



Australian Government

Department of Education, Employment and Workplace Relations

UEPOPS252A Undertake local systems operations

Release: 1

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Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This unit deals with the skills and knowledge required to operate plant at the local position, in conjunction with co-ordinated systems under the control of appropriate authorised personnel.

Application of the Unit

Application of the Unit 2)

This unit describes competencies applicable to employees working under the supervision of the authorised person in charge of the coordinated system

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 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 2 Writing 2 Numeracy 2

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 work	1.1 Safety issues are identified to comply with enterprise/site requirements
	1.2 Work requirements are identified from relevant personnel and documentation
	1.3 Plant status is identified and confirmed in accordance with enterprise/site requirements and instructions
	1.4 Pre-operational checks are carried out on plant according to enterprise/site requirements and instructions
2 Operate plant	2.1 System component/s to be locally controlled identified and operated in accordance with site/enterprise operating procedures and instructions
	2.2 Plant is operated within limits of plant design, enterprise or site requirements
	2.3 Plant is monitored and observed to detect deviations from normal operating conditions
3 Complete documentation	3.1 Documentation is updated and plant problems, movements, abnormalities and status are reported and logged 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 must show that knowledge has been acquired of safe working practices and assembling electronic apparatus.

All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.

KS01-PO252A Operate Electrical Generation Plant Equipment Locally

Evidence shall show an understanding of how to operate electrical generation plant equipment locally to an extent indicated by the following aspects:

T1 Instruction sheets, including:

- Enterprise-specific work instructions or job sheets
- Manufacturers' operating instructions and manuals
- Plant drawings and flow charts

T2 Principles of plant equipment associated with fuel-burning electricity generation plants, including:

- burner tilts
 - burner operations
 - precipitator plant
 - ash or dust plant
 - hydrogen/seal oil differential pressure controllers
 - stator temperature controller
 - hydrogen temperature controller
 - ammonia dosing controller
 - feed heater level controls
 - secondary air and flue gas dampers
 - turning gear barring equipment
 - rotary air heater barring equipment
 - sootblowing retracting equipment
 - reflux valve controls
 - condenser level controls
 - condenser backflushing equipment
 - oil temperature controllers
 - turbine gland sealing controllers
 - electricity distribution system (AC and DC)
 - valves, actuators and dampers (electric, hydraulic, pneumatic and manual)
- i. Types of valves including:
- Gate, butterfly and ball valves.
 - Control valves.

REQUIRED SKILLS AND KNOWLEDGE

- Safety valves.
- Basic pumps

T3 Principles of plant equipment associated with gas-turbine electricity generating plants.

T4 Principles of plant equipment associated with hydro-electricity generating plants.

T5 Principles of plant equipment associated with solar-electricity generating plants.

T6 Fault testing and identification, including:

- Stand-by plant tests
- Post-maintenance operating tests
- Test running equipment

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 competency standard 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)

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'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 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, policies 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
 - Local operation of plant/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 competency standard 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 confined spaces, with different types of plant and equipment as well as different structural/construction types and method 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 competency standard unit applies. This requires that the specified Essential Knowledge and Associated Skills be 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 and equipment may include burner tilts; burner operations; precipitator plant; ash or dust plant; hydrogen/seal oil differential pressure controllers; stator temperature controller; hydrogen temperature controller; ammonia dosing controller; feed heater level controls; secondary air and flue gas dampers; turning gear barring equipment; rotary air heater barring equipment; sootblowing retracting equipment; reflux valve controls; condenser level controls; condenser backflushing equipment; oil temperature controllers; turbine gland sealing controllers; electricity distribution system a.c. and d.c.; valves, actuators and dampers (electric, hydraulic, pneumatic and manual); supervisory, alarm and control equipment.

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

Information and documentation sources may include verbal or written communications; enterprise safety rules documentation; enterprise operating instructions; dedicated computer equipment; enterprise/site standing and operating instructions; enterprise log books; manufacturer's operation and maintenance manuals; and equipment and alarm manuals.

Technical and operational indicators may include stimuli (audio, smell, touch, visual), remote or local indicators and recorders, computers and alarms (visible and or audible).

Communications may be by means of telephone, two way radio, pager, computers (electronic mail) and operating log (written or verbal).

Tests may include stand-by plant tests and post maintenance operating tests.

Appropriate personnel to consult, give or receive direction may include supervisor/team leader or equivalent, power plant operator/unit controller or equivalent; technical and engineering officers or equivalent; maintenance staff; other operating staff or equivalent.

Test, fault finding and operating tools may include high voltage testers, proving dead equipment, power or hand tools, control system equipment and specialised testing equipment.

Operating environment may be remote from plant and equipment being operated (operation is assisted by remote indicators of plant status and other parameter monitors), during inclement or otherwise harsh weather conditions, in wet/noisy/dusty/hot areas or during continuous operation.

Unit operations may include spurious faults in automatic systems; automatic systems operating out of range; failure of automatic system component(s); and routine plant movement.

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