



Australian Government

**Assessment Requirements for MSS025014
Perform sampling and testing of
contaminated sites**

Release: 2

Assessment Requirements for MSS025014 Perform sampling and testing of contaminated sites

Modification History

Release 1. Supersedes and is equivalent to MSS025014A Perform sampling and testing of contaminated sites.

Release 2. Prerequisite code updated. Equivalent outcome.

Performance Evidence

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

- conducting at least **one (1)** visual site inspection to identify a site's key features and potential contamination hazards and to inform the design of subsequent investigation(s)
- safely collecting, preserving and labelling a set of samples from at least **one (1)** contaminated site in accordance with a given sampling plan
- safely preparing (sub)samples and conducting at least **two (2)** different tests/analyses in the field using given test methods
- interpreting and applying regulatory and planning requirements for contaminated sites, site sampling/monitoring plans, sampling/test methods, standards and workplace procedures
- recognising hazards and assessing risks; interpreting and applying health and safety plans and safe work methods, including use of designated safety equipment and personal protective equipment (PPE)
- planning for field activities, including researching and summarising site history and chronology, analysing existing data and/or reports, identifying potential contaminants and possible areas of contamination
- preparing for field activities, including arranging site access, induction, permits, conducting reconnaissance, reviewing safety requirements and securing the resources required
- selecting, checking, packaging and transporting supplies, equipment and instruments to and from the field
- collecting reliable samples in accordance with site sampling plan/methods and paying close attention to any pre-treatment, container, preservation, storage, labelling and traceability requirements
- demonstrating correct and safe use of test equipment and/or analysers including set-up, pre-use checks, calibration and performance checks to obtain reliable data
- recognising atypical results as out-of-normal range or an artefact; identifying and rectifying basic instrument faults
- accurately recording site features, environmental conditions and any observations that may impact on reliability of field data
- calculating required quantities using appropriate units, precision, uncertainties and/or calibration graphs

- interpreting gross features/trends in data, identifying atypical results and/or comparing results with established threshold levels or environmental quality concentration limits
- seeking advice when issues/problems are beyond scope of competence/responsibility
- writing/compiling concise and accurate reports in accordance with workplace procedures
- maintaining, cleaning and decontaminating equipment and PPE in accordance with workplace procedures
- working safely and following relevant legislative requirements for the disposal of waste and the preservation of the environment.

Knowledge Evidence

Must provide evidence that demonstrates knowledge of:

- scientific terminology covering the sampling/testing of air, water and soil at contaminated sites and relevant to job role
- overview of specific legislation, regulations, standards and codes of practice related to contaminated sites, and threshold levels or environmental quality concentration limits for contaminants
- common site hazard and risks, risk assessment techniques and use of risk cards
- properties and health risks associated with groups of contaminants, such as:
 - asbestos
 - heavy metals, such as lead, chromium and arsenic
 - chemical manufacture and industry wastes, such as acids/alkalis, resins, dyes, paints, solvents, fuels, oils, fertilisers, insecticides, herbicides, fungicides, aromatic hydrocarbons, phenols, chlorinated phenols, chlorinated benzenes and organochlorines
- overview of sampling plan design for contaminated sites, including preliminary sampling, non-targeted/grid sampling, targeted/judgemental sampling, and different sampling strategies for gas, water and soil
- sampling/test methods/standards relevant to site activities undertaken
- function of key instrument components and operating principles of common sampling/test equipment relevant to site activities undertaken
- common procedure/equipment problems leading to atypical data/results
- processes for labelling, ensuring chain of custody/traceability of samples and management of large volumes of data
- data processing, recording and reporting procedures
- hazards, health, safety and environment requirements relevant to site activities undertaken; use of safe work methods, safety equipment and PPE.

Assessment Conditions

- Judgement 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).
- Holistic assessment methods include:
 - inspection of contaminated site samples collected by the candidate
 - review of observations, measurements, test results and calculations provided by the candidate
 - review of sampling/test records and site reports prepared by the candidate
 - feedback from supervisors about the candidate's ability to perform sampling and testing of contaminated sites in accordance with given methods and workplace procedures, work safely and produce reliable results within the agreed timeframe
 - oral and/or written questions to assess the candidate's understanding of the principles of sampling/testing of contaminated sites, risk and safety management at contaminated sites, operation of sampling equipment/test instruments/analysers, processing and analysis of data.
- Access is required to all instruments, equipment, materials, workplace documentation, procedures, and specifications associated with this unit including, but not limited to:
 - access to contaminated sites and vehicles
 - appropriate sampling containers, sampling/test equipment, analysers, reagents/consumables, digital camera, global positioning system (GPS), logbooks and data loggers, and/or computers and communication equipment
 - specified PPE, safety equipment and decontamination equipment
 - workplace procedures, work program, maps, site plans, site sampling plans and test methods, standards, environmental data sets, equipment manuals, safety procedures and safe work methods.
- 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 competency 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 an organisation providing environmental monitoring, management or technology related services about performing the competency being assessed within the last twelve months.

Links

The MSS Sustainability Companion Volume implementation Guides are available from VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5b04f318-804f-4dc0-9463-c3fb9a3fe998>