GEOCON
Environmental Consultants Inc.
GEOTECHNICAL ENGINEERING AND ENVIRONMENTAL SCIENCES

Project No. S8100-06-31
July 19, 1995

California Department of Transportation
District 4
P.O. Box 23600
Oakland, California 94623-4454

Attention: Mr. Dave Mohanty

Subject: DISTRICT 4 EXCESS LAND
OAKLAND AND HAYWARD, CALIFORNIA
CONTRACT NO. 53W202
TASK ORDER NO. 04-952137-02
SITE INVESTIGATION WORKPLAN

Dear Mr. Mohanty:

In accordance with Caltrans Contract No. 53W202 and Task Order No. 04-952137-02, Geocon Environmental Consultants is submitting this Workplan for site investigation work to be conducted at the above referenced project sites. This Workplan describes the scope of work requested by Caltrans and outlines procedures and methods to be employed by Geocon to complete the project.

PROJECT LOCATION

The project locations include land owned by Caltrans in the cities of Hayward and Oakland, California. The project site in Hayward is located at the southeast corner of the intersection of Mattox Road and Foothill Boulevard. The project site in Oakland is located between Brush and Castro Streets, and 6th and 7th Streets. The project areas are depicted on the Vicinity Map, Figure 1. Maps depicting each of the project boundaries for the Oakland and Hayward sites are included as Attachments G1 and G2, respectively.

BACKGROUND

The Hayward site was formerly an Exxon gasoline station. The gasoline station ceased operation in the late-1970s and Caltrans reports that the underground storage tanks (USTs) were removed from the site in 1979. No soil samples and analytical testing was reported to have occurred in connection with the UST removal, nor has any subsequent environmental study been performed on the Hayward site.

3235 Sunrise Blvd., Suite 6
Rancho Cordova, CA 95742
(916) 852-9118
Fax (916) 852-9132

The Oakland site, which consists of a city block, is listed on the Regional Water Quality Control Board's (RWQCB) Fuel Leaks List. Caltrans' research on this site indicates that four USTs existed on the site at the former locations of a gas station, a dairy and a commercial warehouse. Additionally, Caltrans has indicated that ERM-West performed soil and groundwater testing at the site in 1987. The ERM study revealed the presence of low concentrations of xylene in soil beneath the site and ethylbenzene, toluene and xylene in groundwater samples obtained.

PURPOSE

The purpose of the work outlined in Task Order 04-952137-02 is to evaluate whether the Hayward and Oakland excess land sites are impacted with heavy metals (notably lead) or petroleum hydrocarbons. The investigative results will be used by Caltrans to determine if further site characterization is necessary with respect to the constituents of concern identified in this task order.

PRE-FIELD ACTIVITIES

A pre-work site visit was conducted on July 5, 1995 with the Caltrans Contract Manager, Mr. Dave Mohanty, and Mr. Jeremey Westmark of Geocon to inspect the work areas. At the pre-work site visit, the Site Visit Checklist and Completion Schedule were discussed and signed by the Geocon project manager designee and the Caltrans contract manager.

Geocon will provide 48 hour notification to Underground Service Alert and review project utility plans if provided prior to job site mobilization. The proposed boring locations will be marked by the Caltrans contract manager during the field activities.

Geocon will prepare and submit Zone 7 Water Agency boring permits. Caltrans Encroachment permits are not necessary for this project.

FIELD PROCEDURES

Weed Abatement

Geocon will provide for the abatement of the weeds covering the majority of the Oakland excess land site.

Geophysical Survey

Prior to the advancement of soil borings, a geophysical survey employing magnetometry and ground penetrating radar (GPR) equipment will be completed at locations selected by Caltrans. The purpose of the geophysical survey is to attempt to locate any USTs or underground utilities that may exist within the project boundaries.

Soil Borings

Within the boundaries of the Hayward excess land site, five soil borings (HAY-1 through HAY-5) will be advanced at locations selected by Caltrans. Borings will be advanced to a maximum depth of approximately 17 feet below ground surface (bgs) or until groundwater is encountered. Sampling will be accomplished utilizing a skid-loader-mounted, Enviro-Core "direct push" soil-sampling unit. Within the boundaries of the Oakland excess land site, seven soil borings (OAK-1 through OAK-7) will be advanced at locations designated by Caltrans. Five of the borings (OAK-3 through OAK-5) will be advanced to a maximum depth of approximately 2 feet bgs, and two of the borings (OAK-1 and OAK-2) will be advanced to a maximum depth of 17 feet bgs, or until groundwater is encountered.

