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Golder Associates

January 29, 1998

Our Ref: 973-7187

Mr. Amir Gholami
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Room 250
Alameda, California 94502

RE: UNDERGROUND TANK CLOSURE PLAN, WATERGATE OFFICE COMPLEX, 2200 POWELL STREET, EMERYVILLE, CALIFORNIA

Dear Mr. Gholami:

We have prepared this letter on behalf of Spieker Properties, the owners of the Watergate Office Complex in Emeryville, California. The Watergate Office Complex consists of three multi-story commercial office buildings (Towers I, II and III) on the north side of Powell Street. Currently two underground storage tanks (USTs) are located to the south of Tower III which are associated with a parking garage adjoining the Tower III.

The closure project consists of the removal of two 10,000 gallon capacity double walled USTs, associated fuel and vent piping, and dispensers. In order to protect the paved surface, utilities and sensors inside the parking garage, the section of fuel piping located inside the parking garage will be abandoned in place. Two soil samples will be collected beneath each UST, and one soil sample will be collected beneath the fuel piping located outside the parking garage. The site location is shown in Figure 1, and the site plan is shown in Figure 2. Location of USTs and the associated fuel dispensers scheduled for removal are shown in Figure 3. An Underground Tank Closure Plan will be submitted to Alameda County Health Care Services Agency (ACHCSA) by the UST removal subcontractor Iconco of Oakland, California.

SITE BACKGROUND

Historically the site was a part of San Francisco Bay. Beginning in the 1940s, and until the mid 1960s the site and the surrounding area was filled. Impoundment dikes of soil, rocks and debris were constructed on bay tidelands, and then the area within the dikes was filled with materials including construction debris, foundry casing sands and slag, soil and industrial wastes. In approximately 1968, the property was purchased by F. P. Lathrop and the entire site and the surroundings were capped with engineered fill, pavement and structural foundation slabs.

The existing buildings constitute the first development of the site. The USTs scheduled for removal were installed at the site in 1984-1985. Based on the information provided by Spieker Properties, these double walled USTs and associated piping have been passing the tightness tests (latest test, May 1997) and are not suspected to be leaking.

In 1989, Woodward Clyde Corporation (WCC) performed [redacted] environmental assessments at the site. Five ground water monitoring wells were installed around the property. A range of chemical constituents were detected in soil and ground water samples collected from the site. Tables from WCC's reports that include a summary of soil and ground water chemical data are included as Appendix A. Among other chemical constituents, petroleum hydrocarbons were detected in water samples collected from all ground water monitoring wells, and their presence was attributed to the fill material placed in the diked areas. WCC concluded that there is no significant threat to human health and the environment because the site is "capped," and the concentrations are not of sufficient magnitude.

During late 1996 and 1997, Golder performed a Phase I study at the site on behalf of Spieker Properties who was planning to purchase the property. Golder consulted with the Regional Water Quality Control Board (RWQCB) San Francisco Bay Region regarding the need for further action at the Watergate Office Complex. RWQCB staff reviewed the WCC reports and aerial photographs and concluded that based on the information they reviewed, the site was not a concern to them. The RWQCB staff considered the site to be an area of "random fill" and therefore not subject to reporting requirements under the California Code of Regulations, Title 23, Chapter 15. Further, the RWQCB indicated that since the site is located adjacent to the San Francisco Bay, their agency is the appropriate agency for handling regulatory activities associated with the site. A letter from RWQCB summarizing their opinions is included as Appendix B.

CONCLUSION

Based on the site background and the results of assessment performed at the site, it is indicated that soils and ground water beneath the site and in the surrounding area are contaminated as a result of contaminated fill. The RWQCB has indicated that they do not view remedial actions at the site as warranted at this time. USTs currently scheduled for removal have recently tested tight and thus are not likely to have caused any further soil and ground water impacts at the site.

Once the USTs have been removed and the visual observation of the bottom and sidewalls of excavation indicate that USTs have not been leaking, routine soil samples will be collected. We propose to immediately backfill the excavation after the removal of USTs, which will avoid collection of ground water in the excavation and thus save significant costs associated with dewatering and disposal.

Also we are proposing no over-excavation to be performed to assess or remove potentially contaminated fill material at the site. We are also proposing soil samples beneath the piping be collected only from the section located outside the parking garage in order to protect the paved surface, utilities and sensors inside the parking garage.

At this time we are planning to start the project during the middle of February 1998. Your expedient review and approval of a) the enclosed Underground Tank Closure Plan and b) our request of no over-excavation and immediate backfilling will help keep this project on schedule and will be appreciated. In case you have questions please call us at (510) 239-9000.

Sincerely,

GOLDER ASSOCIATES INC.

