Safety Meeting

EDM Services, Inc.
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What is H2S?

Hydrogen Sulfide or sour gas (H2S) is a flammable, colorless gas that is toxic at extremely low concentrations. It is heavier than air, and may accumulate in low-lying areas. It smells like "rotten eggs" at low concentrations and causes you to quickly lose your sense of smell. Many areas where the gas is found have been identified, but pockets of the gas can occur anywhere.
Guidelines

Active monitoring for hydrogen sulfide gas and good planning and training programs for workers are the best ways to prevent injury and death.

- Use detection equipment when working in an area where there is a possibility of H2S gas, especially in enclosed or below grade areas such as holes, trenches, & reserve pits.
- Maintain and calibrate detection equipment per manufacturer's specifications.
- Do not enter an H2S area without proper training and authorization.
- In IDLH atmospheres a standby person(s) with suitable Self Contained Breathing Apparatus (SCBA) must be available for purposes of rescue.
- **Never attempt to rescue an H2S victim without a SCBA.**
- Employees working in H2S areas are required to be properly “fit tested”.
- All H2S exposure victims should be treated by a physician before returning to work.
- In the event of a H2S emergency, all personnel should follow the site emergency plan.
- H2S areas, facilities, pipelines, and/or flowlines should be properly identified with signage.
Hazards and Effects of H2S

- Do not rely on your sense of smell to detect H2S.
- H2S causes paralysis of the respiratory center in the brain and can result in immediate collapse and death.
- Inhalation of lower concentrations of H2S gas can cause irrational behavior resulting in unsafe acts and injuries.
- H2S is very flammable.
- H2S reacts with steel to form iron sulfide which can ignite when exposed to air.
- H2S when burned produces Sulfur Dioxide (SO2) which is also toxic.
- H2S is highly corrosive and may lead to metal embrittlement/fatigue.
- H2S effects are influenced and possibly accelerated by alcohol and certain medications.

Concentrations of H2S may affect each individual differently! Exposure may cause:

- Skin and/or eye irritation
- Dizziness
- Loss of appetite
- Dryness in nose and/or throat
- Fatigue
- Coughing
- Nausea
- Loss of consciousness or death
- Headache

Metal fatigue, including hydrogen embrittlement or sulfide stress cracking, can result in a release of hydrogen sulfide gas.