

# DAMES & MOORE

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December 15, 1992

Mr. Ravi Arulanathan  
Alameda County Environmental Health  
80 Swan Way, Room 200  
Oakland, California 94621

Subject: Request for Well Replacement  
Laguna Oak Site  
Pleasanton, California  
For Home Savings of America  
Dames & Moore Job No. 14943-062-015

*Your Request to replace  
MW1, MW2 and MW3 with a new  
4" well, mid-way between  
MW2 & MW3 is acceptable to this  
office. Please submit a revised  
timetable for future monitoring  
events.*

*Ravi*  
*2/10/93*

Dear Mr. Arulanathan:

## BACKGROUND

The Laguna Oak site in Pleasanton was the location of an underground tank leak in the past and has been monitored on a quarterly basis for the last two years using three wells installed by Berloger Consultants. Dames & Moore added three additional wells in July, 1992 and included them in the quarterly monitoring reports.

At the time of Dames & Moore's well installation in July, a pumping test was also performed to understand aquifer characteristics at the site. The earlier wells, MW-1, MW-2, and MW-3 are two-inch diameter wells, as compared to the four-inch diameter wells installed this year. This letter describes our request to replace the three old wells with inappropriate screening intervals by abandoning them and installing one new well in the center of the suspect zone. This will result in four wells on the site, one well at the center of the suspect area, one upgradient and two at downgradient locations.

## HYDROGEOLOGIC SETTING

The Laguna Oak site is located in silty and clayey materials with a perched water zone from 20 to 25 feet thick. The groundwater gradient is to the northeast at a rate of about 0.04 ft/ft (4 feet of head change for every 100 feet of horizontal distance travelled). Past

monitoring has shown PCE contamination to be within wells MW-2 and MW-3. The newly installed Dames & Moore wells MW-4, MW-5, and MW-6 were installed upgradient and downgradient from the contaminated zone as defined in MW-2 and MW-3. The extent of this contamination was investigated by drilling soil borings adjacent to the existing wells but no PCE was detected in soil samples from any of the borings. Shallow trenching also did not yield any PCE contaminated soil.

The most recent round of sampling shows that the three new wells are in working order. They adequately define the upgradient and downgradient trends of the groundwater flow. Any contamination from the contaminated zone could not escape the site without showing up in the existing wells.

#### **PROPOSED WELL REPLACEMENT**

We request permission to abandon the three old wells and replace them with one additional well mid-way between MW-2 AND MW-3. The intent of this well would be to sample groundwater from the perched zone in the center of the suspect zone. The other three remaining wells MW-4, MW-5, and MW-6 will be intended to capture any migration away from the suspect zone. This configuration of wells is expected to adequately represent the site conditions within the potentially contaminated groundwater zone, as well as allow monitoring of any potential migration. Figure 1 illustrates the position of the wells and the groundwater gradient.

#### **SAMPLING FREQUENCY**

The last several quarterly sampling rounds have shown fluctuations in concentration but no significant movement of contaminants. We request permission to broaden the sampling interval to twice a year so that the future rounds would be performed at six-month intervals. We believe that the soil type, the gradient, and the past performance of the monitoring wells shows that there is no rapid movement of contamination that may require quarterly sampling. We will be following up this letter with a phone call to confirm our proposal for well replacement.



Mr. Ravi Arulanathan  
December 15, 1992  
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If you have any questions, please call the undersigned.