Rajeev Cherwoo
Project Engineer

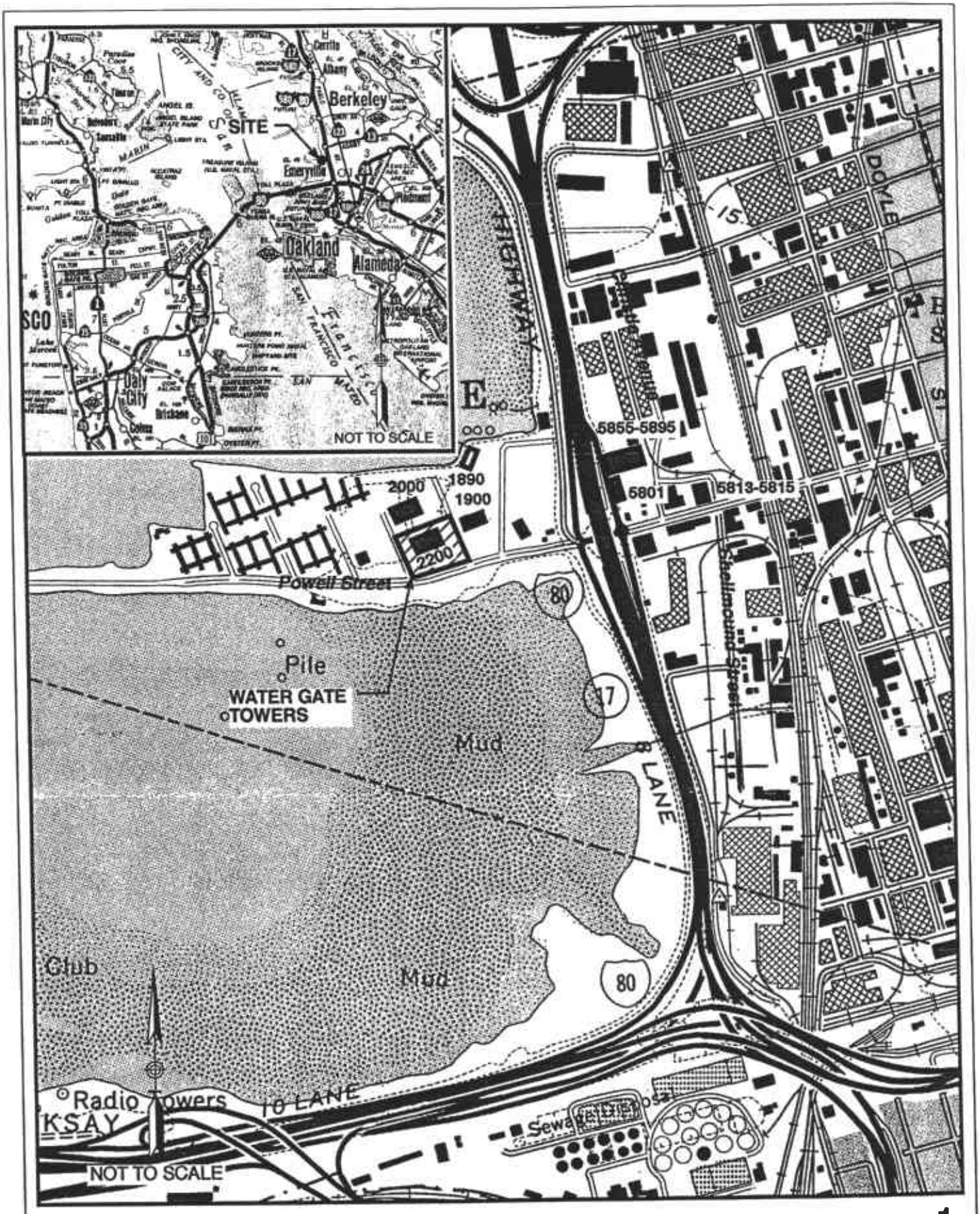
Charles Almestad, R.G, C.Hg.
Associate

RC/CA/mcp

Attachments:

Figure 1	Site Location
Figure 2	Site Plan
Figure 3	Location of USTs and Dispensers Scheduled for Removal
Appendix A	Ground Water Chemical Data for the Site.
Appendix B	Letter to Spieker Properties from the RWQCB, dated December 30, 1997, concerning environmental conditions at the site.
Enclosure	Underground Tank Closure Plan

