HEALTH AND SAFETY PLAN
FOR
HIGH STREET GAS STATION
2951 HIGH STREET
OAKLAND, CALIFORNIA

GENERAL:

This Health and Safety Plan (HSP) contains the minimum requirements for the subject site and tank removal. The field activities include: removal of product, excavation, product lines, triple washing the tank, sampling rinsate, removing rinsate with vactruck, removing the tank, and proper disposal. All personnel and contractors will be required to strictly adhere to these HSP requirements.

The objective of the HSP plan is to describe procedures and actions to protect the worker, as well as unauthorized person, from inhalation and ingestion of, and direct skin contact with potentially hazardous materials that may be encountered at the site. The plan describes (1) personnel responsibilities and (2) protective equipment to be used as deemed when working on the site. At a minimum, all personnel working at the site must read and understand the requirements of this HSP. A copy of this HSP will be on-site, easily accessible to all staff and government field representative.

ALPHA GEO SERVICES

PERSONNEL RESPONSIBILITIES:

The key personnel directly involved in the investigation will be responsible for monitoring the implementation of safe work practices and the provisions of this plan are (1) Alpha Geo Services (AGS) supervisor, Mr. Richard Manley and (2) Soil Tech Engineering, Inc. (STE) project field engineer, Mr. Noori Ameli. These personnel are responsible for knowing the provisions of the plan, communicating plan requirements to workers under their supervision and regulatory agencies inspectors and for enforcing the plan.

The personnel-protective equipment will be selected to prevent field personnel from exposure to fuel hydrocarbons that may be present at the site. To prevent direct skin contact, the following protective clothing will be worn as appropriate while working at the site:

1. Tyvek coveralls.
2. Butyl rubber or disposable vinyl gloves.
3. Hard hat with optional face shield.
4. Steel toe boots.
5. Goggles or safety glasses.

The type of gloves used with be determined by the type of work being performed. Excavation and tank removal personnel will be required to wear butyl rubber gloves because they may have long

duration contact with the subsurface materials. The triple washing (decontaminated) and vactruck crews shall wear butyl rubber gloves as they may have long duration contact with the rinsate. STE sampling staff will wear disposable gloves when handling any sample. These gloves will be changed between each sample.

Tank destruction and removal personnel will be required to wear hard hats and when appropriate wear a protective face shield.

Personnel protective equipment shall be put on before entering the immediate work are. The sleeves of the overalls shall be outside of the cuffs of the gloves to facilitate removal of clothing with the least potential contamination of personnel. If at any time protective clothing (coveralls, boots or gloves) become torn, wet or excessively soiled, it will be replaced immediately.

Total organic vapors will be monitored at the site with a portable PID and portable LEL meter. Should the total organic vapor content approach that of the threshold limit valve (TLV) for any of the substances listed in Table 1, appropriate safety measures will be implemented under the supervision of the site project engineer. These precautions include, but are not limited to, the following: (1) Donning of respirators (with appropriate cartridges) by site personnel, (2) forced ventilation of the site, (3) shutdown of work until such time as appropriate safety measures sufficient to insure the health and safety of site personnel can be implemented.

TABLE 1
THRESHOLD LIMIT VALUES
FOR
COMMON GASOLINE CONSTITUENTS

Benzene	10 ppm
Toluene	100 ppm
Ethylbenzene	100 ppm
Xylenes	100 ppm

No eating, drinking or smoking will be allowed in the vicinity of the drilling operations. AGS will designate a separate area on-site for eating and drinking. Smoking will not be allowed at the vicinity of the site except in designated areas. No contact lenses will be worn by field personnel.

WORK ZONES AND SECURITY MEASURES:

The project engineer will call Underground Service Alert (USA), and the utilities will be marked before any excavation is conducted on-site, and excavation will be at safe distances from the utilities. The client will also be advised to have a representative on-site to advise us in selecting locations of piping trenches with respect to utilities, underground or above ground structures. AGS assumes no responsibility to utilities not so located. The excavation will be hand dig or using small power tools. Each of the areas where the tank or piping will be excavated will be designated as exclusion zones. Only essential

personnel will be allowed into an exclusion zone. When it is practical and local topography allows, approximately 25 to 75 feet of space surrounding those exclusion zones will be designated as contamination reduction zones.

Cones, wooden barricades or a suitable alternative will be used to deny public access to these contamination reduction zones excavation area. The general public will not be allowed closed to the work area under any conditions. If for any reason the safety of a member or the public (e.g. motorists or pedestrians) may be endanger, work will cease until the situation is remedied. Cones and working signs will be used when necessary to redirect motorists or pedestrians.

