Australian Government

RIINHB208X Assist conventional core drilling

DRAFT

Release: 1

RIINHB208X Assist conventional core drilling

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 assist conventional core drilling. It prepares individuals to support the core drilling process, handle core samples, mix drilling fluids and carry out basic maintenance of tools and equipment.

It applies to those working in assistant driller roles. They generally work under supervision to undertake a prescribed range of functions involving known routines and procedures.

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 to assist with conventional core drilling	1.1 Obtain and confirm work requirements 1.2 Access, interpret and apply documentation required to assist conventional core drilling and confirm work activity is compliant

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	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 activity 1.5 Obtain and interpret emergency procedures and identify steps in case of fire, accident and other emergencies 1.6 Communicate with other personnel on site as required and confirm briefings and handover details are communicated and received
2. Support the core drilling process	2.1 Load, unload, move, handle and store core drilling equipment and all associated tools, sampling devices and connecting equipment 2.2 Set up and stabilise racks 2.3 Assemble core barrel components 2.4 Prepare drill string in readiness for tripping and drilling 2.5 Add and remove drill rods and core inner tubes 2.6 Inspect inner tube and core barrel regularly and replace worn or damaged components as required 2.7 Monitor hazards and risks and confirm safety of self, other personnel, plant and equipment 2.8 Use rod and casing handling equipment 2.9 Store and handle diamond tools according to workplace procedures
3. Handle core samples	3.1 Dismantle inner tube for recovery of core samples 3.2 Take required safety precautions when handling potentially contaminated samples 3.3 Remove core samples from inner tube and place in core trays in required sequence 3.4 Record information on core marker blocks and core box 3.5 Take precautions to prevent surface contamination of cores and preserve delicate cores 3.6 Stack core boxes ready for storage and transportation

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	3.7 Clean and lubricate inner tube components and reassemble in preparation for the next run
4. Mix, store and test drilling fluids	4.1 Check labels and read and interpret safety information and hazard codes 4.2 Apply required mixing procedure for the drilling fluid 4.3 Store drilling mud components and additives according to workplace procedures 4.4 Perform basic tests on drilling fluids and record and report the results
5. Carry out basic maintenance of tools and equipment	5.1 Perform inspections and checks on serviceability of core barrel components 5.2 Perform inspections and routine checks on ancillary equipment 5.3 Perform inspections and basic maintenance on rod handling equipment

Range of conditions

N/A

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Assessment Requirements for RIINHB208X Assist conventional core drilling

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:

- assist conventional core drilling on at least two occasions, with each occasion covering a complete core run from preparation through to core recovery and readiness for the next run, including:
    - preparing the core barrel and drill string for drilling and tripping operations
    - handling drill rods, casing and inner tubes during drilling and tripping
    - recovering and laying out core in a way that maintains sample integrity and downhole sequence
    - preparing and checking drilling fluids to suit drilling conditions.

During the above, the candidate must:

- use relevant workplace documentation to plan, check and carry out own work
- follow workplace procedures and safe work practices throughout drilling support activities, including:
    - selecting and checking bits, reamer shells and other downhole components for compatibility and serviceability
    - caring for and storing diamond tools and other drilling consumables
    - using lubricants appropriate to components and conditions
    - checking and maintaining ancillary and rod handling equipment, including mud or water delivery pumps
    - applying safe manual handling and lifting practices
    - responding to hazards and changing site conditions within the scope of own role
- work effectively as part of a drilling team, including:
    - receiving, clarifying and confirming instructions and handover information
    - coordinating own activities with the driller and other personnel before and during work
    - recording and reporting information according to workplace requirements.

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:

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- key policies, procedures and established requirements for assisting conventional core drilling, including those for:
    - work health and safety, including emergency procedures and handling potentially contaminated samples
    - relevant environmental practices
    - placing information on core boxes and core marker blocks
    - identifying and taking care of samples including during storage and transport
    - communicating with other personnel throughout work activities
    - handling core samples
    - storing, mixing and performing basic tests on drilling fluids
    - preparing and using equipment
    - interpreting and applying safety data sheets (SDS)
    - inspecting, performing basic maintenance on and storing equipment
- key factors affecting work activities, including:
    - mud pumps and their applications
    - fluid circulation systems and their effect on hole integrity and sample quality
    - requirements for setting up and stabilising racks
    - safe lifting, handling and storage of core drilling equipment, tools and sampling devices
    - potential hazards associated with the use of rod and casing handling equipment
    - diamond coring equipment, components and naming conventions
    - core bit, reamer shell and thread types and how to match compatible components
    - lubricant types and their uses
- drilling team roles and objectives.

Assessment Conditions

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

- include access to:
    - personal protective equipment
    - equipment required to assist conventional core drilling
    - workplace documentation such as drill plans, site plans and procedures, manufacturer instructions and safety data sheets
- be conducted in a safe environment
- be assessed in the context of this sector's work environment

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- 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 two (2) 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
RIINHB208E Assist diamond core drilling	Equivalent	Updates to application, elements and performance criteria, performance and knowledge evidence, and assessment conditions

Links

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

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