



Australian Government

UEPOPS070 Operate and monitor a boiler unit

Release: 1

UEPOPS070 Operate and monitor a boiler unit

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 and monitor an in-service boiler unit capable of supplying steam.

Boilers are used to create steam by applying heat to water, the steam expands and turns the turbines and these in turn drive the generators in power generation facilities.

Competency in this unit requires the ability to plan work, operate boiler unit plant, test boiler unit plant, analyse boiler unit plant faults, monitor and inspect boiler unit 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 | 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 are identified from relevant personnel and documentation in accordance with workplace procedures |
| | 1.3 Preoperational checks are carried out on boiler unit plant in accordance with manufacturers' recommendations and specifications, and workplace procedures |
| 2 Operate boiler unit plant | 2.1 Combustion is established and fuel consumption at minimum levels is supported in accordance with manufacturers' recommendations and specifications, and workplace procedures |
| | 2.2 Fuel and air feed flows are adjusted to achieve required steam conditions, demand and observation of operating requirements in accordance with workplace procedures |
| | 2.3 Boiler unit plant is operated within the limits of the design in accordance with workplace procedures |
| | 2.4 Boiler unit plant is monitored and observed to detect deviations from required operating conditions in accordance with workplace procedures |
| | 2.5 Corrective actions are taken to rectify boiler unit abnormalities in accordance with manufacturers' recommendations and specifications, and workplace procedures |
| 3 Test boiler unit plant operation | 3.1 Operational tests are performed in accordance with workplace procedures |
| | 3.2 Boiler unit plant is observed for correct operational response in accordance with workplace procedures |
| | 3.3 Boiler unit plant is returned to required operational status upon completion of test in accordance with workplace procedures |
| 4 Analyse boiler unit plant faults | 4.1 Causes of abnormal boiler unit plant operating conditions are identified by analysing technical and operational information in accordance with workplace |

- procedures,
- 4.2** Boiler unit plant integrity and personnel safety is maintained in consultation with relevant personnel, technical and operational documentation in accordance with workplace procedures,
- 5 Monitor boiler unit plant**
- 5.1** Boiler unit plant is monitored 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 unit 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 UEPOPS339 Operate and monitor a boiler unit.

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 UEPOPS070 Operate and monitor a boiler unit

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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 unit 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 working practices
- communicating with personnel
- completing documentation using recording procedures
- identifying boiler unit plant status
- implementing regulations, legislative requirements, codes of practice, manufacturers' recommendations and specifications, and environmental requirements
- interpreting manuals
- operating boiler plant and equipment
- organising resources
- preparing and planning work
- recognising and responding to abnormal boiler unit plant operating conditions
- testing boiler unit plant operationally using diagnostic and test techniques
- utilising permit to work system
- working with boiler unit 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
- boiler unit plant and equipment, location and operating parameters
- boiler unit plant operation processes
- boiler unit plant status

- 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 working 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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