



Job Name: _____ Job Site Location: _____

Date: _____ Start Time: _____ Finish Time: _____ Foreman/Supervisor: _____

Topic 111: Underground Utilities

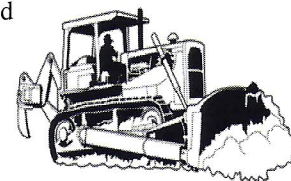
Introduction: To protect the health and safety of the employee and public, certain procedures are necessary to ensure that personnel performing excavation and demolition operations know of the location of underground utilities in the excavation or demolition area. Certain safety procedures must be followed to protect from injuries, fatalities, damage to property, and disruption of service. Utility locating services, commonly called "**Blue Stake**", or the individual utility operators involved in the work area must be advised of the intent to excavate at least 48 hours prior to digging. Locator services are paid by the utility operator and will mark locations within 2 ft. of existing lines. The following procedures should be followed:



- **All personnel involved** in the operation must be familiar with procedures regarding locating and exposing utilities, as well as protection from exposed utilities.
- **All personnel should** be familiar with emergency and evacuation procedures for the excavation area and the area occupants.
- **Employees involved in excavation** should be familiar with the color code for specific utilities as follows:
 - * **RED** - Electric distribution, transmission, and municipal system lines
 - * **YELLOW** - Gas, oil and petroleum, dangerous materials, and product and steam lines
 - * **ORANGE** - Telephone, telegraph, police and fire communications, and cable television
 - * **BLUE** - Water and slurry systems
 - * **GREEN** - Sewer systems



- **It is the duty** of excavators to maintain these markings supplied by the locator service, and in the event of removal or damage, to notify the locator of the need for remarking.
- **When the excavator** is approaching a utility line, extreme care must be taken and any mechanical excavator must be stopped 2 ft. before the indicated position of the line. Utility lines must then be carefully exposed manually to determine their exact location before proceeding.
- **Any utilities exposed** by excavation must be supported (if necessary), conspicuously marked to ensure the safety of workers, and backfilled with appropriate material as soon as possible.
- **Excavators must report** immediately to the utility operator any break in, dent, gouge, or other damage to lines, or to the cathodic shield made or discovered during the course of work.
- **If a break occurs** in any hazardous utility line, work must be shut down immediately and personnel evacuated to a safe distance.
- **Personnel and occupants** must be alerted immediately as to any emergency that may exist during the course of work.
- **If a water line** break should occur in a trench, trenching operations should be halted and the affected area evacuated until deemed safe by a competent person to re-enter the trench.



Conclusion: Most accidents involving underground utilities occur because personnel were unaware the line was there, or someone attempted to reduce labor by using the machine too close to lines, or appropriate personnel were unfamiliar with emergency procedures for underground utilities. If followed correctly, the above 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".



Worksite Review

Work-Site Hazards and Safety Suggestions: _____

Personnel Safety Violations: _____

Material Safety Data Sheets Reviewed: _____ (Name of Chemical)

Employee Signatures: _____
 (My signature attests and verifies my understanding of and agreement to comply with, all company safety policies and regulations, and that I have not suffered, experienced, or sustained any recent job-related injury or illness.)

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