

WORK PLAN FOR SUBSURFACE INVESTIGATION

PROJECT SITE:

**ALLIANCE GAS STATION
20450 HESPERIAN BLVD.
HAYWARD, CALIFORNIA**

PREPARED FOR:

**MR. DANNY CHAUHAN
AIRPORT ALLIANCE
16384 FOOTHILL BLVD. #12
SAN LEANDRO, CALIF. 94578
(510) 481-0166
(510) 887-7715**

SUBMITTED TO:

**MS. JULIET SHIN
ALAMEDA COUNTY
HEALTH AGENCY
80 SWAN WAY SUITE 200
OAKLAND, CA. 94621
(510) 271-4530**

PREPARED BY:

**MR. RAFAEL GALLARDO
CERTIFIED ENVIRONMENTAL CONSULTING, INC.
536 STONE ROAD, SUITE J
BENICIA, CA 94510
(707) 745-0171**

**CEC PROJECT NO. 94-510-1440
January 10, 1994**

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WORK PLAN SUMMARY

INTRODUCTION

Statement of Work. This project includes the drilling of 4 borings to an approximate depth of 25 feet. One boring will be continuously cored, and three will be sampled at 5 foot intervals, or contact change. Soil samples will be collected at 5 foot intervals and a water sample will be obtained at each boring. The water samples will be obtained by hydropunch method. The samples will be delivered to a certified laboratory for analysis for TPH-D, TPH-G, and BTEX.

Site Location and Description. The project site is the Alliance Gas Station, located at 20450 Hesperian Blvd, Hayward, California (Figure 1). A map of the proposed boring locations can be found in Figure 2.

Background. On March 19, 1991, Mr. Danny Chauhan, owner of the Alliance Service Station, received a letter from Alameda County requesting proof that the tank systems on the assessment site were not a contributing source of groundwater contamination for the area located at the corner of Hesperian Blvd. and West A Street.

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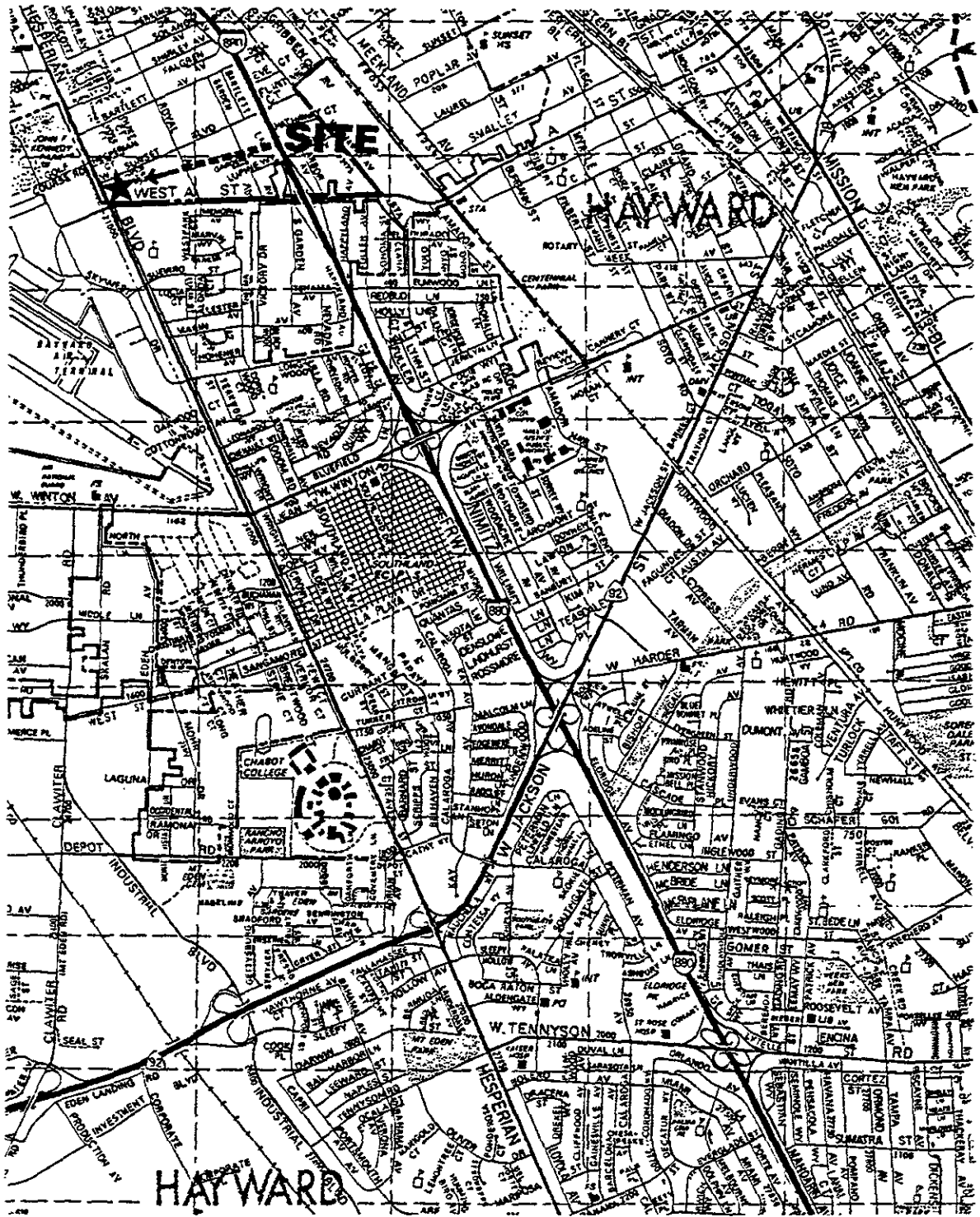
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On January 7, 1994, The Alliance Gas Station retained the services of Certified Environmental Consulting, Inc. (CEC), to perform a Preliminary Site Assessment (Phase One) and a site investigation (Phase Two) on the subject site.

