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

July 6, 2009

Dan Poritsky
Hines Interests
101 California St., Ste. 1000
San Francisco, CA 94111-5894

General Property Manager
NOP Watergate LLC, c/o Hines
2200 Powell St., Ste 220
Emeryville, CA 94608-1857

SPK Emeryville Properties LLC
P.O. Box A-3879
Chicago, IL 60690

Subject: Subject: Fuel Leak Case, RO0002822 and Geotracker # T06019750804, 2000 Powell Street, Emeryville, CA 94608

Dear Gentlemen:

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

SITE INVESTIGATION AND CLEANUP SUMMARY

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

- Residual pollution remaining in soil beneath the site includes TPH as diesel at concentrations of up to 120 ppm and oil and grease up to 11,000 ppm.
- Maximum concentrations of up to 65 ppb TPH as gasoline, 950 ppb TPHd, 0.59 ppb benzene and 69 ppb MTBE remain in groundwater beneath the site.

If you have any questions, please call Barbara Jakub at (510) 639-1287. Thank you.

Sincerely,

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

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

cc:

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

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

Barbara Jakub (w/orig enc), D. Drogos (w/enc), R. Garcia (w/enc)

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REMEDIAL ACTION COMPLETION CERTIFICATE

Subject: Subject: Fuel Leak Case, RO0002822 and Geotracker # T06019750804, 2000 Powell Street, Emeryville, CA 94608

Dear Gentlemen:

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

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

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

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

Sincerely,

Ariu Levi
Director
Alameda County Environmental Health

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

I. AGENCY INFORMATION

Date: June 29, 2009

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 777-2478
Responsible Staff Person: Barbara Jakub	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Spieker Properties		
Site Facility Address: 2000 Powell St, Emeryville, CA 94608		
RB Case No.: NA	Local Case No.: 4051	LOP Case No.: RO0002822
URF Filing Date: ---	Global ID No.: T06019750804	APN: 049-1521-007

Responsible Parties	Addresses	Phone Numbers
Hines Interests, Dan Poritsky	101 California St., Suite 1000, San Francisco, CA 94111-5894	415-982-6200
SPK Emeryville Properties LLC	P.O. Box A-3879, Chicago, IL 60690	
NOP Watergate LLC c/o Hines ATTN: General Property Manager	2200 Powell St., Ste 220, Emeryville, CA 94608-1857	

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	10,000	Gasoline	Removed	July 1998
2	10,000	Gasoline	Removed	July 1998
Piping			In place	July 1998

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Unknown. USTs appeared intact upon removal.		
Site characterization complete? Yes	Date Approved By Oversight Agency: ---	
Monitoring wells installed? None	Number: NA	Proper screened interval? NA
Highest GW Depth Below Ground Surface: 7 feet*	Lowest Depth: 10 feet	Flow Direction: South, north and west, property located on penninsula
Most Sensitive Current Use: Municipal use as per SFRWQCB Basin Plan. However, electrical conductivity greater than 5,000 µmhos/cm.		

* as reported from on-site monitoring wells unrelated to former USTs

Summary of Production Wells in Vicinity: No water supply wells were identified within ¼-mile of this site.	
Are drinking water wells affected? No	Aquifer Name: East Bay Plain
Is surface water affected? No	Nearest SW Name: San Francisco Bay 170 feet south of site.
Off-Site Beneficial Use Impacts (Addresses/Locations): None	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	Two-10,000 gallon	Removed (transported to Erickson, Inc. in Richmond, CA)	July 1998
Piping	Not reported	Rinsed,* capped, and left in place	July 1998
Free Product	None reported	-----	---
Soil	150 yd^3 in the tank area 800 yd^3 of asbestos fill material	Excavated and placed in Forward Landfill in Manteca, CA	July 1998
Groundwater	None reported	-----	---

* 1,350 gallons of rinsate to Romic Chemical Corporation of Palo Alto, CA.

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

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before[1]	After[1]
TPH (Gas)	27,000	<0.93	30,000	65
TPH (Diesel)	120	120	950	950
TPH (Motor Oil)	---	---	---	---
Oil and Grease	11,000 (MW-5)	11,000	5,000 (MW-5)	5,000
Benzene	<25	<0.0048	1,000	0.59
Toluene	160	<0.0048	6,900	1.2
Ethylbenzene	130	<0.0048	380	<0.5
Xylenes	1,910	<0.0048	4,500	0.82
MTBE	<0.0048[2]	<0.0048[2]	69[3]	69[3]
Lead[4]	68	68	NA	NA

1. Samples collected from UST pit except where noted.
2. Other VOCs (Soil mg/kg): <0.0048 MTBE, <0.5 mg/kg TBA, <0.5 mg/kg DIPE, <0.5 mg/kg ETBE, <0.85 mg/kg TAME, <20 mg/kg EtOH, <0.0049 mg/kg EDB and EDC.
3. Other VOCs (groundwater ppb): 69 µg/L MTBE, < 10 µg/L TBA, 0.54 µg/L DIPE, <0.5 µg/L ETBE, 6.6 µg/L TAME, <0.5 µg/L EDB, <0.5 µg/L 1.2-DCA, <1,000 µg/L EtOH.
4. No other metals analyzed.

Site History and Description of Corrective Actions:

1. INITIATION OF CORRECTIVE ACTION

BACKGROUND HISTORY

The site is located within a commercial office complex built upon a peninsula in the San Francisco Bay. Beginning in the 1930s, non-engineered fill, consisting of debris and industrial waste, was placed to construct the peninsula. Reportedly, the thickness of the fill ranges from 16 to 22 feet, and overlies young Bay Mud. The fill material includes concrete and wood debris, roofing shingles, tar paper, linoleum, asbestos, asphalt, and roofing scraps/debris.

Two 10,000-gallon gasoline underground storage tanks were removed in July 1998. Piping at the UST excavation was removed; however, the remainder of the piping was cleaned, capped, and left in place. Golder Associates, Inc. (Golder), observed the removal of the USTs and reported that the "USTs appeared to be in good condition; no holes, cracks, or leaks were observed on the outer surfaces."

The maximum concentrations of petroleum-related constituents from these samples were 27,000 mg/kg TPH-g, 0.057 mg/kg benzene and 68 mg/kg lead in soil. 30,000 µg/L TPH-g and 1,000 µg/L benzene were detected in water from the UST excavation. No floating product or sheen was observed on the water in the UST excavation. No specific observations at the dispensers are documented in the Golder Report.

SITE CHARACTERIZATION ACTIVITIES

Investigation activities were conducted by Geomatrix Consultants, Inc. (Geomatrix), in July 2007. This investigation included three borings advanced at the site; two borings in the vicinity of the former UST excavation, and one boring in the vicinity of the former fuel dispensers.

On July 1, 2007, three borings were advanced using a hydraulic direct-push drilling rig equipped with a dual-tube continuous sampling system. Soil samples were submitted for analysis from the capillary fringe between 6 and 7 feet bgs. The maximum soil concentrations were 120 mg/kg TPHd. No TPHg, or BTEX as detected. Deeper samples were collected below UST invert depths. However, they were not analyzed "due to low contaminant concentrations in the shallow samples". Boring SB-01 was advanced to 18 feet bgs, SB-02 was advanced to 19 feet bgs, and SB-04 was advanced to 16 feet bgs.

Grab groundwater samples were collected by placing a temporary well point in the borehole and retracting the drive casing approximately 5 feet to expose the well screen. Well screens were placed at 13 to 18 feet bgs in SB-01, 14 to 19 ft bgs in SB-02 and 11 to 16 ft bgs in SB-04. The maximum groundwater concentrations were 950 µg/L TPHd, 65 µg/L TPHg, 0.59 µg/L benzene and 69 µg/L MTBE.

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 significant risk to human health based upon current land use and conditions.		
Site Management Requirements: None		
Should corrective action be reviewed if land use changes? No		
Was a deed restriction or deed notification filed? No		Date Recorded: --
Monitoring Wells Decommissioned: NA	Number Decommissioned: 0	Number Retained: 0
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: None		

V. ADDITIONAL COMMENTS, DATA, ETC.

Considerations and/or Variances:

Only shallow soil samples were analyzed. Samples collected below the invert were not analyzed.

This closure is only for the petroleum USTs. It does not cover the fill materials which were addressed under the oversight of the Regional Water Quality Control Board nor does it cover DTSC's Watergate Tower site #60000593.

