Australian Government

Department of Education, Employment and Workplace Relations

UETTDREL12A Operate plant and equipment near live electrical conductors and apparatus

Release: 1

UETTDREL12A Operate plant and equipment near live electrical conductors and apparatus

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor **1) Scope:**

1.1) Descriptor

This Competency Standard Unit covers the safe operation of plant and equipment near live electrical conductors and/or apparatus. It encompasses plant and equipment relevant to the enterprise and is in addition to any Commonwealth, State/Territory or Local Government legislation and or regulatory requirements regarding the operation of that plant and or equipment. It includes maintenance the conducting of operational checks, the correct positioning of road signs, barriers and or warning devices. It also encompasses the completion of log books and job completion documentation.

Application of the Unit

Application of the Unit **2)**

This Competency Standard 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 may require a licence/registration to practice in the work place subject to regulations for undertaking of electrical work. Practice in workplace and during training is also subject to

License to practice **3)**

regulations directly related to Occupational Health and Safety, electricity/telecommunications/gas/water industry safety and compliance, industrial relations, environmental protection, anti discrimination and training.
Commonwealth, State/Territory or Local Government legislation and regulations may exist that limits the age of operating certain equipment.

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.

Common Unit Group

Unit Code	Unit Title
UEENEEE101A	Apply Occupational Health and Safety regulations, codes and practices in the workplace
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications
UETTDREL16A	Working safely near live electrical apparatus

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 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)**

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 to operate plant and equipment near energised and exposed electrical conductors/apparatus	1.1 Works schedule(s), including drawings, plans, requirements, established procedures, and material lists, are received, analysed and confirmed, if necessary, by site inspection.
	1.2 Relevant requirements and established procedures for the operation of plant and equipment near energised and exposed electrical conductors/apparatus are communicated to all personnel and identified for all work sites.
	1.3 OHS policies and procedures related to requirements and established procedures for the operation of plant and equipment near energised and exposed electrical conductors/apparatus are obtained and confirmed for the purposes of the

ELEMENT	PERFORMANCE CRITERIA	
		work to be performed and communicated.
	1.4	Work is prioritised and sequenced following consultation with others for completion within acceptable timeframes and in accordance with established procedures.
	1.5	Hazards are identified, OHS risks assessed and control measures are prioritised, implemented and monitored including emergency exits kept clear according to established procedures.
	1.6	Relevant work permits are obtained to access and perform work according to requirements and/or established procedures.
	1.7	Resources including personnel, equipment, tools and personal protective equipment required for the job are obtained and confirmed in working order.
	1.8	Relevant personnel at worksite are confirmed current in First Aid, relevant rescue procedures and other related work procedures according to requirements.
	1.9	Liaison and communication issues with other/authorised personnel, authorities, clients and land owners are resolved to carry out work where necessary.
	1.10	Site is prepared according to the work schedule and to minimise risk and damage to property, commerce, and individuals in accordance with established procedures.
	1.11	Personnel participating in the work, including plant operators and contractors, are fully briefed and respective responsibilities confirmed where applicable in accordance with established procedures.
	1.12	Road signs, barriers and warning devices are positioned in accordance with requirements.

ELEMENT	PERFORMANCE CRITERIA	
2 Carry out the operation of plant and equipment near energised and exposed electrical conductors/apparatus	2.1	OHS and sustainable energy principles and practices to reduce the incidents of accidents and minimise waste are monitored and followed in accordance with requirements and/or established procedures.
	2.2	Lifting, climbing, working in confined spaces and aloft, and use of power tools/equipment, techniques and practices are safely followed and, currency according to requirements confirmed.
	2.3	Essential knowledge and associated skills are applied in the safe operation of plant and equipment near energised and exposed electrical conductors/apparatus to ensure completion in an agreed timeframe and, to quality standards with a minimum of waste according to requirements.
	2.4	Plant and equipment are safely operated near energised and exposed electrical conductors/apparatus according to requirements and established procedures.
	2.5	Hazard warnings and safety signs are recognised and hazards and assessed OHS risks are reported to the immediate authorised persons for directions according to established procedures.
	2.6	Unplanned events in the operation of plant and equipment near energised and exposed electrical conductors/apparatus are undertaken within the scope of established procedures.
	2.7	Known solutions to a variety of problems are applied using acquired essential knowledge and associated skills.
	2.8	Ongoing checks of quality of the work are undertaken in accordance with instructions and established procedures.

