



Australian Government

RIINHB312D Conduct raise boring

Release: 2

RIINHB312D Conduct raise boring

Modification History

Release	Comment
1	This unit replaces RIINHB312A Conduct raise boring
2	Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Application

This unit describes a participant's skills and knowledge required to conduct raise boring in Metalliferous mining and Drilling.

This unit is appropriate for those working in operational roles.

No licensing, legislative or certification requirements apply to this unit at the time of publication

Unit Sector

Drilling

Metalliferous mining

Elements and Performance Criteria

1. Plan and prepare for raise boring	1.1 Access, interpret and apply raise boring documentation and ensure the work activity is compliant 1.2 Obtain, read, interpret, clarify and confirm work requirements 1.3 Identify and address potential risks, hazards and environmental issues and implement control measures 1.4 Select and wear personal protective equipment appropriate for work activities 1.5 Inspect and assess site conditions to identify and manage possible scaling requirements and misfires 1.6 Communicate and coordinate activities with others throughout the work activity 1.7 Obtain and interpret emergency procedures, and be prepared
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	for fire/accident/emergency
2. Locate collar and drill pilot hole	2.1 Carry out pre-start and start up procedures 2.2 Identify, select and apply rig operational controls 2.3 Inspect and assemble collaring starter equipment 2.4 Install dust suppression and extraction systems 2.5 Confirm and set drill direction accurately and collar hole as specified in the drill plan 2.6 Install assemblies in collared hole to allow pilot hole drilling
3. Drill and monitor progress of pilot hole	3.1 Continually monitor hazards and risks , and ensure safety of self, other personnel, plant and equipment 3.2 Interpret drill plans and drill holes to design 3.3 Operate equipment safely within working environment limitations and ground conditions 3.4 Monitor ground conditions and adjust drilling techniques and components to maintain efficient drilling operations 3.5 Monitor drilling progress using appropriate equipment indicators 3.6 Carry out and monitor drill “break-through” procedures and inspect break through 3.7 Remove housing assemblies
4. Ream raise bore	4.1 Coordinate personnel to attach the reaming head to drill string 4.2 Coordinate removal of raise bore cuttings 4.3 Monitor ground conditions and adjust reaming techniques to maintain efficient drilling operations 4.4 Diagnose and take appropriate action to manage reaming problems and advise appropriate personnel 4.5 Remove and store reamer
5. Respond to problems	5.1 Identify possible operational problems in equipment, process or mud 5.2 Determine problems needing action 5.3 Determine possible fault causes 5.4 Rectify problem using appropriate solution(s) within area of responsibility 5.5 Follow through items initiated until final resolution has occurred 5.6 Report problems outside area of responsibility to designated

	person
6. Complete equipment maintenance and housekeeping	6.1 Carry out shutdown and secure equipment 6.2 Monitor wear and recognise symptoms of malfunction 6.3 Check all equipment and hoses 6.4 Monitor all seals and connections 6.5 Replace, adjust and report items needing attention. 6.6 Service gear and adjust glands where required 6.7 Complete maintenance schedule 6.8 Check oil drops for signs of repairs needed 6.9 Maintain inspection and/or service records 6.10 Ensure housekeeping activities are completed 6.11 Process records

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit. Further information is available in the Resources and Infrastructure Industry Training Package Companion Volume.

Unit Mapping Information

RIINHB312A Conduct raise boring

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 RIINHB312D Conduct raise boring

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Performance Evidence

Evidence is required to be collected that demonstrates a candidate's competency in this unit. Evidence must be relevant to the roles within this sector's work operations and satisfy all of the requirements of the performance criteria of this unit and include evidence that the candidate:

- locates and applies relevant documentation, policies and procedures
- implements the requirements, procedures and techniques for the safe, effective and efficient conducting of raise boring including:
 - using clinometers
 - reading and interpreting plans
 - selecting and using relevant tools
 - setting up and loading the rod rack
 - setting up and aligning a raise bore in readiness for drilling
 - attaching and remove drill rods, bits and reamers
 - calculating and setting drill angles
- works effectively with others to undertake and complete raise boring that meets all of the required outcomes including:
 - complying with written and verbal reporting requirements and procedures
 - communicating clearly and concisely with others to receive and clarify work instructions
 - communicating clearly and concisely with others to resolve coordination requirements prior to commencing and during work activities
- demonstrates completion of raise boring that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - confirming and setting drill direction accurately and collaring hole as specified in the drill plan

- installing assemblies in collared hole to allow pilot hole drilling
- interpreting drill plans and drilling holes to design
- carrying out and monitor drill “break-through” procedures and inspecting break through
- coordinating personnel to attach the reaming head to drill string
- monitoring ground conditions and adjusting reaming techniques to maintain efficient drilling operations

Knowledge Evidence

The candidate must demonstrate knowledge in conducting raise boring through:

- accessing, interpreting and applying the organisation and site requirements and procedures for:
 - work, health and safety
 - environmental issues
 - operating drill rig
 - housekeeping
 - operating auxiliary services
 - equipment cleaning
 - identifying down hole problems
 - site and equipment inspections
- understanding drilling equipment processes, technical capability and limitations
- accessing, interpreting and applying geological and technical data
- site isolation procedures
- manufacturer’s specifications
- recovery procedures
- the start-up and shutdown procedures
- site storage procedures
- site towing procedures
- underground procedures
- and dealing with misfires
- being prepared for fire/accident/emergency

Assessment Conditions

- An assessor of this unit must satisfy the requirements of the NVR/AQTF or their successors; and Industry regulations for certification and licensing; and,
- this unit must be assessed in the context of this sector’s work environment; and,
- this unit must 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,

- assessment may be conducted in conjunction with the assessment of other Units of Competency; and,
- assessment must confirm consistent performance can be applied in a range of relevant workplace circumstances; and,
- assessors must demonstrate the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and through the minimum years of current* work experience specified below in an Industry sector relevant to the outcomes of the unit; or,
- where the assessor does not meet experience requirements a co-assessment or partnership arrangement must exist between the qualified assessor and an Industry subject matter expert. The Industry subject matter expert should hold the unit being assessed (or an equivalent unit) and/or demonstrate equivalence of skills and knowledge at the unit level. An Industry technical expert must also demonstrate skills and knowledge from the minimum years of current work experience specified below in the Industry sector, including time spent in roles related to the unit being assessed; and,
- assessor and Industry subject matter expert requirements differ depending on the Australian Qualifications Framework Level (AQF) of the qualification being assessed and/or Industry Sector as follows:

Industry sector	AQF** Level	Required assessor or Industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Construction	1	1 Year
	2	2 Years
Drilling, Coal Mining and Extractive (Quarrying)	3-6	3 Years
Metalliferous Mining and Civil Construction	3-6	5 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.	

*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 frequent site assessments across various locations.

**Where a unit is being delivered outside of a Qualification the first numeric character in the Unit code should be considered to indicate the AQF level

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