



Government
of South Australia

SafeWork SA

Electrical Safety Proactive Compliance Campaign 2022 Closure Report

Table of contents

Executive Summary	3
Introduction	4
Background	5
Scope	6
Statutory Notices	8
Trends	9
Recommendations	9

Executive Summary

Electricity can kill or severely injure people and cause damage to property. However, simple precautions can be taken when working with electrical equipment to significantly reduce the risk of injury.

Persons Conducting a Business or Undertaking (PCBUs) have a general duty under the *Work Health and Safety Act 2012* (SA) (WHS Act) to manage electrical risks at the workplace. When managing electrical risks, the risks must be eliminated so far as is reasonably practicable, if elimination is not reasonably practicable, the risks must be minimised so far as is reasonably practicable.

PCBUs can eliminate or minimise hazards arising from working with electrical equipment by using a residual current device (RCD) and regularly inspecting and testing electrical equipment to detect electrical faults and deterioration that cannot be detected by visual inspection alone.

Between 3 October and 31 October 2022, SafeWork SA undertook an all-agency proactive compliance campaign focusing on Electrical Safety (the campaign) as part of National Safe Work Month and in response to a 9% rise in electric shock notifications compared to the previous financial year and 38% more than 2019-20.

The rise in electric shock incidents resulted in SafeWork SA publishing new guidance information to assist duty holders in managing the risk associated with electrical equipment, these include:

- [Electrical risks at the workplace](#)
- [Electrical work](#)
- [Inspection and testing of electrical equipment](#)

The objective of the campaign was to:

- ensure the person with management and control of the workplace and PCBUs are regularly inspecting and testing electrical equipment supplied with electricity through an electrical socket outlet, including residual current devices (RCD)
- provide information and educational resources to help PCBUs understand their responsibilities, meet compliance obligations, and manage the health and wellbeing of their workers
- make PCBUs aware of expiable offences associated with general electrical safety in workplaces
- reduce the number of notifiable dangerous incidents associated with the risk of electric shock.

SafeWork SA Inspectors conducted a total of 104 electrical safety inspections, resulting in 42 improvement notices being issued.

The most common areas of non-compliance identified that resulted in an Improvement notice being issued, related to:

- Inspection and testing of electrical equipment (21)

➤ Testing of residual current devices (17)

29 of the 104 (28%) worksites visited resulted in an improvement notice. These findings show there is a high level of non-compliance with general electrical safety in workplaces across various industries. It is recommended that SafeWork SA:

- communicates the outcome of the campaign to internal and external stakeholders
- consolidate all its electronic guidance material on electrical safety onto one landing page on SafeWork SAs website
- Issue expiation notices for breaches resulting from failings to fulfil regulations 150 and 165
- continue to inspect the management of electrical equipment when visiting workplaces

Introduction

SafeWork SA's primary function is to regulate the work health and safety (WHS) laws in South Australia through a combination of education and compliance activities.

SafeWork SA regulates compliance with the *Work Health and Safety Act 2012 (SA)*, *Work Health and Safety Regulations 2012 (SA)* and ensures compliance with the *Managing electrical risks in the workplace Code of Practice*. SafeWork SA can require PCBUs to rectify safety breaches through the issuing of statutory notices or prosecution.

An electrical risk is a risk to a person of death, shock, or other injury caused directly or indirectly by electricity. Contact to exposed live parts are liable to cause electric shock and burns, faults which could cause fires, or explosion where electricity could be the source of ignition in a potentially flammable or explosive atmosphere contributing as the main risk factors. Some items of equipment can also involve greater risk than others. Portable electrical equipment is particularly liable to damage including to plugs and sockets, electrical connections and to the cable itself.

PCBUs must manage electrical risks at the workplace. When managing electrical risks, the risks must be eliminated so far as is reasonably practicable. If elimination is not reasonably practicable, the risks must be minimised so far as is reasonably practicable.

Any PCBU with management or control over electrical equipment (including an electrical installation) must ensure, so far as is reasonably practicable, that the equipment is safe to use.

Under the WHS Act an incident in relation to a workplace that exposes a worker or any other person to a serious risk to a person's health or safety emanating from an immediate or imminent exposure to an electric shock is classified as a dangerous incident requiring notification to SafeWork SA. There is also a requirement for a PCBU to notify the Office of the Technical Regulator.

An example of an electrical shock that is notifiable would be a minor shock resulting from direct contact with exposed live electrical parts (other than 'extra low voltage') including shock from capacitive discharge

As a result of the compliance campaign, SafeWork SA's aim is to proactively drive change across all industries to ensure the risks associated with electrical equipment are managed and reduce electric shock incidents.

Background

SafeWork SA receives a significant number of notifications relating to electrical shock each year that have the potential to result in serious or fatal injuries.

An interrogation of SafeWork SA's compliance database found that electrical inspection and testing was the highest non-compliances identified by Inspectors over a three-year period. In 2021-22, SafeWork SA received 348 notifications associated with electric shock incidents, up 9% on the previous year and 38% more than 2019-20. The construction industry accounted for 24 per cent of all electric shock notifications in 2021-22, an industry where an electric shock can also lead to other types of injury such as causing a fall from ladders or scaffolds.