ELEMENT	PERFORMANCE CRITERIA
3 Complete the operation of plant and equipment near energised and exposed electrical conductors/apparatus	3.1 Work undertaken is checked against works schedule for conformance with requirements and anomalies reported in accordance with established procedures.
	3.2 Accidents and/or injuries are reported in accordance with requirements/established procedures, where applicable.
	3.3 Work site is rehabilitated, cleaned up and made safe in accordance with established procedures.
	3.4 Tools, equipment and any surplus resources and materials are, where appropriate, cleaned, checked and returned to storage in accordance with established procedures.
	3.5 Relevant work permit(s) are signed off and, plant and equipment are checked, returned to service/stored appropriately, in accordance with requirements and established procedures.
	3.6 Works completion records, reports, as installed /modified drawing and/or documentation and information are finalised and processed and appropriate personnel notified.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

8) Essential Knowledge and Associated Skills (EKAS): This describes the essential skills and knowledge and their level, required for this unit.
Evidence shall show that knowledge has been acquired of operating plant and equipment near live electrical conductors/apparatus.
All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.
KS01-TEL12A Chain saw principles
Evidence shall show an understanding of requirements for the use of chain saws including relevant certification and licensing (if required) to an extent indicated by the following aspects:
T1 Safety precautions, requirements and responsibilities
T2 Selection and use of appropriate personal protective equipment
T3 Chain saw operation encompassing:

- Parts and function of components and ancillary equipment
- Pre-operational checks
- Starting procedures
- Safe use of chain saw under load
- Safe transporting and storage procedures

KS02-TEL12A Elevating work platform operational principles
Evidence shall show an understanding of operation of elevating work platform (EWP) to an extent indicated by the following aspects:
T1 Standards, codes, legislation, supply authority regulations and or enterprise requirements associated with EWP including relevant certification and licensing encompassing:

- Safe working clearances
- Safe operation procedures and the mandatory wearing of harness/attachment requirements
- Safety observers
- Inspection and testing procedures prior to use
- Set-up, operate and shut down procedures for an EWP

T2 Emergency procedures for an EWP encompassing:

- Escape procedures for an EWP
- Rescuing procedures
- Mechanical failure procedures

T3 Types of EWPs insulated/uninsulated
KS03-TEL12A Enterprise vehicles
Evidence shall show an understanding of requirements for the use of enterprise vehicles such as, trucks and four wheel drives to an extent indicated by the following aspects:
T1 Standards, codes, legislation, supply authority regulations and or enterprise

REQUIRED SKILLS AND KNOWLEDGE

requirements associated with safe use of enterprise vehicles including relevant certification and licensing such as encompassing:

- Motor cars
- Light and heavy commercial trucks
- Heavy truck/trailer combination
- Four wheel drive vehicles

T2 Compliance with regulations associated with the securing of loads prior for transportation

KS04-TEL12A Hydraulic and pneumatic portable equipment

Evidence shall show an understanding of operation and maintenance of mobile plant, tools and equipment to an extent indicated by the following aspects:

T1 Standards, codes, legislation, supply authority regulations and or enterprise requirements associated with portable hydraulic equipment and portable pneumatic equipment, including relevant certification and licensing encompassing:

- Safe working clearances
- Safe operation procedures
- Safety observers

T2 Inspection and testing procedures prior to use

T3 Set-up, operate and shut down procedures

T4 Permit to work systems and isolation procedures

KS05-TEL12A Basic rigging techniques

Evidence shall show an understanding of basic rigging techniques to an extent indicated by the following aspects:

T1 Standards, codes, legislation, supply authority regulations and or enterprise requirements associated with rigging including the operation of cranes, hoists and winches and relevant certification and licensing (if required)

T2 Requirements for the use of enterprise construction manuals, system diagrams/plans and drawings

T3 Safe use of rigging equipment, tools and associated equipment encompassing:

- Types, techniques and application
- Site inspection procedures encompassing:
- Identifying hazards, assessing and controlling risks
- Appropriate sequence of loading and unloading

T4 Determining the mass and dimensions of load

T5 Selection and inspection procedures encompassing:

- Rigging equipment, materials and tools
- Note: Examples include natural and synthetic fibre ropes and chains, fittings, winch and capstan
- Ratings of wire ropes and slings
- Removing, repairing and replacing of damage parts

T6 Techniques for assembling and erecting power winches and capstans

REQUIRED SKILLS AND KNOWLEDGE

T7 Checking the integrity of support structure; visual inspection of load connections
T8 Techniques in moving, lifting, shifting, managing and placing loads encompassing:

- Use of appropriate communication and signalling methods
- Codes of practice/compliance
- Enterprise and Commonwealth, State/Territory legislative requirements
- Weather conditions
- Erection of safety nets and lines
- Methods of fixing and anchoring loads
- Load stability

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 component 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 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 practiced. 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 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 – UET12". Evidence shall also comprise:

- A representative body of Performance Criteria 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; and
  - Apply sustainable energy principles and practices as specified in the Performance Criteria and range; and
  - Demonstrate an understanding of the essential knowledge and associated skills as described in this unit to such an extent that the learner's performance outcome is reported in accordance with the preferred approach; namely a percentile graded result, where required by the regulated environment; and

- Demonstrate an appropriate level of employability skills; and

- Conduct work observing the relevant Anti Discrimination legislation, regulations, policies and workplace procedures; and
  - Demonstrated performance across a representative range of contexts from the prescribed items below:

Range of tools/equipment/materials/procedures/workplaces/other variables		
Group No	**The minimum number of items on which skill is to be demonstrated**	**Item List**
A	At least four of the following:	Portable generators Chain-saws Concrete cutters Jack hammers Welders Compressor Crimper-cutters Pumps Post hole diggers Drills Friction grip winches Pullers Block and tackle
B	At least one of the following:	Elevating work platform Back hoes Self loading vehicle Borer Bobcat Trench excavators Heavy vehicles
C	At least one occasion	Dealing with an unplanned event by drawing on essential knowledge and associated skills to provide appropriate solutions incorporated in the holistic

		assessment with the above listed items. Note Refer to Section 2.1 Licence to practice contained in this unit for information relevant to the use of the above equipment.

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 operation of plant and equipment near live conductors and or apparatus.

In addition to the resources listed above, in context of and specific resources for assessment, evidence should show demonstrated competency working below ground, in limited spaces, with different structural/construction types and method and in a variety of environments.

Method of assessment **9.4)**

This Competency Standard 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 Competency Standard 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 associated skills described in this unit.

Concurrent assessment and relationship with other units

9.5)

For optimisation of training and assessment effort, competence in this unit may be assessed concurrently with the following units:

UETTDREL13A	Comply with sustainability, environmental and incidental response policies and procedures
UEENEEE101A	Apply Occupational Health Safety regulations, codes and practices in the workplace

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.
This Competency Standard Unit shall be demonstrated in relation to the operation of plant and equipment near live electrical conductors and/or apparatus.
Support plant may include elevating work platform, back hoes, earth drilling rigs, trench excavators, heavy vehicles, concrete cutters, compressors, portable generators, welders, crimper-cutters, pumps, chain-saws, jack-hammers, post hole diggers, sand-blasters, drills and self loading vehicle.
Equipment may include hand operated ratchet and friction grip winches, chain pullers and block and tackle.
The following constants and variables included in the element/Performance Criteria in this unit are fully described in the Definitions Section 1 of this volume and form an integral part of the Range Statement of this unit:

- Appropriate and relevant persons (see Personnel)
- Appropriate authorities
- Appropriate work platform
- Assessing risk
- Assessment
- Authorisation
- Confined space
- Documenting detail work events, record keeping and or storage of information
- Drawings and specifications
- Emergency
- Environmental and sustainable energy procedures
- Environmental legislation
- Environmental management documentation
- Established procedures
- Fall prevention
- Hazards
- Identifying hazards
- Inspect
- Legislation
- MSDS
- Notification
- OHS practices
- OHS issues
- Permits and/or permits to work

RANGE STATEMENT

- Personnel
- Quality assurance systems
- Requirements
- Testing procedures
- Work clearance systems

Unit Sector(s)

Not applicable.

Competency Field

Competency Field **11)**

Entry Level –Cross Discipline Units.