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: Barbara Jakub	Title: Hazardous Materials Specialist
Signature: Barbara Jakub	Date: 6/29/09
Approved by: Donna L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature:	Date: 06/29/09

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: 6/29/09
Signature: Cherie McCaulou	Date: 7/2/09

VIII. MONITORING WELL DECOMMISSIONING

Date Requested by ACEH: NA	Date of Well Decommissioning Report: NA	
All Monitoring Wells Decommissioned: NA	Number Decommissioned: 0	Number Retained: 0
Reason Wells Retained: No monitoring wells installed or retained		
Additional requirements for submittal of groundwater data from retained wells: NA		
ACEH Concurrence - Signature: Barbara Jakub		Date: 6/29/09

Attachments:

1. Site Vicinity Map (pp1)
2. Site Plans (pps 2-6)
3. UST Removal Confirmation Soil and Water Analytical Data (pp 7)
4. Groundwater and Soil Analytical Data from Monitoring Wells (pp 8)
5. Confirmation Groundwater and Soil Analytical Data (pp 9)
6. Groundwater monitoring well Data (pp 10-13)
7. Boring Logs (pp 14-21)

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

Post-it® Fax Note 7671	Date 7/2/09	# of pages ▶ 1
To Barbara Jakub	From Cherie McCaulou	
Co./Dept. ACEH	Co. RWQCB	
Phone # 510-639-1287	Phone # 510-622-2342	
Fax # 510-337-9535	Fax # 510-622-2464	

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: 6/29/09
Signature:	Date:

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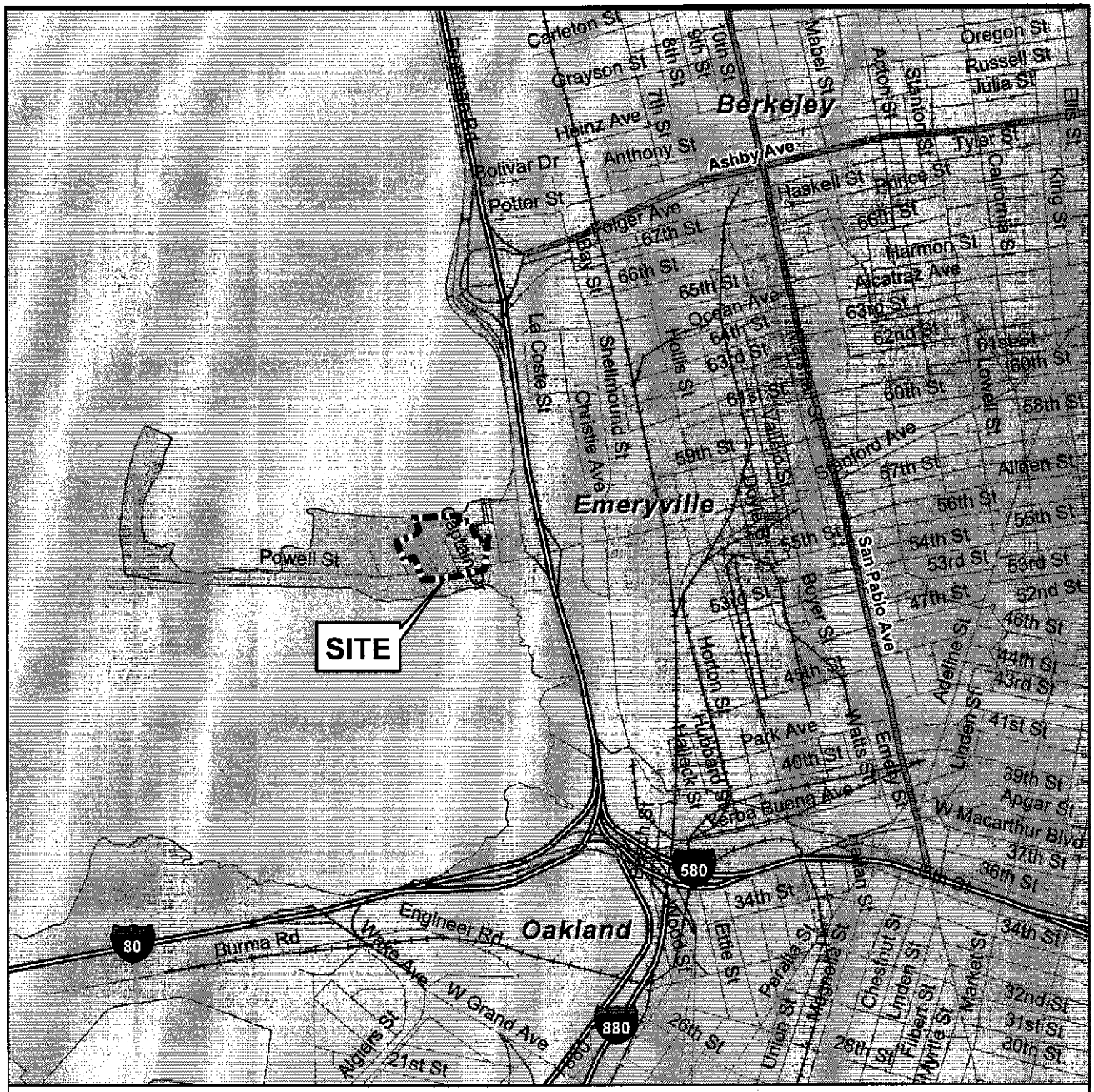
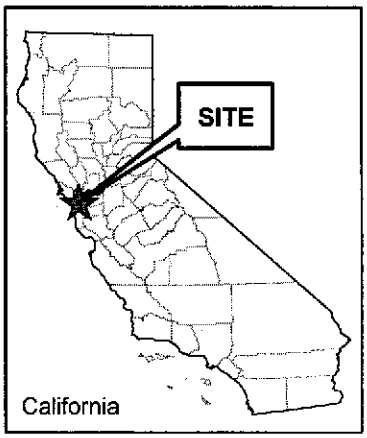


Basemap from Streetmap 2003 (Environmental Systems Research Institute, Inc. [ESRI], 2003).



N

0 2,000 Feet

SITE LOCATION MAP
1900, 2000, 2200 Powell Street
Emeryville, California

By: _	Date: 05/23/2007	Project No. 12924.000
Geomatrix		Figure 1

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ATTACHMENT 1

pg 1.

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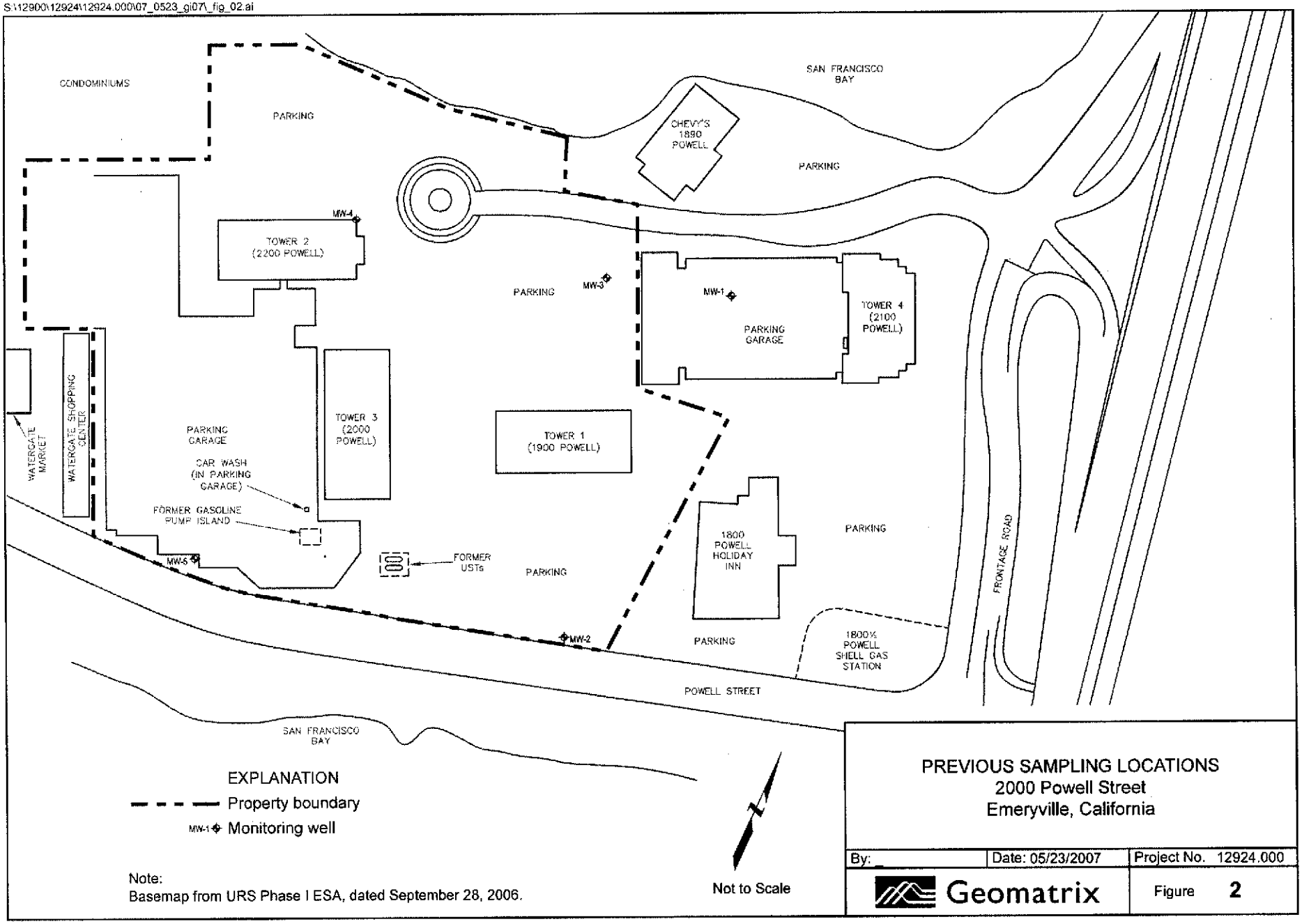