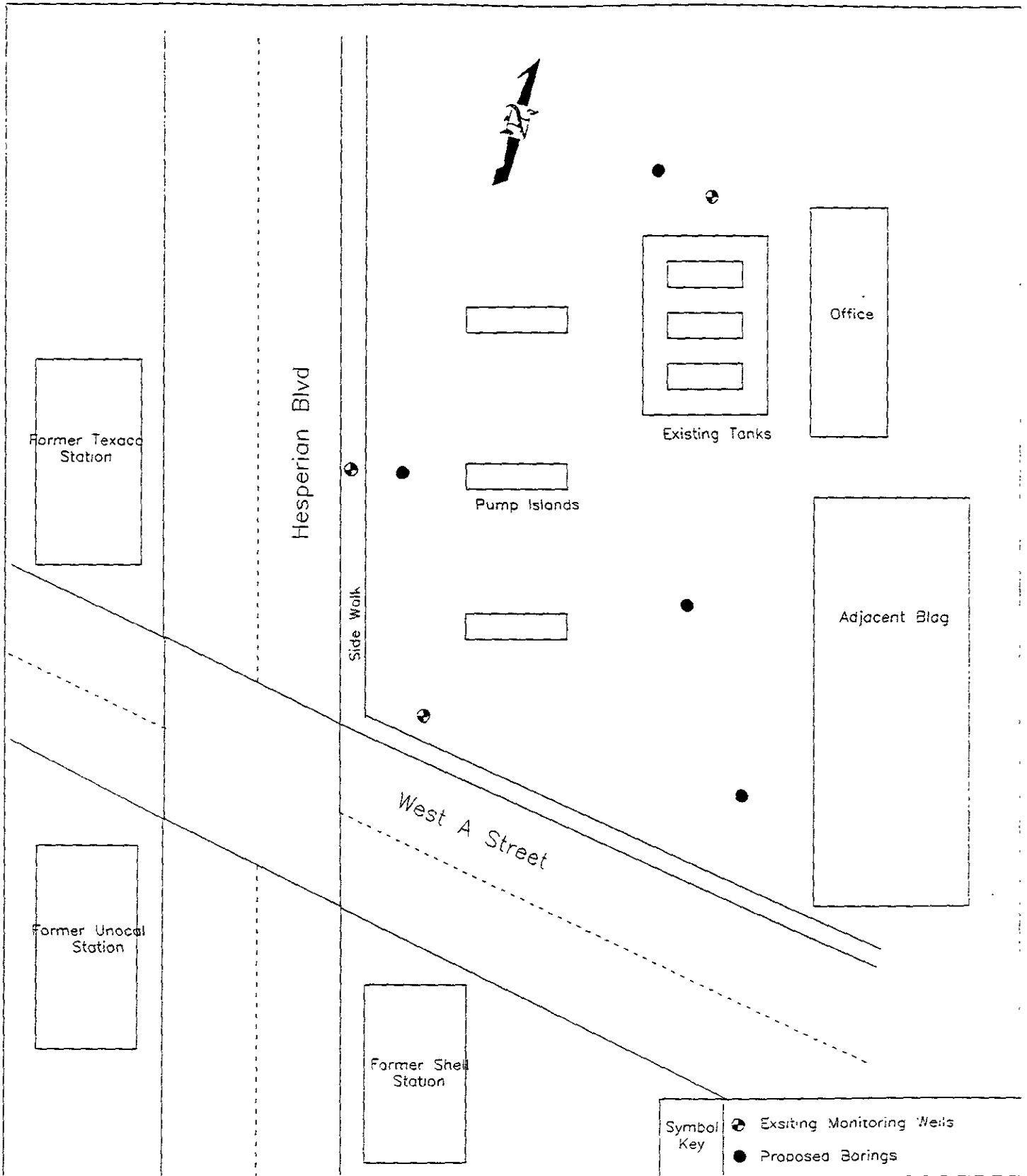


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FIGURE I

SITE LOCATION MAP

20450 HESPERIAN BLVD.
HAYWARD CA. 94541
PROJECT: 94-510-1440



Symbol Key
 ⊕ Existing Monitoring Wells
 ● Proposed Borings

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Figure 2
 Site Map
 20450 Hesperian Blvd
 Hayward, CA
 Project No. 94-510-1445

GEOLOGY AND HYDROGEOLOGY

The site rests on undifferentiated deposits consisting of marine clay, and sand with minor lenses of gravel underlying a thin cover of alluvium and slope wash. The deposits are of Quaternary age upper pleistocene to recent (QU). These are thick unconsolidated deposits with an average thickness exceeding 600 feet. Bedrock occurs at depths of between 468 and 732 feet.

The closest faults in the Quadrangle are the Hayward fault located approximately 1 3/4 miles to Northeast, the West Chabot fault located approximately 2 1/4 miles to the Northeast, and the East Chabot fault located approximately 2 3/4 miles to the Northeast. The Hayward fault is considered to be the most threatening to the area. It is an active fault having displayed movement within the last 11,000 years. The East and West Chabot faults are considered to be inactive.

HYDROGEOLOGY

The site rests within the East Bay Plain. The plain covers an area of approximately 114 square miles. Most of the groundwater is used for irrigation and industrial use, with very little of it pumped for domestic consumption. The groundwater reservoir is comprised of 3 main unconsolidated water bearing units: The Older Alluvium, the Younger Alluvium, and the Merritt Sand. The reservoir is greater than 1100 feet thick and occurs in unconfined and confined conditions.

