



Australian Government

RIINHB208E Assist diamond core drilling

Release: 1

RIINHB208E Assist diamond core 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 assist diamond 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.

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 to assist with diamond core drilling	1.1 Obtain, read and confirm work requirements 1.2 Access, interpret and apply documentation required to assist diamond core drilling 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 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

ELEMENT	PERFORMANCE CRITERIA
	received 1.7 Load, unload, move, handle and store core drilling equipment and all associated tools, sampling devices and connecting equipment 1.8 Set up and stabilise racks
2. Support the core drilling process	2.1 Assemble core barrel components 2.2 Prepare drill string in readiness for tripping and drilling 2.3 Add and remove drill rods and core inner tubes 2.4 Inspect inner tube and core barrel regularly and replace worn and damaged components as required 2.5 Monitor hazards and risks and confirm safety of self, other personnel, plant and equipment 2.6 Use rod and casing handling equipment 2.7 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 necessary 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 and confirm no surface contamination of cores and delicate cores are preserved 3.6 Stack core boxes ready for storage and transportation 3.7 Clean and lubricate inner tube components and re-assemble 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 inspection 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 5.4 Fit restraining devices to hoses

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
Oral Communication	Listens to short, explicit instructions for work procedures and asks questions to clarify and confirm
Writing	Produces and completes workplace reports using appropriate vocabulary, grammatical structures and conventions
Self-management	Monitors and minimises own exposure to worksite hazards during activities

Unit Mapping Information

Supersedes and is equivalent to RIINHB208D Assist diamond core drilling.

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 RIINHB208E Assist diamond core 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:

- assist diamond core drilling on at least two occasions, including:
 - assembling core barrel components
 - preparing drill string in readiness for tripping and drilling
 - adding and removing drill rods and core inner tubes
 - dismantling inner tube for recovery of core samples
 - confirming required sequencing of core samples in core trays
 - applying required mixing procedure for drilling fluid.

During the above, the candidate must:

- locate and apply documentation required to assist diamond core drilling
- implement the requirements, procedures and techniques for assisting with diamond core drilling, including:
 - identifying and measuring core bits, reamer shells and related components
 - identifying thread types
 - identifying bits to suit thread types
 - storing diamond tools
 - using rod handling equipment and methods
 - adding and removing drill rods to the line string
 - complying with basic vehicle cleaning procedures
 - identifying and applying required lubricants
 - identifying and applying required handling of samples
 - conducting housekeeping
 - identifying and mixing drill fluids
 - conducting basic maintenance of mud and/or water delivery pumps
 - applying required lifting techniques

- work with others to assist diamond core drilling that meets required outcomes, including:
 - complying with reporting requirements and procedures
 - communicating with others to receive and clarify work instructions
 - communicating with others to meet 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 and procedures and established requirements for assisting diamond core drilling, including those for:
 - work health and safety
 - relevant environmental practices
 - placing information on core boxes/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
 - refuelling vehicles and equipment
 - preparing and using equipment
 - complying with safety data sheets (SDS)
 - inspecting, performing basic maintenance on and storing equipment
 - housekeeping
- key factors affecting work activities described in performance evidence above, including:
 - mud pumps and their applications
 - fluid circulation system and its effect on hole integrity and sample quality
 - diamond coring equipment, components and system of names
- 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 diamond core 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

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
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 Companion Volume 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.

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