HK2, INC. /SEMCO

1751 LESLIE STREET • SAN MATEO, CA 94402 • (415) 572-8033 • (415) 572-9734 FAX

GENERAL ENGINEERING & ENVIRONMENTAL CONTRACTORS LICENSE NO. 719103 (A, B, C57, C61-D40, HAZ, ASB

September 6, 1996

REF: 96-0247.WPN

Juliet Shin
Alameda County
Dept. of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502
(510) 567-6700
(510) 337-9335 Fax

RE: Subsurface Investigation at 701 San Pablo Avenue, Albany

Dear Ms. Shin:

Enclosed is a work plan for the site investigation of the above site. Our plan is for an initial evaluation of the site to determine what contamination exists at the site and if further investigation is required. The details of the work are included in the work plan.

We are trying to plan the work for Monday, September 23rd. Please let me know if you have any questions.

Yours truly,

HK2, Inc. / SEMCO

Stanley L. Klemetson, Ph.D., P.E.
Vice President

WORK PLAN FOR PHASE II SITE INVESTIGATION

PROJECT SITE:

701 San Pablo Avenue
Albany, California

SUBMITTED TO:

Juliet Shin
Alameda County
Dept. of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94520
(510) 567-6700
(510) 337-9335 Fax

PREPARED FOR:

Ingrid Werner
22 Kensington Court
Kensington, CA 94707
(510) 525-9335
(510) 527-1956 Fax

PREPARED BY:

Stanley L. Klemetson, Ph.D., P.E.
HK2, Inc. / SEMCO
1751 Leslie Street
San Mateo, CA 94402
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PROJECT NO. 96-0247

September 6, 1996

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INTRODUCTION

PROJECT DESCRIPTION

HK2, Inc./SEMCO (HK2) proposes to drill to collect additional soil and groundwater samples a t 701 San Pablo Avenue, Albany, California (See Figure 1) at the location of the former waste oil and gasoline underground storage tanks (See Figure 2). The work will be performed under the direction of Alameda County Department of Environmental Health.

PREVIOUS SITE WORK

HK2 was contracted by Ingrid Werner to remove one (1) 285 gallon waste oil tank and to complete a Phase I Environmental Site Assessment. On June 20, 1996, HK2 removed the waste oil tank under the direction of Juliet Shin, Alameda County Department of Environmental Health.

The steel single wall tank had numerous small rust holes and one large hole in the bottom of the tank of approximately 4" in diameter. The soil in the excavation had some odor and discoloration. Five (5) soil sample were collected. Sample 1-285-WO-6'6" was collected at approximately 2' below the former tank at 6'6" below ground surface (bgs). Sample 2-285-WO-8' was collected at 8' bgs. Sample 3-285-WO-SSW-2'6" was not analyzed because Sample 4-285-WO-SSW-4' was collected. Sample 4-285-WO-SSW-4' was collected from the south side wall at a depth of 4' bgs. Sample 5-SP-COMP was a 4-part composite sample collected from the excavated material. The significant laboratory analysis of these samples is summarized in Table 1.

The laboratory data indicates that the contamination level is decreasing with depth and that the south side wall is clean. The total lead concentration exceeds 50 mg/Kg and will require STLC analysis prior to disposal of excavated soil.

PROPOSED WASTE OIL TANK INVESTIGATION

Groundwater at the site is expected to be shallow; therefore two borings are proposed. The first boring is through the excavation to collect continuous soil samples from 8 feet to approximately 20 feet and then a water sample. One soil and one water sample will be analyzed from this boring for TPH-G/BTEX, TPH-D, TEPH, and Lead. The second boring is located 2 feet north of the excavation to verify that the lateral spread of the contamination was limited to a small area near the tank. A continuous core will be collected and evaluated with an OVM and visually. One soil sample will be analyzed from this boring for TPH-G/BTEX, TPH-D, TRPH and Lead. No water sample will be collected from the second boring unless there is significant soil contamination detected.

