



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **UEPOPS412B Undertake commissioning-decommissioning**

**Release: 1**

## UEPOPS412B Undertake commissioning-decommissioning

### 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 undertake commissioning / decommissioning of plant and equipment.

Commissioning / decommissioning refers to work of a significant nature where plant / equipment is required to meet manufacturer's performance specifications. It may also include the commissioning and decommissioning of plant and equipment following overhaul or major refurbishment.

It does not cover the removing or returning plant to service under normal / routine maintenance situations.

### 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 and the like.

## 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 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 4      Writing 4      Numeracy 4

## 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 Plan and prepare for the work | <p>1.1 Work requirements are identified from request/work orders or equivalent and clarified/confirmed with appropriate parties or by site inspection</p> <p>1.2 Occupational Health and Safety standards, statutory requirements, relevant Australian standards, codes of practice, manufacturers' specifications, environmental requirements and enterprise procedures are identified, applied and monitored throughout the work procedure</p> <p>1.3 Resources required to satisfy the work plan are identified, obtained and inspected for compliance with the job specifications</p> <p>1.4 Relevant plans, drawings and texts are selected and interpreted in accordance with the work plan</p> <p>1.5 Correct size, type and quantity of materials/components are determined, obtained and inspected for compliance with the job specifications</p> <p>1.6 Work is planned in detail including sequencing and prioritising and considerations made, where appropriate, for the maintenance of plant security and capacity in accordance with system/site requirements</p> <p>1.7 Coordination requirements, including requests for isolations where appropriate, are resolved with others involved, affected or required by the work</p> <p>1.8 Potential hazards are identified and prevention</p> |

| ELEMENT                           | PERFORMANCE CRITERIA                                                                                                                                                                  |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                   | and/or control measures are selected in accordance with the work plan and site procedures                                                                                             |
|                                   | 1.9 Work area is prepared in accordance with work requirements and site procedures                                                                                                    |
|                                   | 1.10 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 Decommission plant or equipment | 2.1 Required isolations are confirmed where appropriate in accordance with site requirements                                                                                          |
|                                   | 2.2 Equipment is decommissioned in conjunction with others involved or affected by the work in accordance with the work plan                                                          |
|                                   | 2.3 Equipment is disconnected from energy and/or material sources in accordance with the work plan                                                                                    |
|                                   | 2.4 Equipment is decommissioned in accordance with the work plan                                                                                                                      |
| 3 Remove the plant or equipment   | 3.1 Required isolations are confirmed where appropriate in accordance with site requirements                                                                                          |
|                                   | 3.2 Removal of plant / equipment or disassembly of major components, is carried out in conjunction with others involved in, or affected by, the work in accordance with the work plan |
|                                   | 3.3 Removal of plant / equipment or disassembly of major components, is carried out mindful of the effect on other plant or structures in accordance with the work plan               |
|                                   | 3.4 Where applicable unused electrical conductors are isolated and terminated in accordance with the work plan                                                                        |
|                                   | 3.5 Other sources of energy or material are terminated and blanked in accordance with the work plan                                                                                   |

| <b>ELEMENT</b>                         | <b>PERFORMANCE CRITERIA</b>                                                                                                                                         |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 Re-commission the plant or equipment | 4.1 Plant is de-isolated in accordance with site requirements                                                                                                       |
|                                        | 4.2 Pre-operational checks are carried out on plant according to manufacturer's recommendations and site requirements                                               |
|                                        | 4.3 Sequence for re-commissioning procedures are strictly adhered to in accordance with the work plan                                                               |
|                                        | 4.4 Plant is tested for correct operation in accordance with manufacturer's and enterprise/site procedures                                                          |
|                                        | 4.5 Plant or equipment performance is monitored against manufacturers specifications, using appropriate methods and test equipment in accordance with the work plan |
|                                        | 4.6 Data is collected, interpreted and referenced against specifications and variances recorded                                                                     |
|                                        | 4.7 Plant or equipment is adjusted to specifications using appropriate techniques in accordance with the work plan                                                  |
|                                        | 4.8 Final inspections and performance data collected to ensure compliance with specifications                                                                       |
| 5 Complete the work                    | 5.1 Work is completed and appropriate personnel notified in accordance with site/enterprise requirements                                                            |
|                                        | 5.2 Work area is cleared of waste, cleaned, restored and secured in accordance with site/enterprise procedures                                                      |
|                                        | 5.3 Plant, tools and equipment are maintained and stored in accordance with site/enterprise procedures                                                              |
|                                        | 5.4 Work completion details are finalised in accordance with site/enterprise 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 undertaken commissioning/decommissioning.

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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T1 Evidence shall show that knowledge has been acquired for safe working practices of:

- Relevant environmental, occupational health and safety legislation and regulations
- Enterprise procedures
- Plant drawings and manufacturers manuals
- Introduction to and typical arrangements of power production plant
- Relevant plant and equipment, its location and operating parameters
- Principles of commissioning
- Decommissioning procedures
- Re-commissioning procedures
- Test and measurement equipment

T2 Specific skills needed to achieve the Performance Criteria:

- Interpret plant drawings and manufacturers manuals
- Apply relevant state and territory regulations
- Apply decommissioning procedures
- Apply re-commissioning procedures
- Use test and measuring equipment;
- Analyse relevant data
- Identify relevant plant or equipment
- Communicate effectively

## Evidence Guide

### EVIDENCE GUIDE

**9)** This provides essential advice for assessment of the competency standard 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 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 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. 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 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, policies and workplace procedure
- Demonstrated performance across a representative range of contexts from the prescribed items below:
  - The knowledge and application of relevant sections of: Occupational Health and Safety legislation; Statutory legislation; Enterprise/site safety procedures; Enterprise/site emergency procedures
  - Isolation procedures
  - Decommissioning procedures
  - Commissioning procedures
  - 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 competency standard 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.

Plant may include generating sets, transformers, boiler and associated systems; turbine and auxiliaries; Hydro penstocks; Sub-systems, e.g. mill, conveyor, draught fan; electrical/electronic equipment; hydraulic and pneumatic; and water treatment plant.

Energy sources may include electrical, hydraulic, pneumatic, oil, gas and water.

Specifications or reference documentation includes operating, maintenance procedures, manuals, drawings, original equipment manufacturer data and statutory requirements and standards.

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

|                         |            |
|-------------------------|------------|
| <b>Competency Field</b> | <b>11)</b> |
|                         | Operations |