



Australian Government

UEENEEEE152A Observe safety practices are followed in the vicinity of isolated electrical cables

Release: 2

UEENEEE152A Observe safety practices are followed in the vicinity of isolated electrical cables

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This unit covers the observation of the safe work methods in the vicinity of isolated cables/conductors designed to operate above extra-low voltage. It requires an understanding of a 'permit-to-work' system, electrical hazards, consequences of damage to cables and electrical infrastructure, and safe working methods, identifying hazards, evaluating risks and adapting safe work methods, observing and supervising the safe working behaviour of the work being undertaken and document safety activities

Application of the Unit

Application of the Unit 2)

This unit augments other formally-acquired competencies in a relevant industry such as in construction, maintenance or repair function or plant or machinery operation at least at AQF 2 and shall be used only in conjunction such competencies.

Licensing/Regulatory Information

License to practice 3)

The skills and knowledge described in this unit does require a license to practice in the workplace subject to regulations for undertaking of electrical work. Practice in workplace and during training is also subject to

License to practice

3)

regulations directly related to occupational health and safety and where applicable contracts of training such as apprenticeships.

Pre-Requisites

Prerequisite Unit(s)

4)

Competencies

4.1)

Granting competency in this unit shall be made only after competency in the following unit(s) has/have been confirmed.

UEENEEE1 01A Apply Occupational Health and Safety regulations, codes and practices in the workplace

Literacy and numeracy skills

4.2)

Participants are best equipped to achieve competency in this unit if they have reading, writing and numeracy skills indicated by the following scales. Description of each scale is given in Volume 2, Part 3 'Literacy and Numeracy'

Reading 3 Writing 3 Numeracy 3

Employability Skills Information

Employability Skills

5)

The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this unit of competency is packaged will assist in identifying Employability Skill requirements.

Elements and Performance Criteria Pre-Content

6) Elements describe the essential outcomes of a competency standard unit
Performance Criteria describe the required performance needed to demonstrate achievement of the element.
Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare to observe safety practices.	1.1 Instructions on the nature of the work to be undertaken are received and understood
	1.2 Location of electrical cables in the vicinity of the work to be undertaken is received from person of higher authority
	1.3 Access permit is sought from an authorised switching officer and received, read and understood after the electrical supply to cables in the vicinity of the work to be undertaken is isolated.
	1.4 Safe working methods for plant, machinery and equipment to be used is reviewed and understood.
2 Observe safety practices	2.1 Work is observed to ensure safe working methods are followed.
	2.2 Work within the vicinity of isolated electrical cables is observed to ensure they are not damaged or disturbed.
	2.3 Unplanned events are dealt with in accordance with established procedures.
3 Take actions to mitigate risk	3.1 Work is stopped when a hazard arises that has not been previously identified
	3.2 Newly identified hazards are referred to appropriate personnel for developing risk mitigation measures in accordance with establish consultation process.

ELEMENT

PERFORMANCE CRITERIA

- 3.3 Risk mitigation measures are monitored for continuous improvement in accordance with established procedures.
- 3.4 Observations of safe working practices and any corrective actions are documented in accordance with establish consultation process.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

8) This describes the essential skills and knowledge and their level, required for this unit.

Evidence shall show that knowledge has been acquired of safe working practices and the application of the safe work methods in the vicinity of isolated cables/conductors designed to operate above extra-low voltage.

The knowledge and skills shall be contextualised to current industry standards, technologies and practices.

KS01-EE152A **infrastructure**

Safety practices - electrical cables and

Evidence shall show an understanding of working safely around electrical infrastructure to an extent indicted by the following aspects:

T1 Effects of electric shock on the human body encompassing:

- Shock currents
- Burns
- Risks of low voltage, high voltage and high currents

T2 Risk management and assessment of risk encompassing:

- Principle and purpose of risk management, and
- Processes for conducting a risk assessment

T3 Hazards associated with electrical cables/conductors encompassing:

- Electrical supply arrangements for isolation of circuits
- Supply connected.
- Capacitance charge on cables isolated from supply.

T4 Consequences of damaged cables/conductors encompassing:

- Accelerated deterioration of insulated cables (Includes damage to enclosures, serving, armours, sheathing and insulation without exposure of the conductors)
- Damage exposing conductors with the likelihood of dangerous step voltage and touch voltage'.
- How an short-circuit occurs and the resulting potential damage they cause.

T5 Risks and control measures associated with work in the vicinity of electrical cables and infrastructure.

T6 The main features and purpose of an access permit system.

T7 Electrical isolation and types of permits issued for work in the vicinity of isolated cables.

T8 Scope of work permitted on an access permit.

T9 Safety observation procedures.

Evidence Guide

EVIDENCE GUIDE

9) This provides essential advice for assessment of the unit and must be read in conjunction with the performance criteria and the range statement of the unit and the Training Package Assessment Guidelines.

The Evidence Guide forms an integral part of this unit. It must be used in conjunction with all components parts of this unit and performed in accordance with the Assessment Guidelines of this Training Package.

