AUSTRALIAN CONSTRUCTORS ASSOCIATION

Construction & Building Industry Safety Guideline

Investigation of Low Voltage Electrical Shock

Disclaimer

This Guideline contains information regarding work health and safety. It includes some of your obligations under the work health and safety and electrical safety legislation that jurisdictional regulators administer. To ensure you comply with your legal obligations you must refer to the appropriate Acts and Regulations that apply in the jurisdiction where you are conducting your work.

This publication may refer to legislation that has been amended or repealed. When reading this Guideline you should always refer to the latest jurisdictional laws. It is the responsibility of the businesses and the individuals involved to ensure that a safe system of work is employed and that statutory requirements are met.

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Construction & Building Industry Safety Guideline
Investigation of Low Voltage Electrical Shock

Intent

This guideline defines the methods that should be used by competent authorised electrical workers to technically inform an internal investigation following the report of actual, or suspected electrical shock in low voltage installations and or equipment.

This guideline attempts to ensure that all suspected low voltage reports of electrical shock are investigated safely and thoroughly to prevent further injuries and or a repeat occurrence.

Scope

This guideline applies to electrical equipment and installations up to and including low voltage and does not cover investigating incidents involving step potentials.

This guideline covers the technical process that should be followed to correctly inform an investigation into electrical shock incidents. It does not cover investigations within, hazardous areas, confined spaces or incidents involving high voltage or reportable incidents / serious electrical incidents or incidents under external investigation from a jurisdictional Regulator or other relevant Government authorities

Safety Imperatives

a. The person in Control (PIC) of the installation and / or equipment shall be given notice prior to performing the technical investigation and advised of the findings.

b. A risk assessment shall be performed and recorded prior to conducting an investigation, and reviewed upon completion of the investigation.

c. The investigation shall be conducted by an authorised electrical worker competent in performing the task, who for the purpose of this guideline, shall be referred to as the Technical Investigator (TI).

d. All statutory and local law requirements should be understood by the TI and shall be complied with at all times.

e. A safe system of work shall be maintained during the investigation and all attempts shall be made to conduct the tests on the installation and / or equipment when de-energised.

f. All attempts shall be made to ensure the installation and / or equipment is electrically safe and not interfered with, prior to, during, and after the investigation.

g. The appropriate exclusion zones shall be established and maintained when the investigation involves an electrical installation or electricity supply authority supply line.

h. Faulty electrical equipment shall be disconnected from the supply where deemed safe to do so and placed in a secure location with an “Out of service” tag attached, and access to the equipment maintained for the investigation and /or statutory authorities if required.

i. Where the investigation determines that the installation is not electrically safe and not made safe at the time of the investigation the PIC shall be notified and advised of such for immediate action.

P = Primary responsibility **S = Support role / Involved**

Electrical Safety Guideline

Imperative Item.	Safety Imperative	Element Guidance	Element Timing	Safety Observer	Technical Investigator	PIC	Supervisor	Safety Practitioner	Workplace Manager	General Manager	Expected Outcome	Standard, Regulation Reference
a.	The Person in Control (PIC) of the installation and / or equipment shall be given notice prior to performing the technical investigation and advised of the findings.	Refer to Appendix A for the investigation process flow chart. A "Person in Control" (PIC) for the purpose of this guideline is the person who has overall responsibility of the installation and / or equipment. On a construction site this would be the Principal Contractor. In instances involving overhead or underground services of an electricity supply authority it would be that organisation.	Prior to, during and at completion of conducting the investigation	S	P	S	S	P	P	S	• Compliance to legislation ensured and resources not wasted • A full investigation is completed by an authorised electrical worker and the report is distributed for comprehensive actions.	General WHS requirements - WHS Act & Regulations or jurisdictional equivalent (Vic & WA) Refer Table 1 WHS Regulations Regulations 147 AS/NZS 4836 – 2011 s1.3 and s 1.4
b.	A risk assessment shall be performed and recorded prior to conducting an investigation, and reviewed on completion of the investigation.	The risk management process is vital to a technical investigation and may require to be conducted with a subject matter expert (SME) being consulted. In some cases, the SME need not be an electrical worker or engineer, but a person familiar with a particular item of equipment or process. (e.g. machine operator) The risk assessment must be reviewed at completion of the technical investigation to ensure there is no residual, or new, risk that may cause harm.	Prior to, during and at completion of conducting the investigation	P	P	P	P	P	P	S	Incident escalation potential is minimised.	WHS Regulations 2011 (2012 in SA & TAS) Regulations 32-38 Section 4 - Code of Practice : Managing Electrical Risks in the Workplace AS/NZS 4836 – 2011 Sections 2 and 3

