



Australian Government

**Assessment Requirements for
NWPCAD011 Inspect and report on
embankment dam safety**

Release: 1

Assessment Requirements for NWPCAD011 Inspect and report on embankment 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 hazards protocols
- assessing the importance and urgency of deficiencies
- collecting and processing data from dam inspections
- communicating with engineering professionals and relevant team members on dam safety
- conducting embankment dam inspection activities
- following instructions, standard operating procedures, policies and standards for embankment dam safety
- gathering and recording data
- identifying changes and failure indicators in embankment 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
- 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:

- embankment dam behaviour under a range of conditions
- embankment dam design and construction principles including:
 - causes of cracks and settlement
 - dam performance history
 - hydraulics and erosion by water
 - materials science including soil and rock properties
 - pore pressures

- principles of embankment dam inspection
- principles of filters, piping and embankment stability
- treatment of foundations, grouting and drainage system
- embankment dam safety
- embankment dam types including:
 - concrete faced rock fill dams
 - elements, zones
 - risks and failure modes
- emergency plans
- historic information and lessons from previous embankment dam incidents
- relevant legislation and regulations
- unusual events including:
 - earthquakes
 - increased seepage
 - large discharge events
 - large wave events
- 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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