



**Health and Safety Plan for
Removal of Underground Fuel Storage Tanks
Former Bashland Construction Company
Emeryville, California**

**February 25, 1992
LF 1649.01**

**Prepared for:
Catellus Development Corporation
201 Mission Street
San Francisco, California 94105**



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February 25, 1992

LF 1649.01

**HEALTH AND SAFETY PLAN
REMOVAL OF UNDERGROUND STORAGE TANKS AND ASSOCIATED PIPING
FORMER BASHLAND CONSTRUCTION COMPANY PROPERTY
EMERYVILLE, CALIFORNIA**

1.0 INTRODUCTION

This Health and Safety Plan (HSP) addresses the potential hazards associated with the planned field activities at the former Bashland Construction Company property located in Emeryville, California ("the Site"). The Site location is shown on Figure 1. The HSP presents health and safety requirements for establishing and maintaining a safe working environment during the course of work. The planned field activities include removing three fuel storage tanks and associated piping from the former Bashland property. Based on a drawing of the Site prepared by the Atchison, Topeka and Santa Fe Railway Company, dated April 1957, and an inspection of the Site, it appears two 12,000-gallon-capacity underground storage tanks and one 1,200-gallon-capacity underground tank are currently located on site. The tanks appear to be situated next to each other in the northern portion of the Site, near the property boundary. Separate fuel dispenser islands are not currently present at the Site, nor are they visible on the April 1957 drawing of the Site. Therefore, the extent of underground piping associated with the underground tanks is currently not known, and it is assumed that the piping is does not extend beyond 15 feet from the tanks.

In addition to the procedures and safeguards outlined in this HSP, Levine·Fricke personnel and contractor/subcontractor employees shall follow applicable federal, State of California, and local regulations. In the event of conflicting requirements, the procedures/practices that provide the highest degree of personnel protection shall be implemented. Deviations from this HSP must be approved by the Levine·Fricke Health and Safety Director.

If the planned field activities change during or after the preparation of this HSP, or if site conditions differ as the result of more information, the Levine·Fricke Health Safety Director shall be informed immediately, and appropriate changes shall be made to this HSP.

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At a minimum, all of the contractor's and subcontractors' employees who will be working on site must:

1. Have read and understood this HSP.
2. Have completed all training requirements in 29 Code of Federal Regulations (CFR) 1910.120 and California Occupational Safety and Health (Cal/OSHA) 5192.
3. Provide their own health and safety equipment as indicated in this HSP and comply with the minimum requirements established by this HSP. If the subcontractor has prepared his/her own HSP, it must minimally meet requirements contained herein and all applicable federal, State of California, and local health and safety requirements.

This HSP shall be read and approved by the Levine·Fricke Health and Safety Director, the Levine·Fricke Project Manager, and a Levine·Fricke Quality Assurance Reviewer.

A copy of this HSP shall be kept on site, easily accessible to all employees and government inspectors, and in Levine·Fricke files.

This HSP was prepared using the following documents:

- 29 CFR 1910 -- Occupational Safety and Health Standards.
- 29 CFR 1926 -- Safety and Health Regulations for Construction.
- 29 CFR 1900.1000 -- Air Contaminants -- Permissible Exposure Limits, 1990.
- Title 8, California Code of Regulations, Occupational Health and Safety Standards.
- California Department of Health Services (DHS), Toxic Substances Control Division (TSCD), Technical and Support Unit, Region 3, Los Angeles, California, August 1988. Site Safety Plan Guidance Document.
- National Institute for Occupational Safety and Health (NIOSH); Occupational Safety and Health Administration (OSHA); U.S. Coast Guard (USCG); U.S. Environmental

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Protection Agency (EPA), October 1985. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, U.S. Government Printing Office, Washington, D.C.

- Regional Water Quality Control Board (RWQCB), San Francisco Bay Region, California, June 1986. Site Safety Plan Format.
- Sax, N. Irving, 1984, Dangerous Properties of Materials, 6th edition, Van Nostrand Reinhold Company, Inc., New York, New York.
- U.S. EPA, Office of Emergency and Remedial Response, Hazardous Response Support Division, November 1984. Standard Operating Safety Guides.

2.0 SITE CHARACTERISTICS

Site Location and Description

The Site is located at 4015 Hollis Street in Emeryville, California. The Site is currently fenced to restrict access. A 31,000-square-foot building currently exists in the eastern portion of the property. The building was formerly used as a warehouse by Bashland Construction Company. The Site is currently bordered by Hollis Street to the east, a paved road to the south, an vacant dirt lot to the west, and former Southern Pacific railroad tracks and easement to the north.

History of Site Investigations

Investigation of the Bashland property was conducted as part of the Yerba Buena Project Site investigation and included a site visit, review of background information concerning the Bashland property, collection of a grab ground-water sample from the property, and sampling of product from the underground tanks on the property. Sampling was not conducted inside the building located on the Bashland property. Results of the background information review and soil and ground-water sampling are presented and discussed in Levine·Fricke's "Phase I and II Environmental Investigation, Yerba Buena Project Site" dated October 26, 1990, and Levine·Fricke's "Phase III Investigation, Yerba Buena Project Site" dated February 6, 1991. A brief summary of the results of these investigations is presented below.