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Imperative Item.	Safety Imperative	Element Guidance	Element Timing	Safety Observer	Technical Investigator	PIC	Supervisor	Safety Practitioner	Workplace Manager	General Manager	Expected Outcome	Standard, Regulation Reference
c.	The investigation shall be conducted by an authorised electrical worker competent in performing the task, who for the purpose of this standard shall be referred to as the Technical Investigator (TI).	• The TI shall be authorised to perform the investigation. Note: The tests are required to be performed by a licensed electrical worker who has been deemed competent to perform the tasks as per this guideline by the person conducting the business or undertaking and or other recognised authority. • Authorisation may be required from one or more stakeholders which could include but not be limited to: 1. The person conducting the business or undertaking the role of the TI 2. The PIC where applicable 3. The electricity supply authority whose asset may be involved 4. WHS or Electrical regulators for the State or Territory 5. Police 6. Local authority	Prior to, during and at completion of conducting the investigation	S	P	P	S	P	P	S	Incident escalation potential is minimised.	WHS Regulations Regulations 147 Sections 4 & 5 Code of Practice : Managing Electrical Risks in the Workplace AS/NZS 4836 – 2011 s3.1.3 and s8.1
d.	All statutory and local law requirements should be understood by the TI and shall be complied with at all times.	• The TI shall be aware of the statutory and local law requirements prior to conducting the investigation. • Note: If legislation or policy requires the incident site or equipment to be preserved or left intact, (not interfered with) the tests must not proceed. Consultation with the PIC and the investigating Regulator is required prior to conducting any tests in this instance. • For the purpose of making the scene / equipment safe, supply may be disconnected by the TI after consultation with the PIC.	Prior to conducting the investigation	S	P	S	S	P	P	S	Compliance with legislation ensured and resources not wasted	Section 39 WHS Act or jurisdictional equivalent (Vic & WA) AS/NZS 4836 – 2011 s10.2 and s10.3

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Electrical Safety Guideline

Imperative Item.	Safety Imperative	Element Guidance	Element Timing	Safety Observer	Technical Investigator	PIC	Supervisor	Safety Practitioner	Workplace Manager	General Manager	Expected Outcome	Standard, Regulation Reference
		Examples of where power may be required to be maintained are: 1. Critical safety controls for machinery. 2. Emergency lighting for access / egress. 3. Medical life support systems. • All notices required by legislation or local authorities shall be given within the mandated time (most often within 24hours for notifiable incidents). • Where the investigation reveals electrical works have been performed unlicensed, the electrical regulator for that jurisdiction shall be notified. Also refer to imperative (b.) on the requirements for leaving the area not electrically safe.										
e.	A safe system of work shall be maintained during the investigation and all attempts shall be made to conduct the tests de-energised.	Refer to Appendix B for the investigation process flow chart. • All attempts shall be made to perform the tests on installations and/ or equipment de-energised. • The practice of “recreating” the event/s when investigating reports of electrical shock shall be used only when all other de-energised tests fail to identify the fault/s and shall be deemed “Live work.” Refer to Clause 157 of the WHS Regulations (or equivalent) for requirements relating to when work on energised equipment is permitted. • All checks and tests shall be conducted as per the guidelines and the Code of Practice – Managing electrical risks in the workplace and /or AS/NZS 4836.	Prior to, during and at completion of conducting the investigation		P	P	P	P	P	P	S	Incident escalation potential is minimised.	Clause 157 WHS Regulations or jurisdictional equivalent (Qld,Vic & WA) Sections 4 - 8 Code of Practice : Managing Electrical Risks in the Workplace AS/NZS 4836 – 2011 Sections 2 & 3

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Electrical Safety Guideline

Imperative Item.	Safety Imperative	Element Guidance	Element Timing	Safety Observer	Technical Investigator	PIC	Supervisor	Safety Practitioner	Workplace Manager	General Manager	Expected Outcome	Standard, Regulation Reference
f.	All attempts shall be made to ensure the site and or equipment is electrically safe and not interfered with, prior to, during, and after the investigation.	• Upon being requested to perform the technical investigation the TI shall request that, aside from for the purposes of reducing further risks, the site and or equipment is not to be interfered with. This is to ensure that the equipment fault condition can be accurately assessed and to identify any other contributing factor if present. • Electrical equipment is to be isolated if there is no further risk in doing so. • Barriers and warning mechanisms may be required to ensure the safety of others and to maintain the preservation of the scene. Appendices B and C shall be used for guidance when verifying if hazardous touch potentials (voltages) exist.	Prior to, during and at completion of conducting the investigation	S	P	P	S	P	P	S	Incident escalation potential is minimised.	Sections 4 - 8 Code of Practice : Managing Electrical Risks in the Workplace AS/NZS 4836 – 2011 Section 2 & 3
g.	The appropriate exclusion zones shall be established and maintained when the report involves an electrical installation or electricity supply authority supply line.	• Exclusion zones shall be established and maintained • Exclusion zones should be determined by using the “worst case scenario and highest possible voltages” that could be expected • Persons not essential for the investigation shall maintain the appropriate distances. • Untrained persons involved with the investigation shall: 1. Be involved in the risk management process 2. Wear the appropriate PPE for the conditions /hazards	Prior to, during and at completion of conducting the investigation	S	P	P	S	P	P	S	Incident escalation potential is minimised.	Sections 4 - 8 Code of Practice : Managing Electrical Risks in the Workplace AS/NZS 4836 – 2011 Section 3 to 5