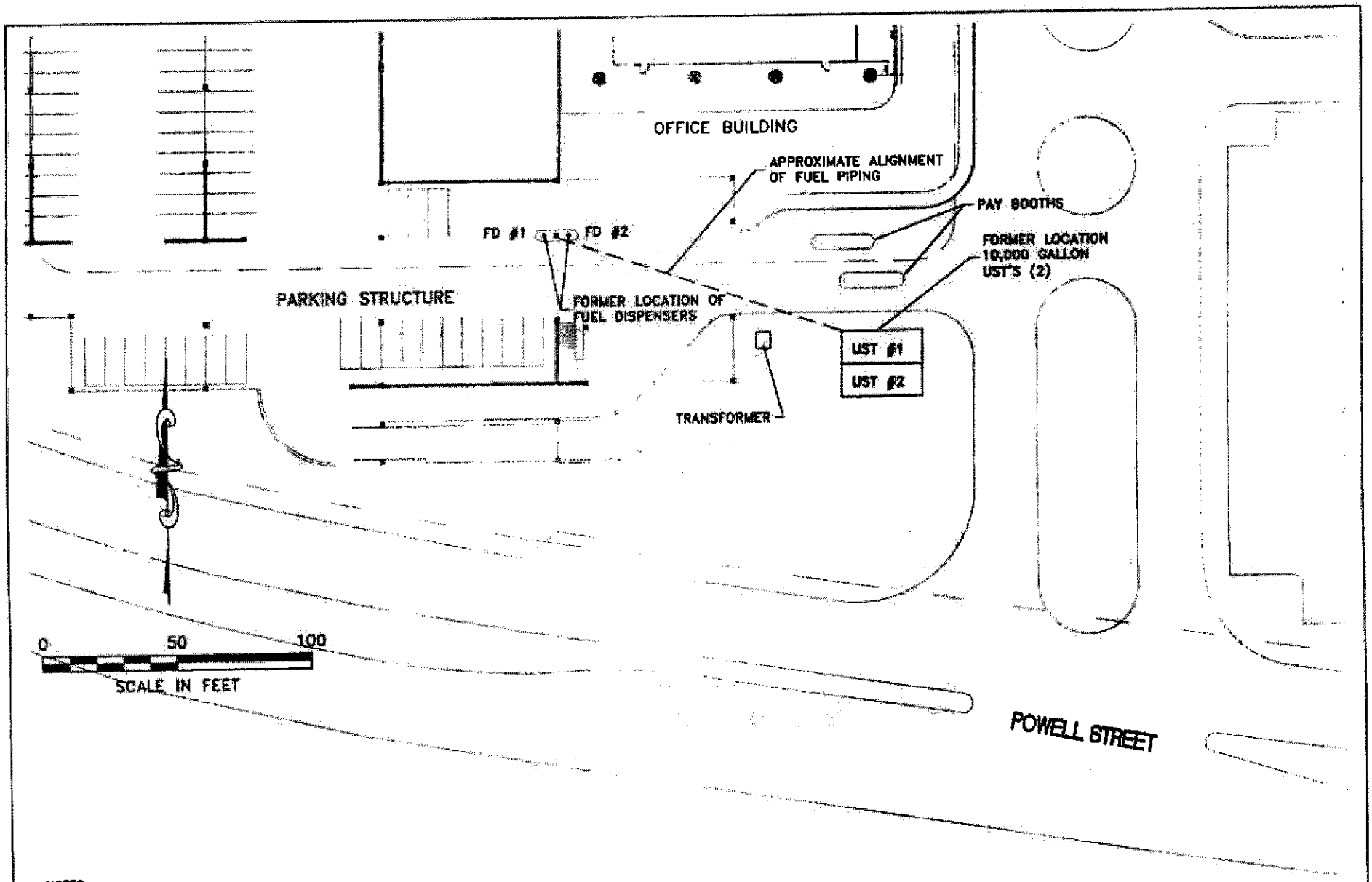
Note:
Basemap from URS Phase I ESA, dated September 28, 2006.

PREVIOUS SAMPLING LOCATIONS
2000 Powell Street
Emeryville, California

By:	Date: 05/23/2007	Project No. 12924.000
Geomatrix		Figure 2

ATTACHMENT 2

pg 2



NOTES:

1. BASE MAP PROVIDED BY SPIEKER PROPERTIES.

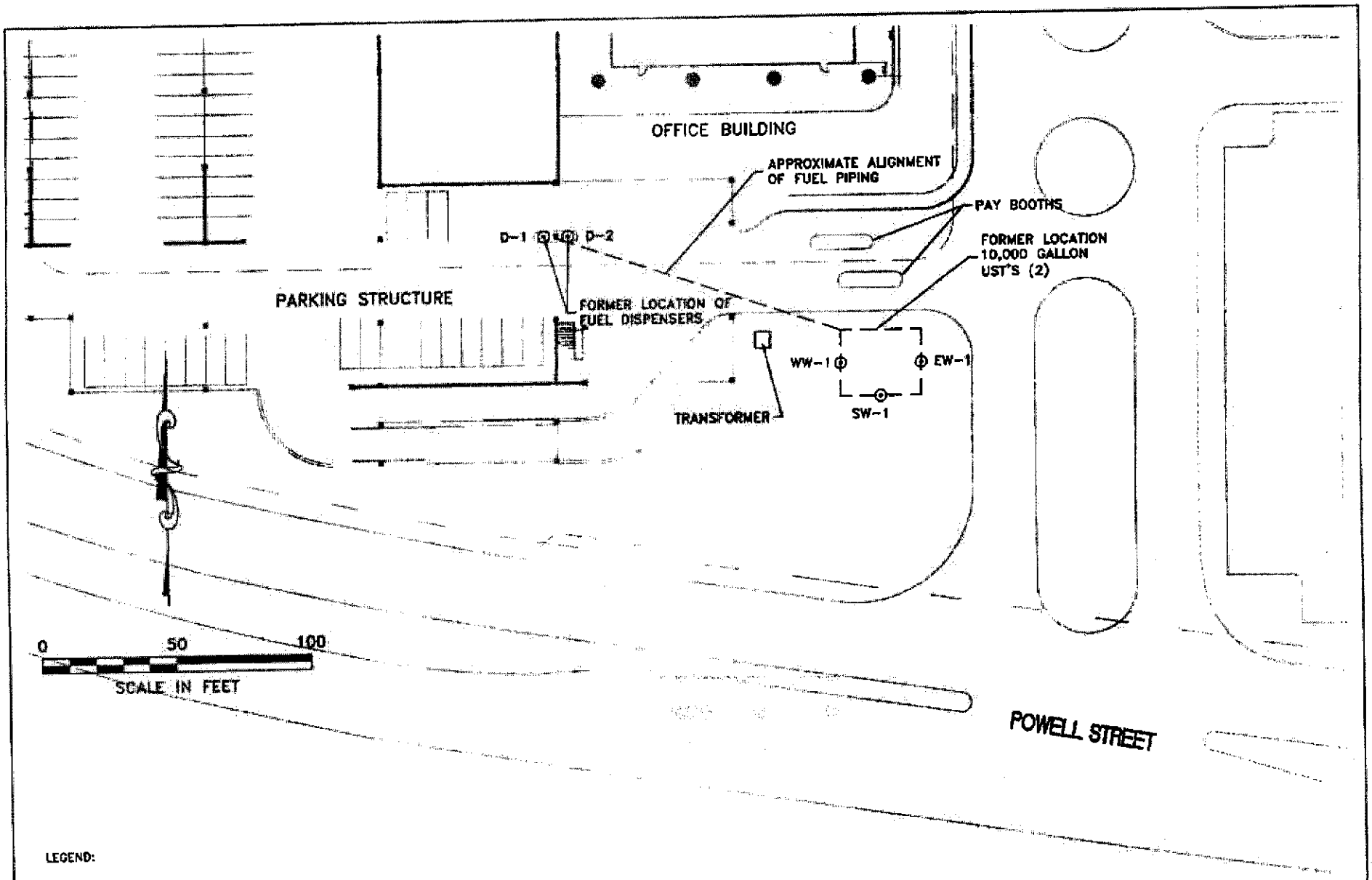
FIGURE 2

SITE PLAN

2200 POWELL STREET/EMERYVILLE/CA

Golder Associates

RAMALES | C:\1997files\9737187\Task_100\5652.dwg | 9-4-98 14:46 | xrf: NONE



LEGEND:

