Australian Government

Department of Education, Employment and Workplace Relations

ICTTCR2189A Use operational safety in a telecommunications rigging environment

Release: 1

ICTTCR2189A Use operational safety in a telecommunications rigging environment

Modification History

Not Applicable

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Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to demonstrate and apply knowledge of fall arrest, fall guarding and fall restraint when working at heights in a telecommunications rigging environment. A licensed rigger is required for the installation of some rigging equipment. The National Standard for Licensing Persons Performing High Risk Work applies to persons performing dogging and rigging work. Completion of the following units is required for certification at either basic, intermediate or advanced levels. CPCCLDG3001A Licence to perform dogging CPCCLRG3001A Licence to perform rigging basic level CPCCLRG3002A Licence to perform rigging intermediate level CPCCLRG4001A Licence to perform rigging advanced level. If operation of an elevated work platform (EWP) is required, a licence may be required. Users should confirm requirements with the relevant federal, state or territory authority.

Application of the Unit

Application of the unit	Technical staff who work in fall arrest, fall guarding and fall restraint when working at height in a telecommunications rigging environment apply the skills and knowledge in this unit. They may make use of rigging plant and equipment, fall arrest, fall guarding and fall constraint and team communications. This unit applies to standard telecommunications structures.

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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. 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 use operational safety in a telecommunications rigging environment	1.1. Prepare for given work according to ***relevant legislation***, ***codes***, ***regulations and standards*** and applicable to fall arrest, fall guarding and fall restraint systems 1.2. Select ***tools*** and ***safety equipment*** required for safe rigging practice
2. Assess hazards associated with wearing safety equipment	2.1. Inform appropriate personnel of ***potential faults and non-compliances*** in ***personal equipment*** 2.2. Inform appropriate personnel of primary hazards associated with the use of a ***safety harness and associated equipment and control strategies***
3. Check and fit a safety harness	3.1. Use correct ***safety harness fitting method*** 3.2. Confirm that the **lanyard** is appropriate for the task and check lanyard and harness for faults according to manufacturer's specifications and workplace procedures 3.3. Fit the safety harness according to manufacturer's instructions
4. Use a safety harness in a telecommunications environment	4.1. Minimise risks to self and others while using a safety harness and lanyards using identified safety principles associated with effective ***fall arrest***, fall guarding and fall restraint systems 4.2. Confirm the safety of possible hook-on points and select the optimum hook-on points 4.3. Attach and detach lanyards in a safe manner to and from anchor points
5. Verify the rescue plan to be activated in the event of a fall	5.1. Confirm the ***rescue plan*** is in place with work supervisor 5.2. Notify individuals of their roles in the rescue plan 5.3. Provide a report to the supervisor on the application of operational safety in rigging practice in a telecommunications environment

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
Required skills

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REQUIRED SKILLS AND KNOWLEDGE

- analytical skills to properly and adequately assess risk on telecommunications network structures
- communication skills to liaise with other personnel, including the use of radio devices
- literacy skills to interpret manufacturer's operating instructions, technical documentation, plans and specifications
- numeracy skills to:
  - take measurements
  - interpret results
  - evaluate different types of technical data
- planning and organisational skills to prioritise and monitor own work and occupational health and safety (OHS) responsibilities
- problem solving and contingency management skills to adapt rigging activities to particular sites and conditions
- task management skills to work systematically with required attention to detail and adherence to all safety requirements
- technical skills to:
  - check and fit a safety harness
  - use a safety harness where a fall hazard exists at height in a telecommunications context
- safety awareness skills to:
  - apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities
  - prevent and treat hypothermia
  - select and use required personal protective equipment for rigging projects to suit different applications and for work at heights conforming to industry and OHS standards
  - work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- technical skills to select and use appropriate equipment and practices to suit different applications

Required knowledge

- electromagnetic radiation (EMR) safety practices
- fall arrest, fall guarding and fall restraint when working at heights in a telecommunications rigging environment
- features and operating requirements of rigging equipment
- government and local government legislation, regulations, and by-laws including:
  - applicable site and company OHS procedures
  - OHS Act
  - relevant codes of practice

