue, Alameda, California

Sample ID	Date Sampled	Lead	TPHd	TPHg	MTBE	Benzene (µg/L)	Toluene	Ethylbenzene	Xylenes	VOCs
GP A	1/26/98	16	120	<50	<2.5	<0.50	<0.50	<0.50	<0.50	---
GP B	1/26/98	120	50	<50	<2.5	<0.50	<0.50	<0.50	<0.50	---
GP-C	1/26/98	20	<50	<50	<2.5	<0.50	<0.50	<0.50	<0.50	ND
GP D	1/26/98	15	220 ✓	<50	<2.5	<0.50	<0.50	<0.50	<0.50	ND
GP-E	1/26/98	400	320	<50	<2.5	<0.50	<0.50	<0.50	<0.50	ND
GP F	1/26/98	44	150 ✓	<50	<2.5	<0.50	<0.50	<0.50	<0.50	ND
GP-G	1/26/98	20	<50	<50	<2.5	<0.50	<0.50	<0.50	<0.50	---
GP H	1/26/98	40	1,500	<50	<2.5	<0.50	0.58	<0.50	<0.50	a

Abbreviations and Notes:

Lead by EPA Method 6010
TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method 8015
TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
MTBE = Methyl tert-butyl ether by EPA Method 8020
Benzene, Toluene, Ethylbenzene, and Xylenes by EPA Method 8020
VOC's = Volatile organic compounds by EPA Method 8240
mg/l = Milligrams per liter
µg/l = Micrograms per liter
<n = Below detection limit of n µg/L
--- = Not analyzed
ND = No VOC's were detected, see laboratory analytical report for specific detection limits
a = No VOC's were detected with the exception of acetone at 56 µg/L.

Table 3

Table 2
Analytical Results: Ground Water Monitoring

Former Bill Chun Service Station
2301 Santa Clara Avenue
Alameda, California

Well	Date	TPH-g (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	TPH-d (ug/L)	HVOCs (ug/L)
MW-8	11/29/95	7,400	260	40	140	190	ND (80)	NA
MW-9	11/29/95	1,500	590	2	3	20	ND (50)	1,2-DCA=46
MW-10	11/29/95	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (2)	ND (950)	NA
MW-11	11/29/95	3,200	14	31	15	570	ND (50)	NA

NOTES:

TPH-g = Total Petroleum Hydrocarbons as gasoline
TPH-d = Total Petroleum Hydrocarbons as diesel
HVOCs= Halogenated Volatile Organic Compounds
1,2-DCA = 1,2-Dichloroethane
ug/L = micrograms per liter or parts per billion (ppb)
NSFP = Not Sampled - Free Product Present
NSL = Not Sampled - Well could not be located
ND = Not Detected at or above laboratory detection limits (detection limits in parentheses)
(1) = Results typical of a non-diesel mixture (<C16)
(2) = Results typical of a diesel and non-diesel mixture (<C16)
(3) = Results typical of weathered gasonline
(4) = Results typical of diesel and unidentified hydrocarbons (<C14)
(5) = Results typical of unidentified hydrocarbons (<C14)

Table 4

Table 3
Analytical Results: Ground Water Assessment

Former Bill Chun Service Station
2301 Santa Clara Avenue
Alameda, California
(All results presented in parts per billion)

Sample ID	Date Collected	TPH-g	TPH-d	Benzene	Toluene	Ethyl-benzene	Total Xylenes	HVOCs
HP-1	8/30/94	7,500	ND	19	98	15	53	ND
HP-2	8/30/94	ND	ND	ND	ND	ND	0.5	ND
HP-3	8/30/94	950	ND	410	2	5	9	1,2-DCA = 54
P1	10/6/95	ND (50)	ND(100)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	1,2-DCA = 10
P2	10/6/95	ND (50)	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	0.5	1,2-DCA = 2.0, PCE = 1.2
P3	10/6/95	ND (50)	ND (500)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	NA
P4	10/6/95	ND (50)	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	0.6	NA
P5	10/6/95	2,400	ND (500)	65	82	150	400	NA
P6	10/6/95	22,000	ND (500)	8,600	320	800	1,200	NA
P7	10/6/95	46,000	ND (50)	240	68	640	870	NA
P8	10/6/95	ND (50)	ND (500)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	NA
P9	10/6/95	ND (50)	ND (500)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	NA

