



**Australian Government**

# **RIIMSM303D Install underground shaft**

**Release: 2**

# RIIMSM303D Install underground shaft

## Modification History

| Release | Comment                                                                                                                                                                                                                                                                                                      |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | This unit replaces RIIMSM303A Install underground shaft                                                                                                                                                                                                                                                      |
| 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 install underground shaft in Metalliferous Mining (Small Mines).

This unit is appropriate for those working in operational roles.

Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and Industry sectors. Relevant information must be sourced prior to application of the unit.

## Unit Sector

Metalliferous Mining (Small Mines)

## Elements and Performance Criteria

|                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Plan and prepare for underground shaft installation | 1.1. Access, interpret and apply underground shaft installation documentation and ensure the work activity is compliant<br>1.2. Inspect and evaluate site and ground conditions at the planned shaft location and determine the type of shaft to be sunk<br>1.3. Identify and address potential risks and hazards<br>1.4. Obtain and interpret emergency procedures, and be prepared for fire/accident/emergency |
| 2. Excavate shaft                                      | 2.1. Conduct or facilitate shaft excavation in planned location<br>2.2. Stabilise unconsolidated ground to prevent falls of ground and shaft collar erosion<br>2.3. Ensure shaft is supported by shaft pillar to ensure the integrity                                                                                                                                                                            |

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                  | <p>of the bottom section of the shaft</p> <p>2.4. Secure area over shaft collar to prevent surface water inflow</p> <p>2.5. Ensure that brow area near the bottom of the shaft, and the geology and walls, are visible for inspection</p>                                                                                                                                                                                                                                                                                                      |
| 3. Fit out shaft | <p>3.1. Fit access ladders securely in shaft in accordance with shaft conditions and code of practice</p> <p>3.2. Install hoisting equipment at the surface of the shaft</p> <p>3.3. Ensure that services supply devices to the shaft wall are fixed away from shaft conveyance equipment</p> <p>3.4. Install shaft protection to prevent falls by people and animals, and unauthorised entry into the mine</p> <p>3.5. Ensure that access shaft is free of unnecessary equipment and fixtures to allow unrestricted movement of materials</p> |

## 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

RIIMSM303A Install underground shaft

## 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 RIIMSM303D Install underground shaft

## Modification History

| Release | Comment                                                                                                                                                                                                                                                                                                      |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | This unit replaces RIIMSM303A Install underground shaft                                                                                                                                                                                                                                                      |
| 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. |

## 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 legislation, documentation, policies and procedures
- implements the requirements, procedures and techniques for the safe, effective and efficient completion of installing underground shaft including:
  - identifying shaft location and types
  - identifying and installing shaft protection
  - installing secondary support devices
  - fitting and locating services in mine shaft
  - assessing and addressing hazards
  - identifying faults
  - maintaining records
  - identifying and applying environmental constraints
  - disposing of environmentally sensitive fluids and materials
- demonstrates completion of installing underground shafts that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
  - evaluating site and ground conditions and determining the type of shaft to be sunk
  - completing shaft excavation
  - stabilising unconsolidated ground to prevent falls of ground and shaft collar erosion
  - installing shaft pillar and ensuring the integrity of the bottom section of the shaft
  - securing area over shaft collar to prevent surface water inflow

## Knowledge Evidence

The candidate must demonstrate knowledge in installing underground shaft through:

- accessing, interpreting and applying legislative, organization and site requirements and procedures for:
  - emergency procedures
  - environmental requirements
  - safety requirements for shaft excavation
  - shaft excavation and shaft use
- conducting assessment of mine ground conditions
- identifying shaft location
- identifying and evaluating types of shafts
- accessing, interpreting and applying shaft excavation methods and equipment
- fitting out and locating services in shaft
- accessing, interpreting and applying shaft protection methods
- accessing, interpreting and applying pillar design and configuration
- being prepared for fire/accident/emergency

## 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 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

## Links

Companion Volume implementation guides are found in VETNet -

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