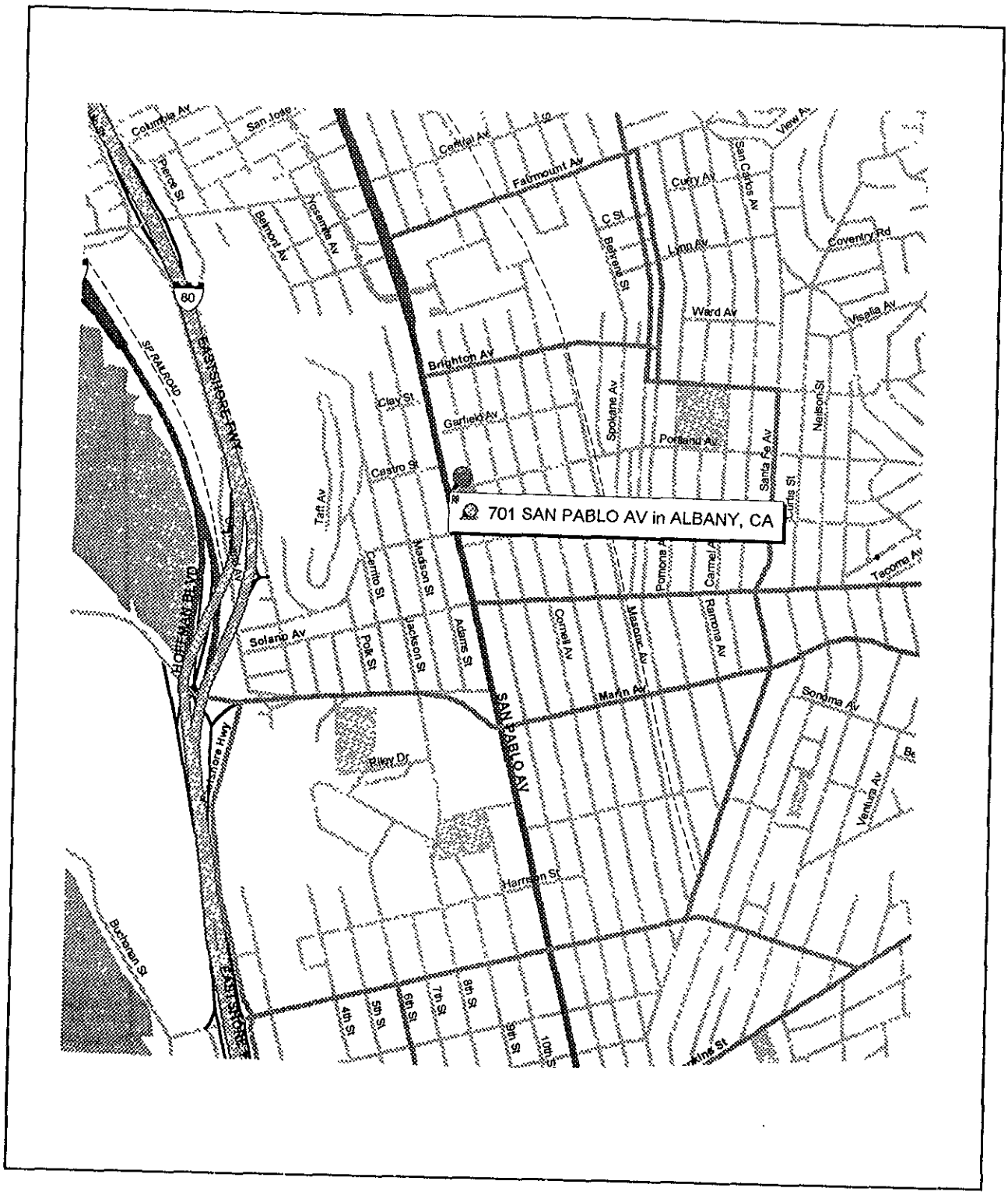


Figure 1. Site Location Map

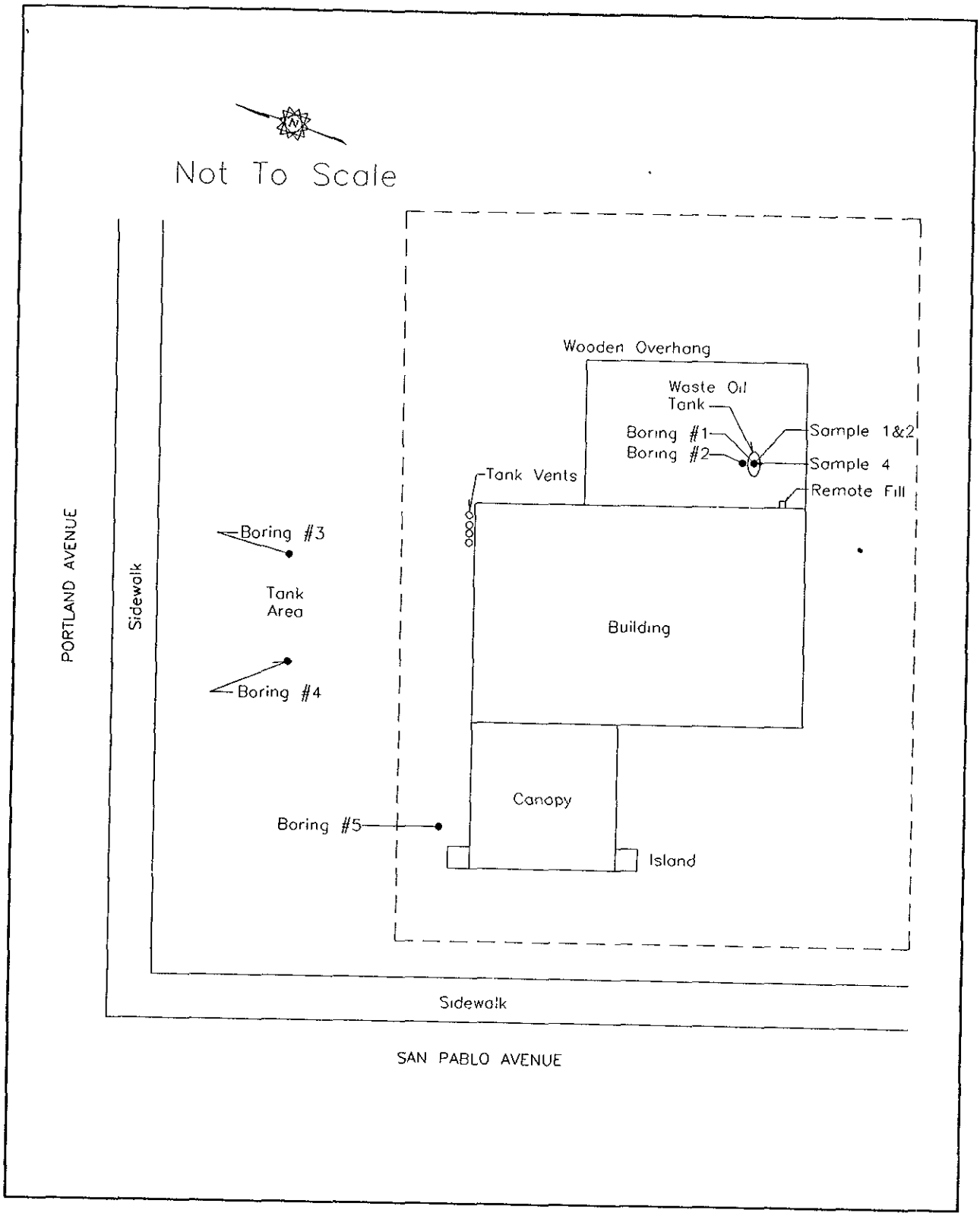


Figure 2. Site Layout

Table 1
WASTE OIL TANK SAMPLE ANALYSIS

	TPH-G (mg/Kg)	TPH-D (mg/Kg)	TEPH (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzne (mg/Kg)	Xylenes (mg/Kg)	Lead (mg/Kg)
1-285-WO-6'6"	310	1300	620	460	5500	2000	8300	720
2-285-WO-8'	6.2	15	NA	16	140	88	314	20
3-285-WO-SSW-2'6"	NA	NA	NA	NA	NA	NA	NA	NA
4-285-WO-SSW-4'	ND	ND	ND	ND	ND	ND	ND	14
5-SP-COMP	24	89	270	44	210	320	550	77

