PES Environmental, Inc.
Engineering & Environmental Services

October 24, 1991

9DO001

Dolan Lumber Company
6365 Scarlett Court
Dublin, California 94568

Attention: Mr. Michael Dolan

PROPOSAL
GROUNDWATER INVESTIGATION
DUBLIN ROCK AND READY MIX
DUBLIN, CALIFORNIA

Dear Mr. Dolan:

This letter presents PES Environmental Inc.'s (PES) proposal to perform a groundwater investigation at Dublin Rock and Ready Mix located at 6393 Scarlett Court in Dublin, California. The purpose of the groundwater investigation is to: (1) evaluate the presence of hydrocarbons in groundwater; and (2) evaluate the direction of groundwater flow at the site. This investigation is being performed to address requests of the Alameda County Health Agency (ACHA), Division of Environmental Health for performing a groundwater investigation at the site.

BACKGROUND

We understand that petroleum hydrocarbons were identified at the site during removal of a 550-gallon underground gasoline tank in February, 1990. Chemical analysis of soil and groundwater samples collected during tank removal activities indicated the presence of total petroleum hydrocarbons (TPH) as gasoline and diesel. The chemical analysis reports indicate that the hydrocarbons detected using the TPH as diesel analysis appeared to be the less volatile constituents of gasoline. In a March 14, 1990 letter to Mr. Todd Bettencourt, the previous president of Dublin Rock and Ready Mix, the ACHA requested the installation of monitoring wells and quarterly progress reports for addressing the identified contamination. Mr. Bettencourt responded to the ACHA and indicated that his company did not have the financial resources to conduct a conventional groundwater investigation at the site. An alternative investigation methodology was implemented by a consultant (Kenneth Henneman) retained by Dublin Rock and Ready Mix. The investigation consisted of drilling five borings with a truck mounted drilling rig and collecting grab groundwater samples from the borings. Based on the results of the site investigation, TPH as gasoline was detected in

groundwater samples collected from five borings around the gasoline tank at concentrations ranging from 0.42 to 150 parts per million. However, because non-standard sampling techniques were used during the collection of the samples, the data collected may not be representative of site conditions.

We understand that the ACHA has tentatively approved a workplan prepared by Kenneth Henneman for performing a groundwater investigation at the site. With your authorization, this proposal will be sent to the ACHA for approval as a revised scope of work presented below.

SCOPE OF WORK

The specific tasks to be performed for the groundwater investigation include the following:

- Task 1 - Regulatory Agency File Review;
- Task 2 - Soil Sampling and Groundwater Monitoring Well Installation;
- Task 3 - Groundwater Sampling; and
- Task 4 - Report Preparation.

Descriptions of these tasks are presented below.

Task 1 - Regulatory Agency File Review

PES will review and evaluate the California Regional Water Quality Control Board's (RWQCB) Fuel Leaks List for Alameda county and ACHA records on the site and surrounding properties. PES will also meet with the ACHA to discuss the investigation proposed in this letter.

Task 2 - Soil Sampling and Monitoring Well Installation

Soil Sampling

Appropriate Alameda County Water District well permits will be obtained prior to drilling. PES will retain a utility locator service and clear the proposed boring locations for utilities. After utility clearance, PES will drill four borings that will be converted to monitoring wells. The wells will be positioned to include one in the assumed upgradient direction and three downgradient from the former tank.

The borings will be drilled using a hollow-stem auger drilling rig and samples will be collected every 5 feet to a depth of about 20 feet below ground surface (bgs) (the depth to groundwater is assumed to be approximately 10 feet bgs). Samples will also be collected at changes in lithology and at the bottom of the boring by driving brass or stainless steel lined split-spoon samplers into the undisturbed soil beneath the cutting bit of the augers. Each sample will be lithologically logged by a PES hydrogeologist or engineer and will be screened with a portable organic vapor analyzer. Based on the results of the screening and/or visual observations, one soil sample from each boring will be analyzed for TPH as gasoline following EPA Test Methods 5030/Modified 8015 and benzene, toluene, ethylbenzene and total xylenes (BTEX) 5030/8020.

