

TRANSMITTAL

TO: Ms. Susan Hugo
Alameda County Health Care Serv. Agency
Department of Environmental Health
80 Swan Way, Suite 200
Oakland, California 94621

DATE: May 11, 1994
PROJECT #: 7940.04
SUBJECT: Letter Work Plan for Waste-Oil
Tank Removal Activities at
ARCO Station 2111.

FROM:
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1	05/10/94	Letter Work Plan for Waste-Oil Tank Removal Activities at ARCO Station 2111, 1156 Davis Street, San Leandro, California.

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cc: Mr. Joel Coffman, GSI
Mr. Michael Whelan, ARCO Products Company
Mr. Karl Busche, City of San Leandro Fire Department (Certified Mail)
Mr. John Jang, Regional Water Quality Control Board (Certified Mail)



LETTER WORK PLAN FOR WASTE-OIL TANK
REMOVAL ACTIVITIES
at
ARCO Station 2111
1156 Davis Street
San Leandro, California

7940.04

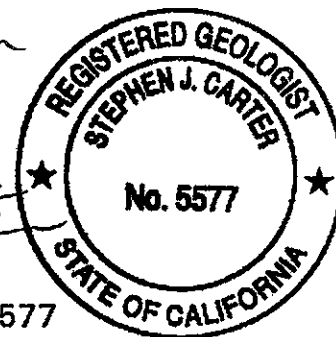
Report prepared for
ARCO Products Company
P.O. Box 5811
San Mateo, California 94402

by
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May 10, 1994

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LETTER WORK PLAN WASTE-OIL TANK
REMOVAL ACTIVITIES

at

ARCO Station 2111
1156 Davis Street
San Leandro, California

For ARCO Products Company

INTRODUCTION

At the request of ARCO Products Company (ARCO), GeoStrategies Inc. (GSI) has prepared this letter work plan to supervise the excavation and removal of a waste-oil tank at the subject site. The proposed work includes supervising the excavation and removal of a waste-oil tank, collecting soil samples from the tank pit for laboratory analyses to evaluate whether the tank has leaked waste-oil hydrocarbons into soils beneath the former tank, and prepare a technical report for the work performed at the above referenced site.

The work to be performed includes: (1) scheduling field work with tank removal contractor; (2) supervising the excavation and removal of the waste-oil tank and collecting soil samples for laboratory analyses; and, (3) preparing a technical report presenting field procedures, results, and conclusions of the waste-oil tank removal activities.

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SITE DESCRIPTION AND BACKGROUND

General

ARCO Service Station 2111 is an active Smog Pros Service Station located at the northwestern corner of the intersection of Davis and Preda Streets in San Leandro, California, as shown on Figure 1, Site Vicinity Map. The site is located in a residential and light commercial area. A Shell Oil Company service station is located directly across Davis Street from the subject site. The schematic layout of the service station and the immediate area showing the location of the waste-oil tank to be removed and other pertinent site features is presented on Figure 2, Site Plan.

Regional and Local Hydrogeology

The site is located within the East Bay Plain and is situated in the San Francisco Bay depression that is in part an irregular down-dropped block bordered by northwest trending faults (Alameda County Flood Control and Water Conservation District, June 1988). The site is at an elevation of approximately 35 feet above mean sea level (msl) and is approximately 1 3/4-mile west of the Hayward Fault Zone. The subsurface soils in the vicinity of the site consist of highly permeable Pleistocene alluvium composed of poorly consolidated to unconsolidated clay, silt, sand, and gravel. The alluvium was derived mainly from the Diablo Range and represents coalescing alluvial fans (Alameda County Flood Control and Water Conservation District, June 1988). Groundwater flow direction in the area is generally inferred from topography to be to the west toward San Francisco Bay, but may have components to the north and east due to recharge areas along the Hayward Fault Zone and shallow, unconnected, perched water-bearing zones.

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PREVIOUS ENVIRONMENTAL WORK

Previous environmental work related to soil sampling during the drilling of soil borings at the site is discussed in detail in the *Report of Initial Subsurface Investigation (GSI, March 31, 1994)*.

PROPOSED WORK

To properly ascertain whether waste-oil hydrocarbons have impacted soils at the site and to delineate and remediate these waste-oil hydrocarbons in soils, if present, GSI proposes project steps 1 through 3 listed below. These steps are to be conducted as part of the excavation and removal of an existing 550-gallon waste-oil tank at the site.

