BC

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

February 6, 2003

City of Oakland
Mr. Mark Gomez
250 Frank Ogawa Plaza, Suite 5301
Oakland, CA 94612-2034

Dear Mr. Gomez:

Subject: Fuel Leak Site Case Closure 818 Jefferson St., aka 801 Clay St, Oakland, CA 94607; Case No. RO0000114, former Housewives Marketplace

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

SITE INVESTIGATION AND CLEANUP SUMMARY

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

- Up to 400 parts per million (ppm) lead remain in soil and
- Up to 2900 parts per billion (ppb) Total petroleum hydrocarbons as gasoline (TPHg), 670, 450, 100, 480 ppb benzene, toluene, ethyl benzene and xylenes, respectively, 290 ppb TPH as mineral spirits, 2400 ppb methyl ethyl ketone, 2 ppb chloroform, 2.2 Freon 12 and 150 ppb trichloroethylene (TCE) remain in groundwater at the site.

If you have any questions, please call Barney Chan at (510) 567-6765. Thank you.

Sincerely,

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

Enclosures.
1. Case Closure Letter
2. Case Closure Summary

cc: Ms. Betty Graham (w/enc)
Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

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

Mr. Leroy Griffin (w/enc)
City of Oakland Fire Department
1605 Martin Luther King Jr. Drive
Oakland, CA 94612

B. Chan (w/orig enc), R. Garcia (w/enc)

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

January 21, 2003

City of Oakland
Mr. Mark Gomez
250 Frank Ogawa Plaza, Suite 5301
Oakland, CA 94612-2034

Dear Mr. Gomez:

Subject: Fuel Leak Site Case Closure 818 Jefferson St., aka 801 Clay St, Oakland, CA 94607; Case No. RO0000114, former Housewives Marketplace

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 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 tanks site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

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

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

Sincerely,

Mee Ling Tung
Director
Alameda County Environmental Health

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

I. AGENCY INFORMATION

Date: December 17, 2002

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6565
Responsible Staff Person: Barney Chan	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Former Housewives Marketplace, Block within 8th, 9th, Clay and Jefferson St.		
Site Facility Address: 818 Jefferson St., aka 801 Clay St., Oakland, CA 94607		
RB Case No.:	Local Case No.: 6898	LOP Case No.: RO0000114
URF Filing Date: not filed	SWEEPS No.: ---	APN: 001-0209-001, 001-0209-002, 001-0209-003, 001-0209-004

Responsible Parties	Addresses	Phone Numbers
City of Oakland, c/o Mark Gomez	250 Frank Ogawa Plaza, Suite 5301 Oakland, CA 94612-2034	510-238-7314

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
Unknown, 2+	Unknown	Assumed gasoline & oil	Likely removed from the NE & SW corners of site	1950s
1	575	Likely heating oil	Removed	4/1/02

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: unknown in 2+ USTs , no evidence of holes or release in tank 1		
Site characterization complete? Yes	Date Approved By Oversight Agency: -----	
Monitoring wells installed? Yes	Number: 3	Proper screened interval? *Yes* *
Highest GW Depth Below Ground Surface: 21.67'	Lowest Depth: 23.23'	Flow Direction: southwest
Most Sensitive Current Use: Potential drinking water source, however, site is scheduled for mixed commercial/residential use and water is currently supplied by EBMUD.		

* all three wells were screened from 20-30' bgs

Summary of Production Wells in Vicinity: No known drinking water wells identified onsite	
Are drinking water wells affected? No	Aquifer Name: Oakland Sub Area, East Bay Plain
Is surface water affected ? No	Nearest SW Name: Oakland Inner Harbor is ~3000' to the south
Off-Site Beneficial Use Impacts (Addresses/Locations): none identified	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health and City of Oakland Fire Department

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	2+ unknown size, 1-575 gallons	Presumed disposed Disposed ECI, Richmond	1950s 4/1/02
Oil and Water	75 gallons	Disposed, Alviso Oil, Alviso, CA	4/1/02
Soil	12 tons	Disposed, Vasco Rd., Livermore,CA	7/3/02

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before[1]	After[2]	Before[3]	After[4]
TPH (gasoline)	ND	ND	1,700,000	2900
Benzene	ND	ND	3200	670
Toluene	ND	ND	13,000	450
Ethyl Benzene	ND	ND	13,000	100
Xylenes	ND	ND	53,000	480
MTBE	NA		NA	ND
TPH (diesel)	ND	ND	ND	ND
TPHmo/ms	ND	ND	670/210,000	ND/290
Lead/WET lead	400/NA	400	NA/19,000	NA
Other (8240/8270)	NA	NA	*2,400	*2,400

Comments (Depth of Remediation, etc.):

1	Soil sample locations at 10-23 ft, borings GP-1 through GP-4
2	No over-excavation performed
3	Maximum concentrations in grab groundwater sample from GP-4 and SB-3
4	Grab groundwater samples from SB-3-GW and groundwater from monitoring wells
*	Other: 2ppb chloroform, 2.2 ppb Freon 12, 150 ppb TCE and 2400 ppb methyl ethyl ketone exhibited in MWs
	Elevated TPHg,TPHms and BTEX was exhibited in the grab groundwater sample from GP-4, located up-gradient on the sidewalk, however, the grab groundwater sample from SB-3 located down-gradient and close to GP-4 exhibited much lower TPH levels, indicating the release from GP-4 is localized.

Site History and Description of Corrective Actions:

The subject property is located in a retail/commercial area in the downtown Oakland area. The site occupies one entire city block and is situated between Clay and Jefferson and 8th and 9th Streets. **See Figure 1.** The proposed future use of this site is mixed commercial and residential development with the residential properties being built above the first floor.

Three buildings were located on this block, Housewives Marketplace a single-story warehouse identified as 819 and 825 Clay St., a two-story building identified as 809 Clay St. and a three-storied building identified as 801, 805 and 807 Clay St. and 554, 556 and 558 8th St. These buildings have been razed. Results from a Phase I investigation indicate the only potential businesses with chemical usage at this site were two former service stations located in the northeast and southwest corners of the block. Sanborn maps from 1951 indicate the presence of "gas and oil" in these locations. The 1952 Sanborn map shows only "oil" at these locations and the 1957 Sanborn map shows no notations at all. Therefore, we assume that the gasoline tanks were removed in 1951 and the oil tanks removed between 1952-1957. The Housewives Market appears on the 1957 map at its current location and dimensions. Part of Housewives Market was located over the presumed location of the former USTs in the northeast corner of the site while "parking" appears in the southwest corner of the site. **See Assessor's map.**

On October 21, 1997, four soil borings (GP-1 through GP-4) were drilled to depths of 28-32 feet bgs in the general location of the two former gasoline stations. A total of nine soil and four grab groundwater samples were collected for petroleum hydrocarbon and BTEX analysis. Several soil samples from each boring were collected as well as a grab groundwater sample. No petroleum hydrocarbon or BTEX was found in any of the soil samples, however, elevated gasoline, mineral spirits and BTEX was exhibited in the groundwater sample from GP-4. Note that GP-4 was located on the sidewalk cross-gradient to the assumed location of the USTs in the northeast corner of the site. **See Figure 2 and Tables 1&2** for the location and analytical results of samples. Soils encountered were mainly sand interspersed with silt and clay from the surface to groundwater, encountered from 25-26'bgs. No borings were located within Housewives Market, therefore any releases from northeast USTs were not adequately characterized.

On January 22 and 23, 1998, six boreholes, GP-5 through GP-10, were advanced to further investigate the site. Boreholes were advanced to depths ranging from 24-28' bgs and soil and groundwater samples collected. The borings were located up-gradient and outside the Housewives Market Place building, **See Figure 3.** No TPHext, TPHg or BTEX was found in any of the soil or groundwater samples. **See Tables 3&4.** Borings GP-9 & GP-3 were located down-gradient of the northeast USTs. **Boring log GP-6 is attached and is representative of subsurface soil.** However, no borings were advanced within the Housewives Market building.

On December 7 and 8, 2000 four borings, SB-1, SB-2, SB-3 and SB-5, were advanced around the presumed location of the northeast UST(s) inside the Housewives building. In addition, one other boring, SB-4, was advanced just north of the presumed location of the southwest USTs. **See Plate 2.** Soil samples were field screened using a PID instrument. Only the soil sample exhibiting a hydrocarbon odor and elevated PID reading (SB-3-25') was analyzed in the laboratory. This sample reported ND for TPHg and TPHms. Grab groundwater samples were collected and analyzed in SB-1 through SB-4. TPHg, TPHms, and BTEX were found only in SB-3-GW, the boring near GP-4, which exhibited the highest concentrations of these parameters. Low levels of trichloroethene, TCE, were reported in SB-1, SB-2 and SB-3. Dichloroethane and napthalene were also reported in SB-3. The location of GP-4 was in question until onsite verification noted that GP-4 was located slightly west of that represented on the figures, and close to SB-3. This accounts for the groundwater contamination exhibited in SB-3. **See Tables 5 & 6** for groundwater results. **Boring log for SB-3 is attached.**

A Risk-Based Corrective Action (RBCA) evaluation was performed in April 2001 and a revised RBCA performed in May 2001. The lower value of either the maximum concentrations or the 95%UCL for each COC was compared to City of Oakland Tier 1 and Tier 2 (Merritt Sands) RBSLs. No values exceeded the RBSLs for the anticipated exposure pathways; residential inhalation of indoor air, commercial inhalation of indoor air and commercial inhalation of outdoor air. **See Tables 7 & 8.** TPH was not evaluated, however, the calculated 95% UCL for TPHg (337 ppm) and the maximum TPHms concentration (210 ppm), were less than the residential and commercial ceiling value for odor, 5000ppm.

On May 1, 2001, additional soil samples were collected within and outside the Housewives building to evaluate surface soils that might be generated during site development. In addition, three monitoring wells were installed to evaluate on-site groundwater and potential off-site sources of contamination. The soil samples were analyzed for total and soluble lead (WET). **See Plate 3 and Table 9.** Although no TPH analysis was performed on these samples, 9 of the 15 borings were screened using a PID instrument and no elevated PID readings were reported in any of these samples. Although the highest total lead reported was 400 ppm, the highest (WET) soluble lead reported was 19 mg/l. Because of these results, reuse of generated soil was recommended during development. Any reused soil will be covered with a surface cap or clean fill material.

