

HA Pabco/Market Place CT. 251  
Pa Emeryville 64<sup>th</sup> + Lacoste  
F 24/608



1135 Atlantic Avenue  
Alameda, CA 94501  
415.521.5200  
FAX 415.521.1547

April 6, 1990

Mr. Lester Feldman  
Regional Water Quality Control Board  
San Francisco Bay Region  
1800 Harrison Street  
Oakland, CA 94607

Dear Mr. Feldman:

**CONSTRUCTION OF WELLS W-13 and W-14 ON EMERY BAY MARKETPLACE PROPERTY,  
EMERYVILLE, CA**

This letter is in response to your request that McLaren determine whether wells W-13 and W-14 on the Emery Bay Marketplace property are adequately constructed to evaluate whether free product may be present on the groundwater surface in the vicinity of these wells. These wells were constructed in August 1989 to evaluate the downgradient extent of the petroleum hydrocarbon free product plume observed in well W-5 (Reported in "Results of the Hydrogeologic Investigation Conducted at the Marketplace/Nielsen Properties", September 11, 1989"). The boring logs for wells W-13 and W-14 are attached to this letter.

Wells W-13 and W-14 were both constructed as follows: sand filter pack from 4 to 11 feet; screened interval from 5 to 10 feet; bentonite pellet seal from 3 to 4 feet; neat cement with 5% bentonite from the ground surface to 3 feet; and a christie box sealed to the asphaltic pavement with concrete. When the wells were drilled, groundwater was first encountered at 7 feet below grade. The screened interval was placed from 5 to 10 feet so that the water table would cross the screened interval. The well was not screened at a shallower depth because of our concern for potential surface water infiltration and the need to place an adequate sanitary seal above the sand pack.

The measured depth to groundwater in these two wells between August 1989 and February 1990 has ranged from approximately 4.2 to 5 feet below the ground surface. Water level data indicate that the water level has varied over 2 feet since these wells were constructed in August 1989. The water level is now above the screened interval, but within the sand pack portion of the well.

Mr. Lester Feldman  
April 6, 1990  
Page 2

We understand your concern that these wells may not be adequately constructed to monitor the potential presence of petroleum free product in groundwater if the water table does not cross the screened interval at the time the well is sampled. However, we believe that wells W-13 and W-14 are still adequate to monitor the downgradient edge of the plume for the following reasons:

- The water table has remained within the sand pack interval, and if floating product were present, then dissolved constituents would be present and detected in samples. No BETX or TPH has been detected in water samples from wells W-13 and W-14..
- If the water table is above the sand pack and floating product is present, then the product would be drawn into the wells by purging during sampling. To date, there has been no evidence of floating product during and after each of the sampling rounds.

We are currently in the process of installing 5 new wells both on-and off-site. To ensure that the stabilized water level crosses the screened interval, these new wells are being constructed with the screened interval up to 3 feet below the ground surface and with a 2 foot thick sanitary seal. Please do not hesitate to call if you would like to discuss this matter in greater detail.

Sincerely,

*Julie S. Menack*  
Julie S. Menack, RG 4440  
Supervising Geologist  
McLaren

*Patrick J. Sheehan*  
Patrick J. Sheehan, Ph.D.  
Supervising Toxicologist  
ChemRisk Division  
McLaren

Attachment

cc: Larry Seto, Alameda County

0406SMF1





# SOIL DRILLING LOG

McLaren Environmental Engineering

SB/MW # : W-14

# D- 2341

Page 1 of 1

Sampler: B. WRIGHT

PROJECT MARTIN GROUP/MARKETPLACE LOCATION 3' NE OF FENCE, 350' S OF N END OF MARKETPLACE  
 ELEVATION \_\_\_\_\_ MONITORING DEVICE 580A OVM  
 SAMPLING DATE(S) 8-8-89 START 1430 FINISH 1600  
 SAMPLING METHOD CA MOD. SPLIT SPOON SUBCONTRACTOR & EQUIPMENT ENVIRONMENTAL EXPLORATION, CME-85  
 MEMO \_\_\_\_\_ HOLLOW STEM AUGER  
 DRILL RIG

