



Australian Government

UEPOPS105 Operate and monitor reverse osmosis plant

Release: 1

UEPOPS105 Operate and monitor reverse osmosis plant

Modification History

Release 1. This is the first release of this unit of competency in the UEP Electricity Supply Industry – Generation Sector Training Package Release 2.0.

Application

This unit involves the skills and knowledge required to operate, inspect and monitor reverse osmosis plant.

Reverse osmosis is a water purification technology that uses a semipermeable membrane to remove dissolved inorganic solids such as salts, ions, molecules and larger particles from water.

Competency in this unit requires the ability to plan work, operate reverse osmosis plant, test reverse osmosis plant, analyse reverse osmosis plant faults, monitor and inspect reverse osmosis plant, and complete all documentation. Individuals will, in general, work under supervision, in a power generation facility as an operator.

Power generation plant operators are 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.

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.

PERFORMANCE CRITERIA

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

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|---|--|
| 1 Plan and prepare work | <ul style="list-style-type: none">1.1 Work health and safety (WHS)/occupational health and safety (OHS) regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, environmental requirements and workplace procedures are identified, applied and monitored1.2 Work requirements are identified from relevant personnel and documentation in accordance with workplace procedures1.3 Documentation to determine reverse osmosis plant status is assessed and evaluate, in accordance with workplace procedures1.4 Inspection and field preparations for reverse osmosis plant service are carried out in accordance with manufacturers' recommendations and specifications, and workplace procedures1.5 Reverse osmosis plant operational prerequisites are established in accordance with manufacturers' recommendations and specifications, and workplace procedures1.6 Sequence for recommissioning of reverse osmosis plant is determined to suit existing circumstances in accordance with workplace procedures |
| 2 Operate reverse osmosis plant | <ul style="list-style-type: none">2.1 Reverse osmosis plant is operated in accordance with manufacturers' recommendations and specifications, and workplace procedures2.2 Reverse osmosis plant is monitored and observed to detect deviations from normal operating conditions in accordance with workplace procedures2.3 Corrective actions are taken to rectify abnormalities in reverse osmosis plant in accordance with manufacturers' recommendations and specifications, and workplace procedures2.4 Reverse osmosis plant is identified and removed from service in accordance with workplace procedures |
| 3 Test reverse osmosis plant operation | <ul style="list-style-type: none">3.1 Operational tests are performed in accordance with workplace procedures3.2 Reverse osmosis plant is observed for correct operational |

		response in accordance with workplace procedures
	3.3	Reverse osmosis plant is returned to required operational status upon completion of testing in accordance with workplace procedures
4 Analyse reverse osmosis plant faults	4.1	Causes of abnormal reverse osmosis plant operating conditions are identified by analysing technical and operational information in accordance with workplace procedures
	4.2	Reverse osmosis plant integrity and personnel safety is maintained in consultation with relevant personnel and technical and operational documentation in accordance with workplace procedures
5 Monitor and inspect reverse osmosis plant	5.1	Reverse osmosis plant is monitored and inspected for normal operation and to detect deviations in accordance with workplace procedures
	5.2	Relevant personnel are notified when defects are detected in accordance with workplace procedures
6 Complete documentation	6.1	Reverse osmosis plant problems, movements, abnormalities 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 UEP Electricity Supply Industry – Generation Sector Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEPOPS323 Operate and monitor reverse osmosis plant.

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 UEPOPS105 Operate and monitor reverse osmosis plant

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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 and performance criteria on at least two separate occasions and include:

- analysing reverse osmosis plant faults using data analysis techniques and tools
- applying work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
 - chemical use and hazards
 - emergency procedures
 - risk control measures
 - safe working practices
- communicating with personnel
- completing documentation using recording procedures
- determining permit to work
- identifying and responding to abnormal reverse osmosis plant operating conditions
- identifying reverse osmosis plant status
- implementing regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- interpreting manuals
- monitoring and inspecting reverse osmosis plant operation
- operating reverse osmosis plant
- organising resources
- preparing and planning work
- testing reverse osmosis plant operationally using diagnostic and testing techniques
- working with reverse osmosis 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 and performance criteria and include knowledge of:

- arrangements of power production plant
- manuals

- permit to work system
- regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- reverse osmosis plant and equipment, location and operating parameters
- reverse osmosis plant status
- WHS/OHS legislated requirements, including:
 - emergency procedures
 - risk control measures
 - safe working practices
 - chemical use and hazards
- workplace documentation
- workplace policies and procedures.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

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.

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 (PPE) currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

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