Title	**Apply safe working procedures and practices in an electrotechnology environment and identify and control special hazards**		
Level	**3**	**Credits**	**5**

Purpose	This unit standard is designed to meet the requirements of workplace safety and workplace hazard management for electrical workers working in an electrotechnology environment. People credited with this unit standard are able to: – demonstrate knowledge of the hazardous nature of installation activities in special environments and locations; – demonstrate knowledge of the Health and Safety at Work Act 2015 in relation to working in special environments and locations; – demonstrate knowledge of the safety management, risk assessment, and control measures of workplace hazards in special environments and locations; – identify and control workplace hazards in special environments and locations; and – apply safety practices and manage risks in special environments and locations.

Classification	Electrical Engineering > Electrotechnology

Available grade	Achieved

Guidance Information

1 This unit standard has been developed for learning and assessment off-job in a simulated environment.

2 References
AS/NZS 3000:2007, *Electrical installations (known as the Australia/New Zealand Wiring Rules),* including Amendment 1;
AS/NZS 3760:2022, *In-service safety inspection and testing of electrical equipment and RCD's,* including Amendment 1 and 2;
AS/NZS 4836:2011, *Safe working on or near low-voltage electrical installations and equipment*;
AS/NZS 60479.1:2022, *Effects of current on human beings and livestock, Part 1: General aspects*;
Electricity (Safety) Regulations 2010;
Health and Safety at Work Act 2015;

New Zealand Resuscitation Council (NZRC) guidelines on CPR – available from http://www.nzrc.org.nz;
and all subsequent amendments and replacements.

3 Definitions

CPR – cardiopulmonary resuscitation.
EWRB – Electrical Workers Registration Board.
Industry practice – those practices that competent practitioners within the industry recognise as current industry best practice.
PCBU – person conducting a business or undertaking.
PPE – personal protective equipment.
Safe and sound practice – as it relates to the installation of electrical equipment is defined in AS/NZS 3000:2007.

4 Range

a Competence may be assessed on any one or more of the following categories of special environments or locations – heights, confined spaces, mobile locations, mobile platforms, minimum approach distances or roofs.
b Competence may be assessed on any one or more of the following categories of safety practices – heights safety, rescue at height, fall arrest, confined space entry, traffic management, rigging, excavations or PPE.
c Workplace manuals and policies, where referenced, should be available to candidates during assessment.
d The assessment of this unit standard must be related to the candidate's area of workplace practice, and must be completed within industry acceptable time frames.
e Demonstration of safe working practices in accordance with *safe and sound practice* are essential components of assessment of this unit standard.
f All activities and evidence presented for all outcomes and performance criteria in this unit standard must be in accordance with:
  i legislation;
  ii policies and procedures;
  iii ethical codes;
  iv Standards – may include but are not limited to those listed in Schedule 2 of the Electricity (Safety) Regulations 2010;
  v applicable site, enterprise, and industry practice; and,
  vi where appropriate, manufacturers' instructions, specifications, and data sheets.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of the hazardous nature of installation activities in special environments and locations.

Performance criteria

1.1 Identify typical special hazard environments and locations in terms of the industry sector being worked in.

1.2 Describe the hazards that may be found within the special hazard environments and locations identified.

1.3 Explain the potential for harm that may arise from the listed hazards.

Outcome 2

Demonstrate knowledge of the Health and Safety at Work Act 2015 in relation to working in special environments and locations.

Performance criteria

2.1 Outline the scope, coverage, and intent of the Health and Safety at Work Act 2015 with reference to installation activities and associated hazards.

2.2 Outline the enforcement of the Health and Safety at Work Act 2015.

Range regulator functions, rights of entry, issue of notices.

2.3 Explain the responsibilities of PCBUs, officers, workers and other persons in terms of the Health and Safety at Work Act 2015.

2.4 Explain the key principle relating to duties in terms of the Health and Safety at Work Act 2015.

2.5 State the requirements to preserve site evidence, keep records, and report notifiable events in terms of the Health and Safety at Work Act 2015.

Outcome 3

Demonstrate knowledge of the safety management, risk assessment, and control measures of workplace hazards in special environments and locations.

Performance criteria

3.1 Explain the principles of risk assessment and control measures.

Range risk assessment – identifying hazards, assessing and prioritising risks, applying control measures;
control measures – eliminate, minimise, personnel training.

3.2 Explain the warning and reporting procedures of unsafe situations in the workplace in accordance with the Health and Safety at Work Act 2015, Electrical Safety Regulations 2010 and best practice.

Range hazard, incident, near miss.

3.3 Explain the warning and reporting procedures of notifiable events in the workplace in accordance with the Health and Safety at Work Act 2015.

Range notifiable injury or illness, notifiable incident, notifiable event.

3.4 Explain control measures to eliminate or minimise workplace hazards for given situations.

Range may include but is not limited to – system isolation, switching off, isolating supply, locking-off and tagging of isolators and rotating machinery, precautions when leaving unfinished work, precautions for working on live equipment, precautions for working at height or on roofs, precautions for work in confined spaces, safety distances, personnel training, safety rules, insulating area, access control, inspection and testing of tools and equipment, hazard control plans, inspection of PPE before use, use of observers; evidence of all relevant control measures for given situations is required.

Outcome 4

Identify and control workplace hazards in special environments and locations.

Performance criteria

4.1 Identify control measures to eliminate or minimise workplace hazards in special environments and locations for given situations.

Range may include but is not limited to – system isolation, switching off, isolating supply, locking-off and tagging of isolators and rotating machinery, precautions when leaving unfinished work, precautions for working on live equipment, precautions for working at height or on roofs, precautions for work in confined spaces, safety distances, personnel training, safety rules, insulating area, access control, inspection and testing of tools and equipment, hazard control plans, inspection of PPE before use, use of observers; evidence of all relevant control measures for given situations is required.

4.2 Explain the need for good practices and procedures to reduce hazards and risks.

4.3 Explain PPE in terms of function of each item, the circumstances where PPE should be used, and inspection requirements in special environments and locations for given situations.

Range may include but is not limited to – system isolation, switching off, isolating supply, locking-off and tagging of isolators and rotating machinery, precautions when leaving unfinished work, precautions for working on live equipment, precautions for working at height or on roofs, precautions for work in confined spaces, safety distances, personnel training, safety rules, insulating area, access control, inspection and testing of tools and equipment, hazard control plans, inspection of PPE before use, use of observers; evidence of all relevant control measures for given situations is required.

Outcome 5

Apply safety practices and manage risks in special environments and locations.

Range assessment against three workplace installations.

Performance criteria

5.1 Carry out risk analysis for installations in special environments or locations.

5.2 Develop a safety management plan for installations.

Range may include but is not limited to – identification of required PPE, specialised equipment and personnel, site management, emergency plan, tool box meetings, site access, training.

5.3 Identify personal safety requirements, training, and certifications related to special hazards.

Planned review date	31 December 2027

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	14 December 2017	31 December 2024
Review	2	2 March 2023	N/A

Consent and Moderation Requirements (CMR) reference	0003

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Comments on this unit standard

Please contact Waihanga Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@waihangaararau.nz if you wish to suggest changes to the content of this unit standard.