The groundwater beneath the East Bay Plain has been seriously threatened by hundreds of documented toxic spills and leaks since 1984. The most serious threat to the groundwater reservoir occurs where the Younger Alluvium, and Merritt Sand outcrop and also along the recharge area of the Older Alluvium. Groundwater in the Older Alluvium has not yet been degraded by toxins.

Groundwater flow direction within the plain in general, is from the Eastern part of the reservoir to the West, towards San Francisco Bay.

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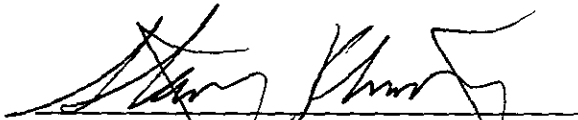
SITE WORK

Site work will be conducted in a step-wise manner to allow for changes in the scope of work as additional information is gathered. The overall project is outlined below.

1. Submit Work Plan to the County of Alameda, Department of Environmental Health at (510) 271-4530. If needed, CEC will obtain any necessary encroachment permits for the work performed on City of Hayward property.
2. Submit map showing boring locations.
3. Locate and mark drilling areas with white paint.
4. Notify Underground Service Alert (USA), (800) 227-2600, 48 hours prior to commencement of work.
5. Notify Ms. Juliet Shin, of Alameda County, Department of Environmental Health at (510) 271-4530, 72 hours prior to commencement of site work.
6. Collect soil and groundwater samples from each boring. The samples will be stored in an ice cooler kept at 4° C for transportation to a certified laboratory for analysis.
7. Analyze samples collected from the 4 borings for Total Petroleum Hydrocarbons as Diesel (TPH-D), Total Petroleum Hydrocarbons as Gasoline (TPH-G), and Benzene, Ethylbenzene, Toluene, and Xylene (BTEX).
8. Fill boreholes with neat cement to surface to eliminate any migratory pathways for contamination.
9. Submit a final report to the county of Alameda. The report will include site history, summary of all findings, laboratory results and recommendations.

REPORTS

Technical reports will be prepared and submitted to meet the County's requirements. Reports will include site history, figures identifying sampling locations, drilling logs, summary of all findings, analytical results and recommendations, if any, for further action.



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



APPENDIX A
Standard Procedures

SOIL SAMPLING IN BOREHOLES

SOIL SAMPLE COLLECTION

Samples will be collected using a 2 of 2.5 inch I.D. modified California split spoon sampler containing three, six-inch-long brass tubes. The sampler and augers will be decontaminated before and after each use by steam cleaning, or an Alconox solution wash, and tap or deionized water rinses. The sampler will be driven ahead of the augers using a 140 pound drop hammer. The average blow counts required to the drive the sampler 18 inches will be recorded on the boring logs.

HANDLING

Sample tubes will be sealed at each end with Teflon sheeting and PVC end caps, placed in ziplock bags, and stored in an ice chest with ice. Samples will be labeled with sample number, location, and sample depth. Samples will be transported under chain-of-custody procedures to a State-Certified laboratory.

DOCUMENTATION AND SOIL CLASSIFICATION

Sample locations will be recorded in the geologist's field notebook. Collection methods, signs of contamination, soil type, and any other appropriate information will also be recorded. 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.

CHAIN OF CUSTODY

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

FIELD EQUIPMENT DECONTAMINATION PROCEDURES

The sampler will be decontaminated before and after each use by washing in an Alconox solution, followed by tap water, or deionized water rinses.

All rinseate used in the decontamination process will be stored on site if necessary, 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.

SOIL CUTTINGS

Soil cuttings generated during drilling will be placed in steel DOT approved drums, or placed on and covered with plastic sheets. Soils will remain on-site for subsequent disposal pending analytical results. Soil cuttings will be the responsibility of the owner/generator, although CEC may arrange for disposal.

WATER SAMPLE COLLECTION

Groundwater will be sampled using a Hydro Punch sample probe system. The Hydro Punch water sample system is advanced through the center of the hollow stem augers to allow for an in-situ water sample collection. Drilling continues to approximately 10 feet below the water table. Once the desired depth is reached the augers are retracted approximately 5 feet. This allows the Hydro Punch system to come in contact with the water bearing formation. Water flows freely into a disposable bailer contained within a stainless steel sample screen. The bailer is then removed and the captured water is placed in the appropriate sample media. The water samples are considered grab samples and are meant for investigatory purposes.

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 vials and bottles approved by the US EPA and the RWQCB, San Francisco Bay Region.

STORAGE AND TRANSPORTATION

Samples exposed to dust, direct sunlight, high temperature, and adverse weather conditions will be avoided whenever possible. Samples shall be transported to the laboratory as soon as possible and on no more than 48 hours from the time they were collected. All samples will be stored in and kept in plastic "ziplock" bags, and kept in a closed ice chest until delivery to the laboratory.

GENERAL PRACTICES

CEC's standard procedures for soil/water sampling meet or exceed guidelines set by California EPA, California State Regional Water Quality Control Board, San Francisco Bay Region, and the County of San Mateo Department of Health. Drilling, construction, and completion of all exploratory borings will be in conformance with procedures in this manual.

APPENDIX B

Health and Safety Plan

EMERGENCY PROCEDURES

The following emergency response plan will be implemented to handle unanticipated on-site emergencies prior to start up of hazardous waste operations. All emergency incidents will be dealt with in a manner that minimizes adverse health risks to workers.

A. Emergency first aid procedures:

Employee injury: When possible, remove the employee from the contaminated zone and conduct decontamination procedures, first aid, and preparation for transport at a safe distance from the work site.

Eye exposure: Wash eyes with large amounts of potable water for at least 15 minutes; lift the upper and lower lids occasionally. Obtain medical attention.

