

P & D ENVIRONMENTAL

A Division of Paul H. King, Inc.

4020 Panama Court

Oakland, CA 94611

(510) 658-6916

Alameda County

June 11, 1997

Proposal 061197.P1

Mr. Michael Liu
c/o Mr. Jeff Hammond
Merritt Environmental Corporation
1044 5th Avenue
Oakland, CA 94606

SUBJECT: Groundwater Monitoring Well Installation, Development,
Monitoring, and Sampling Proposal
Merritt Environmental Corporation Facility
1044 5th Avenue
Oakland, California

Dear Mr. Liu:

P&D Environmental, a division of Paul H. King, Inc. (P&D), is pleased to present this proposal for groundwater monitoring well permitting, installation, development and sampling (for 4 quarters) at the subject site. One two-inch diameter groundwater monitoring well will be installed to a total depth of 20 feet. Soil samples will be collected at depths of 5 and 10 feet below the ground surface for laboratory analysis.

All subcontractor cost (drilling company and laboratory), are included in this proposal. P&D proposes to perform the following scope of work.

Well Installation, Monitoring, and Development And One Well Sampling (1st Quarter)

- o Subcontractor coordination, Alameda County Water Agency Zone 7 permitting, Underground Service Alert notification, regulatory agency notification, health and safety plan preparation.
- o Oversight of drilling contractor during drilling and soil sample collection activities from one borehole to a depth of 20 feet. The driller will be directed to collect soil samples from the borehole at five foot intervals for sample evaluation. All soil samples collected from the borehole will be evaluated with a photoionization detector. Soil samples collected at depths of 5 and 10 feet below grade will be retained for laboratory analysis. After the borehole has been drilled to a depth of 20 feet, a 2-inch diameter PVC groundwater monitoring well will be constructed in the borehole. Driller subcontractor costs are included in this proposal.
- o At least 48 hours after groundwater monitoring well construction, the well will be developed in preparation for groundwater sample collection. P&D requests that two open-head 55-gallon drums be supplied by Merritt Environmental for water generated during well development. The cost for drums is not included in this proposal.
- o At least 24 hours after the well has been developed the well will be purged and sampled. This will be considered the first quarterly monitoring and sampling. During purging operations, the field parameters of pH, electrical conductivity and temperature will be recorded. Water generated during purging operations will be stored in the drums used to containerize water generated during well development.
- o Arrange for analysis of two soil samples and one groundwater sample for TPH-G, BTEX, and MTBE on a normal turn around basis. Laboratory subcontractor costs are included in this proposal.
- o Report preparation documenting soil and groundwater sample collection and sample results. The report will include a site plan

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showing the drilling location, a soil boring log, a well construction diagram, tables summarizing the sample results, and the stamp of an appropriately registered professional. One DRAFT copy of the report will be submitted to you for review, prior to submittal to Mr. Chan, if requested.

- o Preparation of one Well Completion Report for submittal to the California Department of Water Resources documenting the installation of the groundwater monitoring well.

Well Monitoring and Sampling (2nd, 3rd, & 4th Quarters)

- o Monitor the well once each quarter for three quarters. The depth to water in the well will be measured using an electric water level indicator. In addition, the well will be checked for the presence of free product or sheen using a transparent bailer. If free product is detected in a well, the thickness of the free product will be measured using water-finding paste and product-finding paste.
- o Sample the well once each quarter for three quarters. Prior to sampling, the well will be purged of a minimum of three casing volumes of water, or until the well is purged dry with negligible recharge. During purging operations, the purged water will be monitored for the field parameters of pH, electrical conductivity and temperature. Once the field parameters are observed to stabilize and the appropriate minimum amount of water has been purged, the well will be sampled using a Teflon bailer. Water sample will be placed in appropriate sample containers and stored in a cooler on ice until delivery to a State-accredited hazardous waste testing laboratory. Chain of custody procedures will be observed for sample handling.
- o Arrange for the samples to be analyzed at a State-accredited hazardous waste testing laboratory for TPH-G, BTEX, and MTBE. Samples will be analyzed on a normal (five working day) turn around basis.
- o Report Preparation. Upon receipt of the laboratory analytical results, a monitoring and sampling report will be prepared. The report will contain documentation of field activities associated with the collection of the groundwater sample, copies of the laboratory analytical reports, the chain of custody documentation, and the signature and stamp of an appropriately registered professional.

The cost for the scope of work identified in this proposal (subcontractor coordination, notifications, drilling oversight, well development, well purging and sampling, report preparation and Well Completion Report preparation) is \$5,120. Payment is due NET 30 days after submittal of each report as follow:

- o well installation and 1st quarter sampling report \$1,120 (\$3,120 less the \$2,000 paid prior to beginning of work);
- o 2nd quarter purge and sample report \$665;
- o 3rd quarter purge and sample report \$665;
- o and 4th quarter purge and sample report \$670.

P&D requests that \$2,000 be provided before the beginning of work.

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The cost for drums associated with storage of water generated during well development and purging is not included in this proposal. Costs associated with characterization, removal or disposal of soil or water generated during this investigation is not included in this proposal.

If the proposed scope of work and costs meet with your approval, please sign below and return to P&D one signed copy of this proposal.

Should you have any questions, please do not hesitate to contact me at (510) 658-6916.


Sincerely,

P&D Environmental



Paul H. King
Hydrogeologist

I approve the proposed scope of work and costs in this proposal.



Michael Liu

6-21-97

Date

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