aqua science engineers inc.

HEALTH & SAFETY PLAN

for the

ALCOPARK JOBSITE
165 13TH STREET
OAKLAND, CA

prepared by

Aqua Science Engineers, Inc.
2500 Old Crow Canyon Rd., #121
San Ramon, CA 94583
1 (800) 678-9391

AQUA SCIENCE ENGINEERS

signature page for

AlcoPark Jobsite

The below signed personnel have read this plan, understand it's content, and agree to follow the guidelines set forth.

Employee Name (print)	Signature	Date

AQUA SCIENCE ENGINEERS, INC.
HEALTH & SAFETY PLAN
for the
ALCOPARK JOBSITE

A. GENERAL DESCRIPTION

Site: 165 13TH STREET, OAKLAND CALIFORNIA

Work Scope: AQUA SCIENCE ENGINEERS WILL REMOVE ONE 1,000 GALLON WASTE OIL TANK, HAVE THE TANK DISPOSED OF ACCORDING THE STATE AND LOCAL REGULATIONS. BACKFILL THE EXCAVATION USING CLEAN IMPORTED SOIL AND CLEAN OVERBURDEN FROM THE EXCAVATION. RESURFACE THE EXCAVATION WITH CONCRETE AS PER CONTRACT.

SAFETY POLICY:

This Health and Safety Plan is written specifically for the AlcoPark jobsite, located at 165 13th Street, Oakland California. All persons on site will follow OSHA safe operating practices as outlined in 29 CFR 1910 and 1926, as well as established guidelines from their respective companies or organizations.

Plan Prepared by: Michael D. Dirk Date: 5/28/91

Plan Approved by: David Prull Date: 5/28/91

Proposed Start Date: TO BE DETERMINED

Background Review Done? Complete: XXXXX
Preliminary:

Overall Hazard Level: Serious: Low: XXX
Moderate: XXX Unknown:

Project Organization:

Site Manager for A.S.E.: David Prull
A.S.E. Safety Officer: Michael Dirk
Other A.S.E Personnel: Steve DeHope

B. SITE/WASTE CHARACTERISTICS

Waste Type(s): Solid: XXXX Sludge:
Liquid: Gas:

Characteristics: WASTE OIL RESIDUALS, COMBUSTIBLE, TOXIC

Site Parameter: THE EXCAVATION PIT AS WELL AS ANY STOCKPILED MATERIAL ARE IDENTIFIED AS EXCLUSION ZONES. A MINIMUM BOUNDARY OF THREE FEET SURROUNDING BOTH IS TO BE MAINTAINED IN AS MUCH AS IS POSSIBLE.

C. HAZARD EVALUATION

CHEMICAL HAZARDS

Potential chemical hazards include skin and eye contact or inhalation exposure to potentially toxic concentrations of hydrocarbon vapors. The potential toxic compounds that may exist at the site are listed below, with descriptions of specific health effects of each. The list includes the primary potential toxic constituents that may be found in waste oil. (excerpted from NIOSH Pocket Guide to Chemical Hazards, June 1990).

1. BENZENE
a. Colorless, clear, highly flammable liquid with characteristic odor.
b. High exposure levels may cause acute restlessness, convulsions, depression, respiratory failure. *BENZENE IS A SUSPECTED CARCINOGEN.*
c. Permissible exposure level (PEL) for a time weighted average (TWA) over an eight hour period is 1.0 ppm.

2. TOLUENE
a. Colorless liquid with a benzene-like odor.
b. High exposure levels may cause fatigue, euphoria, confusion, dizziness. *TOLUENE IS LESS TOXIC THEN BENZENE.*
c. PEL for a ten hour TWA is 100 ppm.

3. XYLENE
a. Colorless, flammable liquid with aromatic odors.
b. high exposure levels may case dizziness, drowsiness, narcosis.
c. PEL for a ten hour TWA is 100 ppm.

4. ETHYLBENZENE
a. Clear, colorless, highly flammable liquid with characteristic odor.
b. High exposure levels may cause irritation to skin, nose and throat, constriction in chest, loss of consciousness, respiratory failure.
c. PEL for an eight hour TWA is 100 ppm.

5. LEAD
(Lead Arsenate)

a. Odorless, colorless solid with properties that vary depending upon specific compounds.
b. High exposure levels may cause nausea, diarrhea, inflamed mucous membranes, abdominal pains, weakness. *LEAD IS A SUSPECTED CARCINOGEN.*
c. PEL for an eight hour TWA is .05 milligrams per cubic meter (airborne).

ALL SUBSTANCES AS THEY EXIST ON SITE ARE EXPECTED TO BE STABLE.

Site Status: ACTIVE: XXX INACTIVE:

Site History: THE SITE IS CURRENTLY A COUNTY PARKING FACILITY.

PHYSICAL HAZARDS

Under no circumstances will anyone enter the excavation pit or climb on any excavated material piles. Personnel shall otherwise maintain the maximum distance possible from the pit while performing their activities. On-site hazards include physical injuries due to the proximity of workers to engine-driven heavy equipment and tools. Equipment used during excavation may include a backhoe or other excavator, and a mechanical tamper or other equipment as part of the subsequent backfilling operations. Only trained personnel will operate machines, tools and equipment; all equipment will be kept clean and in good repair. Minimum safety apparel required around heavy equipment will include a hardhat and steel-toed boots. The parameter of the excavation will be sloped to create acceptable stable walls for personnel entry if needed. ALL WORK WILL BE PERFORMED IN ACCORDANCE WITH OSHA GUIDELINES.