NA - Not Analyzed

PROPOSED GASOLINE TANK INVESTIGATION

It is assumed that the former gasoline tanks on the site were removed previously. There are several vent pipes attached to the building, but no tanks were detected with metal detectors. The approximate location of the former tanks is assumed on the basis of the metal detector investigation. It is therefore necessary to drill three borings in the area of the former tanks to determine if any contamination is present in the soil or groundwater. This data will also be used to determine if there has been any significant migration of the contamination from the waste oil tank site. Three borings will be drilled to approximately 20 feet. Soil samples will be screened with an OVM and visually. One soil and one water sample from each boring will be analyzed for TPH-G/BTEX, TPH-D, and Lead.

PROPOSED TASKS

HK2 proposes to complete the following tasks:

1. Obtain approval of work plan from Alameda County Department of Environmental Health.

2. Notify Underground Service Alert (USA), (800) 227-2600, at least 48 hours prior to commencement of work for utility marking.

3. Drill two borings in the waste oil tank area and three borings in the gasoline tank area to groundwater or a maximum depth of 20 feet, whichever occurs first. This work is planned to be performed with the SIMCO Earthprobe. A hollow-stem auger may be used.

4. All samples will be screened with an OVM. All samples will be recorded on a chain of custody, covered in ice chest with crushed ice to maintain a temperature of 4°C, and transported to a State Certified Analytical Laboratory for analysis.

5. Up to five (5) soil and five (5) water sample will be analyzed for TPH-G (EPA Method 8015), TPH-D (EPA Method 8015M), BTEX (EPA Method 8020), TEPH (EPA Method 5520 F), and Lead (ICAP, EPA Method 3050).

6. The data collected from the soil and ground water sampling will be evaluated to determine if any hydrocarbons are present in the soil, and possibly the groundwater. This information will be presented in a final report.

7. A report incorporating all site work information will be prepared by a Registered Civil Engineer.

Stanley L. Klemetson Ph.D., P.E.
P.E No. 40087

REGISTERED PROFESSIONAL ENGINEER
STANLEY LOUIS KLEMETSON
No. 40087
Exp. 3/31/96
CIVIL
STATE OF CALIFORNIA

APPENDIX A

STANDARD PROCEDURES

SFP - 2

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, the San Francisco Regional Water Quality Control Board, and the Environmental Health Services Division establish the general and specific criteria for sampling.

SAMPLE INTERVALS

Undisturbed soil samples will be obtained for chemical analysis and geotechnical classification at five-foot intervals or at distinct lithologic changes and at occurrence of apparent soil contamination, beginning at five feet below grade.

COLLECTION DEVICES

Samples will be collected using a 2-inch-i.d. Modified California split spoon sampler containing three, six-inch-long brass tubes. The sampler and tubes will be decontaminated before and after each use by steam cleaning, or an Alconox solution wash, and tap water followed by deionized water rinses. The sampler will be driven ahead of the augers using a 140 pound drop hammer. The average blow counts required to drive the sampler the last 12 inches will be recorded on the boring logs.

PRESERVATION AND HANDLING

Sample tubes will be labeled, sealed at each end with Teflon sheeting and PVC end caps, placed in ziplock bags, and refrigerated in crushed ice in an ice chest at 4°C. 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 for obvious signs of contamination and classified according to the Unified Soil Classification System. These observations will be recorded on 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 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 project name (or number), sample number, boring/well number, sample depth, date and collection time. The same information will be recorded on the chain of custody.

