

1252 Quarry Lane
Pleasanton, CA 94566
(415) 426-2600
Fax (415) 426-0106

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CONSULTANTS

October 16, 1990

10/24 = 30 min.

Clayton Project No: 30493.00

Ms. Cynthia Chapman
ALAMEDA COUNTY HEALTH DEPARTMENT
Hazardous Materials Branch
80 Swan Way, Suite 200
Oakland, CA 94621

Subject: Soil Remediation Work Plan
Former Dry Cleaners Site
Shoreline Drive
Alameda, California

Dear Ms. Chapman:

Clayton Environmental Consultants, Inc. is submitting for your review this work plan for soil remediation by vapor extraction. Soils in the vicinity of the former dry cleaner's building located on Shore Line Drive in Alameda, California, have residual amounts of tetrachloroethene (PCE).

This work plan is based on site visits, a review of previous work at the site, and discussions during our meeting of August 21, 1990.

Cynthia, thank you for your attention to this work plan. Please do not hesitate to call me at (415) 426-2616 if you have any questions.

Sincerely



Frederick G. Moss, P.E.
Supervisor, Remediation

FGM/jws
Enclosure

cc: Mr. Michael Dosen
Mr. Joseph Munyer
Mr. Roy Ikeda

Western Operations

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Pleasanton, CA 94566
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Fax (415) 426-0106

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**Work Plan for Soil Remediation
Park Street and Shore Line Drive
Alameda, California
for
Harsch Investment Corporation**

Clayton Project No. 30493.00

October 16, 1990

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1.0 INTRODUCTION

Clayton Environmental Consultants, Inc, has been retained by Harsch Investment Corporation to conduct soil and groundwater remediation at the former dry cleaning site located at the north corner of Park Street and Shore Line Drive in Alameda, California (Figure 1).

In this work plan we propose to remediate the soil by installing a soil vapor extraction system. When we have completed soil remediation we will develop a plan for remediation of the groundwater.

Contacts for the site include the following:

Owner: Harsh Investment Corp.
Contact: Mr. Joseph Munyer
Manager, Shopping Centers
235 W. MacArthur Boulevard
Oakland, California 94611
(415) 658-1400

Consultant: Clayton Environmental Consultants
Contacts: Mr. Frederick Moss,
Supervisor, Remediation Group
P.O. Box 9019
Pleasanton, CA 94566
(415) 426-2676

Occupant: The site is vacant

2.0 PREVIOUS INVESTIGATIONS

In 1989, Harsch retained Woodward-Clyde Consultants to conduct a Phase I environmental assessment of a square block of property which Harsch owns and plans to redevelop (Figure 2). This property had previously been leased to the following five tenants:

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

All of the above structures have been demolished except for the carwash/service station, which is presently being demolished.

In a subsequent Phase II site investigation of the property, Woodward-Clyde installed two groundwater monitoring wells on the dry cleaning site. Analytical results revealed that shallow groundwater at the former dry cleaning site had been impacted by benzene, tetrachloroethene (PCE), dichloroethene (DCE), and trichloroethene (TCE) (Woodward-Clyde Project No. 8910116A, 7/18/89).

In early November 1989, the aboveground solvent tank at the dry cleaners were punctured during the removal process, releasing approximately 10 to 50 gallons of fluid to the ground. On November 22, 1989, Woodward-Clyde used an organic vapor analyzer (OVA) to "guide the excavation of most of the contaminated soil" (Woodward-Clyde Project No. 8910116A, 2/1/90). The excavation was terminated at the top of the bay mud, which occurred at approximately 5 feet below the ground surface. No groundwater was encountered during excavation. Soil samples were collected from the perimeter of the excavation. Concentrations of PCE in these soil samples ranged from 31 to 280,000 ug/kg.

Woodward-Clyde then excavated the site further in December 1989 until they could not detect any more vapors in soil from the excavation with an OVA. Analytical results of soil samples collected from outside the perimeter of this overexcavation revealed PCE concentrations ranging from 9.8 to 1,100 ug/kg. All excavated soil was stockpiled on plastic sheeting on the former Texaco station site.

Clayton has since taken over subsurface investigation and remediation of soils and groundwater at the former Texaco and dry cleaning sites.

From our review of site plans and other information provided by Harsch, we have determined that a 4-inch sanitary sewer line that connected the dry cleaners, to an existing sewer main which flowed northward, is still in place (figure 3). This sewer line, which has been plugged but not removed, runs through the shopping center.

Soil sample results indicate that residual amounts of PCE remain in shallow soils beneath the site near the former dry cleaners.

3.0 CONCLUSIONS

Soil and groundwater contamination identified at the site, may have resulted from the November 1989 spill from the aboveground storage tank or from a leak from the 4-inch sanitary sewer line that remains in place.