Daily inspections of the excavation, the adjacent areas, and protective systems are to be made by a qualified person while personnel are on site. Attention will be made to note if any evidence of potential cave-in exists.

1. USE SAFETY EQUIPMENT, MASK RESPIRATORS WITH NIOSH APPROVED C-21 CARTRIDGES FOR ORGANIC VAPORS, AS NECESSARY.

2. HAVE AT LEAST ONE DRY CHEMICAL MODEL PA-200 A-B-C FIRE EXTINGUISHER PRESENT.

3. HAVE 100 LBS GRANULAR SORBENT MATERIAL AVAILABLE FOR POTENTIAL SPILLAGE.

LEVEL OF PROTECTION

A contamination Reduction Zone (CRZ) will be maintained and adjusted as work proceeds and moves around the site. The workers on site will wear level 'D' protective clothing. (This protection level may be upgraded after on-site conclusions of data are completed). THE LEVEL OF PROTECTION FOR PERSONNEL WORKING IN THE AREA WILL BE UPGRADED IF; the organic vapor levels in the equipment operator's breathing zone exceeds 5 ppm above background levels continuously for more then five minutes. In this event, personnel protective equipment will include full face respirators with double-cartridge filters for organic vapors and particulates, in addition to hardhat, steel-toed boots and coveralls. Excavation will cease, equipment shutdown, and personnel will withdraw from the area if either 1.) the organic concentration in the operator's breathing zone exceeds 200 ppm for 5 minutes or 2.) the organic vapor concentration two feet above the excavation exceeds 2,000 ppm or 25% of the lower explosive limit. If work proceeds in an environment where organic vapor concentrations exceed 200 ppm, a self contained breathing apparatus or airline respirator will be utilized by the personnel.

Levels of Protective Clothing are defined on the following pages as described in the "EPA Standard Operating Safety Guidelines":

LEVEL A PROTECTION

Components:

1.) Pressure-demand, supplied air respirator that is MSHA and NIOSH approved. Respirators may be pressure demand, self contained breathing apparatus (SCBA), or pressure demand, airline respirator with an escape bottle for atmospheres with an extreme IDLH.

2.) Fully encapsulating chemical resistant suit.

3.) Inner, chemical resistant gloves.

4.) Disposable gloves and boot covers, worn over the fully encapsulating suit.

5.) 2-way radio communications is highly recommended.

LEVEL B PROTECTION
Components:

1.) Pressure-demand, supplied air respirator that is MSHA and NIOSH approved. Respirators may be pressure demand, self contained breathing apparatus (SCBA), or pressure demand, airline respirator with an escape bottle for atmospheres with an extreme IDLH.

2.) Chemical resistant clothing which includes overalls and long sleeved jacket or, hooded one or two piece chemical splash suit or disposable chemical resistant one piece suit..

3.) Outer chemical resistant gloves.

4.) Inner chemical resistant gloves.

5.) Chemical resistant, steel toed and shank boots.

6.) Disposable chemical resistant boot covers.

7.) Hardhat.

8.) 2-way radio communications is highly recommended.

LEVEL C PROTECTION
Components:

1.) Air purifying respirator, full face, with twin cartridge or cannister equipped filters, that are MSHA and NIOSH approved.

2.) Chemical resistant clothing which includes coveralls or, hooded one-piece or two-piece chemical splash suit or chemical resistant hood and apron; disposable chemical resistant coveralls.

3.) Outer chemical resistant gloves.

4.) Inner chemical resistant gloves.

5.) Chemical resistant, steel toed and shank boots.

6.) Disposable chemical resistant boot covers.

7.) Hardhat.

8.) 2-way radio communications is recommended.

LEVEL D PROTECTION

Components:

1.) Coveralls.

2.) Gloves.

3.) Leather boots, shoes or chemical resistant, with steel toe and shank.

4.) Safety glasses or chemical splash goggles.

5.) Hardhat or face shield.

COMBUSTIBLE GAS AND ORGANIC VAPOR MONITORING

Site personnel will monitor ambient levels of combustible gas vapors using a Thermo Environmental Instruments model 580A OVM. Volatile organic vapor levels greater then 5 ppm above background levels in the hot zone are not anticipated. If the OVM measurements do not decrease below 5 ppm, level 'C' protection will be required. The site Project Manager will be notified if organic vapor levels in the air samples exceed ambient concentrations.

A wetting agent or some form of dust control is recommended to reduce the airborne dust level and subsequent particulate hazard. HEPA respirator cartridges are also recommended as needed.

SITE ENTRY PROCEDURES

Any personnel entering the site will observe all conditions set forth by the owner of the property, including vehicle travel speeds, restricted areas and conduct.

Eating, drinking, smoking and other practices which increase the probability of hand-to-mouth transfer of contamination is prohibited in the work zone. All field personnel will be instructed to thoroughly wash their hands and face upon leaving the work area for breaks or cessation of day's activities. A first aid kit and at least one 20 pound A-B-C fire extinguisher will be available at the site.

