



Australian Government

Assessment Requirements for PMAOPS560 Plan and design tailings management facilities

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to PMAOPS560A Plan and design tailings management facilities

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria, and include the ability to:

- assess business and environmental risk and incorporate risk management strategies into design
- develop plans for tailings management facility (TMF) that specify technical, budgetary, plant/equipment, human resource, legislative and safety requirements
- determine and plan for conditions which will lead to out-of-specification operations
- plan and develop enterprise procedures for the waste/tailings management plan.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- tailings/waste characteristics and their impact on design of facilities, including:
 - mineralogy: residual resource potential and plant nutrients
 - chemical reactivity: toxicity, leachate potential, acid producing potential, spontaneous combustion, cementation/hydration and weathering
 - physical characteristics: particle size distribution, particle density compressibility, shear strength, liquefaction potential, erodibility and dusting potential
 - placement characteristics: placed dry density, particle sorting, permeability, bearing capacity and initial placement density
 - handling characteristics: solids content of slurries, trafficability during placement, flocculation/settling time and abrasiveness
- tailings disposal strategies/issues, including:
 - the location of discharge points
 - the rotation sequence for discharges
 - the duration of deposition in an area
 - the location of settling ponds and decant facilities
 - the location and timing of intermediate paddock bunding
 - the likely landform created by the deposition processes at stages throughout operations up to and including final landform
 - flowable volumes and potential flow paths

- operational maintenance requirements (e.g. dust suppression, fauna exclusion and drainage)
- principles of operation of waste treatment and management of different tailings and water types, volumes and consistency.

Assessment Conditions

- The unit should be assessed holistically and the judgement of competence based on a holistic assessment of the evidence.
- The collection of performance evidence is best done from a report and/or folio of evidence drawn from:
 - a single project which provides sufficient evidence of the requirements of all the elements and performance criteria
 - multiple smaller projects which together provide sufficient evidence of the requirements of all the elements and performance criteria.
- A third-party report, or similar, may be needed to testify to the work done by the individual, particularly when the project has been done as part of a project team.
- Assessment should use a real project in an operational workplace. Where this is not possible or practical, assessment must occur using a sufficiently rigorous simulated environment reflecting realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Knowledge evidence may be collected concurrently with performance evidence or through an independent process, such as workbooks, written assessments or interviews (provided a record is kept).
- 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.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.
- The regulatory framework will be reflected in workplace policies and procedures and is not required to be independently assessed.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- In addition, the assessor or anyone acting in subject matter expert role in assessment must demonstrate both technical competency and currency. If the assessor cannot demonstrate technical competency and currency they must assess with a subject matter expert who does meet these requirements.
- Technical competence can be demonstrated through one or more of:
 - relevant VET or other qualification/Statement of Attainment
 - appropriate workplace experience undertaking the type of work being assessed under routine and non-routine conditions

- appropriate workplace experience supervising/evaluating the type of work being assessed under routine and non-routine conditions
- Currency can be demonstrated through one or more of:
 - being currently employed undertaking the type of work being assessed
 - being employed by the organisation undertaking the type of work being assessed and having maintained currency in accordance with that organisation's policies and procedures
 - having consulted/had contact with an organisation undertaking the type of work being assessed within the last twelve months, the consultation/contact being related to assessment
 - conducting on-the-job training/assessments of the type of work being assessed
 - being an active member of a relevant professional body and participating in activities relevant to the assessment of this type of work

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875>