

**WORK PLAN/SITE SAFETY PLAN FOR  
UNDERGROUND STORAGE TANK CLOSURE**

**260 30th STREET  
OAKLAND, CALIFORNIA**

864-4760

***PREPARED FOR:***

***Mrs. Ruth A. Burrows***

**PREPARED BY:**

**TAC ENVIRONMENTAL SERVICES  
Project #SF026-043  
January 23, 1997**

ENVIRONMENTAL  
PROTECTION  
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**TAC ENVIRONMENTAL SERVICES**

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## INTRODUCTION

This work plan discusses and defines the tasks proposed for the in-place closure of one underground storage tank at 260 30th Street, Oakland, California.

The in-place closure is proposed due to the close proximity of the subject tank to a structure located directly adjacent to the tank. The potential threat to the structural integrity of the building by excavating the tank invalidates the possibility of an economical removal. In accordance with Alameda County Department of Environmental Health (ACDEH) requirements and guidelines for in-place closure, the area immediately surrounding the tank will be investigated and upon approval from the ACDEH, the tank will be pumped, rinsed, and pressure grouted.

A detailed outline of proposed closure activities is included in the following work plan.

## SITE HISTORY

### BACKGROUND

The site is located at 260 30th Street, Oakland, California. The property is owned by Robert and Ruth Burrows and is presently occupied by an automobile warehouse (See Figure 1.0 for site location). One underground storage tank containing heating/waste oil is maintained under the sidewalk directly adjacent to the building. The capacity of the UST is not currently known. An order was issued on January 25, 1996 by the Alameda County Department of Environmental Health (ACDEH) directing either removal/closure or recommissioning of the UST. The client has decided to close the UST.

## SCOPE OF WORK

### TANK CONTENTS REMOVAL

Inspection of the UST pipe has indicated that the UST still contains an oil substance. All residual liquids will be pumped from the tank and transported to a certified disposal facility prior to commencement of on-site project activities.

### GEOPHYSICAL SURVEY

Because the orientation of the UST is not currently known, a geophysical survey utilizing Electro-Magnetic processes will be implemented to establish the placement of the tank prior to initiating investigative and closure activities.

# CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY)  
 9/19/96

**PRODUCER**

Jenkins/Welch Corp.  
 P.O. Box 5668  
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THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW

## COMPANIES AFFORDING COVERAGE

- |                |   |                       |
|----------------|---|-----------------------|
| COMPANY LETTER | A | CIGNA Prop & Cas      |
| COMPANY LETTER | B | CIGNA Prop & Cas      |
| COMPANY LETTER | C |                       |
| COMPANY LETTER | D | Republic Indemnity    |
| COMPANY LETTER | E | Admiral Insurance Co. |

**INSURED**

Proficient Environmental Svcs  
 dba: TAC Environmental Svcs  
 151 Link Road  
 Cordelia CA 94585

**COVERAGES**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO TR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFF. DATE (MM/DD/YY)	POLICY EXP. DATE (MM/DD/YY)	LIMITS	
A	GENERAL LIABILITY	D33603058	7/01/96	7/01/97	GENERAL AGGREGATE	2000000
	<input checked="" type="checkbox"/> COMM. GENERAL LIABILITY				PROD-COMP/OP AGG.	2000000
	<input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCC.				PERS. & ADV. INJURY	1000000
	<input type="checkbox"/> OWNER'S & CONTRACT'S PROT				EACH OCCURRENCE	1000000
					FIRE DAMAGE(One Fire)	50000
					MED. EXP. (One Per)	5000
B	AUTOMOBILE LIABILITY	D33603058	7/01/96	7/01/97	COMBINED SINGLR LIMIT	1000000
	<input checked="" type="checkbox"/> ANY AUTO				BODILY INJURY (Per person)	
	<input type="checkbox"/> ALL OWNED AUTOS				BODILY INJURY (Per accident)	
	<input type="checkbox"/> SCHEDULED AUTOS				PROPERTY DAMAGE	
	<input checked="" type="checkbox"/> HIRED AUTOS					
	<input checked="" type="checkbox"/> NON-OWNED AUTOS					
	GARAGE LIABILITY					
	EXCESS LIABILITY				EACH OCCURRENCE	
	<input type="checkbox"/> UMBRELLA FORM				AGGREGATE	
	<input type="checkbox"/> OTHER THAN UMBRELLA FORM					
D	WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY	3521920	7/01/96	7/01/97	<input checked="" type="checkbox"/> STATUTORY LIMITS	
					EACH ACCIDENT	1000000
					DISEASE-POLICY LIMIT	1000000
					DISEASE-RACH RMP.	1000000
E	OTHER Professional Liability	A96PL00155	7/01/96	7/01/97	\$1,000,000. Limit \$5,000. Deductible	

**DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS**

The certificate holder is an additional insured per form CG 2010 attached.