Soil samples will be collected in each of the borings from depths of 0 to 6 inches, 6 to 12 inches, and 18 to 24 inches. In addition, a soil sample will be collected at 16-1/2 feet to 17 feet in the 17-foot-deep borings. Headspace surveys will be performed on the soil samples collected using a portable organic vapor analyzer equipped with a photoionization detector. Sampling equipment will be cleansed prior to the collection of each soil sample by washing the equipment using a steam cleaner. Headspace readings represent qualitative indicators of the presence of organic vapors in the pore space of the soil samples collected. The headspace readings will be recorded on the boring logs submitted with the final report. Soil samples will be collected in stainless steel sample tubes using direct push "Enviro-Core" techniques. Soil sample depths for each of the borings within the Oakland and Hayward sites are listed in the enclosed Soil Investigation Table, Attachment H.

The soil samples will be sealed with Teflon linings and plastic caps, labeled with the boring number and depth, chilled with ice to four degrees Celsius and transported to Sparger Technology, Inc., California-certified hazardous waste testing laboratory, utilizing standard chain-of-custody procedures. Soil samples will be logged for lithologic classification using the Unified Soil Classification System.

Obtain one groundwater sample, if encountered, from each soil boring, or as directed by the onsite Caltrans representative. The groundwater samples will be obtained using a disposable polyethylene bailer, placed in laboratory-provided sample containers, labeled, chilled, and delivered to an analytical laboratory following standard chain-of-custody procedures.

The soil borings will be backfilled to surface grade with hydrated bentonite chips and/or bentonite grout. The soil cuttings and decontamination water will be stored at the Caltrans designated drum storage area within labeled 55-gallon drums pending disposal. The field sampling activities will be performed under the direct supervision of Geocon's field supervisor and/or project manager.

LABORATORY ANALYSES

The laboratory analyses specified by Caltrans for soil and groundwater samples collected under this task order are summarized in Attachment H and are as follows:

- Twenty seven soil samples will be analyzed for total lead using EPA Test Methods 6010 (ICP) or 7000 (AA). In addition, nine soil samples will be analyzed for CAM 17 metals (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium and zinc).

- Seven soil samples and a maximum of 12 groundwater samples will be analyzed for Total Petroleum Hydrocarbons as gas and diesel (TPHg and TPHd) using EPA Test Method 8015 modified, and Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) using EPA Test Method 8020.

- Thirty-seven soil samples will be analyzed for Oil and Grease following Standard Method 5520.

- Toxicity Characteristic Leaching Potential (TCLP) and/or Waste Extraction Test (WET) analyses may be performed upon review of the results of analyses described above. The TCLP and/or WET analyses will be performed if authorization for such testing is received from Caltrans.

Quality assurance/quality control (QA/QC) will be performed for each method of analysis with specificity for each analyte listed in the test method's QA/QC. QA/QC will include the following:

- One method blank for every ten samples, batch of samples or type of matrix, whichever is more frequent.
- One sample analyzed in duplicate for every ten samples, batch of samples or type of matrix, whichever is more frequent.
- One spiked sample for every ten samples, batch of samples or type of matrix, whichever if more frequent, with spike made at ten times the detection limit or at the analyte level.

PROJECT SCHEDULE

The project schedule provided by Caltrans for this work scope will be adhered to as follows:

Task Description	Completion/Delivery Date
Pre-Work Site Visit	July 5, 1995
Draft Workplan/Health and Safety Plan	July 14, 1995
Final Workplan/Health and Safety Plan	July 21, 1995
Start Fieldwork	July 26, 1995
Finish Fieldwork	July 28, 1995
Draft Report	September 7, 1995
Final Report	Three days after receiving final comments

If there are any questions concerning the contents of this Workplan, or if Geocon may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON ENVIRONMENTAL CONSULTANTS