Financial Year	Notifications	Difference to previous year
2021-2022	348	Up 9%
2020-2021	318	Up 21%
2019-2020	252	-

The SafeWork SA financial year data on notifiable incidents for 2019-22 associated with an electric shock found 926 case files containing:

- 918 notifiable dangerous incidents
- 5 notifiable serious injuries
- 3 fatalities (all in 2020)

The SafeWork SA financial year data for 2019-22 on statutory notices issued associated with the management of electrical installations and equipment found 679 notices, consisting of 585 Improvement notices and 94 Prohibition notices.

In 2021-22, SafeWork SA issued 239 statutory notices, up 26 per cent on the previous year and close to the number issued in 2019-20.

Financial Year	Notices	Difference to previous year
2021-2022	239	Up 26%
2020-2021	177	Down 27%
2019-2020	243	-

The above data indicated the need for a stronger approach to compliance with electrical safety by SafeWork SA, through a focused agency-wide proactive compliance campaign on the inspection and testing of electrical equipment, including use and testing of RCDs.

Scope

Between 3 October to 31 October 2022 to coincide with National Safe Work Month and in response to a rise in electric shock incidents in 2021-22, SafeWork SA's conducted an all-agency proactive compliance campaign.

Most workplaces require a risk management approach to determine the type of inspection and if necessary, any testing required. The class of work and the risks associated with the use of specified electrical equipment will determine how often equipment is tested.

A person with management or control of a workplace must take all reasonable steps to ensure that residual current devices (RCD's) used at the workplace are tested regularly by a competent person to ensure that the devices are operating effectively.

Electrical inspection and testing are required for all electrical equipment that is used in an environment in which its normal use exposes the equipment to operating conditions that are likely to result in damage to the equipment or a reduction in its expected life span. Conditions that involve exposing the electrical equipment to moisture, heat, vibration, mechanical damage, corrosive chemicals, or dust: Or environments that seriously affect the safe operation of electrical equipment. Examples of these include wet or dusty areas, outdoors, workplaces that use corrosive substances, commercial kitchens, and manufacturing environments.

A PCBU at a workplace must ensure that the electrical equipment is regularly inspected and tested by a competent person, a record of testing (other than daily testing) must be kept until the device is next tested or disposed of.

A PCBU at a workplace must ensure, so far as is reasonably practicable, that any electrical risk associated with the supply of electricity to the electrical equipment through a socket outlet is minimised by the use of an appropriate residual current device. Such as:

- electrical equipment that is used in an environment in which the normal use of electrical equipment exposes the equipment to operating conditions that are likely to result in damage to the equipment or a reduction in its expected life span, including conditions that involve exposure to moisture, heat, vibration, mechanical damage, corrosive chemicals or dust.
- electrical equipment is moved between different locations in circumstances where damage to the equipment or to a flexible electricity supply cord is reasonably likely
- electrical equipment is frequently moved during its normal use
- electrical equipment forms part of, or is used in connection with, an amusement device.

Guidance on general inspecting and testing of electrical equipment and RCDs is included in [AS/NZS 3760:2010 In-service safety inspection and testing of electrical equipment](#) and SafeWork SA guidance [Inspection and testing of electrical equipment](#).

During the campaign, Inspectors were to check electrical safety at workplaces, provide further education to PCBU's and enforce compliance with work health and safety duties. Electrical safety checks were conducted on a range of industries and workplaces across metropolitan, greater Adelaide metropolitan and regionals areas throughout South Australia.

The campaign focused on:

- WHS Inspectors checking that PCBU's regularly inspect and test their electrical equipment that is supplied with electricity through an electrical socket outlet, including residual current devices (RCDs)
- ensuring shared work health and safety obligations and responsibilities are met with contractor management
- addressing trends, risks and/or systemic issues related to general electrical safety in workplaces
- raising awareness of electrical risks and the control measures available to PCBU's
- providing information and educational resources to help PCBU's understand their responsibilities, meet compliance obligations, and manage the health and wellbeing of their workers
- making PCBU's aware that SafeWork SA can issue expiation notices where non-compliance has been identified.

There are five expiable offences available to Inspectors during the campaign. The issuing of expiation notices where electrical non-compliance was identified should be considered to help drive down electrical shocks.

