



ENVIRONMENTAL ENGINEERING, INC
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December 29, 2003

Mr. Don Hwang
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Alameda County
Environmental Health Services
1131 Harbor Bay Parkway
Suite 250
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Alameda County

DEC 31 2003

Environmental Health

Subject: Addendum to the Approved Workplan; Fuel Leak Case No. RO0000317; Mash Petroleum, 5725 Thornhill Drive, Oakland, CA

Dear Don:

Based on our telephone conversation, this letter is an addendum to the approved Workplan prepared by Aqua Science Engineers Inc. to address some of the concerns I expressed regarding the subject property.

Although the installation of the monitoring wells per your approved Workplan prepared by Aqua Science Engineers Inc. is instrumental in assessing and monitoring of the contaminant levels at the subject site, these wells may not be sufficient to delineate the extent of the petroleum hydrocarbon contamination in the subsurface. As we discussed, I would like to propose the following scope of work in order to collect enough information to build the site's conceptual model:

1. Drill 10 hydropunches using direct push technology (DPT), perform continuous logging and collect soil and groundwater samples. The locations of the proposed hydropunches are presented in the attached figure;
2. Analyze soil and groundwater samples for TPH-g, TPH-d, TPH-Mo, BTEX, MtBE, TAME, ETBE, DIPE, TBA, EDB, EDC and Ethanol using EPA Method 8260;
3. Based on the groundwater sample analyses results, at least three groundwater monitoring wells should be installed. The locations of the groundwater monitoring wells will be decided once the horizontal extent of the groundwater plume is defined;
4. Using the lithological logs of the hydropunches and groundwater monitoring wells longitudinal and transverse geologic cross-sections with respect to the groundwater flow direction will be constructed.
5. Survey the casing elevations of the groundwater monitoring wells and water level elevations along Temescal Creek in order to evaluate the

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Page 2 of 2

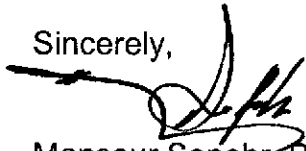
hydraulic connection between the saturated sediments beneath the site and Temescal Creek. It is extremely important to evaluate whether or not Temescal Creek is a gaining stream;

6. Sample and decommission the three existing tank backfill wells by pressure grouting; and finally
7. Prepare a soil and groundwater assessment report.

Upon the completion of the hydropunch study and receiving the analytical results of the soil and groundwater samples, SOMA will discuss the results of this investigation with you in order to decide the locations of the groundwater monitoring wells.

Thank you for your time in reviewing our proposed addendum to the Workplan prepared by Aqua Science Engineers Inc. In the mean time please do not hesitate to call me at (925) 244-6600, if you have any questions or comments.

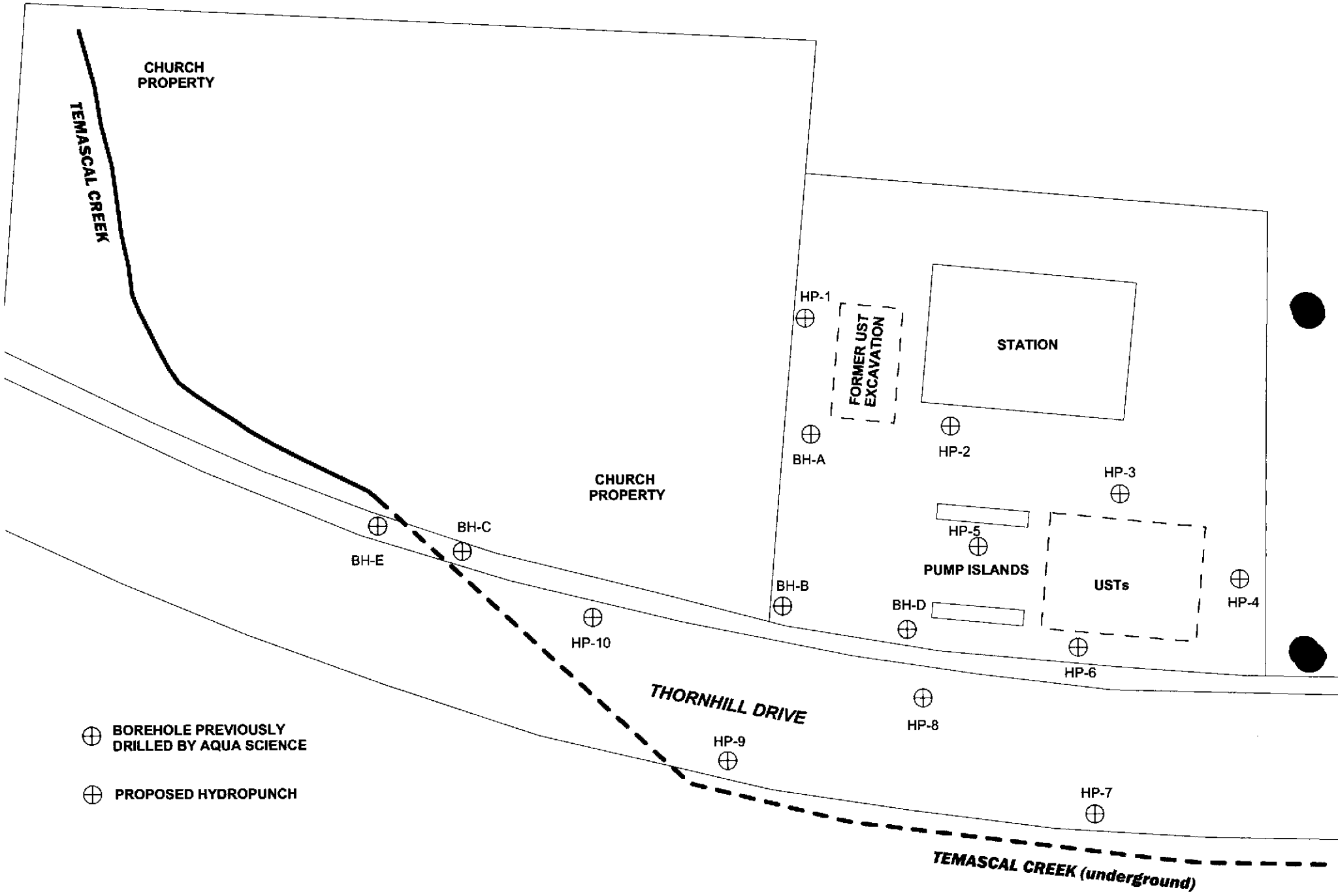
Sincerely,



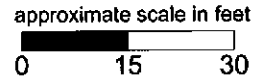
Mansour Sepehr, Ph.D., PE
Principal Hydrogeologist



cc: Mr. Mo Mashhoon, Mash Petroleum, Inc.



- ⊕ BOREHOLE PREVIOUSLY DRILLED BY AQUA SCIENCE
- ⊕ PROPOSED HYDROPUNCH



Site map showing locations of proposed hydropunches.