Skin Exposure: Flush the contaminated skin with water for at least 15 minutes. Remove contaminated clothing. Obtain medical attention immediately when exposed to concentrated solids or liquids.

If paramedic/rescue services are required, they will provide transportation to the hospital. For less serious circumstances, the CEC representative will provide transportation.

B. Emergency telephone numbers are given in the Site Specific Health and Safety Plan.

C. CEC will document the emergency situation. It will include:

- o A description of the incident (including the date and time) that necessitated emergency response procedures, and complete an accident/incident investigation or critique of the incident.
- o The date, time, and names of all persons/agencies that were notified and their responses.
- o The resolution of the incident (including its duration) and the method/corrective action involved.

ON-SITE FIRST AID

All CERTIFIED personnel engaged in field activities will have available at the job site the necessary health and safety items. Depending upon the job requirements, these may include the following:.

- o First aid Kit
- o Half Mask respirator
- o Organic vapor or other appropriate cartridges
- o Hard Hat
- o Safety Glasses
- o Hearing protection devices
- o Protective gloves
- o Chemical resistant coveralls (coated Tyvek)

**SITE SPECIFIC
HEALTH AND SAFETY PLAN
FOR
20450 HESPERIAN BLVD.**

I. SITE: 20450 HESPERIAN BLVD., HAYWARD, CALIFORNIA.

II. KEY PERSONNEL AND PROJECT ASSIGNMENTS

<u>PROJECT ASSIGNMENT</u>	<u>NAME/AGENCY</u>	<u>PHONE</u>
Principal Investigator	Stanley L. Klemetson, P.E.	(707) 745-0171
Geologist and Assistant Site Safety Officer	Rafael Gallardo	(707) 745-0171
Project Manager	Rafael Gallardo	(707) 745-0171
Site Safety Officer	Michael T. Noble, C.I.H.	(510) 867-0322
Owner:	Airport Alliance Mr. Danny Chauhan	(510) 887-7715

III. SCOPE OF WORK

The project includes the drilling of 4 borings to a depth of approximately 25 feet below surface grade (BSG). One boring will be continuously cored and three will be sampled at 5 foot intervals, or contact change. Soil and water samples will be obtained and delivered to a certified laboratory for analysis. The samples will be analyzed for **TPH-G**, **BTEX**, and **TPH-D**. A final report will be submitted to the Alameda County Health Agency.

IV. LEVEL OF PROTECTION

Level D - Level D is the basic work uniform.

V. SITE SECURITY

Only authorized personnel will be permitted within 20 feet of equipment.

VI. EMERGENCY RESPONSE

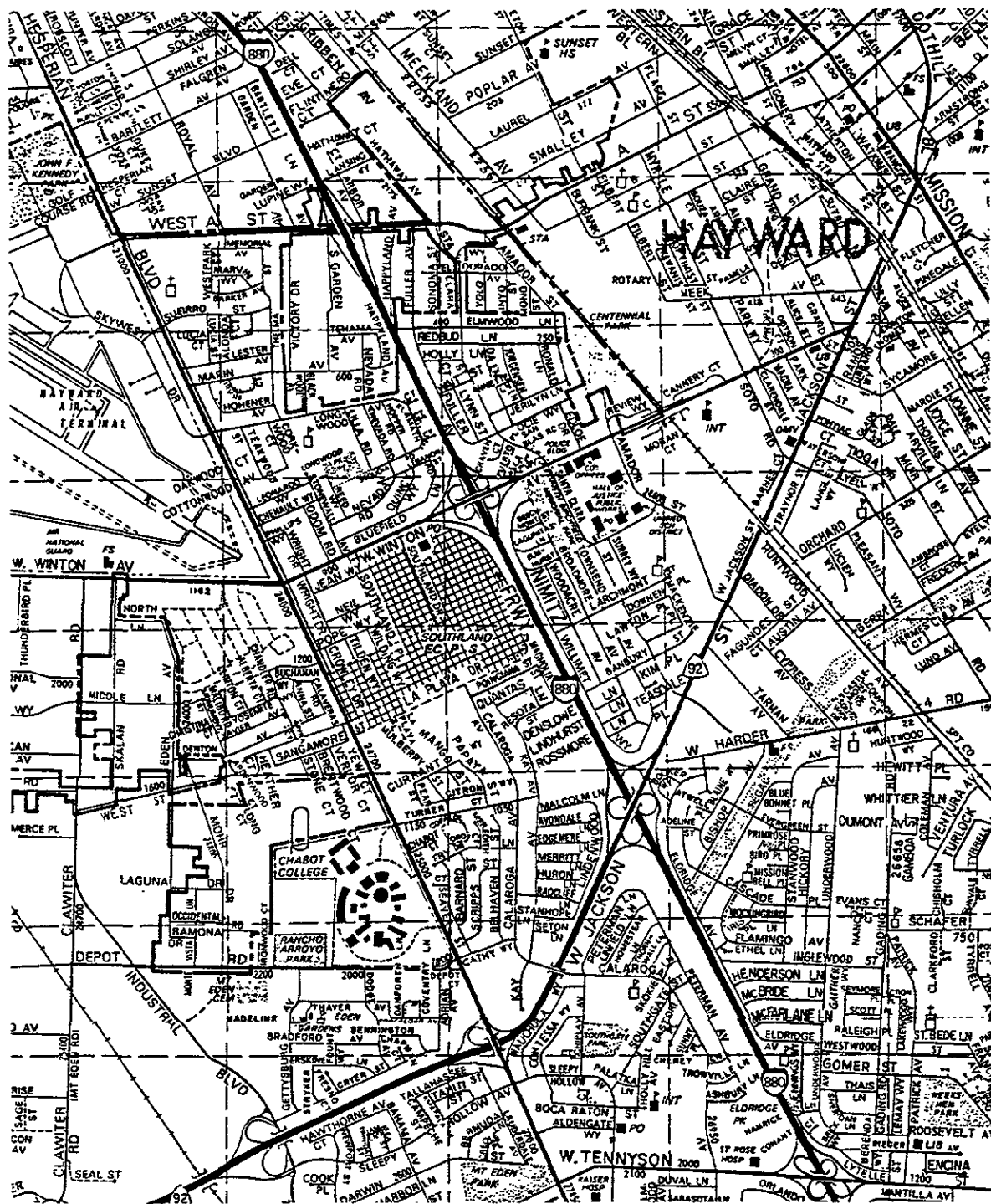
- A. Decontamination procedures for personnel injured or exposed in the work zone. Assist the injured or exposed worker out of the sampling area when possible. If possible, carefully remove his PPE, and remove your own, according to standard decontamination procedures administer CPR/first aid as needed. Call for medical help immediately.
- B. Emergency response plan

