



**Australian Government**

# **MSS404081 Undertake proactive maintenance analyses**

**Release: 1**

# MSS404081 Undertake proactive maintenance analyses

## Modification History

Release 1. Supersedes and is equivalent to MSS404081A Undertake proactive maintenance analyses

## Application

This unit of competency covers the skills and knowledge required to undertake the most common forms of analyses associated with predictive/preventative/reliability centred maintenance strategies.

This unit applies to a technical expert (usually an engineer, technician or tradesperson) who is required to undertake analyses for the purpose of predictive/preventative/reliability centred maintenance as part of a competitive systems and practices strategy.

This unit primarily requires the application of skills associated with communication, teamwork, problem solving, initiative and enterprise, and planning and organising in order to undertake maintenance analyses. This is normally done in the context of using computer technology, and requires aspects of learning and self-management to ensure team involvement and facilitation of learning.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

## Pre-requisite Unit

Nil

## Competency Field

Competitive systems and practices

## Unit Sector

Not applicable

## Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

### 1 Liaise with operator

1.1 Establish a relationship with the operator of equipment/plant.

1.2 Ensure the operator has the required skills and resources to keep the equipment/plant clean.

- 1.3 Ensure the operator is able to effectively monitor the operation of the equipment/plant.
    - 1.4 Regularly communicate with operator about the overall equipment effectiveness (OEE) of their equipment/plant.
    - 1.5 Involve operator, team leader and other key personnel in identification of skill needs and means of skill acquisition to fill any identified gaps.
- 2 **Analyse history**
  - 2.1 Analyse mean time between failures (MTBF) from maintenance records.
  - 2.2 Analyse performance data of the equipment/plant.
  - 2.3 Identify causes of changes to historic trends/status.
  - 2.4 Determine methods of ensuring causes of improvements and resolution of deterioration are locked in.
- 3 **Undertake failure mode effects analysis (FMEA) or similar failure effects analysis**
  - 3.1 Undertake analysis.
  - 3.2 Record results of analysis.
  - 3.3 Investigate methods of eliminating possibility of failure and/or minimising the impact of the failure.
  - 3.4 Liaise with operator, team leader and other key personnel regarding possible solutions.
  - 3.5 Select most appropriate solution.
  - 3.6 Implement selected solutions.
- 4 **Undertake condition monitoring analysis**
  - 4.1 Obtain data for condition monitoring analysis.
  - 4.2 Interpret condition monitoring data.
  - 4.3 Predict required maintenance type and timing from condition monitoring data.
  - 4.4 Liaise with operator, team leader and other key personnel regarding implications of condition monitoring report.

- 4.5 Involve team members in development of changes to maintenance strategy to ensure awareness, learning and commitment.

## Foundation Skills

This section describes those required skills (language, literacy and numeracy) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

## Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

**Competitive systems and practices include one or more of:**

- lean operations
- agile operations
- preventative and predictive maintenance approaches
- statistical process control systems, including six sigma and three sigma
- Just in Time (JIT), kanban and other pull-related operations control systems
- supply, value, and demand chain monitoring and analysis
- 5S
- continuous improvement (kaizen)
- breakthrough improvement (kaizen blitz)
- cause/effect diagrams
- overall equipment effectiveness (OEE)
- takt time
- process mapping
- problem solving
- run charts
- standard procedures
- current reality tree.

## Unit Mapping Information

Release 1. Supersedes and is equivalent to MSS404081A Undertake proactive maintenance analyses

## Links

Companion Volume implementation guides are found in VETNet -

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