Three of the borings located down-gradient of the Housewives building and the former northeast UST area were converted

in monitoring wells, MW-1 through MW-3. On May 3, 2001, these wells were run for TPHg,d,mo and VOCs (EPA 8260). TPHg at 150 ppb and MEK at 2400 ppb were reported in MW-3 and up to 150 ppb TCE was reported in MW-1. The boring logs of MW-1 through MW-3 are attached.

On 8/17/01 three additional off-site borings, GW-1 through GW-3 were advanced to evaluate off-site sources and potential down-gradient extent of the contamination detected in GP-4. Up to 240 ppb TPHd, 50 ppb TPHg and 1.6 ppb chloroform was detected in grab groundwater samples from these borings. No other VOCs were found. **See Table 10A .**

A geophysical investigation was performed on February 7, 2002 and on the following day, three areas of suspected anomalies were excavated in an attempt to determine if USTs were present. Various piping and scrap metal were encountered but no USTs. However, during subsequent demolition activities at the site, a 575 gallon UST, presumed to have contained heating oil was encountered near the corner of Clay and 8th Streets. On April 1, 2002, the UST was removed under the City of Oakland Fire Department oversight. No petroleum contaminants were observed in the soil sample collected and the UST was granted closure by Leroy Griffin of OFD.

Site closure is recommended based upon:

- Adequate site characterization. Based upon historic Sanborn maps, soil and groundwater sampling has been performed in the areas up and down-gradient of the presumed underground tanks.
- An underground magnetic survey was performed to confirm that all underground tanks and appurtenances have been removed prior to site development. An underground tank was found and removed from the sidewalk.
- A RBCA was performed using the City of Oakland RBSLs. No risk is expected to exceed their respective RBSL.
- Groundwater sample results from monitoring wells exhibit low TPH and VOC levels, therefore, additional monitoring is not warranted.
- A Health and Safety Plan will be observed during site excavation and development. Reuse of excavated soil is acceptable .
- The proposed development will be commercial/residential on the first two floors and residential on the other four floors above. No subsurface areas or buildings are proposed.
- The former USTs were removed in the 1950s, therefore natural bio-attenuation is likely to have occurred.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes No		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes No		
Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, it does not appear that the release would present a risk to human health based upon current land use and conditions.		
Site Management Requirements: Site should be included in the City of Oakland Permit Tracking System. A Health and Safety plan will be required prior to site development given the presence of lead in surface soils.		
Should corrective action be reviewed if land use changes? Yes		
Monitoring Wells Decommissioned: No	Number Decommissioned: 0	Number Retained: 3
List Enforcement Actions Taken: none		
List Enforcement Actions Rescinded: none		

V. ADDITIONAL COMMENTS, DATA, ETC.

Considerations and/or Variances:

- Residual groundwater contamination remains at the site.
- No records of UST removal exist, but a geophysical survey did not detect any USTs
- VOCs such as TCE, chloroform, Freon12 and MEK were detected in groundwater from monitoring wells, however, at levels below RBSLs. No soil source of these VOCs was found and it believed that this may represent a city-wide problem.
- No samples were collected directly within the assumed location of the former USTs, however, samples were collected down-gradient of both UST areas and exhibited little to no groundwater contamination. Since the actual location of the former USTs is not known, the exact locations of the borings is not as critical as is their general locations.
- Long term monitoring was not performed, however, three monitoring events were performed and considering the USTs were likely removed in the 1950s, conditions are likely stable as indicated in these results.
- Soluble lead exceeding the STLC (5 mg/l) exists in surface soils, however, the total lead in shallow soil samples range from ND to 400 ppm. The future site will be capped and an appropriate health and safety plan will be observed during site construction.
- The entire suite of motor oil analytes was not analyzed in soil and groundwater samples, specifically semi-volatiles and all the required heavy metals. However, given the absence of motor in soil, there is little likelihood of detecting these oil related analytes at significant levels.
- Particle size analysis was not performed on soil, however, the most conservative soil type for the presumed exposure pathways (Merritt Sands) was evaluated to be conservative.
- Elevated TPHg, TPHms and BTEX was found in groundwater from GP-4 indicative of potential free product. No soil contamination was observed in the borings from GP-4 and grab groundwater samples both up and down-gradient of this boring were low to ND for these constituents. The release appears localized.

Conclusion:

Based upon the information available in our files to date, 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 for the proposed land use (mixed commercial and residential) provided that the Site Management Requirements specified above are implemented. Residual groundwater contamination in the vicinity of the former USTs in the northeast corner of the site appears localized and stable within monitoring wells down-gradient. ACEH staff recommends closure for the site.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Barney M. Chan	Title: Hazardous Materials Specialist
Signature: Barney M Chan	Date: 12/26/02
Reviewed by: Eva Chu	Title: Hazardous Materials Specialist
Signature:	Date: 12/13/02
Approved by: Donna L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature:	Date: 12/26/02

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

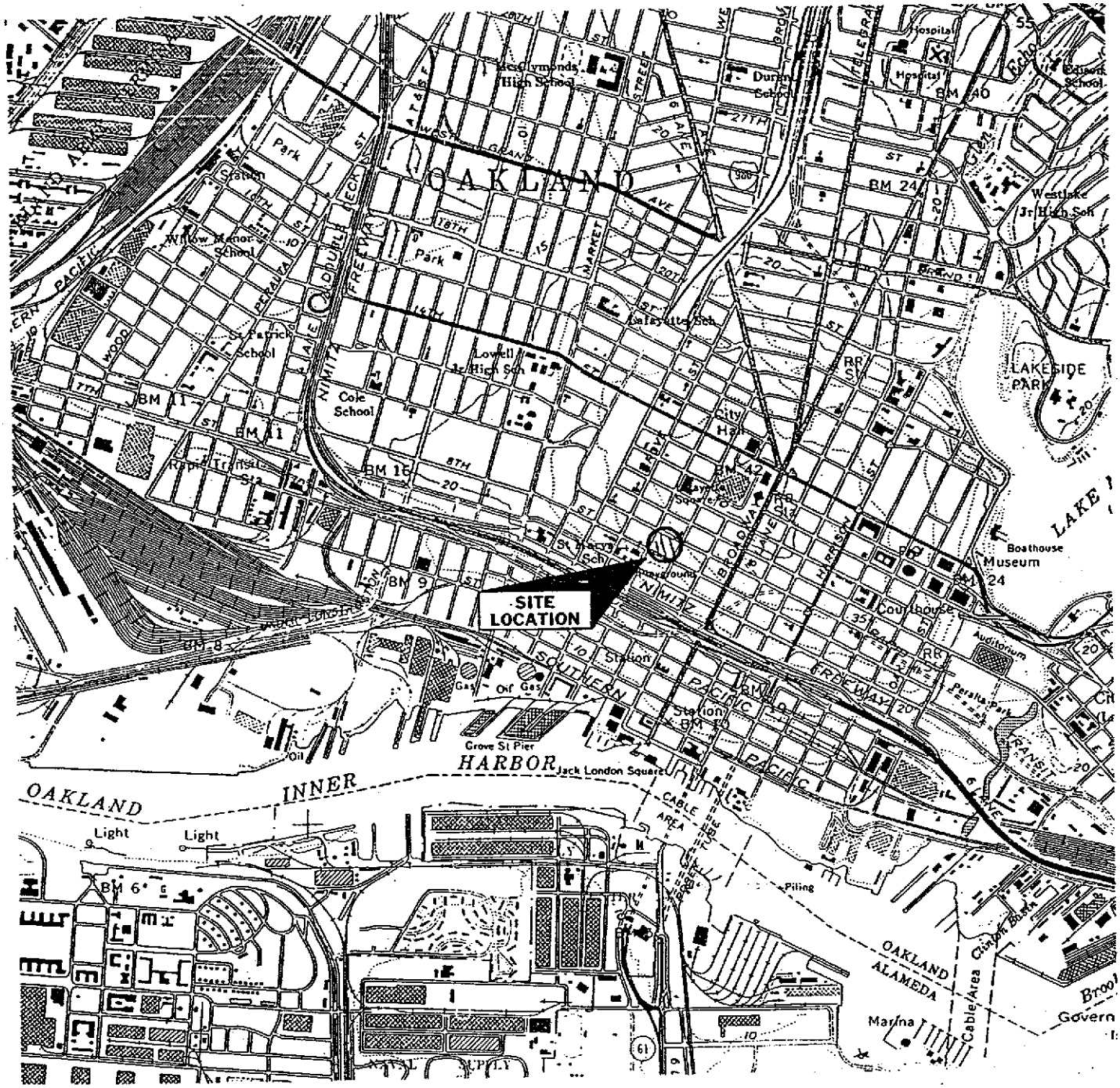
Regional Board Staff Name: Betty Graham	Title: AWRCE
RB Response: Concur, based solely upon information contained in this case	Date Submitted to RB:
Signature: Betty Graham	Date: 1/16/03

Attachments:

Figure 1	Site Location Map
	Assessor's Map
Figure 2	Site Plan, GP-1 through GP-4 Boring Locations, Boring log for GP-4
Tables 1,2	Soil and Groundwater Analytical Results for GP-1 through GP-4
Figure 3	Boring Location Map GP-1 through GP-10
Tables 3,4	Soil and Groundwater Analytical Results for GP-5 through GP-10
	Boring Log for GP-6
Plate 2	Soil Boring Locations, Prior boring plus SB-1 through SB-5
Tables 5,6	Soil and Groundwater Analytical Results SB-1 through SB-5
	Boring Log for SB-3
Tables 7,8	Groundwater Data, RBCA Evaluations
Plate 3	Prior borings plus SB-1 through SB-12 (lead analysis) and MW-1 through MW-3
Table 9	Total and Soluble Lead Analytical Results
Table 10	Groundwater Monitoring Results
	Boring Logs, MW-1 through MW-3
Table 10A	Groundwater results from GW-1 through GW-3.