cc: Jeff White, Spieker Properties

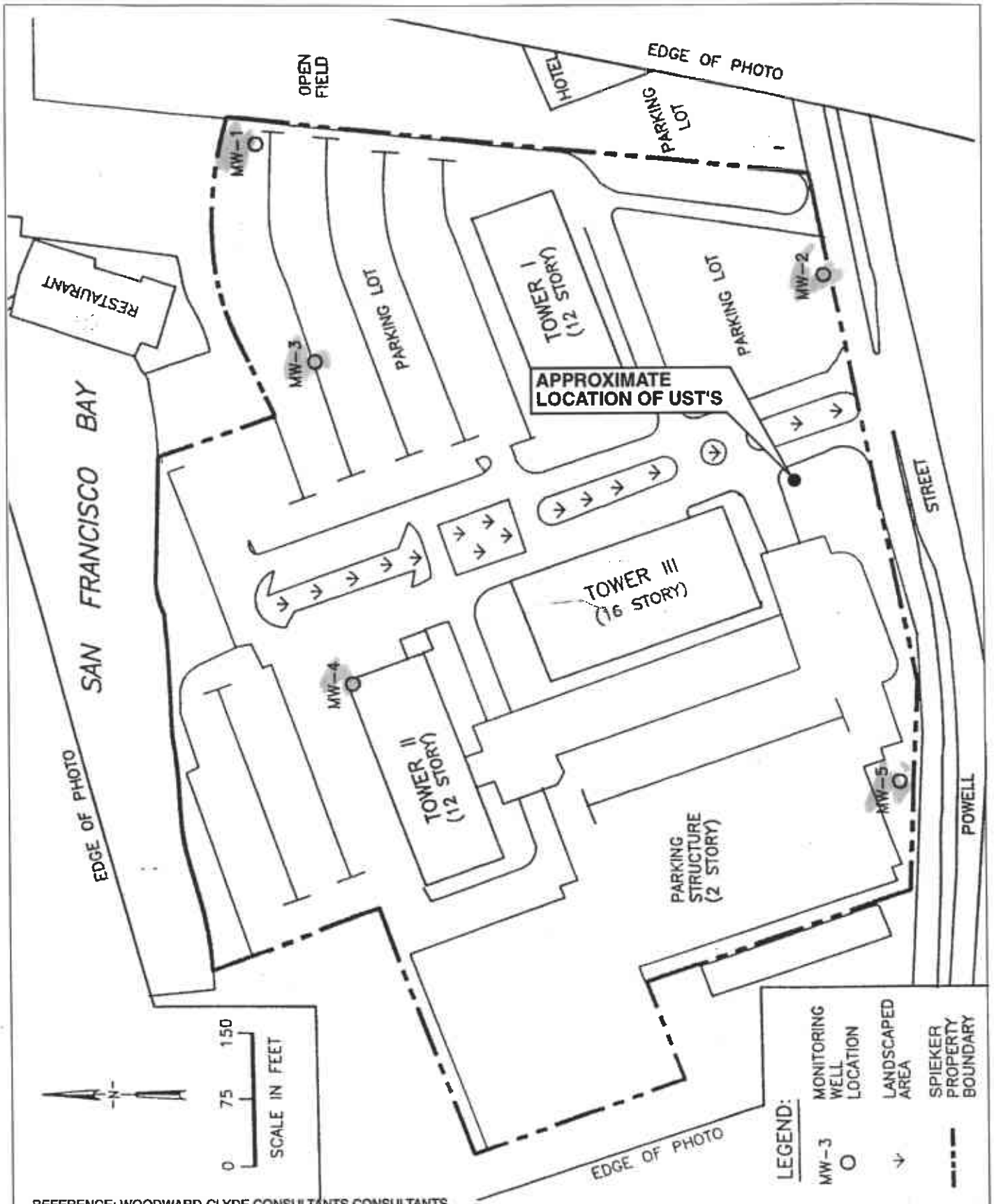


REFERENCE: USGS MAP, OAKLAND WEST QUADRANGLE
1959, PHOTOREVISED 1980.

FIGURE 1
SITE LOCATION MAP
2200 POWELL STREET, EMERYVILLE, CA

PROJECT NO. 973-7167 DRAWING NO. 6258 DATE 11/6/97 DRAWN BY DVR

Golder Associates



REFERENCE: WOODWARD-CLYDE CONSULTANTS CONSULTANTS, APRIL 5, 1985.

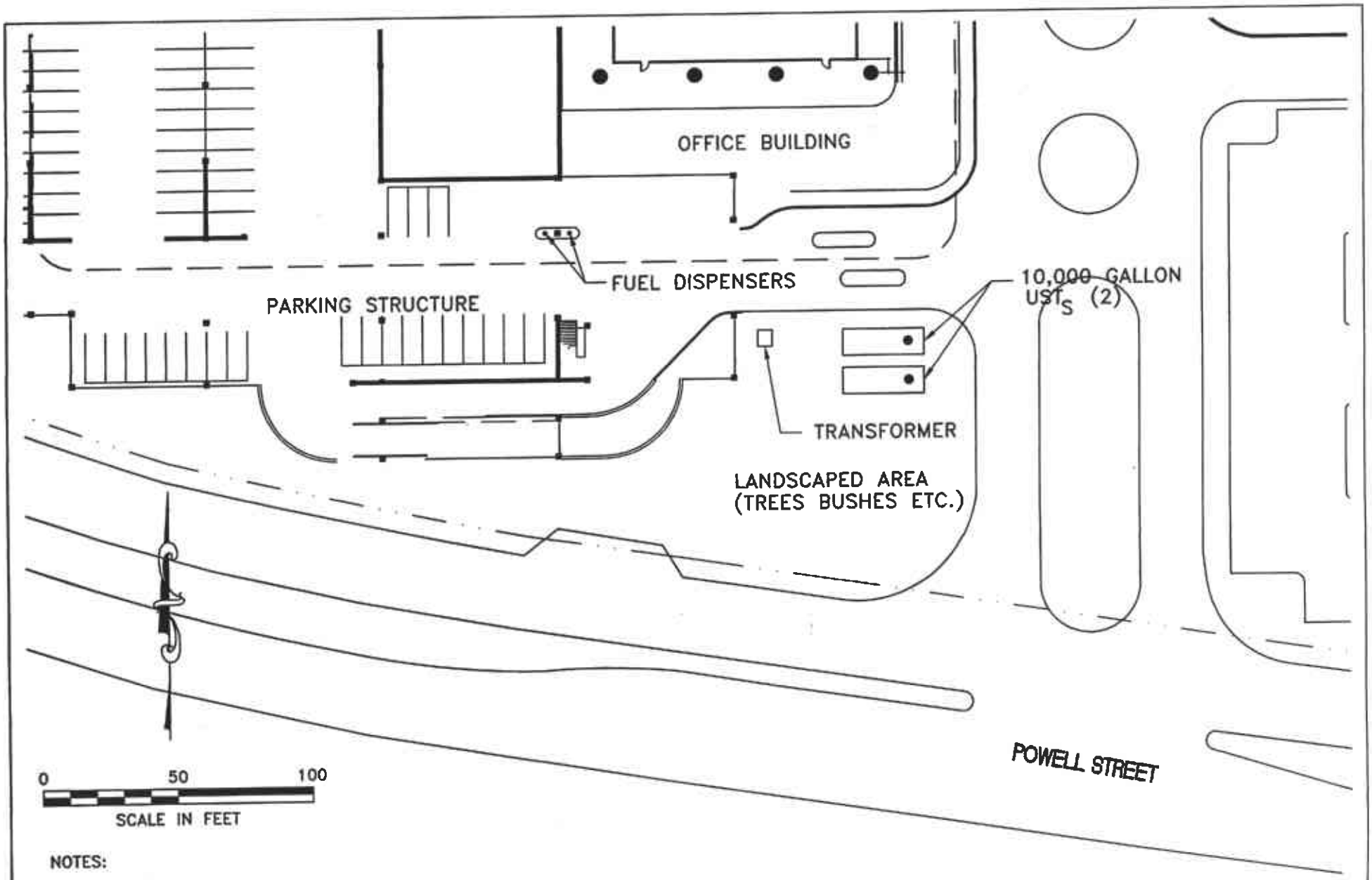
FIGURE **2**

SITE PLAN

SPIEKER PROPERTIES/EMERYVILLE/CA

PROJECT NO. 973-7187.200 DRAWING NO. 5288 DATE 11/21/97 DRAWN BY DVR

Golder Associates



NOTES:

1. BASE MAP PROVIDED BY SPEAKER PROPERTIES.
2. LOCATION OF UNDERGROUND STORAGE TANKS IS APPROXIMATE AND IS BASED ON INFORMATION PROVIDED BY SPEAKER PROPERTIES DURING THE SITE VISIT ON 10/06/97.

