



**DEPARTMENT OF MINERALS AND ENERGY  
WESTERN AUSTRALIA**

**SIGNIFICANT INCIDENT REPORT NO. 67**

**HIGH VOLTAGE CIRCUIT SWITCHED TO EARTH**

**INCIDENT**

While tracing the cause of a local power failure in an underground mine, a contract electrician operated safety switchgear which applied a three phase shortcircuit and earth to a “live” 11000 volt supply cable.

The ensuing fault current caused protection relays to shutdown the surface powerstation and “black-out” electricity supplies to the mine and local township.

The rating of the switchgear was sufficient to withstand the fault, and the person was not injured.

**CAUSE**

The electrician was working outside his authority level, failed to recognise the purpose of the earthing switch and the consequence of it being operated.

**COMMENTS AND PREVENTATIVE ACTION**

AS2067 requires that high voltage switchgear be provided with earthing devices to facilitate safe maintenance access to connections, busbars, circuit cables or lines. The switching of such earthing devices must only be carried out by persons authorised under Mines Safety and Inspection (MSI) Regulation 5.18. Switching should not be undertaken prior to isolating the circuit and proving it to be de-energised.

All responsible persons must ensure that:

- earthing switches are appropriately labelled.
- earthing switches are padlocked in the off position when not in use.
- All electricians are aware of their authority levels.
- MSI Regulation 5.18 is complied with.

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