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Clayton
ENVIRONMENTAL
CONSULTANTS

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May 23, 1990

Clayton Project No: 29196.00

Mr. Ari Levi
ALAMEDA COUNTY HEALTH DEPARTMENT
Hazardous Materials
80 Swan Way, Suite 200
Oakland, CA 94621

Subject: Monitoring Well Installation, Soil and Groundwater
Sampling, and Onsite Aeration of Contaminated Soils at
the Former Texaco Station
Corner of Park Street and Shore Line Drive
Alameda, California

Dear Mr. Levi:

Clayton Environmental Consultants, Inc. is submitting for your review this work plan for the installation of five monitoring wells, excavation of contaminated soils, and onsite remediation by aeration at the Harsch Investment Corporation (Harsch) property located at the north corner of Park Street and Shore Line Drive. This work plan is based on site visits, a review of previous work at the site, and telephone conversations with Mr. Joseph Munyer, manager for Harsch.

PLTF DEFT Exhibit 25
WIT. DENNIS BYRNE
DATE 11/22/91 ECB
ELYSE R. GARDNER, CSR

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Contacts for the site include the following:

Owner:	Harsh Investment Corp.
Contact:	Mr. Joseph Munyer, Manager, Shopping Centers 235 W. MacArthur Boulevard Oakland CA 94611 (415) 658-1400
Consultant:	Clayton Environmental Consultants
Contacts:	Mr. Alan D. Gibbs, Supervisor, Geology Group Ms. Laurene Compton, Project Geologist P.O. Box 9019 Pleasanton, CA 94566 (415) 426-2676
Occupant:	The site is vacant

BACKGROUND

In 1989, Harsch contracted Woodward-Clyde Consultants to conduct a Phase I environmental assessment of a square block of property which Harsch owned and planned to redevelop (Figures 1 & 2). This property had previously been leased to the following five tenants:

- Pet hospital
- Dry cleaner/laundromat
- Chevron carwash/service station
- Goodyear
- Texaco station

All of the above structures have been leveled, except for the carwash/service station.

In a subsequent Phase II site investigation, Woodward-Clyde found that soils and shallow groundwater had been impacted by petroleum and chlorinated hydrocarbons. Woodward-Clyde is currently involved in a Phase II and III continued subsurface investigation and remediation of the former dry cleaner and Goodyear sites.

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The following environmental concerns exist at the site:

- The underground fuel tanks at the Chevron carwash are known to have leaked in approximately 1985.
- Analysis of soil samples collected by Woodward-Clyde beneath the former Goodyear building revealed oil and grease contamination, interpreted as possible hydraulic fluid from the automobile lifts.
- The dry cleaner's solvent tanks are known to have ruptured and contaminated the soil and groundwater during the excavation and tank removal process.
- Groundwater contaminated with petroleum products has been detected down- gradient of Texaco's former underground fuel tanks in Woodward-Clyde's monitoring well MW-1.
- Underground storage tanks (UST) formerly located at the Texaco site included:

One 6,000-gallon gasoline UST
Two 4,000-gallon gasoline USTs
One 550-gallon waste oil UST

These were located near the southern corner of the property at Shore Line Drive and Park Street. There were two islands of dispensers, one bordering Shore Line Drive, and the other bordering Park Street as indicated on the enclosed site plan.

SCOPE OF WORK

We are proposing to install up to five monitoring wells to better define the lateral extent of the soil/groundwater contamination at the former Texaco site. The impacted soils will be excavated for onsite remediation. To accomplish this objective we propose to perform the following tasks:

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Task 1: Soil Sampling and Monitoring Well Installation

Install up to five monitoring wells to investigate the lateral extent of the soil/groundwater contamination. The proposed locations of three monitoring wells (MW-1, MW-2, and MW-3) will be along the north and northeast sides of the subject site. These monitor wells will address migration of hydraulically upgradient known subsurface contamination from the Chevron and Goodyear sites as shown in Figure 2.

The remaining two wells (MW-4 and MW-5) will be placed crossgradient and downgradient from the dry cleaner and Texaco's former underground storage tanks.

During the drilling of each borehole, the soil characteristics will be logged in the field by a Clayton geologist, using the Unified Soil Classification System. Distinguishing features such as color, odor, and relative soil moisture content will be noted. Drilling activities will be conducted in accordance with the California Regional Water Quality Control Board, San Francisco Bay Region, and the County of Alameda Department of Health Services guidelines, under the supervision of a civil engineer or a geologist registered in the State of California.

Soil samples will be collected at a depth of 3.0 to 4.5 feet, using a 2.5-inch split barrel sampler. To aid in locating any contamination, Clayton will screen the soil cuttings during drilling, using a photoionization detector (PID) and visual senses to detect volatile compounds. No soil samples will be collected below the saturated zone for laboratory analysis.

