



FIRST ALERT

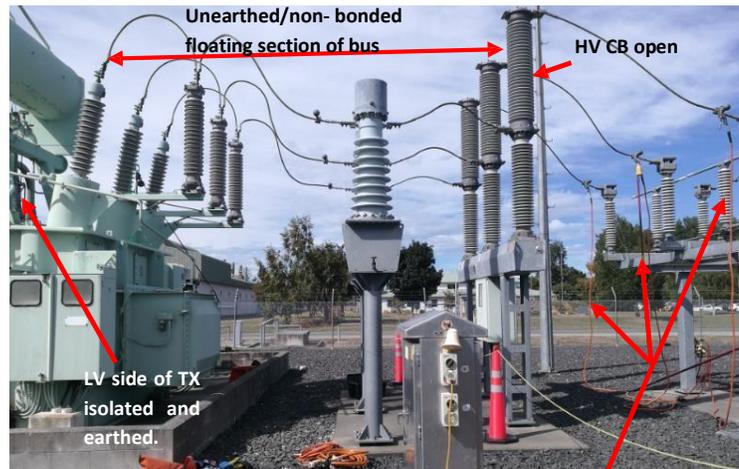
Date: 31/01/2018

Maximo Reference: 113897

Failure to correctly earth Transformer HV

EVENT

- During a maintenance outage a section of bus, transformer with associated circuit breakers and disconnectors were isolated and earthed. An access permit was issued.
- A prestart meeting was completed and a tradesperson and apprentice accessed the top of the Transformer inside the permit area.
- A section of conductor between the Transformer and the open HV Circuit Breaker was not bonded or earthed to the earth grid.
- The tradesperson and apprentice had not considered all safety aspects of their work before climbing on top of the Transformer.



Tx, CT, CB, DS earthing layout

Operator applied earths

IMMEDIATE ACTIONS

- The work team stopped work and discussed the earthing and bonding necessary to access this section of transformer and bus.
- Rather than applying three temporary earths between the transformers and the CT, the work team decided to close, disable and tag the HV circuit breaker to create a continuous bond/earth to the section of bus between the transformer and the operator-applied earths.
- Follow up investigation has commenced.
- All de-energised equipment needs to be earthed and bonded as per the SMEI rules and Transpower Service Specification TP.SS 07.24 [Worksite temporary earthing and bonding in HV switchyards](#)

5.4 Hazardous voltages

5.4.1 Hazardous voltages at work sites will occur if the equipment is not earthed and bonded correctly.



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