SAFETY UNLIMITED, Inc.

Weekly Safety Meeting

Your Safety Is Our Business®

Volume 1, Issue 11 March 16th, 2014

Trenching Safety

A trench is defined as a narrow channel, deeper than it is wide and made below the surface of the ground. A trench can be up to 15 feet wide. An excavation is any man-made hole or trench that is made by removing earth. Trenching is recognized as one of the most hazardous construction activities. The greatest risk is a cave-in.

Each year trenching cave-ins result in more than 5,000 serious injuries and 100 deaths in the United States. Trenches are needed for the installation and repair of utility lines, water and sewer lines, television cable, building roads, and many other uses. Anyone whose work requires them to work in or around a trench should be aware of the hazards so that they neither cause nor become involved in an accident.

The Occupational Safety and Health Administration (OSHA) requires a competent person to inspect trenches on a daily basis for possible cave-ins, failures of protective systems and equipment, hazardous atmospheres, or other hazardous conditions.

Soil, or any material removed from the ground to form a trench or hole, can weigh more than 100 pounds per cubic foot. Most soil is thought of in terms of cubic yards. One cubic yard of soil may weigh more than 2700 pounds.

Safety Hazards

- Cave-ins can be caused by:
- Vibration of nearby construction equipment or vehicle traffic;
- Weight of equipment that is too close to the edge of the trench;
- Soils that do not hold tightly together;
- Soil that has been dug in before that is not as stable as undisturbed earth; and
- Water weakening the strength of the trench sides.

Hazardous atmospheres may be generated because toxic gases may be released by the digging or accumulate in the bottom of the trench.

All underground utilities must be located before any digging begins.

Protective systems are methods that protect workers from cave-ins of material that can fall or roll into an excavation/trench or from the collapse of nearby soil structures. Protective systems include shoring, sheeting, shielding, sloping, and benching. For trenches between 5 feet and 20 feet deep, protective measures must be taken. It is up to the planners of the construction project and the competent person on site to determine which systems will work best. If an excavation is greater than 20 feet deep, a registered professional engineer must design the protective system.

Trenches deeper than 4 feet must be provided with a way to get in and out (access and egress), usually a ladder, for every 25 feet of horizontal travel within the trench.

Even a small trenching job can present serious safety hazards. The key to preventing this type of accident is good planning.

Learn from others' mistakes and you'll have no regrets!

Safety Meeting Sign-In Sheet

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

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

