

Safety Lessons Learned Accident Abstract

Accident Type: Electrical

Injury: Fatality

Damage: N/A

Type of Work: Communications pole handling and setting

DESCRIPTION OF THE ACCIDENT:

On April 30th 2007, a BOSC high voltage service sub-contractor was preparing to set a new communications pole to replace one damaged. As the pole was being lifted the boom of the line truck contacted a high voltage, 12.4 Kv, power line. While the truck was energized, estimated less than sixty seconds, an apprentice line crew worker grabbed the left rear body grab handle of the truck while walking over a pallet of shore power cable. To further steady himself he put his right hand on a metallic roll-up door. Combining those two actions he completed a phase to ground circuit which sent ~7Kv electricity from his left hand across his body and out his right hand. Autopsy report showed evidence of burns on both hands consistent with high voltage burns. Autopsy also revealed the cause of death was high voltage electrocution and that no drugs or alcohol were present in his system.



DIRECT CAUSE:

- ◆ An outage of the high voltage lines was not accomplished before beginning the work.
- ◆ OSHA and Manufacturer's requirements and recommendations were bypassed in regards to working on or near energized equipment.

INDIRECT CAUSE:

- ◆ The BOSC contractor did not follow its purchasing process which would have required the sub-contractor to submit an accident prevention plan and an activity hazard analysis before this work began bypassing oversight by the BOSC.

ROOT CAUSE:

- ◆ Line truck boom contacted high voltage line.
- ◆ An apprentice lineman, not wearing PPE, completed a phase to ground circuit by touching the truck and a metallic roll-up door when the line truck was energized.

LESSONS LEARNED:

The line crew was experienced and trained but failed to implement barrier(s) to prevent the truck from becoming energized. The crew did not wear personal protective equipment. The apprentice failed to observe a Rule-Of-Thumb (R-O-T) when working around line trucks "Never touch the truck when the boom is in the air" – a pictograph of this R-O-T is posted on the truck in at least four places. Neither the BOSC nor the subcontractor sought an outage because the crew convinced the BOSC they work around "hot" lines all the time. The manufacturer of the work platform states in its Operator's manual "Electricity Obeys No Law But Its Own." Follow USACE EM 385-1-1 where applicable and NAVFAC safety guide specification requiring outages unless PWO permission is granted to work energized after detailed review of an Activity Hazard Analysis by the safety office.

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