FIGURE 3

UST'S AND DISPENSERS LOCATION

2200 POWELL STREET/EMRYVILLE/CA

Golder Associates

DWG ID: \9737187\001\5257 DATE 1-27-98 15:40 DRAWN RMN

APPENDIX A

Ground Water Chemical Data for the Site

TABLE 1A. MONITORING WELL NO. 1 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)											5100
Benzene	(ug/L)	-- (b)	10.0	60	20.0	1					
2-Butanone	(ug/L)	55	50.0	150	100.0	(b)					224000
Total 1,2-Dichloroethene	(ug/L)	--	10.0	100	20.0	0.007		16			430
Ethyl benzene	(ug/L)	11	10.0	71	20.0	680					
2-Hexanone	(ug/L)	2800	50.0	7200	100.0						6300
Toluene	(ug/L)	23	10.0	170	20.0	2000		100			
Total xylenes	(ug/L)	170	10.0	1200	20.0	1750		620			
EXTRACTABLE ORGANICS (EPA Method 8270)											970
Acenaphthene	(ug/L)	--	2.0	--	4.0				(k)		
Benzoic acid	(ug/L)	510	10.0	620	20.0						(k)
Benzo(a)anthracene	(ug/L)	--	2.0	--	4.0				(k)		(k)
Benzo(b)fluoranthrene	(ug/L)	--	2.0	--	4.0				(k)		(k)
Benzo(k)fluoranthrene	(ug/L)	--	2.0	--	4.0				(k)		(k)
Benzo(g,h,i)perylene	(ug/L)	--	2.0	--	4.0				(k)		(k)
Benzo(a)pyrene	(ug/L)	--	2.0	--	4.0						
Benzyl alcohol	(ug/L)	6.0	2.0	--	4.0				(k)		(k)
Chrysene	(ug/L)	--	2.0	--	4.0				(k)		(k)
Dibenz(a,h)anthracene	(ug/L)	--	2.0	--	4.0						2944
Diethylphthalate	(ug/L)	--	2.0	--	4.0			400 (e)	(j)	(j)	
2,4-Dimethylphenol	(ug/L)	76	2.0	190	4.0				(k)		(k)
Fluorene	(ug/L)	--	2.0	--	4.0				(k)		
2-Methylnaphthalene	(ug/L)	--	2.0	--	4.0				(j)	(j)	
2-Methylphenol	(ug/L)	32	2.0	92	4.0				(j)	(j)	
4-Methylphenol	(ug/L)	110	2.0	290	4.0				(k)		2350
Naphthalene	(ug/L)	59	2.0	140	4.0				(k)		(k)
Indeno(1,2,3-cd)pyrene	(ug/L)	--	2.0	--	4.0				(k)		(k)
Phenanthrene	(ug/L)	--	2.0	--	4.0			1.0	(j)	(j)	5800
Phenol	(ug/L)	78	2.0	130	4.0						
Sum of phenols	(ug/L)	296	2.0	702	4.0				500	30 (j)	
Sum of polynuclear aromatic hydrocarbons	(ug/L)	59	2.0	140	4.0				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.

TABLE 1B. MONITORING WELL NO. 1 WATER QUALITY DATA, INORGANICS, AND HYDROCARBONS DETECTED

PARAMETER	UNITS	SAMPLING EVENT				DRINKING WATER CRITERIA			MARINE CRITERIA		EPA ACUTE TOXICITY (j)
		January	Detection Limit	May	Detection Limit	PRIMARY MCLs (e), (f), (k)	SECONDARY MCLs (e)	ACTION LEVELS (g)	S.F. BAY BASIN PLAN (h)	CALIFORNIA OCEAN PLAN (i)	
WATER QUALITY PARAMETERS (a), (b)						(d)					
Volume Removed	gal	15		9							
No. of Casing Volumes		2.9		3.5							
pH		7.5		7.0			1600				
Specific Conductance	umhos/cm	28000		10000							
Salinity (vs. seawater)	%	20		6			5				
Turbidity (c)	NTU	slight		NA							
Temperature	C	20		18							
Color		brown		olive/brown							
Odor		hydrocarbon		asphalts							
TITLE 22 TOTAL METALS AND ASBESTOS											
Antimony	(mg/L)	-- (d)	5.0	--	0.1				0.020	0.008	2.319
Arsenic	(mg/L)	--	0.01	0.007	0.001	0.050					
Barium	(mg/L)	0.310	0.2	0.2	0.02	1.0					
Beryllium	(mg/L)	--	0.1	--	0.01				0.010	0.003	
Cadmium	(mg/L)	--	0.1	--	0.01	0.010			0.011	0.002	
Chromium VI	(mg/L)	--	0.005	--	0.005	0.05					10.3
Chromium III	(mg/L)	0.150	0.05	0.073	0.005	0.05					
Cobalt	(mg/L)	--	0.5	--	0.05		1.0		0.020	0.005	
Copper	(mg/L)	--	0.1	--	0.01				0.0056	0.008	
Lead	(mg/L)	0.700	0.005	0.098	0.005	0.050			0.001	0.000140	
Mercury	(mg/L)	--	0.001	--	0.001	0.002					
Molybdenum	(mg/L)	--	0.5	0.084	0.05				0.0071	0.020	
Nickel	(mg/L)	--	0.5	0.11	0.05						
Selenium	(mg/L)	--	0.01	--	0.01	0.010			0.0023	0.000450	
Silver	(mg/L)	--	0.1	--	0.01	0.050					2.13
Thallium	(mg/L)	--	5.0	0.79	0.5						
Vanadium	(mg/L)	--	0.5	0.37	0.05				0.058	0.020	
Zinc	(mg/L)	--	0.1	0.095	0.01		5.0				
Asbestos	(fibers/g)			--	100	7					
PETROLEUM HYDROCARBONS AND OIL AND GREASE (EPA Methods 8015/8020)											
Low/Medium BP Hydrocarbons	(ug/L)	2500	50.0	7700	30.0						5100
Gasoline Standard											6300
Benzene	(ug/L)	4.0	0.5	47	0.3	1		100			430
Toluene	(ug/L)	430	0.5	680	0.3	2					
Ethyl Benzene	(ug/L)	9.0	0.5	35	0.3	680					
Total Xylenes	(ug/L)	140	0.5	550	0.3	1750					
High BP Hydrocarbons Diesel Standard	(ug/L)	290	50.0	11000	50.0						
Oil and Grease (EPA Method 413.2)	(mg/L)	1.4	1.0	3800	1.0						

