

SITE HEALTH AND SAFETY PLAN

Introduction

This health and safety plan prescribes the work-place procedures which will be followed during the soil, groundwater assessment and removal of an underground fuel storage tank of the site located at 5944 San Pablo Avenue, Oakland, California. The provisions of this plan are mandatory for all V.C.I. personnel and subcontractors assigned to this project. All authorized visitors to the site will be required to abide by the procedures. The requirements in this plan may change due to changes in the work conditions, however, no changes will be made without prior written approval of the Health and Safety Consultant and the Project Manager.

VERL' CONSTRUCTION, INC. is committed to providing a safe and healthful working environmental for all its employees and subcontractors.

ASSIGNMENT OF RESPONSIBILITY

Project manager

VCI's Project Manager will be Verl K. Rothlisberger, who will be responsible for oversight and management of the project. Mr. Merlin Bowen will be responsible for the implementation and management of the Health and Safety plan.

Health and Safety Consultant

Mr. Merlin Bowen or his designee will visit the site periodically and during critical phases of the project. The Health and Safety Consultant is responsible for preparation of this plan.

VCI Site Representative/Safety and Health officer

During most of this project there will be an VCI representative on site. That representative will be responsible for day to day implementation of the health and safety plan and overall direction of subcontractor personnel. The VCI representative is empowered to stop all site work in the case of violation of the requirements of the health and safety plan.

Other Project Personnel/Subcontractor

All project and subcontractor personnel will be responsible for understanding and complying with the project health and safety requirements.

HAZARD CHARACTERIZATION AND RISK ANALYSIS**Petroleum Contaminated Water and Soils**

Petroleum contaminated soils and its constituents pose health hazards in two major classifications: explosivity and toxicity. The extreme flammability of gasoline is commonly known. The lower explosion limit (LEL) of gasoline vapor is 1.3 percent in air. If the Concentration of gasoline vapor in air exceeds 1.3. percent (13,000 parts per million) and sufficient quantities of oxygen are present, then the introduction of sufficient heat, spark, or flame will result in an explosion. Because of the low possibility of vapors being present, explosivity is not considered to pose a health hazard.

A lesser known health hazard resulting from exposure to gasoline and its constituents, namely lead, is toxicity. Over exposure to petroleum hydrocarbon vapor can cause depression of the central nervous system. Inhalation of high concentrations of gasoline can cause chemical pneumonia and/or pulmonary edema. Repeated or prolonged skin exposure to gasoline or gasoline contaminated materials can cause dermatitis or even blistering of the skin. Lead poisoning, a potential hazard for this site, can be caused through inhalation of lead particulates or dermal absorption through high levels of lead contamination. Caution should be given in handling of any contaminated soils to ensure worker safety.

Several common constituents of gasoline have been shown to cause serious health problems resulting from relatively minor exposures include benzene, toluene, meta, para, and ortho xylenes, ethyl benzene and tetraethyl lead.

Typical percentages (by weight) of these constituents in gasoline are: benzene - 0.12-3.50%, toluene - 2.73-21.80%, meta xylene -1.77-3.87%, para xylene -0.77-1.58%, ortho xylene - 0.68-2.66%, and ethyl benzene -0.36-2.36%. Typical percentage of tetraethyl lead is not available.

Units used to describe occupational exposures to hazardous substances include: exposure limit, also known as the "threshold limit value" (TLV), ceiling limit, and the concentration level that is "Immediately dangerous to life and health" (IDLH). The exposure limit defines the maximum concentration of a substance to which one can be exposed

During an 8 hour period without suffering significant health effects. The ceiling limit is the concentration level that cannot be exceeded at any time; i.e., a suitable respirator must be worn if concentration values reach the ceiling limit.

The IDLH level represents a maximum concentration from which one could escape within 30 minutes of respirator failure without experiencing escape-impairment or irreversible health damage. IDLH values are not listed for substances that are potential human carcinogens.

EXPOSURE TABLE

<u>Substance</u>	<u>Exposure Limit</u>	<u>Ceiling Limit</u>	<u>IDLH</u>
Benzene	0.1 ppm (8 hrs)	1 ppm (15 min)	Carcinogen ✓
Toluene	100 ppm (10 hrs)	200 ppm (10 min)	2000 ppm
Xylene	100 ppm (8 hrs)	200 ppm (10 min)	1000 ppm
Ethyl Benzene	100 ppm (8 hrs)	N/A	2000 ppm
Tetraethyl lead	0.0067 ppm	N/A	3.6 ppm

Prolonged exposures to concentrations above the limits noted may affect the central nervous system, cardiovascular system, respiratory system, eyes, skin, kidneys, bones and bone marrow. Research has shown that benzene is a carcinogen.

