



SAFETY ALERT

Portable Earth Contact with Live 33kV Equipment during Switching

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Contact for further information	HSW@pioneerenergy.co.nz
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What Happened

During planned switching to isolate a 33kV circuit breaker for maintenance, the switching sequence required two sets of portable earths to be applied following completion of the Test-Prove-Test process using a Voltage Detection Device (VDD).

The first set of portable earths was correctly applied to the designated earthing point on the de-energised side of the Air Break Switch (ABS). The test equipment (VDD) was then proven on a known live source, the second earthing location was confirmed de-energised, and the test equipment was proven again in accordance with the Test-Prove-Test process.

Before applying the second set of portable earths, the switching operator was interrupted by a phone call. After returning to the task, the operator inadvertently approached the live side of the open Air Break Switch instead of the de-energised side where the second portable earth was to be applied.

As part of the operator's normal technique, the earth stick was lightly touched against the earthing point before fully applying the portable earth. On this occasion, the earth stick contacted the live line-side earthing horn, creating a fault that was cleared instantaneously by the network protection system, tripping the 33kV circuit breaker at the remote end of the cable.

No one was injured, and there was no equipment damage. However, the event had the potential for serious harm had the existing protection systems not operated as designed.



Key Learnings Identified / Key Issues identified

This incident is a reminder that our critical risk controls matter.

When we follow our Work Control Process and maintain our PPE and equipment, multiple independent layers of protection are in place. These controls are designed to protect people when unexpected events occur—and in this case, they did exactly that.

HV switching requires your full attention

Distractions increase the likelihood of errors. Phone calls and other interruptions should not occur while carrying out switching operations.

What To Do On Site / Key lessons learned / Actions going forward

- Do not answer phones or respond to non-essential communications while carrying out HV switching.
- Review the work area before applying portable earths and confirm there is adequate clearance from adjacent live equipment.
- Ensure all portable earthing equipment is within inspection and test date and is rated for the required system voltage and prospective fault current.
- Confirm insulating gloves are within test date and inspected before use.