Australian Government

CPPSIS6021 Conduct open pit mine surveys

Release: 1

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Modification History

Release 1.

Replaces superseded equivalent CPPSIS6021A Conduct open mine pit surveying.

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

Application

This unit of competency specifies the outcomes required to conduct open pit mine surveying operations to meet client specifications. The unit covers project management activities relating to scheduling, measuring, recording, monitoring and reporting work progress, organising resources and equipment, and planning for risks and contingencies. The unit also covers presenting schematic models of areas that may have mineral deposits to identify projects, and organising resources and planning to support an open pit mine surveying operation. The unit requires the ability to implement open pit mine surveying operations using specialist equipment to measure identified components of an open pit mine; capture and reduce data; create mine drawings; and comply with standards, legislation and regulations applicable to the mining industry. It requires knowledge of surface mining operations.

The unit supports those who work in a technical management role in an open pit mine 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.	Prepare for open pit mine survey.	1.1. Open pit mine surveying objectives and specifications are identified in consultation with ***appropriate persons***.

		1.2.	Processes and procedures involved in exploring mineral deposits are planned according to organisational requirements.
		1.3.	***Required mining methods*** are detailed according to project specifications and organisational requirements.
2.	Plan open pit mine survey.	2.1.	Surveying objectives, deliverables, constraints, work activities and surveying resource and equipment needs are identified and documented according to spatial data specifications and organisational requirements.
		2.2.	Project management mechanisms are implemented to schedule, measure, record and report progress of activities in relation to agreed schedule and plans.
		2.3.	Agreed communication processes between client and other appropriate persons are implemented and maintained.
		2.4.	Risk management and contingency strategies are followed to ensure project complies with legal and statutory standards and organisational requirements.
3.	Carry out open pit mine surveying tasks.	3.1.	Identified spatial components of open pit mine are accurately measured or set out according to project specifications.
		3.2.	Measured spatial data is reduced to project reference system for comparison with design.
		3.3.	Mine drawings are created to meet project specifications.
		3.4.	Captured data is used to calculate mine volumes according to project specifications.
		3.5.	Measurements are validated and recorded according to organisational requirements.
		3.6.	Problems are identified and resolved, and contingencies managed according to organisational requirements.

4.	Finalise and report open pit mine survey outcomes.	4.1. Project is finalised and checked 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:	• plan and prioritise work to meet contract and resource constraints.
Numeracy skills to:	• conduct precise measurements and calculations relating to height, depth, dimension, direction, position and volumes in actual operational activity and virtual representation.
Oral communication skills to:	• negotiate to clarify client requirements • inform clients and other stakeholders of project progress.
Reading skills to:	• interpret graphical and technical information in mining and engineering plans.
Writing skills to:	• record accurate technical information in organisational documentation.
Technology skills to:	• connect equipment to coordinate systems • set up and calibrate specialised surveying equipment.
Problem-solving skills to:	• identify and resolve areas of potential non-compliance with 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
- site personnel
- registered or qualified surveyor
- supplier.

Required mining methods must include at least two of the following:

- developing roads and ramps
- drilling
- removing interburden
- pre-stripping
- stockpiles, dumps and safety berms
- tailings dams.

Unit Mapping Information

CPPSIS6021A Conduct open mine pit surveying

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b