4.0 REMEDIAL PROGRAM

Clayton proposes installation of a soil vapor extraction (SVE) system to remediate soils contaminated with PCE. By removing chlorinated hydrocarbons from the soil we hope to minimize any further deterioration of groundwater. During installation

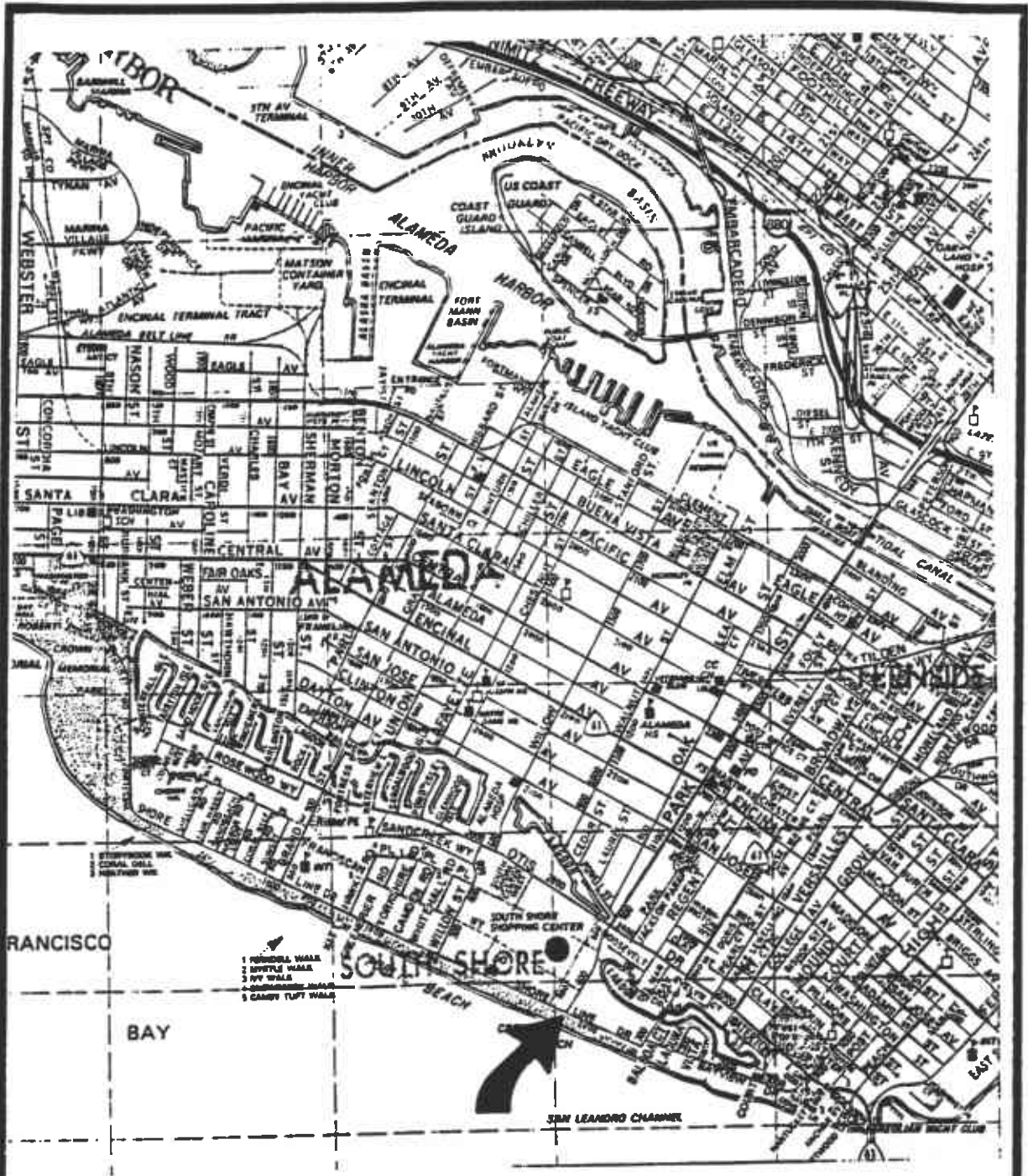
of trenching we will collect additional soil samples and analyze them for PCE. This will help us to further delineate the extent of contamination.

The SVE system will remove PCE vapors from the soils in-place, and the vapors will be adsorbed onto granular-activated carbon (GAC) filters. The extraction system will consist of approximately 200 feet of trench (4-inch diameter PVC pipe) connected to a vacuum pump, and two canisters containing 1200 lb of GAC (Figure 3).

