



Australian Government

MSL975031 Supervise sampling, inspections and testing at construction sites

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 <i>MSL975007 Supervise sampling, inspections and testing at construction sites</i>. Prerequisite changed. Foundation skills added. Range of conditions removed. Assessment requirements amended.

Application

This unit of competency describes the skills and knowledge to supervise and direct the placement of materials, such as soil, concrete and asphalt, at a construction site. The unit involves confirming the requirements of the inspection and testing plans, liaising with site personnel and organising sampling and testing activities, collecting reliable data and reporting results. Personnel are also expected to interpret results in the field, provide reliable advice to construction personnel, recognise and rectify obvious errors or unexpected results and troubleshoot common problems.

This unit applies to technical officers working in the construction materials testing sector. This unit of competency is typically performed by experienced technicians or engineering paraprofessionals who often supervise or direct less experienced technical personnel.

No licensing or certification requirements exist at the time of publication. However, regulations and/or external accreditation requirements for laboratory operations exist, so local requirements should be checked. Relevant legislation, industry standards and codes of practice within Australia must also be applied.

Pre-requisite Unit

- MSL954004 Obtain representative samples in accordance with sampling plan
- MSL973021 Conduct field-based acceptance tests for construction materials

Competency Field

Testing

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | | | |
|---|---------------------------------------|-----|---|
| 1 | Prepare for on-site operations | 1.1 | Identify the job, consult with the client and obtain relevant information, including the level of supervision required, drawings and specifications |
| | | 1.2 | Select equipment and materials required for the job |
| | | 1.3 | Identify site hazards and the personal protective equipment (PPE) and safety procedures specified for job |
| | | 1.4 | Organise site induction for self and support personnel as required |
| | | 1.5 | Record description of the job to be undertaken, compare with specification and resolve any variations |
| | | 1.6 | Select suitable transport for site access |
| | | 1.7 | Brief support personnel on job-specific requirements |
| 2 | Establish on-site operations | 2.1 | Consult with the site superintendent to determine methods of communication, roles, responsibilities and expectations of each party, including identification of potential site problems and conflicts |
| | | 2.2 | Set up facilities for supervision, testing and sample storage |
| | | 2.3 | Inspect the site to determine the characteristics of the project, including survey control points |
| | | 2.4 | Design inspection, sampling and testing program in accordance with specifications |
| 3 | Supervise materials placement | 3.1 | Conduct inspection and direct sampling and testing in accordance with project requirements |
| | | 3.2 | Direct and advise the site superintendent based on test |

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
		results and observations	
		3.3	Record test data and observations in accordance with workplace practices
		3.4	Send samples to the base laboratory for testing as required
		3.5	Ensure cleaning of equipment does not cause environmental damage
		3.6	Supervise the removal of equipment and materials from site
4	Analyse project data and report to client	4.1	Report test results to site superintendent at specified intervals
		4.2	Analyse project data and provide reports to client in the agreed format and at agreed times
5	Maintain workplace records	5.1	Ensure site results are documented in accordance with workplace practices
		5.2	Maintain security and confidentiality of workplace information
		5.3	Prepare and issue a final project report detailing supervision and testing carried out, statement of compliance and relevant tables and plans as required
6	Promote a safe work environment	6.1	Promote the use of safe work procedures and protective equipment
		6.2	Minimise environmental impacts of testing/sampling and generation of waste
		6.3	Promote the collection and disposal of all waste in accordance with workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

- Numeracy skills to:
 - record and store reliable data, observations and project information, including accurate sketches and photographs of site features
 - accurately interpreting test results and observations
- Oral communication skills to:
 - to provide timely advice for construction personnel
 - communicate effectively and resolving site problems constructively with appropriate personnel
- Problem solving skills to recognise, troubleshoot and rectify obvious errors and unexpected results.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Equivalent to MSL975007 Supervise sampling, inspections and testing at construction sites, Release 1.

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>

Assessment Requirements for MSL975031 Supervise sampling, inspections and testing at construction sites

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Performance Evidence

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

- designed and effectively supervised at least 1 inspection, sampling and testing program in accordance with specifications
- safely directed sampling and testing in accordance with inspection and testing plans and remit of samples for testing as required.
- collaborated with the contractor in the placement of materials, such as soil, concrete and asphalt, at a construction site on at least 2 occasions.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- principles of planning and project management
- identification and classification of construction materials
- engineering properties of civil construction materials
- techniques and plant and equipment used in civil construction relevant to job role
- principles and purpose of test methods implemented (why they are used and what they demonstrate)
- in situ and laboratory test methods for construction materials relevant to job role
- roles and responsibilities for different levels of site supervision
- typical site problems and recommended corrective actions
- 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 including traceability, confidentiality and security requirements of all client information, and laboratory data and records.

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 construction sites and relevant site documentation
 - workplace procedures, site plans, sampling and test methods/programs and equipment manuals
 - consumables; hand tools; field sampling equipment, such as moulds and coring equipment; and test equipment, such as nuclear moisture/density gauge, dynamic cone penetrometers and slumping equipment
 - levelling equipment (dumpy and automatic levels) and global positioning system (GPS)
 - still/video camera and communication equipment
 - safety clothing and equipment, including helmets, boots, gloves, earmuffs and glasses.

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

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