DECONTAMINATION PROCEDURES

If required, equipment and personnel decontamination areas will be designated by the Project Manager at the start of the project. To prevent the transfer of contamination from the work site into clean areas, all tools will be cleaned adequately prior to final removal from the work zone. Protective clothing such as Tyvek coveralls, latex gloves, boot covers, etc. will be changed on a daily basis or at the discretion of the Project Manager on site. All disposable protective clothing will be put into plastic bags and disposed of in a proper manner. All respirator cartridges will be discarded and replaced with fresh units on a daily basis, disposal will be in the same manner as the protective clothing. Excavated soils will be stockpiled in an area designated by the Project Manager, until chemical analysis has been performed on representative samples.

In the event of a medical emergency, the injured party will be taken through decontamination procedures, if possible. However, the procedures may be omitted when it may aggravate or cause further harm to the injured party. Member of the work team will accompany the injured party to the medical facility to advise on matters concerning chemical exposure.

Personnel Protection Level will be Level 'D'. Protective clothing levels may be upgraded in the event that on site conclusions determine a greater then anticipated danger to personnel.

SPECIAL CONDITIONS

Site Entry: NORMAL, NO SPECIAL CONDITIONS

Decontamination-

Personnel and Equipment: IF REQUIRED, PERSONNEL AND EQUIPMENT WILL BE DECONTAMINATED A PER USEPA STANDARD OPERATING SAFETY GUIDELINES. A SMALLER MODIFIED DECONTAMINATION LINE MAY BE USED DUE TO SPACE RESTRICTIONS.

Work Limitations (time, weather):

NONE ARE ANTICIPATED, HOWEVER, PERSONNEL WORKING ON SITE MAY EXPERIENCE ELEVATED TEMPERATURES DURING THE WORK DAY. IN THE EVENT THAT AMBIENT TEMPERATURES REACH OR EXCEED 80 DEGREES FAHRENHEIT, THE FOLLOWING GUIDELINES ARE RECOMMENDED.

1. Periods of work should be reduced to no less then one hour time frames and separated by breaks intended to reduce personnel stress due to reduced natural ventilation from wearing protective clothing.

2. All personnel wearing level C protective clothing or greater, will be subject to medical monitoring of body temperature after work periods, by the following guidelines;

a. Heart Rate (HR) should be measured by counting the radial pulse rate for 30 seconds and doubling count for the correct pulse rate. This should be done as early as possible in the resting period. The HR at the beginning of the rest period should not exceed 110 beats per minute. If the HR is higher, the next work period should be shortened by 10 minutes, while the length of the rest period remains the same. If the HR is 100 beats per minute at the beginning of the next rest period, the following work period should be shortened by an additional 10 minutes.

b. Body temperatures should be measured orally with a clinical thermometer as soon as possible in each resting period. Oral Temperatures (OT) should not exceed 99 degrees Fahrenheit. If it does, the next work period should be reduced by 10 minutes while the length of the resting period remains the same. If the OT exceeds 99 degrees Fahrenheit at the beginning of the next work period, the following work period should be reduced by an additional 10 minutes. OT should be measured at the end of each rest period to ensure that the body's temperature has dropped below 99 degrees Fahrenheit.

Body Water Loss (BWL) from sweating, could result in dehydration and further complications and stress on personnel working in protective clothing under adverse weather conditions. It is strongly recommended that plenty of stress relief beverages be available on site to replace body fluids. Commercial drink mixes that provide electrolyte balancing solutions or water are adequate for replacing body fluids.

Alternate methods of heat stress reduction can be made available such as,

Portable showers or hose-down facilities,
Shelter cover to protect against direct sunlight,
Rotating teams of personnel wearing protective clothing,
Performing extremely arduous tasks early in the workday.

EMERGENCY INFORMATION

In the event of an injury or suspected chemical exposure, the first responsibility of the Project Manager will be to prevent any further injury. This objective will normally require an immediate stop to work until the situation is remedied. The Project Manager may order the evacuation of the work party. Other primary responsibilities in the event of an accident will be the first aid and decontamination of the injured team member(s). The injured party will be moved to a designated safe area and initial first aid will be rendered.

Employees are asked to make every effort and take personnel responsibility to prevent accidents involving machinery or any other aspect of the job, either by individual action or by notifying the Project Manager immediately of any unsafe condition that may exist.

In the event of an unexpected hazardous material discovery on site, the following actions will be taken by any employee involved;

1. The person having uncovered the unexpected material will notify the Project Manager and other workers of the danger. The site will be cleared of personnel if deemed necessary by the Project Manager. If site evacuation is required, appropriate local agencies such as the Fire Department or Health Department will be notified as well.

2. Immediate action will be taken to contain the hazardous material, provided the workers involved are properly attired with adequate protective clothing to avoid exposure.

3. Proper containment procedures will be determined for the hazardous material encountered prior to cleanup commencing. All personnel involved in the containment effort will be properly protected to prevent exposure. Backup personnel will be similarly protected while monitoring the work being done for any additional dangers.

4. The container(s) will be staged on site, away from the major activity areas and in such a way that if loss of containment occurs, the material will be withheld from further spread by a secondary containment berm or vessel.

5. The owner or agent controller of the property will be notified promptly of the incident and will be apprised as to the options available for proper disposal.