Field and laboratory QC procedures for the soil borings include the following:

- All sampling equipment will be decontaminated by steam cleaning and/or washing with phosphate-free soap and rinsing with distilled water;
- All soil samples will be covered with aluminum foil, capped, sealed with silicon adhesive tape, and stored on ice in a cooler until delivery to the laboratory;
- All soil sample holding times and analyses will be pursuant to the Tri-Regional guidelines;
- All samples will be appropriately labeled and submitted to the laboratory accompanied by chain-of-custody documentation;
- All lithologic logs will be reviewed by a registered geologist or professional engineer;
- Laboratory QC will be performed pursuant to the procedures inherent with the specific methods used for analyses;
- All analyses will be performed by a laboratory certified by the State of California for each method of analysis used during the project;
- All analyses will be performed using the approved methods described in the Tri-Regional guidelines; and
- All cuttings generated during drilling will be stored in 55-gallon drums on site until laboratory analysis is completed and proper disposal is arranged.

Monitoring Well Installation

The wells will be constructed using 2-inch diameter flush-threaded PVC pipe and well screen. The well will be placed so that the screen is at least 5 feet below the water level and will extend at least two feet above the water level. The well will be completed with a threaded cap on the bottom of the well and have a clean sand pack extending from the bottom of the borehole to approximately two feet above the top of the screen. A bentonite pellet seal will be placed above the sand pack and a cement grout will be placed above the bentonite pellet seal to the ground surface. The well will be completed below grade in traffic-rated well vault with locking water-tight plug caps.

Prior to initial sampling, the well will be developed until it is visually clear and free of sediment. Development will be performed by surging and/or bailing followed by pumping. All development water will be contained on site in 55-gallon steel drums until proper disposal is arranged.

Groundwater Sampling

The initial sampling will be performed a minimum of 24 hours after development. Sampling will include measurement for free product and water level prior to purging the well. All sampling water will be contained on site in 55-gallon steel drums until proper disposal is arranged.

The following quality control (QC) procedures will be followed during the collection of groundwater samples:

- All sampling equipment will be decontaminated by steam cleaning and/or washing with phosphate-free soap and rinsing with distilled water.
- All groundwater samples will be placed in appropriate containers, preserved, and analyzed within the appropriate holding times;
- All samples will be appropriately labeled and submitted to the laboratory accompanied by chain-of-custody documentation; and
- Laboratory QC will be performed pursuant to the procedures inherent with the specific methods used for analyses, including:
    - One laboratory blank will be analyzed for volatile constituents;

- All analyses will be performed by a laboratory certified by the State of California for each method of analysis used during the project; and

- All analyses will be performed using the approved methods described in the RWQCB's Tri-Regional guidelines.

A State-certified laboratory will be retained to analyze the samples in accordance with the Tri-Regional guidelines. The samples will be analyzed for TPH as gasoline and BTEX following EPA Test Methods previously described.

Task 4 - Report Preparation

The results of the groundwater investigation will be presented in a report. The report will include site background, the results of the regulatory file review, field investigative methods used, investigative results and conclusions regarding the presence of contaminants. After your review and with your approval, the reports will be submitted to the ACHA.

FEE ESTIMATE

PES will perform its service on a time and expense basis according to the attached Service Agreement, General Conditions and Schedule of Charges. Our estimated fee for conducting the Scope of Work is provided on the attached table.

SCHEDULE

After receiving a signed copy of the attached Service Agreement as our authorization to proceed, PES will conduct Task 1 within one week or as soon as a meeting can be arranged with the ACHA. Field activities will be performed within two weeks of obtaining the ACHA's approval to perform the investigation. Samples will be analyzed using a normal (one to two weeks) turnaround time. Upon receipt of the laboratory report, PES will prepare a draft report for your review and comments within one week. PES will then finalize the report within two days after receiving your comments. If this schedule is not acceptable, please let us know so that we can accommodate your needs.

We appreciate the opportunity to be of assistance to you on this project and we trust that this is the information you need at this time. If you have any questions or require additional information, please call.