This document and the related CASE CLOSURE LETTER, shall be retained by the lead agency as part of the official site file.

OAKLAND WEST QUADRANGLE
California
7.5 Minute Series (Topographic)



DRAFTED BY: TS	CHECKED BY: GH	Project No. 70100-019-01	Figure 1	*SECOR* 1390 Willow Pass Road Suite 360 Concord, CA 94520
PREP. DATE: 05-13-97	REV. DATE:	Oakland Housewives Market 8th, Clay and Jefferson Oakland, California	Site Location Map	
FILE NAME: houswife.f01				

ASSESSOR'S MAP

Code Area No. 17-022

209 Scale 1" = 50'

OAKLAND(K

BOOK

Post-it® Fax Note 7671

To Barney Chan	Date
Co./Dept.	From Mark Hanes
Phone #	Co.
Fax # 337-9335	Phone # 238-7314
	Fax #

9TH STREET 45-46 665-155

8TH STREET 45-48 865-055

JEFFERSON STREET 800-899

CLAY STREET 801-899

211

203

207

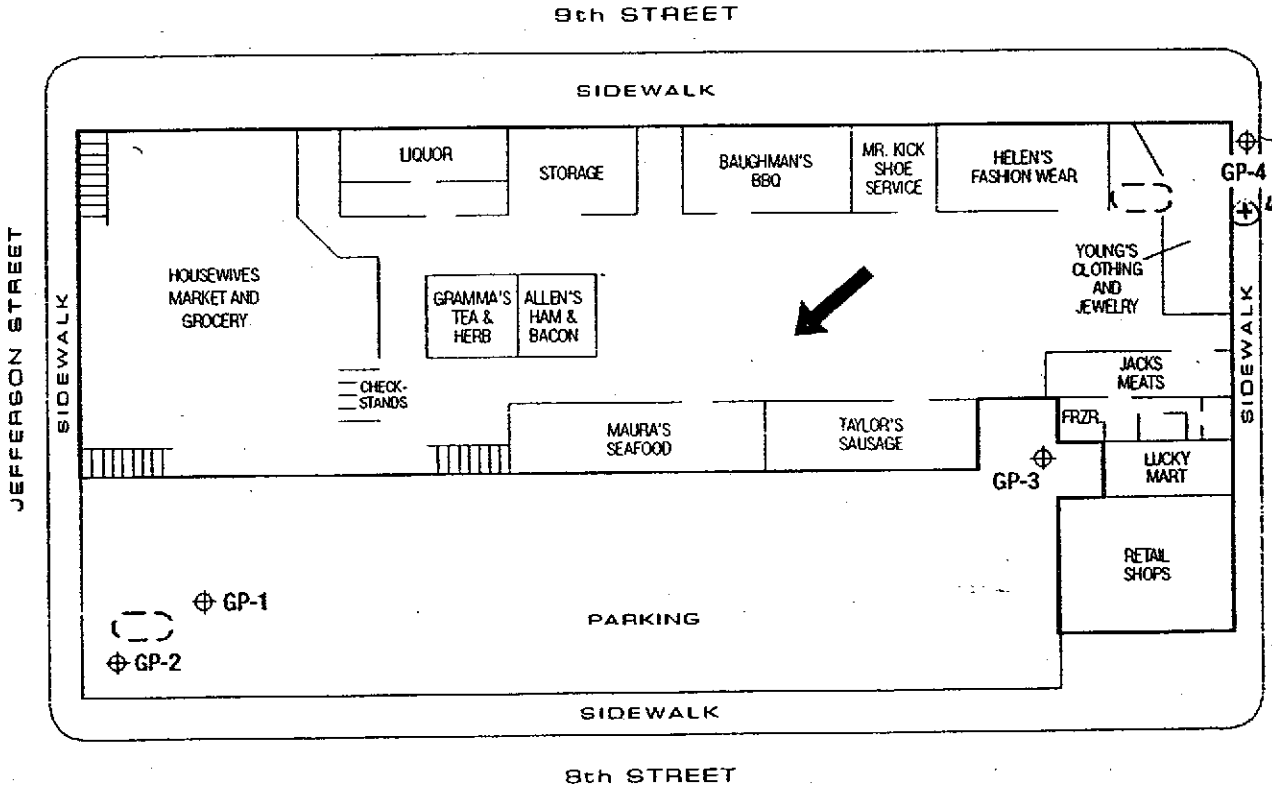
7TH STREET

Parcel #'s:
001-0209-001
002
003
004

A.C.M.

Reference:

Alameda, CA 2001-2002 - , Sheet 1 of 1



LEGEND

- BUILDING OUTLINE
- APPROXIMATE LOCATION OF FORMER UST'S
- GP-1 BORING LOCATION
- ASSUMED GROUNDWATER FLOW DIRECTION

NOT TO SCALE

DRAFTED BY: PEM	CHECKED BY: BR	PROJECT NUMBER: 70100-019-02	FIGURE NUMBER: 2	SECOR 1390 Willow Pass Road Suite 360 Concord, CA 94520
DWG DATE: 9/30/97	REV.DATE: 11/7/97	CLIENT: CITY OF OAKLAND	TITLE: SITE PLAN AND BORING LOCATIONS HOUSEWIVES MARKET OAKLAND, CA	
FILE NAME: ScrOAK801clayBor2*				

Project: HOUSEWIVES MARKET – EIGHT AND JEFFERSON ST., OAKLAND, CA			Log of Boring/Monitoring Well: GP-4
Boring Location: GP–4 (SEE FIGURE 2)	Project No.: 70100–019–03		
Subcontractor and Equipment: VIRONEX/GEOPROBE	Logged By: C.M.	Drawn By: C.C.R.	
Sampling Method: CONTINUOUS CORE	Monitoring Device: OVM 580B		Comments:
Start Date/Time: 10/21/97//1530	Finish Date/Time: 10/21/97//1700		
First Water (bgs): ~24.5 FT.	Stabilized Water Level (bgs): ~24.5 FT.		

Surface Elevation: NA Casing Top Elevation: NA

Sample Number	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
		0–3				OPEN VAULT (ABANDONED)
		4				THIN CONCRETE BOTTOM OF VAULT
GP–4–5	0	5–7				YELLOWISH BROWN (10YR 5/8) SAND (SP) with trace silt, sand is fine–grained, medium dense, moist (0,95,5,0)
GP–4–10	0	10				
	25	11–12				@ ~11.5' staining and odor begins
GP–4–15	8	15				
		18				@ ~18' strong petroleum odor
P–4–23	510	20				
?–4–23		23				
	550	24			▽	
	825	26				

Boring Abandonment/ Well Construction Details

Cement Grout

ECOR

Reviewed By: _____ Date: _____

Revised By: _____ Date: _____

Project:	HOUSEWIVES MARKET – EIGHT AND JEFFERSON ST., OAKLAND, CA	Log of Boring/Monitoring Well: GP-4
Boring Location:	GP–4 (SEE FIGURE 2)	Project No.: 70100–019–03

Sample Number		PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
			30					
			31				Bottom of boring 32'	
			32					
			33					
			34					
			35					
			36					
			37					
			38					
			39					
			40					
			41					
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			63					

SECOR

Reviewed By: _____ Date: _____

Revised By: _____ Date: _____

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS
The Housewives Marketplace and Associated Retail/Office Space
8th, 9th, Clay and Jefferson Streets
Oakland, California

Boring		GP-1		GP-2		GP-3		GP-4		
Depth	(feet)	10	20	15	22	15	23	10	15	20
Benzene	(mg/kg)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)
Toluene	(mg/kg)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)
Ethylbenzene	(mg/kg)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)
Xylenes	(mg/kg)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)
Stoddard	(mg/kg)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)
Kerosene	(mg/kg)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)
Jet Fuel	(mg/kg)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)
Mineral Spirits	(mg/kg)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)
Diesel	(mg/kg)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)
Bunker Oil	(mg/kg)	ND(<100)	ND(<100)	ND(<100)	ND(<100)	ND(<100)	ND(<100)	ND(<100)	ND(<100)	ND(<100)
Motor Oil	(mg/kg)	ND(<20)	ND(<20)	ND(<20)	ND(<20)	ND(<20)	ND(<20)	ND(<20)	ND(<20)	ND(<20)
Unknown HC	(mg/kg)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)
Gasoline	(mg/kg)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)

Notes:

Samples collected October 21, 1997

mg/kg = milligrams per kilograms

ND = below laboratory detection limits (detection limit indicated in parentheses)

HC = hydrocarbons

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
The Housewives Marketplace and Associated Retail/Office Space
8th, 9th, Clay and Jefferson Streets
Oakland, California

Boring		GP-1	GP-2	GP-3	GP-4
Benzene	(ug/l)	ND(<0.5)	ND(<0.5)	ND(<0.5)	3,200
Toluene	(ug/l)	ND(<0.5)	ND(<0.5)	ND(<0.5)	13,000
Ethylbenzene	(ug/l)	ND(<0.5)	ND(<0.5)	ND(<0.5)	13,000[1]
Xylenes	(ug/l)	ND(<0.5)	ND(<0.5)	ND(<0.5)	53,000[1]
Stoddard	(ug/l)	ND(<50)	ND(<50)	ND(<50)	ND(<10,000)
Kerosene	(ug/l)	ND(<50)	ND(<50)	ND(<50)	ND(<10,000)
Jet Fuel	(ug/l)	ND(<50)	ND(<50)	ND(<50)	ND(<10,000)
Mineral Spirits	(ug/l)	ND(<50)	ND(<50)	ND(<50)	210,000
Diesel	(ug/l)	ND(<50)	ND(<50)	ND(<50)	ND(<10,000)
Bunker Oil	(ug/l)	ND(<500)	ND(<500)	ND(<500)	ND(<100,000)
Motor Oil	(ug/l)	670	ND(<500)[2]	ND(<500)[2]	ND(<100,000)
Unknown HC	(ug/l)	ND(<50)	ND(<50)	ND(<50)	ND(<10,000)
Gasoline	(ug/l)	ND(<500)[3]	ND(<500)[3]	ND(<500)[3]	1,700,000[4]

