



## Electricity



All mines safety related queries and notifications should be made by calling **1800 SAFEMINE (1800 723 364)**

For further information, please contact an inspector at any of our regional offices listed below.

### North

1 Adelaide Terrace EAST PERTH WA 6004  
Postal address: Locked Bag 100 EAST PERTH 6892  
Email: north.inspectorate@dmirs.wa.gov.au

### East

Cnr Broadwood and Hunter Streets  
KALGOORLIE WA 6433  
Postal address: Locked Bag 405 KALGOORLIE WA 6433  
Email: east.inspectorate@dmirs.wa.gov.au

### West

1 Adelaide Terrace EAST PERTH WA 6004  
Postal address: Locked Bag 100 EAST PERTH 6892  
Email: west.inspectorate@dmirs.wa.gov.au

### South

66 Wittenoom Street COLLIE WA 6225  
Postal address: PO Box 500 COLLIE WA 6225  
Email: west.inspectorate@dmirs.wa.gov.au

**[www.dmirs.wa.gov.au](http://www.dmirs.wa.gov.au)**

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This publication is available on request in other formats for people with special needs.

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### For publication orders

Telephone: +61 8 9358 8154  
Email: SafetyComms@dmirs.wa.gov.au

The advice provided in this pamphlet is basic safety and health information. Ensure you are familiar with your site procedures and, if uncertain, discuss this information with your supervisor and safety and health representative.



## THE HAZARDS

Contact with electricity can be caused by:

- vehicle or equipment such as ladders, cranes, elevating work platforms, scaffolding, drill rigs, lighting towers, and raised haul truck trays fouling overhead power lines
- using electrical tools in wet locations
- water ingress to items including electrical components, handtools and control switches
- lack of correct over-current protection
- electrical supply not being isolated during activities such as maintenance and alterations
- digging into buried cables
- live cables brought down by storms or structural damage

- unauthorised access or repairs
- earthing system faults
- working on energised equipment or installations during activities such as maintenance, renovations or demolition.

Defective or overloaded electrical equipment and circuits are a common cause of fire and may initiate an explosion.

## WHAT CAN HAPPEN

Personal contact with electrical energy can result in death or injury by electric shock, flash over, fire or explosion, air blast or flying debris.

## SAFE WORK PRACTICES

- Lock or secure electrical equipment with a fixing that can only be opened by an authorised person with the right tool

- Insulate and shroud live electrical components to prevent accidental contact
- Only licensed electricians may install, maintain and repair electrical equipment
- Periodically check and test equipment and record the results
- Isolate, tag and test equipment before commencing work
- Electricians must not work on live circuits unless fully protected from all hazards
- Do not use any electrical equipment thought to be defective. Tag it out and report it
- Use equipment in the intended manner
- Always use residual current device (RCD) protection with handheld tools and extension leads
- Obtain a permit before digging where buried cables may be present

- Ensure outdoor equipment is weatherproof
- Never hose down electrical equipment
- Ensure portable tools and extension leads are not left out in the rain or used in wet locations
- Cleaners should not wash or spray clean light switches and socket outlets
- Electric shocks from welding power sources can be eliminated by using a welding hazard reducing device
- Report all electric shocks or burns and any other dangerous occurrence involving electricity, so that action can be taken to prevent a recurrence. There is no such thing as a minor electric shock – they are all serious

- All recipients of electric shock should undergo a medical assessment
- Identify and avoid all possible contact with overhead powerlines. Obtain a permit before entering a powerline corridor with plant that is capable of breaching the requisite safety clearances
- So far as is practicable, overhead powerlines should be placed underground within road reserves.

For further advice, refer to Part 5 – Electricity in mines of the Mines Safety and Inspection Regulations 1995, and the code of practices *Persons working on or near energised electrical installations* and *Safe low voltage practices by electricians*, available at [www.dmirs.wa.gov.au/building-and-energy](http://www.dmirs.wa.gov.au/building-and-energy)