



Australian Government

MSS015050 Conduct an emissions audit

Release: 1

MSS015050 Conduct an emissions audit

Modification History

Release 1. Unit code changed. Application changed. Elements changed. Performance Criteria changed. Foundation Skills populated. Assessment Requirements changed. Workplace outcome changed. Supersedes and is not equivalent to MSS015030 Conduct an emissions audit.

Application

This unit describes the skills and knowledge required to conduct an emissions audit for a 'process'. In this unit a process could be an organisation, a significant part of an organisation or part of the value chain. Emissions refer to any loss whether in solid, liquid or gas form.

This unit applies to managers, operational or technical experts or others who are required to identify and quantify emissions using material (mass) balancing and calculation of theoretical (optimal) and actual usage and to recommend improvement strategies.

This unit applies to any organisation.

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

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. Identify all sources and uses of materials in process	1.1 Define the scope and parameters of process to be audited according to regulatory and/or organisational requirements 1.2 Identify all external and internal sources of materials relevant to process 1.3 Identify all uses of materials by the process overall 1.4 Identify all uses of materials by process steps and related plant and equipment
2. Calculate theoretical use of the materials	2.1 Calculate theoretical net consumption of material for each process unit 2.2 Calculate overall material balance for process

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	2.3 Evaluate the need for material consumption by process compared to alternative processes
3. Measure actual use of materials	3.1 Calculate actual net material consumption for overall process 3.2 Calculate actual net material consumption for each process step 3.3 Calculate difference between theoretical and actual material consumption by process step and overall 3.4 Identify actual emissions by each process step
4. Develop strategies for reducing emissions	4.1 Rank process steps by difference between theoretical and actual material consumption 4.2 Rank process steps by actual material consumption 4.3 Prioritise process steps with potential for significant emission reduction 4.4 Develop strategies for improvements in priority process steps 4.5 Determine expected improvement in theoretical material use for each strategy
5. Recommend emission reduction strategies	5.1 Consult with key stakeholders to confirm or amend strategies 5.2 Identify strategies related to regulatory and/or organisational requirements 5.3 Rank strategies by cost-benefit ratio 5.4 Short-list preferred emission reduction strategies 5.5 Write report to present audit outcomes and recommendations for reducing emissions

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 regulatory and organisational requirements
- Writing skills to present audit outcomes and recommendations
- Oral communication skills to consult with stakeholders
- Numeracy skills to calculate theoretical and actual water consumption and apply cost-benefit analysis.

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

Unit Mapping Information

Release 1. No equivalent unit.

Links

Companion Volume Implementation Guides are available from VETNet - -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5b04f318-804f-4dc0-9463-c3fb9a3fe998>

Assessment Requirements for MSS015050 Conduct an emissions audit

Modification History

Release 1. Unit code changed. Application changed. Elements changed. Performance Criteria changed. Foundation Skills populated. Assessment Requirements changed. Workplace outcome changed. Supersedes and is not equivalent to MSS015030 Conduct an emissions audit.

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:

- conduct an emissions audit for at least one organisation, a significant part of an organisation or part of the value chain
- develop at least 3 recommendations for emission reduction.
-

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- external and internal sources of materials commonly used in the industry
- type and nature of emissions relevant to materials commonly used in the industry
- first law of thermodynamics
- material (mass) balancing techniques for process and process steps
- methods of measuring actual process amount and flows
- principles of circularity and/or closed loop
- circular approaches to reducing waste
- emission reduction strategies and methods along with costs, effectiveness and alternative disposal strategies
- methods of cost-benefit analysis
- current and emerging approaches to quantifying and evaluating costs, benefits, impacts and risks in relation to sustainability, including direct, indirect and intangible factors
- calculation, manipulation and interpretation of numerical data, including establishing series, means, correlations and rates of change
- sustainability-related regulatory and reporting requirements relevant to the industry
- sustainability-related voluntary standards, codes, reporting frameworks, certification and co-regulatory arrangements relevant to the industry.
-

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:
 - access to data on material usage and material flow
- modelling of industry operating conditions.

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

Links

Companion Volume Implementation Guides are available from VETNet - -

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