



Australian Government

UEPOPS083 Operate and monitor boiler steam/water cycle

Release: 1

UEPOPS083 Operate and monitor boiler steam/water cycle

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 a boiler steam and/or water cycle.

The relationship of components within the boiler and steam and/or water cycle in a power generating unit system, and the effect of adjustments made to components, can impact the efficiency and safety of a power generating facility's operation.

Competency in this unit requires the ability to plan work, operate boiler steam and/or water cycle plant, test boiler steam and/or water cycle plant, analyse boiler steam and/or water cycle plant faults, monitor and inspect boiler steam and/or water cycle 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 prerequisites units.

Competency Field

Operations

Unit Sector

Electricity generation

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential Performance criteria describe the performance needed to

outcomes.

demonstrate achievement of the element.

1 Plan and prepare for boiler/steam water cycle operation

- 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 monitored
- 1.2** Work requirements, including permits to work, are identified from relevant personnel and documentation in accordance with workplace procedures
- 1.3** Documentation to determine boiler steam/water cycle plant status is assessed and evaluated in accordance with workplace procedures
- 1.4** Inspection, preoperational checks and field preparations for boiler steam/water cycle service are carried out in accordance with manufacturers' specifications and workplace procedures
- 1.5** Boiler steam/water cycle plant operational prerequisites are established in accordance with manufacturers' specifications and workplace procedures
- 1.6** Sequence for recommissioning of boiler steam/water cycle plant is determined in accordance with workplace procedures

2 Operate boiler steam/water cycle plant

- 2.1** Boiler steam/water cycle plant is operated in accordance with manufacturers' specifications and workplace procedures
- 2.2** Boiler steam/water cycle plant is monitored and observed to detect deviations from normal operating conditions in accordance with workplace procedures
- 2.3** Corrective actions are taken to rectify abnormalities in accordance with workplace procedures
- 2.4** Boiler steam/water cycle plant is identified and removed from service in accordance with workplace procedures

3 Test boiler steam/water cycle plant operation

- 3.1** Operational tests are performed in accordance with workplace procedures
- 3.2** Boiler steam/water cycle plant is observed for correct operational response in accordance with workplace

		procedures
	3.3	Boiler steam/water cycle plant is returned to required operational status upon completion of testing in accordance with workplace procedures
4 Analyse boiler steam/water cycle plant faults	4.1	Causes of abnormal boiler steam/water cycle plant operating conditions are identified by analysing technical and operational information in accordance with workplace procedures
	4.2	Boiler steam/water cycle plant integrity and personnel safety are maintained in consultation with relevant personnel and technical and operational documentation in accordance with workplace procedures
5 Monitor and inspect boiler steam/water cycle plant	5.1	Boiler steam/water cycle 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	Boiler steam/water cycle 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 UEPOPS316 Operate and monitor boiler steam/water cycle.

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 UEPOPS083 Operate and monitor boiler steam/water cycle

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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 boiler steam/water cycle 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 boiler steam/water cycle plant status
- implementing regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- interpreting manuals
- monitoring and inspecting boiler steam/water cycle plant operations
- operating boiler steam/water cycle plant
- organising resources
- performing isolations
- preparing and planning work
- preparing boiler steam/water cycle plant and/or equipment for operation
- recognising and responding to abnormal boiler water and/or steam cycle plant operating conditions
- testing boiler steam/water cycle plant operationally using diagnostic and testing techniques
- using permit to work system.

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

- boiler steam and/or water cycle, types and characteristics, including steam temperature controls, economisers and superheaters
- boiler steam/water cycle plant and equipment, location and operating parameters
- boiler steam/water cycle plant status
- isolations
- manuals
- permit to work system
- regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- WHS/OHS requirements, including:
 - emergency procedures
 - risk control measures
 - safe work practices
- 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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