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BULLETIN No. 60, September 2003

For circulation to Key Safety Personnel and workplace notice boards.

SAFETY

FATAL NETWORK WORKER ACCIDENT LV O/H LINE THOUGHT TO BE ISOLATED

All electricity network workers are reminded to prove LV electrical apparatus is de-energised and to take precautions to ensure it remains de-energised.

PRELIMINARY ACCIDENT DETAILS

Recently a two man work crew were changing a condemned high voltage cross-arm on a combination HV/LV pole on a rural 22kV HV line. The HV conductors were isolated, tested and earthed and an access permit issued. The work crew had completed a pre-work hazard and risk assessment which identified the live low voltage as a hazard, and decided to isolate the live low voltage.

The substation that supplied the LV overhead mains at the incident site was electrically connected and physically located on the line side of the HV isolation point. Two circuits of overhead LV mains were supplied from this substation. Each circuit went in a different direction. The work crew may have been under the assumption that both sets of LV mains were isolated by a LV circuit breaker attached to the substation pole.

Investigations after the incident revealed that the LV circuit breaker isolated the LV mains in one direction only. The LV mains in the other direction (incident site) were connected directly to the transformer LV bushings and supplied a number of other customers.

Investigations indicate that the deceased, who was working from the pole, received an electric shock from contact with the live LV overhead conductors located below the earthed HV conductors.

CAUSES

Ongoing enquiries into the circumstances of the fatality are being conducted by the Police, WorkCover and the Ministry. It appears that the **primary cause** of the accident may have been failure to prove that the LV overhead line was de-energised. A **secondary cause** appears to be a failure to identify the correct isolation point.

Please turn over for regulatory requirements, required actions and contact details for further information

REGULATORY REQUIREMENTS

NSW electricity network operators have recently replaced their *Safety and Operating Plans* by new *Network Management Plans* under the *Electricity Supply (Safety and Network Management) Regulation 2002*. These plans generally adopt the *National Electricity Network Safety Code* (ESAA NENS 01-2001) in lieu of the *Electricity Transmission and Distribution Asset Management Code* (Electricity Association of NSW, 1997).

The following common principle applies under both codes:

“All LV electricity works shall be regarded as live until isolated and proved to be de-energised, in accordance with the Network Operator’s approved procedure.”

Both codes also have specific requirements concerning the need to prove that electrical apparatus is de-energised in accordance with approved procedures when intending to work on or near de-energised LV electrical apparatus.

It is a regulatory requirement that all work on or near a network operator's transmission or distribution system must be carried out in accordance with the relevant requirements of the relevant Network Management Plan.

REQUIRED ACTIONS

All **electricity network operators** and **accredited service providers** are to:

- review procedures to ensure that they address the need for LV electricity works to be regarded as live until isolated **and proved to be de-energised**;
- ensure that all network workers undertaking work on isolated LV electricity works are trained, authorised and assessed as competent in all relevant working methods, in particular the identification and isolation of mains, and proving by test that isolated low voltage works are in fact de-energised; and
- review the effectiveness of safety management plans in ensuring network worker adherence to safe working procedures in the field. This review should, as a minimum, cover strategies, accountabilities, and inspection and audit systems.

All **network workers** are reminded that:

- adherence to the relevant network operator plan and procedures is a regulatory requirement when carrying out work on or near electricity networks.
- they must prove that electrical apparatus is de-energised in accordance with approved procedures when intending to work on or near isolated LV electrical apparatus.

FURTHER INFORMATION

For further information please contact:

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