Personnel roles, lines of authority, communications. The on-site CEC representative will have final authority on site health and safety methods concerning sampling.

C. Telephone numbers of emergency agencies, key contractor and responsible party.

	<u>NAME/AGENCY</u>	<u>TELEPHONE</u>
Ambulance	Hayward	911
Hospital	Kaiser Permanente Medical Center 1200 El Camino Real South San Francisco, CA	(415) 742-2000
Police Department	Hayward	911
Fire Department	Hayward	911
Project Manager	Rafael Gallardo	(707) 745-0171 Office
Health/Safety Coordinator	Michael T. Noble	(510) 867-0322
Alameda County Department of Environmental Health Division	Ms. Juliet Shin	(510) 271-4530
CA Dept. Health Services	DHS	(415) 540-2122
US EPA	Emergency Spills in California	(415) 974-8131
Federal OSHA	OSHA	(800) 648-1003
CHEMTREC	CHEMTREC	(800) 424-9300
Underground Service Alert	CEC	(800) 227-2600

Directions to hospital (See Figure 3) for route to Kaiser Permanente Medical Center).



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FIGURE 3

HOSPITAL ROUTE MAP
 20450 HESPERIAN BLVD.
 HAYWARD, CA. 94541
 PROJECT NO. 94-510-1440



**CERTIFIED
ENVIRONMENTAL
CONSULTING INC.**

January 10, 1994

REF: 94-510-1440

Ms. Juliet Shin
Department of Environmental Health
Alameda County Health Agency
80 Swan Way, Suite 200
Oakland, California 94621
(510) 271-4530
(510) 569-4757

**SUBJECT: WORK PLAN FOR SUBSURFACE INVESTIGATION AT
20450 HESPERIAN BOULEVARD, HAYWARD CALIFORNIA.**

Dear Ms. Shin:

Enclosed is Certified Environmental Consulting, Inc.'s (CEC) Work Plan for a subsurface investigation located at 20450 Hesperian Boulevard, Hayward, California.

The purpose for this investigation is to verify whether or not a release of petroleum hydrocarbons has occurred at the aforementioned site. A subsurface soil investigation will be conducted to obtain soil and groundwater samples from 4 borings. The soil and groundwater samples will be delivered to a certified laboratory for analysis of TPH-D, TPH-G, and BTEX.

I enjoyed our phone conversation last week and look forward to working with you on this project.

If you have any questions or comments regarding the Work Plan, please feel free to contact us at (707) 745-0171.

Respectfully,


Rafael Gallardo
Project Manager/Geologist


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

cc: Danny Chauhan, Airport Alliance

536 Stone Road, Suite J
Benicia, California 94510-1170

Ofc (707) 745-0171
Fax (707) 745-0163
(800) 228-0171

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FIGURE 1. SITE LOCATION MAP **3**

