



For more information on precautions & PPE needed before entering a bin, listen to our FarmSafe Podcast episode, *Grain Bin Safety, Part 1: Motivation & Tips to Prevent Engulfment.*

IOWA

College of Public Health



GREAT PLAINS
Center for Agricultural Health

CONFINED SPACE SAFETY

GRAIN STORAGE STRUCTURE ENTRY PROCEDURES:



1

CLARIFY TASKS TO PERFORM DURING ENTRY

- Why does someone need to enter?
- Explore alternatives to entering for the reason identified in previous step.
- Prepare for entry:
 - Obtain tools, equipment, & PPE needed for the specified task.
 - Gather trained entrant and observer

2

VERIFY "ZERO ENERGY" IN THE SYSTEM BEFORE ENTRY

- Shut off ALL grain loading and unloading equipment.
- Shut off any rotating or moving mechanical equipment inside the bin.
- Lock out and tag out each power source to prevent equipment from being turned on while someone is inside.

3

TEST THE AIR QUALITY PRIOR TO AND DURING ENTRY

- Oxygen Level: Do not enter if **< 19.5% or > 23.5%**
- Carbon Monoxide: If present, identify source. Danger if **> 25 ppm**
- Hydrogen Sulfide: No entry if **detectable**
- Dust: No entry without N95 or better if you can't see **> 5 ft** in front of you

4

DETERMINE RISK OF STRUCTURE & CONDITION OF MATERIALS

If any of the following are a "yes", entrant **MUST** wear body harness that is tied off to grain bin structure.

- Is the grain bridged? Solid surface may collapse with weight.
- Is grain uneven at the top? Grain can fall from walls and engulf entrant.
- Do the walls slope inward, or the floors slope downward? Building shape can lead to trapped entrant.

5

COMPLETE AN ENTRY PERMIT OR CHECKLIST

This permit/checklist identifies critical safety issues to check before allowing entry.

6

ALLOW ENTRY ONLY IF:

- All steps above are completed.
- Observer remains outside of the entry area to watch entrant at all times.
- Communication between entrant and observer are maintained.
- Observer is trained, able, and equipped with phone, to call 911 for rescue.