ACUTE EXPOSURE SYMPTOMS AND FIRST AID

EXPOSURE ROUTE	SYMPTOMS	FIRST AID
Skin	Dermatitis, itching redness, swelling	Wash immediately with soap and water contact ambulance if evacuation is needed.
Eyes	Irritation, watering	Flush with water, transport directly to emergency room, if necessary.
Inhalation	Vertigo, tremors	Move person to fresh air, cover source of exposure.
Ingestion	Nausea, vomiting	Call Poison Control Center, DO NOT INDUCE VOMITING, transport to medical facility.

Local Resources:

HEALTH AND SAFETY CONTACT FOR ASE:

Michael D. Dirk
Office: (415) 820-9391

Ambulance
Police : 911
Fire

POISON CONTROL: SF (415) 476-6600

Emergency Route to nearest Medical Facility:

Exit site, Travel one-way on 13th St.
RIGHT on Madison St.
RIGHT on 12th. St.
RIGHT on Broadway
BEAR LEFT on Telegraph Ave.
RIGHT on 30th St.

HOSPITAL IS NEAR THE CORNER OF TELEGRAPH AVE. & 30TH STREET.

Hospital: - PERALTA HOSPITAL
450 30TH ST., OAKLAND 451-4900

SITE SAFETY PLAN JOB NO. 6138

1.0 GENERAL INFORMATION

SITE:	Company:	County of Alameda General Services Agency, Building Maintenance Department
	Facility:	Alameda County Parking Garage
	Location:	165 13th Street (On the corner of 13th and Jackson Streets)
	City:	Oakland
	State:	California

PLAN PREPARED BY: GeoStrategies Inc.
DATE: June 6, 1994

OBJECTIVE: To provide a plan for the safe completion of the closure in-place of two underground gasoline storage tanks

PROPOSED DATE OF TANK CLOSURES:
Upon receipt of permits

DOCUMENTATION/SUMMARY:
Hazardous material may be present. Caution is advised.

2.0 SITE/WASTE CHARACTERISTICS

FACILITY DESCRIPTION:
Alameda county parking garage, tanks previously utilized for county vehicle re-fueling

STATUS: Parking garage is active, re-fueling location is in-active

WASTE TYPES: Liquid, Sludge, and Vapor

WASTE CHARACTERISTICS:
Volatile, Flammable and Toxic

3.0 HAZARD EVALUATION

PARAMETER: 10% LEL maximum, 150 ppm maximum for entry to manways

SPECIAL PRECAUTIONS AND COMMENTS:

Applicable safety procedures must be followed per GeoStrategies Inc. Health and Safety Plan. Applicable procedures are attached:

Section 9.1 - Underground Storage Tank Removal and Installation (for inerting, traffic work, electric tools, etc. only)

Section 9.4 - Line Testing

Section 9.6 - Street Work

Section 9.9 - Steam Cleaner and Pressure Washer Use

Section 9.10 - Product Transfer

Section 9.11 - Confined Spaces

All personnel working on this project must have been trained pursuant to the provisions of CFR 1910-120. (Records available at GeoStrategies offices.) Provisions must be made to insure vapors are not allowed to accumulate in garage area during degassing.

4.0 SITE SAFETY WORK PLAN

4.1 PERIMETER ESTABLISHMENT:

Use barricades, flagging and vehicles to restrict access to work areas

4.2 PERSONAL PROTECTION:

Level of Protection: EPA Level D, EPA Level C respiratory protection to be available

Modifications: Hard hats and red vests required

Surveillance Equipment and Material: Gastech

4.3 SITE ENTRY PROCEDURES:

No unauthorized personnel

4.4 CONFINED SPACE ENTRY PROCEDURES:

4.4.1 Prior to entering a confined space:

a. Check for flammable vapors and oxygen with Gastechtor (10% LEL maximum, 20% oxygen minimum). Initial readings and readings on entry shall be recorded on the daily work report, and confined space permit form (attached). Recheck the space periodically while working and prior to each entry.

b. Secure the area around openings, remove all covers and allow space to vent a minimum of 5 minutes. Ventilation fans will be used if necessary.

c. Complete a confined space entry permit form (attached).

4.4.2 No person shall enter a confined space where he or she suspects the accumulation of flammable or toxic vapors or where there is an insufficient oxygen atmosphere.

4.4.3 Two (2) persons are required for entry into a confined space; one to enter the space and the other to remain at the opening for communication with the person in the confined space. The observer may not leave his post while the other person remains in the confined space.

4.4.4 A minimum of three (3) persons are required for any entry into a confined space where supplied air is required:

a. 1 person to enter

b. 1 person to observe

c. 1 person to call for emergency assistance.

The distance between observer and emergency response person will not exceed 100 feet.

4.4.5 For any confined space entry, at least one member of the above-ground team must be C.P.R. certified.

4.4.6 Persons entering a confined space shall wear a harness, which must be attached to a hoist by means of a retrieval line at all times.

4.5 DECONTAMINATION PROCEDURES:
Refer to Work Plan, Section 4.2

4.6 FIRST AID: As applicable

4.7 WORK LIMITATIONS (TIME OF DAY, WEATHER, HEAT/COLD STRESS):
As applicable

4.8 CLOSURE-DERIVED MATERIAL DISPOSAL:
All closure-derived material will be disposed of properly by a licensed hazardous waste hauler after applicable analytical tests have been conducted and the results have been reviewed.