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Electrical Safety Guideline

Imperative Item.	Safety Imperative	Element Guidance	Element Timing	Safety Observer	Technical Investigator	PIC	Supervisor	Safety Practitioner	Workplace Manager	General Manager	Expected Outcome	Standard, Regulation Reference
		3. Follow the instructions of the TI at all times. • Barriers and warning tape should be used to limit access by those not involved in the investigation										
h.	Faulty electrical equipment shall be disconnected from the supply where deemed safe to do so and placed in a secure location with an "Out of service" tag attached, and access to the equipment maintained for the investigation and authorities if required.	• Suspected faulty electrical equipment shall be made safe wherever it is not a risk in doing so or does not create a greater risk and the equipment quarantined and left on site for investigation purposes. • Where the TI is commissioned to correct faults in equipment the appropriate Australian standards shall be used for guidance in proving electrically safe e.g. AS/NZS 3760, AS/NZS 3012 for specified equipment and AS 1674.2 for welding equipment.	Prior to, during and at completion of conducting the investigation	S	P	P	S	P	P	S	• Incident escalation potential is minimised. • The risk of non electrical personnel being exposed to electrical risks is reduced to a level where a deliberate breach would be required to be exposed	Sections 4 - 8 Code of Practice : Managing Electrical Risks in the Workplace AS/NZS 4836 – 2011 Section 4
i.	Where the investigation determines that the installation is not electrically safe and not made safe at the time of the investigation the PIC shall be notified and advised of such for immediate action.	• Suspected faulty electrical installations or portions of it shall be isolated from supply wherever it is not a risk in doing so and does not create a greater risk. • Where the TI is commissioned to correct faults in the installation, checks and tests shall be performed on the equipment / installation to prove electrically safe and recorded. • Where no agreed plan is in place to make the installation electrically safe, and supply was disconnected for the investigation, supply shall not be reinstated by the TI unless failure to do so creates a greater risk. • Where supply was not disconnected for the	Prior to, during and at completion of conducting the investigation	S	P	S	S	P	P	S	Incident escalation potential is minimised.	Sections 4 - 8 Code of Practice : Managing Electrical Risks in the Workplace AS/NZS 4836 – 2011 Section 4

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Imperative Item.	Safety Imperative	Element Guidance	Element Timing	Safety Observer	Technical Investigator	PIC	Supervisor	Safety Practitioner	Workplace Manager	General Manager	Expected Outcome	Standard, Regulation Reference
		investigation and no agreed plan is in place to make the installation electrically safe, the TI shall notify the electrical regulator / authority for that area of the hazards that exist and the reasons they were not rectified. Notice of this shall be given to the PIC for the equipment / installation and records of such maintained with the final report.										

Key references applicable to this Safety Guideline:

Safe Work Australia

Code of practice: Managing electrical risks in the workplace

Code of practice: How to manage work health and safety risks

Code of practice: Work health and safety consultation, Co-operation and Co-ordination

Australian and New Zealand Standards

AS/NZS 4836 – 2011: Safe working on or near low-voltage electrical installations and equipment

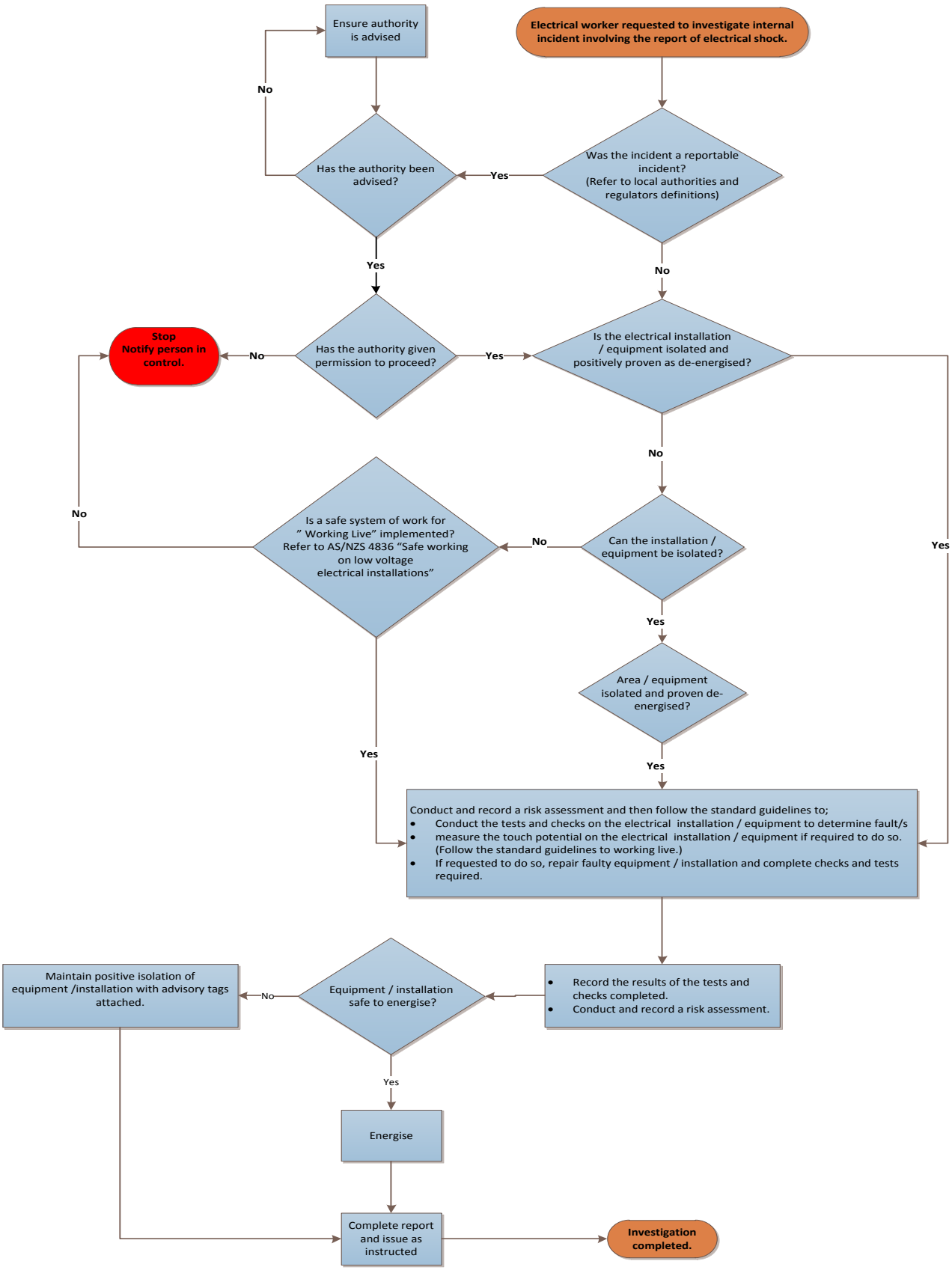
As/NZS 3017 – 2007: Electrical installations – Verification guidelines

