Assessment Requirements for PMASUP341 Monitor and maintain instrument and control systems

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Modification History

Release 1. Supersedes and is equivalent to PMASUP341B Monitor and maintain instrument and control systems

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:

- test, repair, recommission and monitor the operational condition of instrument control systems
- isolate and de-isolate equipment
- read and interpret schematics, technical drawings and technical information
- isolate the causes of problems and distinguish between causes of problems/alarm/fault indications, including:
    - instrument failure/malfunction
    - electrical failure/malfunction
    - mechanical failure/malfunction
    - equipment design deficiencies
    - product parameters (temperature, flows, pressure and levels)
    - process control system malfunction
    - power/utility failures
- issue permits to allow work to be undertaken
- verify equipment operation
- prepare and analyse reports related to the equipment/ systems.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- process and plant schematic and instrumentation diagrams
- types and functions of instrumentation and control devices
- control functions, control regimes, adjustments and tuning
- types and application of test and calibration methods
- types and application of test equipment typically used with control system repair/maintenance/calibration
- short and long-term deviation control planning
- organisation procedures, including those covering
    - safety, emergency and hazard control
    - work permit systems

- maintenance
- standard operating procedures (SOPs)
- 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:
  - should occur over a range of situations which include typical disruptions to normal, smooth operations
  - will typically include a supervisor/third-party report focusing on consistent performance and problem recognition and solving. A supervisor/third-party report must be prepared by someone who has a direct, relevant, current relationship with the person being assessed and who is in a position to form a judgement on workplace performance relevant to the unit of competency
  - must include the testing and repair of at least three (3) items of equipment, use of appropriate tools, equipment and safety gear requiring demonstration of preparation, operation, completion and responding to problems
  - may use industry-based simulation for all or part of the unit particularly where safety, lack of opportunity or significant cost is an issue.
- Assessment should occur in operational workplace situations. Where this is not possible, or where personal safety or environmental damage are limiting factors, assessment must occur in 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.
- Assessment in a simulated environment should use evidence collected from one or more of:
  - walk-throughs
  - pilot plant operation
  - demonstration of skills
  - industry-based case studies/scenarios
  - 'what ifs'.
- Knowledge evidence may be collected concurrently with performance evidence (provided a record is kept) 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