



Australian Government

Assessment Requirements for MSL974018 Conduct geotechnical site investigations

Release: 1

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Modification History

Release	Comments
Release 1	This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>. Supersedes and equivalent to MSL974002 Conduct geotechnical site investigations. Foundation skill information added. Range of conditions removed. Assessment requirements amended.

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- prepared for, and safely and effectively conducted and concluded at least 2 geotechnical site investigations, to provide accurate sampling and testing data, site information and work results within the expected timeframe.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- concepts, purposes and principles of geotechnical site investigations conducted as part of job role
- standard methods for sampling and testing construction materials, such as soils, aggregates, concrete and asphalt
- identification and classification of soil, rock and fill materials
- uses and engineering properties of soil and rock materials
- principles of representative sampling and testing
- in situ testing methods used in job role
- site safety and management rules, including safety induction, risk assessments, controlled entry/exit to site and required personal protective equipment (PPE)
- common site problems and recommended corrective actions
- caving in of excavation walls:
 - drilling difficulties
 - not knowing the requirements of the design engineer
 - not understanding the nature of the item being designed (e.g. retaining wall, piled structure and earthworks)

- sample loss during retrieval
- knowing when to stop a hole, or what and when to test and sample
- misidentification of samples and sampling locations
- equipment breakdown and breakage
- environmental problems and issues, including site access, inclement weather, traffic, wildlife, vegetation and construction activities
- awareness of environmental sustainability issues as they relate to the work task
- legal, ethical and work health and safety (WHS) requirements specific to the work task.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - access to geotechnical sites and relevant site documentation
 - workplace procedures, sampling plans, test methods and equipment manuals
 - consumables; hand tools; field sampling and test equipment, such as dynamic cone penetration (DCP) testing, standard penetration testing (SPT), shear vane, pocket penetrometer and water level indicator
 - excavation equipment, such as hand and power augers, powered excavators, generators and jack hammers
 - safety clothing and equipment, including helmets, boots, gloves, earmuffs and glasses.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>