Importance of Hydrogen Sulfide Safety

Hydrogen sulfide can spike quickly and without warning during pit pumping.

**DURING AGITATION**

**DEADLY GASES POSSIBLE**

People should **NEVER** enter a building or facility while agitation is occurring. Use yellow caution tape to mark barn entrances and alert everyone that manure agitation and pumping is occurring. Consider lockout tags during pumping.

If possible, remove animals before pumping. For barns with multiple pits move cattle out of the room with the pit being agitated to reduce risk.

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**Agitation Strategy**

- Don’t agitate until manure the manure level is 1 ½ to 2 feet below the slats.
  - Hydrogen sulfide is denser than air and as a result will tend to pool on the manure surface; sufficient separation is required to minimize hydrogen sulfide in the animal breathing zone

- Avoid aggressive agitation when animals are in the building (no rooster tailing).
  - Surface agitation causes more turbulence and greatly increases the release of hydrogen sulfide

- Do not direct agitator nozzles toward pillars, walls, or towards a corner.
  - Pillars and walls stop flow quickly and cause the manure to churn, increasing the rate hydrogen sulfide is off gassed from the manure.
  - Corners are often dead air zones; releases off hydrogen sulfide in this area are more likely to result in animal loss

- Stop agitating when bottom nozzle is less than 6” below the manure surface.
  - Keep the agitation below the surface at all times.

- Avoid sudden changes in agitator depth and intensity.
  - Quick changes can result in large amounts of solids that haven’t previously been agitated and result in rapid gas release.
  - Slower changes in both power, flow direction, and depth, allow slower, more continuous release that is safer for animals and workers.