Australian Government

Department of Education, Employment and Workplace Relations

UEPOPS351B Operate H.V. condition changing apparatus

Release: 1

UEPOPS351B Operate H.V. condition changing apparatus

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor **1) Scope:**

1.1) Descriptor

This unit deals with the skills and knowledge required to undertake the local operation of all high voltage condition modifying devices.

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 operations	1.1	Procedures and safety requirements/limits for operating condition changing devices are adhered to in accordance with manufacturers enterprise/site and statutory requirements
	1.2	Location of apparatus is determined from plans, drawings, system diagrams and where appropriate maps
	1.3	Device to be operated is identified and confirmed
	1.4	Condition and status of apparatus to be safely operated is determined visually
	1.5	Prepare device for operation in accordance with enterprise procedures
	1.6	Device to be operated is verified with key stake holders, using appropriate procedures and guidelines, in accordance with enterprise policy
	1.7	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 Operate condition changing device	2.1	Contact with stake holders is maintained throughout and communication is concise and clear
	2.2	System conditions are evaluated prior to operation in accordance with enterprise procedures
	2.3	Device is operated to manufacturer instructions and enterprise policy and guidelines in accordance with enterprise procedures
	2.4	Device is controlled and adjusted in order to alter system conditions to achieve desired outcome
	2.5	Apparatus is examined to ensure device has functioned correctly

ELEMENT	PERFORMANCE CRITERIA	
	2.6	System conditions are re-evaluated to confirm desired outcome
	2.7	Apparatus is secured in accordance with operational procedure and policy
	2.8	Confirmation procedure is conducted after operation in accordance with enterprise policy
3 Complete documentation	3.1	Documentation is updated; equipment 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 shall show that knowledge has been acquired of conducting single energy source isolation procedures.
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 Switchgear types and characteristics
T7 Electrical protection types and characteristics
T8 Electrical fundamentals
T9 Relevant state and territory regulations
T10 Condition changing apparatus, types and characteristics
T11 Plant status
T12 Enterprise recording procedures
T13 H.V. systems and interconnected circuitry
KS02-PO351B H.V. condition changing apparatus
Specific skills needed to achieve the Performance Criteria:
T1 Interpret plant drawings and manufacturers manuals
T2 Apply relevant state and territory regulations
T3 Apply enterprise recording procedures
T4 Operate equipment within design parameters
T5 Identify plant status
T6 Prepare equipment for operation
T7 Communicate effectively
T8 Recognise abnormal switch gear operation
T9 Plan and prioritise work

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
  - Preparing for operating apparatus
  - Operating H.V. apparatus
  - 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.
Apparatus/devices may include on load transformer tap changers, off load transformer tap changers, capacitor banks, rotary converters, voltage regulators, reactors current limiters, rectifiers and transformers.
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 operation and maintenance manuals; and equipment and alarm manuals.
Technical and operational indicators may include stimuli (audio, smell, touch, visual), local indicators and recorders, computers and alarms (visible and or audible).
Communications may be by means of telephone, two way radio, pager, computer (electronic mail), operating logs (written or verbal) and intercom.
Appropriate personnel for consultation, to give or receive direction may include supervisor/team leader or equivalent, power plant operations personnel or equivalent, technical and engineering officers or equivalent, maintenance staff, other operating staff or equivalent, system controller/network controller, field operator and restricted H.V. operators
Operating environment may be remote from plant and equipment being operated (operation is assisted by remote indicators of plant status and other parameters monitored), during inclement or otherwise harsh weather conditions, in wet/ noisy/dusty areas or during night periods.
System parameters may include voltage, current, frequency, VAR load and equipment capability.
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.