Table 1 - Legislative Summary	
Jurisdiction	**Legislation**
Commonwealth	Work Health and Safety Act, 2011 Work Health and Safety Regulations, 2011
Australian Capital Territory	Work Health and Safety Act, 2011 Work Health and Safety Regulations, 2011 Utility Networks (Public Safety) Regulations 2001
New South Wales	Work Health and Safety Act, 2011 Work Health and Safety Regulations, 2011
Northern Territory	Work Health and Safety (National Uniform Legislation) Act, 2011 Work Health and Safety (National Uniform Legislation) Regulations, 2011
Queensland	Work Health and Safety Act, 2011 Work Health and Safety Regulations, 2011 Electrical Safety Regulation, 2013
South Australia	Work Health and Safety Act, 2012 Work Health and Safety Regulations, 2012
Tasmania	Work Health and Safety Act, 2012 Work Health and Safety Regulations, 2012
Victoria	Occupational Health and Safety Act 2004 Occupational Health and Safety Regulation, 2007 Note: WHS Act and Regulations not yet introduced in this jurisdiction.
Western Australia	Occupational Health and Safety Act 1984 Occupational Health and Safety Regulation, 1996 Note: WHS Act and Regulations not yet introduced in this jurisdiction.

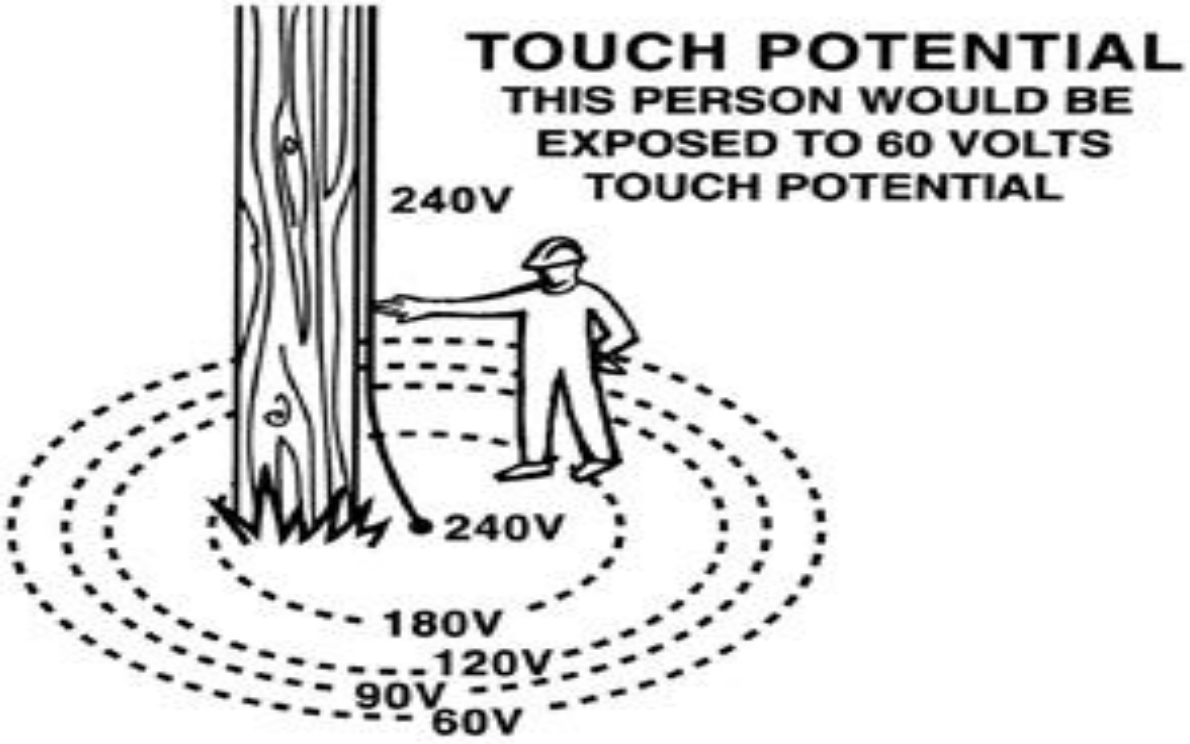
Table 2: Regulatory Guide – Particular requirements that may be relevant to the investigation of a low voltage electrical shock. Note: This is not a complete list of all regulations that may be applicable for the work. Reference must be made to the relevant Work Health and Safety Regulation or jurisdictional equivalent OHS Regulation for a complete list of regulatory requirements.	
Work Health and Safety Regulation	**Subject area**
Regulation 32	Application of Part 3.1
Regulation 33	Specific requirements must be complied with
Regulation 34	Duty to identify hazards
Regulation 35	Managing risks to health and safety
Regulation 36	Hierarchy of control measures
Regulation 37	Maintenance of control measures
Regulation 38	Review of control measures
Regulation 39	Provision of information, training and instruction
Regulation 44	Provision and use of personal protective equipment
Regulation 147	Electrical safety – Risk management
Regulation 157	Electrical work on energised electrical equipment – when permitted

