Minimum Safety Standard

Engineering & Construction

Think "3" For Electricity

Discussion

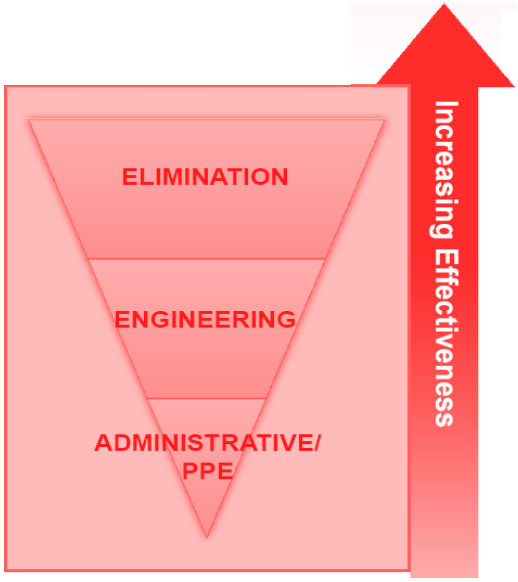
This year, there have been a disturbing number of incidents and near misses across our projects where overhead utility lines have been contacted. Some of these incidents have caused injury and in one case, a fatality.

Spectra Energy Transmission Engineering & Construction (E&C) is taking a strong stand to demand that every reasonable effort and control is implemented to ensure the safety of personnel on our projects. We find it necessary to focus our efforts on layering the controls (e.g. double, triple or quadruple control contingencies or redundancies).

Mandatory controls to prevent overhead utility strikes

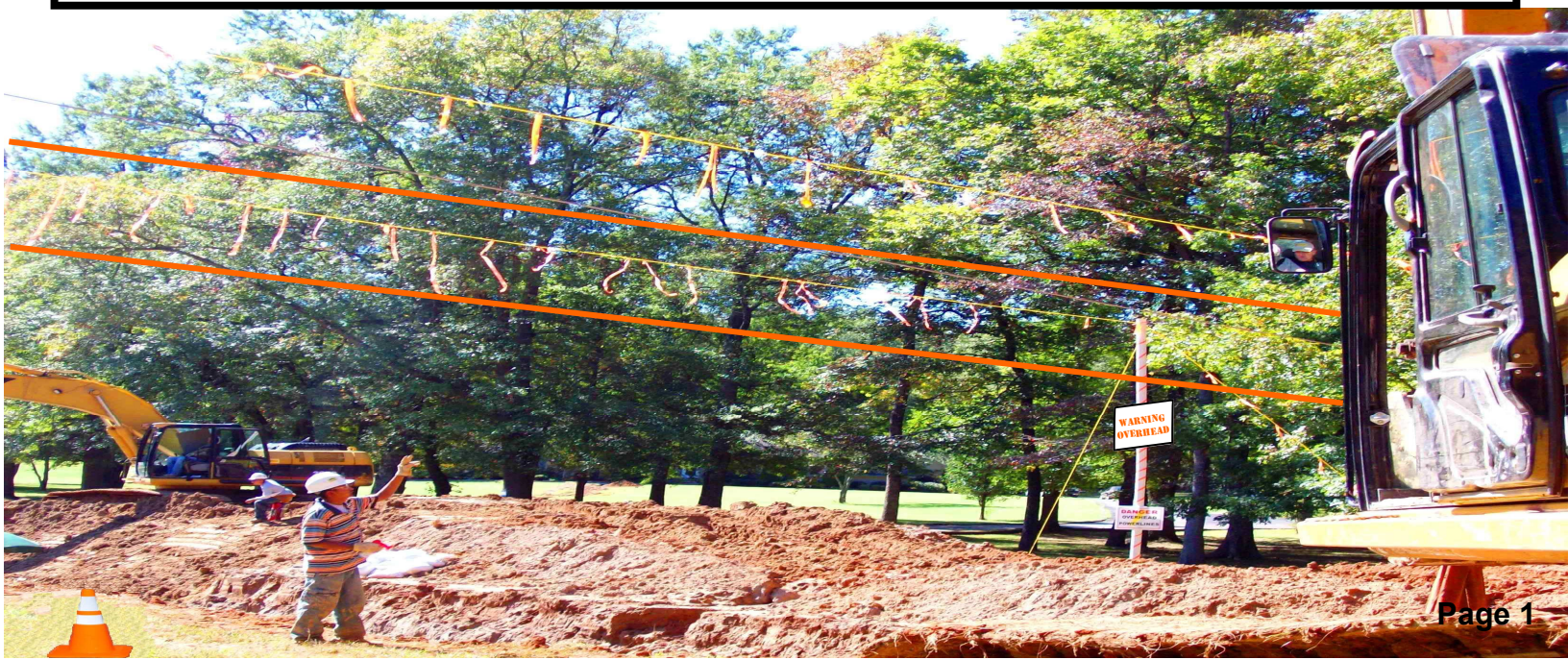
E&C is requiring at least 3 layers of safety controls at all locations where we can reasonably foresee that our construction activities could bring us within the unsafe distance to overhead utility lines.

