

Fatality Narrative

Apprentice Lineman Electrocuted After Contacting Underground Primary Cable *

Industry: Electrical contractors
Occupation: Apprentice lineman
Task: Replacing underground cables
Type of Incident: Electrocution

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On March 1, 2006, an apprentice lineman was electrocuted after making contact with an energized underground cable. The 24-year-old victim had worked with his current employer for 2 ½ years. His employer was a high voltage utility contractor working as a subcontractor for an electric utility company on a project to replace underground cable. At about 10:15 PM a four person line crew, including the victim, was working on a section of underground primary cable in a concrete vault. The workers had tested and grounded all the old cables but not the three new cables located at the bottom of the electrical vault. They removed the old high voltage cables and modules and had begun to install new high voltage modules. During this procedure the employees discovered that one of the primary 7,200 volt underground elbows needed to be rotated 180 degrees in order to be installed on the new high voltage module. The victim used a probe wrench to rotate the elbow and while doing so made contact with an energized 7,200 volt cable. The victim was electrocuted and died at the scene. A second employee was blown clear and received injuries for which he was hospitalized. An investigation of the incident determined that 1) the primary underground cables were never tested and grounded; 2) the crew assumed that the new primary underground wires were numbered correctly and that the cable numbers went to the correct underground vault location; 3) the three-phase transformer bank in the vault that had the primary underground conductor replaced the previous week was never checked to see if it was re-energized after the scheduled power outage.

Requirements/Recommendations (! Indicates items required by law)

- ! Ensure that all lines and equipment are de-energized and grounded before employees work on them.
- ! Tag and label all underground cables to ensure that the correct cables are de-energized and grounded.
- ! Personal protective equipment approved and tested for the task needs to be provided and used.
- ! Approved and tested tools for the appropriate voltage must be used when working with live conductors.
- Suitable barriers or approved insulating material should be provided and used to prevent accidental contact with energized parts.

**This bulletin was developed at the Washington State Department of Labor and Industries to alert employers and employees of a tragic loss of life of a worker in Washington State. We encourage you to consider the above information as you make safety decisions for or recommendations to your company or constituency. The information in this notice is based on preliminary data ONLY and does not represent final determinations regarding the nature of the incident or conclusions regarding the cause of the fatality.*

Developed by the Washington State Fatality Assessment and Control Evaluation (FACE) Program and the Division of Occupational Safety and Health (DOSH) at the WA State Dept. of Labor & Industries. The FACE Program is supported by a grant from the National Institute for Occupational Safety and Health (NIOSH). For more information, contact the Safety and Health Assessment and Research for Prevention (SHARP) Program, 1-888-667-4277, <http://www.lni.wa.gov/Safety/Research/FACE/>.

State Wide Statistics: This was the 12th out of 75 work-related fatalities in Washington State to date during 2006, and was the 3rd out of 22 construction-related fatalities to date.



Photo 1: Shows the location of the electrocution incident, inside the electrical vault.

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