4.9 TEAM COMPOSITION:
GeoStrategies Inc.: Field Engineer (1); Gettler-Ryan Inc.: Site Foreman (1) (Site Foreman is Site Safety Officer), Laborers (2); Subcontractors: Licensed Hazardous Waste Hauler, Slurry Provider, Slurry Pumper

5.0 EMERGENCY INFORMATION

5.1 LOCAL RESOURCES:

Ambulance/Hospital	Dial 911
Police/Sheriff/Highway Patrol	Dial 911

5.2 SITE RESOURCES:

Water Supply	First Aid Kit
Telephone	Sorbant Pads
Visqueen	Harnesses (2)
Fire Extinguisher	Retrieval System

5.3 EMERGENCY CONTACT:

GeoStrategies Inc.	1-510-551-8777

5.4 EMERGENCY ROUTES:

Nearest emergency hospital is: Summit Medical Center
(See Attached Information)

HOSPITAL LOCATION IS MARKED ON MAP.

9.1 UNDERGROUND STORAGE TANK REMOVAL AND INSTALLATION

9.1.1 Underground storage tanks are to be removed or installed by employees specifically authorized by the Field Operations Manager.

9.1.2 Call Underground Service Alert at 1-800-642-2444 to mark all utilities in the sidewalks surrounding service station. Check to see who is covered by service. Some municipalities do not subscribe. Requests must be made 72 hours in advance.

9.1.2.1 Call any known non-subscribers to USA to mark their lines. ie. local sewer and storm drain agencies.

9.1.2.2 If available, use site drawings of underground lines to mark line locations before any excavating is done.

9.1.2.3 If needed, no parking signs should be posted at this time.

9.1.3 Project Manager will conduct a site safety briefing with project foreman prior to the start of work.

9.1.3.1 Project foreman will conduct a preconstruction site safety briefing with his crew and sub-contractors.

9.1.3.2 The foreman is responsible for insuring visitors are aware of site safety requirements.

9.1.4 Use sufficient lighted barricades and flagging to secure excavated areas (1 barricade for each ten feet of distance to cover plus 2).

9.1.4.1 Sites and/or excavations will normally be fenced.

9.1.5 Shut off all power to station exterior (pumps, lights, etc.) when starting tank excavation. VERIFY power is off (See Section 9.13).

9.1.6 Post "No Smoking" signs and enforce them.

9.1.7 Observe overhead line clearances. A minimum 10 ft. clearance must be maintained.

9.1.8 Hard hats are to be worn by all personnel while any heavy equipment is in operation. (i.e., hop-to, crane etc)

9.1.8.1 Hard hats will be worn by employees working in the tank excavation or trenches when there is a danger of falling objects.

9.1.9 Fire extinguishers are required on site during tank removal operations. (2-20 lb. ABC minimum)

9.1.10 Use accepted procedures for freeing tanks of vapors:

- Tank may not contain more than 1 gal. of product per 1000 gal. capacity.
- Remove all product from tank after all lines have been purged.
- Add a minimum of 10 gal. of water to tank and allow to settle 5 minutes then pump out into approved drums.
- Recheck tank for liquid product.
- Begin vapor free/tank ventilation with compressed air venturi device. Device must be bonded metal to metal (grounded) to prevent build up of static electricity.
- When LEL is less than 10%.
- Insert 30 lbs of dry ice per 1000 gal. of tank capacity using as many tank openings as possible. Local regulations may require more.
- Add 5 gallons of water to dry ice in tank.
- Use Gastechtor to check vapor levels in tank hole or other excavations to insure vapors have not collected.
- Tank LEL must be less than 10% or as instructed by local fire marshal before it may be moved.
- Drums of extracted water/product are to remain on site for later disposal. Drums must be labeled as to contents. (Tank bottom water is considered a hazardous waste.)
- Tanks must be removed from site as soon as possible and properly disposed of. (manifested)

9.1.11 Use of electrically powered tools in tank excavation while old UGST are in ground is prohibited.

9.1.11.1 A manual four wheel cutter is recommended for cutting lines when necessary.

9.1.11.2 Pneumatic tools may be used providing LEL in tank area is confirmed below 20% Gastechtor reading.

9.1.12 All persons not required to be working at the excavation should remain outside work area.

9.1.12.1 Watch for fellow workers walking around excavation, hopto, loader and other heavy equipment.

9.1.13 No personnel may enter a tank excavation deeper than five feet below grade for <u>any</u> reason unless the excavation is properly shored, sloped or benched. (See section 9.12)

9.1.13.1 Personnel may enter the excavation to walk on the tank top during purging, LEL checks or to attach chains for removal, as per above.

9.1.13.2 Use extreme caution when walking on any tank top as they can be very slippery.

9.1.14 When working in the street, all personnel must wear red vests and hard hats. Stop/slow paddles must be used by traffic control personnel. Traffic control personnel must be used any time normal street traffic is affected. i.e. Loading or unloading tanks.

9.1.15 If a vehicle or piece of equipment is protruding into the street, it must be coned and/or barricaded. Two way traffic must be maintained.

9.1.16 When tanks are being loaded or unloaded, no personnel are allowed to be under the tanks.

9.1.17 No personnel are allowed to work on a tank top while tank is above ground or on a trailer.

9.1.17.1 Ladders must be used or tank may be rolled such that necessary work i.e., air testing may be performed from ground level.