The soil samples will be collected in precleaned brass tubes for the purpose of lithologic logging. The brass tubes selected for analysis will be sealed with aluminum foil, plastic caps, taped for air tightness, and immediately placed in an iced cooler for shipment to Clayton's state-certified laboratory in Pleasanton, California, for analysis. Legal chain-of-custody procedures will be followed for handling of soil samples.

The soil cuttings and sampling spoils generated from the drilling process will be placed into individually labeled DOT-approved 55-gallon drums and left onsite until proper disposal can be determined based on laboratory analysis.

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Each borehole will be converted into a monitoring well using clean 4-inch diameter PVC casing with threaded joints and slotted screens. The wells will extend at least 10 feet into the upper saturated zone, but will not extend through any clay layers greater than 5 feet thick that are below the shallow water table. The wells will be constructed to an approximate total depth of 14 feet. Each well will be secured with a locking cap.

The well seal in the wells will be allowed to set up for 72 hours prior to development. Since development of the well can volatilize contaminants present, the wells will also be allowed to settle for at least 72 hours between development and the first purging/sampling incident.

Task 2: Well Development and Sampling

The wells will be developed by pumping and surging at least 4 well volumes until water turbidity and specific conductance stabilize. Water samples from the well will be collected using clean teflon bailers. Water will be collected in clean laboratory-supplied containers and placed immediately into an iced cooler for transport to Clayton's laboratory for analysis. One trip blank will be furnished in accordance with Clayton's quality assurance/quality control (QA/QC) program.

The water generated from the well development and sampling will be placed into DOT-approved 55-gallon drums until laboratory results from groundwater samples can be evaluated to determine the proper disposal method. These drums will also be closed, labeled, and left at the site.

Task 3: Laboratory Analyses

Approximately 5 soil samples (1 sample per borehole) and 5 water samples (1 sample per monitor well) will be collected and brought to Clayton's laboratory for analysis.

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Soil and water samples from MW-1 and MW-2 will be analyzed by the following methods to address the possibility of subsurface migration of contaminants from the former Goodyear building and Chevron carwash:

- EPA Method 5030/8015, for volatile hydrocarbons and gasoline
- EPA Method 3510/8015, for diesel fuel
- EPA Method 418.1, for waste oil (hydrocarbon oil and grease)
- ICAP for metals lead, cadmium, chromium and zinc
- EPA Method 8240, for chlorinated hydrocarbons

Soil and water samples from MW-3 and MW-4 will be analyzed by the following methods to address subsurface migration of contaminants from the Chevron carwash and the dry cleaning site, as well as aerating stockpiled soils:

- EPA Method 5030/8015, for volatile hydrocarbons and gasoline
- EPA Method 3510/8015, for diesel fuel
- EPA Method 601/8010, for purgeable halocarbons
- ICAP for metals lead, cadmium, chromium and zinc

Soil and water samples from MW-5 will be analyzed by the following method to address migration from the former Texaco fuel tanks:

- EPA Method 5030/8015, for volatile hydrocarbons and gasoline
- EPA Method 3510/8015, for diesel fuel
- ICAP for metals lead, cadmium, chromium and zinc

Total dissolved solids (TDS) and total chlorides will also be analyzed to better defined overall water quality at this site. This will help define final cleanup levels. A preliminary groundwater sample taken from Woodward-Clyde's MW-3 (Figure 2) had a TDS concentration of 1,200 parts per million (ppm).

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Because the Texaco station has been closed for about 10 years and the Chevron carwash was known to have had a past fuel leak, we may have fingerprint laboratory tests done on the gasoline analyses to help differentiate potential gasoline contamination between these two sites.

Task 4: Groundwater Flow Direction and Gradient

Well elevations will be surveyed to datum sea level by a licensed land surveyor. Existing monitoring wells on adjoining land will be tied into the survey. We will calculate groundwater flow direction and gradient using this data. Because a tidal influence on groundwater elevations is expected beneath the site, we will monitor the groundwater depths through a high and low tidal cycle to attempt to determine tidal effect onsite.

Task 5: Soil Excavation and Aeration

Clayton will notify the Bay Area Air Quality Management District prior to aerating contaminated soils onsite. Soils recognized as contaminated in Tasks 1 and 2 will be excavated and placed adjacent to the excavation pit onto sheets of plastic. Soils will be spread to an acceptable thickness to allow for maximum exposure of surface area for volatilization of contaminants. Soils will be turned periodically to expose additional soils to the aeration process. Confirmation composite samples will be collected after a reasonable period (1 to 3 weeks) to determine the appropriate disposal method for the remediated soils. At this time, pending approval of the regulatory agencies, the remediated soils may be backfilled and compacted.

no sir!