Immediate symptoms of over-exposure include: eye irritation, nose irritation, throat irritation, headache, nausea, dizziness, weakness, confusion, euphoria, excitement, staggered gait, abnormal pain, respiratory difficulties, muscle fatigue, and coma.

In order to protect against over-exposure to these compounds, the ambient air will be monitored with a "lower explosion limit/oxygen content meter and/or handheld photo ionizing detector (PID). As soon as vapor concentrations approach 75% of the exposure limit value, work will cease until all on-site personnel have donned protective clothing and suitable respiratory devices.

Personnel exposures to excessive job-related hazards are expected to be minimal using these safeguards.

It should be noted that summertime heat may initiate weather stress-related problems and decrease productivity on the job site.

Based upon VCI's experience with investigations of potentially gasoline contaminated soil and water, overexposure of personnel to gasoline vapor is unlikely.

Personnel however may be exposed to short term vapor concentrations approaching 100 ppm. Respiratory protection plans will be directed to protecting personnel from the transient exposures.

Drilling Activities

Various hazards are present during excavating procedures.

- electrical hazards due to overhead and underground utility line
- excessive noise
- confined space
- moving portions of the drilling
- falling of heavy overhead objects
- fall hazards due to working at heights

SITE CONTROL

A site map has been attached to this plan. The areas where work will occur, will be on the site, and may be barricade to prevent unauthorized access. Only authorized personnel shall be allowed in the work areas and any unauthorized visitors must remain outside any barricade area.

The site is small enough that normal voice communication can be used. In the vicinity of the excavation, common hand signals will be used.

TRAINING

VCI Personnel

All VCI project personnel shall have completed 40 hours of off-site health and safety training, related to hazardous waste operations. In general, the VCI personnel will have completed a combination of paid training courses which meet the requirements of both the interim and final Occupational Safety and Health Administration (OSHA) rule for Hazardous Waste and-Emergency Response Operations (29 CFR 1910.120). All VCI supervisory personnel on site will have completed an additional 8 hours of relevant health and safety training.

VCI personnel who may visit the site occasionally, and are unlikely to be exposed to chemical hazards will have completed at least 24 hours of relevant health and safety training.

Any VCI or contractor personnel operating specialized industrial equipment such as forklifts, heavy equipment, drilling equipment, etc. shall be able to demonstrate their competency in the safe operation of such items.

Personnel

All subcontractor personnel who are likely to be exposed to hazardous materials either by inhalation or dermal contact shall have completed 40 hours of off-site health and safety training, in accordance with the OSHA interim and final Hazardous Waste and Emergency Operations rule. Subcontractor personnel who are required to work on the site for short periods of time (1-day or less), and who will not be required to wear any protective equipment, shall have completed at least 24 hours of off-site health and safety training.

All Site Personnel

Prior to starting off the project, a kick-off safety will be on the site. During this meeting all personnel will be briefed on the requirements contained within the health and safety plan, and will be told the site safety rules. The kick-off safety meeting will be conducted jointly by the project manager and the HSO.

At the beginning of each work shift, or whenever new personnel arrive on the site, a tailgate safety meeting will be held. The purpose of such meetings is to highlight health and safety concerns and to ensure that employees are fully briefed on the site work procedures to be followed during the shift. The tailgate safety meetings will be conducted by the first line supervisors. The project manager will review records of all tailgate safety meetings.

MEDICAL SURVEILLANCE

All VCI subcontractor personnel shall provide proof of having successfully completed a preplacement or annual update physical examination. This examination shall have been designed to comply with regulatory requirements for hazardous waste operations and shall include the following:

- . medical and occupational history form
- . physical examination
- . blood analysis
- . urinalysis
- . chest x-ray

- . pulmonary function test
- . audiogram
- . electrocardiogram (if indicated during the physical exam)
- . alcohol and illegal drug screening

GOVERNMENT AND VCI STANDARDS

Currently the health and safety of workers performing hazardous waste activities regulated by OSHA (29 CFR 1910.120).

