Australian Government

Department of Education, Employment and Workplace Relations

UEENEEH005B Verify compliance and functionality of custom electronic installations

Release: 1

UEENEEH005B Verify compliance and functionality of custom electronic installations

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor **1**)

1.1) **Descriptor**

This unit covers testing and visual inspection for verifying that a custom electronic system and components are safe and comply with requirements and functions as intended. It encompasses working safely, conducting compliance tests, conducting visual inspections, identifying non-compliance defects and mandatory reporting requirements.

Application of the Unit

Application of the Unit **4**)

This unit is intended to augment previously acquired competencies. It is suitable for employment-based programs under an approved contract of training.

Licensing/Regulatory Information

1.2) License to practice

The skills and knowledge described in this unit require a license to practice in the workplace where plant and equipment operate at voltage above 50 V a.c. or 120 V d.c. However other conditions may apply in some States/Territories subject to regulations related to electrical work.
Where the components of the custom electronic system are connected to the public telephone system facility practice in the workplace is also subject to ACA regulations to undertake cabling work.
Note:
Units 'UEEEEF016A and UEEEEF002B provide the required skill and knowledge for registration in accordance with ACMA regulations for undertaking cabling work.
Practice in the workplace and during training is also subject to regulations directly related to occupational health and safety and where applicable contracts of training such as apprenticeships.

Pre-Requisites

Prerequisite Unit(s) **2)**

2.1) Competencies

Granting competency in this unit shall be made only after competency in the following unit(s) has/have been confirmed.
UEENEEH006B Assemble and set up fixed audio/video components and systems in buildings and premises
For the full prerequisite chain details for this unit please refer to Table 2 in Volume 1, Part 2

Employability Skills Information

Employability Skills	**3)** This unit contains Employability Skills 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 unit of competency	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 verify custom electronic installations.	1.1	OHS procedures for a given work area are identified, obtained and understood.
	1.2	Established OHS risk control measures and procedures are followed in preparation for the work.
	1.3	Safety hazards, which have not previously been identified, are noted and established risk control measures are implemented.
	1.4	Appropriate personnel are consulted to ensure the work is co-ordinated effectively with others involved on the work site.
	1.5	Location of system components is determined from specifications and diagrams.
	1.6	Inspection and tests are appropriately sequenced

ELEMENT	PERFORMANCE CRITERIA	
		in accordance with job schedule.
	1.7	Materials needed for the tests and verification are obtained in accordance with established procedures and checked against job requirements.
	1.8	Tools, equipment and testing devices needed to verify compliance are obtained in accordance with established procedures and checked for correct operation and safety.
Visually inspect the installation.	2.1	OHS risk control measures and procedures for carrying out the work are followed.
	2.2	Circuits/machines/plant are checked as being isolated where necessary in strict accordance OHS requirements and procedures.
	2.3	Cabling is checked for appropriate type and size.
	2.4	Cabling, accessories and components are validated as being suitably located, securely fixed and suitably protected from damage or corrosion.
	2.5	Accessories and components are validated as being appropriately rated and meeting functional requirements.
	2.6	Evidence that equipment complies with safety and functional requirements is cited.
	2.7	Established methods for dealing with unexpected situations are discussed with appropriate person or persons and documented.
	2.8	Unexpected situations are dealt with safely and with the approval of an authorised person.
	2.9	Inspection is carried out efficiently without waste of materials or damage to apparatus and the surrounding environment or services and using sustainable energy practices.

ELEMENT	PERFORMANCE CRITERIA	
2 Conduct tests.	3.1	OHS risk control measures and procedures for carrying out the work are followed.
	3.2	Testing or measuring on a live and operating system in strict accordance with OHS requirements and within established safety procedures.
	3.3	Circuits/machines/plant are checked as being isolated in strict accordance OHS requirements and procedures.
	3.4	Tests are conducted to verify that the cabling is safe and meets specified standards and any applicable regulatory requirements.
	3.5	Custom electronic apparatus and devices are tested to ensure the installation is safe and functions as intended.
	3.6	Established methods for dealing with unexpected situations are discussed with appropriate person or persons and documented.
	3.7	Unexpected situations are dealt with safely and with the approval of an authorised person.
	3.8	Testing is carried out efficiently without waste of materials or damage to apparatus and the surrounding environment or services and using sustainable energy practices.
4 Report inspection and verification findings.	4.1	OHS work completion risk control measures and procedures are followed.
	4.2	Work site and equipment is cleaned and made safe in accordance with established procedures.
	4.3	Non-compliance defects are identified and reported in accordance with established procedures.
	4.4	Recommendations for rectifying defects are made in accordance with established procedures.
	4.5	Work completion is documented and an appropriate person(s) notified in accordance with

ELEMENT	PERFORMANCE CRITERIA
	established procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

7) 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 verifying compliance and functionality of custom electronic installations.
All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.
The extent of the essential knowledge and associated skills (EKAS) required is given in Volume 2 - Part 2.2 EKAS. It forms an integral part of this unit.

2.9.72	Custom electronic installations, testing and verification methods

Evidence Guide

EVIDENCE GUIDE

9) The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package. .
The Evidence Guide forms an integral part of this unit. It must be used in conjunction with all parts of the 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 must 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/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.

EVIDENCE GUIDE

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 shall be demonstrated on at least two occasions in accordance with the 'Assessment Guidelines - UEE07'. 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, polices and workplace procedures
- Demonstrated consistent performance across a representative range of contexts from the prescribed items below:
  - Verify compliance and functionality of custom electronic installations as described in 8) and including:

    A Identifying visual defects.

    B Conducting all tests safely and correctly.

    C Identifying non-compliant defects from test results.

    D Recommending appropriate corrective actions.

EVIDENCE GUIDE

E Acting within regulatory limits.

F Reporting legibly and accurately.

G Dealing with unplanned events by drawing on essential knowledge and skills to provide appropriate solutions incorporated in a holistic assessment with the above listed items.

Note:
Successful completion of relevant vendor training may be used to contribute to evidence on which competency is deemed. In these cases the alignment of outcomes of vendor training with performance criteria and critical aspects of evidence shall be clearly identified.

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 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 verifying compliance and functionality of custom electronic installations.

EVIDENCE GUIDE

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 that the specified essential knowledge and associated skills are assessed in a structured environment which is primarily intended for learning/assessment and 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)** There are no concurrent assessment recommendations for this unit.

Range Statement

RANGE STATEMENT

8) 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 verifying compliance and functionality of custom electronic installations with at least two different new or existing custom electronic installations. One installation shall include a basic integrated system. Verification shall include the following

- Visual inspection of cabling, accessories and apparatus and controls
- Conducting all safety and compliance tests

Note:
1. Testing includes isolation testing; insulation resistance; cable tests to specified standard (e.g. Category 5 standard); polarity tests; continuity of earthing; correct connections performance tests.
2. Electrical testing may be limited by the scope permitted under restricted electrical work

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

2.2) Literacy and numeracy skills
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	4	Writing	4	Numeracy	4

2.2) Literacy and numeracy skills

Competency Field **5)**

Electronics