⊙ SOIL SAMPLE LOCATION

NOTES:

1. BASE MAP PROVIDED BY SPIEKER PROPERTIES.

FIGURE 4

CONFIRMATION SAMPLE LOCATIONS

2200 POWELL STREET/EMERYVILLE/CA

Golder Associates

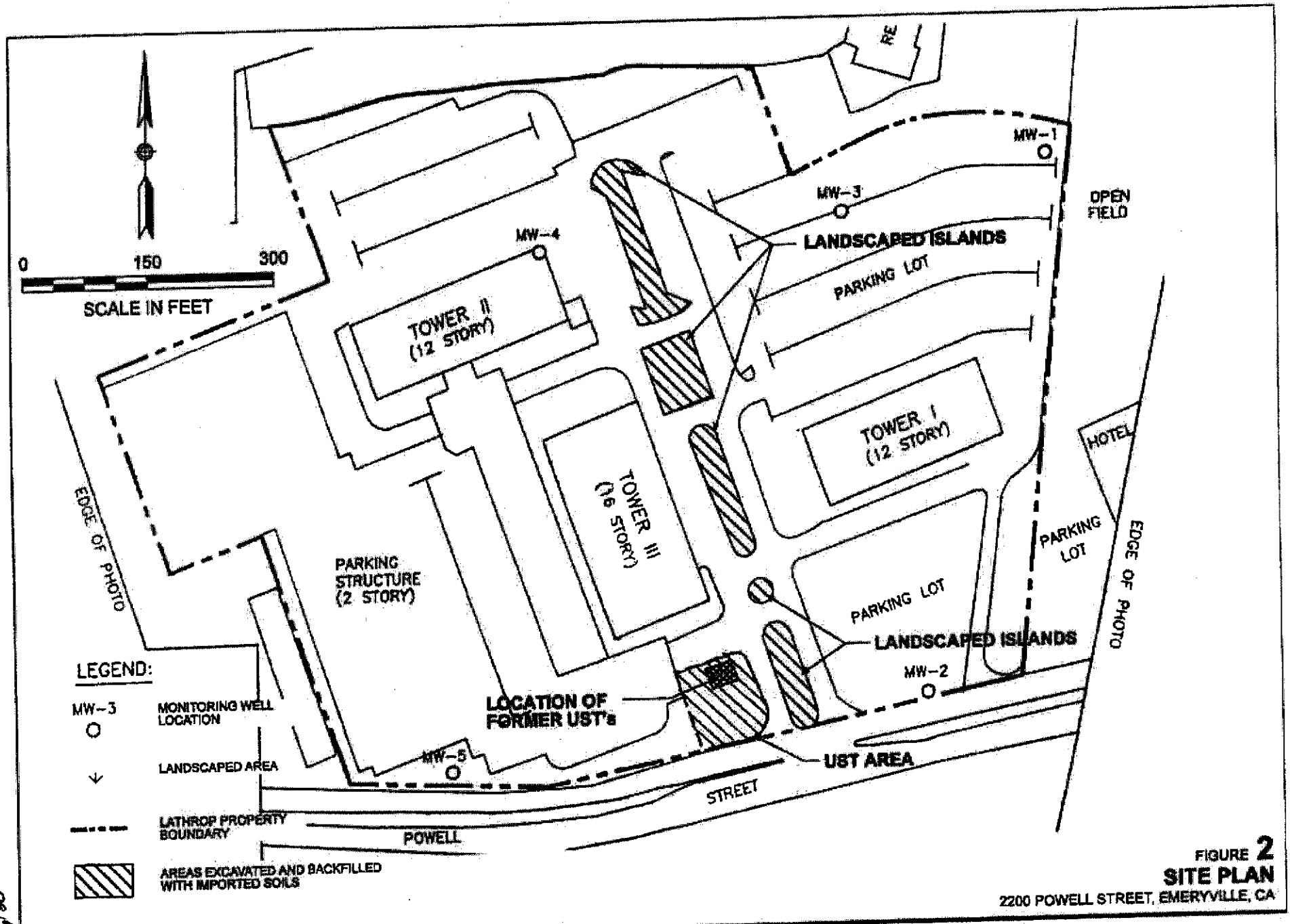


FIGURE 2
SITE PLAN
2200 POWELL STREET, EMERYVILLE, CA

Golder Associates

PROJECT NO. 973-7157.100.100 DRAWING NO. 6890 DATE 9/22/98 DRAWN BY DVR

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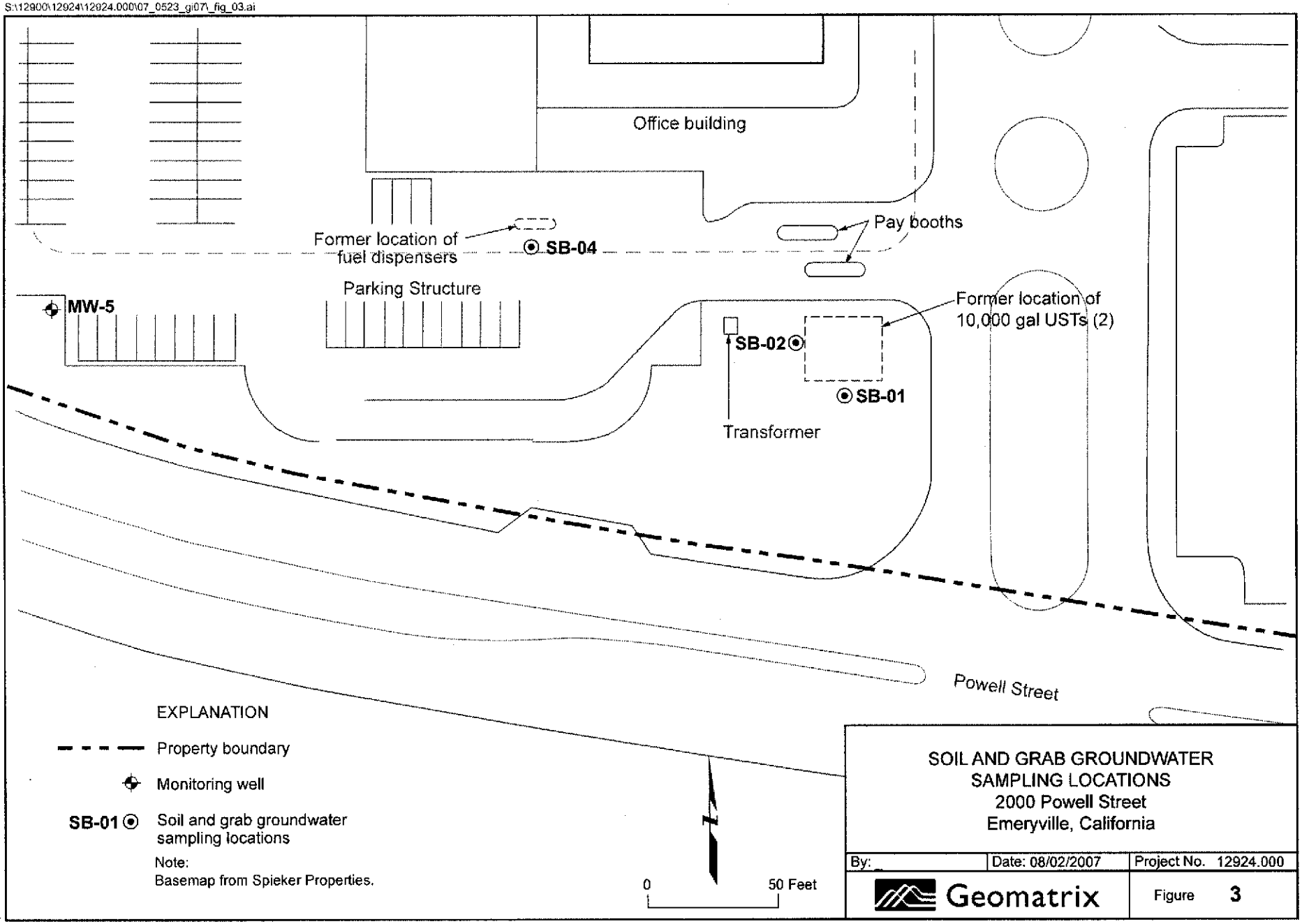

SOIL AND GRAB GROUNDWATER SAMPLING LOCATIONS
2000 Powell Street
Emeryville, California

By:	Date: 08/02/2007	Project No. 12924.000
Geomatrix		Figure 3

ATTACHMENT 3

Table 1
Confirmation Sampling Results
Underground Storage Tanks Removal
2200 Powell Street, Emeryville, California

Sample Location	Sample Depth (feet-bgs)	Date Sampled	Sampling Results					
			TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Lead
Soil Samples Results (mg/kg)								
D-1	0.5	7/10/98	< 1	< .005	< .005	< .005	< .005	7.4
D-2	2	7/10/98	27,000	<25	160	130	1,910	31
EW-1	10	7/10/98	5.5	0.057	0.47	0.15	1.96	67
SW-1	11	7/10/98	< 1	< .005	< .005	< .005	< .005	68
WW-1	12	7/10/98	< 1	< .005	< .005	< .005	< .005	42
Ground Water Sampling Results (mg/l)								
W-1	10	7/10/98	30	1	6.9	0.380	4.5	N/A

NOTES:

D-1 and D-2: Soil samples collected in former location of fuel dispensers.

