

Electric Shock from Energised Secondary Circuit During Tap Changer Work

Date: 19/03/2026

Vault No. 6645

Background

During maintenance work at a Zone Substation, a Site Supervisor received a 120V DC electric shock while assisting with reconnecting a loose control cable to a tap changer selection switch. Although the equipment was under an Access Permit, the control/secondary circuits remained energised. From the investigation: *“The Electrical Fitter was aware of the possibility of voltage still being present but was unable to communicate in a timely manner to the Site Supervisor.”*



WE NEED TO DO THE FOLLOWING:

Preventative Actions

- Reinforce Safe to Continue principles, especially when the task changes unexpectedly (e.g. loose cable connections, altered configuration).
- Treat all control/secondary circuits as energised until proven de-energised.
- Apply Prove – Test – Prove protocols before touching or manipulating any conductors.
- Maintain Minimum Approach Distance (MAD) at all times. The recorded tailgate identified MAD as a critical control that was not followed.
- Ensure clear communication between team members when hazards are identified, further supported by recording any secondary isolations on the recipient applied safety measures doc in conjunction with the authorization held.



Corrective Actions

- Testing terminals have now been installed to allow easy connection from the front of the control box. This will roll out to the other substations with this setup during upcoming planned outages.
- Review work methodologies when accessing control cabinets/enclosures and consider whether any further isolation of conductors is required?

Contact

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