



Australian Government

Assessment Requirements for MSS025008 Monitor and evaluate noise

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MSS025008A Monitor and evaluate noise

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 two (2) noise surveys and evaluating the data
- planning and preparing for field activities, including researching and summarising site history, existing data and/or reports
- identifying and interpreting survey and data quality requirements, test methods, workplace procedures and statutory requirements accurately
- undertaking site reconnaissance and identifying safe and reliable noise monitoring locations according to defined criteria
- safely packaging and transporting supplies, equipment and instruments to and from the field
- setting up and calibrating handheld sound level meters to obtain verifiable results
- assembling, testing, operating and closing down a field-based, noise monitoring station
- performing automatic and manual noise measurements to obtain valid and reliable data
- identifying atypical results as out-of-normal range or an artefact
- identifying and rectifying basic instrument faults
- manipulating raw data to obtain corrected and adjusted data in the required format and calculating required noise parameters
- applying noise standards and/or statutory noise limits to evaluate noise data, if relevant
- providing accurate, complete records of noise measurements, field observations, data and results
- seeking advice when issues/problems are beyond scope of competence/responsibility
- working safely.

Knowledge Evidence

Must provide evidence that demonstrates knowledge of:

- scientific terminology, concepts and principles, such as:
 - sound and noise
 - frequency, pitch and wavelength
 - sound power and acoustic energy
 - sound levels, pressure and intensity
 - sound attenuation with distance
 - measurement units (dBA and others)
 - adding and subtracting sound levels
 - physiology of hearing, perception of noise
 - sources of noise, point sources and line sources
 - types of noise, such as continuous, intermittent and impulsive
 - typical noise levels
 - frequency weighting curves
- function of key components and operating principles of sound level meters/noise measuring instruments, including response, sensitivity and range, hold circuits, integrating and averaging meters
- calibration of handheld sound level meters/noise measuring instruments
- effects on test results of modifying meter/instrument variables
- measurement methods, including techniques for:
 - measuring different noise types, including steady noise, discretely varying noise and impulsive noise
 - methods for measuring noise exposure, including equivalent continuous sound level (Leq)
- common sources of uncertainty in sound level measurement, including mishandling of equipment, meteorological conditions, effects of topography and built structures, reflected and absorbed sound, and background noise effects
- data processing techniques, such as:
 - frequency analysis and weighting networks (including at least A and Lin)
 - calculation of combined sound levels using graphical and mathematical equation techniques
 - statistical analysis, including LAeq, LA10, LA50 and LA90
 - time weighted exposure measurement (LAeqT)
 - characterisation of noise by octave band analysis
 - background noise calculations, background noise level (LA90)
 - day and night sound levels (LDN)
 - calculation of individual noise exposure
 - noise mapping
 - noise rating curves
- specific legislation, policies and codes of practice related to environmental noise measurement, noise standards and statutory noise limits
- procedures for maintaining, storing and transporting noise measurement equipment and instrumentation
- relevant hazards, health, safety and environment requirements, including field safety principles.

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 noise measurements, results and calculations, survey records and/or site reports provided by the candidate
 - feedback from supervisors that the candidate consistently follows workplace procedures, works safely and provides reliable results within the agreed timeframe
 - oral and/or written questions to check the candidate's understanding of the principles of noise measurement, operation of sound level meters/noise measuring instruments and processing of data.
 - Access is required to all instruments, equipment, materials, workplace documentation, procedures, and specifications associated with this unit including, but not limited to:
 - noise measuring equipment, data loggers and telemetry equipment, vehicles, survey equipment, camera, consumables and manuals
 - work program, workplace procedures, codes of practice, site maps, site monitoring plans and test methods and field protocols.
- 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

MSA Training Package Implementation Guides - <http://mskills.org.au/training-packages/info/>