Product samples were collected by Levine·Fricke from each of the Bashland tanks in November 1990 and June 1991; these samples subsequently were characterized as diesel fuel. A shallow ground-water monitoring well was installed just north of the Site in the Southern Pacific Railroad easement during the Phase I Investigation of the Yerba Buena Project Site. Perched ground-water with an oily sheen was detected in shallow sediments during drilling. Analytical results for ground water collected from well LF-9, which was screened below the perched zone, indicated relatively low concentrations of petroleum hydrocarbons in ground water underlying the perched zone. Well LF-9 was abandoned in accordance with regulatory guidelines in June 1991; petroleum hydrocarbon-affected soil and perched ground water were excavated from vicinity of well LF-9 during June and July 1991. Analytical results for soil samples collected from the vicinity of well LF-9 indicated that petroleum hydrocarbons detected in the soil had similar characteristics to product samples collected from the underground storage tanks located on the Site. These results indicated that one or more of the underground storage tanks at the Bashland property may be a source for petroleum hydrocarbons.

3.0 WORK DESCRIPTION

The planned activities at the Site include:

- removing the concrete and/or asphalt paving overlying the underground tanks
- removing liquid from tanks if present
- removing the soil overlying and surrounding the underground tanks
- inerting tank with dry ice (CO₂) prior to removal by placing approximately 150 pounds of dry ice in each of the tanks to purge volatile hydrocarbons.
- removing tanks and associated piping with a backhoe and/or crane
- collecting native soil samples from the bottom and sidewalls of the tank excavation pit by removing samples from the backhoe bucket

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- collecting water samples from the tank excavation, if encountered, using a teflon bailer lowered by nylon rope into the excavation
- excavating fuel-affected soils around tank, if encountered, with the backhoe
- temporary stockpiling of any fuel-affected soils encountered on 6 mil plastic sheeting and covering the stockpiled soils with the 6 mil plastic sheets
- hauling excavated fuel-affected soils and subsequent disposal at an appropriate disposal facility
- barricading the excavation and, if possible, limiting access to the Site by an existing fence and a locked gate to prevent access to the excavation while verification samples are being analyzed. Samples will be analyzed on a 24-hour rush turnaround to limit the time the excavation will remain open
- backfilling the excavation with clean imported backfill and compacting once chemical analysis results of verification samples indicate that soil in the excavation sidewalls and bottom contain concentrations of petroleum compounds equal to or less than cleanup criteria established by Alameda County Health Agency (typically 500 to 1,000 parts per million [ppm] for diesel and oil; 100 to 1,000 ppm for gasoline). Levine·Fricke will perform field density tests during compaction.

4.0 KEY PERSONNEL AND RESPONSIBILITIES

4.1 Site Safety Personnel

<u>Name</u>	<u>Responsibilities</u>
Michael J. Stoll	Site Safety Officer
Amanda Spencer	Project Manager
Shari A. Samuels	Health and Safety Director

4.2 Levine·Fricke Personnel and Responsibilities

The responsibilities of the Levine·Fricke personnel listed in Section 4.1 are outlined below.

4.2.1 Levine·Fricke Project Manager

The Levine·Fricke Project Manager, Ms. Amanda Spencer, has the ultimate responsibility for the health and safety of Levine·Fricke personnel on site. As part of her duties, Ms. Spencer shall be responsible for:

1. The Levine·Fricke Health and Safety Director being informed of project developments.
2. On-site Levine·Fricke personnel receiving the proper training, and being informed of potential hazards anticipated at the Site and procedures and precautions to be implemented on the job.
3. Contractors and subcontractors being informed of the expected hazards and appropriate protective measures at the Site. (Subcontractors should also be given a copy of Levine·Fricke's HSP for review.)
4. Resources being available to provide a safe and healthy work environment for Levine·Fricke personnel.

4.2.2 Levine·Fricke Health and Safety Director

The Levine·Fricke Health and Safety Director is designated as Ms. Shari A. Samuels. Ms. Samuels is responsible for:

1. Monitoring the health and safety impacts of this project for on-site Levine·Fricke personnel.
2. Assessing the potential health and safety hazards at the Site.
3. Recommending appropriate safeguards and procedures.
4. Modifying the HSP, when necessary.
5. Approving changes in safeguards used or operating procedures employed at the Site.

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The Levine·Fricke Health and Safety Director has the authority to:

1. Require that additional safety precautions or procedures be implemented.
2. Order an evacuation of the Site, or portion of the Site, or shut down any operation, if she believes a health or safety hazard exists.
3. Deny unauthorized personnel access to the Site.
4. Require that any worker obtain immediate medical attention.
5. Approve or disallow any proposed modifications to safety precautions or working procedures.

4.2.3 Site Safety Officer

The Site Safety Officer (SSO) has been designated by Levine·Fricke as Mr. Michael J. Stoll. Mr. Stoll is a Senior Staff Engineer with Levine·Fricke. He has fulfilled the 40-hour health and safety training requirements pursuant to 29 CFR 1910.120 and Cal/OSHA 5192.

The SSO, or a trained designated alternate, will be present at the Site during work activities. The SSO shall be notified of and approve activities in which persons may be reasonably expected to be exposed to contaminated soils and/or ground water.

The SSO shall be responsible for:

1. On-site Levine·Fricke personnel complying with the requirements of the HSP.
2. Limiting access to the Site.
3. Reporting unusual or potentially hazardous conditions to the Levine·Fricke Health and Safety Director and the Levine·Fricke Project Manager.
4. Reporting injuries, exposures, or illnesses to the Levine·Fricke Health and Safety Director and the Levine·Fricke Project Manager.