Notes:

Samples collected October 21, 1997

ug/l = micrograms per liter

ND = below laboratory detection limits (detection limit indicated in parentheses)

HC = hydrocarbons

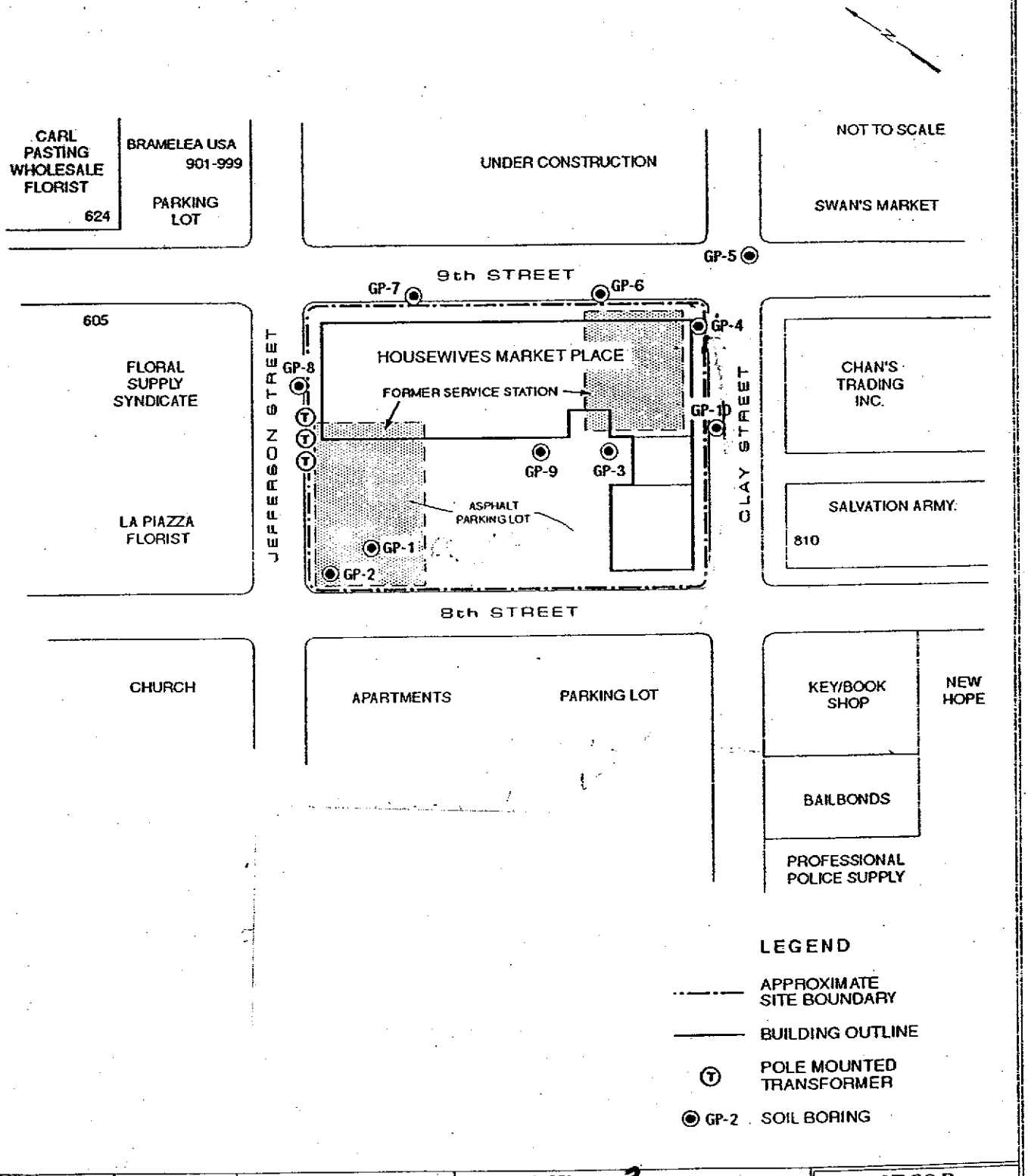
TVPH = Total volatile petroleum hydrocarbons quantified as gasoline

[1] There was a greater than 25% difference for detected concentrations between the two GC columns

[2] Hydrocarbons in the range of motor oil present in the sample however concentrations were below laboratory reporting limits

[3] Analyzed by EPA SW-846 Method 8015M

[4] Analyzed by EPA Method 5030/8015



DRAFTED BY: PEM	CHECKED BY: GH	PROJECT NUMBER: 70100-019-01	FIGURE NUMBER: 3	SECOR 1390 Willow Pass Road Suite 360 Concord, CA 94520
DWG DATE: 5/19/97	REV.DATE: 2/9/98	CLIENT: CITY OF OAKLAND	TITLE: BORING LOCATION MAP HOUSEWIVES MARKET PLACE 801 CLAY STREET OAKLAND, CA	
FILE NAME: ScrOAK801hswfMktBor2				

TABLE 3

SUMMARY OF SOIL ANALYTICAL RESULTS

The Housewives Marketplace and Associated Retail/Office Space

8th, 9th, Clay and Jefferson Streets

Oakland, California

Boring (mg/kg)	GP-5		GP-6		GP-7		GP-8	
Depth (feet)	15	23	15	22	15	21.5	15	21
Benzene	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)
Toluene	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)
Ethylbenzene	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)
Xylenes	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)
TPH Fuel Scan	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)
Gasoline	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)

Notes:

Samples collected January 1998

mg/kg = milligrams per kilograms

ND = below laboratory detection limits (detection limit indicated in parentheses)

3

TABLE - Continued
SUMMARY OF SOIL ANALYTICAL RESULTS
The Housewives Marketplace and Associated Retail/Office Space
8th, 9th, Clay and Jefferson Streets
Oakland, California

Boring (mg/kg)	GP-9		GP-10	
Depth (feet)	15	22	15	21.5
Benzene	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)
Toluene	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)
Ethylbenzene	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)
Xylenes	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)
TPH Fuel Scan	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)
Gasoline	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)

Notes:

Samples collected October 21, 1997
mg/kg = milligrams per kilograms
ND = below laboratory detection limits (detection limit indicated in parentheses)

TABLE 4

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

The Housewives Marketplace and Associated Retail/Office Space

8th, 9th, Clay and Jefferson Streets

Oakland, California

BORING (ug/l)	GP-5	GP-6	GP-7	GP-8	GP-9	GP-10
Benzene	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
Toluene	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
Ethylbenzene	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
Xylenes	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
TPH Fuel Scan	NA	ND(<50)	NA	ND(<50)	ND(<50)	ND(<50)
Gasoline	ND(<50)*	ND(<50)	ND(<50)*	ND(<50)	ND(<50)	ND(<50)

Notes:

Samples GP-1 through GP-4 collected October 21, 1997; Samples GP-5 through GP-10 collected on January 22 and 23, 1998.

ug/l = micrograms per liter

ND = Below laboratory detection limits (detection limit indicated in parentheses)

* = Analyzed by EPA SW-846 Method 8015 (modified)

HOUSEWIVES MARKET - 8TH, 9TH, CLAY AND JEFFERSON ST., OAKLAND, CA

Log of Boring/Monitoring Well: **GP-6**

ocation: GP-6 (SEE FIGURE 2) | Project No.: 70100-019-04

ractor and Equipment: VIRONEX/GEOPROBE | Logged By: C. MELANCON

Method: CONTINUOUS CORE | Monitoring Device: OVM 580B | Comments:

ite/Time: 1/23/98//0900 | Finish Date/Time: 1/23/98//1100

ter (bgs): ~22.5 FT. | Stabilized Water Level (bgs): ~22.5 FT.

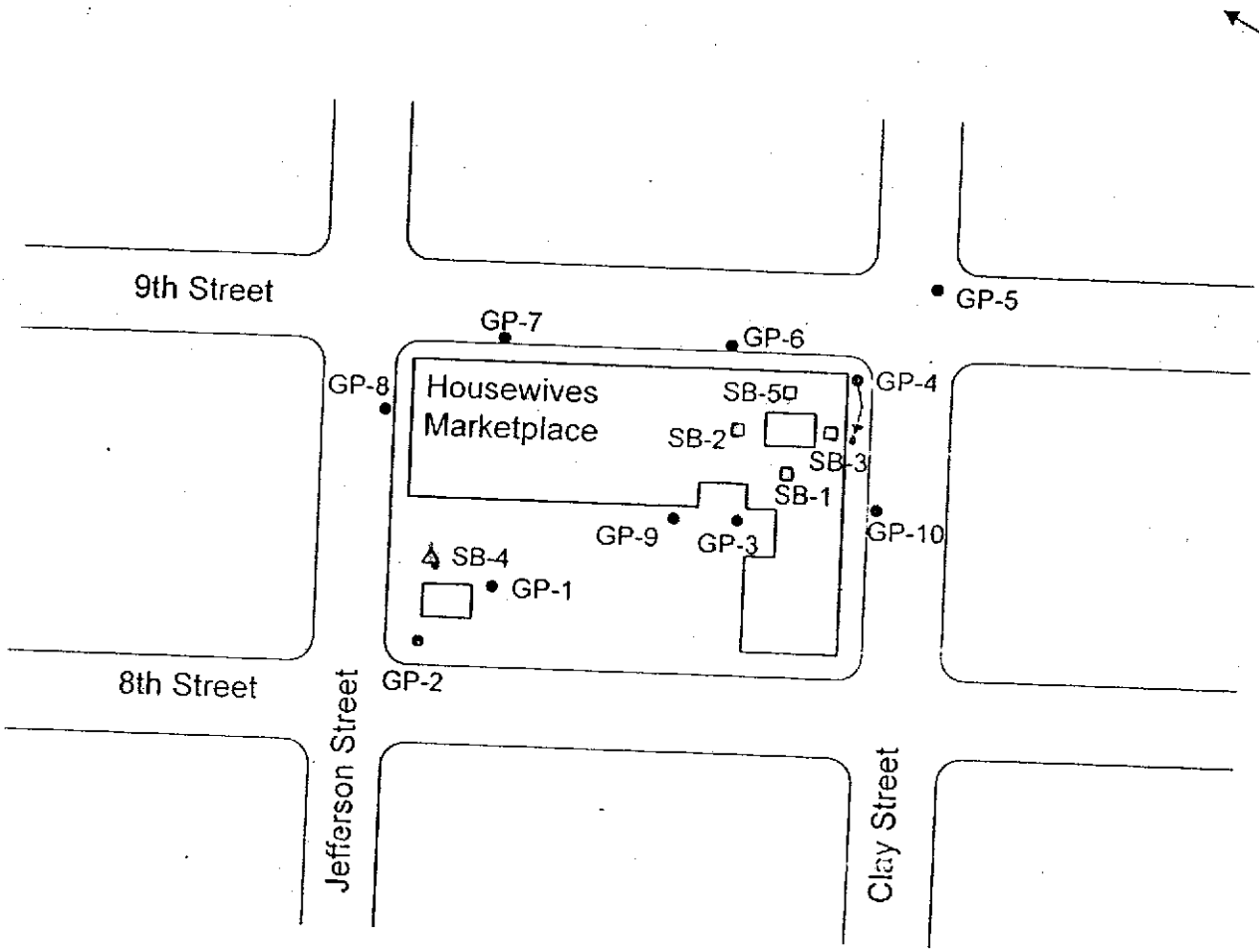
Surface Elevation: NA Casing Top Elevation: NA

PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
	0				ASPHALT AND BASEROCK	
	1				YELLOWISH BROWN (10YR 5/6) SAND (SP) with silt, sand is fine-grained, dense, moist (0,90,10,0)	
0	5					
0	10					Grout
0	15					
0	20				at ~21' color change	
0	22			▼▽		
0	23					
	28					
	30					

Reviewed By: _____ Date: _____

Revised By: _____ Date: _____

COR



NOT TO SCALE

LEGEND

- ▫ SB-3 Initial Interior Sample Location
- △ SB-4 Exterior Sample Location
- ▭ Presumed location of former service station UST
- • GP-5 Previous Soil Boring

CHOW ENGINEERING, INC.

Plate 2 Sample Location Sketch
Housewives Marketplace
City of Oakland

Chow Engineering, Inc.

Table 1 - Grab Groundwater Analytical Results - Petroleum Hydrocarbons

801 Clay Street, Oakland, California

Sample Number	Date Collected	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (µg/L)	TPHg (µg/L)	TPHd (µg/L)	TPHms (µg/L)	TPH ss (µg/L)	TPHk (µg/L)	TPHjf (µg/L)	TPHbo (µg/L)	TPHmo (µg/L)	TPHun (µg/L)	Fuel Scan (µg/L)
GP-1	10/21/97	< 0.5	< 0.5	< 0.5	< 0.5	< 500	< 50	< 50	< 50	< 50	< 50	< 500	670	< 50	NA
GP-2	10/21/97	< 0.5	< 0.5	< 0.5	< 0.5	< 500	< 50	< 50	< 50	< 50	< 50	< 500	< 500	< 50	NA
GP-3	10/21/97	< 0.5	< 0.5	< 0.5	< 0.5	< 500	< 50	< 50	< 50	< 50	< 50	< 500	< 500	< 50	NA
GP-4	10/21/97	3,200	13,000	13,000	53,000	1,700,000	< 10,000	210,000	< 10,000	< 10,000	< 10,000	< 100,000	< 100,00	< 10,000	NA
GP-5	01/22/98	< 0.5	< 0.5	< 0.5	< 0.5	< 50	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-6	01/22/98	< 0.5	< 0.5	< 0.5	< 0.5	< 50	NA	NA	NA	NA	NA	NA	NA	NA	< 50
GP-7	01/23/98	< 0.5	< 0.5	< 0.5	< 0.5	< 50	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-8	01/23/98	< 0.5	< 0.5	< 0.5	< 0.5	< 50	NA	NA	NA	NA	NA	NA	NA	NA	< 50
GP-9	01/23/98	< 0.5	< 0.5	< 0.5	< 0.5	< 50	NA	NA	NA	NA	NA	NA	NA	NA	< 50
GP-10	01/23/98	< 0.5	< 0.5	< 0.5	< 0.5	< 50	NA	NA	NA	NA	NA	NA	NA	NA	< 50
SB-1-GW	12/08/00	< 0.50	< 0.50	< 0.50	< 0.50	< 50	NA	88	NA	NA	NA	NA	NA	NA	NA
SB-2-GW	12/08/00	< 0.50	< 0.50	< 0.50	< 0.50	< 50	NA	< 50	NA	NA	NA	NA	NA	NA	NA
SB-3-GW	12/08/00	670	450	100	480	2,900	NA	290	NA	NA	NA	NA	NA	NA	NA
SB-4-GW	12/08/00	< 0.50	< 0.50	< 0.50	< 0.50	< 50	NA	100	NA	NA	NA	NA	< 500	NA	NA

Notes:

TPHg	Total Petroleum Hydrocarbons as gasoline	TPHmo	Total Petroleum Hydrocarbons as motor oil
TPHd	Total Petroleum Hydrocarbons as diesel	TPHun	Total Petroleum Hydrocarbons-unknown
TPHms	Total Petroleum Hydrocarbons as mineral spirits	mg/Kg	milligrams per kilogram
TPH ss	Total Petroleum Hydrocarbons as Stoddard Solvent	µg/L	micrograms per liter
TPHk	Total Petroleum Hydrocarbons as kerosene	VOCs	Volatile organic compounds
TPHjf	Total Petroleum Hydrocarbons as jet fuel	<	Less than
TPHbo	Total Petroleum Hydrocarbons as bunker oil	NA	Not analyzed

Chow Engineering, Inc.

Table 6 - Groundwater Analytical Results - VOCs

801 Clay Street, Oakland, California

Sample Number	Date Collected	Benzene (µg/L)	1,2 DCA (µg/L)	Ethyl Benzene (µg/L)	IPB (µg/L)	Napthalene (µg/L)	n-PB (µg/L)	Toluene (µg/L)	TCE (µg/L)	1,2,4 TMB (µg/L)	1,3,5 TMB (µg/L)	Total Xylenes (µg/L)
SB-1-GW	12/08/00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	68	< 1.0	< 1.0	< 1.0
SB-2-GW	12/08/00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	23	< 1.0	< 1.0	< 1.0
SB-3-GW	12/08/00	510	9.0	99	6.4	8.9	14	350	30	82	19	370
SB-4-GW	12/08/00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Notes:

1,2 DCA	1,2 Dichloraethane
IPB	Isopropylbenzene
n-PB	normal Propylbenzene
TCE	Trichloroethene
1,2,4 TMB	1,2,4 Trimethylbenzene
1,3,5 TMB	1,3,5 Trimethylbenzene
µg/L	Micrograms per liter
<	Less than

[illegible] Engg., Inc.
[illegible] Drive, Ste 729
[illegible] CA 94621 USA
[illegible] (510) 636-8500
[illegible] (510) 636-8544

Soil/Well Boring Log

Boring Number: SB-3
Location: 801 Clay Street
Oakland, California
Start Date: December 7, 2000
Stop Date: December 7, 2000
Logger: Maurice W. Baron, Jr.

Time (hrs)	Depth	Description	Strat Symbol	Well Construct	Recovery (%)	Odor	PID (ppm)
	0	Foundation, concrete. Approximately 4 to 6 inches. Clayey silty gravely sand, very dark grey, 10YR 3/1, unconsolidated, moist, no hydrocarbon odor. Grades into clayey silty sand, yellowish brown, 10YR 5/4, semi-consolidated, moist, very slight disinfectant odor (?).	GM				
1309		Clayey silty sand, dark yellowish brown, 10YR 4/6, semi-consolidated, moist, no hydrocarbon odor. Sand is fine to very fine grain.	SM/SC		95	No	11
	5						23
1313		Clayey silty sand, dark yellowish brown, 10YR 4/6, semi-consolidated, moist, no hydrocarbon odor. Sand is fine to very fine grain.			90	No	
	10						
1317		Clayey silt, dark yellowish brown, 10YR 4/4, moist, no hydrocarbon odor.	ML		90	No	36
1417		Clayey silty sand, yellowish brown, 10YR 5/4, semi-consolidated, moist, no hydrocarbon odor. Sand is fine to very fine grain w some heavy mineral garins			90	No	
	15						19
1421		Clayey silty sand, dark yellowish brown, 10YR 4/4, semi-consolidated, moist, no hydrocarbon odor. Sand is fine grain to very fine grain.	SM/SC		85	No	
1429		Clayey silty sand, yellowish brown, 10YR 5/4, semi-consolidated, moist, very slight hydrocarbon (TPHg) odor. Sand is fine to very fine grain.			90	Yes	69
	20						78
1445		Sand, dark greenish grey, GLEY 1 4/10Y, semi-consolidated, moist, slight septic/ TPHg (degraded gasolinr) odor. Sand is fine to very fine grain.	SW		90	Slight	42
	25						
1455		Silty sand, dark greenish grey, GLEY 1 4/10Y, semi-consolidated, moist, no slight septic/hydrocarbon odor (degraded gasoline). Sand is fine to very fine grain.	SM		95	Yes	202
1546		Silty sand, dark yellowish brown, 10YR 4/3, semi-consolidated, moist, no hydro-carbon odor. Sand is fine to very fine grain w/ approx 10% silt.			90	Slight No	35
	30						25
1558		Silty sand, dark greyish brown, 10YR 4/3, semi-consolidated, moist, no hydro-carbon odor. Sand is fine to very fine grain w/ approx 15% silt & clay.			90	N	

Total depth of boring 31 feet below ground surface.

Color description from Munsell Color Chart (2000).

Groundwater sample @ 0750 hrs 12/08/00.
Depth to water @ 0916 12/08/00 = 24.1 feet bgs.