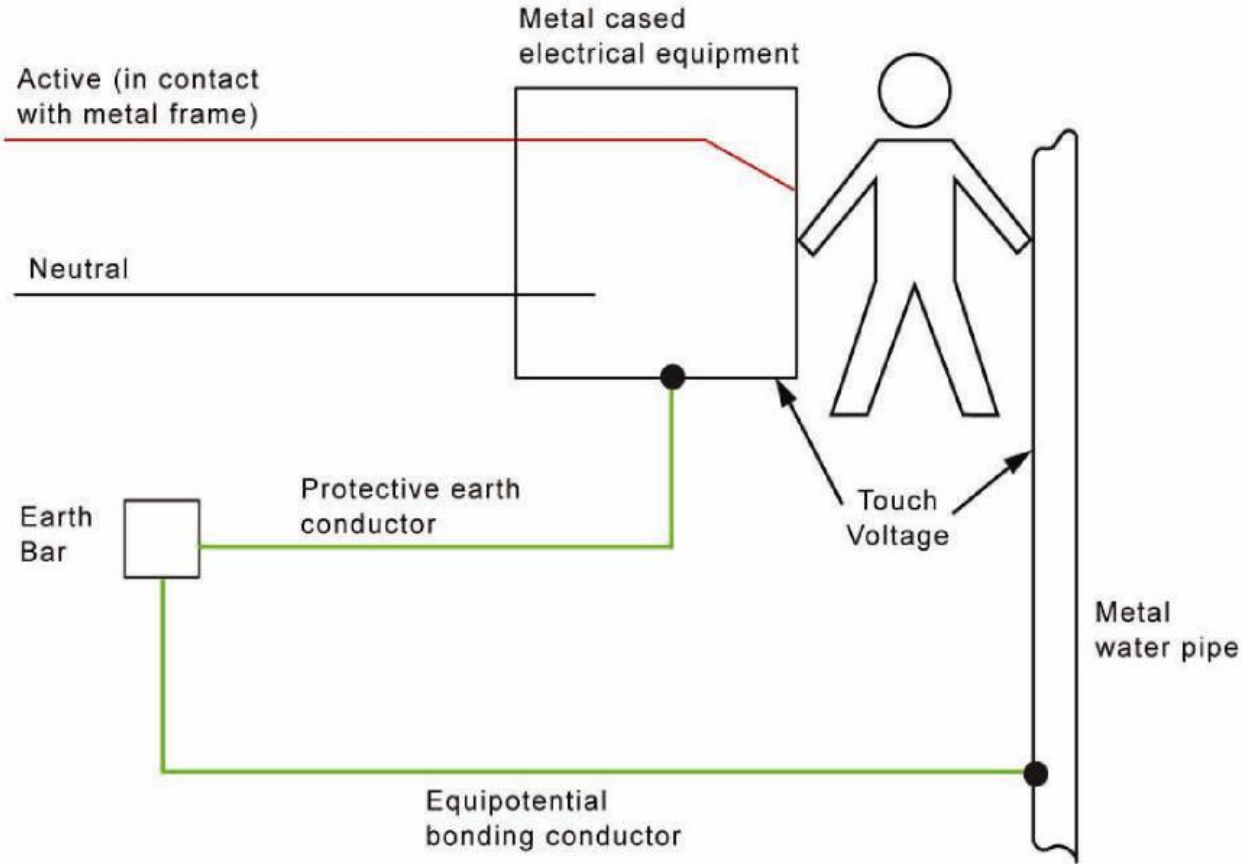
Appendix A - Investigation Of Electrical Shock Flow Chart