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5. Communicating proposed changes in work scope or procedures to the Levine·Fricke Health and Safety Director for approval.
6. Recommending to the Levine·Fricke Health and Safety Director and the Levine·Fricke Project Manager additional safety procedures or precautions that might be implemented.

The SSO shall have the authority to:

1. Order an evacuation of the Site, or portion(s) of the Site, or shut down any operation if he/she believes a health or safety hazard exists.
2. Deny site access to unauthorized personnel.
3. Require that any worker, including the contractors' or subcontractors' personnel, obtain immediate medical attention.

5.0 HAZARD ANALYSIS

5.1 Hazardous Materials Known or Suspected on Site

The chemicals of concern in the proposed earthwork activities are total petroleum hydrocarbons as diesel (TPH[d]) and benzene, toluene, ethylbenzene and total xylenes (BTEX).

5.2 Chemical Hazards

The primary chemical hazard for the proposed work is exposure to TPH(d) and BTEX compounds. Chemical descriptions are presented in Appendix A.

5.3 Physical Hazards

The use of heavy equipment at the Site poses potential physical hazards. Excavations pose a hazard for personnel around and entering excavated trenches. Work procedures to protect workers from chemical and physical hazards are discussed in Section 6.0.

6.0 WORK REQUIREMENTS

6.1 Respiratory Protection

All field personnel will observe Level D Personal Protective Equipment (PPE) requirements in all work areas. The primary route of potential exposure for chemicals is inhalation. Inhalation hazards due to volatilization will be monitored using a photoionization detector (PID) to measure concentrations of volatile organic chemicals (VOCs) in the breathing zone. If ambient air concentrations of VOCs in the breathing zone reach 25 parts per million (ppm) or greater, personnel shall upgrade to Level C using half-face air-purifying respirators equipped with NIOSH-approved high efficiency particulate/organic vapor combination cartridges, and Sensidyne brand low-range benzene detector tubes will be used to detect the presence of benzene. If benzene is detected, a temporary stop work will take place, and the area will be (1) cleared of construction personnel and (2) ventilated and monitored until no benzene is detected in the breathing zone. PPE specified in Section 6.2 will be worn by all on-site field personnel, including the subcontractor's personnel.

6.2 Dermal Protection

Unless adequate precautions are taken, chemicals may contact the skin or clothing. Potential physical contact with chemicals of concern are possible under the following circumstances:

- soil sampling during excavation
- excavating affected soil

Personal Protective Equipment

Levine·Fricke and contractor/subcontractor personnel will wear the following protective clothing on site:

- hard hats
- steel-toed/steel-shanked boots
- inner and outer disposable PVC gloves
- safety glasses
- Tyvek coveralls

6.3 Action Levels

Action Levels for a Temporary Stop Work

The SSO shall impose a temporary stop work and contact the Levine·Fricke Health and Safety Director immediately if the following conditions are observed, or if there is a question about site conditions:

1. indications of heat stress
2. changes in the general health profile of on-site personnel, including symptoms discussed in Appendix A and headaches, dizziness, breathing difficulties, irritation to the eyes, nose, throat, and hands
3. detection of benzene in the breathing zone
4. a reading of 10% on the lower explosive limit/oxygen (LEL/O₂) combustible gas meter.

Action Level for Upgrade to Level C Protection

The action level to upgrade to Level C protection is the detection of ambient air concentrations of VOCs within the breathing zone at concentrations of 25 ppm or greater, without the presence of benzene.

6.4 Protection Against Physical Hazards

Explosion and Fire Prevention

To reduce the possibility of an explosion, residual product will be removed from the tank prior to actual excavation. No more than 1 inch of free product will be allowed to remain in the tank during removal. To minimize the potential for fire, only spark-proof tools will be used around the tank. A combustible gas indicator will be used on site during the tank removal to measure explosive vapors. To purge volatile hydrocarbons from the tank prior to removal, at least 150 pounds of dry ice will be added to the 5,000-gallon tank. If residual vapors detected exceed 10 percent of the lower explosion limit (LEL), the work activities will be temporarily stopped until the combustible liquid and vapors are removed by using nitrogen (N₂) gas or more dry ice to flush the air in the tank until the concentrations of combustible vapor in the tank is less than 10 percent of the LEL.

Excavation Instability

Workers will not enter excavations deeper than 4 feet. All requirements pursuant to 29 CFR 1926.651 and 652, Excavations, Trenching and Shoring, shall be observed.

6.5 Decontamination Procedures

Disposable gloves, coveralls and other disposable clothing or equipment worn by Levine·Fricke personnel will be placed in a suitable disposal container on site at the end of each work day. Protective clothing and equipment will be replaced if their protective function is compromised through holes or tears.

Equipment that comes in contact with on-site soils or ground water that apparently contain petroleum hydrocarbons will be cleaned with high-pressure water before removal from the site area. Wash water that contains petroleum hydrocarbons from cleaning activities will be collected, placed in drums, and appropriately transported and disposed.

7.0 RECORDING OF HEALTH AND SAFETY PROCEDURES

The SSO will record field observations of health and safety procedures followed by workers during soil and sediment sampling activities, including deviations from the recommended health and safety procedures.