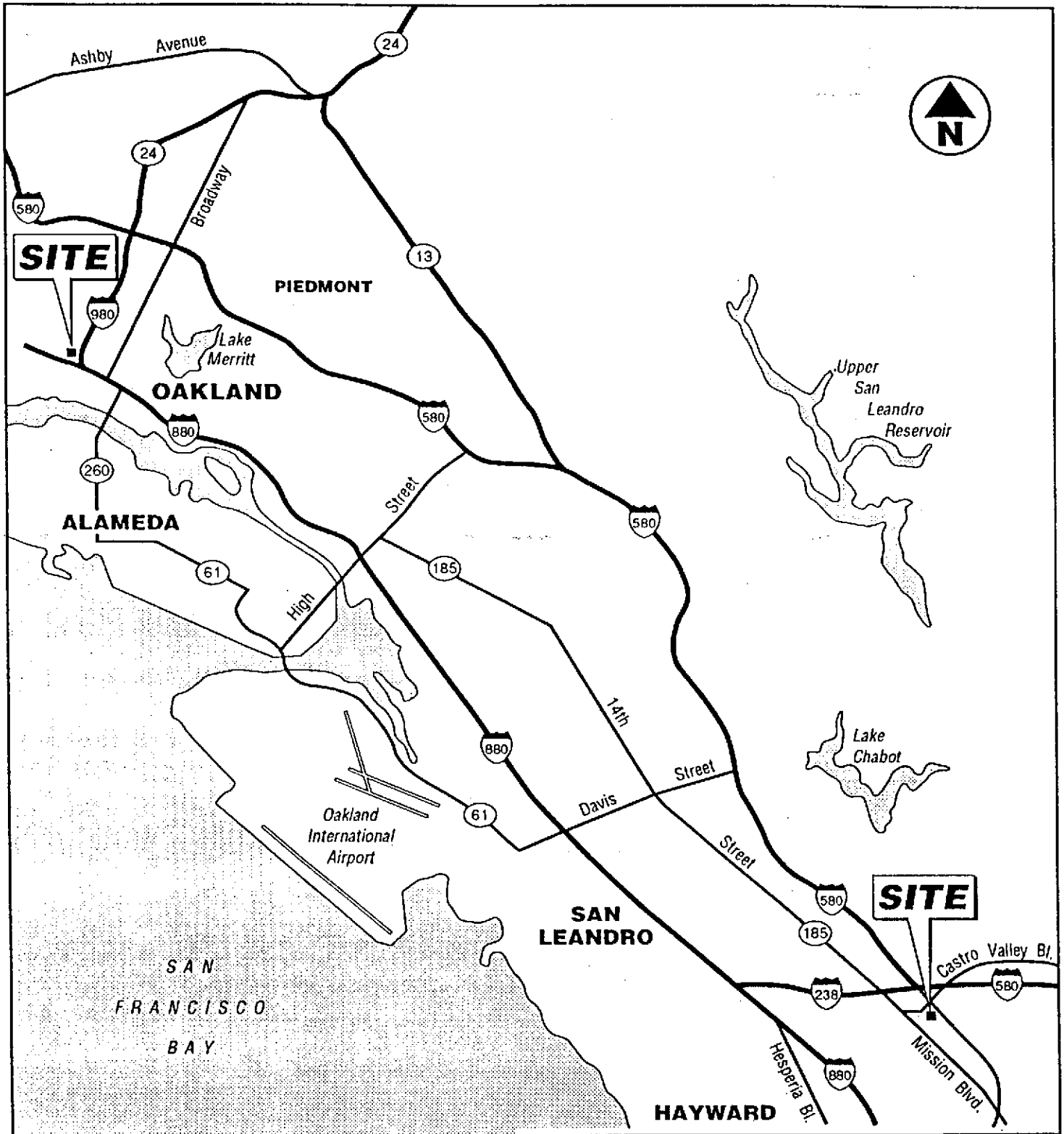
Richard H. Walls, PE
Task Order Manager

Jeremey Westmark
Environmental Scientist

JW\RW:tc

(5) Addressee

Attachment: Figure 1 - Vicinity Map
Attachment G1 - 6th and Castro Street Site
Attachment G2 - Hayward Site
Attachment H - Soil and Groundwater Investigation Tables



GEOCON
ENVIRONMENTAL CONSULTANTS INCORPORATED
3235 SUNRISE BLVD. - SUITE 6 - RANCHO CORDOVA, CALIFORNIA 95742
PHONE 916 852-9118 - FAX 916 852-9132

