

Dairy farmers throughout BC are potentially exposed to toxic Hydrogen Sulphide (H₂S) gas whenever liquid manure is agitated or pumped within manure storage systems. Farmers need to be aware of H₂S gas exposure that can cause breathing difficulties, loss of consciousness and ultimately death.

H₂S Warning Signs

□ Eye irritation

soreness, light sensitivity and seeing “rainbows” around bright lights

□ Breathing irritation

sore nasal passages, sore throat and burning feeling in chest

□ Other symptoms

headache, confusion, nausea and disorientation

Health Hazards

- Hydrogen Sulphide is a very toxic gas
- It has no colour and smells like rotten eggs
- In larger amounts H₂S, quickly blocks the sense of smell - that is why odour should never be used to rate H₂S levels
- Over exposure to H₂S can cause you to stop breathing
- When disturbed, H₂S gas is released, it can render a person unconscious

Tips to Lower H₂S Gas Exposure

- Wear H₂S gas detector to alert you of exposure to H₂S gas
- Do not stand near the agitator or enter enclosed area while agitation occurs
- Perform agitation on a windy day and stand upwind or cross wind of agitation area
- Ventilate the area to ensure that fresh air enters the work area (e.g.; open windows and doors)
- Allow at least 15 minutes of ventilation before entering the area following agitation



Confined / Enclosed Spaces

If your liquid manure work practices involve the requirement to enter a confined or enclosed space, AgSafe strongly recommends farmers receive assistance from a qualified professional.

A list of certified industrial hygienists can be found under Confined Space Resources on our website.

Michael McCarthy helped his father ‘knock off’ a hard crust that had formed on the slurry with a four-foot pike. He was overcome by fumes and fell into the slurry.

The tragic death of Michael urges farmers to implement vigilant safety practices.

[RTE News, 2015]

Exposure Limits

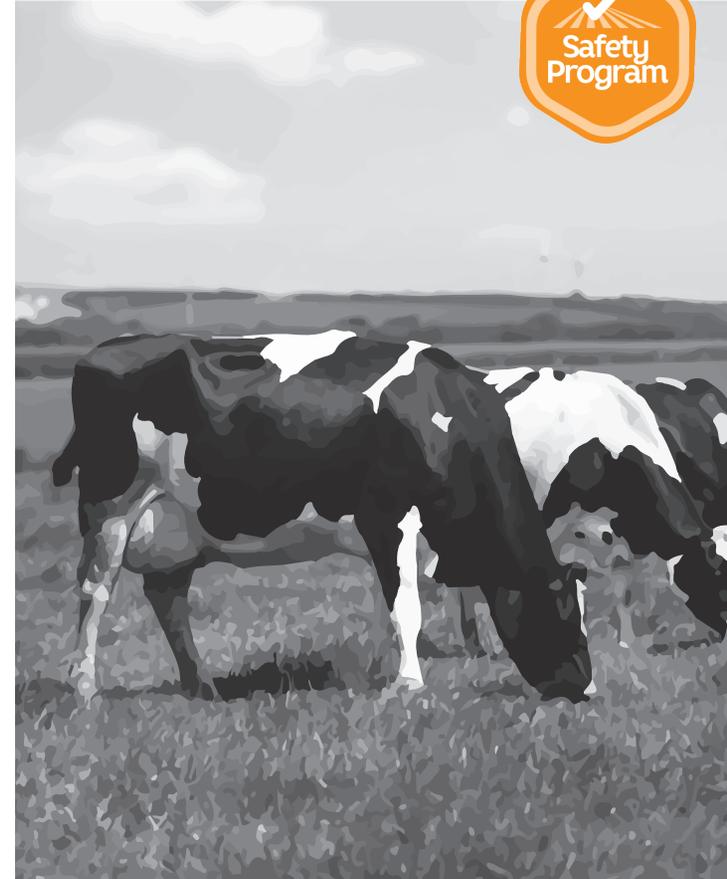
The occupational exposure limit is a ceiling (a value not to be exceeded) of 10 ppm. The immediately dangerous to life and health limit is 100 ppm.

H₂S levels up to 300 ppm have been reported at the start of agitation and reach as high as 1000 ppm during vigorous agitation*.

Most people will smell the typical “rotten egg” odour at a concentration as low as 1 ppm.

*American Society of Agricultural & Biological Engineers

Hydrogen Sulphide Gas Exposure on BC Dairy Farms



Useful Tools to Prevent Exposure to H₂S

Visit our website www.agsafebc.ca for further information.

A sample H₂S exposure control plan is available under the dairy farm resources section on our website.

Awareness Training

Toxic gases and a lack of oxygen are not visible to the naked eye and often cannot be detected by smell. The levels of oxygen and toxic gas can change very quickly.

Awareness training should include:

- The health hazards of released toxic gas
- The important use of multi-gas detectors and monitors
- Safe agricultural practices (e.g.; manure management and ventilation etc)

To arrange training, contact the Safety Consultant for your area by calling:

— **1.877.533.1789** —

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