LOCATION AND PHONE NUMBERS OF EMERGENCY FACILITIES:

The fire department and hospital addresses and phone numbers are listed below:

City of Oakland Fire Department	911
Highland General Hospital 1411 East 31st Street, Oakland, CA	(510) 534-8055

ADDITIONAL CONTINGENCY TELEPHONE NUMBERS:

Poison Control Center . . . . . (800) 523-2222

Soil Tech Engineering Administrative Office . . . . (408) 496-0265

CHEMTREC . . . . . (800) 424-9300

NOTE: Only call CHEMTREC stands for Chemical Transportation Emergency Center, a public service of the Chemical Manufacturer's Association. CHEMTREC can usually provide hazard information, warnings and guidance when given the identification number or the name of the product and the nature of the problem. CHEMTREC can also contact the appropriate experts.

TYPES OF PROTECTIVE CLOTHING AND RESPIRATION THAT SHOULD BE USED AT HAZARDOUS WASTE SITES
HIGH STREET GAS STATION
2951 HIGH STREET
OAKLAND, CALIFORNIA

The degree of hazard is based on the waste material's physical, chemical, and biological properties and anticipated concentrations of the waste. The level of protective clothing and equipment worn must be sufficient to safeguard the individual. A four category system is described below.

LEVEL A

Level A consists of a pressure-demand SCBA (air supplying respirator with back mounted cylinders), fully encapsulated resistant suit, inner and outer chemical resistant gloves, chemical resistant steel safety boots (toe, shank, and metatarsal protection), and hard hat. Optional equipment might include cooling systems, abrasive resistant gloves, disposal oversuit and boot covers, communication equipment, and safety line. Level A is worn when the highest level of respiratory, skin, and eye protection is required. Most samplers will never wear Level A protection.

LEVEL B

Level B protection is utilized in areas where full respiratory protection is warranted, but a lower level of skin and eye protection is sufficient (only a small area of head and neck

is exposed). Level B consists of SCBA, splash suite (one or two piece) or disposal chemical resistant coveralls, inner and outer chemical resistant gloves, chemical resistant safety boots, and hard hat with face shield. Optional items include glove and boot covers and inner chemical resistant fabric coveralls.

LEVEL C

Level C permits the utilization of air-purifying respirators. Level B body, foot, and hand protection is normally maintained. Many organizations will permit only the use of approved full-face masks equipped with a chin or harness-mounted canister. However, many sites are visited by personnel wearing a half-mask cartridge respirator.

LEVEL D

Level D protection consists of a standard work uniform of coveralls, gloves, safety shoes or boots, hard hat, and goggles or safety glasses.

Respirators are of two basic types, air-purifying and air-supplying. Air-purifying respirators are designed to remove specific contaminants by means of filters and/or sorbents. Air-purifying respirators come in various sizes, shapes, and models and can be outfitted with a variety of filters, cartridges, and canisters. Each mask and cartridge or canister is designed for

protection against certain contaminant concentrations. Just because a cartridge says it is for use against organic vapors does not mean that it is good for all organic vapors.

Air-supplying respirators are utilized in oxygen-deficient atmospheres (less than 19.5 percent) or when an air-purifying device is not sufficient. Air is supplied to a face-mask from an uncontaminated source of air via and air line from stationary tanks, from a compressor, or from air cylinders worn on the back (SCBA). Rated capacities of the SCBA's are normally between 30 and 60 minutes. Only positive pressure (pressure demand) respirators should be used in high concentration hazardous environments.

Contact lenses are not permitted for use with any respirator. Contact lenses should not be worn at any site since they tend to concentrate organic materials around the eyes; soft plastic contact lenses can absorb chemicals directly. In addition, rapid removal of contact lenses may be difficult in an emergency. Although eye glasses can prevent a good seal around the temple when wearing goggles or full face masks, spectacle adapters are available for masks and goggles. Respirators often malfunction during cold weather or after continued use. Only NIOSH (National Institute for Occupational Safety and Health) MSHA (Mine Safety and Health Administration) approved respirators should be used.

This Site Safety Plan has been reviewed by the project engineer, STE field personnel and all subcontractors.

Amendments or modifications to this Plan may be written on a separate page and attached to this Plan. Any amendments or modifications must be reviewed and approved by the personnel name above.

This Site Safety Plan has been reviewed by the following persons:

Name:_____

Name:_____

Name:_____

Name:_____

Name:_____

Name:_____

Name:_____