

## **HEALTH AND SAFETY PLAN**

Prepared for:

UST Removal  
at  
2201 West Street  
Oakland, CA



## D. HAZARD EVALUATION

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 at sites which previously handled petroleum hydrocarbons, including home heating diesel fuel.

### 1. Benzene

- a. Colorless to light yellow, flammable liquid with an aromatic odor.
- b. Toxic hazard by **inhalation, adsorption, ingestion** and **skin and/or eye contact**.
- c. Exposure may irritate eyes, nose and respiratory system and may cause acute restlessness, convulsions, nausea, or depression. Benzene is carcinogenic.\*
- d. 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 sweet, pungent, benzene like odor.
- b. Toxic hazard by **inhalation, adsorption, ingestion** and **skin and/or eye contact**.
- c. Exposure may cause fatigue, weakness, confusion, euphoria, dizziness, headaches, dilated pupils, lacrimation, nervousness, insomnia, paresthesia, and dermatitis.
- d. Permissible exposure level for a time weighted average over an eight hour period is 100 ppm.

### 3. Xylene

- a. Colorless liquid with an aromatic odor.
- b. Toxic hazard by **inhalation, adsorption, ingestion** and **skin and/or eye contact**.
- c. Exposure may irritate eyes nose and throat and may cause dizziness, excitement, drowsiness, incoordination, corneal vacuolization, anorexia, nausea, vomiting, and dermatitis.
- d. Permissible exposure level for a time weighted average over an eight hour period is 100 ppm.

### 4. Ethylbenzene

- a. Colorless liquid with an aromatic odor.
- b. Toxic hazard by **inhalation, ingestion**, and **skin and/or eye contact**. Ethylbenzene is carcinogenic.\*
- c. Exposure may irritate eyes and mucous membrane and may cause headaches, dermatitis, narcosis and loss of consciousness.
- d. Permissible exposure level for a time weighted average over an eight hour period is 100 ppm.

\* **Known to the State of California to cause cancer.**

5. Lead

- a. A heavy ductile soft grey metal.
- b. Toxic hazard by **inhalation, ingestion, and skin and/or eye contact**.
- c. Exposure may cause weakness, nausea, lassitude, diarrhea, insomnia, anorexia, inflamed mucous membranes and abdominal pains. Lead is carcinogenic.\*
- d. Permissible exposure level for a time weighted average over an eight hour period is .05 ppb (in vapor).

6. Diesel

- a. Colorless to dark brown, combustible liquid with an aromatic odor
- b. Toxic hazard by **inhalation, ingestion, skin and/or eye contact**.
- c. Inhalation of vapors may depress the central nervous system, increasing reaction times, and decreasing pulse rate and blood pressure. Skin irritant.
- d. Occupational exposure limit 5.0 ppm (in vapor).

7. Gasoline

- a. Colorless liquid with a strong aromatic odor. Highly volatile and extremely flammable.
- b. Toxic hazard by **inhalation, adsorption, ingestion and skin and/or eye contact**.
- c. Inhalation of vapors can cause depression of the central nervous system with symptoms such as headache, dizziness, nausea and loss of coordination. Skin contact can cause defatting of the skin, skin irritation and dermatitis. Benzene is a major constituent of gasoline.
- d. Permissible exposure level for a time weighted average over an eight hour period is 300 ppm.

8. Waste Oil

- a. Toxic hazard by **ingestion** and possibly **inhalation**.
- b. Prolonged contact may cause skin irritation and dermatitis. Waste oil may be carcinogenic.\*
- c. Waste oil may contain metals or toxic organics from thermal breakdown of the oil. In some cases, chlorinated solvents may be present.
- d. Permissible exposure level for a time weighted average over an eight hour period is 5 ppm (in vapor).

\* **Known to the State of California to cause cancer.**

Dusty Roy has been designated to coordinate access control and security on site. All work will strictly follow OSHA guidelines. A safe perimeter has been established at a three foot radius surrounding the site. These boundaries are identified by yellow caution tape and orange safety cones. Personnel shall maintain the maximum distance from the pit while performing their duties. No one shall enter an excavation pit that is greater than five feet in depth unless the excavation is shored or sloped and no one shall climb on the stockpiled material except to cover it with plastic. Additional hazards on site include heavy equipment and overhead lifting equipment. Heavy equipment used for performing the tank removal project may include a backhoe, an excavator, or a crane for lifting the tank out of the excavation. Only 40 hour trained personnel will operate equipment or perform any duty associated with this project. A hard hat and steel toed boots are mandatory for all personnel associated with the tank removal.

A FIRST AID KIT AND A 40 POUND BC FIRE EXTINGUISHER WILL BE AVAILABLE ON SITE.

EMERGENCY SERVICES ARE AVAILABLE BY DIALING 911 ON THE TELEPHONE LOCATED IN THE SITE MANAGER'S VEHICLE. THIS VEHICLE WILL BE ON SITE AT ALL TIMES.

#### E. PERSONAL PROTECTIVE CLOTHING

Based on evaluation of potential hazards, level "D" protective clothing has been designated as the appropriate protection for this project. The level of protective clothing will be upgraded if the organic vapor levels in the operator's breathing zone exceeds 5 ppm above background levels continuously for more than five minutes, or if any single reading exceeds 25 ppm. If this occurs then level C protection will be used. If the organic concentration in the operator's breathing zone exceed's 200 ppm for 5 minutes and/or the organic vapor concentration two feet above the excavation exceeds 1,000 ppm or 10% of the lower explosive limit, then the equipment will be shut down and the site evacuated. If organic vapor concentrations exceed 200 ppm and work continues then level B protection will be required.

"EPA Standard Operating Safety Guidelines" defines the levels of protective clothing as follows:

##### LEVEL A:

Fully encapsulating suit / SCBA / Hard hat / Steel toe boots / Safety gloves.

##### LEVEL B:

Splash resistant suit / SCBA / Hard Hat / Steel toe boots / Safety gloves.

##### LEVEL C:

Half face respirator / Hard hat / Safety glasses / Steel toe boots / Coveralls / Gloves.

##### LEVEL D:

Coveralls / Hardhat / Safety Glasses / Steel toe boots / Gloves.

If air purifying respirators are authorized, organic vapor w-filter is the appropriate canister for use with the involved substances and concentrations. A competent individual has determined that all criteria for using this type of respiratory protection have been met.

NO CHANGES TO THE SPECIFIED LEVELS OF PROTECTION SHALL BE MADE WITHOUT THE APPROVAL OF THE COMPANY SAFETY OFFICER, JOHN ORMEROD.

#### F. MONITORING INSTRUMENTS

The following environmental monitoring instruments shall be used on site at specified intervals.

Lower Explosive Limit (LEL) Meter that will also check the tank for Oxygen levels will be used to check the tank for removal and transportation.

#### G. EMERGENCY HOSPITAL

The closest hospital with an emergency room is:

**Summit Medical Center  
Emergency**

**(510) 655-4000  
911**

DIRECTIONS FROM THE JOB SITE:

EXIT JOBSITE AND GO:

LEFT(NORTH) ON ? STREET  
VEER RIGHT (EAST) ON ! AVENUE  
HOSPITAL LOCATED ON LEFT AT ### @ ROAD

H. READ AND SIGN

The work party was briefed on the contents of this plan on \_\_\_\_\_ at 8:00 am. All site personnel have read the above plan and are familiar with its provisions.

NAME:

SIGNATURE:

COMPANY NAME:

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