DOCUMENTATION

A sample location sketch will be recorded in the field notebook. Collection methods, signs of contamination, soil type and preferential flow paths in the excavation, names of regulators and contractors, and any other appropriate information will also be recorded. Copies of field notes will be submitted to the Project Manager.

DRILLING EQUIPMENT DECONTAMINATION PROCEDURES

The sampler will be decontaminated before and after each use by steam cleaning or washing in an Alconox solution, followed by tap water and deionized water rinses. Only clean tap water from a municipal supply will be used for decontamination of drilling equipment. Equipment will be sealed in plastic bags or other sealed containers to prevent contact with solvents, dusts or other contamination.

The rinsate used in the decontamination process will be stored on site in steel DOT approved 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.

SFP-3

GRAB WATER SAMPLING IN WELLS AND BOREHOLES

GENERAL CONSIDERATIONS

A grab water sample may be collected from inside the hollow-auger of the drilling equipment, or from a borehole, depending upon the depth of the boring and the potential for the soil from the boring walls to fall into the water. A temporary casing may also be installed in the borehole with sand filling the groundwater zone of the casing.

SAMPLE COLLECTION

Wells and borings will be sampled using a new, clean, disposable Teflon bailer attached to new, clean string. Sample vials and bottles will be filled to overflowing and sealed so that no air is trapped in the vial or bottle. Once filled, samples shall be inverted and tapped to test for air bubbles. Samples will be contained in vial and bottles approved by the US EPA and the RWQCB, San Francisco Bay Region. Some analyses may require separate sample containers in accordance with EPA methods described in 40 CFR Part 136 and SW-846.

Water samples intended for volatile hydrocarbon analysis will be contained in 40 ml VOA vials and capped with Teflon-lined septa caps. Samples intended analysis is TPH-G/BTEX (EPA Method 8015M/8020), Chlorinated Hydrocarbons (EPA Method 8010), and VOC (EPA Method 8240 or 8260) will contain a small amount of preservative (HCl). Other samples will not be preserved with acid. Water samples intended for low level diesel analysis will be stored in dark glass 1-liter bottles to reduce degradation by sunlight. Antimicrobial preservative (HCl) may be added to the sample if a prolonged holding time is expected prior to analysis.

SAMPLE LABELING AND CHAIN OF CUSTODY

Samples selected for analysis will be labeled with project name (or number), sample number, boring/well number, sample depth, date and collection time. The same information will be recorded on the chain of custody.

DOCUMENTATION

A sample location sketch will be recorded in the field notebook. Collection methods, signs of contamination, sample odor and/or other characteristics, names of regulators and contractors, and any other appropriate information will also be recorded. Copies of field notes will be submitted to the Project Manager.

FIELD EQUIPMENT DECONTAMINATION PROCEDURES

Bailers and string will be properly disposed of off site. All other sampling equipment that could come in contact with the samples will be decontaminated after each use by washing in an Alconox solution, followed by tap water or deionized water rinses. Equipment will be sealed in plastic bags or other sealed containers to prevent contact with solvents, dusts or other contamination.

All rinsate used in the decontamination process will be stored on site in steel DOT approved 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.

SFP-4

SIMCO EARTHPROBE 200 SOIL SAMPLING

OVERVIEW

The SIMCO Earthprobe 200 sampling system consists of a hydraulically driven sampler for collecting subsurface samples of soil, groundwater and/or gas vapors. The SIMCO Earthprobe 200 sampler is a narrow diameter (approximately 1" diameter) direct push probe. Unlike conventional drill rigs, the SIMCO Earthprobe 200 system does not generate soil cuttings. In addition, the sampling procedure is relatively quick allowing greater amounts of information to be gathered in a shorter period of time.

PROCEDURE

For sample collection, the US EPA standards for field sampling (EPA SW 846) will be followed. Samples will be collected every 5 feet or at changes in lithology or occurrence of apparent soil contamination using the SIMCO Earthprobe 200 sampler. The samples will be collected in 1-in. i.d., 6-in. long tubes.