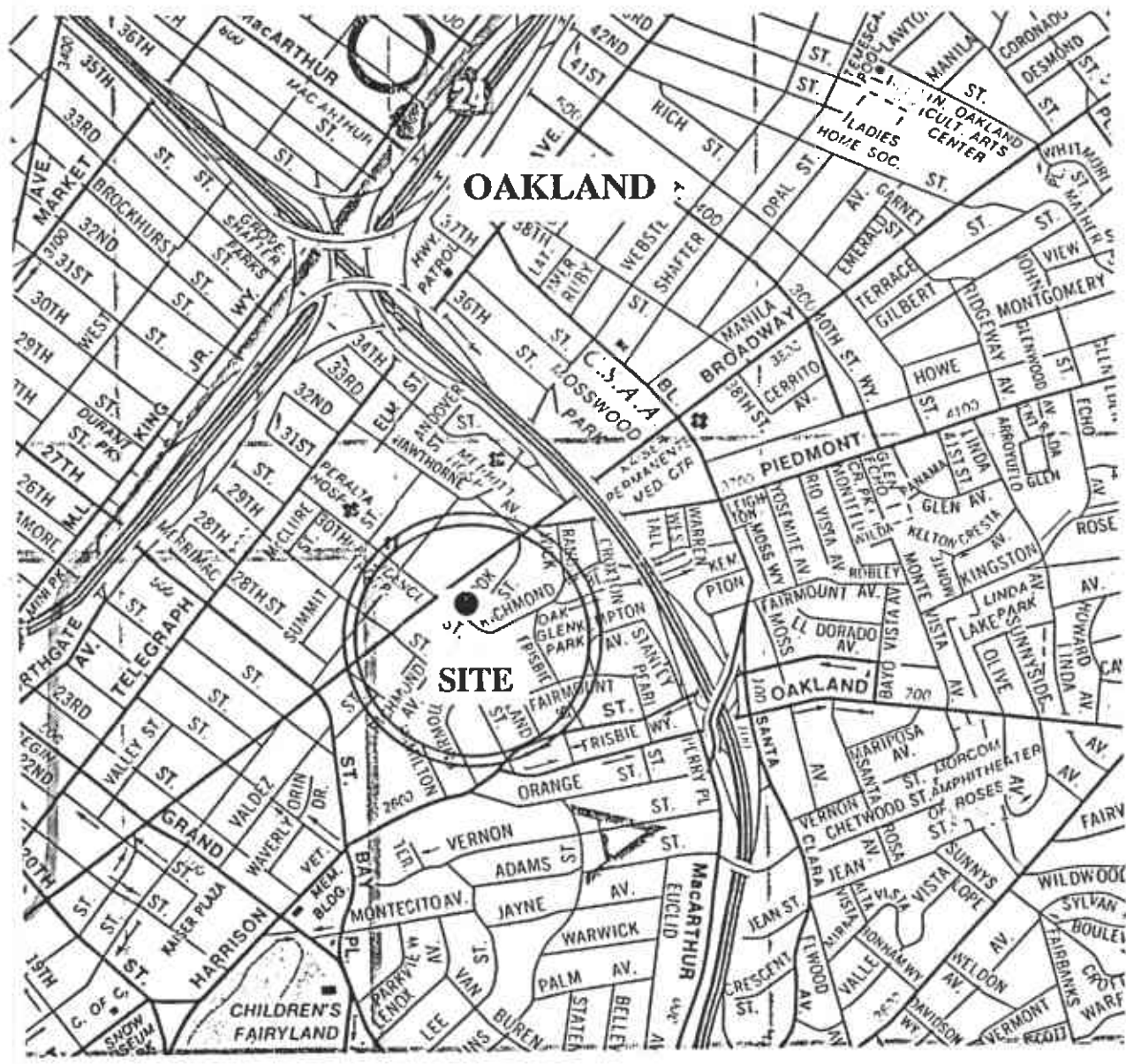
**CERTIFICATE HOLDER**

**CANCELLATION**

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 10 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