Caltrans District 4 Excess Land

Oakland and Hayward, California

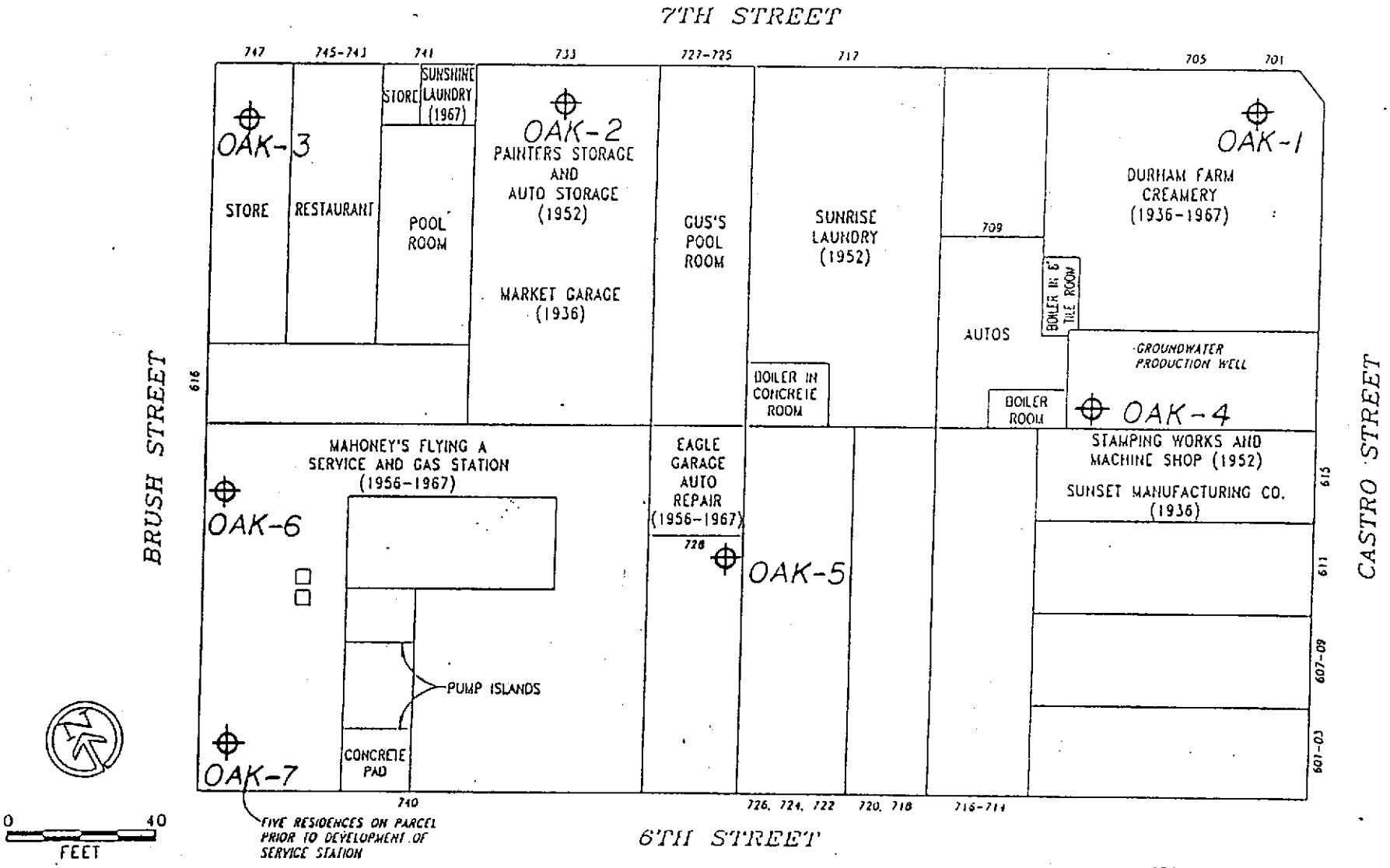
GEOCON Proj. No. S8100-06-31

Task Order No. 04-952137-02

VICINITY MAP

July 1995

Figure 1



LEGEND :

