



Australian Government

MEM22007 Manage environmental effects of engineering activities

Release: 1

MEM22007 Manage environmental effects of engineering activities

Modification History

Release 1. Supersedes and is equivalent to MEM22007A Manage environmental effects of engineering activities.

Application

This unit of competency defines the skills and knowledge required to examine environmental issues and determine environmental strategies for a new or existing product, process, system or service. It applies to engineering work at the paraprofessional level and activities carried out within a range of engineering disciplines.

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

Pre-requisite Unit

MEM16006 Organise and communicate information

Competency Field

Management and organisation

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine the existing environmental condition	1.1 Follow standard operating procedures (SOPs) 1.2 Comply with work health and safety (WHS) requirements at all times 1.3 Research, discuss and report on case studies involving examination of environmental values 1.4 Prepare an inventory of the existing environmental condition 1.5 Record and report on the findings of the initial assessment

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Develop strategies for sustainable development	2.1 Determine expectations regarding each component of the environment 2.2 Record and report on expectations for project or operation integration 2.3 Determine variations between expectations and the existing environmental conditions 2.4 Establish the possibilities and options for improvement in the environment 2.5 Evaluate available options against assessment criteria to identify risks and priorities 2.6 Develop an environmental report on the preferred options
3. Develop an implementation plan to achieve sustainable development	3.1 Consult with stakeholders and specialists according to project scope 3.2 Establish the data necessary to evaluate the implementation 3.3 Identify the process for collection and documentation of data 3.4 Develop an implementation plan that outlines actions, timelines, resources and evaluation mechanisms
4. Implement strategies to achieve sustainable development	4.1 Implement strategies in consultation with appropriate stakeholders 4.2 Collect and review data on implementation of strategies in accordance with agreed plan 4.3 Evaluate progress and review strategies based on implementation outcomes

Foundation Skills

This section describes those language, literacy, numeracy and employment skills 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.

Environmental values include:	• biophysical values including: • clean air • soil • water • biodiversity • ecosystem • sustainability • sustaining the quality of natural and artificial environments • indoor and outdoor socio-cultural values.
Determining existing environmental conditions include:	• identifying how certain actions can affect an environment and recording results • mapping out environmental conditions to analyse areas of intense impact, especially as a result of cumulative impacts • identifying physical, socio-cultural and economic conditions for life • visualising the existing or desired quality of life within the environment • identifying both negative and positive environmental impacts • identifying potential de-sustaining and sustaining aspects of the activity and engineering interventions.
Environmental report includes:	• description of the state of the environment • assessment of the nature and consequence of impacts and identifiable trends available and recommended actions • identification of responsibilities and potential change agents • cost of action • critical review of the parameters of the environmental relations considered, the criteria by which they were evaluated, the process of developing responses and the achievement of the actions taken.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM22007A Manage environmental effects of engineering activities.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>