ND = Not Detected at or above laboratory detection limits (detection limits in parantheses)
PCE = Tetrachloroethene
1,2-DCA = 1,2-Dichloroethane
NA = Not Analyzed
HVOCs = Halogenated Volatile Organic Compounds
TPH-g = Total Petroleum Hydrocarbons as gasoline
TPH-d = Total Petroleum Hydrocarbons as diesel

BORING LOG

Client: **Shell Oil Products Company**

Project No: **240-0477** Phase Task **5**

Boring ID **GP-A**

Location **2300 Santa Clara Avenue, Alameda**

Surface Elev. **NA ft,**

Depth (feet)	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			**Asphalt**
				Sandy GRAVEL with cobbles; (GP); grey; loose; dry; 20% fine sand, 80% gravel; high estimated permeability (fill). concrete chunk @ 6"
5				**SAND;** (SP); brown, loose; damp; 5% silt, 95% fine sand; no plasticity; moderate to high estimated permeability.
				wet; 10% silt, 90% fine sand.
10				

TPHg (ppm) | Graphic Log | Boring Completion Graphics

Depth (feet)	Additional Comments
0	
5	
10	Water encountered @ 9 ft.
	Bottom of boring @ 11 ft.

Driller Gregg

Logged By Christina Empedocles

Water-Bearing Zones NA

Drilling Started 1/26/98

Drilling Completed 1/26/98

Grout Type Portland Type I/II

Notes See site map. 2" diameter Geoprobe boring.

BOR 24477 2/18/98

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Shell Oil Products Company**

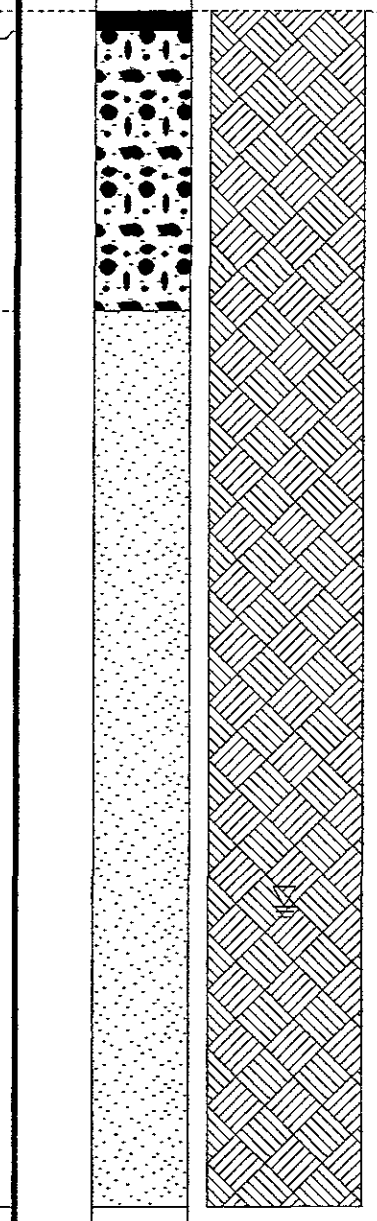
Project No: **240-0477** Phase Task **5**

Boring ID **GP-B**

Location **2300 Santa Clara Avenue, Alameda**

Surface Elev. **NA ft,**

Depth (feet)	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			**Asphalt**
				Sandy GRAVEL with cobbles; (GP); grey; loose; dry; 20% fine sand, 80% gravel; high estimated permeability (fill).
5				**SAND;** (SP); brown; loose; moist; <5% silt, >95% fine sand; no plasticity; moderate to high estimated permeability.
10				wet; 5% silt, 95% fine sand.



Depth (feet)	Additional Comments
0	
5	
10	Water encountered @ 9 ft.
	Bottom of boring @ 12 ft.