Sincerely,

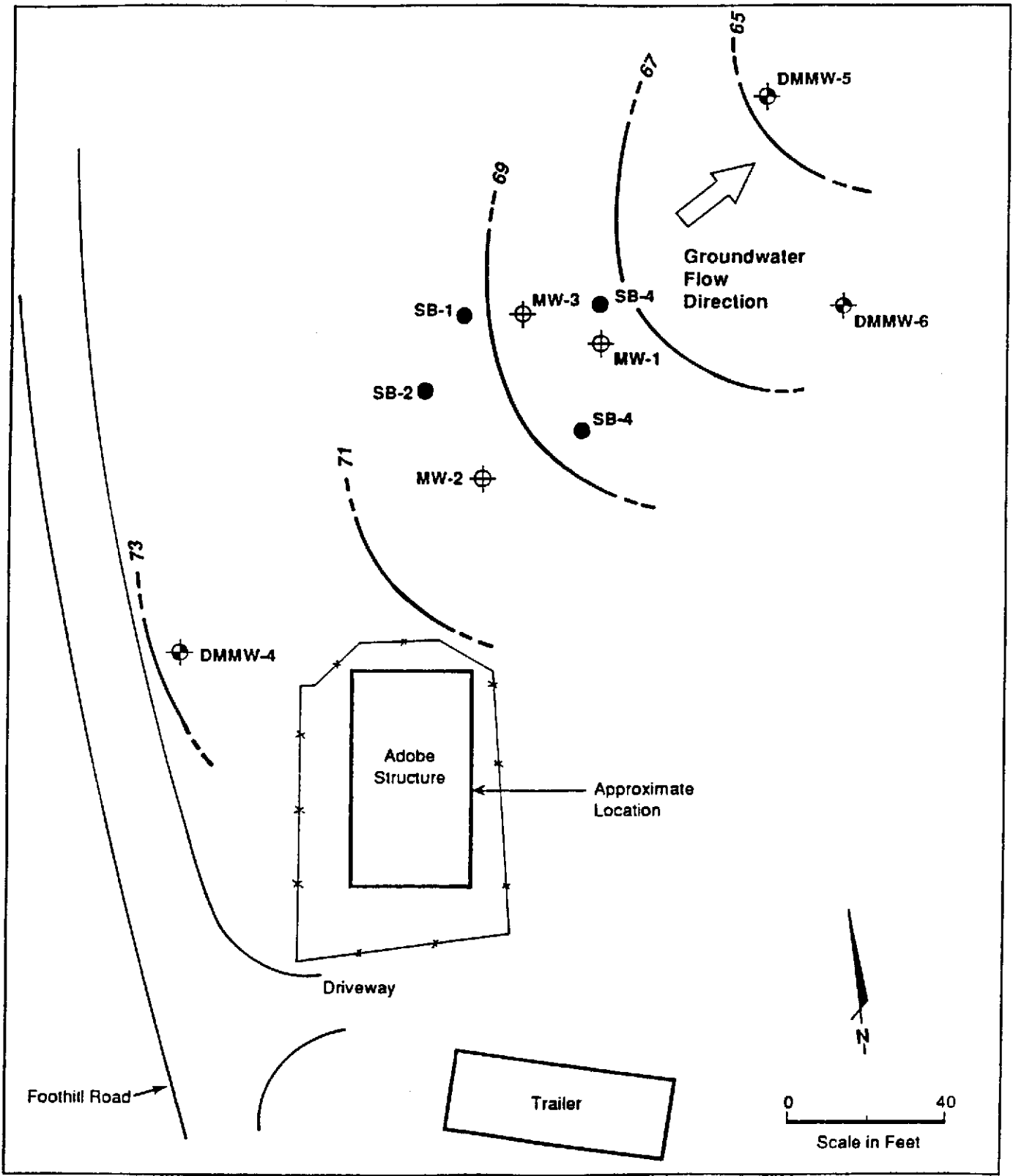
DAMES & MOORE

*Arshud Mahmood*  
for Arshud Mahmood, Ph.D., R.G.E.  
Managing Principal

AM:am

cc: Mr. Gil Swe (Homes Savings of America)  
Mr. John Jeng (California Regional Water Quality Control Board)  
Mr. Dave Rolston (Ahmanson)  
Mr. Mark Kehke (Ahmanson)

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KEY	
● SB-2	Dames & Moore Soil Boring
⊕ MW-2	Existing Monitoring Well
⊕ DMMW-4	Dames & Moore Monitoring Well
Note: Monitoring Wells Surveyed by Martin M. Ron Associates, Inc.	

**GROUNDWATER ELEVATION CONTOUR MAP**

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Ahmanson Developments  
Laguna Oaks PCE Investigation  
Pleasanton, California

July 1992  
14943-062-015

**DAMES & MOORE** FIGURE 1