



Australian Government

Assessment Requirements for CPPSIS6033 Conduct underground mine surveys

Release: 1

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Modification History

Release 1.

Replaces superseded equivalent CPPSIS6033A Conduct underground mine surveying.

This version first released with CPP Property Services Training Package Version 3.

Performance Evidence

A person demonstrating competency in this unit must satisfy the requirements of the elements, performance criteria, foundation skills and range of conditions of this unit. The person must also conduct underground mine surveys for two different projects.

While conducting the above underground mine surveys, the person must:

- analyse organisational priorities and plans and drawings to identify project specifications
- prepare and document project plans and specifications that detail:
 - levels of rock stability and ground support
 - loading and haulage requirements for underground mines
 - mine ventilation requirements
 - required equipment
 - strategies for risk and contingency management
 - underground mining methods for metalliferous and coal mines
- set out underground development based on design parameters in drawings
- communicate clearly with clients and stakeholders to clarify and report project information
- comply with organisational policies and procedures, standards, regulations and legislation relating to underground mining surveying operations when planning for:
 - drainage and dewatering
 - dumps and stockpiles
 - equipment use
 - loading and haulage
 - mine ventilation and air control
 - power and lighting
 - records and reporting
 - rock stability and ground support
 - standards and quality
 - surveying tasks
 - water control and supply
 - work health and safety and mines safety requirements

- conduct underground surveying tasks to create mine drawings, and capture and reduce data to calculate mine volumes
- perform calculations to measure, reduce and validate spatial data captured from underground mine surveying
- measure survey components using two of the following pieces of equipment:
 - cavity monitoring systems
 - gyro-theodolites
 - level
 - remote sensing
 - tape
 - total station
- plan and implement project management mechanisms to ensure the underground mine surveying operation is completed within required timeframes and the project complies with specifications and standards
- work safely, using personal protective equipment (PPE) when performing surveying tasks.

Knowledge Evidence

A person demonstrating competency in this unit must demonstrate knowledge of:

- accuracy and precision requirements for surveying data
- data capture and set-out techniques
- data reduction and manipulation techniques
- drilling techniques:
 - applicable to blasting in mining operations
 - used for sampling rock and unconsolidated sands
- methods for developing headings in underground mining operations
- methods for ensuring adequate mine ventilation, including:
 - duties of ventilation officer for an underground mining operation
 - exposure standards for atmospheric contaminants
 - methods for measuring air velocity and determining air quantity given relevant operational data
 - properties of natural air flow
 - methods of mechanical and auxiliary ventilation
 - procedures for testing and sampling atmospheric contaminants
 - requirements for ventilation plans
 - sources of atmospheric contaminants in an underground mining environment
- mineral exploration methods, including geophysical, geochemical and geological techniques
- mining methods for metalliferous and coal mines
- organisational policies and procedures, standards, regulations and legislation relating to:
 - client and stakeholder communication
 - using equipment, as specified in the performance evidence

- mining industry and underground mining, including:
 - mine access
 - layout development
 - service provision, such as water, air, power, lighting and dewatering
 - work health and safety and mines safety requirements
- records and reporting
- risk and contingency management
- phases and stages of exploration procedure and possible methods of exploration relevant to each
- project management techniques for scheduling, measuring and monitoring work progress and planning for risks and contingencies
- safe work practices in all aspects of underground mining
- specialised surveying equipment requirements and accessibility in relation to underground mining
- techniques for providing rock stability and ground support, including cable bolts and rock bolts
- terminology and nomenclature applicable to underground mining.

Assessment Conditions

The following must be present and available to learners during assessment activities:

- equipment:
 - as specified in the performance evidence, including PPE
- specifications:
 - mining and surveying specifications, including relevant plans and drawings
 - organisational policies, procedures and documentation relating to:
 - work health and safety
 - mining regulations
- relationships with team members and supervisor:
 - lead role in a team.

Timeframe:

- as specified by project requirements.

Assessor requirements

As a minimum, assessors must satisfy the assessor requirements in the Standards for Registered Training Organisations (RTOs) current at the time of assessment.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcfl3d9b>

