



Australian Government

MSS015043 Develop strategies for more sustainable use of resources

Release: 1

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Modification History

Release 1. Unit code changed. Application changed. Performance Criteria changed. Foundation Skills populated. Assessment Requirements changed. Supersedes and is not equivalent to MSS015022 Develop strategies for more sustainable use of resources.

Application

This unit describes the skills and knowledge required to use material (mass) balancing to identify loss in a process and make recommendations to reduce waste. The process may be identified in any part of the value chain for delivery of a product or service.

This unit applies to managers, operational or technical specialists or similar roles who are required to determine resource usage and loss and problem-solve to identify improvement strategies.

This unit applies to any organisation that is implementing sustainability improvements.

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

Sustainable operations

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. Quantify resource consumption	1.1 Identify all significant resources used by process 1.2 Identify consumption measurements available for each resource 1.3 Quantify consumption for each resource at identified process steps
2. Quantify resource loss	2.1 Determine theoretical consumption of each resource 2.2 Compare theoretical consumption with actual consumption 2.3 Quantify loss (emission) for each resource

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
3. Recommend strategies for reducing waste	3.1 Short-list high emission processes 3.2 Analyse short-listed processes to identify emission steps and/or locations 3.3 Determine root cause of emissions 3.4 Investigate methods for reducing emissions and evaluate impacts, outcomes, risks and costs 3.5 Develop strategies and recommendations for improvement likely to deliver overall sustainability benefits
4. Prepare resources use audit report	4.1 Identify purpose of report and key stakeholders 4.2 Compile data, implications and recommendations 4.3 Write report and communicate with stakeholders

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 report on implications of data and make recommendations
- Oral communication skills to communicate with stakeholders
- Numeracy skills to identify and interpret measurements, perform calculations using equations
- Learning skills to identify information needs and sources of information.

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

Unit Mapping Information

Release 1. Supersedes and is not equivalent to MSS015022 Develop strategies for more sustainable use of resources.

Links

The MSS Sustainability Companion Volume Implementation Guides are available from VETNet: - -

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

Assessment Requirements for MSS015043 Develop strategies for more sustainable use of resources

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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:

- use materials (mass) balancing to identify loss (emission) for at least 1 process that comprises at least:
 - three process steps
 - three types of resources
- prepare written report which interprets the data and includes at least 1 recommendation to reduce waste.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- methods and uses of material (mass) balancing
- methods and uses of energy balancing
- methods of comparing theoretical with actual resource consumption
- methods for mapping processes and resources consumed
- methods of measuring actual resource usage
- design thinking as applied to problem solving and innovation for sustainability
- current and emerging approaches to quantifying and evaluating costs, benefits, impacts and risks in relation to sustainability including direct, indirect and intangible factors
- current and emerging approaches to reducing waste including:
 - identifying, retaining and managing residual resources
 - biological materials flow
 - technical materials flow
 - impact of supply chain decisions
 - role of digitalisation
- AS/NZS ISO 14001 Environmental Management Systems or its authorised replacement.
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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
- modelling of industry operating conditions.

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

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