Step 1 After the tank removal contractor (to be named by ARCO) has obtained proper permits from the City of San Leandro Fire Department and other applicable regulatory agencies, GSI will obtain the schedule for field work from the tank removal contractor and coordinate the soil sampling activities. Site safety for field personnel will be the responsibility of the contractor performing the tank removal.

Step 2 GSI field personnel will supervise the excavation and removal of an existing 550-gallon waste-oil tank, located behind the service station building (see Figure 2, Site Plan). After removal of the tank, GSI field personnel will collect two soil samples from soils beneath the tank, which will be submitted under Chain-of-Custody Documentation to a State-certified laboratory for analyses. The soil samples will be analyzed, as recommended in the *Table 2 of the Tri-Regional Board Staff Recommendations for Preliminary Investigations and Evaluations of Underground Storage Tanks (August 10, 1990)*, for total petroleum

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Step 2 hydrocarbons as gasoline (TPH-G) and total petroleum
(Cont.) hydrocarbons as diesel (TPH-D) using Modified Environmental
Protection Agency (EPA) Method 8015; for benzene, toluene,
ethylbenzene, and total xylenes (BTEX) using EPA Method
8020; total oil and grease (TOG) using Standard Method 5520
D&F; for chlorinated hydrocarbons using EPA Method 8240;
polychlorinated biphenyls (PCBs) and acid and base neutrals
(BNAs) using EPA Method 8270; and for the metals cadmium,
chromium, lead, nickel, and zinc using EPA Methods
6010/7010. Soil samples will be analyzed on 48-hour
turnaround if tank pit appears clean. If obvious hydrocarbon
impact is encountered, these soil samples will be analyzed on 2-
week turnaround since the tankhole will be overexcavated and
resampled.

If, upon removal of the waste-oil tank, obvious evidence of
hydrocarbons is encountered in soils based on field
observations, additional excavation and sampling of soils will be
undertaken in attempt to remove (remediate) and/or delineate
the hydrocarbon impacted soils. The pit will be over-excavated
until obvious and significant soil discoloration and hydrocarbon
odor is not visible or noticeable or until further overexcavation
would undermine the structural integrity of the building.
Additional confirmation soil samples will be obtained and
submitted for analyses. These additional samples will be
analyzed for TPH-D and TPH as motor oil [(TPH-MO) using
modified EPA Method 8015], using 24 to 48-hour turnaround
for results. The excavated soil will be stockpiled onsite and
covered with visqueen pending proper disposal.

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- Step 3** Prepare a technical report summarizing field and laboratory procedures, findings, and conclusions.

SCHEDULE OF OPERATIONS

A preliminary time schedule to perform the steps described above is shown on Figure 3, Preliminary Time Schedule. This time schedule is an estimate and is subject to change. Time is estimated in weeks after gaining regulatory approval of the letter work plan does not include any changes which may be required due to regulatory request. GSI can initiate work at the site within 1 week after receiving authorization to proceed from the lead regulatory agency and upon all permits being obtained by the contracting tank removal company.

PROJECT STAFF

Mr. Stephen J. Carter, a Registered Geologist in the State of California (RG No. 5577), will provide overall supervision of the geologic and hydrogeologic aspects of the work. Mr. Joel Coffman, Project Manager, will provide supervision of field and office operations of the project. GSI employs a staff of geologists, engineers, and technicians who will assist with the project.

ARCO Station 2111
Letter Work Plan
7940.04

May 10, 1994

DISTRIBUTION

It is recommended that copies of this report be forwarded to:

Mr. Karl Busché
City of San Leandro Fire Department
835 East 14th Street
San Leandro, California 94577

Ms. Susan Hugo
Alameda County Health Care Services Agency
Department of Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