Task 6: Report

Upon completion of the final confirmation laboratory analyses, Clayton will prepare a report summarizing the findings of the onsite investigation work. The report will be prepared according to Alameda County Water District guidelines, revised February 1990, and will include a discussion of the site investigation technique, soil and groundwater sampling, and

... to the site ...

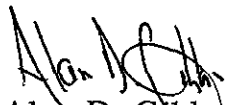
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analytical results. Conclusions, recommendations, and a discussion of groundwater remediation options will also be included in the report.

We are filing for a drilling permit from Alameda County Flood Control, Zone 7. We are providing the City of Alameda a copy of this work plan and will be giving them a copy of our report.

Mr. Levi, thank you for your prompt attention to this work plan. Please do not hesitate to call me at (415) 426-2676 should you have any questions.

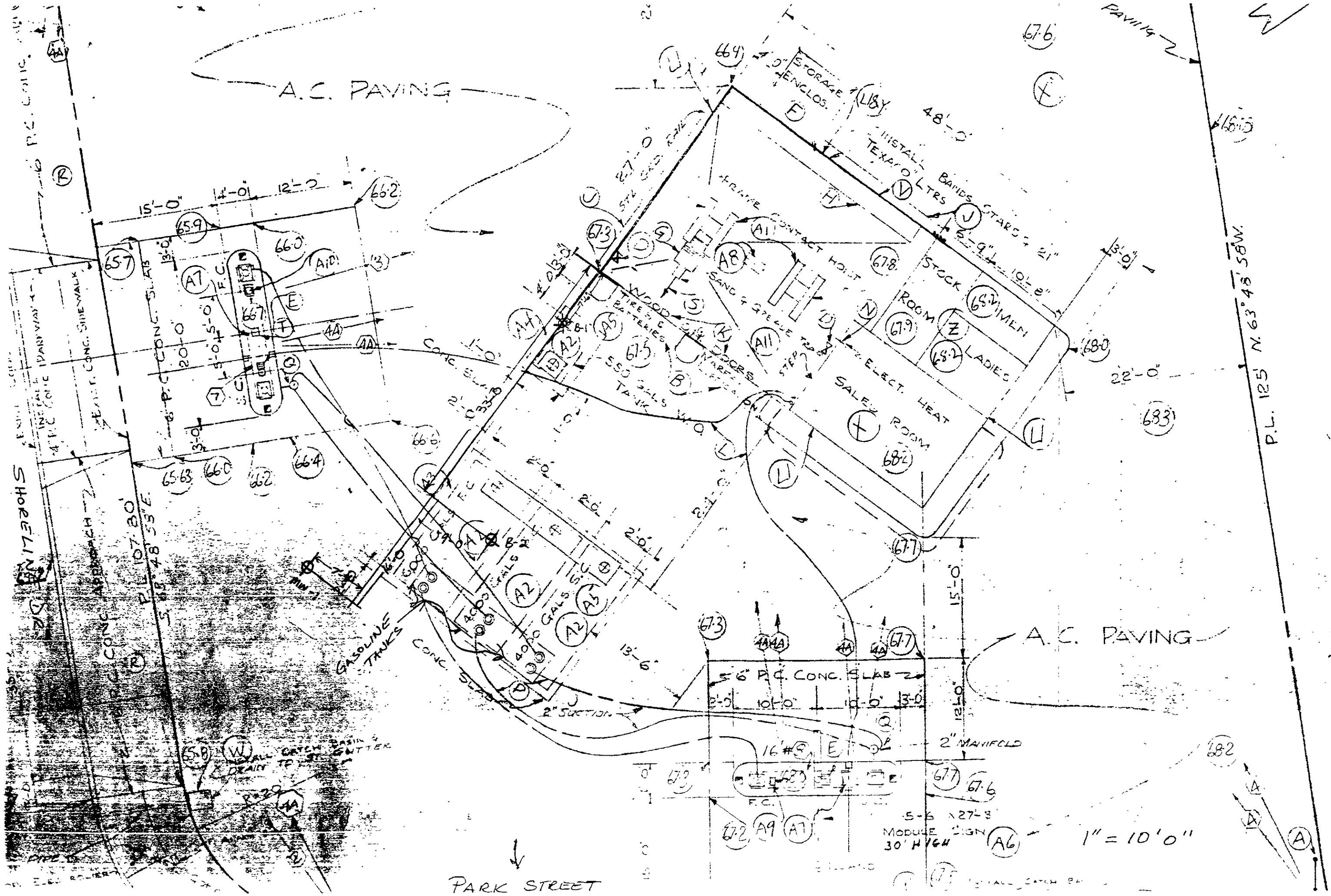
Sincerely,



Alan D. Gibbs, R.G.
Supervisor, Geology Group
Western Operations

ADG/lec
Attachments
cc: City of Alameda

TEXACO
SOUTH SHORE CTR.



P.L. 125' N. 63° 48' 58" W.

1" = 10' 0"

PARK STREET