



April 29, 1997

241.0102.005

Ms. Susan Hugo
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94501

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CONFIDENTIAL

**QUARTERLY WATER-LEVEL AND
PRODUCT THICKNESS MEASUREMENTS
POWELL STREET PLAZA AND SHELLMOUND III SITES
EMERYVILLE, CALIFORNIA**

Dear Ms. Hugo:

This letter presents depth-to-water data and product thickness measurements collected by PES Environmental, Inc. (PES) at Powell Street Plaza and the adjacent Shellmound III properties in Emeryville, California, during the first quarter of 1997. PES collected the measurements on March 5, 1997, on behalf of the former partners of Eastshore Partners.

The groundwater monitoring schedule is described in a June 29, 1994 letter to Ms. Hugo of the Alameda County Department of Environmental Health (ACDEH) and subsequent modifications are described in October 24, 1994 and March 14, 1996 letters to Ms. Hugo. The March 1996 letter documented verbal authorization from Ms. Hugo to reduce the frequency for chemical analysis of groundwater samples from quarterly to semi-annual.

Depth-to-water and product thickness (where present) were measured in the monitoring wells and recorded to the nearest 0.01 foot using an electronic, dual-interface sounding probe. Depth-to-water measurements were converted to water-level elevations referenced to mean sea level (MSL) and corrected for displacement by free product (Table 1). To prevent cross-contamination between wells, the sounding probe and portions of the tape submerged in the well were cleaned with analconox/deionized water solution and double-rinsed with deionized water between well measurements. Water-level elevations and product thickness measurements are listed in Table 1.

Depth to water and product thickness measurements were collected in wells MW-1, MW-6, MW-11, MW-12, MW-13, MW-14, and MG-7. Monitoring wells MW-2, MW-3, MW-8, and MW-9 were inaccessible due to corrosion and dirt in the well traffic box lids and, therefore, were not measured. Plate 1 shows the location of accessible monitoring wells and those that have been damaged by construction activities and can no longer be monitored.

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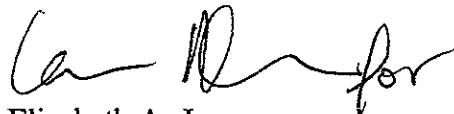
The March 5, 1997 water-level elevations in monitoring wells located at both the Powell Street Plaza and Shellmound III properties ranged from -0.07 foot below mean sea level (MSL) to 4.90 feet above MSL. Water-level elevations in monitoring wells located at the Powell Street Plaza property ranged from 0.03 to 1.33 feet (MW-11 and MW-13, respectively) higher than water-level elevations measured on November 25, 1996. Water-level elevation for MG-7 on the Shellmound III property was 0.42 foot higher than the elevation recorded November 25, 1996. In summary, the water-level elevations observed at the Powell Street Plaza and Shellmound III properties on March 5, 1997 appear slightly higher than water-level elevation measurements recorded on November 25, 1996. The higher elevations most likely reflect an increase in precipitation associated with seasonal storms. Water-level elevations and groundwater contours are illustrated on Plate 2.

A passive free-phase product recovery skimmer has been operating alternately in Wells MW-13 and MW-14 at the Powell Street Plaza site since June 1996. From June 28, 1996 to March 5, 1997, the product recovery system has removed approximately 0.125 gallons of product.

We trust this is the information you require at this time. If you have any questions, please do not hesitate to contact the undersigned.

Yours very truly,

PES ENVIRONMENTAL, INC.



Elizabeth A. Large
Staff Geologist



Richard J. Hutton
Senior Environmental Specialist

Attachments: Table 1 - Water-Level Elevations and Product Thickness Measurements
Plate 1 - Site Plan
Plate 2 - Groundwater Elevations on March 5, 1997

cc: Mr. Thomas Gram
Mr. Thomas Graf, Geomatrix Consultants

TABLE

TABLE 1
Water-Level Elevations and Product Thickness Measurements
March 5, 1997
Powell Street Plaza and Shellmound III Sites
Emeryville, California

