



June 29, 1994

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Ms. Susan L. Hugo  
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80 Swan Way, Room 200  
Oakland, California 94621

**PROPOSED SAMPLING SCHEDULE MODIFICATION  
GROUNDWATER MONITORING PROGRAM  
POWELL STREET PLAZA AND SHELLMOUND III SITES  
EMERYVILLE, CALIFORNIA**

Dear Ms. Hugo:

This letter was prepared by PES Environmental, Inc. ("PES") on behalf of the former Eastshore Partners for the Powell Street Plaza and Shellmound III sites, Emeryville, California. This letter is in response to your request during our meeting on June 14, 1994 for a proposal regarding modification to the well sampling schedule for the groundwater monitoring program.

During the June 14, 1994 meeting, PES proposed a modification to the groundwater monitoring program to reduce redundant monitoring and associated costs. PES understands from this discussion that you will evaluate the proposed modifications upon receipt of this letter outlining the proposed changes. PES request that you review this proposal before the next quarterly sampling event scheduled for early September 1994.

PES has reviewed the groundwater sampling analysis data collected to date (Table 1) and summarized the results for the extent of petroleum hydrocarbons in groundwater as shown on Plate 1. The data table and summary illustration indicate that a number of well locations produce redundant monitoring data. PES proposes that six monitoring wells be eliminated from the sampling schedule and four monitoring wells be sampled on an annual basis. Table 2 summarizes the proposed modifications and the rational for the change. The proposed well sampling schedule modifications are also illustrated on Plate 1.

Monitoring Well MW-11 defines the northern extent of petroleum hydrocarbons in groundwater with Well MW-12 providing redundant monitoring. PES proposes that Well MW-12 be eliminated from the sampling schedule. Well MW-6 is also redundant with MW-1; however, MW-6 can provide early warning of potential contaminant migration from an upgradient source sites. Therefore, PES proposes that Well MW-6 be sampled on an annual basis

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Monitoring Well MW-2 defines the eastern extent of petroleum hydrocarbons in groundwater with Wells MW-1, MW-8, MW-9, and MW-19 providing redundant monitoring. PES proposes that Well MW-1 be sampled on an annual basis to provide early warning of potential contaminant migration from upgradient former source sites and Wells MW-8, MW-9, and MW-10 be eliminated from the sampling schedule.

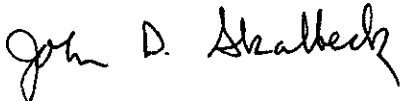
Monitoring Well MW-18 is redundant with Well MG-4 and is inaccessible during the rainy season due to being located in a surface depression at the site. PES proposes that Well MW-18 be eliminated from the sampling schedule. Wells MG-4 and PZ-1 are perimeter wells that have a history of no detectable concentrations of petroleum hydrocarbons. Therefore, PES proposes that Wells MG-4 and PZ-1 be sampled on an annual basis.

Monitoring Wells MW-16 and MG-7 also provide redundant monitoring. PES therefore proposes that Well MW-16 be eliminated from the sampling schedule since Well MG-7 is closer to the source of petroleum hydrocarbons in groundwater.

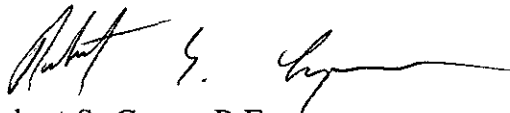
PES trusts this is the information you require at this time. Please feel free to contact either of the undersigned if you have any questions.

Yours very truly,

**PES ENVIRONMENTAL, INC.**



John D. Skalbeck, C.E.G.  
Senior Hydrogeologist



Robert S. Creps, P.E.  
Associate Engineer

Attachments: Table 1. Results of Chemical Analyses of Groundwater Samples  
Table 2. Proposed Sampling Schedule Modifications  
Plate 1. Groundwater Monitoring

cc: Tom Gram, Former Eastshore Partners  
David Cooke, Beveridge & Diamond  
Tony McElligott, Clayton Environmental Consultants

TABLE 1

**Results of Chemical Analyses of Groundwater Samples  
Powell Street Plaza and Shellmound III Sites  
Emeryville, California**