*Robert A. Magnuson*



**TAC**  
**ENVIRONMENTAL SERVICES**  
 151 Link Road, Cordella, CA. 94585

Project Name: <b>260 30TH STREET, OAKLAND, CA</b>	
Project Number: <b>SF96-026-043</b>	Date: <b>JANUARY 22, 1997</b>
Drawn By: SDS	Reviewed By: DCS

FIGURE: #1

SITE LOCATION



## **EXPLORATORY SOIL BORINGS**

In order to identify the potential of hydrocarbon impact to the native soils and/or groundwater in the immediate area of the UST, a total of not more than four soil bores are proposed for this site. Each bore will be advanced to an approximate depth of twenty feet below grade surface (bgs). Soil bores will be drilled using a Direct Push sampling rig. The bores will be placed at each of the four edges of the UST. Actual bore locations will be determined once the orientation of the UST has been established.

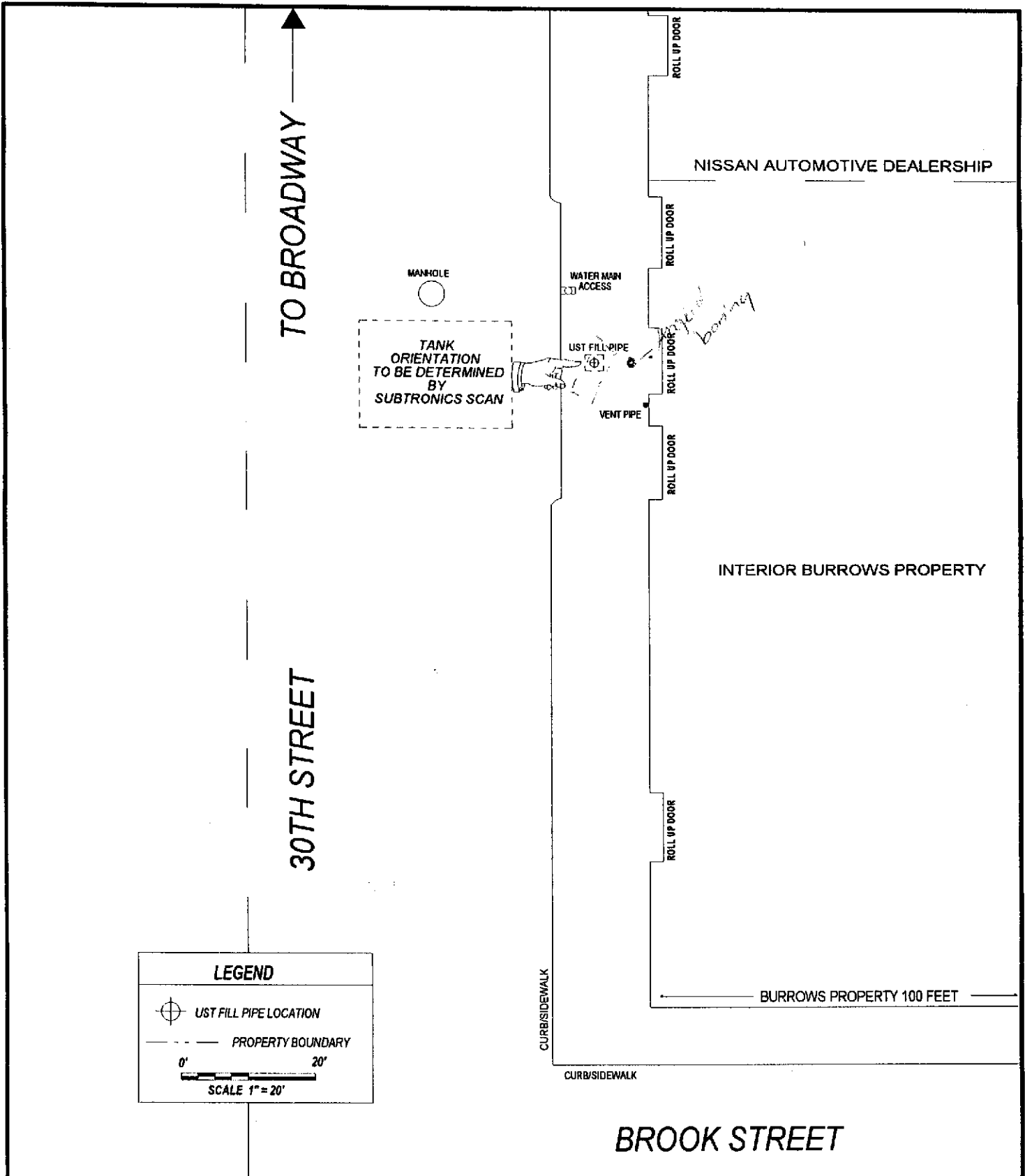
## **SOIL SAMPLING PROGRAM**

Soil samples will be collected using a one-inch diameter by twenty four-inch long piston type soil sampler capable of recovering a discrete sample inside of a removable liner. Soil samples will be collected at five foot intervals, changes in lithology, and where obvious contamination is observed and in accordance with the Standard Procedures for Soil Sampling in Boreholes which are attached as Appendix A. Samples collected will be screened on-site utilizing a photo ionization detector (PID), and a total of not more than four soil samples will be selected from each boring, packaged in brass sleeves and submitted under chain of custody protocol to Mc Campbell Analytical in Pacheco, CA for chemical analysis. If groundwater is encountered during soil boring activities, a groundwater grab sample will also be collected and submitted for analysis.

Soil samples will be tested for their petroleum hydrocarbon content, specifically, motor oil (TPH-mo), BTEX, and LUFT Metals using EPA methods 5520, 8015, and 6010 respectively. All drilling and sampling apparatuses will be properly decontaminated using a tri-sodium phosphate solution and triple tap water rinse prior to each borehole advancement and sample collection. All rinsate generated will be placed in a fifty-five gallon drum and stored on-site for future disposal.

## **TANK CLOSURE**

Once approval from the Alameda County Department of Environmental Health to close the tank in-place is received, the tank will be rinsed with a liquid-nox solution and tap water. All rinsate generated on-site will be pumped and transported to an approved and state certified disposal facility. Dry ice will be applied to the tank at a rate of 25 lbs. per 1,000 gallons of tank capacity. After satisfactory LEL has been achieved, the tank cavity and associated product piping will be pressure grouted with approved cementaceous materials. The fill pipe will then be capped and locked.