FIGURE 2. PROPOSED BORING LOCATIONS **4**

FIGURE 3. HOSPITAL ROUTE MAP **B-6**

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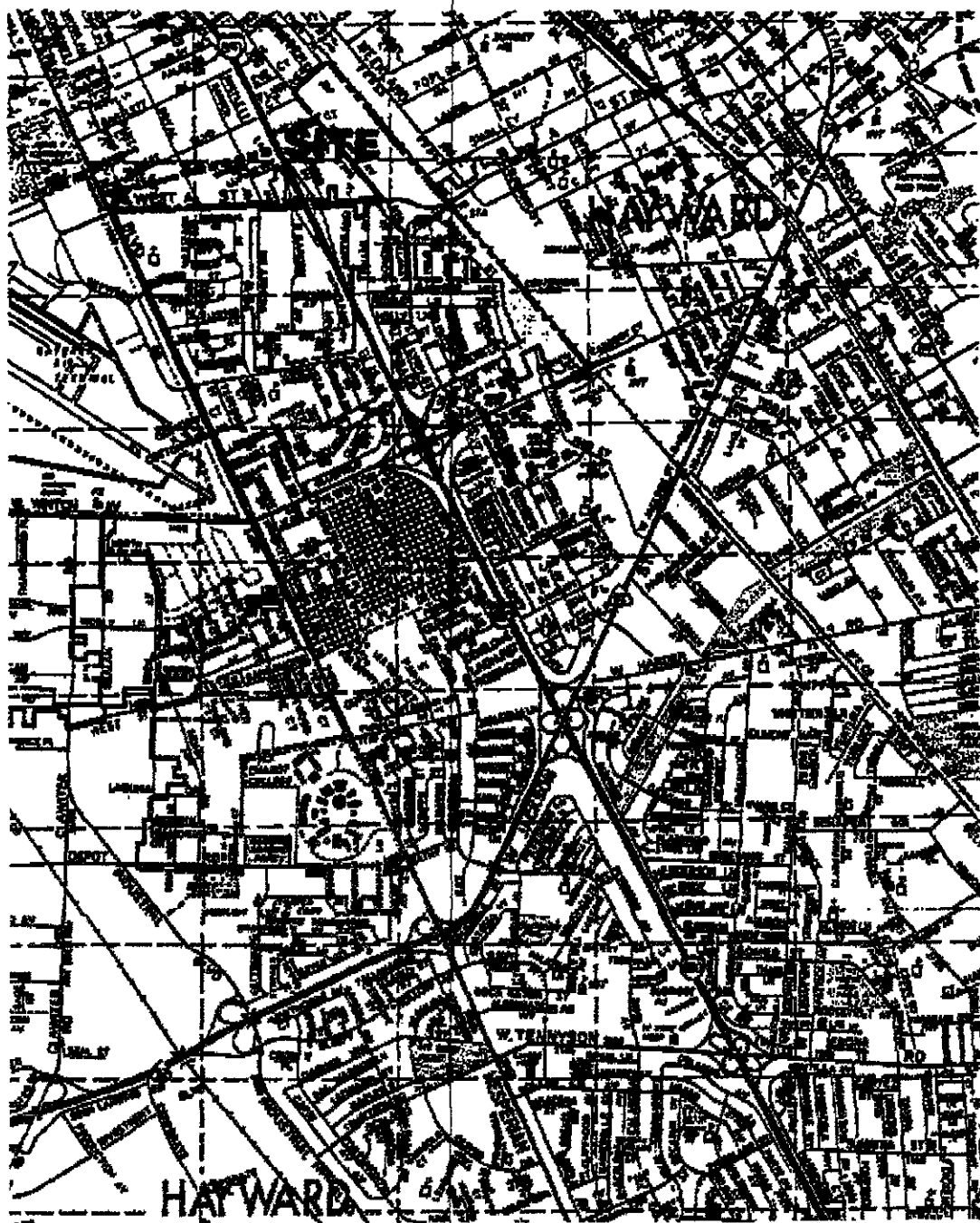
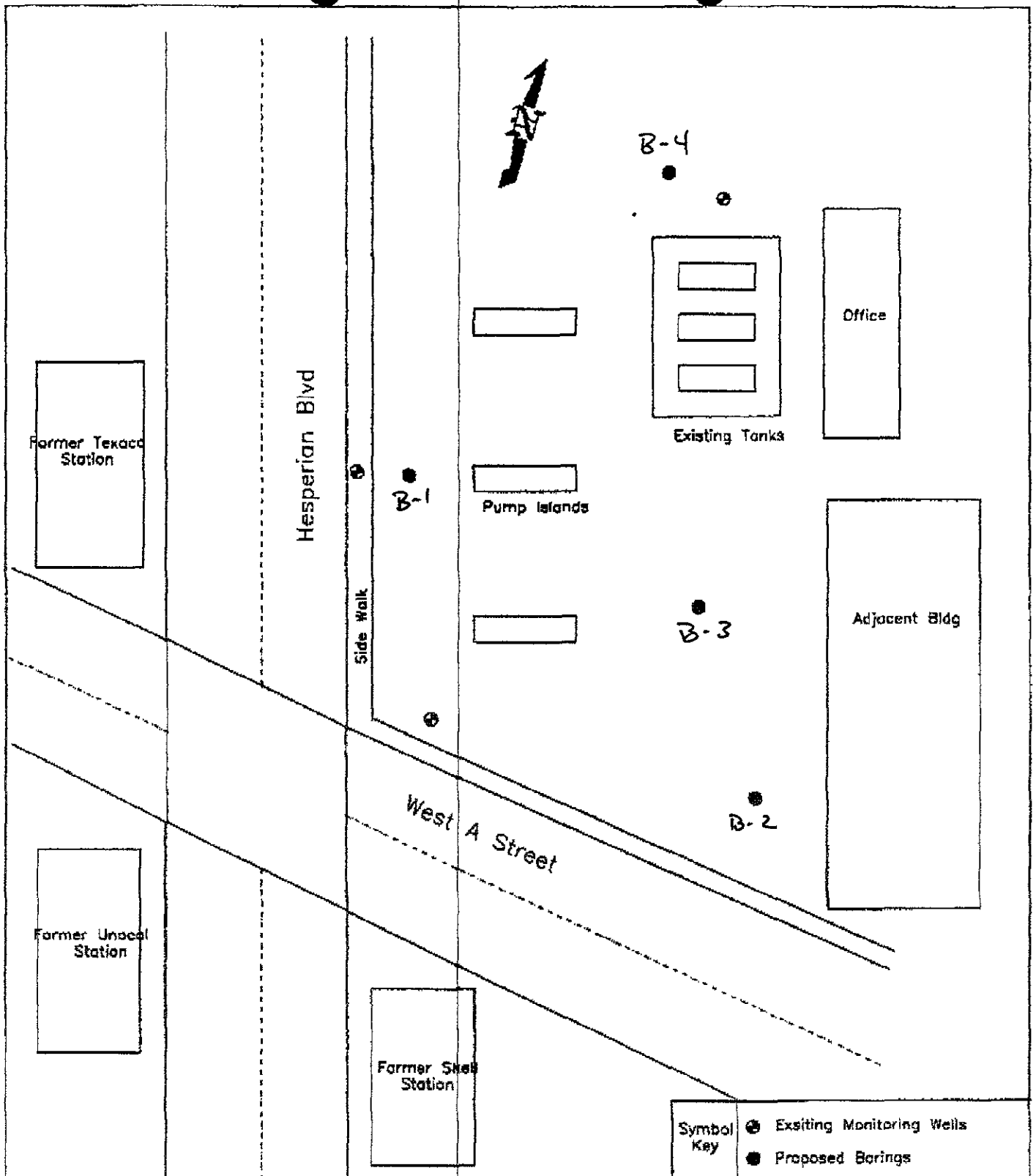