Note: Refer also to the Code of practice – Managing Electrical Risks in the Workplace



Appendix B – Examples of touch (voltage) potentials



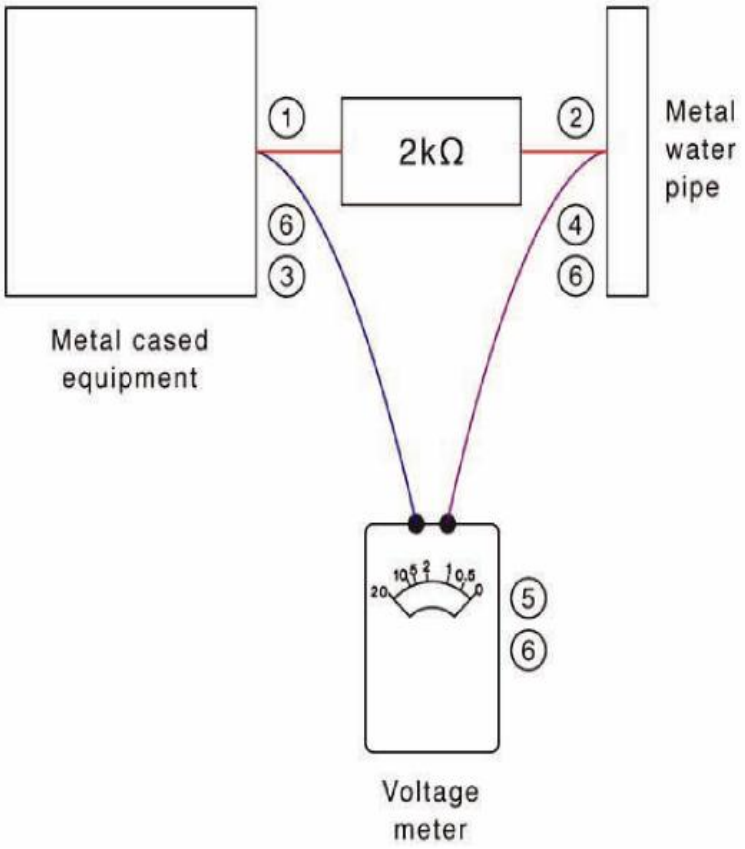


Appendix C – Measuring touch potentials (voltage) – Refer to AS/NZS 3017.

Follow the steps outlined in the test sequence.

Additional steps may be identified by the Technical Investigator (TI)

List and record results of tests performed in the final report.



TEST SEQUENCE:

① = Connect lead from 2kΩ resistor to metal cased equipment

② = Connect lead from 2kΩ resistor to earthed metal water pipe

③ = Connect one test lead to metal cased equipment

④ = Connect other test lead to earthed metal water pipe

⑤ = Test result should be within touch voltage limits specified in AS/NZS 3000

⑥ = Disconnect resistor and test equipment

Notes:

A 2 kΩ resistor is used to simulate the body resistance of a typical person.

Numbers indicate test sequence.

The 2 kΩ resistor is a simplified version of the circuits shown in AS/NZS 60990.

In some instances earth stakes / mats may be required – **Note: An independent earth is recommended to perform these tests.**

Appendix D - Electricity Supply Authorities

Electricity Supply Authorities operate in each state and territory jurisdiction. They own, control or operate electricity networks and may also be known as Network Operators or Electricity Distributors. Electricity Supply Authorities and their contact details are shown in Table 2.

Table 3 - Electricity Supply Authorities

Jurisdiction	Electricity Supply Authority	Contact
Australian Capital Territory	ActewAGL * supplies all of the ACT and south-east NSW.	Ph: (02) 6293 5705 Web: www.actewagl.com.au
New South Wales	**Ausgrid** (formerly Energy Australia) supplies most of Sydney, the Central Coast and Hunter regions of NSW.	Ph: 13 15 25 or 13 15 35 Web: www.ausgrid.com.au
	Endeavour Energy (*formerly Integral Energy*) supplies Sydney's greater west, the Southern Highlands and the Illawarra.	Ph: 131 081 or (02) 9853 6666 Web: www.endeavourenergy.com.au
	Essential Energy (*formerly Country Energy*) supplies the rest of rural and regional NSW.	Ph: 13 23 91 Web: www.essentialenergy.com.au
Northern Territory	**PowerWater *** supplies all of the Northern Territory.	Ph: 1800 245 092 Web: www.powerwater.com.au
Queensland	**Energex** supplies south eastern Queensland - Brisbane to Ipswich, Gold Coast and Sunshine Coast.	Ph: 13 12 53 Web: www.energex.com.au
	Ergon Energy * supplies rural and regional Queensland.	Ph: 13 10 46 Web: www.ergon.com.au
South Australia	**ETSA Utilities** supplies all of South Australia.	Ph: 13 12 61 or (08) 8404 5667 Web: www.etsautilities.com.au
Tasmania	**Aurora Energy *** supplies all of Tasmania.	Ph: 1300 13 2007 Web: www.auroraenergy.com.au
Victoria	**CitiPower Pty.** supplies Melbourne CBD and inner suburbs.	Ph: 1300 301 101 Web: www.citipower.com.au
	Jemena Electricity Network (*formerly Alinta Energy*) supplies north west Melbourne.	Ph: 1300 131 871 Web: www.jemena.com.au
	Powercor Australia Ltd. supplies Melbourne's outer western suburbs and central and western regional Victoria.	Ph: 13 22 06 Web: www.powercor.com.au
	SP AusNet supplies eastern metropolitan Melbourne and eastern regional Victoria.	Ph: 1300 360 795 or (03) 9695 6000 Web: www.sp-ausnet.com.au