Overview of Assessment

9.1)

Longitudinal competency development approaches to assessment, such as Profiling, require data to be reliably gathered in a form that can be consistently interpreted over time. This approach is best utilised in Apprenticeship programs and reduces assessment intervention. It is the industry-preferred model for apprenticeships. However, where summative (or final) assessment is used it is to include the application of the competency in the normal work environment or, at a minimum, the application of the competency in a realistically simulated work environment. It is recognised that, in some circumstances, assessment in part or full can occur outside the workplace. However, it must be in accord with industry and regulatory policy.

Methods chosen for a particular assessment will be influenced by various factors. These include the extent of the assessment, the most effective locations for the assessment activities to take place, access to physical resources, additional safety measures that may be required and the critical nature of the competencies being assessed.

The critical safety nature of working with electricity, electrical equipment, gas or any other hazardous substance/material carries risk in deeming a person competent. Sources of evidence need to be 'rich' in nature to minimise error in judgment.

Activities associated with normal everyday work influence decisions about how/much the data gathered will contribute to its 'richness'. Some skills are more critical to safety and operational requirements while the same skills may be more or less frequently practised. These points are raised for the assessors to consider when choosing an assessment method and developing assessment instruments. Sample assessment instruments are

included for Assessors in the Assessment Guidelines of this Training Package.

**Critical aspects
of evidence
required to
demonstrate
competency in
this unit** 9.2)

Before the critical aspects of evidence are considered all prerequisites shall be met.

Evidence for competence in this unit shall be considered holistically. Each element and associated performance criteria must be demonstrated on at least two occasions in accordance with the 'Assessment Guidelines – UEE11'. Evidence shall also comprise:

- A representative body of work performance demonstrated within the timeframes typically expected of the discipline, work function and industrial environment. In particular this shall incorporate evidence that shows a candidate is able to:
 - Implement Occupational Health and Safety workplace procedures and practices, including the use of risk control measures as specified in the performance criteria and range statement
 - Apply sustainable energy principles and practices as specified in the performance criteria and range statement
 - Demonstrate an understanding of the essential knowledge and associated skills as described in this unit. It may be required by some jurisdictions that RTOs provide a percentile graded result for the purpose of regulatory or licensing requirements.
 - Demonstrate an appropriate level of skills enabling employment
 - Conduct work observing the relevant Anti Discrimination legislation, regulations, policies and workplace procedures
- Demonstrated consistent performance across a representative range of contexts from the prescribed items below:
 - Observing that safety practices are followed in the vicinity of isolated electrical cables as described in 8) and including:

A Reading instructions and understanding the nature of the work to be undertaken.

- | | |
|---|--|
| B | Understanding the location electrical cables in the vicinity of the work to be undertaken |
| C | Receiving, reading and understanding access permit. |
| D | Reviewing and understanding safe working methods for the plant, machinery and equipment to be used. |
| E | Observing work activities ensuring safe working methods are followed. |
| F | Dealing with previously unidentified hazards in accordance with established procedures. |
| G | Monitoring risk mitigation methods for continuous improvement in accordance with established procedures. |
| H | Documenting safe working practices and any corrective actions in accordance with established procedures. |
| I | Dealing effectively with unplanned events |

Context of and specific resources for assessment **9.3)**

This unit should be assessed as it relates to normal work practice using procedures, information and resources typical of a workplace. This should include:

- OHS policy and work procedures and instructions.
- Suitable work environment, facilities, equipment and materials to undertake actual work as prescribed by this unit.

These should also be part of the formal learning/assessment environment.

Note:

Where simulation is considered a suitable strategy for assessment, conditions must be authentic and as far as possible reproduce and replicate the workplace and be consistent with the approved industry simulation policy.

The resources used for assessment should reflect current industry

practices in relation to the application of the safe work methods in the vicinity of isolated cables/conductors designed to operate above extra-low voltage.

Method of assessment

9.4)

This unit shall be assessed by methods given in Volume 1, Part 3 'Assessment Guidelines'.

Note:

Competent performance with inherent safe working practices is expected in the Industry to which this unit applies. This requires assessment in a structured environment primarily intended for learning/assessment which incorporates all necessary equipment and facilities for learners to develop and demonstrate the essential knowledge and skills described in this unit.

Concurrent assessment and relationship with other units

9.5)

For optimisation of training and assessment effort, competency development in this unit may be arranged in combination with other competencies required by a given industry or enterprise construction, maintenance or repair function or plant or machinery operation.

Range Statement

RANGE STATEMENT

10) This relates to the unit as a whole providing the range of contexts and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

This unit shall be demonstrated in relation to observing that safety practices are followed in the vicinity of isolated electrical cables that normal operate above extra-low voltage in each of the following situations:

- Cables installed underground in ducts or buried direct
- Bare and insulated overhead conductors/cables
- Cables installed above ground, unenclosed or enclosed in conduit, trunking or duct.

Generic terms used throughout this Vocational Standard shall be regarded as part of the Range Statement in which competency is demonstrated. The definition of these and other terms that apply are given in Volume 2, Part 2.1.

Unit Sector(s)

Not applicable.

Competency Field

Competency Field	11)
	Electrotechnology