



Australian Government

FBPSUG3006 Monitor a sugar mill powerhouse

Release: 1

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Modification History

Release	Comments
Release 1	This version released with the FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to operate and monitor one or more turbines with attached alternators supplying factory power. It applies to both continuous and short-term powerhouse operation, including start-up and shutdown after a prolonged break.

The unit applies to individuals working in the sugar milling industry. The work is typically carried out in liaison with an electrician.

All work must be carried out to comply with workplace procedures according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

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

Pre-requisite Unit

Prerequisite unit of competency for this unit is:

- UEPOPL001A Licence to operate a steam turbine.

Unit Sector

Sugar milling (SUG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to operate the powerhouse	1.1 Select, fit and use personal protective equipment according to workplace safety procedures 1.2 Run warm-up sequence of turbines and alternators in preparation

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	for handover from local powerhouse to powerhouse consul
2. Monitor powerhouse operation	2.1 Monitor powerhouse output against site requirements 2.2 Monitor equipment to confirm operating condition according to workplace requirements 2.3 Ensure the workplace meets cleaning standards
3. Analyse and respond to abnormal performance	3.1 Analyse plant operating data and conditions to identify causes of abnormal performance 3.2 Take corrective action in response to workplace hazards and abnormal plant performance 3.3 Implement emergency procedures according to health and safety procedures
4. Hand over powerhouse operation	4.1 Maintain workplace records according to workplace procedures 4.2 Carry out handover according to workplace procedures 4.3 Notify powerhouse operators of powerhouse and related equipment status
5. Shut down the powerhouse	5.1 Identify the powerhouse shut down procedure and implement 5.2 Prepare the powerhouse for storage in shutdown mode 5.3 Identify and report operational maintenance requirements according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Oral communication	Speak clearly and use accurate terminology to communicate with others
Numeracy	Monitor and interpret powerhouse control indicators and data
Navigate the world of	- Apply workplace procedures relevant to own role - Understand own role and associated responsibilities

Skill	Description
work	
Interact with others	• Apply communication practices and protocols relevant to own role
Get the work done	• Access and interpret powerhouse control panels and system • Make decisions to correct abnormal plant performance • Identify and correct problems within own level of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPSUG3006 Monitor a sugar mill powerhouse	FDFSUG306A Monitor a sugar mill powerhouse	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPSUG3006 Monitor a sugar mill powerhouse

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Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has monitored a sugar mill powerhouse in line with workplace contexts and demonstrated each of the following points at least once:

- selected, fitted and used personal protective equipment (PPE)
- conducted warm-up sequence
- confirmed that turbines and alternators are ready for warm-up and operation
- handed over control to operating consul
- performed run-up procedures in both manual and automatic modes
- monitored powerhouse operation
- maintained cleaning standards in work area
- performed shift handover procedure
- recorded operating information
- taken corrective action in response to abnormal or unacceptable performance
- applied an understanding of emergency trip procedure and related re-start.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- operating principles of process control, including the relationship between control panels and systems and the physical equipment
- purpose and principles of power generation, including the impact of out-of-range frequency voltage on equipment operation
- operating principles of powerhouse, and instrumentation components, purpose and operation, including the requirement to bar over alternators on start-up, shutdown and emergency stops
- layout of powerhouse, including location of overload protection for equipment and switches

- key health and safety requirements for sugar mill powerhouse operations:
 - hazards related to powerhouse operation, and associated control measures
 - correct use of PPE
 - methods used to render equipment safe to inspect, maintain and/or clean, including lock-out, tag-out and isolation procedures
 - procedures for responding to emergency situations, including safe shutdown procedure
- handover and long-term shutdown and storage procedures
- site procedures for the import and export of power
- environmental issues and controls, including controlling oil spillages.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a sugar milling workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - PPE
 - appropriate steam turbine with an attached alternator and related equipment
 - communication equipment
 - workplace information recording system
- specifications:
 - operating procedures and related advice on equipment operation, including advice on safe work practices and environmental requirements
 - workplace cleaning standards and procedures.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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