8.0 MEDICAL MONITORING

All Levine·Fricke personnel that use or may come in contact with hazardous materials will undergo compulsory routine medical surveillance. The surveillance includes the following:

- a one-time baseline medical history and physical exam, chest X-ray, pulmonary function test, audiogram, EKG, CBC, chemistry panel and urinalysis
- annual medical examination
- exit physical examination upon termination of employment.

The comprehensive medical examination for Levine·Fricke personnel is conducted through a special arrangement with M. Joseph Fedoruk, M.D., Inc., Santa Ana, California.

9.0 EMERGENCY PROCEDURES

9.1 General Injury

- Step 1: Use first-aid kit on site, if appropriate.
- Step 2: Use off-site medical help and/or assistance if appropriate.
- Step 3: Notify SSO, On-Site Project Manager and Health and Safety Director.

9.2 Specific Treatments

- Eye Exposure: Flush eye with eye wash, contact ambulance.
- Skin Exposure: Wash immediately with soap and water; contact ambulance, if appropriate.
- Fire (localized): Use fire extinguisher and activate alarm system, if appropriate.
- Fire (uncontrolled): Call Fire Department.
- Chemical Spill: Contact Fire Department and National Response Center for Toxic Chemical and Oil Spills.
- Explosion: Contact Fire Department if potential for additional explosions or fire danger exists.
- Inhalation: Move person to clean air and cover source of chemicals, if possible.
- Swallowing: Contact ambulance service.

9.3 Emergency Phone Numbers

Medical/General Emergency Services

Fire Department	911
Ambulance	911
Police Department	911
Alta Bates Hospital	1-510-540-1303

Alta Bates Hospital is located at 3001 Colby Avenue in Berkeley, California. Figure 2 shows the route from the Site to the hospital, and presents written directions to the hospital.

Hazardous Materials Release Response/Reporting

National Response Center 1-800-424-8802

California Office of Emergency Services 1-800-852-7550

Toxics Information

CHEMTREK 1-800-424-6699

Poison Control Center 1-415-476-6600

9.4 Accident Reporting Procedures

Immediately contact the following:

Ms. Shari Samuels (Levine·Fricke) 1-510-652-4500
1-510-596-9571
(pager) 1-510-633-8653

10.0 TRAINING PROGRAM

1. The Levine·Fricke SSO shall have fulfilled all appropriate training requirements indicated by 29 CFR 1910.120 (e) and Cal/OSHA 5192, including the 40-hour training requirement and required refresher courses.
2. A tailgate session will be held prior to commencing field activities to discuss this HSP. All Levine·Fricke personnel and contractor/subcontractor employees shall receive, at a minimum, the following information:
 - The names of personnel and alternates responsible for site safety and health
 - Safety, health, and other hazards at the Site
 - Instruction for use of personal protective equipment
 - Employee work practices to minimize risks from on-site hazards
 - Action levels

- Instruction for safe use of engineering controls and equipment on the Site
- Site control measures
- Emergency plans
- Proposition 65 warnings.

11.0 PROPOSITION 65 WARNINGS

11.1 Chemical Classifications

Benzene is classified as Group B-2, which are probable human carcinogens. The B-2 classification is based on sufficient evidence from animal studies but lacks adequate evidence from human epidemiological studies. The State of California has listed benzene as a chemical known to cause cancer under the Safe Drinking Water and Toxic Enforcement Act of 1986.

11.2 Warning Requirements

In compliance with the Proposition 65 Warning Requirements in CCR Title 22, Sections 12000 and 12601, benzene is listed as a chemical classified as 'known to cause cancer' and the following warning must be made:


"This area contains chemicals known to the State of California to cause cancer."

This warning will be disclosed to workers during a tailgate meeting before initiation of work.

12.0 SIGNATURES


12.1 Levine·Fricke Personnel

This HSP for the former Bashland property in Emeryville, California is approved by the following Levine·Fricke personnel:



