



Manure Pit Gas Hazards

A confined-space hazard that often claims multiple lives before anyone realizes there is a danger is manure gas. Manure pits can be oxygen-deficient, toxic and explosive. There are four gases in manure pits that are of primary concern.

Hydrogen Sulfide is a highly toxic gas that is heavier than air. It can cause dizziness, unconsciousness and death. At low concentrations it may smell like rotten eggs, but at higher concentrations it deadens the sense of smell so that no odor can be detected.

Carbon dioxide is an odorless, tasteless gas that is heavier than air. It displaces the oxygen supply in the bloodstream, which can cause unconsciousness and death.

Ammonia is a gas that is lighter than air. It has a pungent smell and can irritate the eyes and respiratory tract. Ammonia also displaces oxygen in the bloodstream.

Methane is also a gas that is lighter than air. The primary hazard of methane gas is that it can create an explosive atmosphere. This gas also displaces oxygen.

- Never enter a manure pit alone.
- Label the manure pit and manure storage areas to warn of the gas hazards.
- Obtain and use monitoring equipment to determine the level of gases present in the manure storage area.
- A self-contained breathing apparatus must be worn when entering a manure storage area and the person wearing it should be trained in its use. A safety harness should also be worn and personnel should be available outside the storage area to monitor the entrant's progress.

Inspection

- Do fences/metal-grill covers restrict pit access?
- Are manure gas warning labels near pit?

Information supplied by the National Safety Council's Agricultural Division, the National Education Center for Agricultural Safety (NECAS) – www.necasag.org or 888-844-6322.