



Australian Government

RIICTT301D Conduct of fluid assisted directional boring

Release: 2

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Modification History

Release	Comment
1	This unit replaces RIICTT301A Conduct fluid assisted directional boring
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 fluid assisted directional boring in Civil Construction.

This unit is appropriate for those working in operational roles.

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

Unit Sector

Civil construction

Elements and Performance Criteria

1. Plan and prepare for fluid assisted directional boring	1.1 Access, interpret and apply fluid assisted directional boring 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 Obtain, confirm and apply work instructions, plans, specifications, quality requirements and operational details to the allotted task 1.6 Identify, obtain and implement traffic signage requirements 1.7 Select and check for faults tools and equipment to carry out tasks
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	1.8 Obtain and interpret emergency procedures, and be prepared for fire/accident/emergency
2. Determine boring requirements	2.1 Determine location, alignment direction, level and grade of bore from drawings and specifications 2.2 Use above and below ground survey instruments and determine the bore pathway for underground vertical and horizontal alignment 2.3 Conduct visual geological investigation of alignment and determine the differing soil types and groundwater conditions 2.4 Select bore head and drilling fluid for the strata 2.5 Position, anchor/stake down boring equipment
3. Conduct equipment checks	3.1 Carry out start-up, shutdown and communication procedures 3.2 Check equipment controls and functions, including implements or other attachments, anchors and/or stabilising equipment for serviceability and report faults 3.3 Conduct inspection and fault finding 3.4 Carry out equipment maintenance to schedule
4. Drive bore hole	4.1 Prepare launch and receiving pits for inserting and receiving bore head in accordance with site requirements 4.2 Extract and dispose of mud in accordance with job specifications 4.3 Continually monitor bore head progress for vertical and horizontal alignment 4.4 Monitor machine for continuity of production to site conditions 4.5 Monitor drilling fluid to accommodate differing strata formation 4.6 Remove bore head 4.7 Check and fit back reaming attachment to drill string 4.8 Conduct back reaming to dimensions/plans/specifications 4.9 Position drums/rolls of installing product and ensure safe discharge of product
5. Clean up	5.1 Clear work area and dispose of or recycle materials 5.2 Clean, check, maintain and store plant, tools and equipment

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

RIICTT301A Conduct of fluid assisted directional boring

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for RIICTT301D Conduct of fluid assisted directional boring

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Performance Evidence

Evidence is required to be collected that demonstrates a candidate's competency in this unit. Evidence must be relevant to the roles within this sector's work operations and satisfy all of the requirements of the performance criteria of this unit and include evidence that the candidate:

- locates and applies applicable , documentation, policies and procedures
- implements the requirements, procedures and techniques for the safe, effective and efficient completion of fluid assisted directional boring, including:
 - interpreting engineering drawings, plan and specification
 - using laser control equipment
 - using electronic devices to locate electronic cable
 - applying electronic equipment calibration
 - applying thrust and rotation of boring equipment
 - applying hazardous materials handling methods
 - applying JSA's/safe work method statement
- works effectively with others to undertake and complete fluid assisted directional boring that meets all of the required outcomes, including:
 - organising work activities to meet all task requirements
 - communicating clearly and concisely with others to receive and clarify work instructions
 - using a range of communication techniques and systems such as signage to advise others of work activity and exclusion zones
- demonstrates completion of conducting fluid assisted directional boring that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - completing of at least 50 metres of fluid assisted directional boring

- using systems to monitor status of boring
- confirming the work instructions, plans, specifications and quality requirements

Knowledge Evidence

The candidate must demonstrate knowledge in fluid assisted directional boring through:

- site isolation and traffic control responsibilities and authorities
- safety data sheets and materials handling methods
- drilling fluids use
- categories of horizontal directional drilling
- strike alert systems
- remote unit operations
- controlling thrust and rotation of boring equipment
- slinging procedures
- relevant equipment types, characteristics, technical capabilities and limitations
- operational, maintenance and basic diagnostic procedures

Assessment Conditions

- An assessor of this unit must satisfy the requirements of the NVR/AQTF or their successors; and Industry regulations for certification and licensing; and,
- this unit must be assessed in the context of this sector's work environment; and,
- this unit must be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- assessment may be conducted in conjunction with the assessment of other Units of Competency; and,
- assessment must confirm consistent performance can be applied in a range of relevant workplace circumstances; and,
- assessors must demonstrate the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and through the minimum years of current* work experience specified below in an Industry sector relevant to the outcomes of the unit; or,
- where the assessor does not meet experience requirements a co-assessment or partnership arrangement must exist between the qualified assessor and an Industry subject matter expert. The Industry subject matter expert should hold the unit being assessed (or an equivalent unit) and/or demonstrate equivalence of skills and knowledge at the unit level. An Industry technical expert must also demonstrate skills and knowledge from the minimum years of current work experience specified below in the Industry sector, including time spent in roles related to the unit being assessed; and,
- assessor and Industry subject matter expert requirements differ depending on the Australian Qualifications Framework Level (AQF) of the qualification being assessed and/or Industry Sector as follows:

Industry sector	AQF** Level	Required assessor or Industry subject matter expert
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		experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Construction	1	1 Year
	2	2 Years
Drilling, Coal Mining and Extractive (Quarrying)	3-6	3 Years
Metalliferous Mining and Civil Construction	3-6	5 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.	

*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 frequent site assessments across various locations.

**Where a unit is being delivered outside of a Qualification the first numeric character in the Unit code should be considered to indicate the AQF level

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