



Australian Government

Department of Education, Employment and Workplace Relations

UETTDRVC31A Operate specialist equipment at ground level near live electrical apparatus

Release: 1

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Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This Competency Standard Unit covers the operation and routine maintenance of specialised plant and equipment at ground level near live electrical apparatus. Including the requirement of carrying out pre-operational checks, calibrate equipment, report faults and maintain operational records and an awareness of workplace safety and positive environmental practices associated with specialised plant and equipment operation. It also includes traffic control measures and compliance with relevant State or Territory regulatory agencies/bodies, local government legislation, Industry bi-partite body – Guidelines/Codes of Practices or other related requirements for safe use of equipment near live electrical and mechanical apparatus.

Application of the Unit

Application of the Unit 2)

This competency standards unit shall apply to Transmission, Distribution, Rail Traction, Telecommunications and Vegetation Management Control industry sectors.

Licensing/Regulatory Information

License to practice 3)

The skills and knowledge described in this unit may only be practiced under the regulations pertaining to each State

License to practice

3)

and Territory for the safe planning for the removal of vegetation around live powerlines up to the live work zone including near live electrical apparatus, and regulations that directly relate to Occupational Health and Safety and/or contracts of training where they apply.

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
UETTDREL13A	Comply with sustainability, environmental and incidental response policies and procedures
UETTDREL14A	Working safely as a non electrical worker near live electrical apparatus
UETTDRC23A	Plan the removal of vegetation up to vegetation exclusion zone near live electrical apparatus
UETTDRC27A	Monitor safety compliance for vegetation work 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 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.
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Elements and Performance Criteria**ELEMENT****PERFORMANCE CRITERIA**

- | | | |
|---|-----|--|
| 1 Prepare to operate and conduct routine maintenance of specialised plant and equipment near live electrical apparatus. | 1.1 | Specialised plant and equipment is selected appropriate to job requirements and confirmed against a work instructions.. |
| | 1.2 | Routine pre-operational checks of machinery and equipment are carried out to manufacturer’s specifications for safe use near live electrical apparatus according to requirements and established procedures. |

ELEMENT	PERFORMANCE CRITERIA
	1.3 Plant and/or equipment is securely attached and/or calibrated for operation to manufacturer's specifications. 1.4 Faulty plant and equipment is identified, safety tagged, and reported to supervisor according to enterprise requirements. 1.5 OHS hazards in the workplace are identified, risk assessed and reported according to enterprise requirements.
2 Operate specialised plant and equipment near live electrical apparatus.	2.1 Specialised plant and equipment is operated in a safe and controlled manner, and monitored for performance and efficiency. 2.2 Risks to self, others and the environment are recognised and minimised according to enterprise and OHS requirements. 2.3 Suitable personal protective clothing and equipment is selected, used, maintained and stored according to OHS requirements. 2.4 Environmental implications associated with plant and equipment operation are identified, assessed and reported to the supervisor.
3 Complete the operation and routine maintenance of ground level specialised plant and equipment near live electrical apparatus.	3.1 Plant and equipment shut-down procedures are carried out to manufacturer's specifications and enterprise requirements. 3.2 Plant and equipment operational records are maintained according to enterprise requirements. 3.3 Plant and equipment damage, malfunctions or irregular performance are recorded and/or reported according to enterprise requirements. 3.4 Post-operational checks, minor maintenance and/or relevant documentation of plant and equipment are conducted according to requirements. 3.5 Appropriate personnel are notified of work completion according to established procedures.

ELEMENT

PERFORMANCE CRITERIA

- 3.6 Plant and equipment is cleaned, secured and stored according to manufacturer's specifications and enterprise requirements.

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 vegetation control specialised plant, and equipment near live electrical apparatus.

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

KS01-TVC31A ESI vegetation control specialist equipment

Evidence shall show an understanding of operating specialist equipment at ground level near live electrical apparatus to an extent indicated by the following aspects:

T1 Enterprise specific vegetation control equipment encompassing:

- Safety policies, procedures and precautions with regards to using, transporting and storage of specialised plant and machinery
- Legislation, Standards, codes, legislation, supply authority regulations and specific enterprise regulations pertaining to the use and care of specialised plant and machinery
- Characteristics, capabilities and application of specialised plant and machinery for a particular job
- Types and application of vegetation cutting tools – chainsaws, brush cutters, hydraulic pruning saws, tool line, specialised pruning tools (cocky beaks and pruning saws)
- Types, selection and application of vegetation mulching tools and specialist equipment.
- Types and application of herbicide application equipment
- Purpose and use of cutting plans relevant to the vegetation type
- Cutting techniques of vegetation control tools and specialist equipment
- Techniques in undertaking different branch cuts - scarf under-cut, top cut technique, top scarf - bottom-back cut technique, side scarf opposite back-cut technique
- Pre-operational checks on vegetation control tools and equipment
- Techniques in safely using vegetation control specialist equipment - visual inspection of vegetation control equipment, methods of using equipment at heights and in confined spaces, precautions to note during use of equipment (proximity of other personnel, proximity of powerlines and obstacles, length of power lead and possible fire danger due to sparks)
- Types of personal protective equipment used in conjunction with vegetation control equipment - head protection, eye protection, hearing protection, hand protection, foot protection, body protection, general protection.
- Basic maintenance of vegetation control equipment - cleaning, proper storage, basic repair and replacement and testing for compliance to manufacturer's and OHS requirements.

