



Australian Government

RIIBHD302E Conduct underground development drilling

Release: 1

RIIBHD302E Conduct underground development drilling

Modification History

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

Application

This unit describes the skills and knowledge required to conduct underground development drilling in metalliferous mining. It includes conducting drilling and monitoring operations and setting up and clearing drill sites.

It applies to those working in driller roles. They generally work under minimal supervision to undertake a broad range of skilled applications in varied work contexts, using some discretion and judgement in selecting equipment, services or contingency measures.

Licensing, legislative and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Users must check requirements with relevant body before applying the unit.

Unit Sector

Metalliferous mining (underground)

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. Prepare for underground drilling	1.1 Obtain, interpret, confirm and clarify shift change over details 1.2 Access, interpret and apply underground development drilling documentation and confirm work activity is compliant 1.3 Select and wear personal protective equipment according to legislative and site requirements 1.4 Inspect and assess site conditions, determine if scaling is required and respond according to site requirements 1.5 Conduct equipment pre-start checks according to manufacturer specifications and site requirements 1.6 Confirm work area ventilation according to site requirements

ELEMENT	PERFORMANCE CRITERIA
	1.7 Check work site and identify and control potential misfires according to site requirements
2. Drill and monitor progress	2.1 Identify, control and report hazards and potential risks according to site requirements 2.2 Apply dust suppression and extraction methods according to site requirements 2.3 Carry out prestart and start-up procedures according to manufacturer specifications and site requirements 2.4 Drill holes and realign equipment according to manufacturer specifications, drill plan and site requirements 2.5 Monitor drilling operations and site conditions and adjust operations as required according to manufacturer specifications and site requirements 2.6 Remove drill cuttings and sludge 2.7 Mark misdirected drill holes according to site requirements 2.8 Install collar pipes/lifters according to job and site requirements 2.9 Carry out shutdown procedures according to manufacturer specifications and site requirements
3. Carry out operator maintenance and housekeeping	3.1 Clear site and remove auxiliary equipment and services according to site requirements 3.2 Service and make minor adjustments to equipment according to manufacturer specifications and site requirements 3.3 Inspect and clean equipment and reports faults according to manufacturer specifications and site requirements 3.4 Complete documentation according to site requirements 3.5 Pass on end of shift information to oncoming shift according to site requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Numeracy	Calculates measurements, masses and dimensions
Reading	Identifies and interprets information from workplace documentation
Self-management	Monitors and minimises own exposure to worksite risks and hazards during activities

Unit Mapping Information

Supersedes and is equivalent to RIIBHD302D Conduct underground development drilling.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for RIIBHD302E Conduct underground development drilling

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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 underground development drilling on at least two occasions, including:
 - planning and preparing for drilling
 - drilling and monitoring progress
 - packing-up drill site
 - carrying out operator maintenance and housekeeping activities.

During the above, the candidate must:

- locate and apply relevant documentation and procedures and confirm work activity is compliant
- work effectively with others to conduct underground development drilling in a manner that meets required outcomes, including:
 - organising work activities to meet task requirements
 - communicating clearly and concisely with others to receive and pass on changing of shift information.

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 legislation required to conduct underground development drilling
- key procedures and documentation required to conduct underground development drilling, including:
 - auxiliary services procedures
 - drilling plan
 - drill system manufacturer specifications
 - equipment safety requirements

- techniques for interpreting and applying basic geological and technical data
- techniques for dust suppression and extraction
- characteristics, technical capabilities and limitations of drill rigs, accessories and associated equipment, including:
 - prestart, start-up and shutdown procedures
 - collar pipe and lifter installation procedures
 - routine operator service, maintenance and housekeeping procedures
- principles and techniques for identifying and responding to relevant hazards and emergencies
- techniques for coordinating job activities with others.

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 underground development 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 (RTOs) 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 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.

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