

Incident Alert



Incident Title:

Technician receives electric shock from super-imposed DC voltages

Date of Incident:

02 August, 2015

Incident Description and Details:

On the morning of Sunday 2 August a Technician was called to Transpower's Takapu Road Substation in response to a 110 Volt DC fault alarm.



On arrival the Technician found that 110V DC chargers measured -250V to earth on the positive side and -350V DC to earth on the negative side. This is a most uncommon fault situation.

The Technician was diagnosing the high voltage potential as per the test and measure configuration shown in the diagram. The Technician inadvertently contacted a live potential from a test lead when making the test circuit connections at the same time holding the metal frame of earthed test apparatus. He therefore received an electric shock from one hand touching the conductor through to the other hand touching earthed metal.

The Technician was assessed for injury and none was found. The work party comprising two Technicians stopped work and took a break to reassess the situation.

The work was being conducted on a Sunday and the incident was reported to a client representative via email but not to the client manager directly responsible for the work. The incident was not reported to the Technicians employer until the Monday.

The incident is under investigation and a detailed technical Alert is being developed for Technicians working in the substation environment to ensure learnings are circulated.

Recommendations / Lessons:

- Always ensure you reassess your methodology when you find a situation that is abnormal.
- Ensure test configurations are assembled in such a manner that unattached leads cannot be energised.
- Ensure incident reporting is expedient and to the correct line management regardless of time and day of week.

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