

## TOOLBOX TALK #23

### SAFE TRENCHING AND EXCAVATIONS – PART 1

Keeping workers safe during trenching and excavation can be a challenge. The work poses numerous risks, particularly collapses. Trench-related deaths have prompted OSHA emphasis programs at the federal level.



OSHA warns that trench collapses are rarely survivable because a cubic yard of soil can weigh as much as 300 pounds or about the weight of a Volkswagen. Moving it by yourself is virtually impossible. Fatal injury is usually caused by suffocation, not necessarily physical, bodily harm. The air is pushed out of your lungs and you cannot inhale due to the pressure.

Workers are in danger if trench walls aren't protected and if a trench:

- Hasn't been inspected by a competent person
- Doesn't have a safe way for workers to enter/exit
- Has standing water or a hazardous atmosphere
- Has equipment/materials close to the edge

OSHA's standard on trenching and excavation (Subpart P) requires protective systems such as sloping, benching, shoring and shielding for trenches that are 5 feet deep or deeper, unless you're in stable rock.

- **Sloping:** Cutting back the trench wall at an angle that's inclined away from the excavation
- **Benching:** Forming one or a series of horizontal levels or steps into the sides of an excavation, usually with vertical or near-vertical surfaces between levels
- **Shoring:** Installing aluminum hydraulic or other types of supports to prevent soil movement and cave-ins.
- **Shielding:** Using trench boxes or other supports to prevent cave-ins.