Driller **Gregg**

Logged By **Christina Empedocles**

Water-Bearing Zones **NA**

Drilling Started **1/26/98**

Drilling Completed **1/26/98**

Grout Type **Portland Type I/II**

Notes. **See site map. 2" diameter Geoprobe boring.**

BOR 24477 2/18/98

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Shell Oil Products Company**

Project No: **240-0477** Phase Task **5**

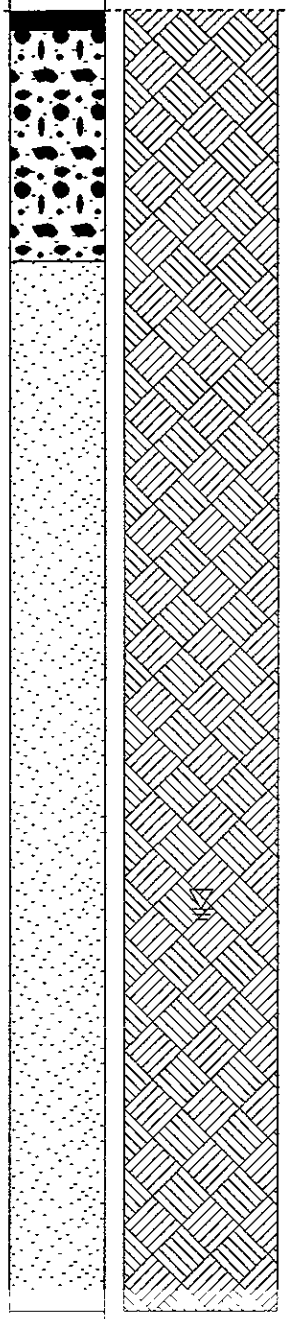
Boring ID **GP-C**

Location **2300 Santa Clara Avenue, Alameda**

Surface Elev. **NA ft,**

Depth (feet)	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			**Asphalt**
				Sandy GRAVEL with cobbles; (GP); grey; loose; dry; 20% fine sand, 80% gravel; high estimated permeability (fill).
5				**SAND;** (SP); brown; loose; moist; 5-10% silt, 90-95% fine sand; no plasticity; moderate to high estimated permeability.
10				wet.

TPHg (ppm) | Graphic Log | Boring Completion Graphics



Depth (feet)	Additional Comments
0	
5	
10	Water encountered @ 9 ft.
	Bottom of boring @ 13 ft

Driller Gregg

Logged By Christina Empedocles

Water-Bearing Zones NA

Drilling Started 1/26/98

Drilling Completed 1/26/98

Grout Type Portland Type I/II

Notes: See site map. 2" diameter Geoprobe boring.

BOR 24477 2/18/98

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Shell Oil Products Company**

Project No: **240-0477** Phase Task **5**

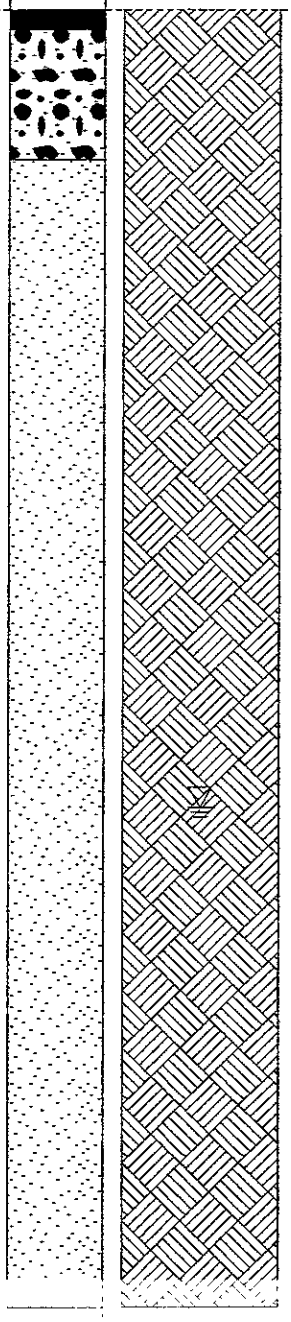
Boring ID **GP-D**

Location **2300 Santa Clara Avenue, Alameda**

Surface Elev. **NA ft,**

Page **1** of **1**

Depth (feet)	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			**Asphalt**
				Sandy GRAVEL with cobbles: (GP); grey; 20% fine sand, 80% gravel; high estimated permeability (fill).
5				**SAND;** (SP); brown; loose; moist; 5% silt, 95% fine sand; no plasticity; moderate to high estimated permeability.
10				wet; 10% silt, 90% fine sand.



Depth (feet)	Additional Comments
0	
5	
8	Water encountered @ 8 ft.
10	
13	Bottom of boring @ 13 ft.