SAMPLE LABELING AND CHAIN OF CUSTODY

Samples selected for analysis will be labeled with project name (or number), sample number, boring/well number, sample depth, date and collection time. The same information will be recorded on the chain of custody.

HANDLING

Each of the sample tubes will be sealed at the ends with Teflon sheeting and PVC end caps. Samples will be labeled with the project name (or number), sample number, boring/well number, sample depth, date and time, and sampler's initials. All of the samples will be stored in an ice chest with ice, maintained at approximately 4° C, and transported under chain-of-custody to a State-certified laboratory.

DOCUMENTATION

A sample location sketch will be recorded in the field notebook. Collection methods, signs of contamination, soil type and preferential flow paths in the excavation, names of regulators and contractors, and any other appropriate information will also be recorded. Copies of field notes will be submitted to the Project Manager.

DECONTAMINATION

The sampler will be decontaminated after each use by washing in a trisodium phosphate solution, followed by tap water rinses. All rinsate used in the decontamination process will be collected in 5-gallon buckets and stored on site in steel, DOT-approved drums. Drums used to store rinsate will be labeled as to contents, suspected contaminants, date container filled, expected removal date, company name, contact and phone number. Drums will then be sealed and left on-site for subsequent disposal pending analytical results.

QUALITY CONTROL

One field duplicate sample will be collected and analyzed for every sample set up to 10 samples. The field duplicate will be collected identically to and immediately after a randomly chosen sample. This will provide second sample confirmation and a means of determining sample precision.

SFP-5

SIMCO EARTHPROBE 200 WATER SAMPLING

OVERVIEW

The SIMCO Earthprobe 200 sampling system consists of a hydraulically driven sampler for collecting subsurface samples of soil, groundwater and/or gas vapors. The SIMCO Earthprobe 200 is a narrow diameter (approximately 1" diameter) direct push probe. Unlike conventional drill rigs, the SIMCO Earthprobe 200 system does not generate soil cuttings. In addition, the sampling procedure is relatively quick allowing greater amounts of information to be gathered in a shorter period of time.

SAMPLE COLLECTION

Borings will be sampled either by using a new, clean, disposable Teflon bailer attached to new, clean string or by drawing groundwater from well points installed in the borings. Sample vials and bottles will be filled to overflowing and sealed so that no air is trapped in the vial or bottle. Once filled, samples will be inverted and tapped to test for air bubbles. Samples will be contained in vials and bottles approved by the US EPA and the RWQCB, San Francisco Bay Region. Some analyses may require separate sample containers in accordance with EPA methods described in 40 CFR, Part 136 and SW-846.

Water samples intended for volatile hydrocarbon analysis will be contained in 40 ml VOA vials and capped with Teflon-lined septa caps. Samples intended analysis is TPH-G/BTEX (EPA Method 8015M/8020), Chlorinated Hydrocarbons (EPA Method 8010), and VOC (EPA Method 8240 or 8260) will contain a small amount of preservative (HCl). Other samples will not be preserved with acid. Water samples intended for low level diesel analysis will be stored in dark glass 1-liter bottles to reduce degradation by sunlight. Antimicrobial preservative (HCl) may be added to the sample if a prolonged holding time is expected prior to analysis.

SAMPLE LABELING AND CHAIN OF CUSTODY

Samples selected for analysis will be labeled with project name (or number), sample number, boring/well number, sample depth, date and collection time. The same information will be recorded on the chain of custody.

DOCUMENTATION

A sample location sketch will be recorded in the field notebook. Collection methods, signs of contamination, sample odor and/or other characteristics, names of regulators and contractors, and any other appropriate information will also be recorded. Copies of field notes will be submitted to the Project Manager.

FIELD EQUIPMENT DECONTAMINATION PROCEDURES

Bailers and string will be properly disposed of off site. All other sampling equipment that could come in contact with the samples will be decontaminated after each use by washing in an Alconox solution, followed by tap water or deionized water rinses. Equipment will be sealed in plastic bags or other sealed containers to prevent contact with solvents, dusts or other contamination.

All rinsate used in the decontamination process will be stored on site in steel DOT approved 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.