Yours very truly,

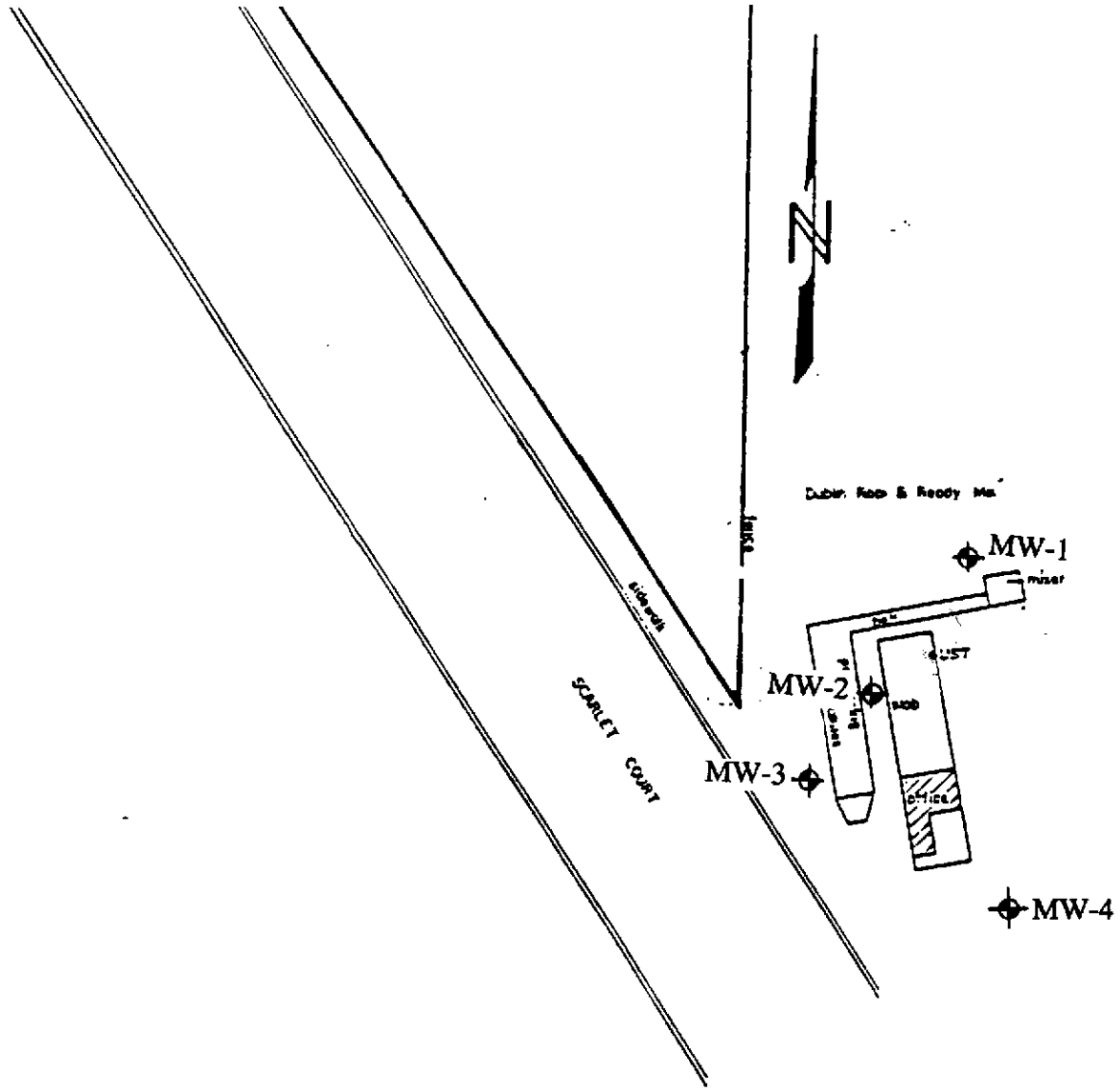
PES ENVIRONMENTAL, INC.