EW-1, SW-1, WW-1: Soil samples collected from sidewalls of USTs excavation.

W-1: ground water sample collected from USTs excavation.

feet-bgs: feet below ground surface.

TPH-G: Total petroleum hydrocarbons quantified as gasoline.

NA = Not Analyzed

Laboratory analysis performed by Curtis and Tompkins Ltd., Berkeley, California.

8 of 2

Background Chemical Concentrations in Soil and Groundwater[1]

Sample ID	Sample Date	Constituents Detected						
		TPHg[2]	TPHd[3]	Oil & Grease	Benzene	Toluene	Ethyl-benzene	Xylenes
Soil Samples (milligrams per kilogram)								
MW-1	Jan-89	1,100	1,500	9,000	0.14	7	6.6	86
MW-2	Jan-89	44	170	40,000	0.26	0.48	0.50	7.2
MW-3	Jan-89	ND[4]	12	12	ND	ND	ND	ND
MW-4	Jan-89	3	89	21,000	0.1	0.72	0.14	1.6
MW-5	Jan-89	ND	27	11,000	ND	ND	ND	ND
Groundwater Samples (micrograms per liter)								
MW-1	Jan-89	2,500	290	1,400	4	430	9	140
	May-89	7,700	11,000	3,800,000	47	680	35	550
MW-2	Jan-89	67	< 50	<1,000	1.1	0.57	< 0.5	0.9
	May-89	130	430	7,200	14	0.84	< 0.3	1.2
MW-3	Jan-89	<50	540	<1,000	<0.5	<0.5	<0.5	0.64
	May-89	30	420	6,100	1.4	0.52	<0.3	0.3
MW-4	Jan-89	120	540	3,500	0.93	7.9	1.9	6.9
	May-89	150	500	7,200	1.7	3.9	1.1	3.8
MW-5	Jan-89	< 50	270	<1,000	< 0.5	1.1	< 0.5	1.8
	May-89	34	390	5,000	< 0.3	< 0.3	< 0.3	0.84

Notes:
1. Source: Assessment of Environmental Conditions, Watergate Towers, Emeryville, California, Golder Associates, Inc., June 16, 1997
2. TPHg – total petroleum hydrocarbons quantified as gasoline
3. TPHd – total petroleum hydrocarbons quantified as diesel
4. ND – not detected

The site formerly contained two underground storage tanks (USTs), two fuel dispensers, and associated piping located south of Tower III (Figure 2). The USTs and fuel dispensers were removed in 1998 and the associated fuel pipelines were reportedly rinsed and abandoned in-place. Analytical results of samples collected during UST removal activities indicated the presence of low concentrations of petroleum hydrocarbons in soil from the excavated tank pit. Analytical results of a water sample collected from the UST excavation indicated that the water in the excavation was impacted with total TPHg, benzene, toluene, ethylene, and xylenes (collectively BTEX) at concentrations of 30,000, 1,000, 6,900, 380, and 4,500 micrograms per liter, respectively. Additionally, TPHg was detected in a shallow soil sample collected adjacent to the former fuel dispensers at a concentration of 27,000 milligrams per kilogram.

ATTACHMENT 4

Geomatrix

TABLE 1

SUMMARY OF SOIL AND GRAB GROUNDWATER SAMPLING RESULTS

Watergate Towers
Emeryville, California

SOIL

Sample ID	Date	Sample Depth (feet bgs)	SOIL SAMPLE ANALYTICAL RESULTS													
			TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	TAME	EDB	1,2-DCA	Ethanol
Soil sample concentrations reported in millligram per kilogram (mg/kg).																
SB-01-7	7/17/2007	7	6.5 J	<0.93[2]	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.096	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.96
SB-02-7	7/17/2007	7	80 J	<0.93	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.094	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.94
SB-04-6	7/17/2007	6	120 J	<0.94	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.098	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.98
Environmental Screening Level[3]			500	400	0.38	9.3	32	11	5.6	110	--	--	--	0.02	0.07	45

GROUNDWATER

Sample ID	Date	Sample Depth (feet bgs)	GRAB GROUNDWATER SAMPLE ANALYTICAL RESULTS													
			TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	TAME	EDB	1,2-DCA	Ethanol
Grab groundwater sample concentrations reported in microgram per liter (µg/l).																
SB-01-GW	7/17/2007	NA	390/420[4] J	<50/<50	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	1.6/1.2	<10/<10	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<1,000/<1,000
SB-02-GW	7/17/2007	NA	**950 J**	65	0.59	1.2	<0.5	0.82	69	<10	<0.5	<0.5	6.6	<0.5	<0.5	<1,000
SB-04-GW	7/17/2007	NA	290 J	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<10	0.54	<0.5	<0.5	<0.5	<0.5	<1,000
Environmental Screening Level[5]			640	500	46	130	290	100	1800	18,000	--	--	--	150	200	50,000

Notes:

1. Grab groundwater samples were collected by Geomatrix Consultants, Inc., of Oakland, California, and analyzed by Curtis & Tompkins, of Berkeley, California for TPHd and TPHg using EPA Method 8015B following silica gel prepartation; and benzene, toluene, ethylbenzene, total xylenes, MTBE, TBA, DIPE, ETBE, TAME, 1,2-DCA, EDB, and ethanol using EPA Method 8260B.
2. < = Analyte not detected above laboratory reporting limit.
3. Environmental Screening Levels (ESLs). San Francisco Bay Regional Water Quality Control Board (Water Board), Interim Final February 2005.
   Table B-2. Commercial/Industrial Land Use: Fianl ESL, Shallow Soil (equal or less than 3 meters bgs), groundwater IS NOT a current or potential drinking water resource (mg/kg).
4. / = Indicates blind duplicate sample collected from boring. Blind duplicate sample results are shown with the grab groundwater sample results.
5. ESLs. Water Board, Interim Final February 2005.
   Table F-1b. Groundwater Screening Levels: Final Groundwater Screening Level, groundwater IS NOT a current or potential drinking water resource (µg/l).
6. **Bolded** values are detections greater than the environmental screening level.

Abbreviations:

"--" = No screening level published
1,2-DCA = 1,2-dichloroethane
bgs = below ground surface
DIPE = di-isopropyl ether
EDB = 1,2-dibromoethane
ETBE = ethyl tert-butyl ether
MTBE = methyl tert-butyl ether
NA = Not Applicable
TAME = tert-amyl methyl ether
TBA = tert-butyl alcohol
TPHd = total petroleum hydrocarbons quantified as diesel
TPHg = total petroleum hydrocarbons quantified as gasoline

Data Flags:

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

I:\Doc_Safe\12000s\12924\3000 REPORT\UST Investigation\2 Tbl\Table 1 results

ATTACHMENT 5

pg 1

TABLE 2A. MONITORING WELL NO. 2 ORGANIC COMPOUNDS DETECTED AND WATER QUALITY CRITERIA

PARAMETER (a)	UNITS	SAMPLING EVENT				DRINKING WATER CRITERIA			MARINE CRITERIA		
		January	Detection Limit	May	Detection Limit	PRIMARY MCLs (d), (e), (l)	SECONDARY MCLs (d)	ACTION LEVELS (f)	S.F. BAY BASIN PLAN (g)	CALIFORNIA OCEAN PLAN (h)	EPA ACUTE TOXICITY (i)
VOLATILE ORGANICS (EPA Method 8240)											
Benzene	(ug/L)	4.9	2.0	14	2.0	1					5100
2-Butanone	(ug/L)	--	10.0	--	10.0	(b)					224000
Total 1,2-Dichloroethene	(ug/L)	--	2.0	--	2.0	0.007		16			430
Ethyl benzene	(ug/L)	--	2.0	--	2.0	680					
2-Hexanone	(ug/L)	--	10.0	--	10.0						6300
Toluene	(ug/L)	--	2.0	--	2.0	2000		100			
Total xylenes	(ug/L)	--	2.0	--	2.0	1750		620			
EXTRACTABLE ORGANICS (EPA Method 8270)											
Acenaphthene	(ug/L)	--	2.0	--	2.0				(k)		970
Benzoic acid	(ug/L)	--	10.0	12	10.0						
Benzo(a)anthracene	(ug/L)	--	2.0	3.6	2.0				(k)		(k)
Benzo(b)fluoranthene	(ug/L)	--	2.0	5.7	2.0				(k)		(k)
Benzo(k)fluoranthene	(ug/L)	--	2.0	7.5	2.0				(k)		(k)
Benzo(g,h,i)perylene	(ug/L)	--	2.0	7.8	2.0				(k)		(k)
Benzo(a)pyrene	(ug/L)	--	2.0	6.8	2.0						(k)
Benzyl alcohol	(ug/L)	--	2.0	--	2.0				(k)		
Chrysene	(ug/L)	--	2.0	4.0	2.0				(k)		(k)
Dibenz(a,h)anthracene	(ug/L)	--	2.0	7.9	2.0						(k)
Diethylphthalate	(ug/L)	--	2.0	--	2.0						2944
2,4-Dimethylphenol	(ug/L)	--	2.0	--	2.0			400 (c)	(j)	(j)	
Fluorene	(ug/L)	--	2.0	--	2.0				(k)		(k)
2-Methylnaphthalene	(ug/L)	--	2.0	--	2.0				(k)		
2-Methylphenol	(ug/L)	--	2.0	--	2.0				(j)	(j)	
4-Methylphenol	(ug/L)	--	2.0	--	2.0				(j)	(j)	
Naphthalene	(ug/L)	--	2.0	2.2	2.0				(k)		2350
Indeno(1,2,3-cd)pyrene	(ug/L)	--	2.0	8.1	2.0				(k)		(k)
Phenanthrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Phenol	(ug/L)	--	2.0	--	2.0			1	(j)	(j)	5800
Sum of phenols	(ug/L)	--	2.0	--	2.0				500	30 (j)	
Sum of polynuclear aromatic hydrocarbons	(ug/L)	--	2.0	53.6	2.0				15		300

(a) Compounds listed are only those compounds detected in one or more of the wells sampled. Data for other compounds (not detected) is available in Appendix C.

(b) -- indicates parameter below detection limit. Blank indicates no test performed or no water quality criteria known.

(c) Taste and odor threshold.

(d) Drinking Water Regulations Under the Safe Drinking Water Act. U.S. EPA, Criteria and Standards Division, Washington D.C. February, 1989.

(e) State of California Department of Health Services, Recently Adopted Maximum Contaminant Levels for Contaminants in Drinking Water, April, 1989. California code of Regulations. Title 22.

(f) Drinking Water Action Levels Recommended by the State of California Department of Health Services, April 19, 1989.

(g) San Francisco Bay Basin Water Quality Control Plan, California RWQCB, San Francisco Bay Region. December 1986. Table IV-1 (Shallow Water).

(h) California State Water Resources Control Board. 1983 Water Quality Control Plan; Ocean Waters of California

(i) U.S. Environmental Protection Agency, Water Quality Advisories, March 1986. and U.S. Environmental Protection Agency, Quality Criteria for Water, May 1986 and various updates.

(j) Refer to "Sum of phenols" for comparison criteria. Criteria for California Ocean Plan refers to total non-chlorinated phenols.

(k) Refer to "Sum of polynuclear aromatic hydrocarbons" for comparison to criteria.

(l) If state and federal guidelines both exist, the lower of the two concentration limits is given.

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TABLE 2B. MONITORING WELL NO. 2 WATER QUALITY DATA, INORGANICS, AND HYDROCARBONS DETECTED

PARAMETER	UNITS	SAMPLING EVENT				DRINKING WATER CRITERIA			MARINE CRITERIA		
		January	Detection Limit	May	Detection Limit	PRIMARY MCLs (d), (e), (j)	SECONDARY MCLs (d)	ACTION LEVELS (f)	S.F. BAY BASIN PLAN (g)	CALIFORNIA OCEAN PLAN (h)	EPA ACUTE TOXICITY (i)
WATER QUALITY PARAMETERS (a)											
Volume Removed	gal	50		10		(c)					
No. of Casing Volumes				3.5							
pH		7.8		7							
Specific Conductance	umhos/cm	11000		17000			1600				
Salinity (vs. seawater)	%	8		11.5							
Turbidity (b)	NTU	slight		18			5				
Temperature	C	19		19							
Color		Lt. Brown		Gray							
Odor		hydrocarbon		Asphalts							
TITLE 22 TOTAL METALS AND ASBESTOS											
Antimony	(mg/L)	-- (c)	5.0	--	0.1						
Arsenic	(mg/L)	--	0.01	0.0098	0.001	0.050			0.020	0.008	2.319
Barium	(mg/L)	1.4	0.2	0.68	0.02	1.0					
Beryllium	(mg/L)	--	0.1	--	0.01						
Cadmium	(mg/L)	--	0.1	--	0.01	0.010			0.010	0.003	
Chromium VI	(mg/L)	--	0.005	--	0.05	0.05			0.011	0.002	
Chromium III	(mg/L)	--	0.05	0.005	0.005	0.05					10.3
Cobalt	(mg/L)	--	0.5	--	0.05						
Copper	(mg/L)	--	0.1	--	0.01		1.0		0.020	0.005	
Lead	(mg/L)	0.2	0.005	0.18	0.005	0.050			0.0056	0.008	
Mercury	(mg/L)	--	0.001	--	0.001	0.002			0.001	0.000140	
Molybdenum	(mg/L)	--	0.5	0.050	0.05						
Nickel	(mg/L)	--	0.5	--	0.05				0.0071	0.020	
Selenium	(mg/L)	--	0.01	--	0.01	0.010					
Silver	(mg/L)	--	0.1	0.012	0.01	0.050			0.0023	0.000450	
Thallium	(mg/L)	--	5.0	0.11	0.5						2.13
Vanadium	(mg/L)	--	0.5	--	0.05						
Zinc	(mg/L)	--	0.1	0.18	0.01		5.0		0.058	0.020	
Asbestos	(fibers/g)			--	100	7					
PETROLEUM HYDROCARBONS AND OIL AND GREASE (EPA Methods 8015/8020)											
Low/Medium BP Hydrocarbons Gasoline Standard	(ug/L)	67	50.0	130	30.0						
Benzene	(ug/L)	1.1	0.5	14	0.3	1					5100
Toluene	(ug/L)	0.57	0.5	0.84	0.3	2		100			6300
Ethyl Benzene	(ug/L)	--	0.5	--	0.3	680					430
Total Xylenes	(ug/L)	0.9	0.5	1.2	0.3	1750					
High BP Hydrocarbons Diesel Standard	(ug/L)	--	50.0	430	50.0						
Oil and Grease (EPA Method 413.2)	(mg/L)	--	1.0	7.2	1.0						

(a) Values estimated to two significant figures based on field measurements.

(b) Due to settlement of particulates, turbidity varied with time from sample collection. Values are approximate.

(c) -- indicates parameter below detection limit. Blank indicates no test performed or no water quality criteria known.

(d) Drinking Water Regulations Under the Safe Drinking Water Act. U.S. EPA, Criteria and Standards Division, Washington D.C. February, 1989.

(e) State of California Department of Health Services, Recently Adopted Maximum Contaminant Levels for Contaminants in Drinking Water. April, 1989. California code of Regulations. Title 22.

(f) Drinking Water Action Levels Recommended by the State of California Department of Health Services, April 19, 1989.

(g) San Francisco Bay Basin Water Quality Control Plan, California RWQCB, San Francisco Bay Region. December 1986. Table IV-1 (Shallow Water).

(h) California State Water Resources Control Board. 1983 Water Quality Control Plan; Ocean Waters of California.

(i) U.S. Environmental Protection Agency, Water Quality Advisories. March 1986. and U.S. Environmental Protection Agency, Quality Criteria for Water. May 1986 and various updates.

(j) If state and federal guidelines both exist, the lower of the two concentration limits is given.