APPENDIX B

SITE SPECIFIC HEALTH AND SAFETY PLAN

SITE SPECIFIC HEALTH AND SAFETY PLAN

701 SAN PABLO AVENUE
ALBANY, CALIFORNIA

I. OVERVIEW

This Health and Safety Plan has been prepared to minimize environmental risk while working at the site and handling the extracted materials. The following plan will be reviewed by all workers and visitors prior to site entry to prepare for potential on-site emergencies and to minimize adverse health risks to workers.

II. SITE CHARACTERISTICS

A. Site Location	701 San Pablo Avenue Albany, California
B. Past Use	Service Station
C. Present Use	Landscaping Plant Sales
D. Topography	Site has a gentle slope
E. Accessibility	There should be no access problems for outside drilling work, but working areas is limited inside of building.
F. Weather Conditions	Warm weather conditions, wind velocity generally below 10 mph.

III. SITE WORK

A. Work Description	The present site work will include drilling five soil boring for soil and groundwater sampling, and collection of shallow soil samples.
B. Personnel	Environmental engineer and Drilling Contractors.

Personnel and Project Assignments

Assignment	Name	Phone Number
Project Manager	Stanley L. Klemetson, Ph.D.	(415) 572-8033
Site Safety Officer	Stanley L. Klemetson, Ph.D.	(415) 572-8033
Owner Representative	Ingrid Warner	(510) 525-9335

IV. SITE HAZARDS

A. Chemicals of Concern

Threshold Limit Values

Substance	OSHA PEL	ACGIH TVL	NIOSH REL
Benzene	10 ppm	10 ppm	0.1 ppm

B. Toxicology 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. Benzene appears to be poorly absorbed through skin.

C. Physical Hazards
Slip, trip and fall hazards
Hazards due to heavy equipment
Excessive noise
Heat Stress/Stroke
Electrical

D. Other Hazards Dispersion of Volatile compounds i.e. gasoline and benzene

E. Description of Wastes Hydrocarbons in soil matrix and in groundwater

F. Range of Concentrations Low levels of hydrocarbons may be encountered during sampling and soil handling.

V. PERSONAL PROTECTIVE EQUIPMENT

A. Level of Protection Level D

B. Respiratory Protection Half mask dual cartridge respirator with organic vapor cartridges should be available, but, will only be required if airborne concentrations are above action levels (below).

C. Protective Clothing

- Hard hat (required)
- Work boots (required)
- Safety Glasses (optional)
- Hearing Protection (optional)
- Protective gloves (optional)

D. Action Levels Don respirators if organics in the breathing zone exceed a constant 30 ppm

VI. EXPOSURE MONITORING PLAN

A. Monitoring Requirements Air should be monitored every 30 minutes using an organic vapor meter while excavating and sampling in contaminated areas.

B. Methodology Monitor downwind in the breathing zone.

VII. DECONTAMINATION PROCEDURES

A. For PPE Leave the work area and remove clothing, respirator last. All non-reusable clothing will be disposed of in garbage containers.

B. Sampling Equipment All sampling equipment, such as buckets and samplers will be decontaminated after each use by washing in a trisodium phosphate solution followed by tap water rinses. All rinsate

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

VIII. PROTECTION OF GENERAL PUBLIC

A. Procedures

The on-site safety officer will redirect pedestrian traffic around the work area using temporary fencing, or barricades and warning ribbon. Only authorized personnel will be permitted within 10 ft. of heavy equipment.

