

ELECTRICAL EQUIPMENT RISK ASSESSMENT

MAY 2006

WHAT ARE THESE GUIDELINES ABOUT?

Electricity has great potential to seriously injure and kill. As an employer or self employed person you are responsible for ensuring the electrical equipment in your workplace is safe and where required regularly inspected, tested and maintained.

A system should be in place to assess the electrical equipment that is used in your workplace. If the electrical equipment operates in or is affected by a hostile environment it must be regularly inspected, tested and maintained by a competent person.

These guidelines will help you comply with the legislative requirements in clause 64 of the *Occupational Health and Safety Regulation 2001* (the OHS Regulation 2001) by taking you through the steps of a risk assessment for the inspection, and testing of **plug-in type electrical equipment** used in the workplace.

WHO SHOULD BE INVOLVED IN COMPLETING THE RISK ASSESSMENT?

When using these guidelines it is important to involve your employees. Employees who work directly with electrical equipment can help you identify and develop the best safety solutions. By involving your staff you will be meeting your obligation to consult your employees on workplace electrical safety issues under the *Occupational Health and Safety Act 2000*.

WHAT THESE GUIDELINES DO NOT INCLUDE

- Electrical equipment that is used in construction work. This equipment must be regularly inspected and tested in accordance with the requirements of the *WorkCover Code of Practice – Electrical practices for construction work*.
- Hired electrical equipment. As this equipment is used in a diverse range of working environments outside the control of the equipment owner a risk assessment cannot be carried out. Clause 124(2) of the OHS Regulation 2001 requires that a person who hires or leases plant (electrical equipment) to another person must ensure that the plant is regularly inspected. The best way of achieving compliance with the requirements of the OHS Regulation 2001 is to regularly inspect and test electrical equipment that is hired in accordance with the provisions of the Australian Standard AS/NZS 3760: *In-service safety inspection and testing of electrical equipment*.
- Workplace electrical equipment that has been serviced or repaired which could affect the electrical safety of the equipment. This equipment must be inspected and tested in accordance with the requirements of the Australian Standard AS/NZS 3760 prior to the equipment being placed back into service at the workplace.
- Electrical equipment associated with amusement rides and devices Australian Standard (AS 3533) or electrical equipment associated with shows and carnivals Australian Standard (AS/ANZ 3002). This equipment must be inspected and tested in accordance with the provisions of those Standards.

CHECKING OUT YOUR WORKPLACE

An important part of your business is to ensure the health and safety of your employees and other people who visit your workplace. You need to be aware of potential hazards and take action to ensure no one is at risk while using electrical equipment. To ensure you fulfil these obligations for a safe workplace, the following questions will help you evaluate how well you are currently managing electrical safety in your workplace.

Do you talk to your employees about electrical safety issues?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Do you encourage your employees to report electrical safety problems?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Do you regularly inspect and maintain your electrical equipment to identify safety problems?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Do you fix identified electrical safety problems?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

WHO CAN CARRY OUT THE RISK ASSESSMENT?

The electrical equipment risk assessment should in most situations be relatively straightforward and can be carried out by you or a trained member of staff. For example, a workplace that has a limited number of items of electrical equipment.

However, other workplace electrical equipment risk assessments may require a higher level of expertise and interpretation of results and, therefore, should be carried out by appropriately qualified or experienced personnel who are able to recognise electrical hazards or potentially unsafe conditions. For example, an electrician, electrical contractor or specialist testing provider.

COMPLETING THE RISK ASSESSMENT

When completing the risk assessment, you should also identify any specific workplace factors that may contribute to the risk, including:

- the work premises and the working environment, including their layout and condition,
- the capability, skill, experience and age of people undertaking the work,
- the systems of work being used,
- the range of reasonably foreseeable conditions.

Note: If multiple items of electrical equipment of the same design are installed and used under the same working conditions that are the same for all practical purposes it is only necessary to complete your risk assessment on a representative sample of those items. For example, office computers and other similar office type electrical equipment would fall into this category.

WHAT IS A HOSTILE OPERATING ENVIRONMENT?

A hostile operating environment means an operating environment at a place of work where the electrical equipment or flexible supply cord is, in its normal use, subject to operating conditions that are likely to result in damage to the equipment and for example, includes an operating environment that may cause mechanical damage to the item of equipment or expose the equipment to moisture, heat, vibration, corrosive substances or dust.

Electrical equipment that is being used in a hostile operating environment must be regularly inspected and tested in accordance with the provisions of Australian Standard AS/NZS 3760.

