Unprotected Trenches are Deathtraps



WHAT'S AT STAKE

Every month in the United States, an average of two workers die after being caught in collapsing trenches. In Canada, about 10 workers die in trench collapse incidents each year.

WHAT'S THE DANGER

The greatest risk to workers involves being caught in a cave-in. Even if the worker survives the initial collapse, one cubic yard of soil can weigh as much as a car and the pressure on the chest can make it impossible for a worker to breathe even if his or her head is above the level of the collapsed soil.

Also, a worker caught in a trench collapse may suffer fatal organ damage through crushing injuries.

Workers may mistakenly believe that if a trench wall suddenly collapses they will have enough time to climb out to safety. In reality, by the time the worker realizes that a trench wall is letting go, it's probably too late to get out.

There are many factors that can cause a trench to collapse, ranging from the type of soil to its water content, to the weight of heavy equipment operating close to a trench, to vibrations from machinery and motor vehicle traffic.

EXAMPLE

A 38-year-old construction laborer working in an unprotected eight-foot-high trench died only minutes after he had entered it. He had been removing an old gas line and was sawing it when the trench collapsed, burying him.

HOW TO PROTECT YOURSELF

The lack of a protective system is the leading cause of trench-related worker deaths. Depending on the regulations in your area, employers are required to protect workers against collapse in trenches as little as four-feet deep, by either:

- Sloping the trench by cutting back at the trench walls to an angle where it is unlikely that the soil will shift,
- Shoring the sides of an excavation using timber, mechanical or hydraulic systems, or
- Using a trench box to protect workers inside a trench. The box is moved along as the trench progresses, with workers required to be outside of the trench while

the trench box is being moved.

Don’t enter an unprotected trench, even if the job will only take a minute. Anything could happen within that time. There are often no warning signs that a collapse is about to occur.

Here are some additional trenching safety tips:

- Even if a trench is said to be protected, you need to look at it before entering it. If you spot any problems with the trench or its protective system, talk to your supervisor before entering it. Recent rain and heavy vibrations from equipment increase the odds of a collapse occurring.
- By law, there must be ladders or ramps placed near workers in a trench, allowing for quick entry and exit. They should extend a few feet above the trench. If these devices aren’t present at short intervals throughout the trench, stay out of it.
- Piles of excavated materials and equipment must be placed at least two feet or 0.6 meters away from the excavation. Retaining devices such as trench boxes that extend above the top of the trench are designed to keep equipment and spoils from falling into a trench.
- Before digging, know where underground utilities are located.
- The atmosphere within a trench may need to be tested by a competent person for low oxygen content, hazardous fumes or toxic gases.
- Never work under suspended or raised loads or materials.
- If you are in the vicinity of vehicular traffic, you must wear high-visibility clothing.

FINAL WORD

The hazards of working in unprotected trenches are well known, yet companies are cited every day for violations involving trenches. If you work in trenches, you need to know what protective measures are required and ensure that they are in place every time you enter a trench.