**LEGEND**

UST FILL PIPE LOCATION

PROPERTY BOUNDARY

0' 20'

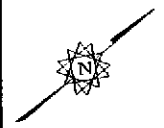
SCALE 1" = 20'

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Drawn By: <b>SDS</b>	Reviewed By: <b>DCS</b>

FIGURE: #2

**SITE PLAN**



## CLOSURE REPORT

All investigative tank removal and closure activities inclusive of soil and water sampling, analytical findings, conclusions, and recommendations will be developed and submitted to the client and regulator for review and approval.



## LIMITATIONS

This work plan has been prepared for the exclusive use of the Ruth A. Burrows (Client) with specific application to the site located 260 30th Street, Oakland, California. The use of this report, its contents, or any part of it, by any one other than Client or authorized designee, is not allowed.

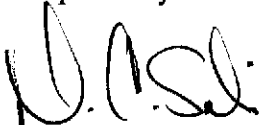
The services provided under this contract as described in this report include professional opinions and judgments based on data collected. These services have been performed according to generally accepted standards and practices. The opinions and conclusions contained in this report are based on information obtained from:

1. Observations and measurements by our field geologist;
2. The soil borings and monitoring wells installed at the site;
3. Information from previous investigations; and
4. The results of chemical testing by a state-certified laboratory.

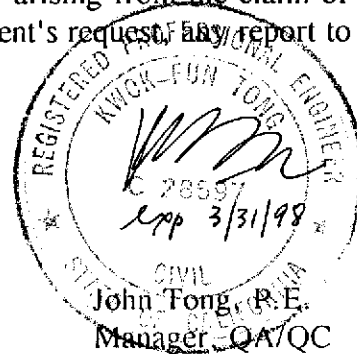
The Client acknowledges that TAC Environmental Services (TAC) has been retained for the sole purpose of assisting the Client in assessing the degree of petroleum hydrocarbon contamination at the project site. It is recognized and agreed that TAC and sub-consultants have assumed responsibility only for performing this investigation and presenting this report and conclusions to the Client. The responsibility for making any further evaluation, disclosure, or report to any third party or for the taking of corrective, remedial, and/or mitigative action shall be solely that of the Client.

The Client agrees to hold TAC and sub-consultants harmless from any and all liability, damage, loss, cost, or expense, including attorney fees, in any way arising from the claim of any third party. TAC agrees not to make, except to the Client or at Client's request, any report to any third party not legally required of it.

