

Safety Alert – 11 February 2014

Near Miss – Arc Flash

A trainee line mechanic had an incident where he was engulfed by an arc flash when he disturbed a three phase hard tapped XLPE cable termination onto the main line resulting in a phase to phase flashover.

What happened?

The trainee had installed hard covers to the PVC insulated main line in preparation for working off a pole board to re-sag the low voltage conductors after the pole had been straightened. He had climbed onto the pole board and was in the process of adjusting his pole strap when this action disturbed an XLPE three phase 35mm² cable that was hard tapped to the main line. The insulation on the conductor was crazed and a phase to phase short occurred rupturing the low voltage fuses at the berm substation adjacent to the worksite. The PPE worked as designed. No injury resulted.

Investigation findings

Immediate causes:

- Failure of XLPE cable insulation

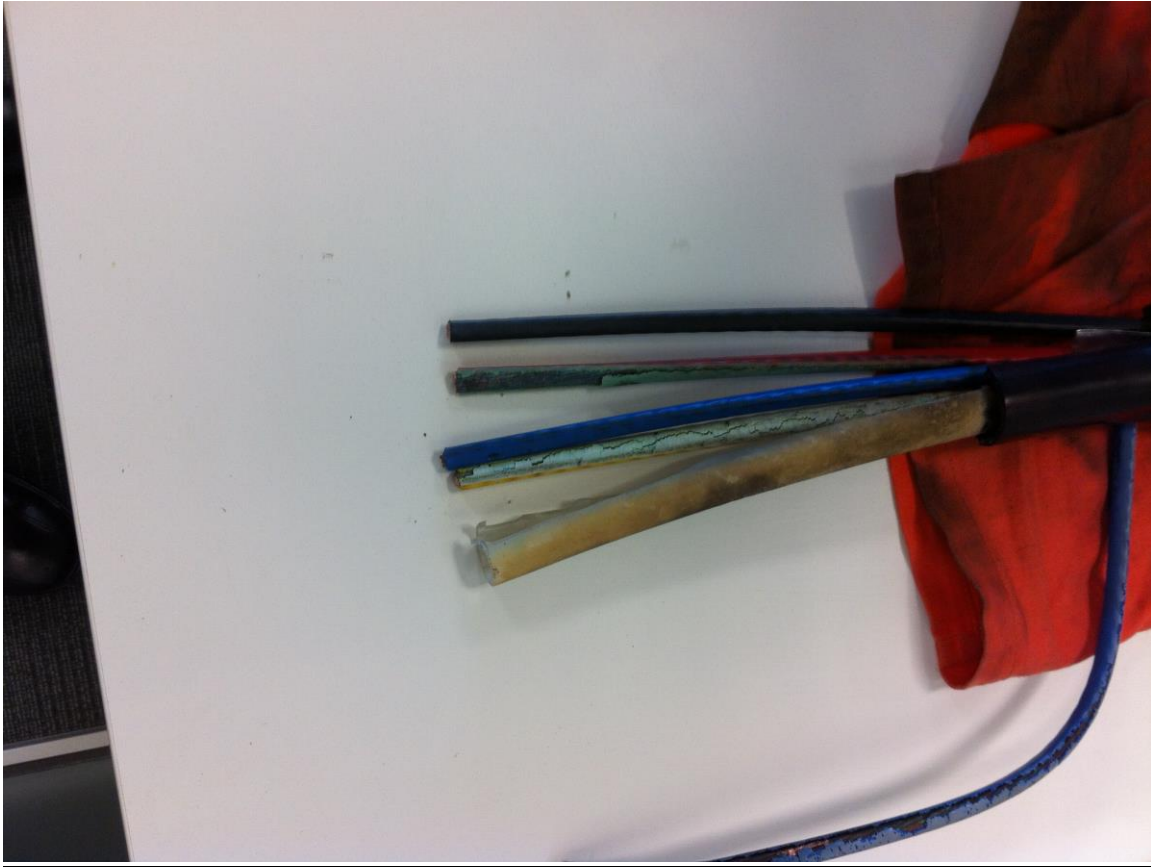
Contributing causes:

- Potential hazard of XLPE cable insulation degradation not identified during scoping of work and relayed to work party via job pack
- Potential hazard of XLPE cable insulation degradation not identified during prestart worksite briefing

This cable is easily identifiable by the milky appearance of what was originally clear insulation on the outside of the cable. The UV also damages

the XLPE insulation of the conductor through the cable sheath as observed in the attached photo.

A thorough inspection should be made of the cable termination before working on or near the cable. If UV damage is evident, postpone the work as the cable will need replacing.



Issued by Bill Doig, HSC Manager, WEL Networks