IX. EMERGENCY RESPONSE

A. Command and Control

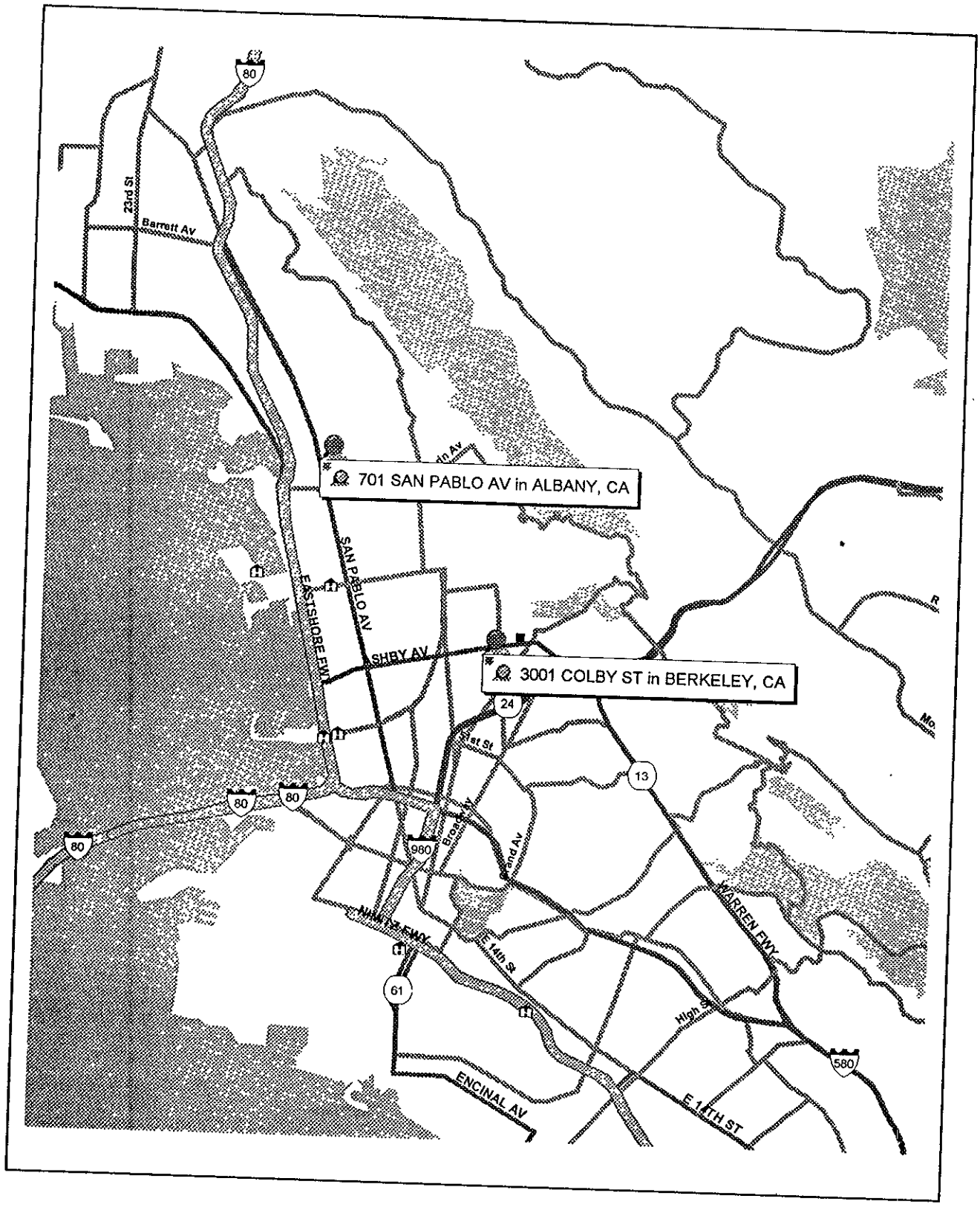
The on-site safety officer will be responsible for enforcing health and safety procedures issues related to sampling and drilling.

B. Emergency Procedures

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	Albany	911
Hospital (See Attached Route Map)	Alta Bates 3001 Colby Street Berkeley	(510) 540-0337
Police	Albany	911
Fire Department	Albany	(510) 528-5770
Public Health	Juilet Shin Alameda County	(510) 567-6700
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



Route to Hospital

SIGNATURE PAGE

The following individuals have reviewed the Health and Safety Plan prior to entry to the site.

Printed Name	Signature	Date
Printed Name	Signature	Date
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