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

(b) Well bailed dry on May 2, sampled May 3 due to slow recovery.

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

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

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

(f) 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.

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

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

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

(j) 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.

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

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						
Benzyl alcohol	(ug/L)	--	2.0	--	2.0				(k)		(k)
Chrysene	(ug/L)	--	2.0	4.0	2.0				(k)		(k)
Dibenz(a,h)anthracene	(ug/L)	--	2.0	7.9	2.0						2944
Diethylphthalate	(ug/L)	--	2.0	--	2.0			400 (e)	(j)	(j)	
2,4-Dimethylphenol	(ug/L)	--	2.0	--	2.0				(k)		(k)
Fluorene	(ug/L)	--	2.0	--	2.0				(k)		
2-Methylnaphthalene	(ug/L)	--	2.0	--	2.0				(j)	(j)	
2-Methylphenol	(ug/L)	--	2.0	--	2.0				(j)	(j)	
4-Methylphenol	(ug/L)	--	2.0	2.2	2.0				(k)		2350
Naphthalene	(ug/L)	--	2.0	8.1	2.0				(k)		(k)
Indeno(1,2,3-cd)pyrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Phenanthrene	(ug/L)	--	2.0	--	2.0			1	(j)	(j)	5800
Phenol											
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.

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

PARAMETER	UNITS	SAMPLING EVENT				DRINKING WATER CRITERIA			MARINE CRITERIA		EPA ACUTE TOXICITY (i)
		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)	
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				0.020	0.008	2.319
Arsenic	(mg/L)	--	0.01	0.0098	0.001	0.050					
Barium	(mg/L)	1.4	0.2	0.68	0.02	1.0					
Beryllium	(mg/L)	--	0.1	--	0.01				0.010	0.003	
Cadmium	(mg/L)	--	0.1	--	0.01	0.010			0.011	0.002	
Chromium VI	(mg/L)	--	0.005	--	0.05	0.05					10.3
Chromium III	(mg/L)	--	0.05	0.005	0.005	0.05					
Cobalt	(mg/L)	--	0.5	--	0.05				0.020	0.005	
Copper	(mg/L)	--	0.1	--	0.01		1.0		0.0056	0.008	
Lead	(mg/L)	0.2	0.005	0.18	0.005	0.050			0.001	0.000140	
Mercury	(mg/L)	--	0.001	--	0.001	0.002					
Molybdenum	(mg/L)	--	0.5	0.050	0.05				0.0071	0.020	
Nickel	(mg/L)	--	0.5	--	0.05						
Selenium	(mg/L)	--	0.01	--	0.01	0.010			0.0023	0.000450	
Silver	(mg/L)	--	0.1	0.012	0.01	0.050					2.13
Thallium	(mg/L)	--	5.0	0.11	0.5						
Vanadium	(mg/L)	--	0.5	--	0.05				0.058	0.020	
Zinc	(mg/L)	--	0.1	0.18	0.01		5.0				
Asbestos	(fibers/g)			--.	100	7					
PETROLEUM HYDROCARBONS AND OIL AND GREASE											
(EPA Methods 8015/8020)											
Low/Medium BP Hydrocarbons	(ug/L)	67	50.0	130	30.0						5100
Gasoline Standard											6300
Benzene	(ug/L)	1.1	0.5	14	0.3	1		100			430
Toluene	(ug/L)	0.57	0.5	0.84	0.3	2					
Ethyl Benzene	(ug/L)	--	0.5	--	0.3	680					
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.

