

## Safety Flash

### Incident with property damage

**Incident:** Before excavating for a fire line, RLI and the customer reviewed drawings and hydro-excavated to locate known utilities. The 5-foot-wide excavator bucket, used to clear soil from under the electrical conduits and direct-bury cable, damaged the insulation on one conductor of the 480-volt, direct-bury cable, causing a small arc. No breakers were tripped.

#### Possible contributing factors:

- Tight, congested utilities in the area.
- The direct-bury cable was in the bottom of a trench with several other conduits.
- The operator used a 5-foot-wide bucket in a 5-foot, 2-inch wide space.
- The excavation method chosen to remove soil under electrical lines/conduit did not take into account the hazard of using a 5-foot-wide bucket which could make contact with the cable.
- No one recognized the hazard of working close to energized direct-bury cable without providing temporary protection for the cable.
- The power was not shut off when working close to the direct-bury cable.
- The operator had performed similar excavations close to energized cables without incident.



#### Primary contributing factor:

- The excavation method chosen to remove soil under electrical lines/conduit did not take into account the hazard of using a 5-foot-wide bucket which could make contact with the cable.
- No one recognized the hazard of working close to the energized direct-bury cable without providing temporary protection for the cable.

#### Possible solutions:

- Consider directional boring with a sleeve or hydro-excavating under electrical cables.
- Review RLI procedures for locating, protecting, exposing and excavating around direct-bury cables.
- Continue to include subcontractors (electrical, mechanical and piping) in excavation planning to identify hazards, risks, improve questions/dialogue between RLI supervision, crews and subcontractors.
- Research best practices for hydro-excavating around direct-bury cables.

#### Action plan:

- RLI will assemble a team to review/modify utility locating and excavation planning tools.
- Crews will be trained on revised procedures developed by the above-named team.
- RLI will identify additional questions and information needed during planning to eliminate/minimize risk when working around utilities before resuming work on site.
- Hydro-Vac will be asked what best practices they use for working around direct-bury cable.

#### Keep improving

Your health and safety are our core value on every project. If you see a way we can support you in keeping our job sites safe, see your supervisor or contact: Jim Philo, 419/654-2043; Rich Franklin, Michigan, 734/679-7283; Alan Doane, Cleveland, 440/429-0639; Rick Wallace, Lima, 419/705-9170 or Mark Hoffman, 419/360-9280.