The OSHA PEL for gasoline vapor is 300 ppm average over an eight-hour period. The 15-minute short term exposure limit is 500 ppm. To ensure that no project workers monitored several times each day using either a photoionization detector (PID) or colorimetric indicator tubes.

If the PID or colorimetric indicator tube samples indicate that hydrocarbon vapor levels are 50 ppm or greater, then daily air samples will be collected from representative project personnel using charcoal tube sampling methods (OSHA Method 1M1S1340). Personnel will be notified in writing of the results of any personal air samples and their significance. A copy of this report will be maintained in the employee's medical surveillance file.

ACCESS AND DECONTAMINATION

Access

Access to the project work area zones shall be regulated and limited to authorized persons. a daily log shall be kept all persons entering such areas. The work area itself shall be cordoned off using barrier tape or other suitable barriers.

Decontamination

Due to the low toxicity of the material involved (gasoline), the anticipated low levels of contamination, and the minimal hazard posed of spread of contaminated soil, formal decontamination procedures will not be required. The following site requirements will be enforced:

- . Eating, drinking and smoking within the work area are prohibited.
- . project personnel may eat, drink or smoke outside the work area, only if they have washed their hands and face.
- . An emergency eye wash station shall be located on the job site adjacent to the work area.

Any potentially contaminated equipment will either be disposed of, or washed off with soap and water.

Any equipment used in the contaminated zone should be washed with soap and water before it is removed from the site.

SAFE USE OF FLAMMABLE AND COMBUSTIBLE MATERIALS

Employees shall make sure that combustible scrap, debris and waste materials (oily rags, etc.) are stored in covered metal receptacles and removed from the worksite promptly. Be sure that proper storage is practiced to minimize the risk of fire including spontaneous combustible liquids and that approved containers and tanks are used for the storage and handling of flammable and combustible liquids.

Employees shall make sure that all connections on drums and combustible liquid piping, vapor and liquid are tight, that all bulk drums of flammable liquids are grounded and bonded to containers during dispensing.

Be certain that storage rooms for flammable and combustible liquids have explosion-proof lights and that storage rooms for flammable and combustible liquids have mechanical or gravity ventilation.

Make sure that liquefied petroleum gas is stored, handled and used in accordance with safe practices and standards, pay particular attention in that no smoking signs are posted on liquefied petroleum gas tanks. All solvent wastes, and flammable liquids will be kept in fire-resistant, covered containers until they are removed from the worksite.

Vacuuming shall be used whenever possible, rather than blowing or sweeping combustible dust. Be certain that firm separators are placed between containers of combustibles or flammables, when stacked one upon another, to assure their support and stability.

All fire extinguishers will be selected and provided for the particular types of materials in areas where they are to be used.

Class A: Ordinary combustible material fires.

Class B: Flammable liquid, gas or grease fires.

Class C: Energized-electrical equipment fires.

All appropriate fire extinguishers shall be mounted within 75 feet of outside areas containing flammable liquids, and within 10 feet of any inside storage area for such materials. Said fire extinguishers shall be free from obstructions or blockage and that all extinguishers are serviced, maintained and tagged at intervals not to exceed one year.

Be certain that "NO SMOKING" signs are posted where appropriate in areas where flammable or combustible materials are used or stored and that safety cans are used for dispensing flammable or combustible liquids at a point of use. Spills of flammable or combustible liquids are to be cleaned up promptly.

Make sure that storage tanks are adequately vented to prevent the development of excessive vacuum or pressure as a result of filling, emptying, or atmosphere temperature changes. Be certain that storage tanks are equipped with emergency venting that will relieve excessive internal pressure caused by fire exposure and that "NO SMOKING" rules are enforced in areas involving storage and use of hazardous materials.

EMPLOYEE AND WORK RULES AROUND EXCAVATIONS

When excavation is necessary at a job site, before work commences and during the performance of work the site shall be adequately protected to prevent sloughing of earth by shoring or sloping. The site shall be fenced in or boarded over to prevent personnel from slipping or falling in the area when moving about.

No employee shall enter or perform work in an excavation which requires the person's head be below the surface of the ground until all confined space procedures are followed.

Employees are not permitted to work in or adjacent to any excavation until an inspection is conducted to determine that they will not be exposed to injuries resulting from moving ground and that necessary permits have been obtained.