Shari A. Samuels
Health and Safety Director

2-25-92
Date



Jeff Hennier
Quality Assurance Reviewer

2/25/92
Date



Amanda L. Spencer
Project Manager

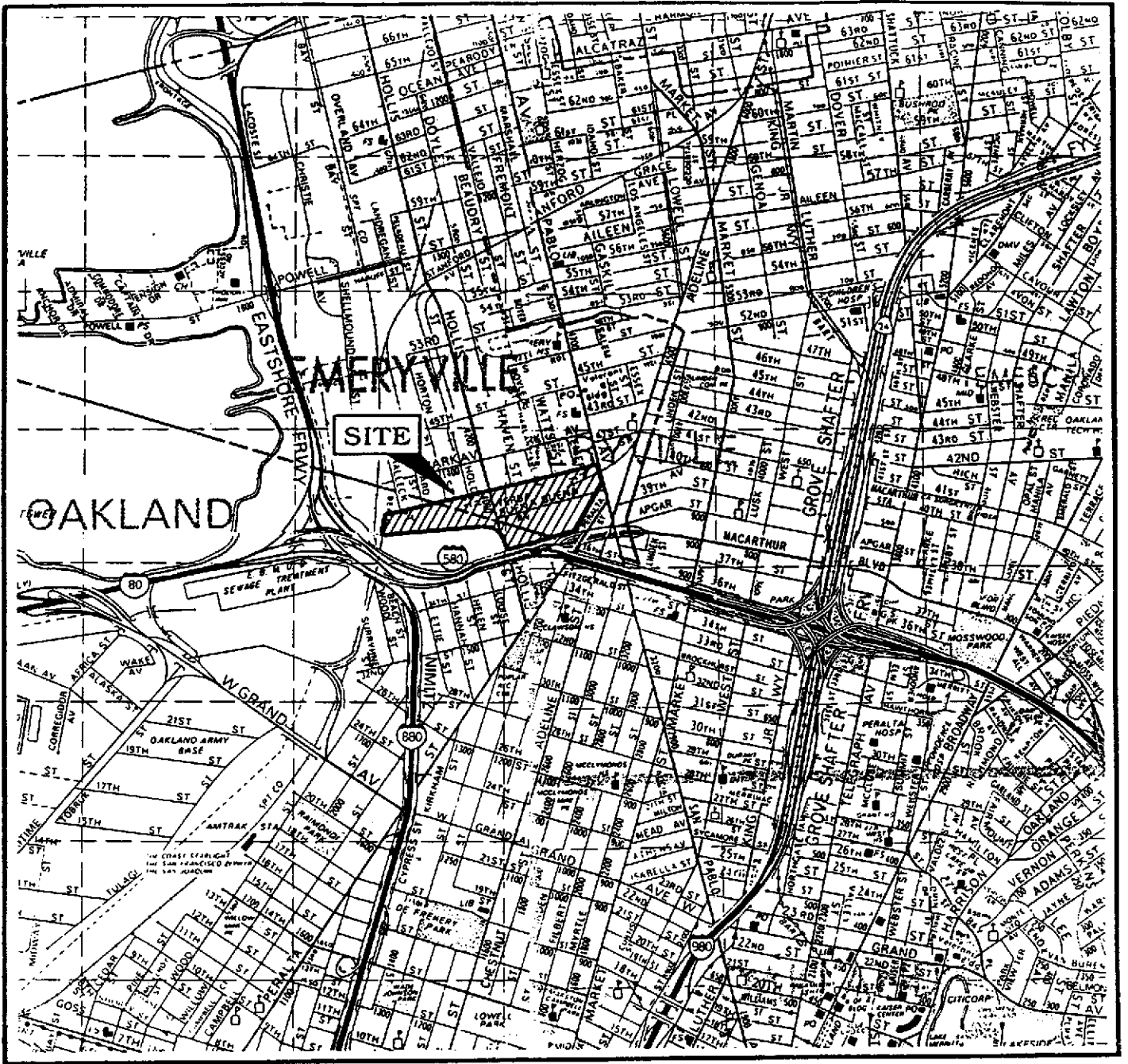
2/25/92
Date

12.2 Contractor and Subcontractor Personnel

Contractor and Subcontractor Agreements:

- 1. Contractor certifies that the following personnel to be employed on the Site have met the Hazards and Protection requirements of the OSHA Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120) and other applicable standards.
- 2. Contractor certifies that, in addition to meeting the OSHA requirements, she/he has received a copy of this HSP and will insure that the employees and subcontractors of the Contractor are informed, and will comply with both OSHA requirements and the guidelines in this HSP.
- 3. Contractor further certifies that she/he has read, understands, and will comply with all provisions of this HSP and will not hold Levine·Fricke responsible or liable for any injury or health problems that may occur.

Contractor Personnel	Training/ Certification/ Medical Examination	Signature	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____



