

**S**afety is an extremely important consideration in the design and operation of a manure storage facility.

## Safety in Manure Storage Facilities

As livestock operations become larger and numbers of employees more numerous, safety becomes a critical issue in manure storage.

### Signage and fencing

Manure storage facilities should always be equipped with a fence or other barrier to prevent accidental animal or human entry. Earthen impoundments should be fenced to exclude animal traffic but still permit entry with pumping equipment. Install signs that will alert uninformed individuals that a potential hazard exists. Removable grills should be installed over pumping and agitation openings. Railings around pump docks and access points will provide protection during agitation and cleanout.

### Toxic gases

Stored manure generates toxic gases such as hydrogen sulfide that can accumulate to hazardous levels under certain conditions. When stored manure is agitated, these gases are released at potentially toxic concentrations. Humans or animals should not be near a tank or in a building where manure is being agitated. If removal of animals is not possible, provide maximum ventilation of the building either by operating all ventilating fans or opening all doors and ventilating curtains. ***Do not allow anyone to enter a manure tank without a self-contained breathing apparatus and use the “buddy system.”***

### Secondary containment

Secondary containment structures can reduce the possibility of environmental impact due to a “spill,” or malfunction of the manure collection transport system. Examples of possible malfunctions include plugged or broken sewer lines, discharge of manure through cleanouts, and broken recycle lines. A secondary containment system designed to catch runoff from the building and manure storage area offers increased protection in the event of a malfunction. Accumulated runoff in the secondary containment facility is tested for contaminant levels. If levels are below a certain threshold, the accumulated runoff may be discharged from the facility. If contaminant levels are above the threshold level, the effluent must be handled through the manure management system. Some states may require secondary containment structures, depending on the size of the facility.