TABLE 3A. MONITORING WELL NO. 3 ORGANIC COMPOUNDS DETECTED

PARAMETER (a)	UNITS	SAMPLING EVENT				DRINKING WATER CRITERIA			MARINE CRITERIA		
		January	Detection Limit	May	Detection Limit	PRIMARY MCLs (d), (e), (f)	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)	--	4.0	2.5	2.0	1					5100
2-Butanone	(ug/L)	--	20.0	--	10.0	(b)					224000
Total 1,2-Dichloroethene	(ug/L)	--	4.0	--	2.0	0.007		16			430
Ethyl benzene	(ug/L)	--	4.0	--	2.0	680					
2-Hexanone	(ug/L)	--	20.0	--	10.0			100			6300
Toluene	(ug/L)	--	4.0	--	2.0	2000		620			
Total xylenes	(ug/L)	--	4.0	--	2.0	1750					
EXTRACTABLE ORGANICS (EPA Method 8270)											970
Acenaphthene	(ug/L)	--	2.0	--	2.0				(k)		
Benzoic acid	(ug/L)	--	10.0	--	10.0						(k)
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						
Benzyl alcohol	(ug/L)	--	2.0	--	2.0				(k)		(k)
Chrysene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Dibenz(a,h)anthracene	(ug/L)	--	2.0	--	2.0						2944
Diethylphthalate	(ug/L)	--	2.0	--	2.0			400 (c)	(j)	(j)	
2,4-Dimethylphenol	(ug/L)	--	2.0	--	2.0				(k)		(k)
Fluorene	(ug/L)	--	2.0	--	2.0				(k)		
2-Methylnaphthalene	(ug/L)	--	2.0	--	2.0				(j)	(j)	
2-Methylphenol	(ug/L)	--	2.0	--	2.0				(j)	(j)	
4-Methylphenol	(ug/L)	--	2.0	--	2.0				(k)		2350
Naphthalene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Indeno(1,2,3-cd)pyrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Phenanthrene	(ug/L)	--	2.0	--	2.0			1.0	(j)	(j)	5800
Phenol	(ug/L)	--	2.0	--	2.0				500	30 (j)	
Sum of phenols	(ug/L)	--	2.0	--	2.0				15		300
Sum of polynuclear aromatic hydrocarbons											

(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.

TABLE 3B. MONITORING WELL NO. 3 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		15		(c)					
No. of Casing Volumes		17.4		6.5							
pH		8.1		7.4							
Specific Conductance	umhos/cm	11000		4100			1600				
Salinity	%	8		2.6							
Turbidity (b)	NTU			35			5				
Temperature	C	22		17							
Color		brown		olive/gray							
Odor		hydrocarbon		hydrocarbon							
TITLE 22 TOTAL METALS AND ASBESTOS											
Antimony	(mg/L)	-- (c)	0.5	--	0.1						
Arsenic	(mg/L)	--	0.01	0.01	0.001	0.050			0.020	0.008	2.319
Barium	(mg/L)	--	0.2	0.096	0.02	1.0					
Beryllium	(mg/L)	--	0.01	--	0.01				0.010	0.003	
Cadmium	(mg/L)	--	0.01	--	0.01	0.010			0.011	0.002	
Chromium VI	(mg/L)	--	0.005	--	0.005	0.050					10.3
Chromium III	(mg/L)	--	0.005	0.012	0.005	0.050					
Cobalt	(mg/L)	--	0.05	--	0.05						
Copper	(mg/L)	--	0.01	--	0.01		1.0		0.020	0.005	
Lead	(mg/L)	0.050	0.005	0.03	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	--	0.05						
Nickel	(mg/L)	--	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	0.66	0.5						2.13
Vanadium	(mg/L)	--	0.5	--	0.05						
Zinc	(mg/L)	0.098	0.01	0.039	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	(ug/L)	--	50.0	30	30.0						5100
Gasoline Standard											6300
Benzene	(ug/L)	--	0.5	1.4	0.3	1					430
Toluene	(ug/L)	--	0.5	0.52	0.3	2		100			
Ethyl Benzene	(ug/L)	--	0.5	--	0.3	680					
Total Xylenes	(ug/L)	0.64	0.5	0.3	0.3	1750					
High BP Hydrocarbons Diesel Standard	(ug/L)	540	50.0	420	50.0						
Oil and Grease (EPA Method 413.2)	(mg/L)	--	1.0	6.1	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.

TABLE 4A. MONITORING WELL NO. 4 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)											5100
Benzene	(ug/L)	3.7	2.0	--	2.0	1					
2-Butanone	(ug/L)	-- (b)	10.0	13	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)	9.6	2.0	4.3	2.0	2000		100			
Total xylenes	(ug/L)	9.6	2.0	4.3	2.0	1750		620			
EXTRACTABLE ORGANICS (EPA Method 8270)											970
Acenaphthene	(ug/L)	3.0	2.0	3.4	2.0				(k)		
Benzoic acid	(ug/L)	--	10.0	52	10.0						(k)
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						
Benzyl alcohol	(ug/L)	--	2.0	--	2.0				(k)		(k)
Chrysene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Dibenz(a,h)anthracene	(ug/L)	3.0	2.0	--	2.0						2944
Diethylphthalate	(ug/L)	--	2.0	--	2.0			400 (e)	(j)	(j)	
2,4-Dimethylphenol	(ug/L)	3.0	2.0	2.0	2.0				(k)		(k)
Fluorene	(ug/L)	9.0	2.0	6.8	2.0				(k)		
2-Methylnaphthalene	(ug/L)	--	2.0	--	2.0				(j)	(j)	
2-Methylphenol	(ug/L)	--	2.0	36	2.0				(j)	(j)	
4-Methylphenol	(ug/L)	49	2.0	20	2.0				(k)		2350
Naphthalene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Indeno(1,2,3-cd)pyrene	(ug/L)	4.0	2.0	4.0	2.0				(k)		(k)
Phenanthrene	(ug/L)	4.0	2.0	--	2.0			1.0	(j)	(j)	5800
Phenol											
Sum of phenols	(ug/L)	4.0	2.0	36	2.0				500	30 (j)	
Sum of polynuclear aromatic hydrocarbons	(ug/L)	68.0	2.0	36	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.

