



**Australian Government**

**Assessment Requirements for  
NWPCAD010 Inspect and report on  
concrete dam safety**

**Release: 1**

# Assessment Requirements for NWPCAD010 Inspect and report on concrete dam safety

## Modification History

Release 1. This is the first release of this unit of competency in the NWP National Water Training Package.

## Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and includes:

- applying safety protocols
- assessing the importance and urgency of deficiencies
- collecting and processing data from dam observations
- communicating with engineering professionals and relevant team members on dam safety
- conducting concrete dam inspection activities
- gathering and recording data
- identifying changes and failure indicators in concrete dam and appurtenant structures
- identifying inspection features and scheduling activities according to the required frequency
- identifying the purpose and audience of dam safety reports
- interpreting and applying relevant organisational and regulatory information and requirements to the planning of inspection activities
- planning and organising work schedules and responses to contingencies
- producing inspection reports
- reporting on inspection and monitoring outcomes, with recommendations for action
- using digital photography and locational equipment

## Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of:

- concrete dam behaviour under a range of conditions
- concrete dam design and construction principles including:
  - aging of concrete
  - concrete technology
  - hydraulics
  - materials science
  - post tensioning principles
  - principles of arch action

- principles of buttress action
- principles of gravity action
- principles of roller compacted concrete
- treatment of foundations, grouting and drainage systems
- concrete dam types including:
  - arch
  - buttress
  - gravity
- dam safety
- emergency plans
- historic information and lessons from previous concrete dam incidents
- principles of concrete dam inspection
- relevant legislation and regulations
- unusual events including:
  - earthquakes
  - increased seepage
  - large wave events
  - large discharge events uplift pressures and drainage systems
- workplace policies, procedures, guidelines and requirements relevant to the worksite

## Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including legislation, regulations, codes of practice, workplace procedures and operation manuals.

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=26336bc0-04e5-49d9-8c31-46c49b6a0037>

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