Jurisdiction	Electricity Supply Authority	Contact
	United Energy Distribution Pty. Ltd. supplies south eastern metropolitan Melbourne and Mornington Peninsula.	Ph: 1300 131 689 or (03) 8846 9900 Web: www.ue.com.au
	Basslink Pty. Ltd. High voltage direct current cable under Bass Straight supplies Tasmania and Victoria during energy shortages and times of peak demand.	Ph: (03) 9607 4700 Web: www.basslink.com.au
Western Australia	**Horizon Power *** supplies regional and remote Western Australia.	Ph: (08) 9159 7250 Web: www.horizonpower.com.au
	Western Power supplies south west corner of Western Australia.	Ph: 13 10 87 Web: www.westernpower.com.au

Appendix E - Example of Electric Shock Incident Reporting Format and Sample Questions

Source: Based on information from the Office of Technical Regulator – South Australia

VICTIM—*Name*	Phone No
Address	
Occupation	Injuries received
Location of medical treatment if obtained	

INCIDENT SITE— *Site Occupiers name*						
Address						
Incident date		Phone No:	Fax No:			
Reported to Network Operator by			Date		Time	
Reported to Electrical Regulator by			Date		Time	

INCIDENT DETAILS *Location:*	
What was contacted for the shock current to enter and leave the victim—*e.g. power tool*	
Where did the current enter and leave the body—*e.g. left hand to right foot*	
Please describe how the shock was received	

TEST RESULTS					
Voltage measured between the surfaces contacted which caused the shock current to pass to the victim.					
1. On arrival	volts	2. After remedy	volts	System voltage	volts
Test instruments e.g. Analogue voltmeter, manufacturer, model.					

PRODUCT OR EQUIPMENT INVOLVED					
Article	Trade name	Model	Approval No.	Insulation Ω	Earth Ω
1.					
2.					
3.					
4.					
5.					
Property damage details: *Describe damage caused to the electrical installation and /or equipment*					

INVESTIGATION	
Cause of incident identified as	
Action taken to make safe	
Job referred to—e.g. Electricity Supply Authority to check service	

INVESTIGATOR/S—*Name*					
Electrical Workers Lic No		Phone No		Fax No	
Employer					
Address					
Date/s of investigation		Person compiling report			
Signature		Title		Date	

1. LOCATION
WORKPLACE
OTHER

2. VICTIM
ELECTRICAL WORKER
NON ELECTRICAL WORKER - Trade
SUPPLY INDUSTRY WORKER
GENERAL PUBLIC

3. CAUSE
FAILURE / DETERIORATION
MISUSE / INTERFERENCE - DELIBERATE
MISUSE / INTERFERENCE - INCIDENT
ELECTRICAL WORKER – WORK PRACTICE
OTHER:

4. INSTALLATION
ELECTRICITY SUPPLY AUTHORITY
OVERHEAD LINE – FIXED
OVERHEAD – FALLEN
UNDERGROUND LINE – FIXED
SUBSTATION
CONSUMERS SERVICE – OVERHEAD FIXED
CONSUMERS SERVICE – OVERHEAD FALLEN
CONSUMERS SERVICE - UNDERGROUND
OTHER:
CONSUMERS ELECTRICAL INSTALLATION
INSTALLATION WIRING
FIXED EQUIPMENT
OTHER:
CONSUMERS ELECTRICAL EQUIPMENT
FLEXIBLE CORDS & ACCESSORIES
APPLIANCES / PLUG IN EQUIPMENT / LAMP
OTHER:
OTHER
GENERATORS / INVERTERS
OTHER:

5. SAFETY PROTECTION
RCD PROTECTION PROVIDED
RCD PROTECTION COULD HAVE REDUCED THE EFFECTS OF THE ELECTRIC SHOCK
OTHER

6. PHOTOGRAPHS

Insert photographs of the electrical installation and /or electrical equipment taken as part of the electric shock investigation. Photographs should be numbered and added to the investigation report with a short description.