Well Number	Date Sampled	Consultant	EPA Test Method	(concentrations expressed in parts per million)						Comments
				TPH as Gasoline	TPH as Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	
MW-1	3/14/88	Alton	8015	NT	<1	NT	NT	NT	NT	
	3/25/91	PES	8015/8020	<0.050	<0.050	<0.0003	<0.0003	<0.0003	<0.0003	
	11/10/93	PES	8260	<0.050	<0.050	0.0013	0.0018	<0.0005	0.0020	
	2/23/94	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	
MW-2	3/14/88	Alton	8015	NT	0.05	NT	NT	NT	NT	
	3/25/91	PES	8015/8020	0.053	<0.050	0.0006	<0.0003	<0.0003	<0.0003	
	11/10/93	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	
	2/23/94	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	
MW-3	3/14/88	Alton	8015	NT	0.15	NT	NT	NT	NT	
	3/25/91	PES	NS	NS	NS	NS	NS	NS	NS	
	11/10/93	PES	NS	NS	NS	NS	NS	NS	NS	
	2/23/94	PES	8260	<0.050	11.000	0.0007	<0.0005	<0.0005	<0.0005	
MW-4	3/14/88	Alton	8015	NT	1.2	NT	NT	NT	NT	
	3/25/91	PES	8015/8020	1,300	2,500	0.7100	0.0030	0.0020	0.0060	
	11/10/93	PES	8260	0.800	34.000	0.4400	0.0030	<0.0020	<0.0020	
	2/23/94	PES	8260	0.560	18.000	0.4500	0.0025	<0.0005	0.0020	
MW-5	3/14/88	Alton	8015	NT	<1	NT	NT	NT	NT	
	11/10/93	PES	8260	<0.050	6.800	<0.0005	<0.0005	<0.0005	<0.0005	
	2/23/94	PES	8260	<0.050	7.100	<0.0005	<0.0005	<0.0005	<0.0005	
MW-6	3/14/88	Alton	8015	NT	<0.05	NT	NT	NT	NT	
	11/10/93	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	
	2/23/94	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	

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Well Number	Date Sampled	Consultant	EPA Test Method	(concentrations expressed in parts per million)						Comments
				TPH as Gasoline	TPH as Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	
MW-7	3/10/88	Alton	NS	NS	NS	NS	NS	NS	NS	Free product (1.32 ft) Free product (0.22 ft) Free product (0.02 ft)
	11/10/93	PES	NS	NS	NS	NS	NS	NS	NS	
	2/23/94	PES	8260	NS	NS	NS	NS	NS	NS	
MW 8	3/14/88	Alton	8015	NT	<0.05	NT	NT	NT	NT	
	11/10/93	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	
	2/23/94	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	
MW-9	3/14/88	Alton	8015	NT	<1	NT	NT	NT	NT	
	11/10/93	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	
	2/23/94	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	
MW-10	3/14/88	Alton	8015	NT	<1	NT	NT	NT	NT	
	11/10/93	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	
	2/23/94	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	
MW-11	3/14/88	Alton	8015	NS	NS	NS	NS	NS	NS	Well was dry
	11/10/93	PES	8260	<0.050	<0.050	0.0008	<0.0005	<0.0005	<0.0005	
	2/23/94	PES	8260	<0.050	<0.050	0.0008	<0.0005	<0.0005	<0.0005	
MW 12	3/14/88	Alton	8015	NT	0.05	NT	NT	NT	NT	
	11/10/93	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	
	2/23/94	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	
MW-13	3/14/88	Alton	8015/8020	NT	1.7	<0.0005	<0.0005	<0.0005	<0.0005	Free product (1.06 ft) Free product (Trace: <0.01 ft)
	11/10/93	PES	8240	NS	NS	NS	NS	NS	NS	
	2/23/94	PES	8260	NS	NS	NS	NS	NS	NS	

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Well Number	Date Sampled	Consultant	EPA Test Method	(concentrations expressed in parts per million)						Comments
				TPH as Gasoline	TPH as Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	
MW-14	3/14/88	Alton	8015	NT	<1	NT	NT	NT	NT	Free product (0.27 ft) Free product (Trace: <0.01 ft)
	11/10/93	PES	8260	NS	NS	NS	NS	NS	NS	
	2/23/94	PES	8260	NS	NS	NS	NS	NS	NS	
MW-15	3/14/88	Alton	8015/8020	NT	1.8	<0.0005	<0.0005	<0.0005	<0.0005	Free product (0.15 ft) Free product (Trace: <0.01 ft)
	11/10/93	PES	8260	NS	NS	NS	NS	NS	NS	
	2/23/94	PES	8260	NS	NS	NS	NS	NS	NS	
MW-16	3/14/88	Alton	8015	NT	<0.05	NT	NT	NT	NT	Non-standard diesel pattern
	4/21/89	Tenera	8015	NT	<1.0	0.0009	0.0026	0.0004	0.0041	
	3/25/91	PES	8015/8020	<0.050	<0.050	<0.0003	<0.0003	<0.0003	0.0003	
	5/20/92	PES	8015/8020	<0.050	0.140	<0.0003	<0.0003	<0.0003	<0.0003	
	11/10/93	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	
	2/23/94	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	
MW-17	3/14/88	Alton	8015	NT	<0.05	NT	NT	NT	NT	
	4/21/89	Tenera	8015	NT	<1.0	<0.3	<0.3	<0.3	<0.3	
MW-18	3/14/88	Alton	8015	NT	<0.05	NT	NT	NT	NT	Well under standing water
	5/20/92	PES	8015/8020	<0.050	<0.050	<0.0003	<0.0003	<0.0003	<0.0003	
	11/10/93	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	
	2/23/94	PES	8260	NS	NS	NS	NS	NS	NS	

