



Australian Government

Assessment Requirements for MSS025035

Perform sampling and testing of soils

Release: 1

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Modification History

Release 1. Unit code changed. Application changed. Performance Criteria changed. Foundation Skills populated. Assessment Requirements changed. Supersedes and is equivalent to MSS025022 Perform sampling and testing of soils.

Performance Evidence

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

- collect, preserve and label a set of representative air samples for at least one site in accordance with sampling plan
- prepare soil (sub)samples and conduct the following, using specified test methods:
 - 2 field tests, including one chemical and one physical test
 - 2 laboratory tests, including one chemical and one physical test
- process and interpret data from at least 2 tests, including estimation of measurement uncertainty.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- scientific terminology used in job role covering soil sampling and testing
- fundamentals of soil morphology, including soil profiles, horizons, structure and texture, and mineralogy
- chemical and physical soil testing
- (Australian) soil classification system
- fundamentals of soil formation
- land use and soil systems (interactions and impacts), including plant-soil interactions, soil fertility, soil contamination and remediation
- fundamentals of geomorphology, including erosion and mass wasting, transportation and deposition, sedimentation; fluvial, aeolian, hillslope and weathering processes
- fundamentals of soil chemistry, including soil salinity
- physical and/or engineering soil properties, including:
 - colour (Munsell chart)
 - liquid and plastic limits
 - linear shrinkage
 - soil particle density
 - particle size distribution
 - dispersion and Emerson class number

- fundamentals of sampling, including:
 - sampling plans and site selection
 - principles of representative samples
 - principles and procedures for random, systematic, stratified and composite sampling, including consistency of sampling procedures
 - preservation of the integrity of samples
 - maintaining identification of samples relative to their source, workplace and legal traceability requirements
 - cost-effectiveness of sampling
- characteristics of soils to be sampled and likely contaminants
- materials for sampling and different types of samples
- sampling tools and equipment
- testing equipment and instruments
- links between quality control, quality assurance, quality management systems and sampling procedures
- workplace procedures dealing with legislative requirements for the handling, labelling and transport of hazardous goods
- common site hazards and control measures
- health, safety and environment requirements, including field safety and survival principles and high-risk sites.
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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 facilities, equipment and resources, including:
 - soil sampling equipment, field test equipment and instruments, laboratory test equipment and instruments, equipment manuals, digital camera, containers, reagents and consumables
 - safe work procedures and safety equipment
 - maps, site plans
 - site sampling plans and test methods
- modelling of industry operating conditions, including:
 - access to site/s.

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

Links

Companion Volume Implementation Guides are found in VETNet -

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