

Topic: Trench Safety

Safety in the Trenches

Trenching and excavation work is a dangerous activity that takes place in many projects, including installation or repair of services, residential construction, and road construction and repair work, to name a few. If you are working on a project that involves removing material from the ground or working near an excavation in which the depth exceeds the width, it is important that you understand the hazards associated with this type of work and how to protect yourself and your co-workers.

What are the Hazards?

Those working in or near trenches face many deadly hazards. The risk of a cave-in is the most serious and it often occurs in seemingly safe conditions and instantaneously. When an unstable trench collapses, a worker can be seriously injured or killed by the falling soil. Imagine suddenly being buried beneath a wall of soil that weighs as much as a car. You can't escape. And each time you exhale, the weight bears down even more on your chest, slowly suffocating you.

This was the fate of a 55 year old man who was digging a sewer line when the trench around him collapsed. Emergency crews worked for several hours to dig through six feet of dirt and clay. When they finally found him, he was still standing upright. But he was dead where he stood.

The risk of a cave-in is not the only hazard. Workers are also at risk of cutting existing utility lines, falling into the trench, or a host of other dangers associated with working near heavy equipment and other traffic.

How to Stay Safe in the Trenches

If your work takes you near or into a trench, it's important that you:

- Know which member of the crew is designated the competent worker responsible for conducting the daily site inspection for the duration of the excavation;
- Wait until the daily pre-job safety assessment has been conducted before you enter the trench;
- Know the location of any buried services, such as gas or electricity;
- Know the location of overhead power lines;
- Know the conditions that may cause a cave-in, such as soil conditions, vibrations, and the addition or removal of water;
- Understand that excavation conditions can change at a moment's notice. Watch for changing weather conditions and vibrations from traffic or from other equipment working nearby;
- Know how to use and store the trenching equipment;
- Know how to operate the safety features on the trenching equipment;
- Report to your supervisor any defects you notice in the trenching equipment;

The information presented herein has been compiled from various sources believed to be reliable; however, it cannot be assumed that all acceptable safety measures are contained in this publication or that other additional measures may not be required under particular or exceptional circumstances. While every effort is made to ensure that information and recommendations contained within this publication are the best current opinions on the subject, no guarantee or warranty is made by Health Safety and You as to the absolute correctness or sufficiency of any representation contained in this publication herewith.

TOOLBOX TALKS



- Wear appropriate personal protective equipment, including steel-toe boots, hardhat, and work gloves;
- Do not work under elevated loads;
- Never enter a trench alone;
- Do not sit or lie down in a trench;
- Do not get into an unsupported trench that is deeper than your knees;
- Enter and exit trenches safely by using ladders that have been placed inside a protected area and are securely tied off;
- Watch out for falling debris, such as stones or piping that may roll down an excavated bank;
- Outside the trench, watch where you step to ensure you do not fall over or slide down the edge of a trench;
- Understand your company's established emergency procedures in the event of a cave-in.

Conclusion

Excavations, whether shallow or deep, are unstable. Pre-planning, proper protective measures, and safe working procedures are all critical to keeping safe those working in or near the trenches.

Quiz:

1. You should not enter an unsupported trench that is deeper than your knees.
True or False
2. Conditions affecting the stability of an excavation can change at a moment's notice.
True or False
3. You should never enter a trench when working alone.
True or False
4. Vibrations from nearby road traffic can affect the stability of a trench.
True or False
5. There is usually some type of warning before an unstable trench wall collapses, giving workers plenty of time to get out safely.
True or False

Answers:

1 True, 2 True, 3 True, 4 True, 5 False