⊕ BORING LOCATION

EXCESS LAND

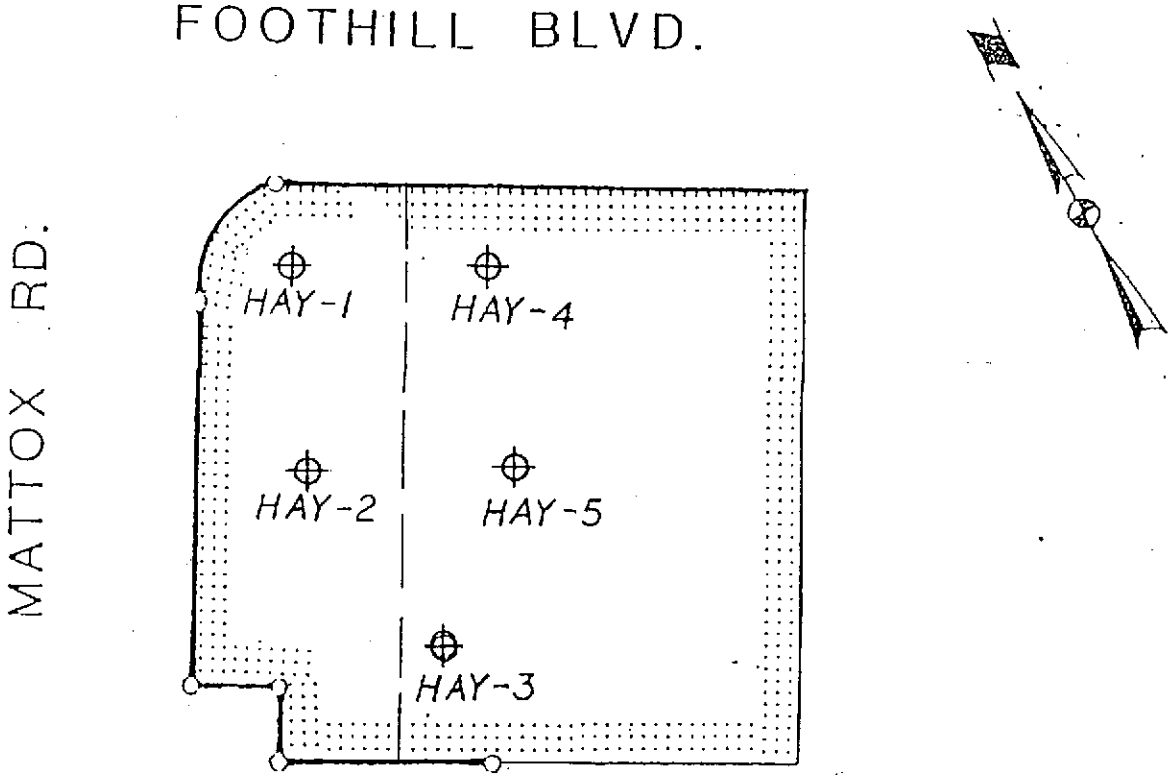
Task Order No. 04-952137-02

6TH AND CASTRO STREET

OAKLAND

SITE MAP

ATTACHMENT G2



LEGEND

⊕ BORING LOCATION

EXCESS LAND

Task Order No. 04-952137-02

04-ALA-580-PM 30.7

SITE MAP

ATTACHMENT H

SOIL INVESTIGATION TABLE
Task Order No. 04-952137-OZ
Contract No. 53W202

Boring No.	Depth of Sample	6010 ICAP			SM 5520	8015 M TPH-G	8015 M TPH-D	8020 BTEX	Organolead LUFT - 1988
		Pb only	7 Metals	All Metals					
OAK-1	0-15 cm (0-6")	x			x				
	30.5 cm (1')	x			x				
	61.0 cm (2')	x			x				
	518.5 cm (17')				x	x		x	
OAK-2	0-15 cm (0-6")	x			x				
	30.5 cm (1')	x			x				
	61.0 cm (2')	x			x				
	518.5 cm (17')				x	x		x	
OAK-3	0-15 cm (0-6")	x							
	30.5 cm (1')	x							
	61.0 cm (2')	x							
OAK-4	0-15 cm (0-6")			x					
	30.5 cm (1')			x					
	61.0 cm (2')			x					
OAK-5	0-15 cm (0-6")	x			x				
	30.5 cm (1')	x			x				
	61.0 cm (2')	x			x				
OAK-6	0-15 cm (0-6")			x	x				
	30.5 cm (1')			x	x				
	61.0 cm (2')			x	x				
OAK-7	0-15 cm (0-6")			x	x				
	30.5 cm (1')			x	x				
	61.0 cm (2')			x	x				
HAY-1	0-15 cm (0-6")	x			x				
	30.5 cm (1')	x			x				
	61.0 cm (2')	x			x				
	518.5 cm (17')				x	x	x	x	
HAY-2	0-15 cm (0-6")	x			x				
	30.5 cm (1')	x			x				
	61.0 cm (2')	x			x				
	518.5 cm (17')				x	x	x	x	
HAY-3	0-15 cm (0-6")	x			x				
	30.5 cm (1')	x			x				
	61.0 cm (2')	x			x				
	518.5 cm (17')				x	x	x	x	
HAY-4	0-15 cm (0-6")	x			x				
	30.5 cm (1')	x			x				
	61.0 cm (2')	x			x				
	518.5 cm (17')				x	x	x	x	
HAY-5	0-15 cm (0-6")	x			x				
	30.5 cm (1')	x			x				
	61.0 cm (2')	x			x				
	518.5 cm (17')				x	x	x	x	

GROUNDWATER INVESTIGATION TABLE
Task Order No. 04-952137-02
Contract No. 53W202

Boring No.	8015 M TPH-G	8015 M TPH-D	8020 BTEX
OAK-1	x	x	x
OAK-2	x	x	x
OAK-4	x	x	x
OAK-6	x	x	x
OAK-7	x	x	x
HAY-1	x	x	x
HAY-2	x	x	x
HAY-3	x	x	x
HAY-4	x	x	x
HAY-5	x	x	x