9.1.18 A temporary vent must be installed in each newly installed tank.

9.1.18.1 Tanks taken out of service but not immediately removed must be vented above grade.

9.1.19 Tanks will be ballasted with water to avoid tank floating. Gasoline may be used at the direction of the customer only.

9.1.20 All driveways and excavated areas must be barricaded and flagged at all times except to allow worker and equipment access.

9.1.21 Insure all public right of ways (street and sidewalks) are clean and free of job caused hazards.

9.1.22 Fence excavation as required.

9.1.23 Nail 2"x4" lumber between barricades around excavated areas and driveways where fencing is not used.

9.1.24 Cover trenches with 1 1/8" plywood where needed for walking. Barricade all others, regardless of fencing.

9.1.25 Keep area lighted at night when possible.

9.1.26 A 24 hour guard will be maintained on site when required. e.g. an excavation over 5 feet deep containing water, excessive vapors are present or there is exposed piping which has been tested.

9.4.1 Petrotite Testing (Hydrostatic)

9.4.1.1 Turn off power to submersible pumps before opening any line.

9.4.1.2 Lockout/Tagout breaker switch and post warning sign. Inform station personnel of affected products. (See Section 9.3)

9.4.1.3 Secure all nozzles on affected products.

9.4.1.4 Follow all manufacturers procedures for equipment set up.

9.4.1.5 Use cones and barricades as necessary to close off working area. Wearing of red warning vests while working on service islands is recommended.

9.4.1.6 When removing dispenser door panels:

- Do not stand panels up against anything (they may fall and hit cars or people).

- Lay panels flat, out of the way, if possible.

9.4.1.7 Avoid product spillage. Use absorbent materials and pans if required.

9.4.1.8 If Petrotite line test fails:

- Do not put system back into service until repairs are made, the line retested, the test holds, and the system is without defects.

- If line is to be left out of service, screw down product check valve, trip all product impacts and tape off product breaker switch.

9.4.2 Air, nitrogen or helium testing of lines

9.4.2.1 Two men recommended for all pressure testing.

9.4.2.2 Lines will be isolated from tanks when testing above 5 psi. (maximum pressure is 100 psi. unless otherwise specified).

9.4.2.3 Turn off power to submersible pump and secure product nozzles of affected products when testing product lines.

9.4.2.4 Keep air compressor as far away as possible from tank complex and pump islands.

9.4.2.5 Always remove fill caps and, if possible, drop tubes from ALL tanks when testing lines.

9.4.2.6 Confirm line configuration. Check for crossed lines.

9.4.2.7 Use two good/serviceable gauges.

9.4.2.8 All primary piping is to be tested at 90 to 100 PSI. Use 0-120 PSI gauge.

9.4.2.9 Test will be left on for 1 hour minimum.

9.4.2.10 If product line test fails:

- Do not put system back into service until repairs are made, the line is retested, the test holds, and the system is without defects.

- If line is to be left out of service screw down product check valve, trip all impacts and lock out product breaker switch.

9.4.2.11 When testing is complete:

- Bleed pressure off slowly.
- Watch for vapor accumulation in surrounding area.
- Remove all plugs.
- Reconnect all lines.
- Reset all impact valves.
- Check for and repair any product leaks.
- Insure all systems are operational prior to leaving site.
- Systems that fail testing are not to be put back into service until repairs are made.

9.6 STREET WORK

9.6.1 All planned street work will be submitted to the Safety Manager a minimum of 72 hours prior to commencement of work.

9.6.2 The Safety Manager is responsible for formulating a traffic safety plan for the site.

9.6.3 The Safety Manager or Superintendent will physically check each site for street layout.

9.6.3.1 All digging/drilling locations should be marked with white paint at this time.

9.6.3.2 USA will be notified immediately after marking.

9.6.3.3 If needed, no parking signs should be posted a minimum of 72 hours prior to commencement of work.

9.6.4 The traffic safety plan will include as a minimum:

- map of location with excavation points marked.
- lanes to be affected.
- traffic control devices needed.

9.6.5 A traffic safety plan will be made for each site requiring regular monitoring and/or sampling of street wells. This plan will become a part of the work order.

9.6.6 Two persons are required for all street work requiring a traffic lane closure. Two persons recommended for all other street work.

9.6.7 A red safety vest with reflective stripes will be worn by all personnel working in the street or by those crossing a street on regular basis to work. Hard hats are recommended while working in the street to provide additional protection and visibility to motorists.

9.6.8 The State of California Department of Transportation (CALTRANS) guidelines will be used as the traffic control guide unless specifically supplemented by local requirements.

9.6.9 No work in the street will commence until the affected lanes have been closed off and all traffic control devices are in place.

9.6.10 Vehicles should be parked so as to provide maximum protection for personnel. At least 1 vehicle must be equipped with a warning light other than hazard flashers.

9.6.11 All excavations in the street including parking areas will be covered by trench plates when practical.

9.6.12 Any cones or delineators left overnight in or near the street must have reflective sleeves.

9.6.12.1 Unattended 28" cones are not to be used to block a lane of traffic at night.

9.6.13 Barricades left overnight must be lighted. Use of unattended barricades in the street is not recommended.

9.9 STEAM CLEANER/PRESSURE WASHER USE

9.9.1 All personnel using the steam cleaner/pressure washers (SC/PW) must read the operators manual on the equipment.

9.9.2 Eye and hand protection are required while operating this equipment. Face shields, goggles and insulated rubber gloves are strongly recommended.

