

Eva

Here is a revised
SHSP as you requested.

Attachments
(Tank Removal)

ON-SITE WORK PLAN
FOR TANK REMOVAL AND EXCAVATION

Jax
Terri Stock
American Construction.
(510) 447-2484.

#10 Permit
9/13

Removal of Flammable Vapors and Removal of Tanks

Removal of flammable vapors and removal of tanks will be performed in accordance with the requirements of Local Regulatory Agencies. The following are general guide lines.

A review of available codes, standards, and recommended procedures produces the following consensus:

- A. All possible sources of ignition must be kept from impacting the tank or the area in which flammable vapors may reside during excavation or after removal.
- B. Drain and flush all piping into tank. Flammable or combustible free standing liquid production stock will be removed from the tank prior to removal. Avoid spilling product on the ground during disconnection of the tank from its associated lines.
- C. Vent lines should not be sealed and should be cut last. Keep all sources of ignition away from vent lines as well as tanks.
- D. Once all liquid has been removed from the tank, any tank with flammable vapors in excess of 10% of the LEL or 5% oxygen will be purged with dry ice (CO₂). Thirty pounds of dry ice per 1,000 gallons of tank capacity is added to render the tank inert. All piping except the vent pipe should be disconnected.

Emergency Services

The address and telephone number of the local hospital, ambulance and medical emergency room should be prominently posted. In addition, the telephone number of the fire department/rescue unit should be posted.

General information regarding emergency services may be found on front page.

erythema, burning, edema and blistering of the skin. Inhalation of high concentrations of benzene can produce central nervous system depression characterized by confusion, dizziness, tightening of the leg muscle, excitation, stupification and coma. Benzene is a known leukemogen and suspected human mutagen, carcinogen and teratogen. It is also a severe fire hazard. TLV = 10ppm, PEL = 1ppm, Odor Threshold Concentration = 4.7 ppm. Ionization Potential = 9.245.

2. NAPHTHALENE

Naphthalene can affect the body by inhalation, eye or skin contact or by ingestion; it is also absorbed by the skin. Inhalation or ingestion may cause gastrointestinal disorders and bloody or dark urine. Exposure to naphthalene may also cause destruction of red blood cells resulting in anemia, jaundice, and kidney and liver damage. Naphthalene may also cause skin irritation and, possible, and allergic rash. Repeated exposure may cause cataracts. TLV = 10 ppm, PEL = 10 ppm, Threshold Odor Concentration = 0.003 to 0.3 ppm. Ionization Potential = 8.12.

3. ETHYL BENZENE

Liquid ethyl benzene is an irritant to the skin and mucous membranes. Ethyl benzene vapors are irritating to the eyes and can cause dizziness, irritation to the nose and throat, and a sense of constriction of the chest. Exposure to high vapor concentrations can cause ataxia, loss of consciousness, tremor of the extremities and death due to respiratory failure. It is also an experimental teratogen. TLV = 100 ppm, PEL = 100 ppm, Odor Threshold Concentration = 0.25 to 200 ppm. Ionization potential = 8.76.

4. TOLUENE

Toluene is a skin and eye irritant. It can cause central nervous system depression which is characterized by headaches, nausea, loss of appetite, lassitude and impairment of coordination and reaction time. It may affect the liver and blood, and it may also be a mutagen. TLV = 100 ppm, PEL = 100 ppm. Odor Threshold Concentration = 0.17 to 40 ppm. Ionization Potential = 8.82.

5. XYLENE

Xylene is a skin, eye and respiratory system irritant. It is moderately toxic by inhalation and ingestion and may cause pulmonary edema if inhaled in high concentrations. TLV = 100 ppm, PEL = 100 ppm. Odor Threshold Concentration = 0.5 to 3.8 ppm. Ionization Potential = 8.45 - 8.56.