Note: You can vary the testing timeframes recommended in AS/NZS 3760 subject to a risk assessment being carried out in accordance with the risk management provisions of the OHS Regulation 2001.

Any variation of the testing timeframes that are recommended in AS/NZS 3760 must be supported by documentation that is retained by the employer in accordance with the record keeping provisions of clause 65 of the OHS Regulation 2001.

WHAT IS A NON-HOSTILE OPERATING ENVIRONMENT?

A non-hostile operating environment refers to a workplace where electrical equipment is used in a working environment that is dry, clean, well organised and free of operating conditions that are likely to result in damage to the item of electrical equipment or flexible supply cord. For example, an office, retail shop, telecentre, classrooms, etc.

Electrical equipment commonly used in these types of low risk operating environments includes, computers, photocopiers, power boards, stationary or fixed electrical equipment and similar electrical appliances.

HOW DO I MANAGE THE SAFETY OF MY ELECTRICAL EQUIPMENT?

You can implement a range of control measures to manage the safe operation of electrical equipment used in your workplace, including:

- routine visual checks by the equipment user
- formal visual inspections
- maintenance
- repair
- replacement
- use of fixed or portable residual current devices (RCDs) more commonly known as safety switches
- training and instructing employees in the safe use of the electrical equipment

- and, if determined as an outcome of a risk assessment, inspection and testing of identified electrical equipment.

MONITORING AND REVIEW

When you complete the risk assessment, you must also decide how often it needs reviewing. The effectiveness of the decisions, made as a result of the risk assessment also need to be re-evaluated if:

- there is evidence the risk assessment is no longer valid,
- or an injury results from exposure to an electrical hazard to which the risk assessment relates
- or a significant change occurs in the working environment, location or use of the electrical equipment, to which the risk assessment relates.

WHAT RECORDS DO I HAVE TO KEEP?

You are required to keep records of all inspections, test and maintenance carried out on your electrical equipment that operates in or is affected by a hostile operating environment.

In particular, the following information must be recorded:

- the name of the person who carried out the inspection, test or maintenance,
- the date or dates the inspections , tests or maintenance was carried out,
- the result or outcome of the inspections, tests or maintenance,
- the date when the next inspection and test must be carried out.

DO I NEED TO RECORD THE RESULTS OF RISK ASSESSMENTS CARRIED OUT ON ELECTRICAL EQUIPMENT?

Although not required by the OHS Regulation WorkCover recommends that for electrical equipment being used in a non hostile operating environment that a documented risk assessment be undertaken or if there is a change in equipment use / location or if an electrical incident occurs at the workplace involving electrical equipment to which the risk assessment relates.

Any such record of a risk assessment should be retained for a period of 12 months.

To get you started, the sample Electrical Equipment Risk Assessment and Inspection Record provides a format for recording the outcome of your risk assessment and the results of any inspection and testing carried out on the electrical equipment. Your records should be located conveniently so that managers, employees and employee representatives can access the information. WorkCover inspectors and authorised employee representatives have the right to examine the records of employers, which are required to be kept by the Regulation.

WHAT GUIDANCE IS AVAILABLE TO HELP ME?

WorkCover has produced the *Code of Practice: Technical Guidance*. The Code adopts without alteration the Australian Standard (AS/NZS 3760), *In-service safety inspection and testing of electrical equipment*. This Standard provides employers with practical guidance on the inspection, testing and record keeping of electrical equipment they use at their workplace.

Electrical practices on construction sites, which include inspection and testing of electrical equipment, are covered separately by the requirements of *WorkCover's Code of Practice – Electrical practices for construction work*.

In addition to the electrical equipment risk assessment and codes of practice, WorkCover has also produced a list of frequently asked questions (FAQs), on the subject of electrical inspection, testing and tagging. To view this guidance material and the FAQs, visit WorkCover's website at www.workcover.nsw.gov.au.

WHERE CAN I GET A COPY OF THE AUSTRALIAN STANDARD AS/NZS 3760?

Australian Standards can be purchased from Standards Australia either in hard copy form or purchased as a download from the Standards website.

Contact details

SAI Global
Publisher of Australian Standards
286 Sussex Street, Sydney NSW 2000
Postal Address: GPO Box 5420, Sydney NSW 2001
Customer Service Centre, Phone: 131 242
website : www.saiglobal.com/shop

FURTHER INFORMATION

For more information or assistance contact your local WorkCover NSW office listed in the telephone directory, go to the WorkCover website www.workcover.nsw.gov.au or contact the WorkCover Assistance Service on **13 10 50**.

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