



**STAY  
FARM  
SAFE**

# STAY FARM SAFE



**BE AWARE OF THE DANGERS  
WHEN MIXING SLURRY**

**SAFETY FOR FARMERS**

## **Slurry gas - the silent killer on our farms**

Despite numerous incidents, repeated warnings and articles on the subject of slurry gas, farmers and their workers still continue to get caught out, often with serious consequences. Slurry gas is released very quickly in underground slatted tanks after the slurry pump has been activated. In the majority of incidents HSENI has investigated, high concentrations of gas have been released into the atmosphere within minutes of the slurry pump starting up. Hydrogen Sulphide (H<sub>2</sub>S) is the gas that can cause the most harm but other gases such as methane, carbon dioxide and ammonia are also present when slurry is mixed or agitated in tanks. Previous tests carried out by HSENI found levels up to 2000 ppm of Hydrogen Sulphide in the atmosphere within minutes of the pump starting. At this concentration, anyone breathing this atmosphere would become unconscious with respiratory paralysis and would be dead within a few minutes.

## **What about gas monitors?**

Farmers often ask about the suitability of gas monitors when mixing slurry. They are certainly available it is important to remember that they need to be serviced and calibrated on a regular basis.

## **Will a mask help?**

Only proper breathing apparatus with its own air supply is recommended. Filter type masks are not suitable.

Farmers frequently enter buildings to determine if the slurry is being mixed at the opposite end of the house from where the pump is located. This is a dangerous practice as the pump will direct the slurry and the gas to the furthest point in large quantities. This situation is often encountered in many of the reported incidents, with the cattle collapsing in the pen furthest away from the mixing point.

One such incident occurred in the Kilkeel area during 2010. A farmer from Annalong, Co Down had started to mix his slurry tank with the help of his neighbour. He had made the decision not to remove the cattle from the house before mixing commenced. A short time after the slurry pump had started his neighbour noticed cattle going down in the pen furthest away from the main door. The farmer

had gone to the cattle in an effort to save them but he too collapsed. The neighbour saw what happened, stopped the slurry pump and made his way to where the farmer was lying. He dragged the farmer up the feed passage towards the exit door and outside. The farmer's son arrived on the scene and helped the neighbour get his father to safety. An ambulance was called and the farmer spent some time in hospital before being released. A number of bulls were lost in the incident but it could have been much worse with the loss of human life, not only the farmer, but also others trying to save him.

### **What should you do if someone has been overcome by gas from slurry?**

If possible, stop the pump and get the person to fresh air but do not put yourself at risk in the process. If breathing is weak or stopped artificial respiration may be effective in saving life. Get emergency medical attention as soon as possible.

### **Slurry gas can kill people and animals.**

The risk is variable and difficult to predict. You may not have experienced a problem with slurry gas on your farm up to now, but the gas will always be present. A combination of conditions can easily result in you or your animals suddenly being in serious danger.

### **Don't let it happen to you.**

So what should farmers do to protect themselves and their workers from the dangers associated with pumping slurry in underground tanks?

It will be necessary to carry out a risk assessment before slurry mixing work has commenced. This does not have to be complicated.

We know the hazard is the slurry, we know the risk is being overcome by gas but we also need to know how to protect ourselves from becoming affected.

The list on the back of this pamphlet gives the top tips for safety during tank mixing.

# Slurry Gas Safety

Remember...

The tried and tested method for ensuring safety during tank mixing is as follows:

- Remove all animals from the buildings where slurry is to be mixed.
- The building should be well ventilated by opening all doors. Choose a breezy day to carry out mixing as the gases will be dispersed more quickly than on a calm day.
- The farmer should not enter into the building during mixing as toxic gases can linger inside buildings for considerable lengths of time.
- Use outside mixing points first and always keep out of the building when the pump is working. Consider installing outside mixing points and safety gang slats to tanks where they currently do not exist.
- Never allow children to be present during slurry mixing operations.



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