



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **RIIUND302A Conduct cage operations**

**Release: 1**

## RIIUND302A Conduct cage operations

### Modification History

Not applicable.

### Unit Descriptor

This unit covers the conduct of cage operations in the resources and infrastructure industries. It includes organising cage operations, operating cages, transporting explosives in the cage, and carrying out operator maintenance. 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

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| 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  |
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| 1. Organise cage operations         | 1.1. Access, interpret and apply <b><i>compliance documentation</i></b> relevant to the work activity<br>1.2. Receive, interpret and clarify shift changeover details<br>1.3. Select personal protective equipment appropriate for work activities<br>1.4. Perform equipment and work area pre-start checks to ensure equipment is ready for operation<br>1.5. Check records for outstanding maintenance/inspections and recorded defects to establish the operational status of equipment and if defective take action<br>1.6. Identify, address and report <b><i>potential risks and hazards</i></b><br>1.7. Carry out start-up procedures, including <b><i>checking that area is clear for operations</i></b><br>1.8. Identify, address and report <b><i>environmental issues</i></b><br>1.9. Adhere to emergency procedures |
| 2. Operate cage                     | 2.1. <b><i>Load</i></b> cage within <i>capacity</i> and compliance with specified limits<br>2.2. Ensure that <i>loads</i> in or attached to cage, are positioned and secured prior to transit<br>2.3. Communicate with relevant personnel<br>2.4. Operate cage safely in the working environment<br>2.5. Monitor and manage cage performance using appropriate <b><i>indicators</i></b> to aid safe operations<br>2.6. Complete all required documentation clearly, concisely and on time<br>2.7. Pass on end of shift information to oncoming shift  |
| 3. Transport explosives in the cage | 3.1. Identify explosives used on site<br>3.2. Determine and ensure the segregation and separation of detonators and explosives<br>3.3. Secure and transport blasting agents and explosives<br>3.4. Track and record movement of explosives  |

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|                                   | and detonators  |
| 4. Carry out operator maintenance | 4.1. Isolate cage before conducting <i>operator maintenance</i><br>4.2. Service and make minor adjustments to equipment<br>4.3. Restore cage operations |

## 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 cage operations:

- apply legislative, organisation and site requirements and procedures for conducting cage operations
- apply standard operating practices and procedures around shafts
- work safely and within level of competence
- clean equipment
- grease
- communicate and report
- use hand and power tools

### 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 cage operations:

- the key areas of mining acts and regulations pertaining to winding
- shaft operations
- shaft installations
- identification of defects relevant to cage operations through inspection or observation
- trip and fault procedures and abnormal conditions
- site winder emergency procedures
- communication system between cage and winder
- recording and logging requirements for winder drivers, and electrical and mechanical maintenance personnel
- isolation and permit-to-work procedures
- mine ventilation system
- site procedures
- in-shaft communication equipment

## Evidence Guide

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| <p>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.</p> |   |
| <p><b>Overview of assessment</b></p>  |   |
| <p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>  | <p>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:</p> <ul style="list-style-type: none"> <li>• knowledge of the requirements, procedures and instructions for conducting cage operations</li> <li>• implementation of requirements, procedures and techniques for the safe, effective and efficient completion of cage operations</li> <li>• working with others to undertake and conduct cage operations that meet all of the required outcomes</li> <li>• consistent timely conduct of cage operations that safely, effectively and efficiently meet the required outcomes</li> </ul>  |
| <p><b>Context of and specific resources for assessment</b></p>  | <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• Customisation of assessment and delivery environment should sensitively accommodate</li> </ul> |

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|  | <p>cultural diversity.</p> <ul style="list-style-type: none"> <li>• Aboriginal people and other people from a non English speaking background may have second language issues.</li> <li>• 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.</li> </ul>   |
| <b>Method of assessment</b>                | <p>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:</p> <ul style="list-style-type: none"> <li>• written and/or oral assessment of the candidate's required knowledge</li> <li>• observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> <li>• implementation of appropriate requirements, procedures and techniques for the safe, effective and efficient achievement of required outcomes</li> <li>• consistent achievement of required outcomes</li> </ul> </li> <li>• first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> <li>• working with others to undertake and conduct cage operations</li> </ul> </li> </ul> |
| <b>Guidance information for assessment</b> | <p>Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.</p>  |