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 of competency 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	Confirm the range of specialised plant and equipment is applicable to this standard in at least 3 of the following: (This should be: Confirm the use of at least 3 of the following)	Chippers. Stump grinders Brush cutters. Slashers/Tritters. Power pruners. Chemical control applicators. *Pre and post operational checks, inspections and minor maintenance. *Safe deployment of machinery and equipment in varying conditions and weather. (* Must do)
B	Confirm what is involved in routine pre-operational checks of specialised plant and equipment. (This should be: Confirm all of the following)	Pre-start and safety checks as per manufactures specifications. Checking and confirming equipment calibration settings and operating methods Observing and monitoring noise levels for correct operation. Preparation of independently powered tools may include cleaning, priming, tightening, basic repairs and adjustments. Identify and segregate unsafe or faulty equipment for repair or

		replacement.
C	Confirm what enterprise requirements apply to this standard.	Standard Operating Procedures (SOPs), Industry standards, Production schedules, Material Safety Data Sheets (MSDSs), Work notes, Product labels, Manufacturers specifications, Operators manuals, Enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), OHS procedures, Supervisors oral or written instructions, Work and routine maintenance plans.
D	Confirm from the following what OHS hazards are encountered in the workplace.	Exposure to; loud noise, fumes, solar radiation, dust, ergonomic hazards associated with posture and vibration, hazardous substances (fuel, oils, fertiliser), oil and grease spills. Presence of: bystanders, livestock and wildlife, difficult terrain and varying gradients, potholes, ditches, gullies, embankments, obstacles (rocks, logs, fences, debris, buildings), extreme weather

		conditions, electricity, overhead powerlines, mechanical malfunctions and exposed moving parts, and other machinery including hydraulics.
E	Confirm how safe and controlled operation of machinery and equipment has been demonstrated.	This should include: Appropriate selection and use of specialised plant and equipment. Using operational techniques for the specific terrain (on and off-road environments) and weather conditions. Maintaining working loads within specifications including ensuring hitch-points are operated at the correct height.
F	Confirm what personal protective clothing and equipment is relevant to this standard.	Boots, hat/hard hat, overalls, gloves, protective eyewear, hearing protection, respirator or facemask, and sun protection (sun hat, sunscreen).
G	Confirm what environmental implications associated with the operation of machinery and equipment.	Negative environmental impacts may result from excessive noise and exhaust emissions, the incorrect use and disposal of maintenance debris (oils containers, chemical residues), and hazardous substances (fuel, fertiliser).

		Impacts may also include run-off flows of water and cleaning agents from servicing, maintenance and cleaning activities, soil disturbance and dust problems from high speed and frequent traffic (including irrigation equipment).
H	Confirm what procedures are included in the shut-down of machinery and equipment.	Safe dismount procedures (including turning engine off), maintaining a clear thoroughfare, parking away from hazards, securing, engaging handbrake, removing keys, refuelling and cleaning.
I	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.

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 safely undertake actual operation and routine maintenance of specialised plant and equipment near live electrical

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 Transmission, Distribution and Rail Traction Industry. 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:

RTC2005A Fell small tress
RTC2706A Apply chemicals under supervision

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.

This Competency Standard Unit is to be demonstrated in relation to the operation and routine maintenance of specialised plant and equipment such as chippers, slashers, tritters, brush cutters, stump grinders, power pruners, chemical control applicators and other related associated and powered specialised plant and equipment used near live electrical apparatus.

Excludes plant and machinery that encompasses driving/flying and associated licenses, such as aerial croppers, boom-operated mowers, insulated elevating work platforms and the like.

Preparation of risk assessment control measures that encompass job safety assessment and includes traffic control measures and compliance with relevant State or Territory regulatory agencies/bodies, local government legislation, Industry bi-partite body – Guidelines/Codes of Practices or other related requirements for Safe use of equipment near live Electrical and Mechanical Apparatus.

Prevailing Licensing Requirements

Excludes any work that is or may be performed by other competent operatives within the defined “ordinary person zone”

Working near energised live electricity supply infrastructure assets

Includes periodical and pre-operational checks of the specialised plant and equipment for safe operation and conduct of maintenance checks and, associated documentation

Safe approach distances zones/Safe Working Clearance

Work permit(s) and/or access authorisation permits

Technical standards and Industry Guidelines

Ground configuration – undulations, uneven ground, soft ground, damp, etc

Plant, equipment and tools for use in electrical environments

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
- Assessing risk
- Assessment
- Authorisation
- Documenting detail work events, record keeping and or storage of information
- Drawings and specifications
- Emergency

RANGE STATEMENT

- Environmental and sustainable energy procedures
- Environmental legislation
- Established procedures
- Fall prevention
- Hazards
- Identifying hazards
- Inspect
- Legislation
- MSDS
- Notification
- OHS practices
- OHS issues
- Permits and/or permits to work
- Personnel
- Quality assurance systems
- Requirements
- Work clearance systems

Unit Sector(s)

Not applicable.

Competency Field

Competency Field **11)**

Vegetation Units