▼ First water

▽ Static water level

Chow Engineering, Project No. 2R-1179

Table 7. Groundwater Data Summary
RBCA Evaluation
Housewives Marketplace
Oakland, California

Analyte	Number of Detections	Number of Analyses	Frequency of Detection (%)	Minimum Detected Value	Maximum Detected Value	Arithmetic Mean	Standard Deviation	95% UCL [a]	EPC	MCL	COPC? [b]
	Statistical Data Summary (mg/L)										
BTEX (EPA Method 8020)											
Benzene	2	14	14.3	0.67	3.2	0.28	0.86	0.68	0.68	0.001	Yes
Toluene	2	14	14.3	0.45	13	0.96	3.5	2.6	2.6	0.15	Yes
Ethylbenzene	2	14	14.3	0.10	13	0.94	3.5	2.6	2.6	0.7	Yes
Xylenes, total	2	14	14.3	0.48	53	3.8	14	11	11	1.75	Yes
Volatile Organic Compounds (EPA Method 8260)											
Benzene	1	4	25	0.51	0.51	0.13	0.25	N/A	0.51	0.001	Yes
1,2-Dichloroethane	1	4	25	0.009	0.009	0.003	0.004	N/A	0.009	0.0005	Yes
Ethylbenzene	1	4	25	0.099	0.099	0.025	0.049	N/A	0.099	0.7	No
Isopropylbenzene	1	4	25	0.0064	0.0064	0.0020	0.0030	N/A	0.0064	0.77 [d]	No
Naphthalene	1	4	25	0.0089	0.0089	0.0026	0.0042	N/A	0.0089	0.17 [d]	No
n-Propylbenzene	1	4	25	0.014	0.014	0.004	0.007	N/A	0.014	0.26 [d]	No
Toluene	1	4	25	0.35	0.35	0.09	0.17	N/A	0.35	0.15	Yes
Trichloroethene	3	4	75	0.023	0.068	0.030	0.028	N/A	0.068	0.005	Yes
1,2,4-Trimethylbenzene	1	4	25	0.082	0.082	0.021	0.041	N/A	0.082	--	Yes
1,3,5-Trimethylbenzene	1	4	25	0.019	0.019	0.005	0.009	N/A	0.019	--	Yes
Xylenes, total	1	4	25	0.37	0.37	0.09	0.18	N/A	0.37	1.75	No
Total Petroleum Hydrocarbons (EPA Method 8015 Modified)											
TPHg	2	14	14.3	2.9	1,700	122	454	337	337	--	No
TPHms	4	8	50	0.088	210	26	74	N/A	210	--	No
TPHmo	1	4	25	0.67	0.67	0.36	0.21	N/A	0.67	--	No

mg/L	Milligrams per liter.
%	Percent
95% UCL	95 Percent upper confidence limit on the arithmetic mean.
EPC	Exposure point concentration (i.e., lesser of 95% UCL and maximum detected value).
MCL	Maximum contaminant level (*DHS, 2001*).
COPC	Chemical of potential concern.
BTEX	Benzene, toluene, ethylbenzene, and xylenes.
TPHg	Total petroleum hydrocarbons as gasoline.
TPHms	Total petroleum hydrocarbons as mineral spirits.
TPHmo	Total petroleum hydrocarbons as motor oil.
	Chemical retained for further evaluation as a COPC.

< 0.5	Not detected at a laboratory reporting limit of 0.5 mg/L.
Bold	Detected value.
--	Not available.
N/A	Not applicable.

[a] 95% UCL not calculated for data sets with less than 10 samples.

[b] Chemicals with maximum detected value exceeding the MCL or those lacking a MCL were selected as COPCs. For TPH compounds, see text Section 4.1.2.

[c] Value not included in statistical calculations because half-reporting limit exceeds maximum detected value.

[d] Action level presented because chemical lacks a MCL.

Note: Only detected chemicals are presented.

Table 7. Groundwater Data Summary
RBCA Evaluation
Housewives Marketplace
Oakland, California

Analyte	Boring Number:	GP-1	GP-2	GP-3	GP-4	GP-5	GP-6	GP-7	GP-8	GP-9	GP-10	SB-1-GW	SB-2-GW	SB-3-GW	SB-4-GW
	Date:	10/21/97	10/21/97	10/21/97	10/21/97	01/22/98	01/22/98	01/23/98	01/23/98	01/23/98	01/23/98	12/08/00	12/08/00	12/08/00	12/08/00
		Sample Results (mg/L)													
BTEX (EPA Method 8020)															
Benzene		< 0.0005	< 0.0005	< 0.0005	**3.2**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.67**	< 0.0005
Toluene		< 0.0005	< 0.0005	< 0.0005	**13**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.45**	< 0.0005
Ethylbenzene		< 0.0005	< 0.0005	< 0.0005	**13**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.1**	< 0.0005
Xylenes, total		< 0.0005	< 0.0005	< 0.0005	**53**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.48**	< 0.0005
Volatile Organic Compounds (EPA Method 8260)															
Benzene		--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	**0.51**	< 0.001
1,2-Dichloroethane		--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	**0.009**	< 0.001
Ethylbenzene		--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	**0.099**	< 0.001
Isopropylbenzene		--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	**0.0064**	< 0.001
Naphthalene		--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	**0.0089**	< 0.001
n-Propylbenzene		--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	**0.014**	< 0.001
Toluene		--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	**0.35**	< 0.001
Trichloroethene		--	--	--	--	--	--	--	--	--	--	**0.068**	**0.023**	**0.03**	< 0.001
1,2,4-Trimethylbenzene		--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	**0.082**	< 0.001
1,3,5-Trimethylbenzene		--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	**0.019**	< 0.001
Xylenes, total		--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	**0.37**	< 0.001
Total Petroleum Hydrocarbons (EPA Method 8015 Modified)															
TPHg		< 0.5	< 0.5	< 0.5	**1,700**	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	**2.9**	< 0.05
TPHms		< 0.05	< 0.05	< 0.05	**210**	NA	NA	NA	NA	NA	NA	**0.088**	< 0.05	**0.29**	**0.1**
TPHmo		**0.67**	< 0.5	< 0.5	< 100 [c]	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.05

mg/L	Milligrams per liter.
%	Percent
95% UCL	95 Percent upper confidence limit on the arithmetic mean.
EPC	Exposure point concentration (i.e., lesser of 95% UCL and maximum detected value).
MCL	Maximum contaminant level (*DHS, 2001*).
COPC	Chemical of potential concern.
BTEX	Benzene, toluene, ethylbenzene, and xylenes.
TPHg	Total petroleum hydrocarbons as gasoline.
TPHms	Total petroleum hydrocarbons as mineral spirits.
TPHmo	Total petroleum hydrocarbons as motor oil.
	Chemical retained for further evaluation as a COPC.

< 0.5	Not detected at a laboratory reporting limit of 0.5 mg/L.
Bold	Detected value.
--	Not available.
N/A	Not applicable.

[a] 95% UCL not calculated for data sets with less than 10 samples.

[b] Chemicals with maximum detected value exceeding the MCL or those lacking a MCL were selected as COPCs. For TPH compounds, see text Section 4.1.2.

[c] Value not included in statistical calculations because half-reporting limit exceeds maximum detected value.

[d] Action level presented because chemical lacks a MCL.

Note: Only detected chemicals are presented.

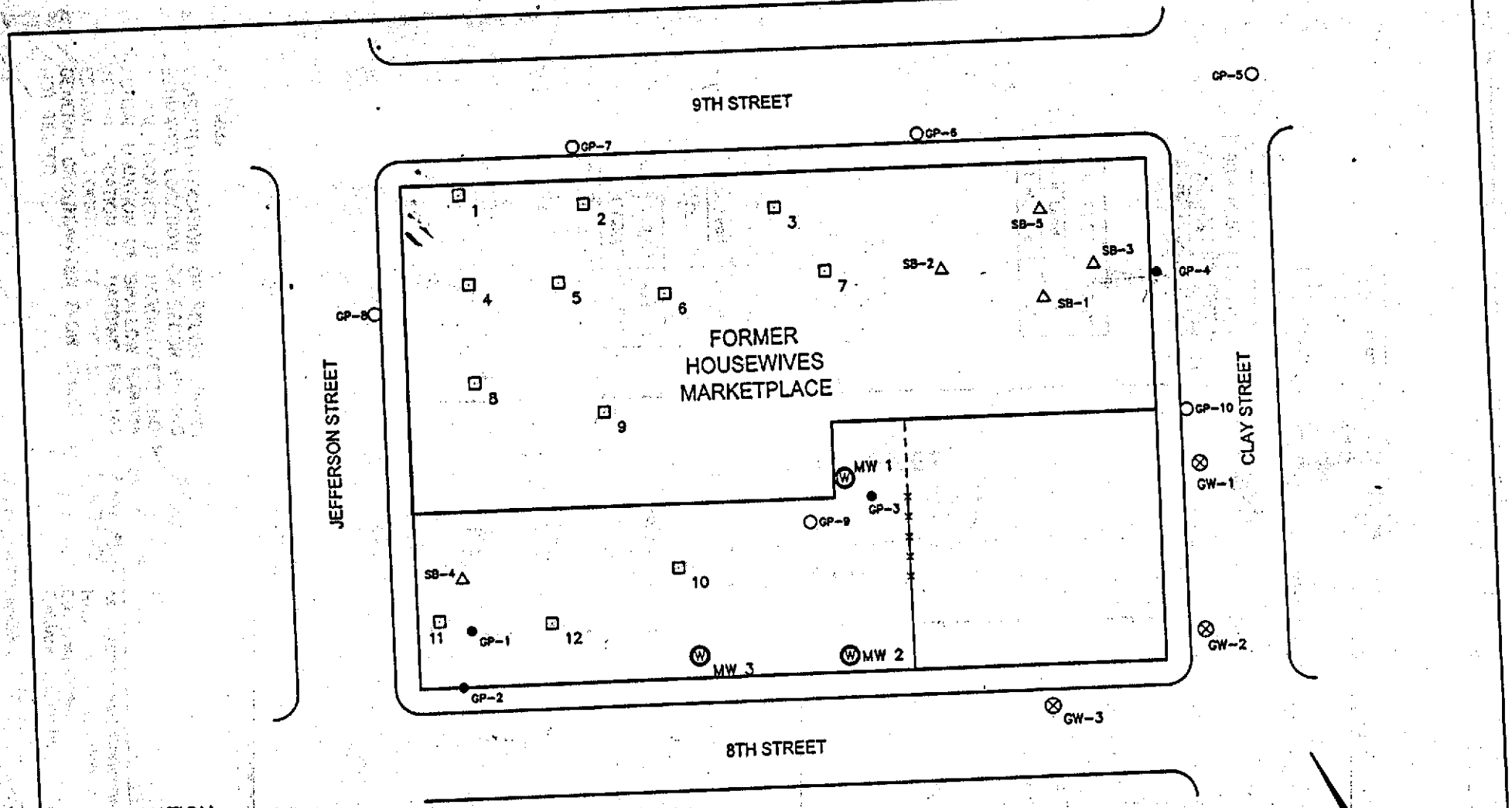
Table 8. RBCA Tiers 1 and 2 Evaluation
RBCA Evaluation
Housewives Marketplace
Oakland, California

