



Australian Government

CPPSIS6034 Conduct mining geology operations

Release: 1

CPPSIS6034 Conduct mining geology operations

Modification History

Release 1.

Replaces superseded equivalent CPPSIS6034A Conduct mining geology operations.

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

Application

This unit of competency specifies the outcomes required to conduct mining geology operations. The unit covers analysing organisational priorities and specifications to identify projects; and planning projects to identify and document factors, such as objectives, deliverables, risks, constraints and equipment requirements, in order to comply with regulations and legislation applicable to the mining industry. The unit also covers analysing mining geology to assess and recognise geological aspects of possible ore deposits, rock types and structures, and levels of rock stability and ground support; using surveying techniques to take measurements and reduce and manipulate spatial data to assist in analysing the geology of the mining operation. The unit requires the ability to implement project management activities relating to scheduling, measuring, recording, monitoring and reporting work progress. It also requires the ability to evaluate project activities and outcomes for compliance with specifications. It requires knowledge of underground mining and mining geology operations.

The unit supports surveyors of mine geology who work in a surveying team in a mining environment.

Licensing, legislative, regulatory or certification requirements apply to this unit in some States where mining surveying must be undertaken under the supervision of a registered surveyor. Relevant state and territory regulatory authorities should be consulted to confirm those requirements.

Pre-requisite Unit

Nil

Unit Sector

Surveying and spatial information services

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.

1. Identify and plan project.
 - 1.1. Organisational priorities are determined to identify project objectives and specifications.
 - 1.2. Project specifications are presented to *appropriate persons*.
 - 1.3. Project objectives, deliverables, constraints, *environmental considerations* and work activities are planned and documented according to organisational requirements.
 - 1.4. Mining regulations with regard to management and safety are detailed according to legislative and organisational requirements.
 - 1.5. Equipment is selected and checked to ensure correct operation and functionality according to organisational requirements.

2. Analyse mining geology.
 - 2.1. Geological aspects of possible ore deposits are identified by assessing the environment, and information is verified.
 - 2.2. Rock types and structures fundamental to mining operations are identified and analysed according to project specifications.
 - 2.3. Levels of rock stability and ground support requirements are observed according to project specifications.
 - 2.4. Ore and minerals fundamental to mining operations are identified and analysed according to project specifications.
 - 2.5. Methods for obtaining ore and mineral samples are identified and analysed according to project specifications.
 - 2.6. Measurements are conducted and spatial data is reduced and manipulated according to project specifications.

3. Manage project.
 - 3.1. Project management mechanisms are implemented to schedule, record and report progress of activities in relation to agreed timeframes and plans.

- 3.2. Agreed communication processes between client and other appropriate persons are implemented and maintained.
 - 3.3. Pertinent legal and statutory requirements and standards are identified and analysed to ensure compliance.
 - 3.4. Risk management and contingency strategies are devised and followed to ensure project complies with legal and statutory standards and organisational requirements.
 - 3.5. Problems are identified and resolved, and contingencies and constraints are managed according to organisational requirements.
4. Finalise project.
 - 4.1. Mining geology project is evaluated for compliance with project specifications and organisational requirements.
 - 4.2. Appropriate persons are notified of project results according to organisational requirements.
 - 4.3. Documentation is completed and spatial data archived according to project and organisational requirements.

Foundation Skills

This section describes the language, literacy, numeracy and employment skills essential to performance in this unit but not explicit in the performance criteria.

Skill	Performance feature
Planning and organising skills to:	<ul style="list-style-type: none"> • plan and prioritise work to meet schedules.
Numeracy skills to:	<ul style="list-style-type: none"> • conduct precise measurements and calculations relating to height, depth, dimension, direction and position in actual operational activity and virtual representation.
Oral communication skills to:	<ul style="list-style-type: none"> • negotiate to achieve client requirements.

- Reading skills to:
- analyse graphical and technical information in specifications.
- Writing skills to:
- record technical information in organisational documentation.
- Technology skills to:
- calibrate and program specialised surveying instruments.
- Problem-solving skills to:
- identify and resolve areas of potential non-compliance of operations with pertinent legislation, regulations and standards.

Range of Conditions

This section specifies work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Bold italicised wording, if used in the performance criteria, is detailed below.

- Appropriate persons*** must include at least two of the following:
- client
 - colleague
 - engineer
 - manager
 - registered or qualified surveyor
 - supplier.

- Environmental considerations*** must include at least one of the following:
- chemical leakage
 - coal fire
 - erosion
 - loss of biodiversity
 - sinkhole formation
 - soil, groundwater and surface water contamination.

Unit Mapping Information

CPPSIS6034A Conduct mining geology operations

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>