TABLE 4B. MONITORING WELL NO. 4 WATER QUALITY DATA, INORGANICS, AND HYDROCARBONS DETECTED

PARAMETER	UNITS	SAMPLING EVENT				DRINKING WATER CRITERIA			MARINE CRITERIA		EPA ACUTE TOXICITY (i)
		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)	
WATER QUALITY PARAMETERS (a)											
Volume Removed	gal	50		10		(c)					
No. of Casing Volumes		20		4							
pH		8.2		6.4							
Specific Conductance	umhos/cm	3300		1700			1600				
Salinity	%	2					5				
Turbidity (b)	NTU	slight		NA							
Temperature	C	21		19							
Color		lt. brown		gray							
Odor		hydrocarbon		hydrocarbon							
TITLE 22 TOTAL METALS AND ASBESTOS TESTS OF GROUNDWATER											
Antimony	(mg/L)	-- (c)	0.5	--	0.1				0.020	0.008	2.319
Arsenic	(mg/L)	--	0.01	0.003	0.001	0.050					
Barium	(mg/L)	0.85	0.02	0.84	0.02	1.0					
Beryllium	(mg/L)	--	0.01	--	0.01				0.010	0.003	
Cadmium	(mg/L)	--	0.01	--	0.01	0.010			0.011	0.002	
Chromium VI	(mg/L)	--	0.005	--	0.005	0.050					10.3
Chromium III	(mg/L)	--	0.005	0.036	0.005	0.05					
Cobalt	(mg/L)	--	0.05	0.05	0.05				0.020	0.005	
Copper	(mg/L)	--	0.01	--	0.01		1.0		0.0056	0.008	
Lead	(mg/L)	0.10	0.005	0.22	0.005	0.050			0.001	0.000140	
Mercury	(mg/L)	--	0.001	--	0.001	0.002					
Molybdenum	(mg/L)	--	0.05	--	0.05				0.0071	0.020	
Nickel	(mg/L)	0.064	0.05	0.072	0.05						
Selenium	(mg/L)	--	0.01	--	0.01	0.010			0.0023	0.000450	
Silver	(mg/L)	--	0.01	--	0.01	0.050					2.13
Thallium	(mg/L)	--	0.5	--	0.5						
Vanadium	(mg/L)	--	0.05	--	0.05				0.058	0.020	
Zinc	(mg/L)	0.17	0.01	0.95	0.01		5.0				
Asbestos	(fibers/g)			--	100	7					
PETROLEUM HYDROCARBONS AND OIL AND GREASE (EPA Methods 8015/8020)											
Low/Medium BP Hydrocarbons Gasoline Standard	(ug/L)	120	50.0	150	30.0						5100
Benzene	(ug/L)	0.93	0.5	1.7	0.3	1					6300
Toluene	(ug/L)	7.9	0.5	3.9	0.3	2		100			430
Ethyl Benzene	(ug/L)	1.9	0.5	1.1	0.3	680					
Total Xylenes	(ug/L)	6.9	0.5	3.8	0.3	1750					
High BP Hydrocarbons Diesel Standard	(ug/L)	540	50.0	500	50.0						
Oil and Grease (EPA Method 413.2)	(mg/L)	3.5	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, 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 concentrations limits is given.

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), (f)	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						(k)
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						
Benzyl alcohol	(ug/L)	--	2.0	--	2.0				(k)		(k)
Chrysene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Dibenz(a,h)anthracene	(ug/L)	--	2.0	--	2.0						2944
Diethylphthalate	(ug/L)	--	2.0	--	2.0			400 (c)	(j)	(j)	
2,4-Dimethylphenol	(ug/L)	--	2.0	--	2.0				(k)		(k)
Fluorene	(ug/L)	--	2.0	--	2.0				(k)		
2-Methylnaphthalene	(ug/L)	--	2.0	--	2.0				(j)	(j)	
2-Methylphenol	(ug/L)	--	2.0	45	2.0				(j)	(j)	
4-Methylphenol	(ug/L)	--	2.0	--	2.0				(k)		2350
Naphthalene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Indeno(1,2,3-cd)pyrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Phenanthrene	(ug/L)	--	2.0	--	2.0				(k)		
Phenol								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. 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.

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)						(c)					
Volume Removed	gal	40		10							
No. of Casing Volumes		16		4							
pH		7.8		6.6			1600				
Specific Conductance	umhos/cm	4300		4100							
Salinity	%	3		2.8			5				
Turbidity (b)	NTU	very slight		25							
Temperature	C	19		21							
Color		lt. brown		gray							
Odor		hydrocarbon		hydrocarbon							
TITLE 22 METALS AND ASBESTOS											
Antimony	(mg/L)	-- (c)	0.5	--	0.1	0.050			0.020	0.008	2.319
Arsenic	(mg/L)	0.037	0.01	0.027	0.001	1.0					
Barium	(mg/L)	0.74	0.02	0.65	0.02				0.010	0.003	
Beryllium	(mg/L)	--	0.01	--	0.01	0.010			0.011	0.002	
Cadmium	(mg/L)	--	0.01	--	0.01	0.050					10.3
Chromium VI	(mg/L)	--	0.005	--	0.05	0.05					
Chromium III	(mg/L)	--	0.005	0.015	0.005						
Cobalt	(mg/L)	--	0.05	0.05	0.05		1.0		0.020	0.005	
Copper	(mg/L)	--	0.01	--	0.01				0.0056	0.008	
Lead	(mg/L)	0.07	0.005	0.16	0.005	0.050			0.001	0.000140	
Mercury	(mg/L)	--	0.001	--	0.001	0.002					
Molybdenum	(mg/L)	--	0.05	--	0.05				0.0071	0.020	
Nickel	(mg/L)	0.078	0.05	--	0.05						
Selenium	(mg/L)	--	0.01	--	0.01	0.010			0.0023	0.000450	
Silver	(mg/L)	--	0.01	--	0.01	0.050					2.13
Thallium	(mg/L)	--	0.5	0.19	0.5						
Vanadium	(mg/L)	--	0.05	--	0.05				0.058	0.020	
Zinc	(mg/L)	0.076	0.01	0.18	0.01		5.0				
Asbestos	(fibers/g)			--	100	7					
PETROLEUM HYDROCARBONS AND OIL AND GREASE (EPA Methods 8015/8020)											
Low/Medium BP Hydrocarbons	(ug/L)	--	50.0	34	30.0						5100
Gasoline Standard											6300
Benzene	(ug/L)	--	0.5	--	0.3	1		100			430
Toluene	(ug/L)	1.1	0.5	--	0.3	2					
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.