Driller **Gregg**

Logged By **Christina Empedocles**

Water-Bearing Zones **NA**

Drilling Started **1/26/98**

Drilling Completed **1/26/98**

Grout Type **Portland Type I/II**

Notes: **See site map. 2" diameter Geoprobe boring.**

BOR 24477 2/18/98

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Shell Oil Products Company**

Project No: **240-0477** Phase Task **5**

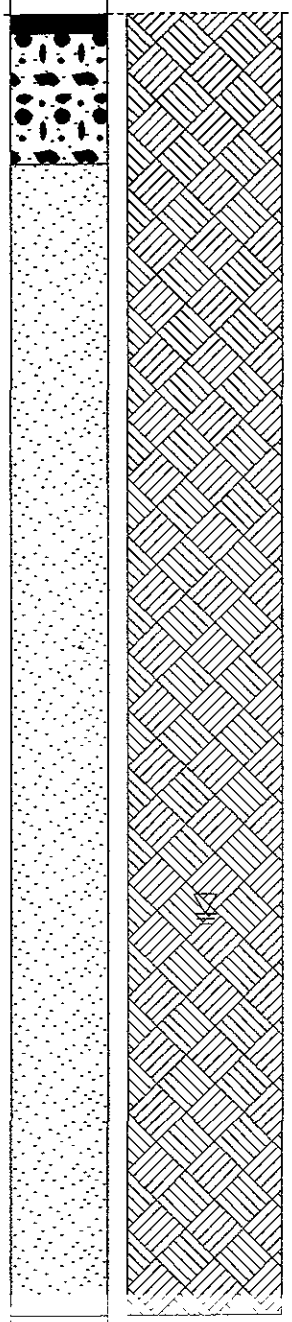
Boring ID **GP-E**

Location **2300 Santa Clara Avenue, Alameda**

Surface Elev. **NA ft,**

Depth (feet)	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			**Asphalt**
				Sandy GRAVEL with cobbles; (GP); grey; loose; dry; 20% fine sand, 80% gravel; high estimated permeability (fill).
5				**SAND;** (SP); brown; loose; damp; <5% silt, >95% fine sand; no plasticity; moderate to high estimated permeability.
10				wet; 5% silt, 95% fine sand.

TPHg (ppm) | Graphic Log | Boring Completion Graphics



Depth (feet)	Additional Comments
0	
5	
10	Water encountered @ 9 ft.
	Bottom of boring @ 13 ft.

Driller Gregg

Logged By Christina Empedocles

Water-Bearing Zones NA

Drilling Started 1/26/98

Drilling Completed 1/26/98

Grout Type Portland Type I/II

Notes See site map. 2" diameter Geoprobe boring.

BOR 24477 2/18/98

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Shell Oil Products Company**

Project No: **240-0477** Phase Task **5**

Boring ID **GP-F**

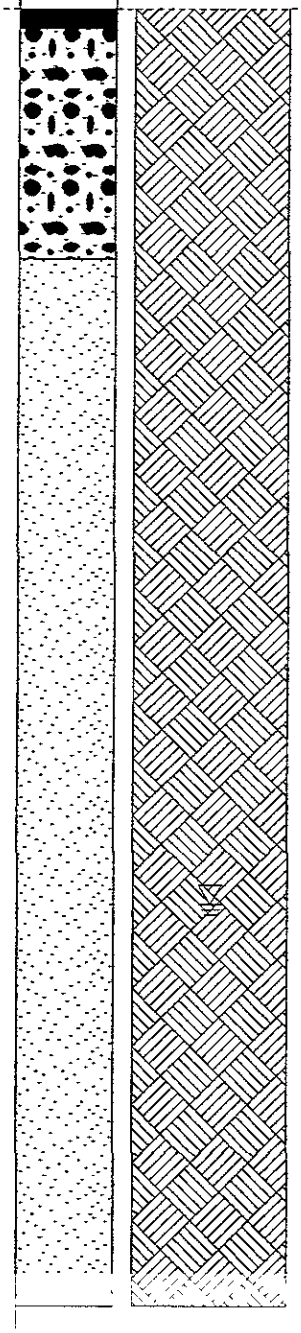
Location **2300 Santa Clara Avenue, Alameda**

Surface Elev. **NA ft,**

Page **1** of **1**

Depth (feet)	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				Asphalt
				Sandy GRAVEL with cobbles; (GP); grey; loose; dry; 20% fine sand, 80% gravel; high estimated permeability (fill).
5				**SAND;** (SP); brown; loose; moist; 5% silt, 95% fine sand; no plasticity; moderate to high estimated permeability.
10				wet.