MAP SOURCE:
Alameda & Contra Costa Counties,
Thomas Bros. map, 1990 Edition

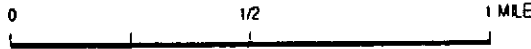


Figure 1: SITE LOCATION MAP
VERBA BUENA PROJECT SITE

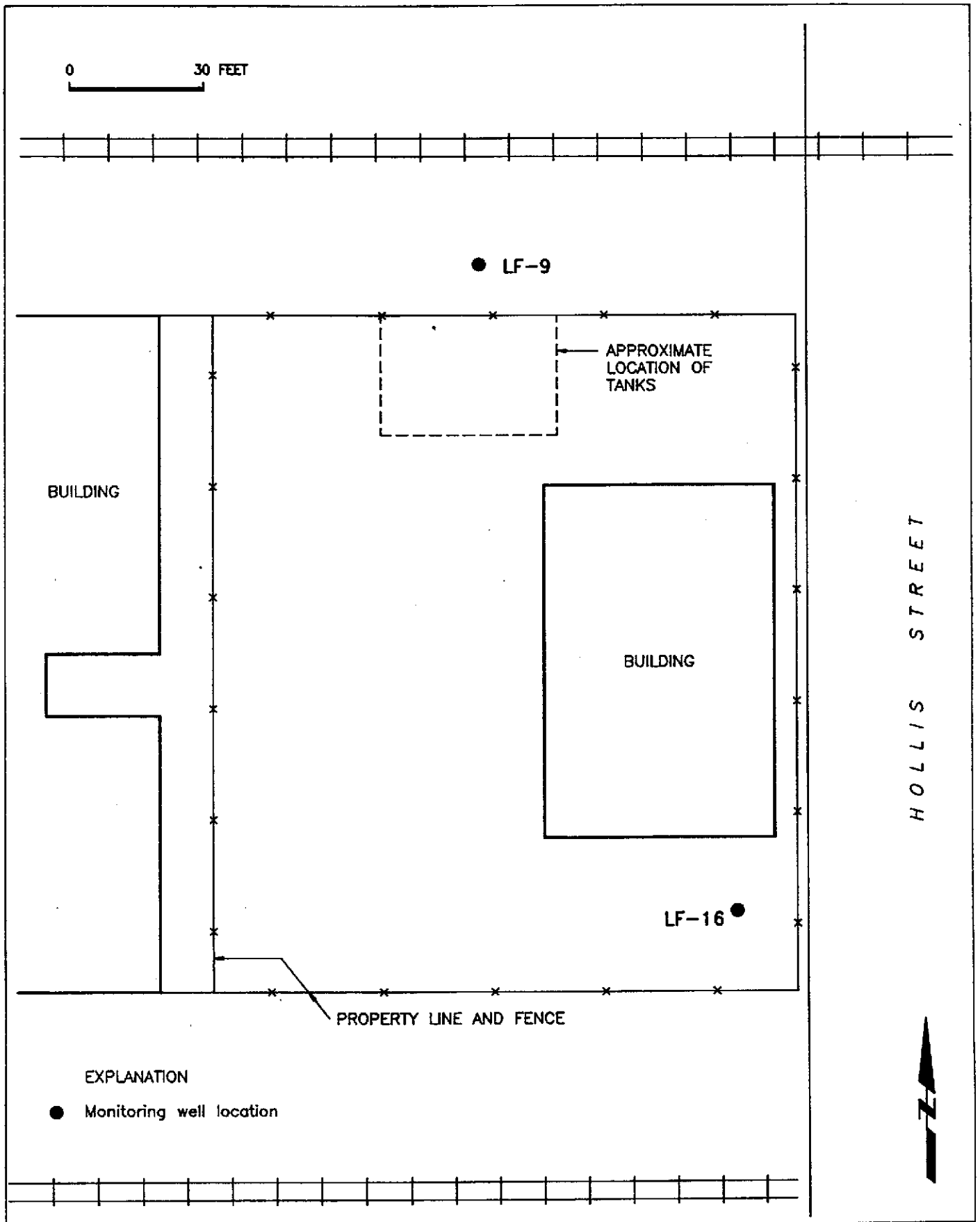


Figure 2 : SITE PLAN

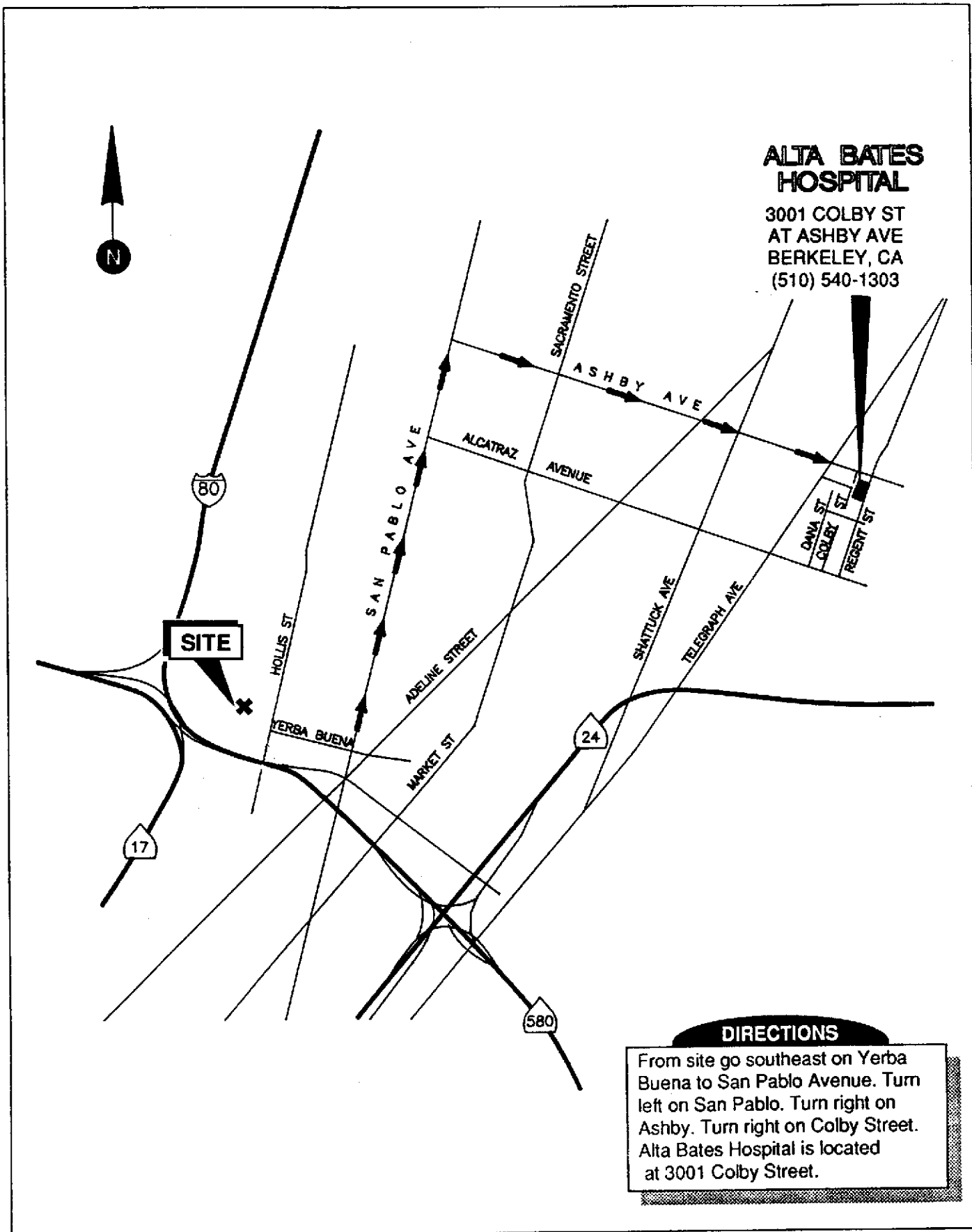


Figure 3 : HOSPITAL ROUTE MAP

APPENDIX A**CHEMICAL DESCRIPTIONS**

The following chemical descriptions include physical odor recognition characteristics, effects of short-term exposure, and the Time-Weighted Average (TWA) over an eight-hour period for the Permissible Exposure Limit (PEL).

Diesel Fuel

Diesel fuel is a gas oil fraction available in various grades as required by different engines. Composition of diesel varies in ratios of predominantly aliphatic, olefinic, cycloparaffinic, and aromatic hydrocarbons, and additives.

Ingestion of diesel can lead to systemic effects such as gastrointestinal irritation, vomiting, diarrhea, and in severe cases drowsiness and central nervous system depression, progressing to coma and death. Aspiration of diesel fuel can cause hemorrhaging and pulmonary edema, progressing to pneumonitis and renal involvement.

Gasoline

Gasoline is produced from the light distillates during petroleum fractionation, with its major components including paraffins, olefins, naphthenes, aromatics, and recently ethanol. Gasoline also contains various functional additives as required for different uses, such as antiknock fluids, antioxidants, metal deactivators, corrosion inhibitors, anti-icing agents, preignition preventors, upper-cylinder lubricants, dyes, and decolorizers. Lead additives in particular were widely used in gasoline until the introduction of vehicle catalytic converters.

Mild cases of gasoline ingestion can cause inebriation, vomiting, vertigo, drowsiness, confusion, and fever. Aspiration into the lungs and secondary pneumonia may occur unless prevented. Gasoline can cause hyperemia of the conjunctiva and other eye disturbances. Inhalation of gasoline during bulk handling operations produced no physiological effects. Gasoline is a skin irritant and a possible allergen. Repeated or chronic dermal contact can result in drying of the skin, lesions, and other dermatologic conditions.