7. SAMPLE QUESTIONS

1. When did the injured person start the activity and/or join the project?
2. What was the injured person's responsibility on this project?
3. What was the injured person doing?
4. Who had assigned the injured person to the task?
5. Who had instructed the injured person and what training and instruction was given?
6. What tools, machinery, plant or equipment were being used?
7. What did the injured person and/or any witnesses see that was unsafe?
8. When was something first observed to be wrong and who was notified?
9. Who authorised and energised the installation and /or device which caused the electric shock?
10. Who witnessed the incident, events leading up to the incident, or was working with the injured person? (e.g. workmates, other contractors, clients etc.)
11. Why was the installation and /or item not de-energised, isolated, locked and tagged out or otherwise made safe?
12. Why did the injury occur?
13. When did the supervisor last see the injured person, and was the supervisor notified when things started to go wrong?
14. What action has been taken to prevent any recurrence?
15. What other near misses or similar incidents have occurred?
16. What safety rules, regulations or work practices apply to the task being performed?

17. How would the injured person have known that the item was energised “live” or “dangerous”?
18. Was personal protective equipment (PPE) provided?
19. What PPE was used?
20. Other questions:

FOR INFORMATION – Electric Shock Incident Notification Requirements

Extract from the NSW WORK HEALTH AND SAFETY ACT, 2011

Note: Refer to the jurisdictional Work Health and Safety Act, Electrical Safety or Occupational, Health and Safety legislative equivalent for details on the notification of electric shock incidents in that jurisdiction.

Incident notification

Section 35 What is a "notifiable incident"?

In this Act, ***notifiable incident*** means:

a) the death of a person, or
b) a serious injury or illness of a person, or
c) a dangerous incident.

Section 36 What is a "serious injury or illness"?

In this Part, ***serious injury or illness of a person*** means an injury or illness requiring the person to have:

a) immediate treatment as an in-patient in a hospital, or
b) immediate treatment for:
    (i) the amputation of any part of his or her body, or
    (ii) a serious head injury, or
    (iii) a serious eye injury, or
    (iv) a serious burn, or
    (v) the separation of his or her skin from an underlying tissue (such as de-gloving or scalping),
    (vi) a spinal injury, or
    (vii) the loss of a bodily function, or
    (viii) serious lacerations, or
c) medical treatment within 48 hours of exposure to a substance,
d) and includes any other injury or illness prescribed by the regulations but does not include an illness or injury of a prescribed kind.

Section 37 What is a "dangerous incident"?

In this Part, a ***dangerous incident*** means 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:

a) an uncontrolled escape, spillage or leakage of a substance, or
b) an uncontrolled implosion, explosion or fire, or
c) an uncontrolled escape of gas or steam, or
d) an uncontrolled escape of a pressurised substance, or
e) electric shock, or
f) the fall or release from a height of any plant, substance or thing, or
g) the collapse, overturning, failure or malfunction of, or damage to, any plant that is required to be authorised for use in accordance with the regulations, or
h) the collapse or partial collapse of a structure, or
i) the collapse or failure of an excavation or of any shoring supporting an excavation, or
j) the inrush of water, mud or gas in workings, in an underground excavation or tunnel, or
k) the interruption of the main system of ventilation in an underground excavation or tunnel, or
l) any other event prescribed by the regulations,

but does not include an incident of a prescribed kind.

Section 38 Duty to notify of notifiable incidents

1) A person who conducts a business or undertaking must ensure that the regulator is notified immediately after becoming aware that a notifiable incident arising out of the conduct of the business or undertaking has occurred.
   Maximum penalty:
   a) in the case of an individual—$10,000, or
   b) in the case of a body corporate—$50,000.
2) The notice must be given in accordance with this section and by the fastest possible means.
3) The notice must be given:
   a) by telephone, or
   b) in writing.
   Example: The written notice can be given by facsimile, email or other electronic means.
4) A person giving notice by telephone must:
   a) give the details of the incident requested by the regulator, and
   b) if required by the regulator, give a written notice of the incident within 48 hours of that requirement being made.
5) A written notice must be in a form, or contain the details, approved by the regulator.
6) If the regulator receives a notice by telephone and a written notice is not required, the regulator must give the person conducting the business or undertaking:
   a) details of the information received, or
   b) an acknowledgement of receiving the notice.
7) A person conducting a business or undertaking must keep a record of each notifiable incident for at least 5 years from the day that notice of the incident is given to the regulator under this section.
   Maximum penalty:
   a) in the case of an individual—$5,000, or
   b) in the case of a body corporate—$25,000.
8) Despite subsection (1), a person is not required to give notice under this section of an incident that occurs at a mine to which the *Mine Health and Safety Act 2004* applies or at a coal workplace.

Section 39 Duty to preserve incident sites

1) The person with management or control of a workplace at which a notifiable incident has occurred must ensure so far as is reasonably practicable, that the site where the incident occurred is not disturbed until an inspector arrives at the site or any earlier time that an inspector directs.
   Maximum penalty:
   a) in the case of an individual—$10,000, or
   b) in the case of a body corporate—$50,000.
2) In subsection (1) a reference to a site includes any plant, substance, structure or thing associated with the notifiable incident.
3) Subsection (1) does not prevent any action:
   a) to assist an injured person, or
   b) to remove a deceased person, or
   c) that is essential to make the site safe or to minimise the risk of a further notifiable incident, or
   d) that is associated with a police investigation, or
   e) for which an inspector or the regulator has given permission.
4) This section does not apply to a mine to which the *Mine Health and Safety Act 2004* applies or to a coal workplace.