Depth Below Surface (ft.)	Penetration Results		Sampler Depth Interval (ft.)	Sample ID #	OVM reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sub-Sample	Borehole Abandonment/ Well Construction Details
	Blows 6"-6'-6"	EFF								
0						Asphalt Brown (10YR 4/3) gravelly sand, fine grained sand to medium pebble gravel, common brick, loose, moist.	Fb	[Cross-hatched]		
2.5						Gray (5Y 5/1) to light brownish gray (2.5Y 6/2) sand, very fine to coarse grained sand, loose, poorly graded, moist.	SP	[Dotted]		
5	5-4-4	8	5.0'- 6.5'		0	Light olive brown (2.5Y 5/4) silty clay, high plasticity, stiff, slightly moist.	CL	[Diagonal lines]		
7.5	4-7-7	14	7.0'- 8.5'		0	Dark greenish gray (5GY 4/1) silty sand, very fine to medium grained sand, loose, very moist.	SM SP	[Dotted] [Dotted]		
10	6-9-9	18	9.0'- 10.5'		0	Very dark gray (2.5Y N3/) sand, fine to very coarse grained sand, loose, trace pebble gravels and shell fragments, saturated.	SM	[Dotted]		
11	5-6-7	13	11.0'- 12.5'		0	Greenish gray (5GY 5/1) silty clay, medium plasticity, stiff, slightly moist.	CL	[Diagonal lines]		
						Very dark gray (2.5Y N3/) silty sand, very fine to coarse sand dense, saturated.	CL	[Diagonal lines]		
						Dark gray (2.5Y N4/) silty clay, low plastic, soft, saturated.				
						Light olive brown (2.5Y 5/6) silty clay, medium plasticity, stiff minor fine sand, trace granules, moist.				

SIGNATURE OF FIELD SUPERVISOR

SIGNATURE OF REVIEWER

*Julie S. Menack*  
*Supervising Geologist*

TITLE

TITLE



McLaren Environmental Engineering

# SOIL DRILLING LOG

SB/MW # W-13  
 # D- 2340  
 Page 1 of 1  
 Sampler: B. WRIGHT

PROJECT MARTIN GROUP/MARKETPLACE LOCATION 3' NE OF FENCE, 100' S OF N END OF MARKETPLACE  
 ELEVATION \_\_\_\_\_ MONITORING DEVICE 580A OVM  
 SAMPLING DATE(S) 8-8-89 START 1130 FINISH 1330  
 SAMPLING METHOD CA MOD. SPLIT SPOON SUBCONTRACTOR & EQUIPMENT ENVIRONMENTAL  
 MEMO \_\_\_\_\_ EXPLORATION, CME-55  
HOLLOW STEM AUGER  
DRILL RIG

Depth Below Surface (ft.)	Penetration Results		Sampler Depth Interval (ft.)	Sample ID #	OVM reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sub-Sample	Borehole Abandonment/ Well Construction Details
	Blows 6"-6'-6"	BF								
0					0	Asphalt Brown (10YR 4/3) gravelly sand, fine grained sand to medium pebble gravel, common brick, fill to 2', moist.	Fb	[Cross-hatched pattern]		
2.5	15-7-7	14	4.0-5.5'		0	Greenish gray (5GY 5/1) sand, very fine to medium grained sand, poorly graded, trace pebble gravels and shell fragments, wood at 4'.	SP	[Dotted pattern]		
5						Greenish gray (5GY 5/1) clayey sand, very fine to medium grained sand, low plasticity, sticky, very moist.	SC	[Diagonal lines pattern]		
7.5	1-1-1	2	7.0-8.5'		0	Light olive brown (2.5Y 5/4) sandy gravel, fine grained sand to medium pebble gravel, well graded, rounded, saturated.	GW	[Dotted pattern]		
9	9-17-21	38	9.0-10.5'		0	Very dark gray (2.5Y N3/) silty sand, very fine to medium grained sand, dense, soft, sticky, saturated.	CL	[Diagonal lines pattern]		
10	7-16-19	35	11.0-12.5'		0	Very dark gray (2.5Y N3/) clay, medium plasticity, soft, smooth, saturated.	SM	[Dotted pattern]		
12.5						Very dark gray (2.5Y N3/) silty sand, very fine to medium grained sand, dense, medium stiff, common clam shells, moist.	GC	[Diagonal lines pattern]		
						Light olive brown (2.5Y 5/4) gravelly clay, coarse grained sand to fine pebble gravel, low plasticity, very stiff, moist.				

SIGNATURE OF FIELD SUPERVISOR \_\_\_\_\_

*Julie S. Menack* RG  
 SIGNATURE OF REVIEWER  
*Supervising Geologist*  
 TITLE

TITLE \_\_\_\_\_