



**Australian Government**

# **RIICCM302 Track directional boring operations**

**Release: 1**

# RIICCM302 Track directional boring operations

## Modification History

Not applicable.

## Application

This unit describes the skills and knowledge required to track directional boring operations in civil construction and drilling.

It applies to those working in operational roles in civil construction and drilling. They generally work under supervision and hold some responsibility for tracking directional boring operations.

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

## Unit Sector

Civil construction

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. Prepare for work                              | <ul style="list-style-type: none"><li>1.1 Obtain, interpret, and confirm work requirements</li><li>1.2 Access, interpret and apply documentation required for tracking directional boring and confirm work activity is compliant</li><li>1.3 Identify hazards and environmental issues, assess the risks and implement control measures in line with workplace policies</li><li>1.4 Identify, obtain and implement traffic management signage requirements</li><li>1.5 Select equipment and tools required for work activities and check for faults and report or rectify within scope of own role</li><li>1.6 Select and wear personal protective equipment required for work activities</li><li>1.7 Complete induction procedures as required by workplace policies and procedures and job role requirements</li></ul> |

| ELEMENT                                     | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                             | 1.8 Identify and apply environmental protection requirements<br>1.9 Obtain and interpret emergency procedures and identify steps in case of fire, accident and other emergencies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 2. Complete on-site preparation             | 2.1 Determine location, alignment direction, level and grade of services and/or utilities from plans and location details<br>2.2 Define work area, check exclusion zone, and prepare worksite to comply with job and safety requirements<br>2.3 Inspect and assemble tracking equipment and confirm sonde in drill head is emitting location<br>2.4 Complete pre-operational procedures with driller operator as required<br>2.5 Establish communication processes between operators and confirm correct positioning of personnel<br>2.6 Use visual and physical means to inspect site for services and/or utilities prior to construction<br>2.7 Determine and mark out drill pathway according to underground services requirements<br>2.8 Mark drill path and head placement according to job requirements |
| 3. Complete tracking for directional boring | 3.1 Advise of locations for potholing and non-destructive excavation to expose underground services as required<br>3.2 Track sonde and guide driller according to underground services requirements and work plan<br>3.3 Use operational radio communication to communicate with driller and other personnel as required<br>3.4 Monitor direction and depth of bore hole in relation to services and communicate driller to emergency stop and adjust as required<br>3.5 Complete tracking and set up for fall back<br>3.6 Record and report to asset owners and supervisory staff any damage to services and utilities during activity                                                                                                                                                                       |
| 4. Complete job                             | 4.1 Clear work area and dispose of and recycle materials as required<br>4.2 Advise job owner and contact person of job completion and report any issues and incidents as required<br>4.3 Clean and perform maintenance on equipment, confirm stability for use and report issues as required or address within scope of own role<br>4.4 Finalise and process written records according to workplace procedures                                                                                                                                                                                                                                                                                                                                                                                                |

## 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                                                                                                                                                                  |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reading | <ul style="list-style-type: none"><li>Identifies and interprets information from at times complex workplace procedures, documentation, legislation and regulations</li></ul> |
| Writing | <ul style="list-style-type: none"><li>Records simple and routine information relating to work activities</li></ul>                                                           |

## Unit Mapping Information

New unit

## 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 RIICCM302 Track directional boring operations

## Modification History

New unit.

## 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:

- track directional boring operations on at least three occasions.

During the above, the candidate must:

- locate, apply and retain on site access to documentation, policies and procedures required for tracking directional boring operations
- implement the requirements, procedures and techniques for the completion of tracking for directional boring operations, including:
  - preparing work area and tracking equipment
  - identifying and communicating location of underground services
  - completing housekeeping activities
- work with others to track directional boring operations that meets required outcomes, including:
  - organising work activities to meet task requirements
  - communicating with others to receive and clarify work instructions
  - using a range of communication techniques and systems
  - using signage to advise others of work activity and exclusion zones
- comply with written and verbal reporting requirements and procedures
- track directional boring to avoid at least one of the following underground assets:
  - gas lines
  - electrical lines
  - water pipelines
  - waste pipelines
  - traffic signals and street lights
  - telecommunication cables
  - broadband
  - storm water drains.

## 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:

- safety data sheets and materials handling methods
- civil construction terminology relevant to tracking for directional boring operations
- drill machinery used in tracking for directional boring operations
- key risks relating to tracking directional boring operations, including those associated with:
  - traffic
  - live electrical services
  - confined spaces
  - falls
  - locating near other works in progress
  - manual handling
  - gas
- key policies and procedures, legislation and established requirements for tracking directional boring operations, including those for:
  - workplace health and safety
  - site isolation and traffic control
  - site condition assessments
  - exposure of services, utilities and drill head
  - underground asset exclusion zones
  - boring parallel to underground services
  - operating and maintaining equipment
  - waste disposal and recycling
  - housekeeping activities
- key factors affecting work activities described in performance evidence above, including:
  - job plan and location detail accuracy
  - equipment types, characteristics, technical capabilities and limitations
  - working in a road reserve
  - types of services, utilities and providers
  - sources of interference to tracking receivers.

## Assessment Conditions

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

- include access to:
  - directional boring tracking equipment
  - personal protective equipment
- be conducted in a safe environment; and,
- be assessed in context of this sector's work environment; and,
- 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,

- 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 competency standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/AQTF 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 a high level of RII training product knowledge
- having an understanding and knowledge of legislations and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence as 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 hold the relevant vocational competencies and have current industry skills directly relevant to the training and assessment being provided and must work alongside a trainer and/or assessor to conduct the assessment. This means the industry subject matter expert should hold the unit being assessed (or an equivalent unit), and must also 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** Level | Required assessor or industry subject matter expert 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 of competency 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.

\*\*\* While a unit of competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

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