



Australian Government

Assessment Requirements for MSS024007

Collect and evaluate meteorological data

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MSS024007A Collect and evaluate meteorological data

Performance Evidence

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

- siting and setting up basic ‘ground level’ meteorological monitoring equipment and collecting reliable field data on at least two (2) occasions
- analysing, interpreting and summarising the key features of at least two (2) sets of meteorological data
- explaining the purpose and objectives of meteorological monitoring tasks, including:
 - information and analysis required
 - end users of information
 - significance of outcomes for broader programs
- accurately interpreting maps, aerial photos, instructions, specifications, procedures and/or manuals associated with job role
- planning and organising resources for efficient meteorological data collection
- setting up, checking and operating meteorological equipment at a field site in accordance with manuals and/or workplace procedures
- accurately recording and/or storing field data
- assessing quality of field data and interpreting significant features and anomalies
- identifying and rectifying basic instrument faults
- verifying that processed data meets quality requirements
- comparing collected/processed data with other meteorological data sets, associating meteorological parameters, interpreting results and drawing logical conclusions
- seeking advice when issues/problems are beyond scope of competence/responsibility
- accurately reporting field data and site observations
- following procedures for working safely and minimising environmental impacts and waste.

Knowledge Evidence

Must provide evidence that demonstrates knowledge of:

- distinction between weather and climate and an awareness of climate change science
- composition and structure of the atmosphere, especially the lower atmosphere
- solar energy spectrum and link to atmospheric conditions

- seasonality, effects of latitude and continental geography
- atmospheric motion (horizontal and vertical)
- lifting (orographic, convective and frontal)
- basic pressure/temperature/volume principles
- high and low pressure cell formation
- weather effects (e.g. precipitation, temperature and wind strength/direction)
- local wind effects (e.g. sea breeze, city breeze, katabatic winds and anabatic winds)
- forms of atmospheric moisture and humidity
- atmospheric conditions related to wind direction
- measurement of atmospheric conditions (e.g. precipitation, temperature, humidity, wind speed and direction)
- interpretation of weather maps (e.g. symbols used, terminology, interpretation and forecasts)
- historical and geographic comparison of weather data
- scalar and vector wind speed and direction calculations
- wind run
- operation, calibration and maintenance of meteorological equipment
- effects of instrument set-up, such as different sampling intervals and averaging times.

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:
 - review of meteorological field/processed data and field records generated by the candidate
 - review of candidate's interpretation of meteorological data sets for accuracy and completeness
 - feedback from supervisors that the candidate is able to safely site, set-up and operate basic 'ground level' meteorological monitoring equipment; generate verified meteorological data; accurately interpret data sets and report the findings within the agreed timeframe.

- oral and/or written questions to check the candidate's understanding of basic meteorology, in-field measurement of meteorological parameters and interpretation of data sets, relevant workplace procedures
- observation of the candidate working in the field with a focus on:
 - identification of monitoring site according to defined criteria
 - safe, reliable set-up and operation of equipment
 - accurately recording and storing basic meteorological 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 suitable sites and vehicle
 - meteorological monitoring equipment; camera; consumables; calculator, computer and relevant software or laboratory information system
 - documentation, such as site information and history, maps, aerial photos; workplace procedures governing siting and operation of meteorological monitoring equipment and data collection; and equipment manuals.
- 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

Companion Volume implementation guides are found in VETNet -

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