



Australian Government

Department of Education, Employment and Workplace Relations

UEPOPS346B Conduct non-routine operational testing

Release: 1

UEPOPS346B Conduct non-routine operational testing

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This competency standard unit deals with the skills and knowledge required to conduct testing of generation plant and associated equipment which may be of a non-routine nature.

Application of the Unit

Application of the Unit 2)

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

Licensing/Regulatory Information

License to practice 3)

The skills and knowledge described in this unit do not require a licence to practise in the workplace. However, practice in this unit is subject to 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 of competency in this unit shall be made only after competency in the following unit(s) has/have been confirmed.

Where pre-requisite pathways have been identified. All competencies in the Common Unit Group must be have been completed.

There are no pre-requisite units.

Literacy and numeracy skills 4.2)

Participants are best equipped to achieve this unit if they have reading, writing and numeracy skills indicated by the following levels. A description of what each level entails is provided in Section 2.3.1 Language, 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 for testing	1.1 Safety issues are identified and complied with in accordance with enterprise/site and legislative requirements
	1.2 Needs and outcomes for the tests are defined in accordance with work requirements
	1.3 Test procedures are determined and monitoring equipment requirements are defined in accordance with the test objectives
	1.4 Availability and access to plant is determined in accordance with work requirements
	1.5 Coordination requirements, including requests for isolations where appropriate, are resolved with others involved, affected or required by the testing procedure
	1.6 Where appropriate, the teams and individuals roles and responsibilities within the team are identified and, where required, assist in the provision of the on-the-job training
2 Conduct non-routine testing	2.1 Testing is performed in accordance with relevant sections of enterprise, state or national standards and codes of practise
	2.2 Required isolations are confirmed where appropriate in accordance with enterprise/site requirements
	2.3 Testing is performed in accordance with defined procedures application to the test
	2.4 Plant is observed and corrective action taken when response is not in accordance with plant operating parameters/plant integrity or personnel safety
	2.5 Testing completed, permits relinquished where appropriate, and plant returned to required operational status

ELEMENT	PERFORMANCE CRITERIA
3 Complete the work	3.1 Appropriate personnel notified of the completion of testing in accordance with enterprise/site procedures
	3.2 Plant problems or abnormalities are reported and logged in accordance with enterprise/site procedures
	3.3 Test results/observations are interpreted and documented in accordance with enterprise/site procedures

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 conducting non-routine operational testing.

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 required follows:

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Evidence shall show that knowledge has been acquired for safe working practices of:

T1 Relevant environmental, occupational health and safety legislation and regulations

T2 Enterprise procedures

T3 Plant drawings and manufacturers manuals

T4 Introduction to and typical arrangements of power production plant

T5 Relevant plant and equipment, its location and operating parameters

T6 Relevant state and territory regulations

T7 Plant status

T8 Testing procedures and techniques

T9 Enterprise recording procedures

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Specific skills needed to achieve the Performance Criteria:

T1 Interpret plant drawings and manufacturers manuals

T2 Apply relevant state and territory regulations

T3 Locate relevant plant and equipment

T4 Identify plant status

T5 Recognise abnormal plant operating conditions

T6 Restore normal operating conditions

T7 Apply testing techniques and procedures

T8 Use testing equipment

T9 Communicate effectively

T10 Apply data analysis techniques and tools.

Evidence Guide

EVIDENCE GUIDE

9) This provides essential advice for assessment of the unit of competency 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 Competency Standard Unit and shall 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)

Longitude 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's 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 in this regard.

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. Hence, sources of evidence need to be 'rich' in nature so as to minimise error in judgment. Activities associated with normal every day 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 pre-requisites 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 – UEP12”. 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 6) Essential Knowledge and Associated Skills of this unit
 - Demonstrate an appropriate level of employability skills
 - Conduct work observing the relevant Anti Discrimination legislation, regulations, polices and workplace procedures
- Demonstrated performance across a representative range of contexts from the prescribed items below:
 - Knowledge and application of relevant sections of: Occupational Health and Safety legislation; Statutory legislation; Enterprise/site safety procedures; Enterprise/site emergency procedures
 - Preparation and planning of work
 - Testing techniques and procedures
 - Operational requirements of the plant and/or associated equipment
 - Dealing with an unplanned event by drawing on essential knowledge and skills to provide appropriate solutions incorporated in the holistic assessment with the above

listed items

**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.

Competency Standards should be assessed in the workplace or simulated workplace and under the normal range of workplace conditions.

Assessment of this unit will be supported with documentary evidence, by means of endorsement stating type and application of work.

In addition to the resources listed above in Context of assessment', evidence should show competency working, in limited spaces, with different types of plant and equipment as well as different structural/construction types and methods and in a variety of environments.

**Method of
assessment** 9.4)

This unit shall be assessed by methods given in Section 1.3.00 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 recommended concurrent assessments with this unit,

however in some cases efficiencies may be gained in terms of learning and assessment effort being concurrently managed with allied competency standard units where listed.
Nil

Range Statement

RANGE STATEMENT

10) This relates to the unit of competency 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.

Generation plant and/or equipment may include turbines and generators; mills; fans; pumps; heat exchangers; fired and unfired pressure vessels; motors; transformers; switchgear; pneumatic, hydraulic and electrical/electronic control systems; cooling systems; and chemical treatment and water quality systems.

Relevant standards may include sections of Occupational Health and Safety legislation, enterprise safety rules and procedures, relevant state and federal legislation, national standards or codes of practices for plant.

Information and documentation sources may include verbal or written communications; enterprise safety rules documentation; equipment and alarm manuals; dedicated computer equipment; drawings, logic diagrams; plant records; enterprise/site log books; and manufacturer operation and maintenance manuals.

Testing may include commissioning of newly installed plant or equipment/ post maintenance tests, QA/QC tests and fault finding procedures.

Test results may be conveyed to supervisor/team leader or equivalent; technical and engineering officers or equivalent; power system control personnel or equivalent; maintenance staff; power plant operations staff personnel; contractor and external specialist personnel.

Testing environment may be remote from plant; aided by indicators and monitors; during inclement or otherwise harsh weather conditions; wet/noisy/dusty areas; during night periods; and in confined spaces.

Test equipment may include calculators, thermocouples, multimeters, flow meters, stopwatch, check sheets, data logger, power or hand tools.

Generic terms are used throughout this Training Package for vocational standard shall be regarded as part of the Range Statement in which competency is demonstrated. The definition of these and other terms are given in Section 2.1 Preliminary Information and Glossaries.

Unit Sector(s)

Not applicable.

Competency Field

Competency Field **11)**
Operations.