



Australian Government

Department of Education, Employment and Workplace Relations

UEENEEE009B Comply with scheduled and preventative maintenance program processes

Release: 2

UEENEEE009B Comply with scheduled and preventative maintenance program processes

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This unit covers the quality assurance and risk management compliance processes for maintenance of the electrotechnology aspects of plant and equipment. It encompasses working safely and to technical, quality and risk management standards, work specifications and maintenance schedules, sample inspections, evaluating components and completing the necessary maintenance documentation.

Application of the Unit

Application of the Unit 2)

This unit apply to any qualification in this standard at an AQF 3 level.

Licensing/Regulatory Information

License to practice 3)

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. Where refrigeration and air conditioning are involved practice in the workplace is subject to Federal/State/Territory regulations covering the use of refrigerants and the relevant codes of practice; in some jurisdictions a licence is required.

Practice in the workplace is also subject to regulations

directly related to occupational health and safe and contracts of training such as new apprenticeships.

Pre-Requisites

Prerequisite Unit(s) 4)

Competencies 4.1)

There are no prerequisite competencies for this unit.

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)

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 comply with scheduled maintenance program processes.	1.1 OHS procedures for a given work area are identified, obtained and understood.
	1.2 Established OHS risk control measures and procedures in preparation for the work are followed.
	1.3 Safety hazards which have not previously identified are noted and established risk control measures are implemented.
	1.4 The maintenance schedule and process compliance requirements are confirmed and work appropriately sequenced in accordance with established procedures.
	1.5 Appropriate person(s) are consulted to ensure the work is coordinated effectively with others involved on the work site.
	1.6 Location equipment to be maintained is determined from maintenance schedule procedures and/or system specifications and diagrams.
	1.7 Resources needed to conduct the maintenance is obtained in accordance with established procedures and checked against job requirements.
	1.8 Tools, equipment and testing devices needed to conduct the maintenance are obtained in accordance with established procedures and checked for correct operation and safety.
2 Comply with scheduled maintenance program processes.	2.1 OHS risk control measures and procedures for carrying out the work are followed.
	2.2 Test or measure on a live and operating system in strict accordance with OHS requirements and within established safety procedures.
	2.3 Circuits/machines/plant are checked as being isolated where necessary in strict accordance OHS requirements and procedures.

ELEMENT	PERFORMANCE CRITERIA
	<p>2.4 Apparatus to be maintained is inspected and evaluated for compliance with requirements in accordance with maintenance schedule.</p> <p>2.5 Non-compliant apparatus/components are documented and arrangements made for their rectification in accordance with established procedures.</p> <p>2.6 Established methods for dealing with unexpected situations are discussed with appropriate person or persons and documented.</p> <p>2.7 Ongoing checks of the quality of the maintenance are undertaken in accordance with established procedures.</p> <p>2.8 Maintenance process compliance is performed efficiently without waste of materials or damage to apparatus and the surrounding environment or services and using sustainable energy practices.</p>
<p>3 Completion of maintenance compliance processes.</p>	<p>3.1 OHS work completion risk control measures and procedures are followed.</p> <p>3.2 Work site and equipment is cleaned and made safe in accordance with established procedures.</p> <p>3.3 Final checks are made to verify that the maintenance complies with requirements.</p> <p>3.4 Maintenance completion is documented and appropriate person(s) notified in accordance with established procedures.</p>

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 complying with scheduled and preventative maintenance program processes. All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.

KS01-EE009B Scheduled maintenance process

Evidence shall show an understanding of maintenance processors to an extent indicated by the following aspects:

- Maintenance principles encompassing:
 - maintenance function
 - role of maintenance department
 - occupational health and safety requirements
- Maintenance systems encompassing:
 - maintenance terminology
 - preventative maintenance
 - predictive maintenance
 - corrective maintenance
- Data acquisition encompassing:
 - plant history cards/files
 - inspection techniques
 - predictive maintenance
 - remote visual inspection
 - non-destructive testing
 - thermography
 - vibration analysis
 - oil analysis
- Maintenance plan encompassing:
 - characteristics of plant operation
 - assessment of failure characteristics
 - link failure characteristics to maintenance systems
 - identify production windows
 - resources
 - labour

REQUIRED SKILLS AND KNOWLEDGE

- materials
- establish plan
- implementation procedures
- Review of maintenance plan encompassing:
 - analysis of records
 - manual recording methods
- Computerised recording 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 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 accordance 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.

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Activities associated with normal everyday work have a bearing on the decision as to how much and how detailed 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 must 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:

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- 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:
 - Comply with scheduled and preventative maintenance program processes as described in 8) and including:
 - A Interpreting maintenance schedule requirements correctly.
 - B Following quality assurance and risk management compliance processes.
 - C Following maintenance schedule.
 - D Inspecting and evaluating apparatus for quality assurance and risk compliance.
 - E Arranging for corrective action of non compliant apparatus.
 - F Documenting maintenance work.
 - 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

EVIDENCE GUIDE

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 in this unit.

These should be used in the formal learning/assessment environment.

Note:

Where simulation is considered a suitable strategy for assessment, conditions for assessment 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 complying with scheduled and preventative maintenance program processes.

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

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 scheduled and preventative maintenance compliance processes of at least three different items of installed equipment in the any of the following electrotechnology disciplines.

- Appliances
- Business equipment
- Computers
- Data Communications
- Electrical
- Electrical Machines
- Electronics
- Fire protection
- Instrumentation
- Lifts
- Mining, electrical
- Marine, electrical
- Refrigeration and Air Conditioning
- Uninterruptible power supplies (UPS)
- Stand alone generator sets
- Renewable / sustainable energy
- Security technology

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