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The TWA of the PEL for gasoline is 300 ppm and the STEL is 500 ppm.

The toxicology of some of the components of gasoline are discussed below.

Benzene

Benzene is a clear colorless liquid.

Exposure to high concentrations (3,000 ppm) may result in acute poisoning, characterized by the narcotic action of benzene on the central nervous system. Chronic poisoning occurs most commonly through inhalation and dermal absorption. Benzene is also a recognized carcinogen.

The PEL for benzene is 1 ppm in air.

Ethylbenzene

Ethylbenzene is a clear, colorless liquid.

Exposure to high concentrations of ethylbenzene vapor may result in irritation of the skin and mucous membranes, dizziness, irritation of the nose and throat and a sense of constriction of the chest.

The PEL for ethylbenzene is 100 ppm in air.

Toluene

Toluene is a colorless liquid with a benzol-like odor.

Inhalation of high vapor concentrations may cause impairment of coordination and reaction time, headaches, nausea, eye irritation, loss of appetite, a bad taste, and lassitude.

The PEL for toluene is 100 ppm in air.

Xylenes

Xylenes are clear, colorless liquids.

Exposure to high concentrations of xylenes vapor may result in eye and skin irritation. Eye irritation may occur at concentrations of about 200 ppm.

The PEL for total xylenes is 100 ppm in air.



CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY)
07/30/91

PRODUCER



DSI INSURANCE SERVICES
1737 NORTH FIRST STREET, #400
SAN JOSE, CA 95112
CARLYN A. EATON
(408) 436-7180
(408) 436-7187 (FAX)

INSURED

TRUMPP BROS., INC. DBA:
GENERAL ENGINEERING AND CONSTRUCTION
1540 INDUSTRIAL AVENUE
SAN JOSE, CA 95112

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	LLLOYDS AND LONDON COMPANIES
COMPANY LETTER B	NORTHBROOK PROPERTY & CASUALTY
COMPANY LETTER C	INSURANCE COMPANY OF THE WEST
COMPANY LETTER D	
COMPANY LETTER E	

