



Australian Government

MSS405090 Adapt a proactive maintenance strategy to the process operations sector

Release: 1

MSS405090 Adapt a proactive maintenance strategy to the process operations sector

Modification History

Release 1. Unit code changed. Application changed. Performance Criteria changed. Foundation Skills populated. Range of Conditions removed. Assessment Requirements changed. Supersedes and is equivalent to MSS405082 Adapt a proactive maintenance strategy to the process operations sector.

Application

This unit describes the skills and knowledge required to develop and apply a proactive maintenance strategy for continuous manufacturing processes.

This unit applies to an individual who is required to interpret a proactive maintenance strategy and adapt it to continuous operations, factoring in start-up, shutdown and isolation considerations and hazard and/or major hazard facility requirements.

This unit applies to any organisation seeking to improve the efficiency and reliability of equipment in continuous manufacturing, for example, processing chemicals and hydrocarbons, oil refining, smelting and cement manufacture.

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Pre-requisite Unit

Nil

Competency Field

Competitive systems and practices

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Interpret proactive maintenance strategy	1.1 Analyse proactive maintenance strategy to identify areas which may conflict with hazard or operations requirements 1.2 Analyse incident report and similar data to determine maintenance implications 1.3 Compile hazard control implications for proactive maintenance strategy

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
2. Interpret hazard information	2.1 Analyse hazard and operability studies (HAZOP) or similar data for maintenance implications 2.2 Analyse safety case or similar data for maintenance implications 2.3 Compile hazard control implications for proactive maintenance strategy
3. Identify shutdown and turnaround cycle requirements	3.1 Determine when next shutdown is due and expected time between shutdowns 3.2 Identify plant items and maintenance activities which can only be completed during shutdown 3.3 Identify critical conditions which must not be breached in order to maintain plant reliability until shutdown 3.4 Compile shutdown cycle requirements for proactive maintenance strategy
4. Identify maintenance requirements of ancillary equipment	4.1 Identify proactive maintenance requirements of ancillary equipment 4.2 Identify maintenance which can only be done when plant is shut down 4.3 Compile ancillary equipment requirements for proactive maintenance strategy
5. Adapt proactive maintenance strategy	5.1 Compare identified requirements to proactive maintenance strategy 5.2 Consult with stakeholders to negotiate proactive maintenance strategy which meets identified requirements 5.3 Involve team members in solving problems and developing solutions for strategy 5.4 Monitor implementation of strategy to identify potential and actual non-conformances and take or initiate action in response

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

- Reading skills to interpret familiar and technical information
- Writing skills to document proactive maintenance strategy
- Oral communication skills to consult and negotiate with stakeholders

- Numeracy skills to compare costs of maintenance strategies.

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

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSS405082 Adapt a proactive maintenance strategy to the process operations sector.

Links

Companion Volume Implementation Guides are found in VETNet -

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

Assessment Requirements for MSS405090 Adapt a proactive maintenance strategy to the process operations sector

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- adapt at least one proactive maintenance strategy to meet requirements of a continuous manufacturing operation.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- continuous manufacturing equipment, processes and products of the organisation
- start-up, shutdown and isolation considerations for the organisation and their impact on proactive maintenance strategies
- skills required by operators and maintenance personnel to achieve effective proactive maintenance strategy implementation
- characteristics and strengths of different types of strategies, techniques and tools in relation to continuous manufacturing operations
- holistic costs of different strategies combining cost of maintenance with costs of lost production, sales, and other factors relevant to the organisation
- business goals sufficient to match the strategy to the business needs
- strategic thinking and its application to proactive maintenance
- principles of process equipment and how to improve its reliability
- resources required and how to obtain them
- hazards, hazard controls and related regulatory requirements that apply to the organisation.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - proactive maintenance strategy

- modelling of industry operating conditions.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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