COPC [a]	EPC (mg/L)	Oakland RBSL/SSTLs (mg/L) [a]: Residential Receptor (Inhalation of Indoor Air Vapors)	Commercial Receptor (Inhalation of Indoor Air Vapors)	Commercial Receptor (Inhalation of Outdoor Air Vapors)	EPC Exceeds Residential Indoor Air RBSL/SSTL?	EPC Exceeds Commercial Indoor Air RBSL/SSTL?	EPC Exceeds Commercial Outdoor Air RBSL/SSTL?
Tier 1 Analysis							
BTEX							
Benzene	0.68	0.11	1.8	21	Yes	No	No
Toluene	2.6	210	> Sol.	> Sol.	No	No	No
Ethylbenzene	2.6	> Sol.	> Sol.	> Sol.	No	No	No
Xylenes, total	11	> Sol.	> Sol.	> Sol.	No	No	No
Volatile Organic Compounds							
1,2-Dichloroethane	0.009	0.72	11	69	No	No	No
Trichloroethene	~~0.068~~ 0.150	0.69	11	150	No	No	No
1,2,4-Trimethylbenzene	0.082	--	--	--	N/A	N/A	N/A
1,3,5-Trimethylbenzene	0.019	--	--	--	N/A	N/A	N/A
Tier 2 Analysis (Soil Type: Merritt Sands) [b]							
Benzene	0.68	1.4	N/A	N/A	No	N/A	N/A

COPC Chemical of potential concern.
RBSL Risk-based screening level.
mg/L Milligrams per liter.
EPC Exposure point concentration (from Table 1).
PRG Preliminary Remdiation Goal (*U.S. EPA, 2000*).
BTEX Benzene, toluene, ethylbenzene, and xylenes.
> Sol. Screening level exceeds solubility threshold of chemical in water.
-- Not available.
N/A Not applicable.

[a] From: *Oakland, 2000a* - recommended RBSLs assuming groundwater is not a current or potential drinking water resource. For carcinogenic chemicals, the lower of the carcinogenic and noncarcinogenic values is presented.

[b] Only benzene for a residential receptor was evaluated in Tier 2 because it did not pass the Tier 1 analysis.



EXPLANATION:

- ● MEASURED LOCATION OF SECOR BORING
- ○ ESTIMATED LOCATION OF SECOR BORING
- △ ACTUAL LOCATION OF HARDING/ESE BORING
- □ ACTUAL LOCATION OF SHALLOW HARDING ESE BORING
- Ⓦ ACTUAL LOCATION OF HARDING ESE MONITORING WELL
- ⊗ ESTIMATED LOCATION OF HARDING ESE GROUNDWATER SAMPLE

PLATE

Harding ESE
A MACTEC Company

Site Plan
Locations of Borings, Samples and Monitoring Wells
Housewives Marketplace
801 Clay Street
Oakland, California

DRAWN: SS
JOB NUMBER: 54023.1
APPROVED:
DATE: 09/01
REVISED DAT

Table 9: Total and Soluble Lead Concentrations in Soil

Housewives Marketplace

801 Clay Street

Oakland, California

Sample Location	Sample Depth (feet)	Total Lead Concentration (mg/Kg)	Soluble Total Lead Concentration (STLC) (mg/L)	Fill or Native Soil
SB-1	0.9	88	9.2	Fill
SB-2	0.8	130	5.8	Fill
SB-3	3	5.2	NT	Native
SB-4	1.5	150	17	Fill
SB-5	2.8	<5.0	NT	Native
SB-6	4	<5.0	NT	Native
SB-7	1	330	11	Fill
SB-8	4	6.9	<0.5	Fill
SB-9	1	100	4.1	Fill
SB-10	1.5	400	19	Native
SB-11	2	<5.0	NT	Native
SB-12	4	<5.0	NT	Native
MW-1	0.9	72	5.7	Fill
MW-2	1.3	260	12	Fill
MW-3	1	16	0.62	Fill

Notes:
Soluble lead concentrations greater than 5.0 mg/l indicate that the soil is California hazardous. Disposal at a hazardous waste landfill is typically required.

NT = Not Tested

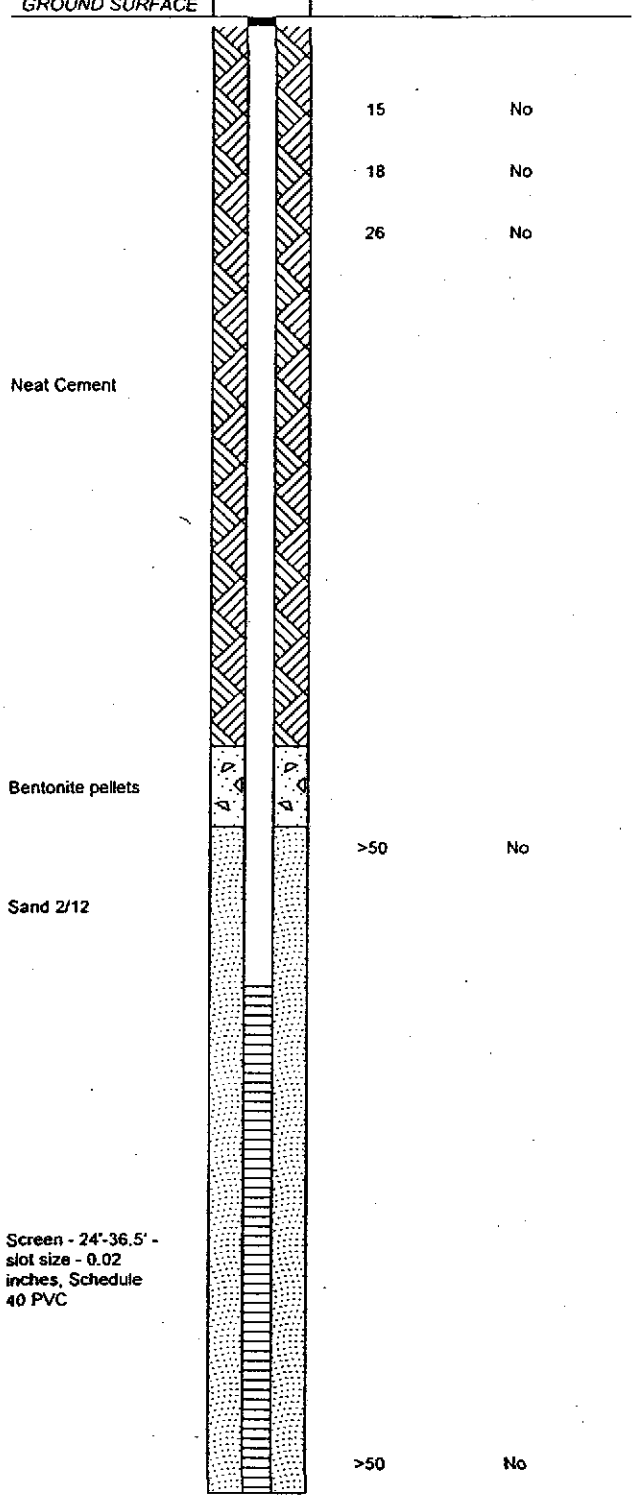
Table 3: Groundwater Monitoring Well Analytical Results
Housewives Marketplace
801 Clay Street
Oakland California

Test Method	Analyte	Well ID / Sample Date / Units	MW-1 5/3/01	MW-1 5/17/01	MW-2 5/3/01	MW-2 5/17/01	MW-3 5/3/01	MW-3 5/17/01
EPA 9056	Chloride	mg/L	180	64	230	90	210	59
9040B	pH	pH units	6.9	7.0	6.8	7.0	6.8	7.0
160.1	TDS	mg/L	920	530	860	540	550	410
120.1	EC	µS/cm	1200	850	1400	950	1200	710
EPA 8015M	Diesel	µg/L	ND(61)	NA	ND(61)	NA	ND(61)	NA
	Motor Oil	µg/L	ND(610)	NA	ND(610)	NA	ND(610)	NA
	Gasoline	µg/L	ND(50)	NA	ND(50)	NA	150	NA
EPA 8260A *	Freon 12	µg/L	2.2	NA	3.2	NA	ND(10)	NA
	MEK	µg/L	ND(1.0)	NA	ND(50)	NA	2400	NA
	Chloroform	µg/L	2.0	NA	ND(1.0)	NA	ND(10)	NA
	TCE	µg/L	150	NA	2.5	NA	ND(10)	NA

Notes:

EC	Specific Conductance.
ND(61)	Not detected above reporting limit shown in parentheses.
NA	Not analyzed per sample schedule.
*	Only detected compounds are shown
Freon 12	Dichlorodifluoromethane
MEK	2-Butanone
TCE	Trichloroethene
mg/L	milligrams per liter
µg/L	micrograms per liter
µS/cm	microsiemens per centimeter

