Australian Government

RIINHB301X Set up and prepare for drilling operations

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Release: 1

RIINHB301X Set up and prepare for drilling operations

Modification History

Release	Comments
1	This unit of competency was first released in RII Resources and Infrastructure Industry Training Package Release 13.0.

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.

Licensing/Regulatory Information

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

Pre-requisite unit(s)

No pre-requisite units

Competency field(s)

N/A

Unit sector(s)

Drilling

Elements and Performance Criteria

Element	**Performance criteria**
Elements describe the essential outcomes.	*Performance criteria describe the performance needed to demonstrate achievement of the element.*
1. Plan and prepare for drilling operations	1.1 Review and confirm work instructions and complete relevant documentation during briefing and handover

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	1.2 Identify, minimise and manage environmental hazards and risks within scope of own role and according to legislative and workplace requirements 1.3 Interpret and confirm emergency procedures in case of fire, accident and other emergencies 1.4 Select and wear personal protective equipment required for work activities 1.5 Communicate with other personnel at site according to work requirements 1.6 Identify and determine location and nature of any installed 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
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

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	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

Range of conditions

N/A

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Assessment Requirements for RIINHB301X Set up and prepare for drilling operations

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements and performance criteria 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

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- 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 and performance criteria 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:

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- include access to:
    - personal protective equipment
    - equipment required to set up and prepare for drilling operations
    - workplace documentation, including drill plans, site procedures, manufacturer specifications and safety data sheets
- be conducted in a safe environment
- be assessed in the context of this sector's work environment
- 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
- 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.

*Guidance on simulated environments has been stipulated in the RII Companion Volume Implementation Guide.

Industry Experts

An industry expert engaged by an RTO to wholly or partially conduct assessment, independently or together with another assessor, or be involved in an assessment judgement, must also satisfy the assessor requirements in applicable vocational education and training legislation, frameworks and/or standards.

Assessors and industry experts delivering training in the drilling industry sector must also have a minimum of three (3) years industry experience, directly relevant to the training and assessment being provided.

Mandatory Workplace Requirements

Assessment of performance evidence may be in a workplace setting or an environment that accurately represents a real workplace.

Unit Mapping Information

Previous Code and Title	Equivalence	Comments
RIINHB301E Set up and prepare for drilling operations	Equivalent	Assessment Conditions Assessor and Industry Experts

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Links

Companion volumes, including implementation guides, are found on the national training register - https://training.gov.au/training/details/RII.

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