



Australian Government

Assessment Requirements for MSL974027 Monitor performance of structures

Release: 1

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Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL974013 Monitor performance of structures. Foundation skill information added. Range of conditions removed. Assessment requirements amended.</p>

Performance Evidence

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

- safely monitored at least 3 different civil engineering structures to measure their performance, confirm design parameters and/or measure the effects of improvements or rehabilitation.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- purpose and principles of monitoring activities routinely performed in job role and the properties of materials and/or structures being monitored
- operating procedures for monitoring instruments and equipment routinely used in job role, including the pre-use checks, function of key components, effects of varying key controls, connections, data acquisition fundamentals and common problems
- basic instrument fault identification and rectification procedures
- expected measurement values, precision, units, sources of uncertainty and methods for their control
- performing calculations and dealing with unexpected or atypical results and/or equipment problems
- standard methods for sampling and testing construction materials, such as soils, aggregates, concrete and asphalt
- typical monitoring activities:
 - displacement and vibration
 - pressure and force
 - temperature
 - setting time

- strain
- cracking (visual assessment of road condition)
- defect mapping
- moisture
- water levels
- movement of chemical ions through structures
- specific codes and guidelines:
 - AustRoads test methods
 - State/Territory Road Authority test methods
- 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 civil engineering structures and relevant site documentation
 - survey equipment, monitoring instruments and equipment, such as transducers, accelerometers, load cells, piezometers, strain gauges and thermocouples
 - signal conditioning and data storage devices, such as amplifiers, data loggers and portable computers
 - global positioning system (GPS) and communication equipment
 - digital camera
 - signage, warning lights and boundary tape/cones, umbrellas and shade structures
 - workplace procedures, test methods and description of monitoring activities, data sets and records, and work instructions.

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>