## 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.

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| <p><b>Relevant compliance documentation</b> may include:</p> | <ul style="list-style-type: none"> <li>• legislation, which may include Acts and regulation dealing with:             <ul style="list-style-type: none"> <li>• mining safety and health</li> <li>• mine inspection</li> <li>• OHS</li> <li>• explosives</li> </ul> </li> <li>• organisational and site requirements and procedures which may include:             <ul style="list-style-type: none"> <li>• clean up</li> <li>• equipment shutdown and isolation procedures</li> <li>• evacuation procedures</li> <li>• First Aid</li> <li>• notifying relevant authorities</li> <li>• permit-to-work systems</li> <li>• safety equipment</li> <li>• use of personal protective equipment</li> <li>• communication procedures (e.g. with winder operator)</li> <li>• portable electric apparatus procedures</li> <li>• fall arrestor and harness procedures</li> <li>• confined spaces</li> </ul> </li> <li>• manufacturer's guidelines and specifications</li> <li>• Australian standards</li> <li>• Employment and workplace relations legislation</li> <li>• Equal Employment Opportunity and Disability Discrimination legislation</li> </ul> |
| <p><b>Potential risks and hazards</b> may include:</p>       | <ul style="list-style-type: none"> <li>• blockages or obstructions</li> <li>• communication failure</li> <li>• oversized loads</li> <li>• unauthorised personnel</li> <li>• unsafe ground</li> <li>• poor visibility</li> </ul>  |



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|   | <ul style="list-style-type: none"> <li>• explosion</li> <li>• asphyxiation and drowning</li> </ul>   |
| <p><b>Checking that area is clear for operations</b> may include:</p> | <ul style="list-style-type: none"> <li>• external damage/defects/wear</li> <li>• cage arresting and slack rope systems</li> <li>• cleanliness of cage and plats</li> <li>• computer systems</li> <li>• danger/out of service tags</li> <li>• display instrumentation and gauges (indicators, gauges, laser levels)</li> <li>• fire suppression unit (pins in position in triggers)</li> <li>• loose wheels</li> <li>• communication systems</li> <li>• lubricants</li> <li>• idle positioned and running</li> <li>• guides and shoes</li> <li>• plat and cage illumination</li> <li>• oil leaks</li> <li>• personnel and materials proximity to shaft</li> <li>• portable fire extinguisher (bracket, gauge, hose, ease of access)</li> <li>• cage doors</li> <li>• cage ropes and attachments</li> <li>• visual and audio warning devices and lights</li> </ul> |
| <p><b>Environmental issues</b> may include:</p>                       | <ul style="list-style-type: none"> <li>• dust</li> <li>• fumes</li> <li>• noise</li> <li>• water</li> <li>• heat</li> <li>• flammable and noxious gases</li> <li>• flammable dust</li> </ul>   |
| <p><b>Capacity</b> of the cage may be affected by:</p>                | <ul style="list-style-type: none"> <li>• efficient and safe operating speed</li> <li>• personnel carrying capacity</li> <li>• operating limitations</li> <li>• type of activities performed</li> <li>• weight and/or load limitations</li> </ul>   |
| <p><b>Loads</b> may include:</p>                                      | <ul style="list-style-type: none"> <li>• people</li> <li>• automotive diesel fuel</li> <li>• explosives (including detonators)</li> <li>• consumables</li> <li>• drilling equipment</li> <li>• trackless vehicles</li> </ul>   |

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|  | <ul style="list-style-type: none"> <li>• track vehicles</li> <li>• ground support materials</li> <li>• cement</li> <li>• lubricants</li> <li>• paints</li> <li>• other hazardous substances</li> <li>• track laying materials</li> </ul> |
| <b>Indicators</b> may include:           | <ul style="list-style-type: none"> <li>• computer indicators</li> <li>• cage indicators</li> <li>• plat indicators</li> <li>• communication and signalling systems</li> </ul>  |
| <b>Operator maintenance</b> may include: | <ul style="list-style-type: none"> <li>• greasing</li> <li>• rope adjustments</li> <li>• cage door adjustments</li> <li>• tightening loose fittings</li> </ul>   |

## Unit Sector(s)

Underground Mining

## Competency field

Refer to Unit Sector(s).

## Co-requisite units

Not applicable.