



Australian Government

Department of Education, Employment and Workplace Relations

PMASUP441C Decommission plant

Release: 1

PMASUP441C Decommission plant

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This competency covers the decommissioning of an existing plant/pipeline or major plant area, and its associated equipment. Decommissioning refers to the removal from service of plant/pipeline and equipment and its storage/'mothballing' or disposal.</p> <p>This unit does not cover the shutdown of a plant/pipeline - use <i>PMAOPS411B Manage plant shutdown and restart</i>.</p>
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Application of the Unit

Application of the unit	<p>In a typical scenario, an existing plant/pipeline or major plant area, and its associated equipment, are planned to be taken out of service. The experienced technician organizes the systematic shutdown, cleaning out and preparation for safe 'moth-balling' all of the plant and equipment.</p> <p>This competency is typically performed by experienced technicians, likely to be the leaders of an operational team, usually working in conjunction with a decommissioning team, for the purpose of decommissioning plant/pipelines. As decommissioning is usually a team activity, the technician will take a lead technical role, rather than undertake all aspects on an individual basis.</p> <p>Much of the activity of successful decommissioning is in planning the activity and then supervising the work to ensure it is done safely and efficiently with no environmental damage. The technician may have no 'hands-on' role at all.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Contribute to decommissioning planning.	1.1. Apply process understanding to the planning process 1.2. Identify the role and purpose of the plant and equipment 1.3. Ensure the work is coordinated effectively with others involved on the work site 1.4. Identify process conditions and apply to hazard studies 1.5. Undertake investigations following on from hazard studies 1.6. Obtain materials necessary to complete the work and check against job requirements 1.7. Obtain tools and equipment necessary to carry out the work and check for correct operation and safety 1.8. Prepare plans to ensure that procedures are performed in the correct sequence 1.9. Obtain approvals where necessary from appropriate authorities to ensure decommissioning process proceeds in accordance with the plan. 1.10. Complete all appropriate documentation.
2. Isolate and decontaminate equipment/unit.	2.1. Interpret and apply decommissioning plan 2.2. Identify and use appropriate safety equipment and materials 2.3. Isolate and decontaminate equipment components as required 2.4. Dispose of contaminated materials or components as required 2.5. Complete required documentation.
3. Inspect, test and notify completion of work.	3.1. Select tools and equipment appropriate to the testing/inspection requirements and utilise in accordance with manufacturer specifications and legislative requirements 3.2. Test/inspect in accordance with requirements 3.3. Ensure compliance with OHS legislative requirements for risk assessment prior to disposal 3.4. Ensure any required additional work is undertaken/initiated 3.5. Notify work completion.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

Demonstrated knowledge and ability to:

- plan the decommissioning process
- arrange resources as required
- coordinate own work and the work of others, including on-site contractors/operators
- interpret and solve operational problems as they arise and take appropriate action
- document the decommissioning and recommendations for safe storage/maintenance/disposal.

Required knowledge

Competence to include the ability to apply and explain:

- chemistry of materials involved
- principles of operation of the process
- principles of operation of the equipment involved
- all items on a schematic of the plant and the function of each
- correct methods of, stopping plant items
- function of major components
- HAZOP study process and the interpretation of findings
- results and impact of a HAZAN study
- hazardous substances legislation
- the process of hazard identification, risk assessment and control
- sources of hazard information (such as Material Safety Data Sheets)
- safe disposal methods of materials and equipment
- decontamination processes.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Assessment of this unit should include demonstrated competence on actual plant/pipeline and equipment in a work environment. The unit will be assessed in as holistic a manner as is practical and may be integrated with the assessment of other relevant units of competency.

Simulation may be required to allow for assessment of parts of this unit. It is possible that a simulation will be required to ensure that the technician is competent before taking a significant role in a decommissioning activity. Decommissioning is an infrequent activity and so it may not be practical or equitable to wait for an actual decommissioning to occur to use this as the basis for assessment.

Simulation should be based on the actual plant and will include walk-throughs of the relevant competency components. Simulations may also include the use of case studies/ scenarios and role plays.

This unit of competency requires a significant body of knowledge which will be assessed through questioning and the use of what-if scenarios both on the plant (during demonstration of normal operations and walk-throughs of abnormal operations) and off the plant.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Competence must be demonstrated in the ability to recognise and analyse potential situations requiring action and then in implementing appropriate corrective action. The emphasis should be on the ability to stay out of trouble rather than on recovery from a disaster.

Consistent performance should be demonstrated. In particular look to see that:

- potential problems are recognised
- the range of possible causes can be identified and analysed and the most likely cause determined
- appropriate, timely action is taken
- obvious problems in related plant areas are recognised and an appropriate contribution made to their solution

These aspects may be best assessed using a range of scenarios/case studies/what ifs as the stimulus with a walk through forming part of the response. These assessment activities should include a range of problems, including new, unusual and improbable situations which may have been generated from the past incident history of the plant, incidents on similar plants around the world, hazard analysis activities and similar sources.

EVIDENCE GUIDE	
Context of and specific resources for assessment	Assessment will require access to a plant over an extended period of time, or a suitable method of gathering evidence of operating ability over a range of situations. A bank of scenarios/case studies/what-ifs will be required, as will a bank of questions which will be used to probe the reasoning behind the observable actions.
Method of assessment	In all plants it may be appropriate to assess this unit concurrently with relevant teamwork and communication units. In a major hazard facility, it may be appropriate to assess this unit concurrently with relevant OHS units.
Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Range Statement

RANGE STATEMENT	
<p>The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.</p>	
Codes of practice/ standards	Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.
Context	<p>This competency unit includes the functions of :</p> <ul style="list-style-type: none"> • liaison with manufacturers, engineering personnel, designers, maintenance personnel • participation in hazard and operability studies (HAZOP) and hazard analysis studies (HAZAN) • removal of plant and equipment from service, which may include: <ul style="list-style-type: none"> • 'mothballing' • storage • disassembly • demolition • decontamination of equipment • disposal of equipment and waste. <p>This competency unit includes the understanding and application of:</p> <ul style="list-style-type: none"> • OHS regulations especially those related to plant • codes of practice • disposal procedures and regulations. <p>All operations are performed in accordance with standard operating procedures.</p>
Health, safety and environment (HSE)	All operations to which this unit applies are subject to stringent health, safety and environment requirements, which may be imposed through State or Federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between Performance Criteria and HSE requirements, the HSE requirements take precedence.
Procedures	<p>Procedures may be written, verbal, computer-based or in some other form. They include:</p> <ul style="list-style-type: none"> • all work instructions • standard operating procedures • formulas/recipes

RANGE STATEMENT

- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant.

For the purposes of this Training Package, 'procedures' also includes good operating practice as may be defined by industry codes of practice (eg Responsible Care) and government regulations.

Unit Sector(s)

Unit sector	Support/generic
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	
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