



Australian Government

Department of Education, Employment and Workplace Relations

RIIUND307A Conduct tele-remote operations

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the conduct of tele-remote operations in the resources and infrastructure industries. It includes planning and preparing for tele-remote control operations, setting up tele-remote operations, conducting tele-remoting, carrying-out operator maintenance, and conducting housekeeping activities. Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Relevant information must be sourced prior to application of the unit.

Application of the Unit

This unit is appropriate for those working in an operational role at worksites within:

- Metalliferous mining

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

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. Plan and prepare for tele-remote control operations	1.1. Access, interpret and apply compliance documentation relevant to the work activity 1.2. Plan and prepare work 1.3. Receive, interpret and clarify shift changeover details 1.4. Select personal protective equipment appropriate to the task 1.5. Select appropriate type of tele-remote equipment according to job type and specifications 1.6. Perform equipment pre-start checks to ensure equipment is ready for operation 1.7. Identify, address and report potential risks and hazards 1.8. Carry out start-up, park and shutdown procedures 1.9. Identify, address and report environmental issues 1.10. Confirm location and construction of remoting area 1.11. Erect barricades or signage and/or safety provisions where appropriate to prevent unauthorised access 1.12. Adhere to emergency procedures to ensure safety of personnel, equipment and site 1.13. Inspect and assess site conditions to determine if scaling is required and take action according to site requirements 1.14. Use approved dust suppression and extraction methods 1.15. Ensure area is well ventilated before entry into work area
2. Setup tele-remote operation	2.1. Check transmitter functions for correct operation 2.2. Ensure communication is available for operator at all times during operation 2.3. Confirm operation of visible warning lights 2.4. Check receiver and cameras are installed and operating correctly

	2.5.Ensure proximity device or barrier is operational 2.6.Activate/erect warning signs in control room
3. Conduct tele-remoting	3.1.Monitor control room indicators for equipment and environment feedback 3.2.Maintain constant control of remote equipment to ensure safe operation 3.3.Continuously assess ground conditions and determine safest operating method and efficiency of operations 3.4.Identify cause when proximity sensors are activated and report incidence as required 3.5.Reset proximity sensors 3.6.Shutdown and secure remote controls whilst not in use 3.7.Complete all required documentation clearly, concisely and on time 3.8.Pass on end-of-shift information to oncoming shift
4. Carry out operator maintenance	4.1.Carry out operator maintenance 4.2.Carry out park-up and shutdown procedures 4.3.Service and make minor adjustments to equipment 4.4.Visually inspect equipment and report faults and make equipment available for operational maintenance
5. Conduct housekeeping activities	5.1.Clean equipment and remoting area 5.2.Clean and store auxiliary service equipment 5.3.Complete all required records and documentation accurately

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes the ability to carry out the following as required to conduct tele-remote operations:

- apply legislative, organisation and site requirements and procedures for conducting tele-remote operations
- use hand and power tools
- operate radio controlled transmitter/receiver
- test and identify remote control faults

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes knowledge of the following as required to conduct tele-remote operations:

- environmental procedures
- equipment parking
- equipment processes, technical capability and limitations
- equipment safety requirements
- geological and technical data (basic)
- isolation procedures
- primary and secondary ventilation
- tele-remote operational procedures

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	The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following: • knowledge of the requirements, procedures and instructions for conducting tele-remote operations • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of tele-remote operations • working with others to undertake and complete tele-remote operations that meet all of the required outcomes • consistent timely completion of tele-remote operations that safely, effectively and efficiently meet the required outcomes
Context of and specific resources for assessment	• This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • Assessment of this competency requires typical resources normally used in a resources and infrastructure sector environment. Selection and use of resources for particular worksites may differ due to the site circumstances. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job. • Customisation of assessment and delivery

	environment should sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Where applicable, physical resources should include equipment modified for people with disabilities. Access must be provided to appropriate learning and/or assessment support when required.
Method of assessment	This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods: • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: • implementation of appropriate requirements, procedures and techniques for the safe, effective and efficient achievement of required outcomes • consistent achievement of required outcomes • first hand testimonial evidence of the candidate's: • working with others to undertake and complete the tele-remote operations
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

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 compliance documentation may include:	• legislation which may include Acts and regulations dealing with: • mining safety and health • mine inspection • OHS • explosives • organisational and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Tele-remote equipment may include:	• any piece of equipment with tele-remote capabilities and may include: • drill rig • integrated tool carrier • LHD • rock breaker • bogger (mucking) • recommended/required PPE • remote may be: • hard wire (cable) • radio signal
Equipment pre-start checks may include:	• approved remote testing areas • computer systems • display instrumentation and gauges (indicators, gauges, laser levels) • remote controls • visual and audio warning devices and lights
Potential risks and hazards may include:	• communication failure • remote failure • spillage

	• unauthorised personnel entry • unsafe ground • visibility
Start-up, park and shutdown procedures may include:	• manual • remote operations
Environmental issues may include:	• dust/fumes/heat • noise • visibility • water
Barricades may include:	• barricade tape, lasers • cables across drive (e.g. wire, chain) • witches hats • infrared proximity detectors
Signage may include:	• flashing lights • worded signs
Emergency procedures may include:	• clean up • equipment shutdown procedures • evacuation procedures • First Aid • notification of authorities • safety equipment • use of personal protective equipment
Dust suppression and extraction methods may include:	• mobile/fixed sprays • screens (vent doors, vent blinds) • use of water trucks • ventilation bags operational • watering down site
Indicators may include:	• control room monitors and indicators • equipment indicators • remote indicators
Ground conditions may include:	• broken ground • dryness • location of water table • noise • slope of working surface • stability of ground • stable ground (compaction) amount of scale • ventilation characteristics (fumes, dust) • visibility/wet
Operator maintenance may	• cleaning

include:	• greasing • inspect battery charges • service cables • tightening loose fittings
Clean may include:	• degreasing • forced air • steam cleaning • water

Unit Sector(s)

Underground Mining

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.