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TABLE 5A. MONITORING WELL NO. 5 ORGANIC COMPOUNDS DETECTED

PARAMETER (a)	UNITS	SAMPLING EVENT				DRINKING WATER CRITERIA			MARINE CRITERIA		
		January	Detection Limit	May	Detection Limit	PRIMARY MCLs (d), (e), (l)	SECONDARY MCLs (d)	ACTION LEVELS (f)	S.F. BAY BASIN PLAN (g)	CALIFORNIA OCEAN PLAN (h)	EPA ACUTE TOXICITY (i)
VOLATILE ORGANICS (EPA Method 8240)											
Benzene	(ug/L)	--	2.0	--	2.0	1					5100
2-Butanone	(ug/L)	--	10.0	--	10.0	(b)					224000
Total 1,2-Dichloroethene	(ug/L)	--	2.0	--	2.0	0.007		16			430
Ethyl benzene	(ug/L)	--	2.0	--	2.0	680					
2-Hexanone	(ug/L)	--	10.0	--	10.0						6300
Toluene	(ug/L)	--	2.0	3.3	2.0	2000		100			
Total xylenes	(ug/L)	2.3	2.0	3.0	2.0	1750		620			
EXTRACTABLE ORGANICS (EPA Method 8270)											
Acenaphthene	(ug/L)	--	2.0	--	2.0				(k)		970
Benzoic acid	(ug/L)	--	10.0	--	10.0						
Benzo(a)anthracene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzo(b)fluoranthrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzo(k)fluoranthrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzo(g,h,i)perylene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzo(a)pyrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzyl alcohol	(ug/L)	--	2.0	--	2.0						
Chrysene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Dibenz(a,h)anthracene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Diethylphthalate	(ug/L)	--	2.0	--	2.0						2944
2,4-Dimethylphenol	(ug/L)	--	2.0	--	2.0			400 (c)	(j)	(j)	
Fluorene	(ug/L)	--	2.0	--	2.0				(k)		(k)
2-Methylnaphthalene	(ug/L)	--	2.0	--	2.0				(k)		
2-Methylphenol	(ug/L)	--	2.0	--	2.0				(j)	(j)	
4-Methylphenol	(ug/L)	--	2.0	45	2.0				(j)	(j)	
Naphthalene	(ug/L)	--	2.0	--	2.0				(k)		2350
Indeno(1,2,3-cd)pyrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Phenanthrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Phenol	(ug/L)	--	2.0	--	2.0			1.0	(j)	(j)	5800
Sum of phenols	(ug/L)	--	2.0	45	2.0				500	30 (j)	
Sum of polynuclear aromatic hydrocarbons	(ug/L)	--	2.0	--	2.0				15		300

(a) Compounds listed are only those compounds detected in one or more of the wells sampled. Data for other compounds (not detected) is available in Appendix C.

(b) -- indicates parameter below detection limit. Blank indicates no test performed or no water quality criteria known.

(c) Taste and odor threshold.

(d) Drinking Water Regulations Under the Safe Drinking Water Act. U.S. EPA, Criteria and Standards Division, Washington D.C. February, 1989.

(e) State of California Department of Health Services, Recently Adopted Maximum Contaminant Levels for Contaminants in Drinking Water. April, 1989. California code of Regulations. Title 22.

(f) Drinking Water Action Levels Recommended by the State of California Department of Health Services, April 19, 1989.

(g) San Francisco Bay Basin Water Quality Control Plan, California RWQCB, San Francisco Bay Region. December 1986. Table IV-1 (Shallow Water).

(h) California State Water Resources Control Board. 1983 Water Quality Control Plan; Ocean Waters of California

(i) U.S. Environmental Protection Agency, Water Quality Advisories. March 1986. and U.S. Environmental Protection Agency, Quality Criteria for Water. May 1986 and various updates.

(j) Refer to "Sum of phenols" for comparison criteria. Ctiteria for California Ocean Plan refers to total non-chlorinated phenols.

(k) Refer to "Sum of polynuclear aromatic hydrocarbons" for comparison to criteria.

(l) If state and federal guidelines both exist, the lower of the two concentration limits is given.

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TABLE 5B. MONITORING WELL NO. 5 WATER QUALITY DATA, INORGANICS, AND HYDROCARBONS DETECTED

PARAMETER	UNITS	SAMPLING EVENT				DRINKING WATER CRITERIA			MARINE CRITERIA		
		January	Detection Limit	May	Detection Limit	PRIMARY MCLs (d), (e), (j)	SECONDARY MCLs (d)	ACTION LEVELS (f)	S.F. BAY BASIN PLAN (g)	CALIFORNIA OCEAN PLAN (h)	EPA ACUTE TOXICITY (i)
WATER QUALITY PARAMETERS (a)											
Volume Removed	gal	40		10		(e)					
No. of Casing Volumes		16		4							
pH		7.8		6.6							
Specific Conductance	umhos/cm	4300		4100			1600				
Salinity	%	3		2.8							
Turbidity (b)	NTU	very slight		25			5				
Temperature	C	19		21							
Color		lt. brown		gray							
Odor		hydrocarbon		hydrocarbon							
TITLE 22 METALS AND ASBESTOS											
Antimony	(mg/L)	-- (c)	0.5	--	0.1						
Arsenic	(mg/L)	0.037	0.01	0.027	0.001	0.050			0.020	0.008	2.319
Barium	(mg/L)	0.74	0.02	0.65	0.02	1.0					
Beryllium	(mg/L)	--	0.01	--	0.01						
Cadmium	(mg/L)	--	0.01	--	0.01	0.010			0.010	0.003	
Chromium VI	(mg/L)	--	0.005	--	0.05	0.050			0.011	0.002	
Chromium III	(mg/L)	--	0.005	0.015	0.005	0.05					10.3
Cobalt	(mg/L)	--	0.05	0.05	0.05						
Copper	(mg/L)	--	0.01	--	0.01		1.0		0.020	0.005	
Lead	(mg/L)	0.07	0.005	0.16	0.005	0.050			0.0056	0.008	
Mercury	(mg/L)	--	0.001	--	0.001	0.002			0.001	0.000140	
Molybdenum	(mg/L)	--	0.05	--	0.05						
Nickel	(mg/L)	0.078	0.05	--	0.05				0.0071	0.020	
Selenium	(mg/L)	--	0.01	--	0.01	0.010					
Silver	(mg/L)	--	0.01	--	0.01	0.050			0.0023	0.000450	
Thallium	(mg/L)	--	0.5	0.19	0.5						2.13
Vanadium	(mg/L)	--	0.05	--	0.05						
Zinc	(mg/L)	0.076	0.01	0.18	0.01		5.0		0.058	0.020	
Asbestos	(fibers/g)			--	100	7					
PETROLEUM HYDROCARBONS AND OIL AND GREASE (EPA Methods 8015/8020)											
Low/Medium BP Hydrocarbons Gasoline Standard	(ug/L)	--	50.0	34	30.0						5100
Benzene	(ug/L)	--	0.5	--	0.3	1					6300
Toluene	(ug/L)	1.1	0.5	--	0.3	2		100			430
Ethyl Benzene	(ug/L)	--	0.5	--	0.3	680					
Total Xylenes	(ug/L)	1.8	0.5	0.84	0.3	1750					
High BP Hydrocarbons Diesel Standard	(ug/L)	270	50.0	390	50.0						
Oil and Grease (EPA Method 413.2)	(mg/L)	--	1.0	5.0	1.0						

(a) Values estimated to two significant figures based on field measurements.
(b) Due to settlement of particulates, turbidity varied with time from sample collection. Values are approximate.
(c) -- indicates parameter below detection limit. Blank indicates no test performed or no water quality criteria known.
(d) Drinking Water Regulations Under the Safe Drinking Water Act. U.S. EPA, Criteria and Standards Division, Washinton D.C. February, 1989.
(e) State of California Department of Health Services, Recently Adopted Maximum Contaminant Levels for Contaminants in Drinking Water. April, 1989. California code of Regulations. Title 22.
(f) Drinking Water Action Levels Recommended by the Department of Health Services. State of California Department of Health Services, April 19, 1989.
(g) San Francisco Bay Basin Water Quality Control Plan, California RWQCB, San Francisco Bay Region. December 1986. Table IV-1 (Shallow Water).
(h) California State Water Resources Control Board. 1983 Water Quality Control Plan; Ocean Waters of California.
(i) U.S. Environmental Protection Agency, Water Quality Advisories. March 1986. and U.S. Environmental Protection Agency, Quality Criteria for Water. May 1986 and various updates.
(j) If state and federal guidelines both exist, the lower of the two concentration limits is given.

