



Australian Government

UEPOPS331 Operate and monitor water systems (condensate and feedwater)

Release: 1

UEPOPS331 Operate and monitor water systems (condensate and feedwater)

Modification History

Release 1. This is the first release of this unit of competency in the UEP Generation Training Package.

Application

This unit involves the skills and knowledge required to operate, inspect and monitor water systems (condensate and feedwater).

Water systems are used to supply high quality water to the generator and to heat water. Between the condenser and feedwater pump, the water is called condensate and between the feedwater pump and the generator the water is called feedwater.

Competency in this unit requires the ability to plan work, operate water system (condensate and feedwater) plant, test water system plant, analyse water system plant faults, monitor and inspect water system plant and the completion of all documentation. Individuals will, in general, work as an operator in a power generation plant.

Power generation plant operators are typically trained and authorised to isolate, prepare plant and issue permits to work.

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

Note: Workplace practice

The application of the skills and knowledge described in this unit may require a licence or training permit to practice in the workplace where work is carried out on gas and electrical installations. Additional conditions may apply under state and territory legislative and regulatory licensing requirements.

Pre-requisite Unit

There are no prerequisite units.

Competency Field

Operations

Unit Sector

Electricity generation

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Plan and prepare for water systems plant operation

2 Operate water system plant

3 Test water system plant operation

PERFORMANCE CRITERIA

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

- 1.1** Safety issues related to operating and monitoring water system plant are identified, in accordance with workplace procedures and Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) regulations and legislative requirements
- 1.2** Work requirements including permit to work are identified, in accordance with workplace procedures, from relevant personnel and documentation
- 1.3** Documentation to determine water system plant status is assessed and evaluated, in accordance with workplace procedures
- 1.4** Inspection, preoperational checks and field preparation for water system plant service are carried out, in accordance with workplace procedures and manufacturers' recommendations
- 1.5** Water system plant operational prerequisites are established, in accordance with workplace procedures and manufacturers' recommendations
- 1.6** Sequence for recommissioning of water system plant is determined, in accordance with workplace procedures and site requirements
- 2.1** Water system plant is operated, in accordance with workplace procedures and manufacturers' operating recommendation
- 2.2** Water system plant is monitored and observed, in accordance with workplace procedures, to detect deviations from normal operating conditions
- 2.3** Corrective actions are taken to rectify water system abnormalities, in accordance with workplace procedures, industry standards and site requirements
- 3.1** Operational tests are performed, in accordance with workplace procedures

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| | 3.2 | Water system plant is observed for correct operational response, in accordance with workplace procedures |
| | 3.3 | Corrective action is taken when response does not meet with documentation, water system plant integrity or personnel safety requirements |
| | 3.4 | Water system plant is returned to required operational status upon completion of testing, in accordance with workplace procedures |
| 4 Analyse water system plant faults | 4.1 | Causes of abnormal water system plant operating conditions are identified, in accordance with workplace procedures, and by analysing technical and operational information |
| | 4.2 | Corrective action is taken, in accordance with workplace procedures |
| | 4.3 | Water system plant integrity and personnel safety is maintained, in accordance with workplace procedures, and in consultation with appropriate personnel and technical and operational documentation |
| 5 Monitor and inspect water system plant | 5.1 | Water system plant to be monitored and inspected is physically identified, in accordance with workplace procedures |
| | 5.2 | Water system plant is monitored and inspected, in accordance with workplace procedures, for normal operation or to detect deviations |
| | 5.3 | Corrective action is taken, in accordance with workplace procedures |
| | 5.4 | Appropriate personnel are notified when defects are detected, in accordance with workplace procedures |
| 6 Complete documentation | 6.1 | Water system plant problems, movements and status are reported, in accordance with workplace procedures |
| | 6.2 | Documentation is updated, in accordance with workplace procedures |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEPOPS331B Operate and monitor water systems (condensate and feedwater).

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1715b9fa-e7bd-441c-bb8d-cf22c9c825a8>

Assessment Requirements for UEPOPS331 Operate and monitor water systems (condensate and feedwater)

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions on at least two separate occasions and includes:

- analysing water system plant faults using data analysis techniques and tools
- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements including:
 - emergency procedures
 - risk control measures
 - safe work practices
- communicating with personnel
- completing documentation using recording procedures
- identifying water system plant status
- monitoring and inspecting water system plant operations
- operating water system
- organising resources
- performing isolations
- preparing and planning work
- recognising and responding to abnormal water system plant operating conditions
- testing water system (condensate and feedwater) plant operationally using diagnostic and test techniques
- using permit to work system
- working with water system plant and equipment

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements, performance criteria and range of conditions and includes knowledge of:

- characteristic water system plant faults and corrective actions
- feedwater system plant types and characteristics including feedwater chemical treatments
- isolations

- legislation, industry standards, codes of practice and regulations
- manufacturers' specifications and manuals
- permit to work system
- typical arrangements of power production plant
- water system plant and equipment, its location and operating parameters
- water system plant status
- WHS/OHS legislated requirements including:
 - emergency procedures
 - risk control measures
 - safe work practices
- workplace documentation
- workplace policies and procedures

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

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Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including workplace procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

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