Michael D. Thompson, P.E.
Senior Engineer

William F. Frizzell, P.E.
Principal Engineer

Attachments: Service Agreement
General Conditions
Schedule of Charges

DRAFT



Approximate Monitoring Well Location

0 40 80

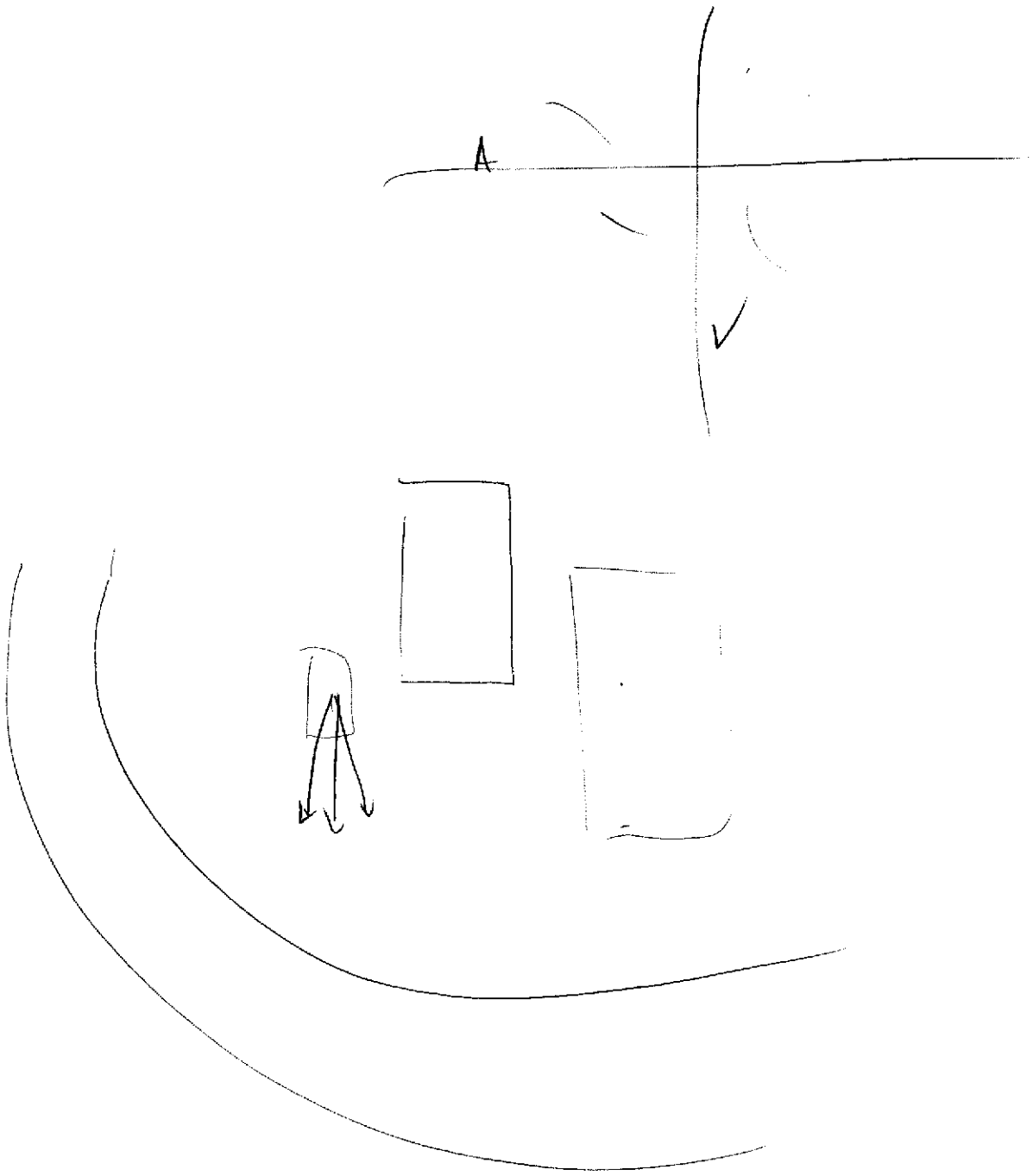
Scale in Feet

PES Environmental, Inc.
Engineering & Environmental Services

PLATE

Site Plan
Dublin Rock and Ready Mix
Dublin, California

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE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