TPHg (ppm) | Graphic Log | Boring Completion Graphics



Depth (feet)	Additional Comments
0	
5	
10	Water encountered @ 9 ft.
	Bottom of boring @ 13 ft.

Driller **Gregg**

Logged By **Christina Empedocles**

Water-Bearing Zones **NA**

Drilling Started **1/26/98**

Drilling Completed **1/26/98**

Grout Type **Portland Type I/II**

Notes. **See site map. 2" diameter Geoprobe boring.**

BOR 24477 2/18/98

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Shell Oil Products Company**

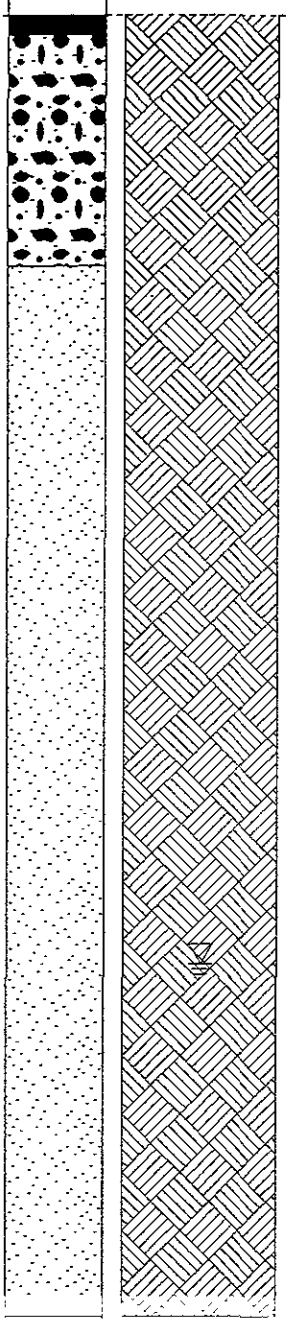
Project No: **240-0477** Phase Task **5**

Boring ID **GP-G**

Location **2300 Santa Clara Avenue, Alameda**

Surface Elev. **NA ft,** Page **1** of **1**

Depth (feet)	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			**Asphalt**
				Sandy GRAVEL with cobbles; (GP); grey; loose; dry; 20% fine sand, 80% *gravel; high estimated permeability* (fill).
5				**SAND;** (SP); brown; loose; moist; 5% silt, 95% fine sand; no plasticity; moderate to high estimated permeability.
				wet; 10% silt, 90% fine sand.
10				



Driller Gregg

Logged By Christina Empedocles

Water-Bearing Zones NA

Drilling Started 1/26/98

Drilling Completed 1/26/98

Grout Type Portland Type I/II

Notes See site map. 2" diameter Geoprobe boring.

BOR 24477 2/18.98

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Shell Oil Products Company**

Project No: **240-0477** Phase Task **5**

Boring ID **GP-H**

Location **2300 Santa Clara Avenue, Alameda**

Surface Elev. **NA ft,** Page **1** of **1**

Depth (feet)	Blow Count	Sample	Interval	Lithologic Description	TPHg (ppm)	Graphic Log	Boring Completion Graphics	Depth (feet)	Additional Comments
0	Ground Surface			**Asphalt**				0	
				Sandy GRAVEL with cobbles: (GP); grey; loose; dry; 20% fine sand, 80% gravel; high estimated permeability (fill).					
				NOV 0 2 2001					
5								5	
				SAND; (SP); brown; medium dense; wet; 10% silt, 90% fine sand; no plasticity; moderate to high estimated permeability.					Water encountered @ 8.5 ft.
10								10	
									Bottom of boring @ 13 ft.

Driller **Gregg**

Logged By **Christina Empedocles**

Water-Bearing Zones **NA**

Drilling Started **1/26/98**

Drilling Completed **1/26/98**

Grout Type **Portland Type I/II**

Notes. **See site map. 2" diameter Geoprobe boring.**

BOR 24477 2/18/98

Cambria Environmental Technology, Inc.