



HYDROGEN SULFIDE (H₂S) & CONFINED SPACES

Hydrogen sulfide is a colorless, flammable, extremely hazardous gas with a rotten egg smell. It occurs naturally in crude petroleum and natural gas and can be produced by the breakdown of organic matter and human and/or animal wastes (i.e., sewage). It's heavier than air and can collect in low-lying, enclosed, poorly ventilated areas such as basements, manholes, sewer lines and underground telephone and electrical vaults. When hydrogen sulfide gas burns it produces other toxic vapors and gases, including sulfur dioxide.

HEALTH EFFECTS

Health effects vary with the length of the exposure and the concentration levels in which you are exposed. People with asthma may be at greater risk. The OSHA Construction Permissible Exposure Limit is an eight-hour limit of 10 ppm.

- Low concentrations (2 -5 ppm) – Effects include irritation of eyes, nose, throat or respiratory system. These effects can be delayed.
- Moderate concentrations (20 -50 ppm) – Effects include more severe eye irritation and difficulty breathing, headache, dizziness, nausea, coughing and vomiting.
- High concentrations (100 ppm and greater) – Effects that can be extremely rapid (within a few breaths) include shock, convulsions, inability to breathe, coma or death.

BEFORE ENTERING A VAULT, TANK OR OTHER CONFINED SPACE

A qualified person using gas detection equipment must test the air for the presence and concentration of hydrogen sulfide (and other atmospheric hazards). The qualified person also determines if fire and/or explosion precautions are necessary.

- If gas is present, you must ventilate the space.
- If you can't remove the gas, use appropriate respiratory protection and any other necessary personal protective, rescue and communication equipment.
- Atmospheres containing high concentrations (greater than 100 ppm) are immediately dangerous to life and health and require a self-contained breathing apparatus.

There are absolutely **NO** circumstances under which you would ever enter a confined space (a space large enough to enter, limited entry and exit, not designed for continuous occupancy) without:

- 1) Testing for atmospheric hazards.
- 2) Having the equipment and training to do a non-entry rescue. Calling the fire department is NOT a rescue plan. It's a recovery plan.
- 3) Following all confined space requirements under OSHA 1926 Subpart AA.



Company Name: _____

Project #/Name: _____

Meeting Date: _____

Meeting Location: _____

Person Conducting Meeting: _____

Items Discussed

Problem Areas or Concerns

Attendees

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Comments