Respectfully submitted,



David C. Solis, P.E.  
Sr. Project Manager



**APPENDIX A**  
**SOIL BORING PROCEDURES**

## APPENDIX A

### Standard Procedures No. SFP-02

#### SOIL SAMPLING IN BOREHOLES

U.S. Environmental Protection Agency standards serve as the foundation for all field sampling operations. EPA SW 846 is the primary publication from which procedures are derived. While some aspects of field and laboratory work may be delegated to the California Department of Health Services, the California Water Resources Control Board, and the San Francisco Bay Regional Water Quality Control Board establish the general and specific criteria for sampling.

#### SAMPLE INTERVALS

Samples will be taken at five-foot intervals, distinct lithologic changes, and the capillary fringe zone. Selected samples will be properly retained for chemical analysis.

#### COLLECTION DEVICES

Samples will be collected using a 1-inch-I.D. by 24-inch long piston-type soil sampler capable of recovering a discrete sample inside of a removable liner. The driving equipment is a Direct Push sampling rig. The unit is a vehicle-mounted, hydraulically-powered, soil probing machine that utilizes static force and percussion to advance small diameter sampling tools into the subsurface for collecting soil core, soil gas, or ground-water samples. The sampler will be decontaminated before and after each use by steam cleaning, or a tri sodium phosphate solution wash, and triple tap water rinses.

#### PRESERVATION AND HANDLING

Sample tubes will be labeled, sealed at each end with Teflon sheeting and PVC end caps, and stored in an ice chest with ice. Samples will be delivered under chain of custody to a State-certified laboratory.

#### SOILS CLASSIFICATION

Soils exposed at the ends of each brass tube will be examined by a geologist for obvious signs of contamination and classified according to the Unified Soil Classification System. These

observations will be recorded in the boring logs.

Selection of samples for laboratory analysis will be based primarily on headspace readings and position within the boring, although some discretion by the site geologist or engineer will be required. In general, samples with headspace readings on an Organic Vapor Meter or Photo Ionization Detector over 50 ppm, or that have visual or olfactory indications of contamination, will be submitted for analysis. One sample will also be selected from one to two intervals below the apparent lower limit of contamination to obtain a "zero line" value. In addition, the sample closest to the depth of the storage tank invert (i.e. 12-13 feet) will be submitted for analysis. If the water table is above the tank invert, the sample closest to the water table will be selected. If the water table is below the tank invert, a sample from the capillary fringe zone above the water table will be collected and analyzed.

### **SAMPLE LABELING AND CHAIN OF CUSTODY**

Samples selected for analysis will be labeled with self-adhesive, pre-printed labels with the sample number, or directly on sample tube with an indelible marker. This number will also be recorded the sampler's field notebook along with the project number, sample location, depth, and the date and time collected. The same information will be recorded on the chain of custody.

### **DOCUMENTATION**

A diagram for each boring will be completed by the geologist and submitted to the project manager when the work has been completed. In addition, the details of drilling and field measurements will be summarized as daily entries in a field notebook or data sheets which will be submitted to the project manager when the work has been completed.

### **DRILLING EQUIPMENT DECONTAMINATION PROCEDURES**

The sampler will be decontaminated before and after each use by steam cleaning or washing in a tri sodium phosphate, followed by tap water. Only clean water from a municipal supply will be used for decontamination of drilling equipment.

All rinsate used in the decontamination process will be stored on site in steel DOT approved 55 gallon drums. Drums will be labeled as to contents, suspected contaminants, date container filled, expected removal date, company name, contact and phone number, sealed and left on-site for subsequent disposal pending analytical results.

Standard Procedures No. SHS-02

**SITE SPECIFIC HEALTH AND SAFETY PLAN**

260 30th Street  
Oakland, CA

**I. PROJECT PLAN**

**Objectives** TAC Environmental Services has prepared this Health and Safety Plan for Client prior to work at the Burrows property located at 260 30th Street, Oakland, CA. The following emergency response plan will be implemented prior to beginning site work to handle on-site emergencies. The first priority in all emergency incidents will be to minimize adverse health risks to workers.