SLIPS, TRIPS AND FALLS

Inattentiveness is one of the major factors contributing to injuries caused by slips, trips and falls. An employee who is not fully aware of his or hers working conditions, allows himself or herself to be put in a potentially dangerous position.

Another contributing factor is practicing GOOD HOUSEKEEPING ! Working conditions are made hazardous by the spillage of liquids, petroleum products and or residual material unto working areas around machinery and walkways. If spills, unused material, and construction debris are left in walkways, work areas and near construction site, such hazardous shall be immediately cleaned up.

TOOL AND EQUIPMENT HANDLING

SAFETY DEVICES- Employees must never remove, displace, damage, destroy, or carry away any safety device, safeguard, notice, or warning used at the Company facilities, Company property, or customer job locations.

Never, in any way, interfere with the use of another employee's safety device or safeguard. Verify that all guards and other protective devices are in their proper place, in good repair, and properly adjusted for safe operation. Any deficiency or malfunction must be reported immediately to the supervisor or Safety Representative.

DAMAGED/UNSAFE EQUIPMENT- REPAIR WORK

Employees must not repair operating equipment or machinery, oil moving parts, except when the equipment or machinery is designed or fitted with safeguards to protect the employee while performing the work.

Equipment that is worn, damaged, or otherwise defective to the extent that it is unsafe must be reported immediately to the supervisor or Safety Representative.

CRANE/HOISTING EQUIPMENT

Unauthorized persons are not to be permitted in a crane cab or on a crane at any time. All unattended equipment shall be guarded against operation by unauthorized persons, signals to the operator of the equipment shall be given by a designated person.

Cranes, derricks, hoists or other equipment shall not be used for side pulls or lifts that would affect the stability or overstress the equipment.

Hoisting equipment shall be loaded so that the load is in a stable position and does not exceed the designated safe load. Loads shall be test lifted, brakes checked, and slings readjusted when required, to check the stability and safety of the lift.

Outriggers, when provided, shall be used for the stability and safe operation of the equipment. The operator shall personally check that the outriggers have been properly placed and blocked in position.

A mobile or overhead traveling crane, hoist, or shovel shall not be operated unless the gong or other effective warning device is in suitable operating condition. Equipment surfaces

and walkways shall be maintained free of oil, grease, or debris, and , where necessary, non-slip material shall be used.

Wire rope, under tension, shall not be guided by the hands or feet. Employees shall avoid standing or passing under suspended loads. Extreme care shall be exercised in the selection, inspection, and use of chains.

Precautions in dealing with wire rope slings:

- Do not use knots to make slings.
- Pad or block sharp corners.
- Do not jerk loads. lift and lower loads slowly.
- Use slings of adequate capacity. Consult the charts.
- Know how much weight you are lifting.

