

# SAFETY ALERT

## ELECTRICAL HAZARDS FROM METALLIC WATER SERVICES

This safety alert replaces a previous safety alert issued in 2005 and has been revised following the recent death of a plumber who was electrocuted while installing a new section of copper water pipe at a private residence. This is the second fatality of its type that has occurred in NSW since 2005.

This alert warns plumbers that serious or fatal electric shocks can result when removing water meters, or cutting through or disconnecting metallic water pipes on water services.

The main contributing factor in these types of incidents is a fault has occurred with the electricity supply on the premises, or in the street, that causes the metallic piping to become 'live'. When the pipe is cut or disconnected, either side of the pipe could become 'live', causing the worker to receive a serious or fatal electric shock.

### OCCUPATIONAL HEALTH AND SAFETY REQUIREMENTS

The *Occupational Health and Safety Regulation 2001* requires employers and self-employed people to identify hazards and assess and control risks at the workplace, in consultation with their workers.

### RISK CONTROLS

Prior to the removal of water meters, or the repair or replacement of metallic water piping, the following control measures should be implemented:

- Before commencing work, ask the customer about the operational condition of the electrical installation. If they have experienced a 'tingling' sensation after touching the water pipes, taps or appliances, do not work on the water service. Advise the customer and the local electricity distributor that an electrical fault is suspected
- If practicable, find the main switch for the premises and turn off the power. Attach a danger tag, or lock the switchboard, to ensure the power remains off until the work is completed
- Use low voltage, insulated gloves when working on the water service
- Thoroughly clean the section of pipe each side of the length to be cut or disconnected – or either side of the water meter if the meter is to be removed

*making a difference*

- Attach a bridging conductor with a current rating of 70 amperes or greater, and span the work area where the metal pipe is to be cut or the meter disconnected – and leave the area undisturbed until the work is finished. Ensure the clamps make good physical contact with the cleansed parts of the metal pipe



**Bridging conductor with insulated screw type clamps**

- The bridging conductor must not be broken or removed until all work on the water service is completed and continuity of the metallic pipe is restored
- Where metallic pipe is to be replaced by plastic pipe or other fittings, work must not commence until the earthing requirements have been checked by an electrical contractor, and modified if necessary
- Plumbers must not disconnect earth wires that may be attached to the metal water pipes. If an earth wire needs to be disconnected, or is damaged, the customer should be told to get an electrical contractor to carry out the work.

## FURTHER INFORMATION

Further information regarding electrical hazards associated with this work can be found in:

- *AS/NZS 3500.1 Water services, section 5.2*
- *Plumbing safety information – risk of electric shock from metallic water service pipes, Sydney Water*
- *Electrical safety for plumbers, NSW Office of Fair Trading*

Also, visit [www.workcover.nsw.gov.au](http://www.workcover.nsw.gov.au) or phone **13 10 50**.

### Disclaimer

This publication may contain occupational health and safety and workers compensation information. It may include some of your obligations under the various legislations that WorkCover NSW administers. To ensure you comply with your legal obligations you must refer to the appropriate legislation.

Information on the latest laws can be checked by visiting the NSW legislation website ([www.legislation.nsw.gov.au](http://www.legislation.nsw.gov.au)) or by contacting the free hotline service on 02 9321 3333.

This publication does not represent a comprehensive statement of the law as it applies to particular problems or to individuals or as a substitute for legal advice. You should seek independent legal advice if you need assistance on the application of the law to your situation.

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