APPENDIX B

Letter to Spieker Properties from the RWQCB, Dated December 30, 1997 Concerning Environmental Conditions at the Site

n Francisco Bay
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Quality Control
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Pete Wilson
Governor

December 30, 1996
File No.: 2223.09 (SA)
SMS Case File

Spieker Properties
4900 Hopyard Road, Suite 120
Pleasanton, California 94588

Attention: Mr. John Winther

RE: Properties at 5801, 5855-5895 Christie Avenue, 5813-5815 Shellmound Street, and the Watergate Towers Complex property, Emeryville, Alameda County.

Dear Mr. Winther:

This letter contains San Francisco Bay Regional Water Quality Control Board (RWQCB) Staff's views on the environmental conditions at the above subject properties. We understand Spieker properties is considering acquisition of the properties. RWQCB Staff discussed the properties with representatives of Speiker Properties and Lathrop Properties at two meetings held on November 6, 1996, and December 3, 1996. Based on the meetings and review of information presented to us, we have the following views regarding the environmental conditions at the properties.

Properties at 5801, 5855-5895 Christie Avenue (Christie Avenue properties) and 5813-5815 Shellmound Street

1. The properties, located east of Interstate I-80, are within the area of the Emeryville Brownfield's Initiative. Historically the properties were owned by Fiberboard Corporation and it's predecessors. Environmental conditions beneath the Christie Avenue properties have not been documented. Based on historical information, it appears that the Christie Avenue properties were filled with industrial debris and soil similar to that placed west of Interstate I-80.

2. The Christie Avenue properties have not been under the RWQCB's regulatory oversight and are not listed in the RWQCB's site management system database. However, based on the RWQCB Staff's experiences with other sites in this area, we believe that the risk to human health and the environment is most likely acceptable because the sites are paved and any subsurface hazardous constituents that may be present are essentially in deep soil layers. If subsurface work (e.g.

foundations, utilities etc.) is necessary, a risk management plan that includes plans for the possibility of handling potential hazardous materials is advisable.

3. With regard to groundwater beneath the properties, we do not consider the uppermost groundwater zone a suitable drinking water source. The Brownfield Initiative is a mechanism for the City of Emeryville (COE) and regulatory agencies to acknowledge the regional nature of hazardous constituents in soil and groundwater and deal with them on a regional basis which may include containment, selected risk-based cleanup, and monitoring. The COE plans to enter into a memorandum of understanding with the RWQCB, Department of Toxic Substances Control (DTSC), Environmental Protection Agency (EPA), and potentially other regulatory agencies using a regional monitoring program and risk management practices. Soil issues would remain the responsibility of the property owner or responsible party and groundwater issues would be handled by the city. In the absence of specific pollution sources, the RWQCB would not view groundwater remediation on a site by site basis, as reasonable, except where significant individual pollution sources are present.

4. The 5813-15 Shellmound Street Property is listed as a petroleum release site under the jurisdiction of the Alameda County Department of Environmental Health (ACDEH). Both the RWQCB and the ACDEH are using risk-based approaches to assess the need for remediation at the property.

The Watergate Towers Complex property (located on the west side of Interstate I-80)

1. There are three potential issues with respect to the historical industrial landfilling at the property. These issues include: (a) Health and Safety (b) Use of groundwater for drinking and (c) effects of the landfill materials on the San Francisco Bay.

   a. Health and Safety. Health and safety was addressed in previous reports prepared by Woodward Clyde Consultants and future potential concerns can be adequately addressed with an operations and maintenance plan that includes requirements for subsurface excavation work that might uncover potentially hazardous materials. We believe that there is no unacceptable threat to human health, for the current office/commercial use of the property, as the site is covered with pavement, building floors and asphalt parking lots.

   b. Beneficial Uses of Groundwater. The shallow groundwater at the site is not a current source of drinking water and the probability of its use for domestic purposes is extremely low. In addition, deeper water-bearing zones are not likely to be impacted by vertical migration of hazardous constituents because of the presence of low permeability bay mud underlying the fill materials.

   c. Impacts of Historic Fill Areas on the Bay. The issue of impacts of the fill areas on the San Francisco Bay is uncertain as the RWQCB has not developed or implemented guidelines to measure and assess the potential impacts of historic fill areas to San Francisco Bay. However, given the

current state of knowledge, it is unlikely that the site will come under the oversight of the RWQCB in the future. If and when the RWQCB develops a method to assess potential impacts of historical fill to San Francisco Bay, some additional assessment of potential releases of hazardous constituents from the site to the Bay may be required. It is unlikely that containment systems would be required.

2. The RWQCB staff consider the site to be an area of "random fill" and therefore not subject to reporting requirements under the California Code of Regulations, Title 23, Chapter 15. The site is currently not subject to RWQCB environmental regulatory oversight and that status is not likely to change in the future. The concern with the hazardous constituents in the fill relates primarily to metals contained in the fill and their potential mobility into the Bay. Further assessment of soluble constituents and the potential for their migration from the site to the Bay may be required if and/or when the RWQCB develops methods to assess similar sites around the Bay. The RWQCB recognizes the difficulty in differentiating between the potential contributions of hazardous constituents to the Bay from historical and current sources.

3. Since the site is located adjacent to the San Francisco Bay, any regulatory actions at the site should be based on protection of water quality, environment, and human health. Thus, the RWQCB is the appropriate agency for handling regulatory activities associated with the site.

We hope that this letter clarifies the RWQCB Staff's views on the properties. If you have any questions, please call Sumadhu Arigala at (510)-286-0434.

Sincerely,
Loretta K Barsamian,
Executive Officer

Stephen I. Morse, by DM
Chief, Toxics Division.

cc: Curtis Scott, Landfills Section, RWQCB

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