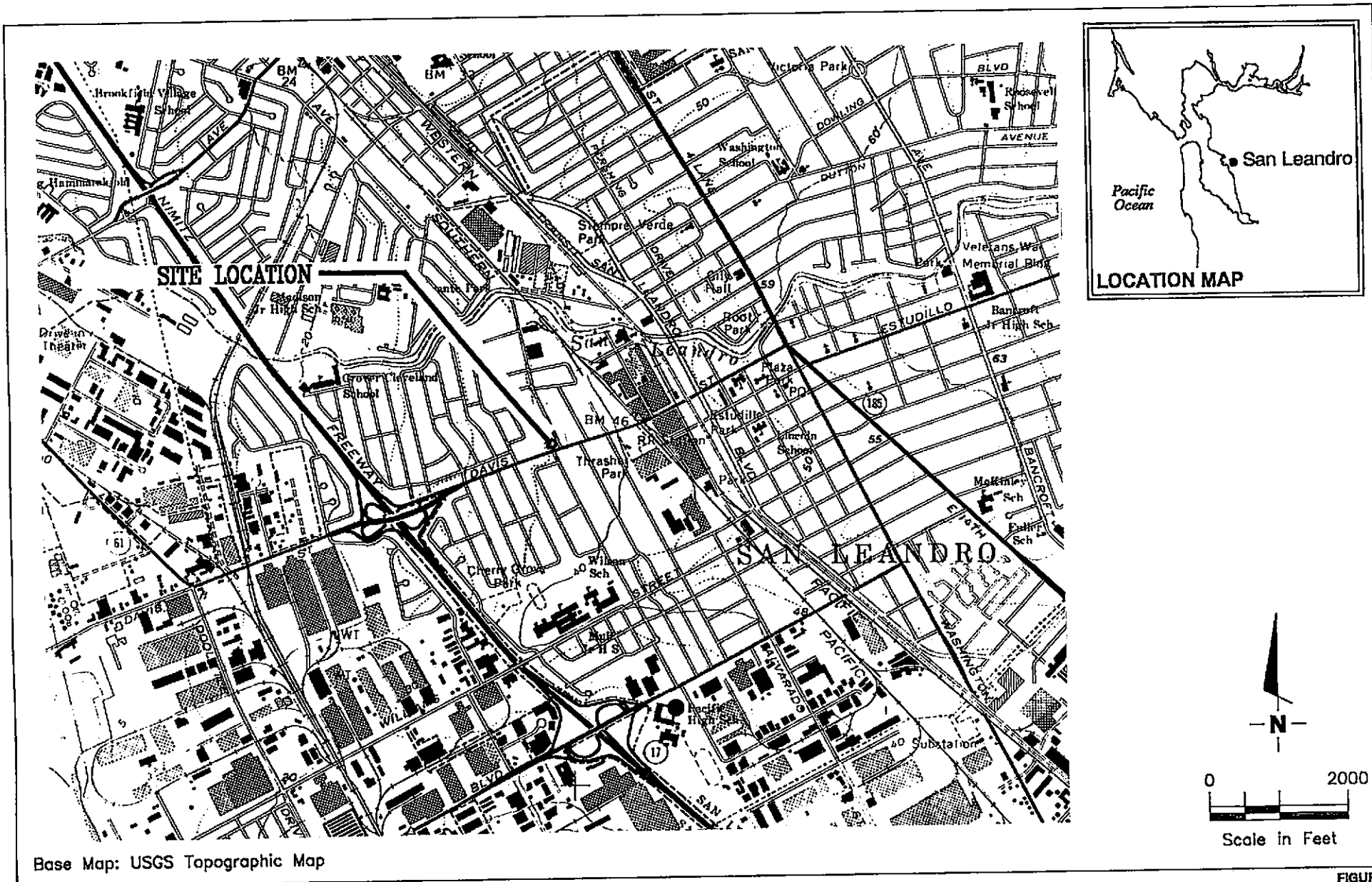
Mr. John Jang
Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612



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REFERENCES

- Alameda County Flood Control and Groundwater Conservation District, June 1988. Geohydrology and Groundwater - Quality Overview, East Bay Plain Area, Alameda County, California 205 (J) Report. pp. 22-65.
- GSI, March 31, 1994. Report of Initial Subsurface Investigation at ARCO Station 2111, 1156 Davis Street in San Leandro, California. GSI Project No. 7940.03.
- Helley, E.S., K.R. Lajoie, W.E. Spangle, and M.L. Blair. 1979. Flatland deposits of the San Francisco Bay Region, California. U.S. Geological Survey Professional Paper 943.