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Well Number	Date Sampled	Consultant	EPA Test Method	(concentrations expressed in parts per million)						Comments
				TPH as Gasoline	TPH as Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	
MG-1	4/21/89	Tenera	NS	NS	NS	NS	NS	NS	NS	Free product Free product Free product (0.03 ft) Free product (0.36 ft) <b>Free product (Trace: &lt;0.01 ft)</b>
	3/25/91	PES	NS	NS	NS	NS	NS	NS	NS	
	5/21/92	PES	NS	NS	NS	NS	NS	NS	NS	
	11/10/93	PES	8260	NS	NS	NS	NS	NS	NS	
	2/23/94	PES	<b>8260</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	
MG-2	4/21/89	Tenera	8015	NT	<1.0	0.09	0.0027	<0.0003	0.0017	
	3/25/91	PES	8015/8020	<0.050	<0.050	0.0010	<0.0003	<0.0003	<0.0003	
	5/21/92	PES	8015	0.210	1.400	0.0820	0.0018	0.0006	0.0014	
	11/10/93	PES	8260	0.050	0.540	0.0160	0.0009	<0.0005	<0.0005	
	2/23/94	PES	<b>8260</b>	<b>&lt;0.050</b>	<b>3.300</b>	<b>0.0033</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	
MG-3	4/21/89	Tenera	8015	NT	<1.0	0.1	0.0023	<0.0003	0.0089	Free product (0.85 ft) Free product (0.47 ft) <b>Free product (0.02 ft)</b>
	3/25/91	PES	8015/8020	0.610	2.600	0.0750	0.0008	0.0004	0.0020	
	5/21/92	PES	NS	NS	NS	NS	NS	NS	NS	
	11/10/93	PES	NS	NS	NS	NS	NS	NS	NS	
	2/23/94	PES	<b>8260</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	
MG-4	4/21/89	Tenera	8015	NT	<1.0	0.0003	<0.0003	<0.0003	0.0013	
	3/25/91	PES	8015/8020	<0.050	<0.050	0.0004	<0.0003	<0.0003	0.0005	
	5/20/92	PES	8015/8020	<0.050	<0.050	<0.0003	<0.0003	<0.0003	<0.0003	
	11/10/93	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	
	2/23/94	PES	<b>8260</b>	<b>&lt;0.050</b>	<b>&lt;0.050</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	

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				TPH as Gasoline	TPH as Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes		
MG-7	3/25/91	PES	8015/8020	<0.050	<0.050	0.0005	<0.0003	<0.0003	<0.0003	Non-standard diesel pattern	
	5/20/92	PES	8015/8020	<0.050	0.060	<0.0003	<0.0003	<0.0003	<0.0003		
	11/10/93	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005		
	2/23/94	PES	8260	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005		
PZ-1	3/25/91	PES	8015/8020	0.320	0.340	0.0004	<0.0003	<0.0003	0.0010		0.450 - TPH as light petroleum distillate 0.200 - TPH as stoddard solvent
	5/21/92	PES	8015/8020	0.120	0.600	0.0018	0.0003	0.0003	0.0012		
	11/10/93	PES	8260	<0.050	<0.050	0.0015	<0.0005	<0.0005	<0.0005		
	2/23/94	PES	8260	<0.050	<0.050	0.0009	<0.0005	<0.0005	<0.0005		

NOTES:

NT = Not tested for indicated test parameter  
NS = Not sampled for indicated test parameter  
TPH = Total petroleum hydrocarbons

SOURCES:

Alton = Alton Geoscience, Report on Additional Site Characterization Studies at PIE Nationwide Property, 5500 Eastshore Freeway, Emeryville, California, April 28, 1988.  
Tenera = Tenera Environmental Services, Phase II Environmental Site Assessment of Certain Property in Emeryville, California, June 2, 1989.  
PES = Results of chemical analyses for samples collected on March 25, 1991 were presented in PES' report entitled Preliminary Endangerment Assessment, Shellmound III Site, 4300 Eastshore Highway, Emeryville, California, September 27, 1991. Results of chemical analyses for samples collected on May 20, 1992 were presented in PES' report entitled Results of Groundwater Sampling and Analyses, Shellmound III Site, 4300 Eastshore Highway, Emeryville, California, July 7, 1992.

TABLE 2.

PROPOSED MONITORING SCHEDULE MODIFICATION

Powell Street Plaza and Shellmound III Sites  
Emeryville, California

<b><u>Proposed Wells for Elimination From Monitoring Schedule</u></b>	<b><u>Rationale</u></b>
MW-12	Redundant with MW-6 and MW-11
MW-8, MW-9, MW-10	Redundant with MW-1 and MW-2
MW-18	Redundant with MG-4 and Inaccessible during rainy season
MW-16	Redundant with MG-7
<b><u>Proposed Wells for Annual Monitoring Frequency</u></b>	<b><u>Rationale</u></b>
MW-6	Redundant with MW-11 and Perimeter Well with ND History
MW-1	Redundant with MW-2 and Perimeter Well with ND History
PZ-1	Perimeter Well with ND History
MG-4	Perimeter Well with ND History

NOTE

ND = No detectable concentrations of petroleum hydrocarbons