FIGURE I

SITE LOCATION MAP

**20450 HESPERIAN BLVD.
 HAYWARD CA. 94541
 PROJECT: 94-510-1440**



Symbol	● Existing Monitoring Wells
Key	● Proposed Borings

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Figure 2
 Site Map
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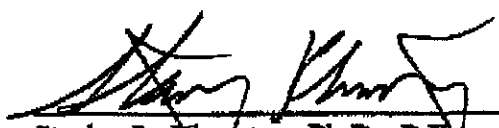
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All rinseate used in the decontamination process will be stored on site if necessary, in steel DOT approved drums. Drums will be labeled as to contents, suspected contaminants, date container filled, expected removal date, company name, contact and phone number, sealed and left on-site for subsequent disposal pending analytical results.

SOIL CUTTINGS

Soil cuttings generated during drilling will be placed in steel DOT approved drums, or placed on and covered with plastic sheets. Soils will remain on-site for subsequent disposal pending analytical results. Soil cuttings will be the responsibility of the owner/generator, although CEC may arrange for disposal.

WATER SAMPLE COLLECTION

Groundwater will be sampled using a Hydro Punch sample probe system. The Hydro Punch water sample system is advanced through the center of the hollow stem augers to allow for an in-situ water sample collection. Drilling continues to approximately 10 feet below the water table. Once the desired depth is reached the augers are retracted approximately 5 feet. This allows the Hydro Punch system to come in contact with the water bearing formation. Water flows freely into a disposable bailer contained within a stainless steel sample screen. The bailer is then removed and the captured water is placed in the appropriate sample media. The water samples are considered grab samples and are meant for investigatory purposes.

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 vials and bottles approved by the US EPA and the RWQCB, San Francisco Bay Region.

STORAGE AND TRANSPORTATION

Samples exposed to dust, direct sunlight, high temperature, and adverse weather conditions will be avoided whenever possible. Samples shall be transported to the laboratory as soon as possible and on no more than 48 hours from the time they were collected. All samples will be stored in and kept in plastic "ziplock" bags, and kept in a closed ice chest until delivery to the laboratory.

GENERAL PRACTICES

CEC's standard procedures for soil/water sampling meet or exceed guidelines set by California EPA, California State Regional Water Quality Control Board, San Francisco Bay Region, and the County of San Mateo Department of Health. Drilling, construction, and completion of all exploratory borings will be in conformance with procedures in this manual.

APPENDIX B
Health and Safety Plan

EMERGENCY PROCEDURES

The following emergency response plan will be implemented to handle unanticipated on-site emergencies prior to start up of hazardous waste operations. All emergency incidents will be dealt with in a manner that minimizes adverse health risks to workers.

A. Emergency first aid procedures:

Employee injury: When possible, remove the employee from the contaminated zone and conduct decontamination procedures, first aid, and preparation for transport at a safe distance from the work site.

Eye exposure: Wash eyes with large amounts of potable water for at least 15 minutes; lift the upper and lower lids occasionally. Obtain medical attention.

Skin Exposure: Flush the contaminated skin with water for at least 15 minutes. Remove contaminated clothing. Obtain medical attention immediately when exposed to concentrated solids or liquids.

If paramedic/rescue services are required, they will provide transportation to the hospital. For less serious circumstances, the CEC representative will provide transportation.

B. Emergency telephone numbers are given in the Site Specific Health and Safety Plan.

C. CEC will document the emergency situation. It will include:

- o A description of the incident (including the date and time) that necessitated emergency response procedures, and complete an accident/incident investigation or critique of the incident.
- o The date, time, and names of all persons/agencies that were notified and their responses.
- o The resolution of the incident (including its duration) and the method/corrective action involved.

ON-SITE FIRST AID

All **CERTIFIED** personnel engaged in field activities will have available at the job site the necessary health and safety items. Depending upon the job requirements, these may include the following:

- o First aid Kit
- o Half Mask respirator
- o Organic vapor or other appropriate cartridges
- o Hard Hat
- o Safety Glasses
- o Hearing protection devices
- o Protective gloves
- o Chemical resistant coveralls (coated Tyvek)

**SITE SPECIFIC
HEALTH AND SAFETY PLAN
FOR
20450 HESPERIAN BLVD.**

I. SITE: 20450 HESPERIAN BLVD., HAYWARD, CALIFORNIA.

II. KEY PERSONNEL AND PROJECT ASSIGNMENTS

PROJECT ASSIGNMENT	NAME/AGENCY	PHONE
Principal Investigator	Stanley L. Klemetson, P.E.	(707) 745-0171
Geologist and Assistant Site Safety Officer	Rafael Gallardo	(707) 745-0171
Project Manager	Rafael Gallardo	(707) 745-0171
Site Safety Officer	Michael T. Noble, C.I.H.	(510) 867-0322
Owner:	Airport Alliance Mr. Danny Chauhan	(510) 887-7715

III. SCOPE OF WORK

The project includes the drilling of 4 borings to a depth of approximately 25 feet below surface grade (BSG). One boring will be continuously cored and three will be sampled at 5 foot intervals, or contact change. Soil and water samples will be obtained and delivered to a certified laboratory for analysis. The samples will be analyzed for TPH-G, BTEX, and TPH-D. A final report will be submitted to the Alameda County Health Agency.

IV. LEVEL OF PROTECTION

Level D - Level D is the basic work uniform.