Base Map: USGS Topographic Map



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VICINITY MAP
 ARCO Service Station #2111
 1156 Davis Street
 San Leandro, California

FIGURE

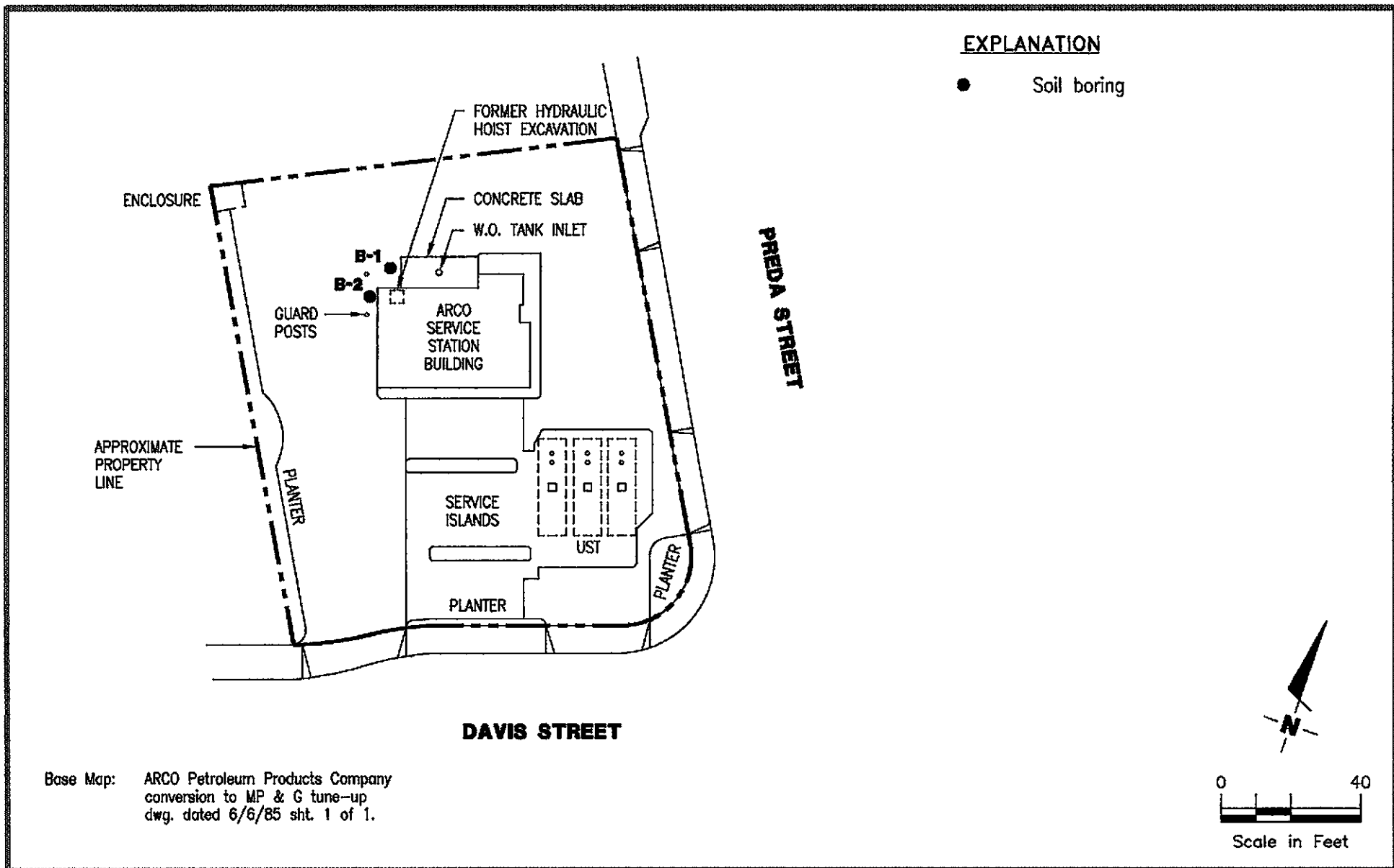
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DATE
 1/94

REVISED DATE



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SITE PLAN
 ARCO Service Station #2111
 1156 Davis Street
 San Leandro, California

FIGURE

2

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DATE
5/94

REVISED DATE

PRELIMINARY TIME SCHEDULE

PROJECT STEPS	ESTIMATED TIME IN WEEKS (AFTER ACQUIRING REGULATORY APPROVAL)																								COMMENTS	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
(1) SCHEDULE FIELD OPERATIONS																										
(2) SUPERVISE EXCAVATION AND REMOVAL OF WASTE-OIL TANK AND SUBMIT SOIL SAMPLES FOR ANALYSIS																										
(3) PREPARE CLOSURE REPORT																										

LEGEND

ESTIMATED SCHEDULE



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PRELIMINARY TIME SCHEDULE
 ARCO Service Station #2111
 1156 Davis Street
 San Leandro, California

FIGURE

3

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DATE
5/94

REVISED DATE