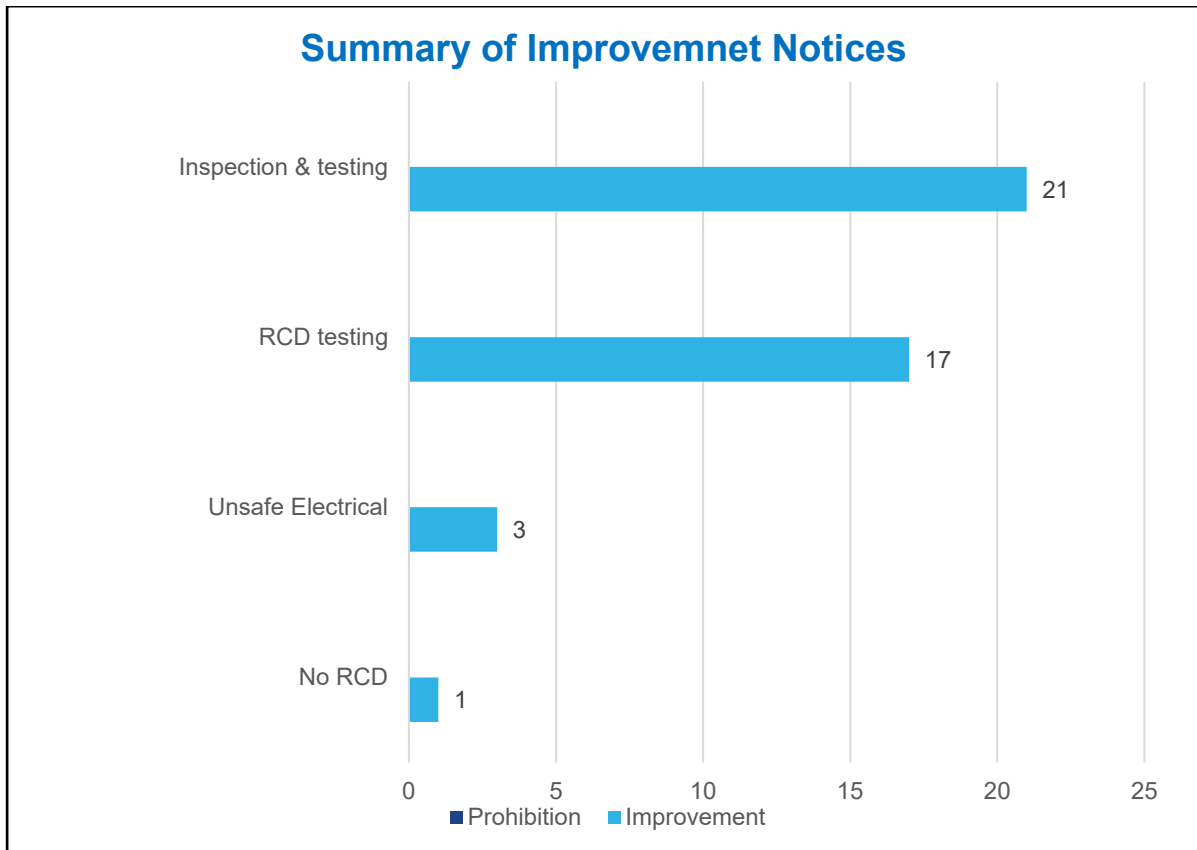
Regulation number	Regulation	Fee
150(1)	Regularly inspected and tested by a competent person if the electrical equipment is— <ul style="list-style-type: none"> - supplied with electricity through an electrical socket outlet; and - used in an environment in which the normal use of electrical equipment exposes the equipment to operating conditions that are likely to result in damage to the equipment or a reduction in its expected life span, including conditions that involve exposure to moisture, heat, vibration, mechanical damage, corrosive chemicals or dust. 	Individual \$432. Body corporate \$2160.
150(2)	Electrical equipment that is new and unused at the workplace, the person must ensure that the equipment is inspected for obvious damage before being used.	Individual \$432. Body corporate \$2160.
150(3)(a)	The person must ensure that a record of any testing carried out is kept until the electrical equipment is next tested	Individual \$144. Body corporate

		\$720.
150(3)(b)	The person must ensure that a record of any testing carried out is kept until the electrical equipment is permanently removed from the workplace or disposed of	Individual \$144. Body corporate \$720.
165(1)	A person with management or control of a workplace must take all reasonable steps to ensure that residual current devices used at the workplace are tested regularly by a competent person to ensure that the devices are operating effectively	Individual \$432. Body corporate \$2160.
165(2)	The person must keep a record of all testing of a residual current device (other than any testing conducted daily) until the earlier of the following occurs <ul style="list-style-type: none"> - the device is next tested - the device is permanently removed from use 	Individual \$144. Body corporate \$720.

Statutory Notices

104 electrical inspections were conducted during the campaign, resulting in 42 Improvement notices being issued in response to non-compliance, consisting of:

- 21 Inspection and testing of electrical equipment
- 17 Testing of residual current devices
- 3 Unsafe electrical equipment
- 1 No RCD protection.



Trends

While the majority of workplaces inspected throughout the campaign demonstrated that PCBUs were complying with their statutory duties regarding electrical safety, a significant number of breaches were identified.

The most common breaches identified resulted from a PCBU failing to comply with inspection and testing requirements. The Regulations requires electrical equipment to be regularly inspected by a competent person, electrical equipment and RCDs to be regularly tested by a competent person and that electrical inspection and testing records are kept.

A failure to inspect and test electrical equipment goes hand in hand with a failure to regularly test RCDs

Recommendations

It is recommended that SafeWork SA:

- communicates the outcome of the campaign to internal and external stakeholders
- consolidate all its electronic guidance material on electrical safety onto one landing page on SafeWork SA's website
- issue expiation notices for breaches resulting from failings to fulfil regulations 150 and 165.
- continue to inspect the management of electrical equipment when visiting workplaces