



Australian Government

RIINHB301E Set up and prepare for drilling operations

Release: 1

RIINHB301E Set up and prepare for drilling operations

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 prepare for drilling operations, set up drill and equipment and diagnose problems in drilling.

It applies to those working in operational roles. They generally perform tasks involving a broad range of skilled applications in a wide variety of contexts, which may involve some discretion and judgement in selecting equipment, services and contingency measures.

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

Unit Sector

Drilling

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 for drilling operations	1.1 Obtain, interpret and confirm work requirements 1.2 Access, interpret and apply drilling operations documentation, and confirm work activity is compliant 1.3 Identify and minimise environmental issues and potential hazards, and assess and address risks within scope of own role and according to workplace procedures 1.4 Select and wear personal protective equipment required for work activities 1.5 Communicate with other personnel at site according to work requirements and confirm briefings and handover details are communicated and received 1.6 Identify and determine location and nature of any installed

ELEMENT	PERFORMANCE CRITERIA
	services near or crossing the proposed drill plan 1.7 Identify and obtain all necessary permits and consents 1.8 Develop contingency plans for changes in geological conditions 1.9 Obtain and interpret emergency procedures and identify steps required in case of fires, accidents and other emergencies
2. Prepare to drill	2.1 Check all required personnel, equipment and supplies are available 2.2 Check equipment is in operational condition, and address identified issues according to manufacturer specifications 2.3 Erect or place safety barriers where needed according to safety requirements 2.4 Check all modes of communication according to work requirements and workplace procedures 2.5 Select suitable lay down areas for separate storage of chemicals and fuels or other incompatible items according to safety requirements 2.6 Select locations for ancillary equipment that provide maximum efficiency and minimal risk to personnel
3. Set up drill and equipment	3.1 Carry out prestart and start-up procedures according to manufacturer specifications and workplace procedures 3.2 Ensure a solid foundation for the rig 3.3 Interpret plans and position equipment accurately 3.4 Stabilise drill according to manufacturer specifications 3.5 Align and secure mast at correct angle according to manufacturer specifications and drill plan 3.6 Position ancillary equipment accurately according to work requirements
4. Diagnose problems	4.1 Recognise symptoms of problem according to workplace procedures 4.2 Identify and isolate causes and determine solution 4.3 Implement solution if within scope of authority and competence 4.4 Seek help if problem is too complex 4.5 Implement solution as directed

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	Identifies and comprehends relevant mathematical information in relation to setting up and preparing for drilling operations

Unit Mapping Information

Supersedes and is equivalent to RIINHB301D Set up and prepare for drilling operations.

Links

Companion Volume implementation guides is found on VETNet -

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

Assessment Requirements for RIINHB301E Set up and prepare for drilling operations

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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:

- set up and prepare for drilling operations on at least two occasions, including:
 - coordinating drill team members and activities
 - determining location and nature of any installed services near or crossing the proposed drill plan
 - identifying and obtaining all necessary permits and consents
 - selecting locations for storage of chemicals/fuels/incompatible items/ancillary equipment
 - ensuring a solid foundation for the rig
 - stabilising drill
 - aligning and securing mast at correct angle.

During the above, the candidate must:

- locate and apply required documentation, policies and procedures
- implement the requirements, procedures and techniques for the setting up and preparing for drilling operations, including:
 - operating ancillary equipment
 - interpreting graphical representation, including maps and diagrams relevant to drilling operations
 - using appropriate instruments to measure:
 - volume
 - quantities
 - mass
 - weight
 - length
 - applying basic geometry to interpret depth, direction and azimuth of a hole

- work with others to set up and prepare for drilling operations that meet 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 setting up and preparing for drilling operations, including those for:
 - work health and safety
 - emergencies
 - hazard management
 - operating drill rig
 - housekeeping
 - environmental practices, including:
 - controlling flow off site
 - disposing of waste
 - ensuring pad is suitable for drilling
 - preventing spread of contaminants
- original equipment manufacturer (OEM) specifications
- safe work practices
- mathematical skills, including:
 - addition
 - subtraction
 - multiplication
 - division
 - converting between metric and imperial
 - using calculating tools
 - estimating skills, including mental arithmetic, visualisation of size and quantity
- fault finding and troubleshooting techniques
- team work principles
- communication systems and procedures for complying with site radio requirements, including a two-way radio.

Assessment Conditions

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

- include access to:
 - personal protective equipment
 - equipment required to set up and prepare for drilling operations
- 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 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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