Equipment Mobile B 4500
Hole Diameter 2
Surface Elevation 35.45 ft Date 5/1/01
Reference Datum City of Oakland Datum



ASPHALT CONCRETE
Brown SILTY SAND, (SM) medium dense, moist (FILL)
Brown SAND, (SP) trace brick, moist, loose to medium dense (FILL)
Dark to light brown SAND, (SP) moist, medium dense

Light brown SILTY SAND, (SM) moist, dense

5/3/2001

Becomes saturated below 23 feet

Bottom of boring at 36.5 feet

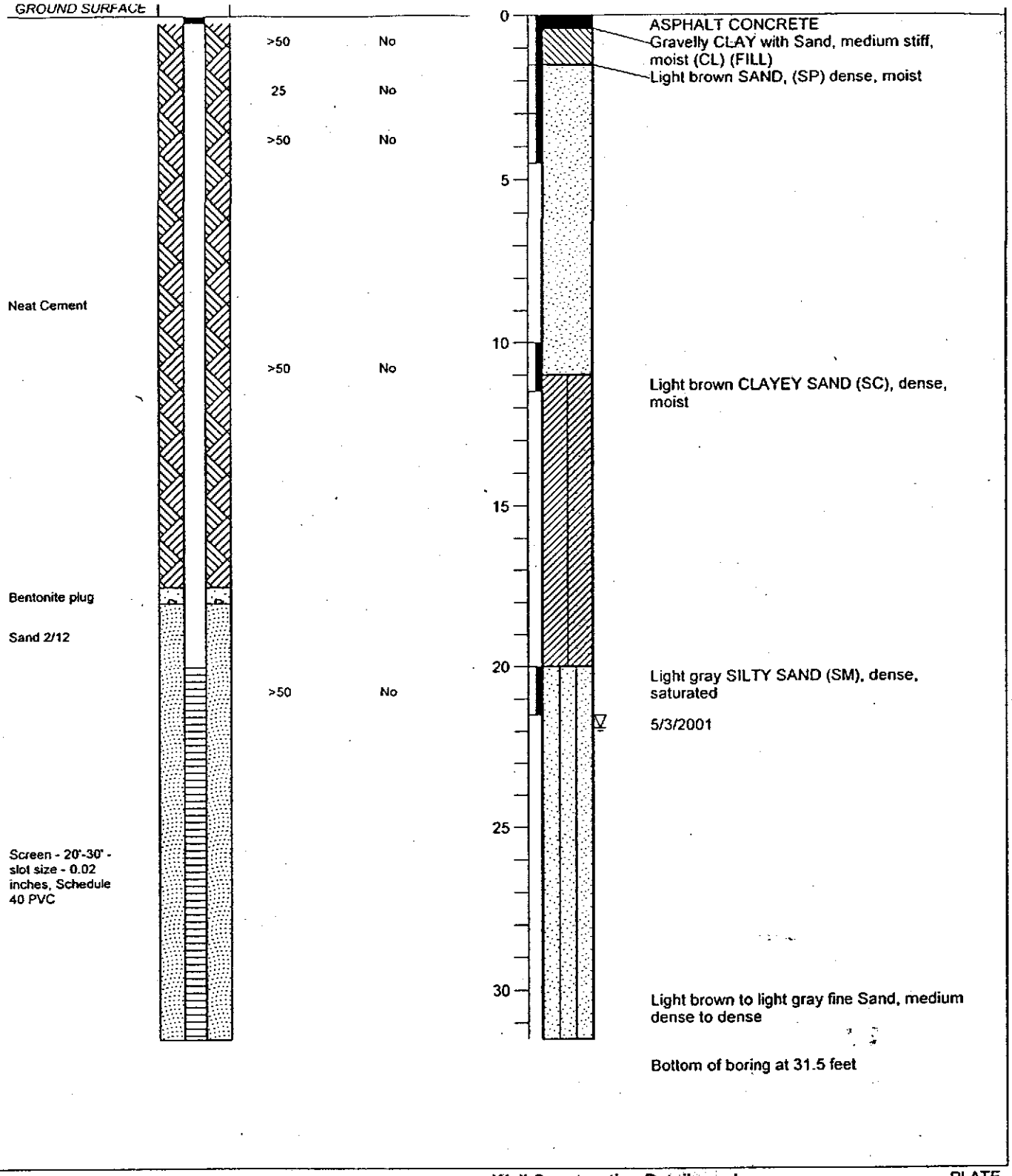
BORING_WELL_HARDINGESE 54023.GPJ GEOL.GDT 9/26/01

Harding ESE
A MACTEC Company

Well Construction Details and Log of Boring MW-1
Housewives Marketplace
801 Clay Street
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
SS	54023		9/01	



BORING_WELL_HARDINGESE 54023.GPJ GEOL.GDT 9/13/01

Harding ESE
A MACTEC COMPANY

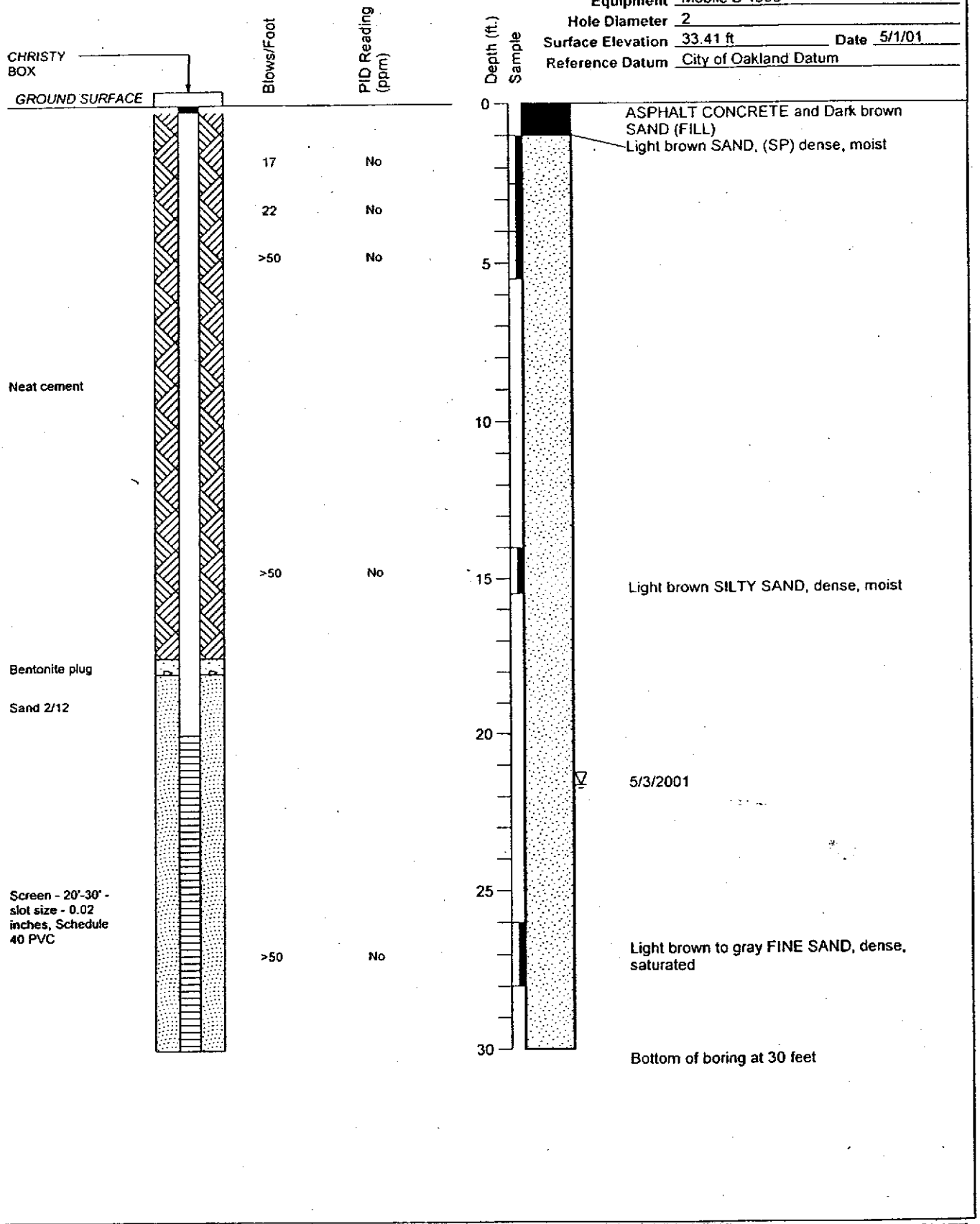
Well Construction Details and Log of Boring MW-2

Housewives Marketplace
801 Clay Street
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
SS	54023		9/01	

Equipment Mobile B 4500
Hole Diameter 2
Surface Elevation 33.41 ft Date 5/1/01
Reference Datum City of Oakland Datum



BORING_WELL_HARDINGESE 54023.GPJ GEOL.GDT 9/26/01

Harding ESE
A MACTEC COMPANY

Well Construction Details and Log of Boring MW-3
Housewives Marketplace
801 Clay Street
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
SS	54023		9/01	

Table 10A Groundwater Samples at 8th Clay Streets
Housewives Marketplace
801 Clay Street
Oakland, California

Test Method	Analyte	Sample ID: / Sample Date: / Units	GW-1 8/17/01	GW-2 8/17/01	GW-3 8/17/01
EPA 8015M	Diesel	ug/L	240 [1]	120 [1]	180 [1]
	Gasoline	ug/L	50	ND(50)	ND(50)
EPA 8260A *	1,2-DCA	ug/L	1.0	ND(1.0)	ND(1.0)
	Chloroform	ug/L	ND(1.0)	ND(1.0)	1.6

Notes:

[1] Hydrocarbon does not match the pattern of the laboratory's diesel standard

1,2-DCA 1,2-Dichloroethane

µg/L micrograms per liter

ND Not detected above the reporting limit shown in parentheses

Appendix A

Appendix B

JFT
pdata/53380/
/2001