V. SITE SECURITY

Only authorized personnel will be permitted within 20 feet of equipment.

VI. EMERGENCY RESPONSE

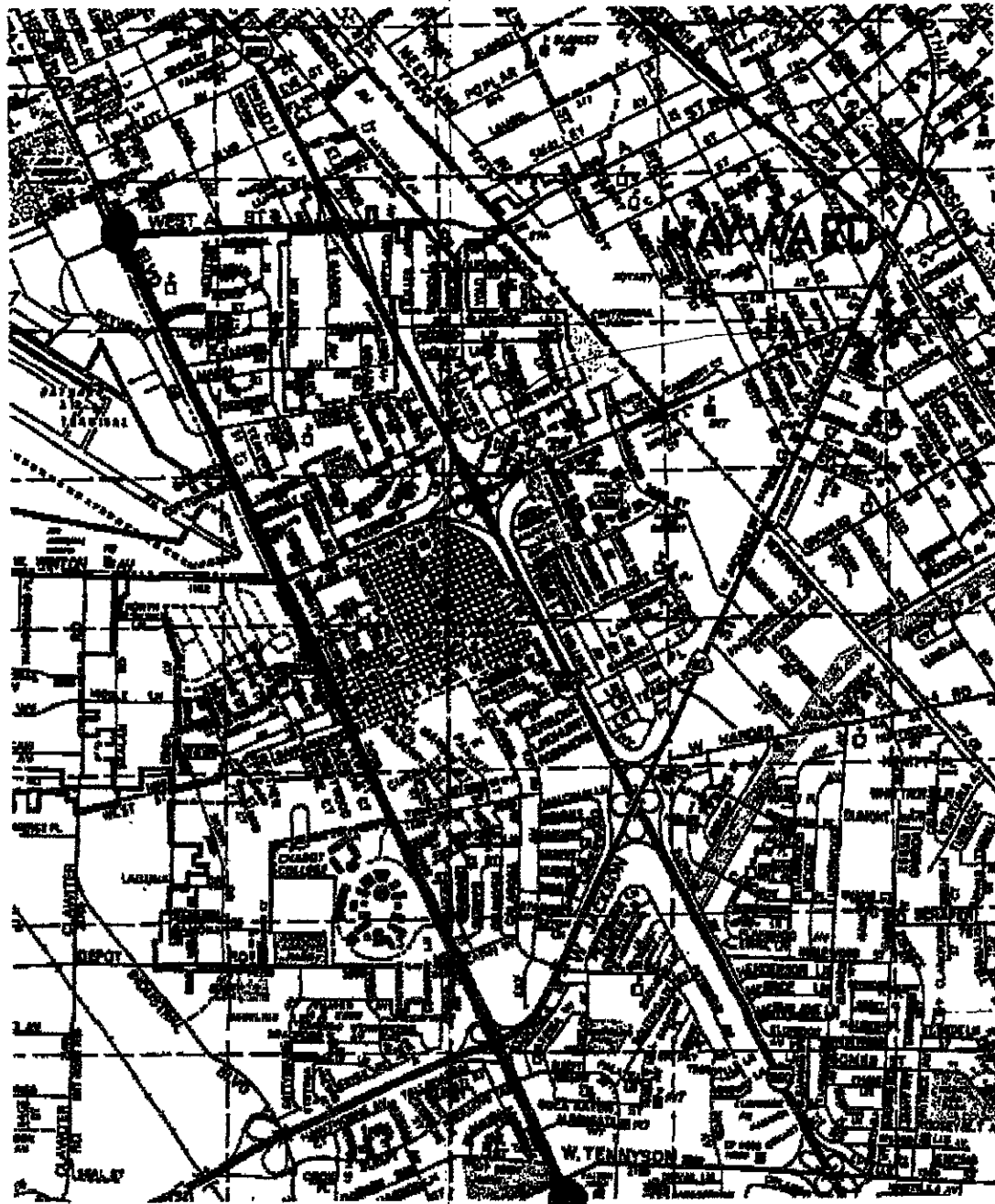
- A. Decontamination procedures for personnel injured or exposed in the work zone. Assist the injured or exposed worker out of the sampling area when possible. If possible, carefully remove his PPE, and remove your own, according to standard decontamination procedures administer CPR/first aid as needed. Call for medical help immediately.
- B. Emergency response plan

Personnel roles, lines of authority, communications. The on-site CEC representative will have final authority on site health and safety methods concerning sampling.

C. Telephone numbers of emergency agencies, key contractor and responsible party.

	<u>NAME/AGENCY</u>	<u>TELEPHONE</u>
Ambulance	Hayward	911
Hospital	<i>On transport responder in Hayward</i> → Kaiser Permanente Medical Center 1200 El Camino Real South San Francisco, CA	(415) 742-2000
Police Department	Hayward	911
Fire Department	Hayward	911
Project Manager	Rafael Gallardo	(707) 745-0171 Office
Health/Safety Coordinator	Michael T. Noble	(510) 867-0322
Alameda County Department of Environmental Health Division	Ms. Juliet Shin	(510) 271-4530
CA Dept. Health Services	DHS	(415) 540-2122
US EPA	Emergency Spills in California	(415) 974-8131
Federal OSHA	OSHA	(800) 648-1003
CHEMTREC	CHEMTREC	(800) 424-9300
Underground Service Alert	CBC	(800) 227-2600

Directions to hospital (See Figure 3) for route to Kaiser Permanente Medical Center).



CERTIFIED ENVIRONMENTAL CONSULTING, INC.

FIGURE 3

HOSPITAL ROUTE MAP

20450 HESPERIAN BLVD.
 HAYWARD, CA. 94541
 PROJECT NO. 94-510-1440