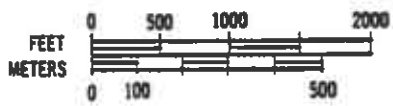
Clayton plans to install the system close to the groundwater table, with the expectation that the close proximity will also remove some of the PCE dissolved in the groundwater beneath the site.

Clayton estimates that the SVE system will need to operate a minimum of 3 months, depending upon the removal efficiency of the system. Clayton will provide skilled technicians to monitor and operate the system. Clayton will maintain field records so that we can estimate the total operating period required to remediate the soils and schedule carbon replacement. No discharge of contaminants to the atmosphere is anticipated and, therefore, the SVE should be exempt from Bay Area Air Quality Management District permitting.

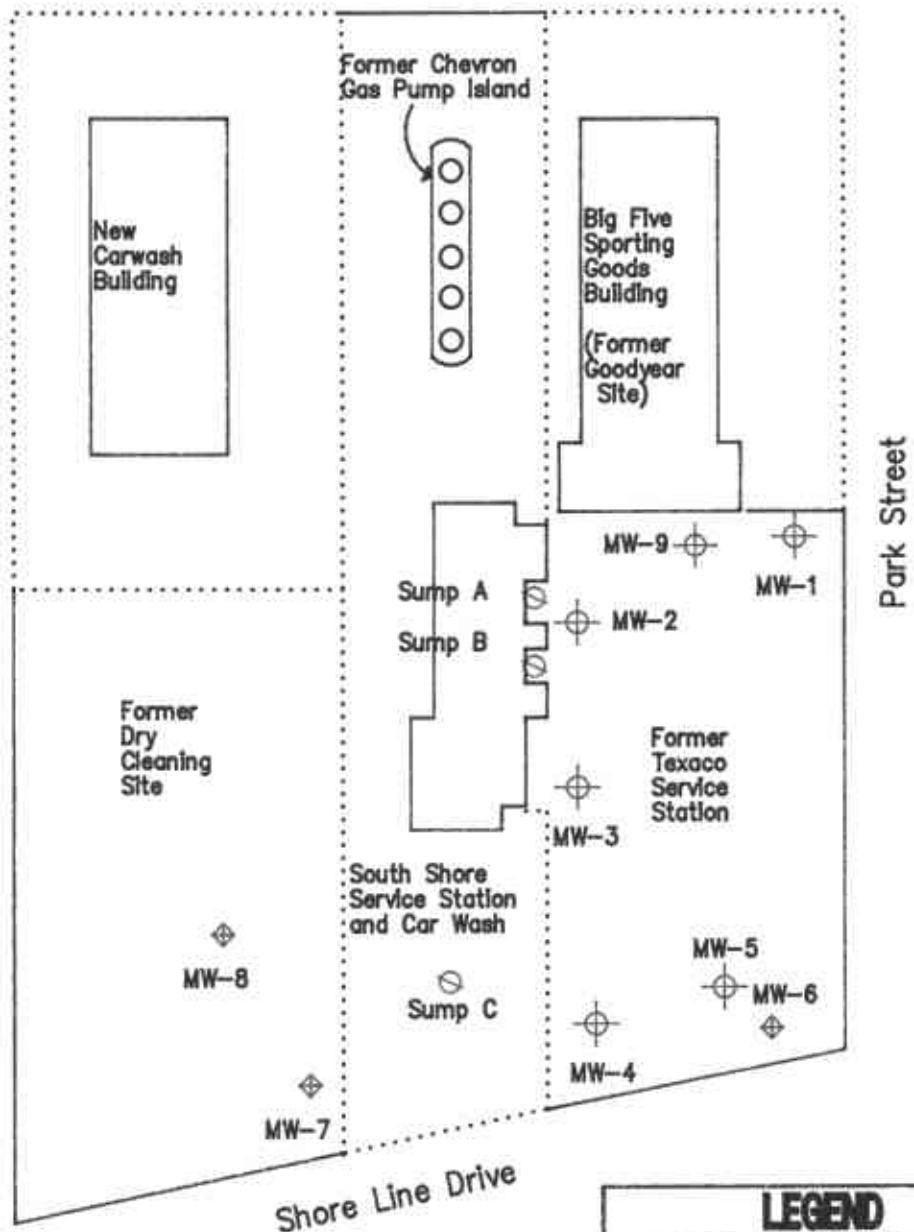
Clayton will prepare a summary report in accordance with Alameda County Health Department guidelines. The report will include a discussion of the site investigation, soil and groundwater sampling, analytical results, and remediation achieved. Conclusions, recommendations, and a discussion of groundwater remediation options will also be included in the report.