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REQUIRED SKILLS AND KNOWLEDGE
• subsequent amendments in regards to fall arrest, fall guarding and fall restraint when working at heights in a telecommunications rigging environment • hazards associated with wearing a safety harness and associated equipment • licensing and regulatory issues applying to rigging practices and systems on telecommunications radio structures • optical fibre cabling and equipment safety practices • personal protective equipment for rigging projects • rescue plan to be activated in the event of a fall • risks present when working on telecommunications radio structures • safe rigging practices and systems to telecommunications radio structures • suspension trauma • working at heights safety practices • workplace operational procedures.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the ability to: • use fall arrest, fall guarding and fall restraint systems when working at heights in a telecommunications rigging environment • check and fit a safety harness according to industry practice • use a safety harness where a fall hazard exists at height in a telecommunications context • demonstrate knowledge of the rescue plan to be activated in the event of a fall • apply related OHS requirements and work practices associated with fall arrest, fall guarding and fall restraint when working at heights in a telecommunications rigging environment.
Context of, and specific resources	Assessment must ensure:

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EVIDENCE GUIDE	
for assessment	• site on which rigging operations may be conducted • rigging and safety equipment • relevant regulations, standards specifications and manuals.
Methods of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • direct observation of the candidate checking and fitting a safety harness using correct method • direct observation of the candidate using a safety harness in a telecommunications environment • review of report prepared by the candidate outlining a rescue plan in the event of a fall • oral or written questioning of the candidate to assess OHS requirements and work practices associated with rigging.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: • ICTTCR2188A Use rigging practices and systems on telecommunications network structures • ICTTCR2190A Use safe rigging practices to climb and perform rescues on telecommunications network structures. Aboriginal people and other people from a non-English speaking background may have second language issues. Access must be provided to appropriate learning and assessment support when required. Assessment processes and techniques must be culturally appropriate, and appropriate to the oral communication skill level, and language and literacy capacity of the candidate and the work being performed. In all cases where practical assessment is used it will be combined with targeted questioning to assess required knowledge. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. Where applicable, physical resources should include

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EVIDENCE GUIDE	
	equipment modified for people with special needs.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	

Relevant legislation, ***codes***, ***regulations and standards*** may include:	• Australian Communications Industry Forum (ACIF) standards and codes
	• Australian Communications and Media Authority (ACMA) technical standards
	• appropriate licences that may be required:
	  • crane
	  • dogging
	  • rigging
	  • scaffolding
	  • winch.
	• Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) electromagnetic radiation (EMR) standard
	• AS 1353.1:1997
	• AS 1353.2:1997
	• AS 1657:1992
	• AS 2089:2008
	• AS 2319:2001
	• AS 2626: replaced by AS/NZS 1891.4:2000
	• AS 3775.1:2004
	• AS 3775.2:2004
	• AS 3777:2008
	• AS 4497.2:1997
	• AS/NZS 1891.1:2007
	• AS/NZS 1891.4:2000

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RANGE STATEMENT	

	• AS/NZS 4801:2001
	• AS/NZS ISO 14001:2004
	• Australian building codes and regulations
	• Australian Standards
	• CE, American national standards Institute (ANSI) equipment standards
	• enterprise standards
	• environmental protection
	• equipment certifications:
	  • NFPA 1983 (2006 edition)
	  • NFPA/UL G-rated (General Use)
	• equipment standards:
	  • intrinsically safe lightning protection
	  • site engineering standard
	• fire regulations
	• heritage legislation
	• international standards
	• local government
	• OHS
	• Radcoms Act
	• related publications
	• Telecoms Act
	• WI's, CI's, Business Operating Procedures (BOP), Radiocommunications Assignment and Licensing Instruction (RALI), assignment guidelines.

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RANGE STATEMENT	
Tools may include:	• crane • hand • load and tension gauge • mechanical • power.

