



Australian Government

Assessment Requirements for RIINHB304E Conduct reverse circulation drilling operations

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 5.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- conduct reverse circulation drilling operations on at least two occasions.

During the above, the candidate must:

- locate and apply required documentation, policies and procedures
- implement the requirements, procedures and techniques for the completion of reverse circulation drilling, including:
 - applying prescribed thread form torque parameters during make-up of down hole equipment and consumables
 - applying correct internal and external calipers, vernier, rule and or tape measure for identification of drill pipe/rod diameter wear limits, measurement of bits/shrouds and other required down hole equipment
 - applying correct measurement of drill string length
 - applying methods for calculating hole depth
- work with others to conduct reverse circulation drilling tasks that meets required outcomes, including:
 - complying with written and verbal reporting requirements and procedures
 - communicating with others to receive and clarify work instructions
 - communicating with others to determine coordination requirements prior to commencing and during work activities.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key policies, procedures and established requirements for conducting reverse circulation drilling, including those for:

- work health and safety
- emergencies
- environmental practice
- operating drill rig
- housekeeping
- the importance to match like threads with like threads on all threaded components and make up torque requirements applicable to thread form in use
- the relationship between pressure, volume, hole diameter, rod diameter and calculation of up hole velocity
- drill rod and thread form wear limit parameters
- the need for correct hole collaring, use of casing and collar sealing techniques
- methods for complying with the tungsten carbide (TC) bit sharpening procedures
- potential problems related to inaccurate measurement and usage sequence of ground engaging consumables and related down hole components
- hazard control measures to enable safe use of compressed air
- the importance of ensuring sample quantity including the prevention of blockages
- safe procedures to clear down and up hole drill cuttings blockages within the outside hole return, down hole equipment and up hole sample system and/or hose
- the critical need for correct fitting, inspection, maintenance and replacement of restraining devices
- hazards associated with the collection of high velocity drilling cuttings
- reasons for checking inner tubes and inner tube sealing devices in RC drill rod
- hazards associated with wire-line operations and applicable control measures
- the various thread forms used in reverse circulation drilling
- the various in-hole tools and correct application given ground conditions
- the need for managing uncontaminated samples.

Assessment Conditions

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

- include access to:
 - personal protective equipment
 - equipment required to conduct reverse circulation drilling
- 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 and processes 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 2015/Australian Quality Training Framework 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 the required level of RII training product knowledge
- having an understanding and knowledge of legislation and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence 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 have current industry skills directly relevant to the training and assessment being provided. This means the industry subject matter expert must 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	

Industry sector	AQF indicator level***	Required assessor 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 is found on VETNet -

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