



Safety Advice 06-2004 (NZ)

NEAR MISS INCIDENT - CABLE CUTTING

BRIEF DESCRIPTION

Cable cut whilst live pilot inside.

JOB DESCRIPTION

Cut and relocate three phase 70mm² neutral screen cable and three phase 35mm² single core cables to allow a car park to be developed into a new building.

INCIDENT

The cables were identified at each end and dug up where they were to be cut and removed. The cables were tested at each end and proven to be alive. The single core cable were also tested where they were to be cut, with a proximity voltage detector, and proven to be alive. The three phase neutral screen cable was then isolated at its source and tested at the other end. It was proven dead. This also isolated the single core cables. Tested with the proximity tester and proven dead. The box supplied by the three phase neutral screen cable was then tested with the proximity tester to confirm there were no other unknown feeds into the box beside the three phase 70mm² neutral screen cable. This indicated the box was dead. The neutral screen cable was tested, found to be dead, with a proximity tester at the point where the cut was to be made. The cable was then cut with a hacksaw. Full PPE was worn as well as LV rubber gloves and over gloves.

The blade of the hacksaw was approximately three-quarters of the way through the cable when there was a loud pop heard from the cable. There was no flash from the cable when the live pilot was hit by the hacksaw.

EXTENT OF INJURY / DAMAGE

There were no injuries to any personnel. The only equipment damage was to the hacksaw blade as the photographs indicate.

LOCAL ACTION TAKEN

Work was immediately stopped, all staff moved away from the cable, and the area guarded to prevent any further incidents. The Project Manager was then called and an investigation started to find out why the cable was still alive. This investigation discovered the pilot in the neutral screen cable that had not been isolated.



The pilot was a white 10mm² core at the source end underground box and had been joined to a piece of red 6mm² conduit wire at the load end underground box. The proximity detector did not detect this cable when used in the load end underground box. The pilot was isolated and further testing carried out to determine that all cables were now isolated and the job completed.

ADDITIONAL COMMENTS / SUGGESTIONS

1. Use spiking gun.
2. Do not rely on proximity detectors to guarantee screened underground cables have been isolated. The pilot was on the bottom of the cable where the cut was made. The pilot location plus the cable screen may have been the cause of the proximity detector failing to detect the live pilot.
3. This type of cable, three phase plus pilot, is not common within the network and may have been a factor in the incident.



Neutral screen cable + pilot.



Approximate depth of hacksaw when LIVE pilot was hit.



Hacksaw blade.