EMERGENCY RESPONSE

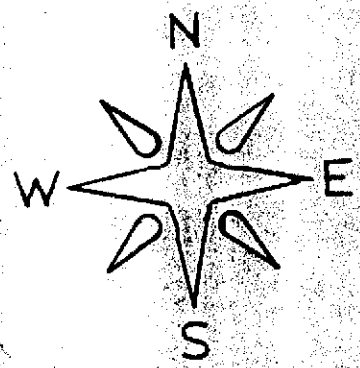
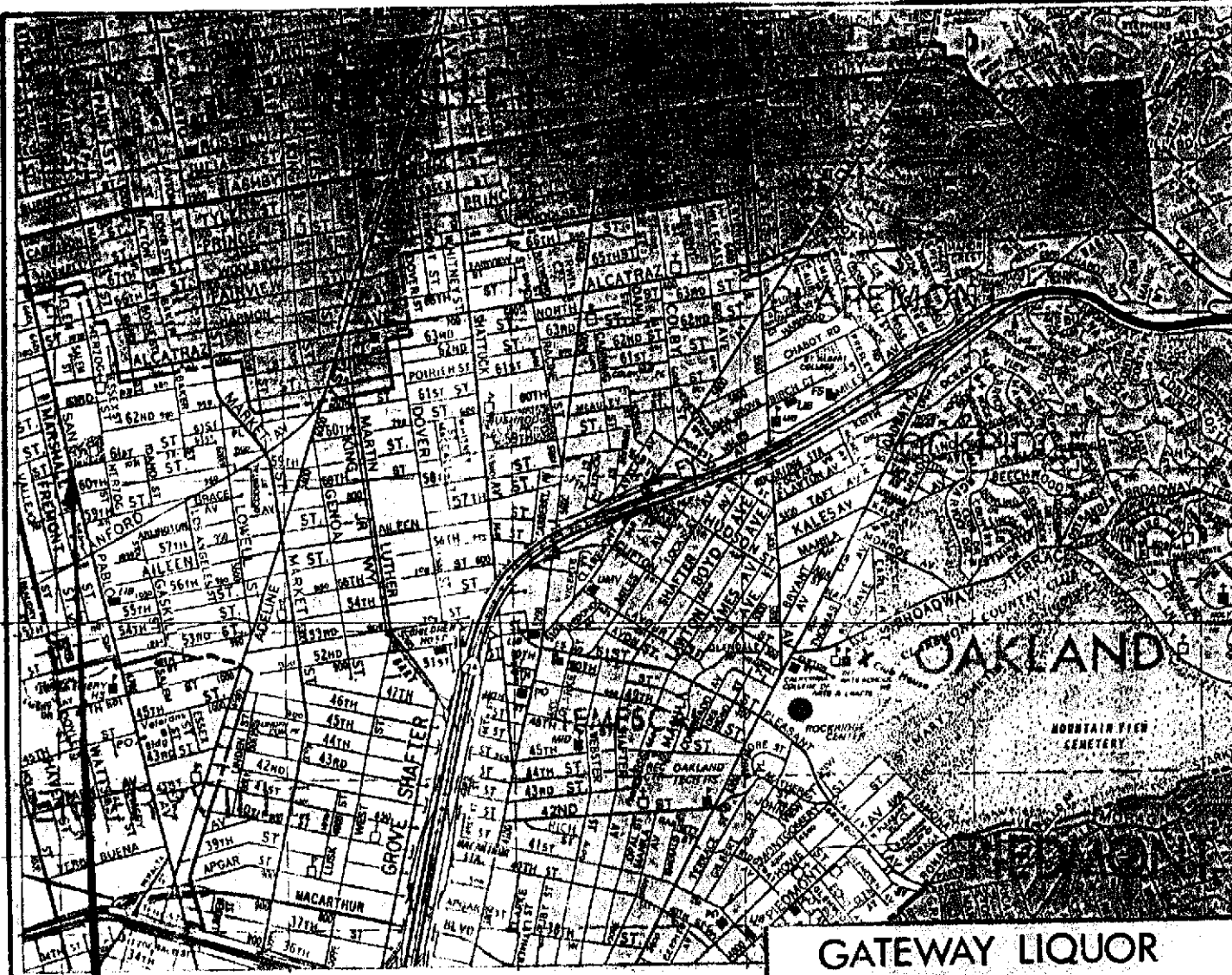
In the event of an emergency such as a sickness, injury or fire, the following procedures will be followed:

- . Emergency procedures will be initiated by the first person recognizing the emergency situation. This person shall immediately notify the VCI site representative.
- . The designated VCI First Aid/CPR provider and a project member shall provide assistance to any injured or sick employee. In the case of suspected release of toxic material, these personnel shall first don protective suites and self-contained breathing apparatus. The injured employee will first be moved to a safe location, before any attempt at treatment is made.
- . A project member or other responsible person will notify appropriate government agencies or individuals.

1. Police, Fire, or Ambulance emergency: 911
2. Nearest Emergency Hospital:
Highland General Hospital (510) 534-8055
1411 E. 31st Street
Oakland, CA. 94602
3. Nearest Fire Station 911
Station #8
463 51st Street, Oakland, California 94608
4. Alameda County/ Dept. of Public Health (510) 271-4320
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, Ca. 94621

- 5. Poison Control (209) 445-1222
- 6. Office of Emergency Service (800) 852-7550
- 7. Chemtrec (800) 424-9300
- 8. EPA Region 9 (415) 974-8153
- 9. HHS Region 9 (415) 556-7260
- 10. OSHA Region 9 (415) 556-3782

