



Australian Government

Assessment Requirements for PMASUP540

Analyse equipment performance

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to PMASUP540B Analyse equipment performance

Performance Evidence

- Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria, and include the ability to:
- design and implement verification trial appropriate to the plant/equipment, theoretical analysis and required data
- undertake theoretical/mathematical and practical analysis of the process
- recommended changes that are justified based on the comparison of trial and theoretical data
- calculate equipment and component performance from the design specification
- determine equipment and design performance from practical trials
- determine the 'limiting component' in the performance of an item of equipment or a process
- determine possible performance of an item of equipment/process if practical improvements were made to the 'limiting item'

predict interactions between materials, equipment and process and their impacts on performance.

Knowledge Evidence

Evidence must be provided that demonstrates sufficient knowledge to interact with relevant personnel and be able to analyse equipment performance, including knowledge of:

- methods of identifying and calculating theoretical performance
- ways of trialling, trial design and implementation
- methods of data analysis to determine trial outcomes
- methods of interpreting information deduced from trial data
- all items on a schematic (e.g. piping and instrumentation diagrams (P&IDs) and process flow diagrams (PFDs) of the system and the function and principles of operation of each
- systems operating parameters
- system integrity limits
- process control philosophies and strategies
- process parameters and limits
- product specifications and tolerances
- principles of operation of plant/equipment
- science (e.g. physics, chemistry and biochemistry) relevant to process and materials
- organisation procedures

- duty of care obligations
- hierarchy of control.

Assessment Conditions

- The unit should be assessed holistically and the judgement of competence based on a holistic assessment of the evidence.
- The collection of performance evidence is best done from a report and/or folio of evidence drawn from:
 - a single project which provides sufficient evidence of the requirements of all the elements and performance criteria
 - multiple smaller projects which together provide sufficient evidence of the requirements of all the elements and performance criteria.
- A third-party report, or similar, may be needed to testify to the work done by the individual, particularly when the project has been done as part of a project team.
- Assessment should use a real project in an operational workplace. Where this is not possible or practical, assessment must occur using a sufficiently rigorous simulated environment reflecting realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Simulation may be used for part only of this unit.
- 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).
- 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.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.
- The regulatory framework will be reflected in workplace policies and procedures and is not required to be independently assessed.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- In addition, the assessor or anyone acting in subject matter expert role in assessment must demonstrate both technical competency and currency. If the assessor cannot demonstrate technical competency and currency they must assess with a subject matter expert who does meet these requirements.
- Technical competence can be demonstrated through one or more of:
 - relevant VET or other qualification/Statement of Attainment
 - appropriate workplace experience undertaking the type of work being assessed under routine and non-routine conditions
 - appropriate workplace experience supervising/evaluating the type of work being assessed under routine and non-routine conditions

- Currency can be demonstrated through one or more of:
 - being currently employed undertaking the type of work being assessed
 - being employed by the organisation undertaking the type of work being assessed and having maintained currency in accordance with that organisation's policies and procedures
 - having consulted/had contact with an organisation undertaking the type of work being assessed within the last twelve months, the consultation/contact being related to assessment
 - conducting on-the-job training/assessments of the type of work being assessed
 - being an active member of a relevant professional body and participating in activities relevant to the assessment of this type of work.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875>