PROJECT: WATERGATE TOWERS Emeryville, California	**Log of Boring No. SB-01**
BORING LOCATION: 5' south of former UST area	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling, Inc.	DATE STARTED: 7/17/07 / DATE FINISHED: 7/17/07
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 18.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 7720 DT	DEPTH TO WATER (ft.) FIRST: 13.5 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [4' x 1.5"]	LOGGED BY: P. Jorgensen/T. Klitzke
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: P. Jorgensen / REG. NO. PG 7806

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1					POORLY GRADED SAND with CLAY(SP-SC): olive brown (2.5Y 4/3), moist, 90% fine to medium sand, 10% nonplastic fines	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2						
3					80% fine to medium sand, 10% fine to coarse gravel, 10% nonplastic fines	Hand augered to 3 feet bgs.
4					brick debris	
5						
6	SB-01-7			24	POORLY GRADED SAND(SP): dark gray (2.5YR 4/1), wet, 95% fine to medium sand, 5% fines	
7					LEAN CLAY with SAND(CL): dark greenish gray (10GY 4/1), moist, 75% fines, 25% fine to medium sand, medium plasticity, firm	
8						
9				1.4	CLAYEY SAND with GRAVEL(SC): dark gray (N 4/), moist, 60% fine to coarse sand, 25% low plasticity fines, 15% fine gravel, wood debris [FILL]	
10						
11						Grab groundwater sample SB-01-GW collected through 5 feet of 1-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 13 to 18 feet bgs. Drive casing retracted from bottom of boring to 13 feet bgs to maintain surface seal.
12						
13				0.2	rubber debris	
14	SB-01-15				CLAYEY SAND(SC): black (N 2.5/), wet, 75% fine to coarse sand, 25% low plasticity fines, abundant wood debris [FILL]	
15						

PROJECT: WATERGATE TOWERS
Emeryville, California

Log of Boring No. SB-01 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16					CLAYEY SAND(SC): cont'd	
17						
18					Bottom of boring at 18.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						

PROJECT: WATERGATE TOWERS Emeryville, California	**Log of Boring No. SB-02**
BORING LOCATION: 5' west former UST area	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling, Inc.	DATE STARTED: 7/17/07 / DATE FINISHED: 7/17/07
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 7720 DT	DEPTH TO WATER (ft.) FIRST: 13.5 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [4' x 1.5"]	LOGGED BY: P. Jorgensen/T. Klitzke
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: P. Jorgensen / REG. NO. PG 7806

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
1					CLAYEY SAND(SC): dark olive brown (2.5Y 3/3), moist, 70% fine to medium sand, 30% medium plasticity fines	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2						
3					dark gray (N 4/)	
4					70% fine to medium sand, 20% meidum plasticity fines, 10% fine gravel, wood debris, plastic debris, tar shingles [FILL]	Hand augered to 4 feet bgs.
5						
6						
7	SB-02-7			0.2		
8						
9						
10					very dark gray (N 3/), 60% fine to medium sand, 30% medium plasticity fines, 10% fine to coarse gravel, brick debris [FILL]	
11						Grab groundwater sample SB-02-GW collected through 5 feet of 1-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 14 to 19 feet bgs. Drive casing retracted from bottom of boring to 14 feet bgs to maintain surface seal.
12						
13						
14	SB-02-14				POORLY GRADED GRAVEL with SAND(GP): greenish gray (10Y 5/2), wet, 70% fine to coarse gravel, 25% fine to coarse sand, 5% fines	
15						

PROJECT: WATERGATE TOWERS
Emeryville, California

Log of Boring No. SB-02 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16					POORLY GRADED GRAVEL with SAND(GP): cont'd	
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19					Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: WATERGATE TOWERS Emeryville, California	**Log of Boring No. SB-04**
BORING LOCATION: Fuel dispenser area	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling, Inc.	DATE STARTED: 7/17/07 / DATE FINISHED: 7/17/07
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 16.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 7720 DT	DEPTH TO WATER (ft.) FIRST: 12.0 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [4' x 1.5"]	LOGGED BY: P. Jorgensen/T. Klitzke
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: P. Jorgensen / REG. NO.: PG 7806

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
0					ASPHALTIC CONCRETE: (3 inches thick)	
1					LEAN CLAY(CL): greenish black (10Y 2.5/1), moist, 90% fines, 10% fine to medium sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2						
3						Hand augered to 3 feet bgs.
4						
5	SB-04-6			0.2	trace coarse gravel	
6						
7				0.2	brick debris dark greenish gray (5GY 4/1)	
8				0.2		
9						
10					GRAVELLY LEAN CLAY(CL): very dark gray (N 3/), moist, 70% fines, 25% coarse gravel, 5% fine to medium sand, low to medium plasticity, firm	
11						Grab groundwater sample SB-04-GW collected through 5 feet of 1-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 11 to 16 feet bgs. Drive casing retracted from bottom of boring to 11 feet bgs to maintain surface seal.
12	SB-04-12.5				wet	
13					CLAYEY SAND(SC): black (N 2.5/), wet, 65% fine to medium sand, 35% low plasticity fines	
14						
15						

OAKBOREV (REV. 3/00)

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PROJECT: WATERGATE TOWERS
Emeryville, California

Log of Boring No. SB-04 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16		X		0.2	wood debris, plastic debris CLAYEY SAND(SC): cont'd	
					Bottom of boring at 16.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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Woodward-Clyde Consultants PROJECT NAME: Lathrop Property NO. 8810235A

BORING LOCATION	MW-2	ELEVATION AND DATUM	
DRILLING AGENCY	Datum Exploration	DRILLER Jim / Gary	DATE STARTED / DATE FINISHED January 12,1989
DRILLING EQUIPMENT	CME - 75	COMPLETION DEPTH 25'	SAMPLER 2"California Modified Type
DRILLING METHOD	8" Hollowstem Augers	DRILL BIT CME Carbide	NO. OF SAMPLES DIST. N/A / UNDIST. N/A
SIZE AND TYPE OF CASING	2" PVC	WATER LEVEL FIRST 10.5'	COMPL. N/A / 24 HRS. N/A
TYPE OF PERFORATION	0.010" Slotted FROM 5 TO 25 FL.	LOGGED BY: Chuck Rambo	CHECKED BY: Alan Lattanner
SIZE AND TYPE OF PACK	Lonestar #2/12 Monterey Sand FROM 4 TO 25 FL.		
TYPE OF SEAL	NO. 1 Bentonite Pellets FROM 2.5 TO 4 FL.		
	NO. 2 Neat Cement FROM 0 TO 2.5 FL.		

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology / Piezometer Installation	Water Content	Piezometer Data	SAMPLES: Drive Number / Sample Number / Recov. (Feet.) / Blow Count	REMARKS (Drill Rate, Fluid Loss, Odor, etc.)
0	FILL - SILTY SAND (SM) -with clay -with gray gravel -brown -moist				1: 1 2 3 4 / 4 5 8	OVA = 0 ppm
5	FILL - SILTY CLAY (CL) -with sand lenses -black				2: 1 2 3 4 / 12 16 9	OVA = 8 ppm from the drum of cuttings Petroleum Odor from the drums
10	-with concrete and wood debris		1/18/89		3: 3 4 / 8 4 7	
15	-with roofing paper, asphalt shingles, and wood debris				4: 1 2 3 4 / 14 15 10	OVA = 50 ppm from the drum of cuttings
20	SILTY CLAY (CH) -dark gray -moist -very soft				5: 1 2 3 4 / 1 2 3	OVA = 0 ppm
25	Bottom of boring at 25'					
30						
35						

FIELD LOG OF BORING NO. MW-2 SHEET 1 OF 1

Woodward-Clyde Consultants

PROJECT NAME: Lathrop Property NO. 8810235A

BORING LOCATION	MW-5			ELEVATION AND DATUM					
DRILLING AGENCY	Datum Exploration	DRILLER	Jim / Gary	DATE STARTED / DATE FINISHED	January 16,1989				
DRILLING EQUIPMENT	CME - 75			COMPLETION DEPTH	25'			SAMPLER	2"California Modified Type
DRILLING METHOD	8" Hollowstem Augers	DRILL BIT	CME Carbide	NO. OF SAMPLES	DIST. N/A			UNDIST.	N/A
SIZE AND TYPE OF CASING	2" PVC			WATER LEVEL	FIRST 9' to 10'			COMPL. N/A	24 HRS. N/A
TYPE OF PERFORATION	0.010" Slotted	FROM 5 TO 25 FT.		LOGGED BY:				CHECKED BY:	
SIZE AND TYPE OF PACK	Lonestar #2/12 Monterey Sand	FROM 4 TO 25 FT.		Carl Parten				Alan Lattanner	
TYPE OF SEAL	NO. 1 Bentonite Pellets	FROM 1 TO 4 FT.							
	NO. 2 Neat Cement	FROM 0 TO 1 FT.							

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology / Piezometer Installation	Water Content	Piezometer Data	SAMPLES: Drive Number	Sample Number	Recov. (Feet)	Blow Counts	REMARKS (Drill Rate, Fluid Loss, Odor, etc.)
0	FILL - SILTY CLAY (CH) -gray -damp -medium stiff								
5	FILL - CLAYEY SAND (SC) -gray -well sorted -damp -medium dense				1	2 3 4		8 6 7	OVA = 1000+ ppm Slight Sour Odor
	-moist		1/18/89						OVA Readings while drilling 500 - 900 ppm
10	FILL - CLAYEY SAND (SC) -gray -wet -loose -with sandstone fragments to 1"				2	1		5 5 6	No recovery Redrove with Standard Pen. Sampler
15	FILL - CLAYEY SAND (SC) to SANDY CLAY (CL) -the majority of the sample consists of tar paper and roofing scraps				3	2 3 4		8 18 40	OVA = 20 to 30 ppm Hydrocarbon Odor
20	SILTY CLAY (CH) -gray to black -wet -soft -"Bay Mud"				4	1 2 3 4		15 15 1	OVA = 50 to 100 ppm Hydrocarbon Odor
25	Bottom of boring at 25'								
30									
35									

FIELD LOG OF BORING NO. MW-5 SHEET 1 OF 1

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