9.9.3 Use only diesel in the burner unit. Use only regular gas in engine, DO NOT CONFUSE TANKS.

9.9.4 Turn unit off completely while refueling.

9.9.5 Do not spray water on electrical components.

9.9.6 Grip steam cleaning wand securely before starting washer. Serious injury can be inflicted if an unsecured wand starts whipping.

9.9.7 Units with shut off guns should not be operated in the shut off position for extended periods. Insure burner shuts off when gun is shut off.

9.9.8 Protect discharge hose(s) from vehicular traffic.

9.9.8.1 Replace any discharge hose which has signs of damage or wear.

9.9.9 Protect the public and all property from flying debris and wand discharge.

9.9.10 Drum and label all cleaning water as required by local regulations.

9.9.11 Use proper containment for equipment being cleaned.

9.10 PRODUCT TRANSFER

9.10.1 During the course of our operations we may be required to transfer flammable products (gasoline/diesel primarily) from tank to tank, dispenser to drum, tank to drum, etc. for on site storage or tank and line testing.

9.10.2 During any product transfer extreme care must be taken to prevent the build up of static electricity through bonding and grounding.

9.10.3 Spills must always be avoided. Have absorbent materials readily accessible.

9.10.4 The primary means of transfer are the use of:

- approved flammable liquid transfer pump.
- approved hand operated transfer pump.
- gasoline dispenser to calibration bucket, safety can or drum.

9.10.4.1 When using the pneumatic gasoline transfer pump, care must be taken to insure:

- tank truck hoses are being used.
- pump is grounded.
- 20 lb ABC fire extinguisher is readily accessible.
- discharge nozzle is below product level when possible.
- discharge hose is bonded to container by use of grounding wire and/or that nozzle is below product level.
- intake should be below product level to minimize air intake.

9.10.4.2 When using hand transfer pump, care must be taken to insure:

- discharge hose is bonded to tank or drum. (use ground wire or tip of standard steel braid gasoline hose)
- discharge nozzle is below surface of product.

9.10.4.3 When using gasoline dispenser to transfer product care must be taken to insure:

- nozzle tip rests against the metal container.
- a bonding (grounding) wire is used whenever lines are being purged of air. (Metal to metal contact is required).
- DO NOT use a plastic bucket!

9.10.5 Do not use trash or other water pumps for fuel transfer.

9.10.6 When necessary, approved safety cans will be used to store gasoline and diesel on Gettler-Ryan Inc. vehicles. Five (5) gallons of each product is the maximum allowable storage.

9.10.7 When pouring gasoline/diesel into tank or any container use approved funnels.

9.10.8 Flammable liquids will be stored on site only in DOT approved drums. (closed top with 1-2" bung and 1-3/4" bung) Drums must be properly labeled.

9.11 CONFINED SPACES

9.11.1 A confined space is any area where an employees' entry and exit are limited and where NORMAL air maybe in short supply and/or a hazardous atmosphere may exist. A confined space can be open topped if it is 4 feet deep or more.

Re: 8CCR5156-5159

9.11.2 Gettler-Ryan Inc. does not normally conduct services in permit required spaces as defined by OSHA. However, Gettler-Ryan Inc. employees will be trained in permit procedures, confined space operations and will use a Gettler-Ryan Inc. permit form for each confined space they enter.

9.11.2.1 The confined spaces which our employees may encounter are:

- Submersible pump boxes
- UGST manways.
- Recovery system vaults.
- Tank hole excavations.
- Trenches
- Sewer/stormdrain manholes

9.11.2.2 Prior to entering a confined space:

a. Check for flammable vapors and oxygen with Gastechtor. (10% LEL maximum, 20% oxygen minimum). Initial readings and readings on entry shall be recorded on the daily work report, and confined space permit form (see attachment 3). Recheck the space periodically while working and prior to each entry.

b. Secure the area around openings, remove all covers and allow space to vent a minimum of 5 minutes.

1. Use ventilation fans, if necessary.

c. Complete a confined space entry permit form (see Attachment 3).

9.11.2.3 No person shall enter a confined space where he or she suspects the accumulation of flammable or toxic vapors or where there is an insufficient oxygen atmosphere.

9.11.2.4 Two (2) persons are required for entry into a confined space; one to enter the space and the other to remain at the opening for communication with the person in the confined space. The observer may not leave his post while the other person remains in the confined space.