**Field Activities** Site work will include soil borings, well installation, and testing.

**Personnel Requirements** Field geologist, engineer, and drillers

**Key Personnel and Owner Representative**

<u>Project Assignment</u>	<u>Name/Agency</u>	<u>Telephone</u>
Project Manager & Site Safety Officer	David C. Solis, P.E.	(707) 864-4760
Project Engineer	Shawn D. Smith	(707) 864-4760
Regulatory Contact	Madula Logan	(510) 567-6765
Owner Representative	Bruce Burrows	(510) 743-1854

## II. JOB HAZARD ANALYSES

### Threshold Limit Values for Anticipated Chemical Substances

Substance	OSHA PEL	ACGIH TVL	NIOSH REL
Benzene	10 ppm	10 ppm	0.1 ppm
Toluene	200	100	100
Xylene	100	100	-

#### Toxicological Hazards of Wastes

Human exposure to benzene concentrations in excess of 150 ppm may cause headache, weariness, and loss of appetite. Vapors at high concentrations may cause smarting of the eyes and dermatitis.

#### Physical Hazards Associated with Site Activities

- Slip, trip and fall hazards
- Hazards due to falling or swinging objects and heavy equipment
- Excessive noise

### III. SITE CHARACTERIZATION

#### A. Site Information

<b>Location</b>	260 30th Street, Oakland, CA
<b>Topography</b>	Site is located in on a rolling hillside
<b>Accessibility</b>	There are no access problems.
<b>Pathways for Hazardous Substance Dispersion</b>	Hydrocarbons may volatilize slightly from soil
<b>Anticipated Weather Conditions</b>	Mild weather
<b>Past and Present Use of Site</b>	Automobile warehouse

#### B. Description of Wastes On Site

<b>Location</b>	Soils underlying former tank locations.
<b>Physical State of Wastes</b>	Adsorbed in soil matrix
<b>Concentrations Found</b>	N/A

#### IV. PERSONAL PROTECTIVE EQUIPMENT

<b>Level of Protection</b>	Level D
<b>Respiratory Protection</b>	Half mask dual cartridge respirator with organic vapor cartridges; will only be required if airborne concentrations are above action levels.
<b>Protective Clothing</b>	<ul style="list-style-type: none"><li>• Hard hat (required)</li><li>• Work boots (required)</li><li>• Safety Glasses (optional)</li><li>• Hearing Protection (optional)</li><li>• Protective gloves (optional)</li></ul>
<b>Action Levels and Work Requirements</b>	Don respirators if organics in the breathing zone exceed a constant 30 ppm

#### V. EXPOSURE MONITORING PLAN

<b>Frequency and Type of Monitoring</b>	Air should be monitored every 30 minutes using an organic vapor meter while excavating and sampling in contaminated areas.
<b>Methodology</b>	Monitor downwind in the breathing zone.

#### VI. DECONTAMINATION PROCEDURES

<b>For PPE</b>	Leave the work area and remove clothing, respirator last. All non-reusable clothing will be disposed of in garbage containers.
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#### VII. PROTECTION OF GENERAL PUBLIC

<b>Procedures</b>	<p>The tank removal contractor will redirect pedestrian traffic around the work area using temporary fencing, or barricades and warning ribbon. The temporary pedestrian walkway will also be protected from automobile traffic using barricades and warning ribbon. Any excavation left open over night will be enclosed with fencing.</p> <p>Only authorized personnel will be permitted within 10 ft. of heavy equipment.</p>
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## VIII. EMERGENCY RESPONSE

### **Command and Control**

The on-site TAC representative will be responsible for health and safety issues related to sampling and drilling.

### **Directions to Hospital**

See area map for route to Summit Medical Center, 350 Hawthorne Ave, Oakland, CA. (510) 869-6777

### **Emergency Procedures for Personnel Injured or Exposed in the Work Zone**

1. Assist the injured or exposed worker out of the sampling area.
2. Call for medical help.
3. Administer CPR/first aid as needed.
4. If possible, carefully remove the victim's PPE and begin decontamination procedures.

Emergency Agencies with Telephone Numbers

Emergency Service	Name/Agency	Telephone
Ambulance	Oakland	911
Hospital	Summit Medical Center 350 Hawthorne Ave Oakland, CA	(510) 869-6777
Police	Oakland	911
Fire Department	Oakland	911
Public Health	Ms. Madula Logan Alameda County	(510) 567-6765
Project Manager	David C. Solis, P.E.	(707) 864-4760
Emergency Spills	CalEPA	(415) 974-8131
Worker Health and Safety	OSHA	(800) 648-1003
CHEMTREC	CHEMTREC	(800) 424-9300
Utilities	Underground Service Alert	(800) 227-2600