- 1 PERIMETER WALL
- 2 DIRT WALL
- 3 IVY WALL
- 4 CONCRETE WALL
- 5 SANDY TUFF WALL



Clayton Environmental Consultants, Inc. Diagrammatic Site Vicinity Map Horaco Investments Texaco Service Station Park Avenue and Shore Line Drive Alameda, California	Figure 1 93694-00
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Estimated Groundwater Flow Direction



(not to scale)

LEGEND	
	Woodward-Clyde Monitoring Well
	Clayton Monitoring Well
	Sumps, Approximate Location
	Fence

Diagrammatic Site Vicinity Map
 Harsch Investment Corporation
 Texaco Service Station
 Park Street and Shore Line Drive
 Alameda, California
 Clayton Project No. 29196.00

Figure
2

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29196-01-17

LEGEND

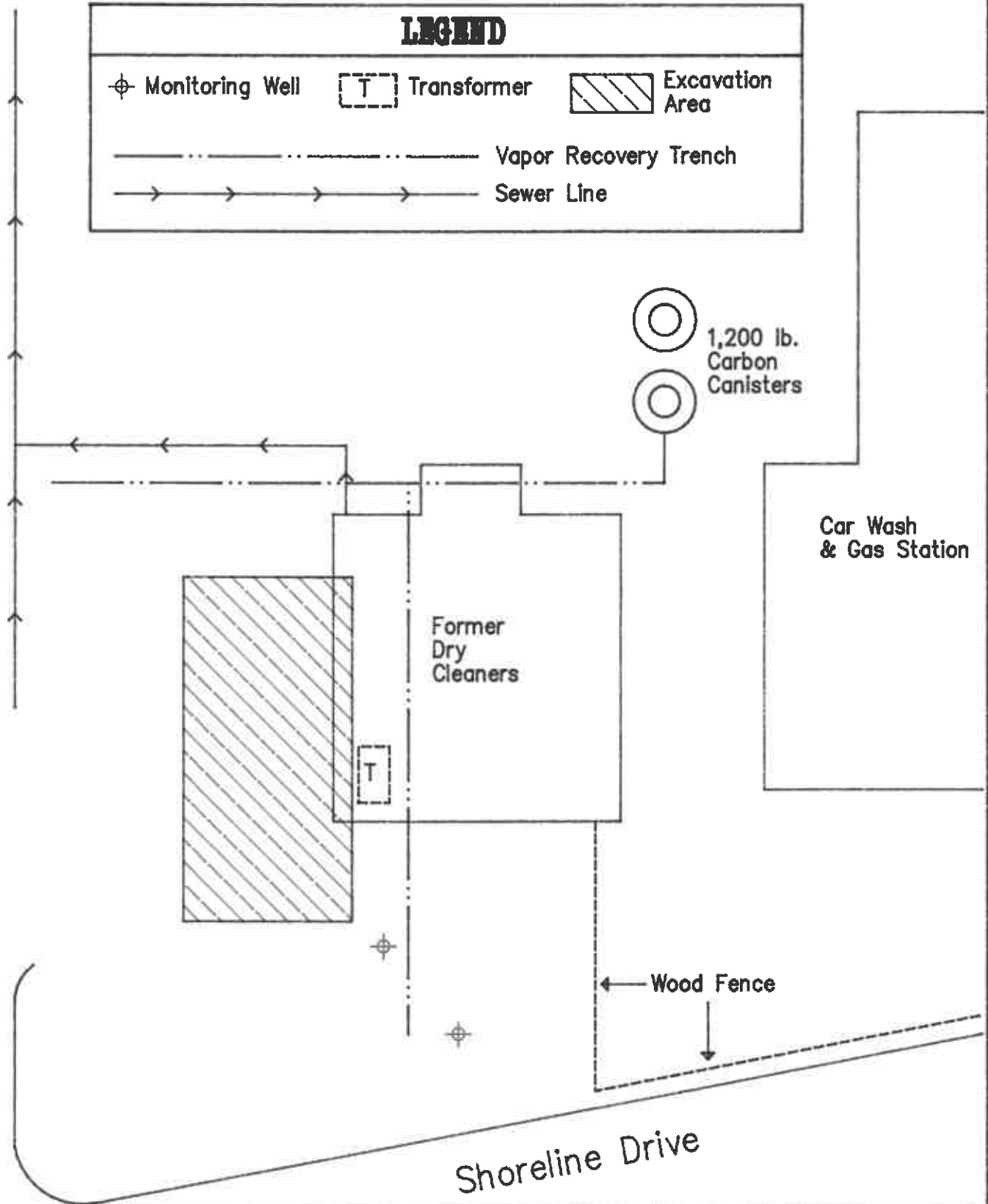
⊕ Monitoring Well

T Transformer

Excavation Area

Vapor Recovery Trench

Sewer Line



Soil Vapor Extraction system
Harsch Investment
Shoreline Drive
Alameda, California

(not to scale) Clayton Project No. 30493.00

Figure

3

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