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Weekly Safety Meeting

Trenching Safety

An excavation is any man-made cut, cavity, trench, or depression in an earth surface formed by earth removal.

A trench (trench excavation) is a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet.

Working in an unprotected trench is dangerous. The walls can collapse suddenly and without warning. When this happens, workers do not have time to move out of the way.

While a small amount of dirt may not seem dangerous, one square yard of dirt can weigh more than 3,000 pounds. This weighs the same as a compact car. This small amount of dirt is enough to fatally crush and suffocate workers.

Injuries and deaths related to trench collapses continue to happen. More than 80% of the deaths happen in the construction industry. Workers do not often survive trench collapses, but such collapses can be prevented.

OSHA Standard:

The OSHA standard for excavations, including trenches, is located in 29 CFR 1926 Subpart P. This standard describes the precautions needed for safe excavation work. OSHA requires that all excavations 5 feet deep or greater make use of one of the protective system measures noted below.

There are ways to prevent trench collapses. Engineering controls, protective equipment, and safe work practices can reduce hazards to workers and prevent trench cave-ins.

Workers **should never** enter a trench that does not have a protective system in place.

Protective System Measures:

Trenches 5 feet deep or greater require a protective system unless the excavation is made entirely in stable rock. If the trench is less than 5 feet deep, a competent person may determine that a protective system is not required.

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Trenches 20 feet deep or greater require that the protective system be designed by a registered professional engineer or be based on tabulated data prepared and/or approved by a registered professional engineer. Now let's look at some protective measures:

Benching – is a method of protecting workers from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near vertical surfaces between levels. This type of protective system cannot be done in a Type C soil.

Sloping - involves cutting back the trench wall at an angle inclined away from the excavation.

Shoring - requires installing aluminum, hydraulic, or other types of supports to prevent soil movement and cave-ins.

Shielding - protects workers by using trench boxes or other types of supports to prevent soil cave-ins. Designing a protective system can be complex because you must consider many factors: soil classification, depth of cut, water content of soil, changes caused by weather or climate, surcharge loads (e.g., spoil, other materials to be used in the trench) and other operations in the vicinity.

Competent Person:

OSHA standards require that employers inspect trenches daily and as conditions change. The inspection should be done by a competent person, before worker entry, in order to ensure elimination of excavation hazards.

A competent person is an individual who can identify existing and predictable hazards or working conditions that are hazardous, unsanitary, or dangerous to workers, soil types and protective systems required, and who is authorized to take prompt corrective measures to eliminate these hazards and conditions.

Workers can take training to become a competent person. Training is available from many sources, (e.g., insurance companies, trade associations, labor unions, and companies that make safety equipment for trench workers.)

Remember you are the one going into the hole, so check the methods being used to protect the excavation. Prior to climbing down the ladder, check the spoil pile location and equipment that is near the excavation. Do you feel comfortable with the excavation, its protection, and the nearby surroundings?

SOIL IS HEAVY…PROTECT YOURSELF FROM TONS OF DIRT!!

Safety Meeting Sign-In Sheet

Supervisor:	Subject:
Location:	Date:
Conducted By:	Trainer Signature:

Name (print clearly)	Signature	Comments / Safety Concerns / Training Requests