9.11.2.4.1 A least one member of the above-ground team must be C.P.R. certified.

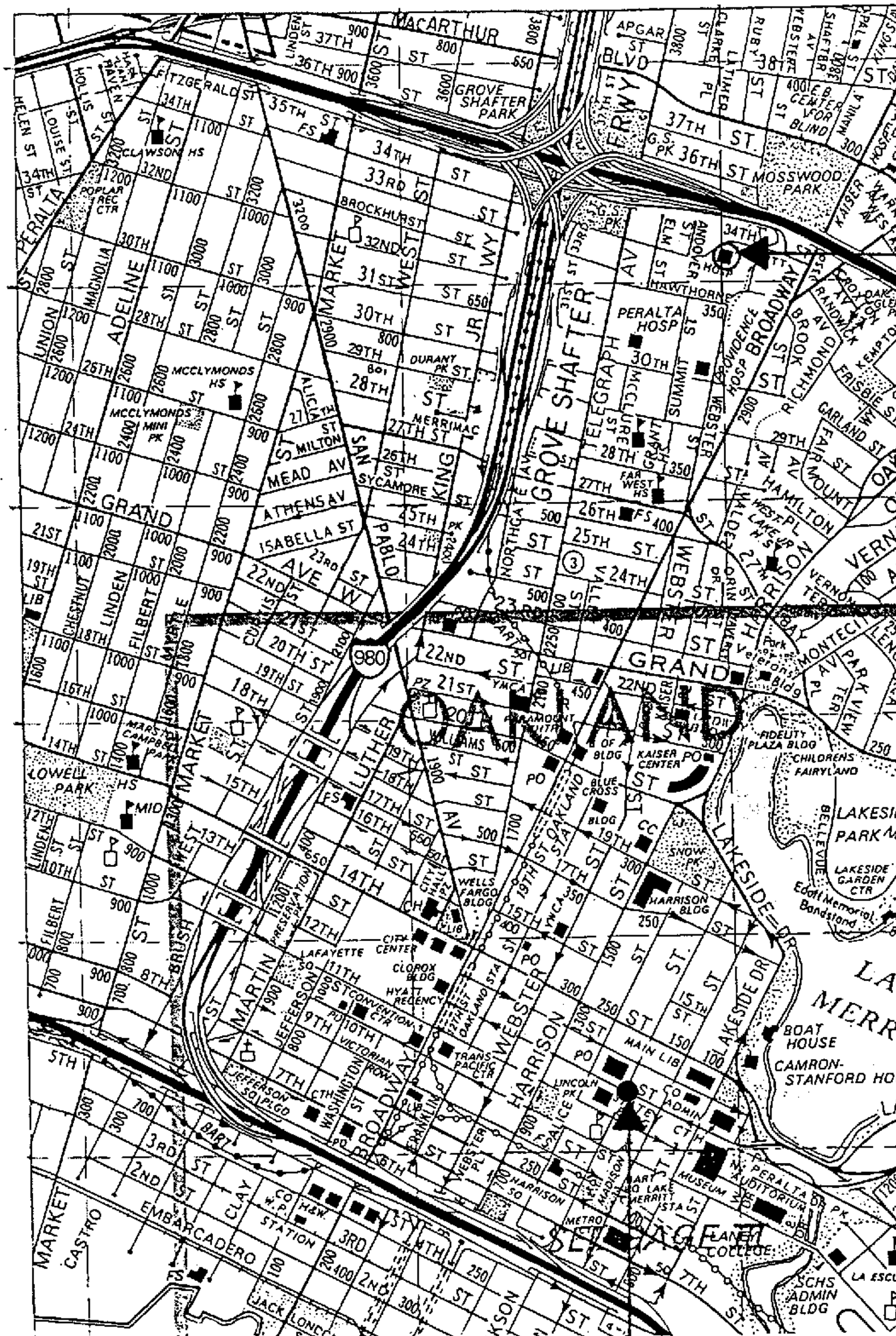
9.11.3 Gettler-Ryan Inc. does not normally work in confined spaces where supplied air would be required.

9.11.3.1 A minimum of three (3) persons are required for any entry into a confined space where supplied air is required:

a. 1 person to enter

b. 1 person to observe

c. 1 person to call for emergency assistance.



SUMMIT MEDICAL CENTER (SEE INFORMATION NEXT PAGE)

WORK SITE - ALAMEDA COUNTY PARKING GARAGE 165 13th STREET

SUMMIT
MEDICAL CENTER

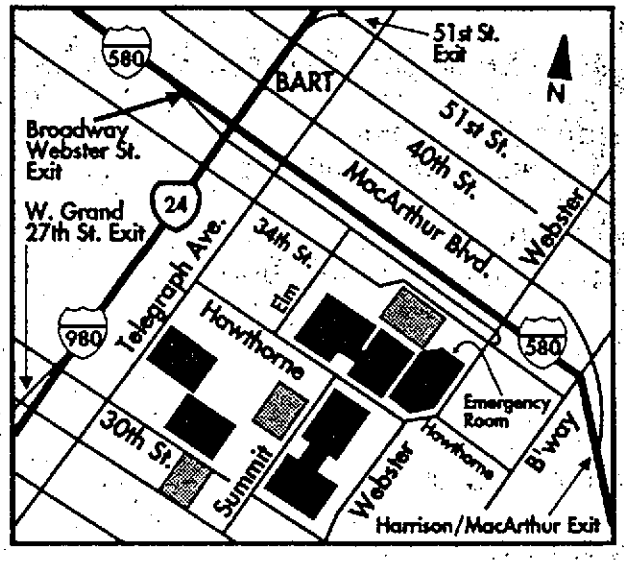
Formerly Merritt Peralta
Medical Center and
Providence Hospital

655-4000

24-Hour Emergency Room 420-6080

Health Match Physician Referral 420-6777

Located within minutes
of all East Bay communities
adjacent to Interstate 580
and Highway 24



350 Hawthorne Avenue, Oakland