B. Fire and Explosion

The presence of volatile liquids and vapors at this site presents the potential for fire or explosion during the excavation. The following precautions will be taken during the project to prevent fire or explosion:

1. There will be NO SMOKING within a 50 foot radius from the source of any vapors.
2. The atmosphere at the site will be continually monitored for the presence and concentration of flammable vapors and measurements will be documented in writing.
3. Two 10 A-20 B:C fire extinguishers will be maintained on site within 50 feet of the line of travel of the on-ground person designated as fire watch at all times.
4. During refueling of vehicles and heavy equipment, the engines of the equipment will be required to be off. There must be metal to metal contact between the refueling equipment and vehicle/heavy equipment being refueled. No combustion sources will be allowed with 25 feet of refueling operations.

PERSONAL PROTECTIVE EQUIPMENT

Level D PPE will be required on site at all times. The following table will guide upgrades from this level of protection:

Consistent-Sustained
Breathing Zone

PID Reading

Level of Protection

<10 ppm

Level D

10 - 100 ppm

Level D + half-mask air purifying respirator

50 - 500 ppm

Level D + full-face air purifying respirator

>500 ppm

Level D + SCBA

Descriptions of the different levels of protection are found in Appendix A.

C. Air Monitoring, Personnel Monitoring, Environmental Sampling Techniques and Instrumentation

The following monitoring will be performed at this site.

- A combustible gas indicator (CGI) will be used to monitor the atmosphere at the site for flammable vapors.
- A Photoionization Detector (PID) or equivalent will be used to determine the appropriate level of protection.
- A Photoionization Detector (PID) or equivalent will be used to screen soils for contamination as they are removed from the excavation.

Monitoring with the CGI, for flammable vapors, and the PID, to determine levels of protection, will be performed continually and documented in writing. Monitoring with the PID to screen for soil contamination will be performed as needed. When the PID is being used to screen soils, breathing zone measurements will be alternated with soil screening measurements. Breathing zone measurements from the person screening the soils will be used to guide levels of protection for all workers within the exclusion zone.

All environmental monitoring and sampling at the site will be performed in accordance with Federal, State, and Local Regulations and accepted standards. Monitoring instruments will be calibrated and maintained in accordance with the manufacturer's instructions. Calibration will be documented in writing.

SPILL CONTAINMENT PROGRAM

If there is no health threat from containing a spill, the following spill control measures will be implemented immediately:

- a. Take measures to stop the release.
- b. Construct a containment barrier using excavated soil to prevent the contaminant from spreading.
- c. Remove as much of the liquid portion of the substance as possible using a pump truck and/or adsorbent material.
- d. Place contaminated containment soil into an appropriate container for disposal.
- e. Place all contaminated materials which cannot

be decontaminated into appropriate containers for disposal.

- f. Decontaminate all tools used in the spill control procedures.
- g. Properly dispose of all contaminated materials including decontamination rinse water.
- h. Notify the appropriate authorities.

Appendix A

Levels of Protection

2

3

Level A

1. Positive pressure, full-facedpiece, self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA.
2. Totally-encapsulating chemical-protective suit.
3. Gloves, outer, chemical-resistant.
4. Gloves, inner, chemical-resistant.
5. Boots, outer, chemical-resistant steel toe and shank.
6. Optional Level A:
 - Coveralls
 - Long Underwear
 - Hard hat*

Level B

1. Positive pressure, full-facedpiece, self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA.
2. Hooded chemical-resistant clothing.
3. Gloves, outer, chemical-resistant.
4. Gloves, inner, chemical-resistant.
5. Boots, outer, chemical-resistant steel toe and shank.
6. Optional Level B:
 - Coveralls
 - Boot covers, outer, chemical-resistant, disposal
 - Hard hat
 - Face shield

Level C

1. Full-face or half-mask air purifying respirator.
2. Hooded chemical-resistant clothing.
3. Gloves, outer, chemical-resistant.

4. Gloves, inner, chemical-resistant.

5. Optional Level C:

- Coveralls
- Boot covers, outer, chemical resistant, disposal
- Hard hat
- Face shield
- Boots, outer, chemical-resistant steel toe and shank
- Escape Mask

Level D

1. Coveralls

2. Boots/shoes, chemical-resistant steel toe and shank.

3. Safety glasses or chemical splash goggles.

4. Gloves, inner, chemical-resistant.

5. Optional Level D:

- Gloves
- Boots, outer, chemical-resistant, disposal
- Hard hat*
- Face shield
- Escape Mask

*Required

...forms\safetank.att