Well Number	Top of Casing Elevation* (feet MSL)	3/5/97 Depth to Product (feet)	3/5/97 Depth to Water (feet)	3/5/97 Product Thickness (feet)	11/25/96 Product Thickness (feet)	Change in Product Thickness (feet)	3/5/97 Groundwater Elevation (feet MSL)	3/5/97 Corrected GW Elevation (feet MSL)	11/25/96 Groundwater Elevation (feet MSL)	Change In Elevation 11/25/96 - 3/5/97 (feet MSL)
MW-1	8.72	NP	5.17				3.55		3.07	0.48
MW-2	9.83	NP	NM				NM		2.99	NM
MW-3	10.86	NP	NM				NM		2.86	NM
MW-4 ⁽¹⁾	----	----	----				----		----	
MW-5 ⁽¹⁾	----	----	----				----		----	
MW-6	11.42	NP	7.92				3.50		3.21	0.29
MW-7 ⁽¹⁾	----	----	----				----		----	
MW-8	7.48	NP	NM				NM		1.84	NM
MW-9	7.50	NP	NM				NM		4.80	NM
MW-10	7.38	NM	NM				NM		NM	NM
MW-11	11.89	NP	11.96				-0.07		-0.10	0.03
MW-12	9.42	NP	6.87				2.55		2.24	0.31
MW-13	10.83	6.27	6.37	0.10	0.28	-0.18	4.46	4.55	4.29	0.26
MW-14	11.74	Trace	6.84	< 0.01	0.35	-0.35	4.90		3.57	1.33
MW-15 ⁽¹⁾	----	----	----				----		----	
MW-16 ⁽¹⁾	----	----	----				----		----	
MW-18	6.21	NM	NM				NM		NM	NM
MW-19	9.94	NM	NM				NM		NM	NM
MG-1	11.82	NM	NM				NM		NM	NM
MG-2	10.83	NM	NM				NM		NM	NM
MG-3	9.76	NM	NM				NM		NM	NM
MG-4	7.38	NM	NM				NM		NM	NM
MG-7	13.10	NP	12.00				1.10		0.68	0.42
PZ-1	7.99	NM	NM				NM		NM	NM

Notes:

* = Top of casing elevations based on December 27, 1994 and January 4, 1995 Kier & Wright surveys.

NP = No free product observed

NM = Not measured

Trace = Product thickness less than instrument detection limit of 0.01 feet.

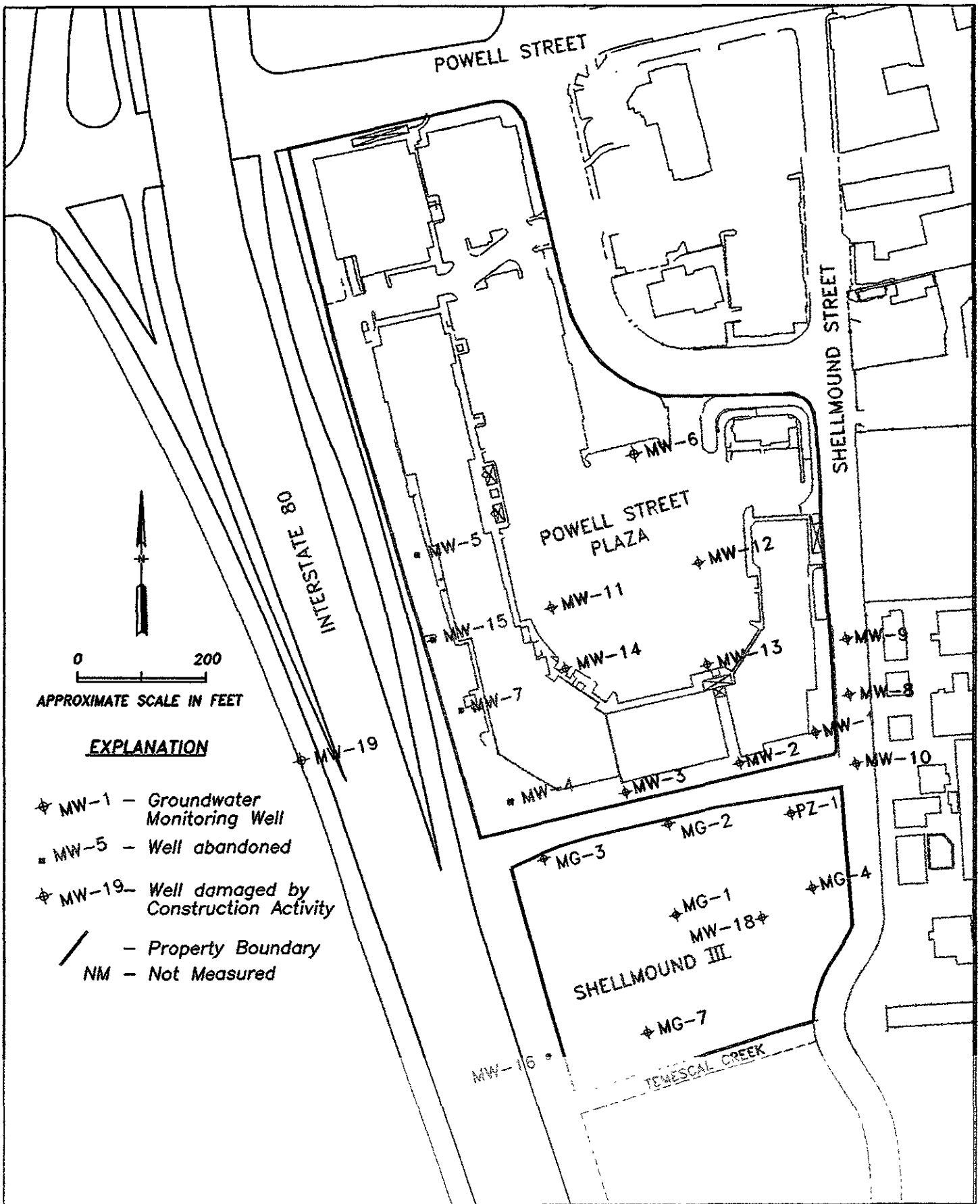
Groundwater Elevations were calculated as follows:

$$\text{Water-Level Elevation} = \text{Top of Casing} - \text{Depth to Water} + (0.85 \times \text{Product Thickness})$$

GW = Groundwater

(1) = Well has been abandoned.

