



**Australian Government**

# **MSL975042 Design and supervise complex environmental field surveys**

**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 MSL975011 Design and supervise complex environmental field surveys. Foundation skill information added. Range of conditions removed. Assessment requirements amended.</p> |

## Application

This unit of competency describes the skills and knowledge to design and supervise complex field surveys for a wide range of environmental systems. This unit covers confirming survey requirements, designing and organising field surveys to achieve their purpose, and supervising the field survey according to a defined plan.

This unit applies to technical officers working in the environmental industry sector. All operations must comply with relevant standards, appropriate procedures and/or workplace requirements.

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

MSL974022 Undertake environmental field-based monitoring

## Competency Field

Testing

## Elements and Performance Criteria

Elements describe the essential outcomes.

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

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|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 <b>Confirm survey requirements with senior staff</b> | 1.1     Confirm the purpose and objectives of the field survey activities with senior management and details of information required                                    |
|                                                        | 1.2     Clarify the purpose and objectives of the field survey activities with all stakeholders within the context of the workplace's overall environmental program     |
|                                                        | 1.3     Identify and accurately interpret all external statutory requirements and workplace protocols that relate to the defined field survey activities                |
|                                                        | 1.4     Analyse drivers and constraints that may influence field survey activities                                                                                      |
|                                                        | 1.5     Document the type, quantity and quality of data needed to meet the defined objectives                                                                           |
|                                                        | 1.6     Refine and document the detailed objectives of the field activities with senior management and stakeholders                                                     |
| 2 <b>Design field survey activities</b>                | 2.1     Develop and document details of the field survey methodology                                                                                                    |
|                                                        | 2.2     Discuss and confirm survey methodology with senior staff and external experts or stakeholders                                                                   |
|                                                        | 2.3     Develop work program, including timetable and staff roles and responsibilities for the total field survey, and all related activities                           |
|                                                        | 2.4     Ensure that work program conforms to workplace requirements covering risk management, data quality procedures, safety, environmental and emergency requirements |
|                                                        | 2.5     Document work program                                                                                                                                           |
|                                                        | 2.6     Address all administration requirements and obtain appropriate approvals                                                                                        |
| 3 <b>Identify</b>                                      | 3.1     Identify and list all resources required to implement the                                                                                                       |

|                                           |                                                  |                                                                                                 |                                                                                                                                  |
|-------------------------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Elements describe the essential outcomes. |                                                  | Performance criteria describe the performance needed to demonstrate achievement of the element. |                                                                                                                                  |
|                                           | <b>resources and supervise pre-survey checks</b> |                                                                                                 | agreed work program                                                                                                              |
|                                           |                                                  | 3.2                                                                                             | Arrange collection and checking of all equipment, field instruments and supplies required for implementation of the work program |
|                                           |                                                  | 3.3                                                                                             | Supervise calibration of all appropriate field instruments                                                                       |
|                                           |                                                  | 3.4                                                                                             | Arrange correct packaging and transportation of equipment and instruments                                                        |
|                                           |                                                  | 3.5                                                                                             | Arrange suitable access, transport, communication and emergency systems for all field locations and activities                   |
| 4                                         | <b>Supervise field survey activities</b>         | 4.1                                                                                             | Supervise all field survey and associated activities                                                                             |
|                                           |                                                  | 4.2                                                                                             | Monitor equitable duty rosters covering field survey activities in consultation with all staff                                   |
|                                           |                                                  | 4.3                                                                                             | Follow data quality procedures                                                                                                   |
|                                           |                                                  | 4.4                                                                                             | Perform survey work safely and with minimal impact on the environment                                                            |
| 5                                         | <b>Supervise close-down of field activities</b>  | 5.1                                                                                             | Arrange for the checking, packaging and transportation of all samples, equipment and instruments back to base                    |
|                                           |                                                  | 5.2                                                                                             | Ensure that site is left in accordance with workplace and environmental requirements                                             |
|                                           |                                                  | 5.3                                                                                             | Monitor dispatch of collected samples for subsequent laboratory analyses                                                         |
|                                           |                                                  | 5.4                                                                                             | Test and document all equipment and instruments before final storage, as required                                                |
|                                           |                                                  | 5.5                                                                                             | Store all field data appropriately for subsequent analysis                                                                       |
|                                           |                                                  | 5.6                                                                                             | Report results, any anomalies and recommendations to data analysers, users and/or supervisor                                     |

## Foundation Skills

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

- Oral communication skills to interact and negotiate effectively with staff and stakeholders to resolve problems or conflicts.

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

## Unit Mapping Information

Equivalent to MSL975011 Design and supervise complex environmental field surveys, Release 1.

## Links

Training Package Companion Volumes -

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

## Assessment Requirements for MSL975042 Design and supervise complex environmental field surveys

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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:

- effectively designed, organised and supervised at least 1 complex environmental field survey.

### Knowledge Evidence

There must be evidence the candidate has knowledge of:

- general principles of environmental planning and assessment, and environmental protection
- environmental field survey terminology, principles, practices and techniques relevant to job role
- workplace data quality procedures, data recording and storage methods relevant to job role
- current developments in field instrumentation, survey equipment and communication systems relevant to job role
- typical purpose and objectives of the complex environmental field surveys:
  - part of workplace environmental management plan
  - statutory requirements
  - environmental impact assessment for major development
  - environment audit
  - pollution control activity
  - general environmental and ecological surveys
  - research studies

- rights and responsibilities of employers and employees when conducting field activities, such as legal/regulatory requirements, risk management, safety and emergency management, and environmental protection
- types of field survey activities:
  - climate and meteorology
  - geology, soils and geomorphology
  - hydrology and water quality
  - noise
  - land resources, vegetation, wildlife and conservation
  - land uses, agriculture, forestry, mining and recreation
- typical clients of field surveys:
  - Commonwealth, state/territory and local government agencies
  - organisations with monitoring and/or survey responsibilities
  - regulatory authorities
  - private companies
  - developers
  - land owners and leaseholders
- typical field survey problems
- 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:
  - workplace procedures and field protocols, equipment/instrument manuals, calibration procedures, instrument fault-finding procedures, general maintenance and repair procedures
  - equipment required for field activities, such as vehicles, navigation and communication equipment, survey equipment, sampling/monitoring equipment, containers and animal cages, field test kits and instruments, consumables, safety equipment, first aid and/or survival kits
  - work program, workplace procedures, codes of practice and field protocols and manuals.

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

## Links

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