



Australian Government

Assessment Requirements for MSL974013 Monitor performance of structures

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MSL974013A Monitor performance of structures

Performance Evidence

Evidence of competence in this unit must satisfy all of the requirements of the elements and performance criteria, and include demonstration of:

- safely monitoring civil engineering structures on at least three (3) occasions to measure their performance, confirm design parameters and/or measure the effects of improvements or rehabilitation
- liaising effectively with clients and site personnel to arrange for monitoring to be performed safely and efficiently
- interpreting and applying work instructions, safety information, test methods and workplace procedures with close attention to detail
- confirming requirements and assembling resources for monitoring activities
- setting up, operating and troubleshooting monitoring equipment in the field in accordance with test methods and/or workplace procedures
- recording and interpreting data in the field accurately
- recognising and rectifying obvious errors or unexpected results and troubleshooting common problems
- taking appropriate corrective actions, including:
 - logical checking of equipment setup
 - checking of calibration, zero error, drift for measuring instrument, data entry/storage and transfer
 - replacement of batteries, instrument boards/cards, and leads and connectors
 - careful re-reading of procedures and checklists
 - repeating measurements
 - seeking timely advice
- estimating/calculating simple scientific quantities, such as stress, strain and pressure
- downloading/storing data and site information and reporting results within the required timeframe
- working semi-autonomously, demonstrating a professional approach and positive company/organisation image
- maintaining security, integrity and traceability of all samples, data/results and documentation
- following workplace procedures for minimising environmental impacts, maintaining equipment and for the collection and disposal of waste.

Knowledge Evidence

Must provide evidence that demonstrates 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
- procedures for verifying and recording instrumental data, reporting site observations and results, performing calculations and dealing with unexpected or atypical results and/or equipment problems
- procedures for ensuring security, traceability of data and results, and confidentiality requirements
- relevant hazards, work health and safety (WHS) and environmental management requirements.

Assessment Conditions

- Judgment of competence must be based on holistic assessment of the evidence. Assessment methods must confirm consistency of performance over time, rather than a single assessment event.
- This unit of competency is to be assessed in the workplace or a simulated workplace environment. A simulated workplace environment must reflect realistic operational workplace conditions that cover all aspects of workplace performance, including the environment, task skills, task management skills, contingency management skills and job role environment skills.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- 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.
- 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 in each case).
- This unit of competency may be assessed with:
 - MSL924001 Process and interpret data
 - MSL924002 Use laboratory application software
 - MSL943002 Participate in laboratory or field workplace safety
- Holistic assessment methods include:
 - review of monitoring data, results and records generated by the candidate
 - feedback from supervisors and clients regarding the candidate's ability to work independently and conduct a range of monitoring activities reliably, safely and efficiently
 - questions to assess understanding of workplace procedures, monitoring activities, test methods and interpretation of data relevant to their job role.
- Access is required to instruments, equipment, materials, workplace documentation, procedures and specifications associated with this unit, including, but not limited to:
 - 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 worksheets.
- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- The assessor must demonstrate both technical competence and currency.
- Technical competence can be demonstrated through:
 - relevant VET or other qualification/Statement of Attainment AND/OR
 - relevant workplace experience.
- Currency can be demonstrated through:

- performing the competency being assessed as part of current employment OR
- having consulted with a laboratory about performing the competency being assessed within the last twelve months.

Links

MSA Training Package Implementation Guides - <http://mskills.org.au/training-packages/info/>