



Australian Government

PMAOPS520 Manage utilities

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to PMAOPS520C Manage utilities

Application

This unit of competency covers the skills and knowledge required to manage utilities used by a whole site or group of plants in order to improve the efficiency of usage. It applies to utilities, such as:

- steam (saturated and/or superheated)
- air (instrument, safety, process and/or mechanical)
- water (cooling and/or process)
- fuel (gas and oil)
- other heating/cooling mediums (oil, 'Dowtherm' and brine)
- electricity
- other reticulated utilities.

The utilities will typically be centrally produced and/or controlled.

This unit of competency applies to senior technicians or those in similar roles who are required to apply in-depth knowledge of process and plant operations and problem solving in order to determine utilities requirements and actual consumption, compare actual to theoretical consumption, and initiate actions which will lead to a more efficient use of these utilities.

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

Pre-requisite Unit

Nil

Competency Field

Operations

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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| 1 | Identify source and use of all utilities on plant | <div>1.1 Obtain current services diagram or schematic for plant</div> <div>1.2 Identify all items of equipment using utilities</div> <div>1.3 Identify source of each utility</div> <div>1.4 Identify utility properties (e.g. pressure, voltage, current) as supplied</div> <div>1.5 Determine required utility properties (e.g. from engineering specification) for each item of equipment using each utility</div> |
| 2 | Determine actual consumption of utilities | <div>2.1 Get information showing consumption of utilities by the plant and plant equipment</div> <div>2.2 Get information showing actual utility properties as used by each plant item</div> <div>2.3 Physically check each item of equipment for signs of inefficient utility use (e.g. faulty steam traps and leaks)</div> <div>2.4 Compile report/database showing actual usage of utilities and observed problems</div> |
| 3 | Determine efficiency of use | <div>3.1 Determine theoretical consumption of utilities for equipment items from engineering specifications, by calculation or other methods</div> <div>3.2 Compare actual consumption of utilities with theoretical consumption</div> <div>3.3 Determine inefficient users of utilities</div> <div>3.4 Compile report/database showing efficiency of use of utilities</div> |
| 4 | Take required action to improve utility efficiency | <div>4.1 Rank inefficient users in priority order for remediation based on costs and business requirements</div> <div>4.2 Investigate and determine causes of inefficiency in the higher ranked users</div> <div>4.3 Develop plans to remove the causes of inefficiency</div> |

- 4.4 Identify any health, safety and environmental (HSE) implications of planned actions and address prior to any implementation of changes
- 4.5 Consult with relevant stakeholders regarding HSE implications and the implementation of these plans
- 4.6 Initiate appropriate action for items within scope of authority
- 4.7 Follow through on items to facilitate a timely completion
- 4.8 Report/make recommendations on required improvements which are beyond scope of authority to action

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.

Regulatory framework The latest version of all legislation, regulations, industry codes of practice and Australian/international standards, or the version specified by the local regulatory authority, must be used, and include one or more of the following:

- legislative requirements, including work health and safety (WHS)
- industry codes of practice and guidelines
- environmental regulations and guidelines
- Australian and other standards
- licence and certification requirements

All operations to which this unit applies are subject to stringent health, safety and environment (HSE) requirements, which may be imposed through state/territory 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.

Hazards Hazards include one or more of the following:

- heat
- electricity
- fluids under pressure
- plant services (steam, condensate and cooling water)
- flammability and explosivity
- hazardous products and materials
- unauthorised usage
- other hazards that might arise

Procedures All operations must be performed in accordance with relevant procedures.

Procedures are written, verbal, visual, computer-based or in some other form, include one or more of the following:

- emergency procedures
- work instructions
- standard operating procedures (SOPs)
- safe work method statements (SWMS)
- formulas/recipes
- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant

Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875>