



Australian Government

RIINHB304D Conduct air drilling

Release: 2

RIINHB304D Conduct air drilling

Modification History

Release	Comment
1	This unit replaces RIINHB304B Conduct air drilling
2	Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Application

This unit describes a participant's skills and knowledge required to conduct air drilling in the Resources and Infrastructure Industry.

This unit is appropriate for those working in operational roles.

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

Elements and Performance Criteria

1. Plan and prepare for air drilling	1.1 Access, interpret and apply conduct air drilling documentation, and ensure the work activity is compliant 1.2 Obtain, read, interpret, clarify and confirm work requirements 1.3 Identify and address potential risks, hazards and environmental issues and implement control measures 1.4 Select and wear personal protective equipment appropriate for work activities 1.5 Communicate and coordinate activities with others throughout the work activity 1.6 Obtain and interpret emergency procedures, and be prepared for fire/accident/emergency
2. Inspect and maintain air drilling equipment	2.1 Carry out pre-start and start up procedures 2.2 Ensure restraining devices are not damaged or worn and are correctly fitted 2.3 Fit or replace restraining devices

	2.4 Inspect and maintain the cyclone in safe and serviceable condition 2.5 Ensure mounting and security of cyclone is adequate for safe operation, particularly when down hole water may result in release of energy 2.6 Maintain dust suppression systems to ensure minimal emission of airborne dust and integrity of sample quality 2.7 Inspect pressure relief valves to ensure they have not been tampered with
3. Drill using air drilling methods	3.1 Identify, select and apply rig operational controls 3.2 Select and use appropriate drill rod and drill string components given hole specification and anticipated ground conditions 3.3 Operate make-up and break-out equipment 3.4 Select and use appropriate type and size of in-hole tools given hole specification and anticipated ground conditions 3.5 Drill/open-up hole collar as required to suit given ground conditions and hole specification 3.6 Install drill hole collar casing and seal at the hole collar 3.7 Install outside hole return collar device, if required, given hole specification of open or reverse circulation drill hole 3.8 Operate drill rod and pipe handling equipment 3.9 Add and remove drill rods or casing and other in-hole equipment 3.10 Monitor and adjust air pressure and other drilling parameters to achieve maximum performance 3.11 Monitor and control down hole water conditions to ensure integrity of the hole, drill cuttings and sample quality 3.12 Monitor and control discharge from outside hole return collar device 3.13 Calculate depth of hole
4. Select and use drilling additives	4.1 Identify ground conditions requiring the use of drilling additives 4.2 Select appropriate drilling additives to suit ground conditions 4.3 Preparing required drilling additives 4.4 Use drilling additives to achieve required results
5. Take samples	5.1 Select and check sample devices to ensure client sample

	quantity and quality specifications are met 5.2 Clean or supervise the cleaning of sample devices 5.3 Monitor splitting, bagging, presentation, and marking of samples to ensure client specifications are met 5.4 Identify and promptly rectify sample blockages affecting or having the potential to affect sample quality 5.5 Clear sample delivery hose blockages safely 5.6 Clear outside return hole blockages of collared holes as required 5.7 Supervise drill crew and ensure all sampling tasks are carried out correctly and safely
6. Respond to problems	6.1 Monitor drill cuttings or sample quality, quantity and air return 6.2 Identify possible problems in equipment or process 6.3 Determine possible cause(s) of problems 6.4 Rectify problem(s) using appropriate solution within area of responsibility 6.5 Follow through items initiated until final resolution has occurred 6.6 Report problems outside area of responsibility to designated person
7. Complete equipment maintenance and housekeeping	7.1 Supervise the use of specified personal protective equipment when using grinders or bit sharpening equipment 7.2 Supervise the selection and correct fitting grinding disks, wheels and stones 7.3 Monitor wear of in-hole tools 7.4 Check, maintain, and/or replace compressed air hoses and hose fittings or clamps 7.5 Supervise the correct sharpening and maintenance of in-hole tools 7.6 Inspect, dismantle, replace worn or damaged components and reassemble in-hole equipment 7.7 Carry out shutdown and secure equipment 7.8 Ensure housekeeping activities are completed 7.9 Process records

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit. Further information is available in the Resources and Infrastructure Industry Training Package Companion Volume.

Unit Mapping Information

RIINHB304B Conduct air drilling

Links

Companion Volume implementation guides are found in VETNet -

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