

Location: \_\_\_\_\_ Instructor: \_\_\_\_\_ Date/Time: \_\_\_\_\_

## **TOPIC C111: UNDERGROUND UTILITIES**

**Introduction:** To protect the health and safety of the employees and the public when excavation and demolition work is being done, certain procedures must be followed to ensure you know the location of underground utilities at the worksite. These safety procedures must be followed to protect workers and others in the area from injuries, fatalities, damage to property and disruption of services.

Utility locating services, One Call 811, must be notified of the intent to excavate at least 48 hours before to digging. This locator service will indicate the locations of existing lines to within 3 feet.

**The following procedures should be followed:**

- Everyone involved in the operation must be familiar with procedures of how to locate and excavate utilities, as well as protection from exposed utilities
- Make sure you're familiar with emergency and evacuation plan and procedures for the excavation area
- Workers performing the excavation are responsible for maintaining the markings provided by the locator service. If the markings are removed or damaged the locator must be notified and remarking requested
- When a mechanical excavator is approaching a marked line, the excavator must be stopped 3 feet before the indicated position of the line. The lines must then be carefully hand dug and manually exposed to determine their exact location before proceeding
- Any utilities exposed by excavation must be supported, conspicuously marked to ensure the safety of workers, and backfilled with appropriate material as soon as possible
- Excavators must immediately report any break, dent, gouge, or other damage to lines made or discovered during the course of work to the proper utility operator and/or authority
- If a break occurs in any hazardous utility line, stop work immediately and evacuate to a safe distance
- All personnel in the area must be alerted immediately of any emergency that may exist during the work
- If a water line break occurs in a trench, operations must be halted and the affected area evacuated until a competent person determines it's safe to re-enter the trench

**Utilities Color Codes:** Employees involved in excavation or demolition work must be familiar with the standard color codes used to mark specific utilities:

- RED flags or paint indicates electrical distribution, transmission, and municipal system lines
- YELLOW flags or paint indicates gas, oil and petroleum, dangerous materials, product and steam lines
- ORANGE flags or paint indicates telephone, telegraph, police and fire communications, and cable television
- BLUE flags or paint indicates water and slurry systems
- GREEN flags or paint indicates sewage systems

**Conclusion:** Most accidents involving underground utilities occur because workers were unaware the line was there, or someone attempted to reduce labor by using an excavating machine too close to lines. Other accidents occur because employees were unfamiliar with emergency procedures for underground utilities. Always call 811 before beginning any excavation work. Following these procedures will prevent most accidents from occurring.

The National Utilities Locating Contractors Association (NULCA) guidelines for excavation recommend that excavators call 911 if excavation damage "involves potential risk to life, health or significant property damage."

Follow these guidelines to ensure the safety of the public and you.

**Employee Attendance:**(Names or signatures of personnel who are attending this meeting)


These guidelines do not supersede local, state or federal regulations, and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.