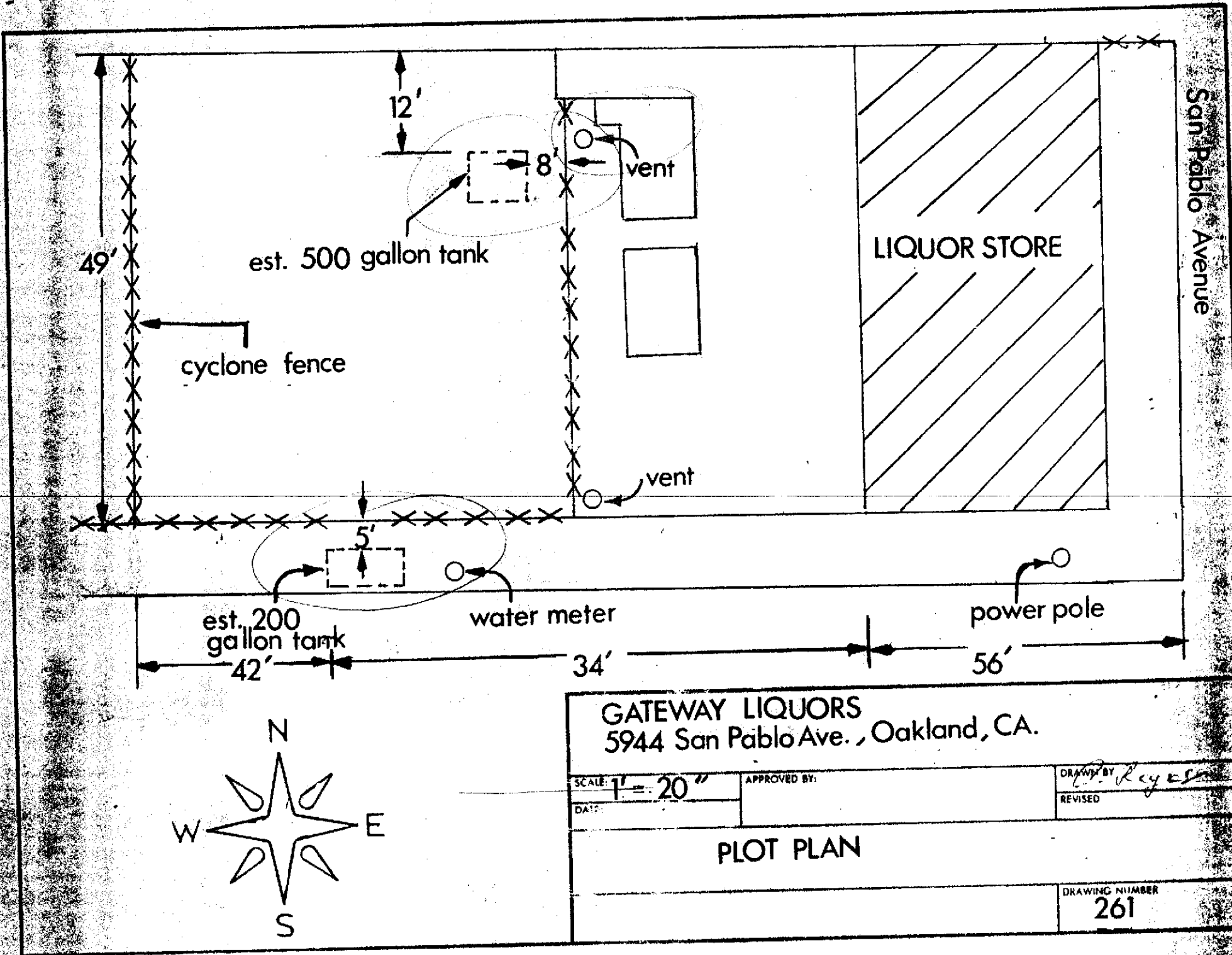
Any injuries or incidents which have the potential to result in an injury will be recorded by the VCI site representative on the supervisor's employee injury report form. This form, when completed by the site representative, shall be forwarded to the VCI project manager, and to the VCI. Corporate Health and Safety Department.



Site Location

GATEWAY LIQUOR
 5944 San Pablo Ave., Oakland, CA.

SCALE:	APPROVED BY:	DRAWN BY: <i>Royce</i>
DATE:		REVISED:
SITE MAP		DRAWING NUMBER: 261



San Pablo Avenue

LIQUOR STORE

est. 500 gallon tank

cyclone fence

vent

vent

est. 200 gallon tank

water meter

power pole

GATEWAY LIQUORS
5944 San Pablo Ave., Oakland, CA.

SCALE: 1" = 20'

APPROVED BY:

DRAWN BY: *R. J. E. Smith*
REVISED

PLOT PLAN

DRAWING NUMBER
261