



Australian Government

RIIHAN310E Conduct crane operations underground

Release: 1

RIIHAN310E Conduct crane operations underground

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 3.0.

Application

This unit describes the skills and knowledge required to conduct crane operations underground.

This unit applies to those working in site-based roles.

Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories and industry sectors and must be sourced from state jurisdictions prior to applying this unit.

Unit Sector

Coal mining

Metalliferous mining

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare to conduct crane operations underground	1.1 Access, interpret and apply crane operations documentation to ensure work activity is compliant 1.2 Obtain, interpret, clarify and confirm work requirements 1.3 Select and wear personal protective equipment required for work activities 1.4 Identify hazards and environmental issues, assess the risks and implement control measures in line with workplace policies 1.5 Coordinate and communicate planned activities with others at the site prior to commencement of work activity 1.6 Check indicators and perform pre-start checks on equipment and

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	attachments in line with workplace procedure 1.7 Carry out start-up checks in line with workplace procedures 1.8 Identify faults or defects and rectify or report within scope of own responsibility and according to workplace procedures 1.9 Scale loose material and make site safe 1.10 Use approved dust suppression and extraction methods in line with safe work practices 1.11 Check area is well ventilated before entry into work area
2. Lift and shift load in line with established requirements to complete work activity	2.1 Assess ground conditions, position equipment to ensure stability of crane and safety of other equipment and personnel 2.2 Determine rigging and slinging requirements after assessing site and load conditions in line with workplace requirements 2.3 Determine lifting technique according to the nature of the load being moved and the required location in line with workplace procedures 2.4 Operate equipment within work environment and equipment limitations, using safe driving conventions 2.5 Monitor and manage equipment performance using indicators and alarms 2.6 Park up, shut down, secure and carry out post operational inspection of equipment in line with workplace procedures
3. Conduct housekeeping activities	3.1 Clean equipment and work area and dispose or recycle materials according to workplace procedures 3.2 Clean and store ancillary service equipment 3.3 Manage and/or report hazards to maintain a safe working environment 3.4 Complete and file or distribute documentation

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Skill	Description
Reading	Identifies and interprets information from workplace procedures, documentation, legislation and regulations
Numeracy	Uses equipment operating capacity schedule to confirm safe weight load limits

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
RIIHAN310E Conduct crane operations underground (Release 1)	RIIHAN310D Conduct crane operations underground (Release 3)	Minor updates to reflect changes to operator maintenance and lifting activities	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIHAN310E Conduct crane operations underground

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 3.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements and performance criteria of this unit.

The candidate must demonstrate completion of crane operations that safely, effectively and efficiently follow workplace procedures to carry out work activity on at least two occasions, and include:

- conducting prestart checks prior to commencing operations and shutdown procedures on completion of operations
- operating crane and adjusting techniques to suit site conditions
- monitoring, assessing and addressing equipment performance
- determining lifting techniques
- lifting and shifting load to the correct location
- securing and parking equipment

In the course of the above the candidate must

- locate and apply required documentation, policies and procedures
- select and wear personal protective equipment required for work activities
- monitor and manage equipment performance using indicators and alarms
- inspect equipment and reporting faults
- interpret ground conditions
- establish weight of load
- apply problem solving and troubleshooting techniques when operating equipment
- monitor loads and manage changes in the load's centre of gravity during transportations
- use hand and power tools
- tow using the equipment
- carry out refuelling requirements and procedures
- use a range of communication techniques and equipment essential to the safe completion of work activity, including hand, audible and other signals
- meet written and verbal reporting requirements and procedures associated with underground crane operations

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements and performance criteria of this unit. This includes:

Key policies and procedures and established requirements for crane operations, including those relating to:

- maintenance and basic diagnostics
- housekeeping activities
- personal protective equipment
- work health and safety

Key factors affecting work activities described in performance evidence above, including:

- techniques for calculating safe working loads
- safety data sheet and materials handling methods
- safe operating techniques in varying terrain
- geological and technical data (basic)
- equipment processes, technical capability and limitations

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - crane
 - materials to be shifted
 - personal protective equipment
- be conducted in a safe environment and
- be assessed in the context of this sector's work environment and
- be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed and
- confirm consistent performance can be applied in a range of relevant workplace circumstances

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Assessor requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory regulatory standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/AQTF mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed

- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing a high level of RII training product knowledge
- having an understanding and knowledge of legislations and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must hold the relevant vocational competencies and have current industry skills directly relevant to the training and assessment being provided, and must work alongside a trainer and/or assessor to conduct the assessment. This means the industry subject matter expert should hold the unit being assessed (or an equivalent unit), and must also demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 Year
	2	2 Years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 Years
Other sectors	Where this unit is being assessed outside of the resources and infrastructure sectors assessor and/or industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no Industry standard is specified should comply with any relevant regulation.	

*Guidance on simulated environments has been stipulated in the RII implementation guide located on VETNet.

**Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a Unit of Competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>