PLATES



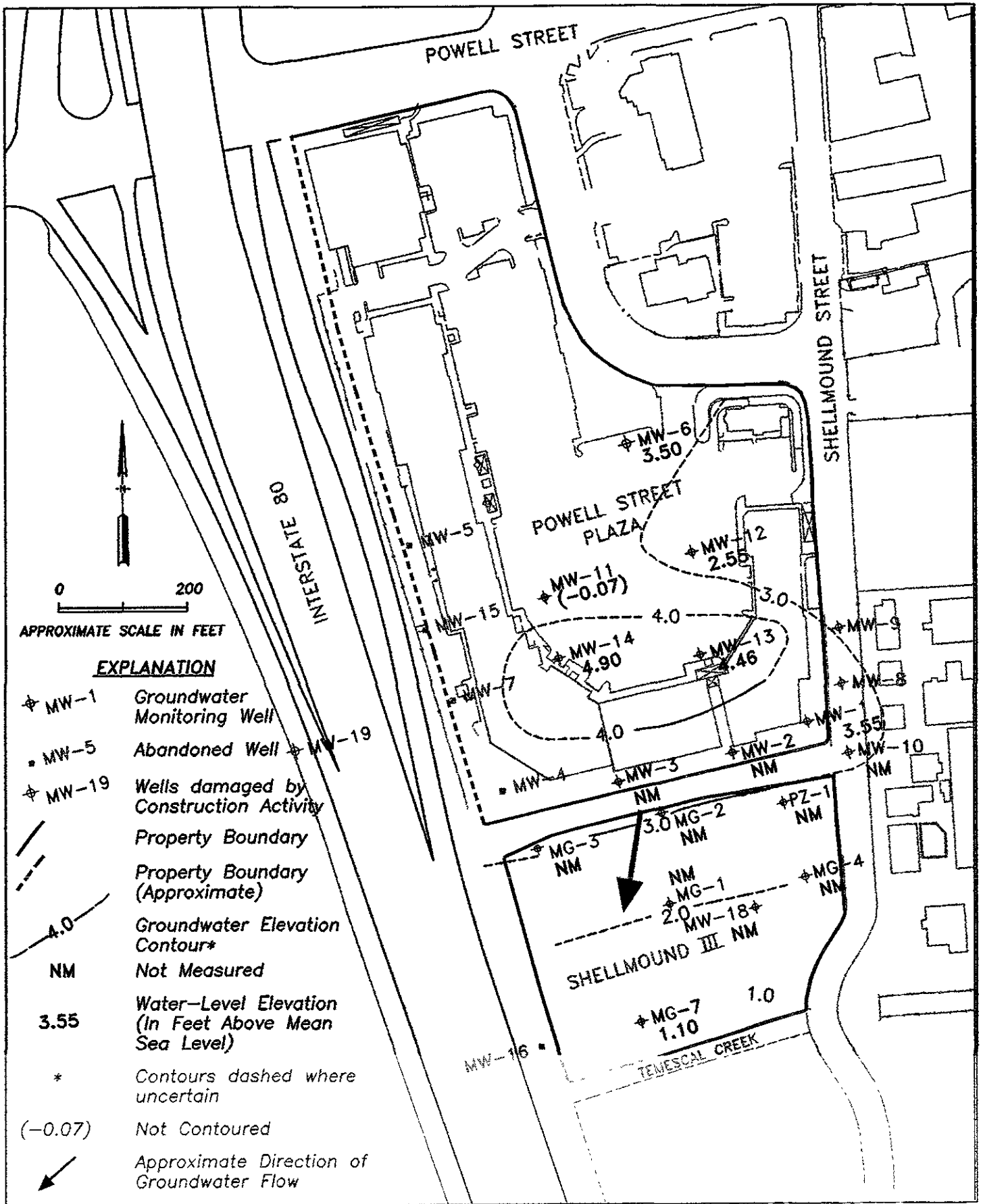
PES Environmental, Inc.
 Engineering & Environmental Services

Site Plan
 Powell Street Plaza and
 Shellmound III Sites
 Emeryville, California

PLATE

1





- EXPLANATION**
- ◆ MW-1 Groundwater Monitoring Well
 - MW-5 Abandoned Well
 - ◆ MW-19 Wells damaged by Construction Activity
 - Property Boundary
 - - - Property Boundary (Approximate)
 - 4.0 Groundwater Elevation Contour*
 - NM Not Measured
 - 3.55 Water-Level Elevation (In Feet Above Mean Sea Level)
 - * Contours dashed where uncertain
 - (-0.07) Not Contoured
 - ↙ Approximate Direction of Groundwater Flow

Groundwater Elevations on March 5, 1997
 Powell Street Plaza and
 Shellmound III Sites
 Emeryville, California

RTW