Safety equipment may include:	• aerial safety belts and lines
	• anchor straps
	• earmuffs
	• elevated platform
	• equipment guards
	• fall arrest systems
	• fall constraint systems
	• fall guarding systems
	• flashing lights
	• gloves
	• guards
	• helmets
	• pulleys
	• rigging plates
	• rope clamps
	• safety cages
	• safety glasses
	• safety harnesses:
	  • basic
	  • full body fall arrest
	  • sit harness
	• scaffold deck
	• warning signs and tapes.

Potential faults and non-compliances may relate to:	• assessing condition of personal equipment and inspecting for:
	  • abrasions
	  • chemical damage
	  • cracks
	  • deformities
	  • heat damage
	  • mechanical failure
	  • wear
	• determining appropriate:
	  • anchors

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RANGE STATEMENT	
	• ascenders • climbing equipment for network structures • descenders • karabiners • lines • non-registered equipment and damage to: • connectors • fall arrestor • harnesses • lanyards • shock absorbers • using climbing equipment and fall arrest systems • using: • anchor points • connectors • jointing splices • karabiners • rigging screws • shackles • slings • snatch blocks • strops • synthetic ropes • turn buckles • wire rope grips • wire ropes.

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RANGE STATEMENT	

Personal equipment may include:	• personal protective equipment for:
	  • carrying out rigging work
	  • work at a telecommunications site with potential optical fibre and laser equipment hazards
	• personal monitor for detecting and reporting RF EMR hazards.

Safety harness and associated equipment and control strategies may include:	• aerial safety belts and lines
	• anchor straps
	• crane cage
	• elevated platform
	• equipment guards
	• fall arrest devices and systems
	• fall constraint systems
	• fall guarding systems
	• flashing lights
	• guards
	• helmets and other personal safety equipment:
	  • earmuffs
	  • gloves
	  • safety glasses
	• lanyards, static lines and anchors
	• pulleys
	• rescue harness
	• rigging plates
	• rope clamps
	• safety cages
	• safety harness, basic to full body fall arrest and sit harness
	• safety issues:
	  • in roof work
	  • installation of fall arrest
	  • fall guarding
	  • fall restraint systems
	  • free fall
	  • suspension trauma
	  • unprotected edge
	  • working at heights
	• scaffold deck
	• suspension trauma, fall restraint verses fall

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RANGE STATEMENT	
	arrest, pendulum effect • verifying and maintaining the EMR hazard management plan against an on site situation • warning signs and tapes.

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RANGE STATEMENT	

Safety harness fitting method includes:	• fitting components:
	  • attachment point
	  • front buckle
	  • lanyard
	  • leg straps
	  • non-fall arrest attachment points
	  • shock absorber and inspection tags
	  • shoulder straps
	• checking and fitting a safety harness:
	  • visual inspection
	  • functionality assessment
	  • currency of inspection records
	  • tags
	  • logs
	• correct fitting and adjustment sequence:
	  • straps untwisted
	  • evenness on shoulders
	  • tightened to 'flat hand space' comfort
	  • objects in pockets are no hazard
	  • lanyard secured
	• types and application of different safety harnesses.

Lanyard may relate to:	• types:
	  • single
	  • double
	  • retractable
	  • twin tail
	• situations with two or more people working together and people working below
	• checking:
	  • connection to harness
	  • functionality assessment
	  • length
	  • visual inspection.

Fall arrest may include:	• arrest of:
	  • free fall
	  • limited free fall
	  • restrained free fall

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RANGE STATEMENT	

	• total restrained fall
	• fall factors 1 and 2, maximum allowable fall distances
	• fixed and temporary
	• systems with:
	  • abseil lines
	  • attachment devices
	  • double lanyards
	  • harnesses
	  • pole straps
	  • rails
	  • static lines.

Rescue plan may relate to:	• abseil rescue
	• performing rescues from telecommunications network structures
	• personal and team safety
	• raise and lower systems
	• stabilising a casualty
	• treating suspension trauma
	• roles:
	  • emergency services
	  • equipment operators
	  • trained specialists
	  • your own
	• using appropriate first aid in rescue situations on telecommunication network structures.

Unit Sector(s)

Unit sector	Telecommunications

Co-requisite units

Co-requisite units		

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Co-requisite units		

Competency field

Competency field	Telecommunications Rigging Installation

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