COVERAGES

THIS IS TO CERTIFY THAT 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.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIABILITY LIMITS IN THOUSANDS		
						EACH OCCURRENCE	AGGREGATE
A	GENERAL LIABILITY	IWOM2409	7/1/91	7/1/92	BODY INJURY	\$	\$
	<input checked="" type="checkbox"/> COMPREHENSIVE FORM				PROPERTY DAMAGE	\$	\$
	<input checked="" type="checkbox"/> PREMISES/OPERATIONS UNDERGROUND EXPLOSION & COLLAPSE HAZARD				BI & PD COMBINED	\$1,000,	\$ 1,000,
	<input checked="" type="checkbox"/> PRODUCTS/COMPLETED OPERATIONS				PERSONAL INJURY		\$ 1,000,
	<input checked="" type="checkbox"/> CONTRACTUAL						
	<input checked="" type="checkbox"/> INDEPENDENT CONTRACTORS						
	<input checked="" type="checkbox"/> BROAD FORM PROPERTY DAMAGE						
B	AUTOMOBILE LIABILITY	CA0193528	7/1/91	7/1/92	BODY INJURY (PER PERSON)	\$	
	<input checked="" type="checkbox"/> ANY AUTO				BODY INJURY (PER ACCIDENT)	\$	
	<input checked="" type="checkbox"/> ALL OWNED AUTOS (PRIV. PASS)				PROPERTY DAMAGE	\$	
	<input checked="" type="checkbox"/> ALL OWNED AUTOS (OTHER THAN PRIV. PASS.)				BI & PD COMBINED	\$1,000,	
	<input checked="" type="checkbox"/> HIRED AUTOS				BI & PD COMBINED	\$	\$
	EXCESS LIABILITY				BI & PD COMBINED	\$	\$
	<input type="checkbox"/> UMBRELLA FORM						
C	WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY	793616	7/1/91	7/1/92	STATUTORY		
	<input type="checkbox"/> OTHER THAN UMBRELLA FORM				\$ 000, (EACH ACCIDENT)		
					\$ 000, (DISEASE-POLICY LIMIT)		
	OTHER				\$ 000, (DISEASE-EACH EMPLOYEE)		

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

CERTIFICATE HOLDER

ALAMEDA COUNTY HEALTH CARE
DEPT. ENVIRONMENTAL HEALTH
80 SWAN WAY, RM 200
OAKLAND, CA 94621

CANCELLATION

10 DAYS FOR NON-PAYMENT OF PREMIUM
SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 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

JEFFREY N. ABER, VICE PRESIDENT

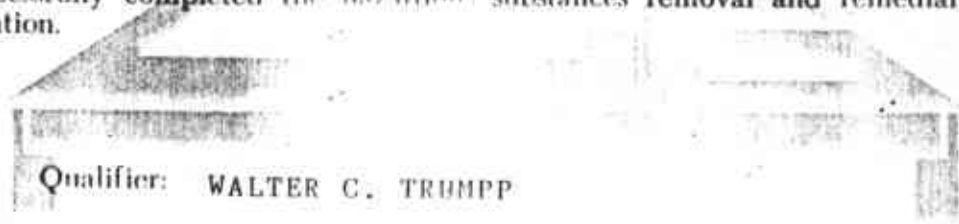


Building Quality



HAZARDOUS SUBSTANCES REMOVAL AND REMEDIAL ACTIONS CERTIFICATION

Pursuant to the provisions of Section 70317 of the Business and Professions Code, the Registrar of Contractors does hereby certify that the following qualifying person has successfully completed the hazardous substances removal and remedial actions examination.



Qualifier: WALTER C. TRUMPP

License No.: 504951

Business Name: WALTER C. TRUMPP

WITNESS my hand and official seal this

25th day of March, 1992

Doris R. Peltier
Registrar of Contractors

This certification is the property of the Registrar of Contractors, is not transferable, and shall be returned to the Registrar upon demand when suspended, revoked, or invalidated for any reason.

A 4791



This is to certify that on

Date **FEB. 28, 1992**



NAME **WALLY TRUMPP**

SSN **54 38 9579**

Successfully completed 40 hours of
Hazardous Waste training in
accordance with 29 CFR 1910.120

Instructor

Ken O'neal

OSHA 29 CFR 1910.120 P00259

Certificate of Training

Gary Trumpp

549-86-3491

has met the 8 hour Refresher Training requirement
for the Hazardous waste Operators &

Emergency Response

[Signature]
Acknowledgement

Expiration: 3/92

Occupational Health & Safety Group, Inc.

CERTIFICATE OF TRAINING OSHA - SARA

GARY TRUMPP

Has Met The 8 Hour Supervisor Training Requirement Under OSHA
Standard, 29CFR1910.120 Hazardous Waste Operations And
Emergency Response



ACKNOWLEDGEMENT

Occupational Health & Safety Group, Inc.

APRIL 9, 1991

DATE

CERTIFICATE OF TRAINING OSHA - SARA

TOM THARP

Has Met The 8 Hour Refresher Training Requirement Under OSHA
Standard, 29CFR1910.120 Hazardous Waste Operations And
Emergency Response


ACKNOWLEDGEMENT

Occupational Health & Safety Group, Inc.

MARCH 5, 1991

DATE

CERTIFICATE OF TRAINING

OSHA - SARA

RAY ROBESON

Has Met The 8 Hour Refresher Training Requirement Under OSHA
Standard, 29CFR1910.120 Hazardous Waste Operations And
Emergency Response



ACKNOWLEDGEMENT

Occupational Health & Safety Group, Inc.

JUNE 20, 1991

DATE

CERTIFICATE OF TRAINING

OSHA - SARA

CARL GOMES

Has Met The 8 Hour Refresher Training Requirement Under OSHA
Standard, 29CFR1910.120 Hazardous Waste Operations And
Emergency Response


ACKNOWLEDGEMENT

Occupational Health & Safety Group, Inc.

MARCH 5, 1991

DATE