There are 5 families of controls from which to select the 3 layers of controls that need to be applied: Signage, Physical Barriers, Dedicated Spotter, Proximity Alarms, and Utility Controls. Each are discussed in detail on page 2 and 3.



Support

If you have any questions, you can contact an E&C Senior H&S Specialist at (713) 627-5448, or email us at aske&ch&s@spectraenergy.com.



Think "3" for Electricity

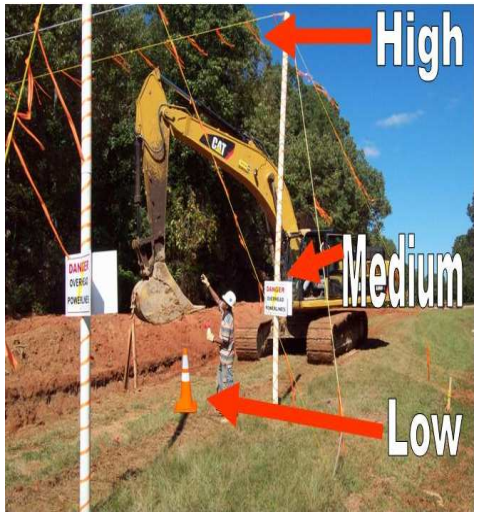
Mandatory Controls to prevent Overhead Utility Strikes

As discussed on page 1, E&C is requiring **at least 3 layers of safety controls at all locations where we can reasonably foresee that our construction activities could bring us within the limits of approach of overhead utility lines**.

There are 5 families of controls from which to **select at least the 3 layers** ("*Think 3 for Electricity*") of controls that need to be applied:

1. SIGNAGE – signage shall cover three parts of the view plane: HIGH (e.g. ribbon tied to overhead goal posts), MEDIUM (e.g. "Beware of overhead lines" sign at eye level) and LOW (e.g. cones on the ROW).

1. Signage



2. Physical Barriers

2. PHYSICAL BARRIERS – a non-conductive barrier (e.g. goal posts with rope extending across the ROW) set outside the limit of approach (these limits vary by jurisdiction and voltage) on both the upstream AND downstream sides. Breaking/broaching this barrier would constitute a significant near miss under our contract safety Terms and Conditions.

3. Dedicated Spotter

3. DEDICATED SPOTTER – a trained, dedicated employee, not engaged in any other duties (e.g., swamping) while performing spotter duties. Their task is to monitor and direct traffic around lines, and shall use an appropriate audible alarm (air horn for example) to warn the driver of potential danger.

Think "3" for Electricity

Mandatory Controls to prevent Overhead Utility Strikes (continued)

4. **PROXIMITY ALARMS** – alarms that set off once equipment approaches too close to energized sources. (e.g. for reference purposes only – not a product endorsement - http://sigalarminc.com/PricnOfOperation.htm)

4. Proximity Alarms

5. Utility Controls

5. UTILITY CONTROLS – site specific controls (e.g. line cover-up, line raising/relocation, outage(s), etc.,) arrived at in consultation with a local utility or specialized safety professional.

STANDARDIZED LIMITS OF APPROACH

When using physical barriers such as goalposts as a layer of control, barriers shall be placed in all directions from which a vehicle may approach. See example below. The barrier shall be set back at a standard limit of approach distance of no less than 10 feet unless a greater distance is required by jurisdiction or voltage (see 29 CFR 1926.550 or visit http://www.osha.gov for details).

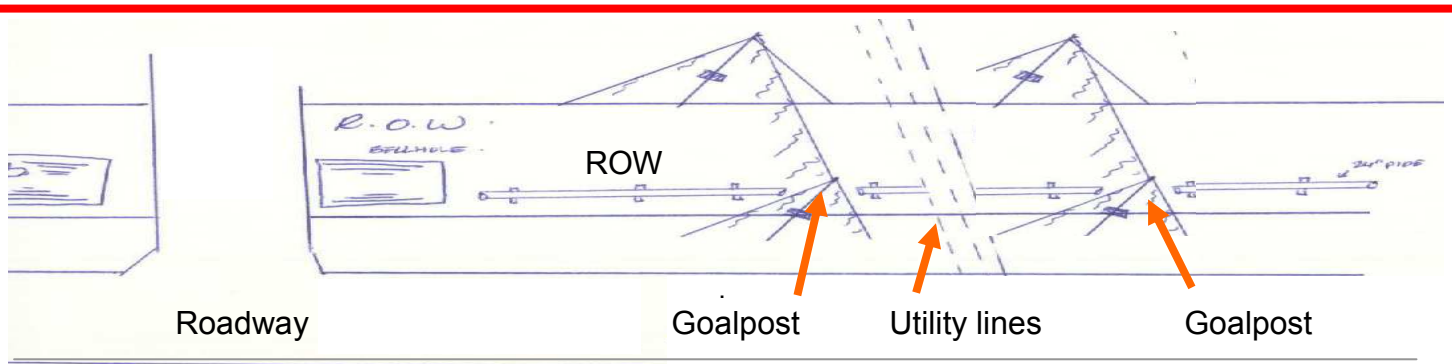


Diagram of overhead power-line barriers perpendicular to roadway and on each side of hazard.