



**Australian Government**

# **FBPSUG2019 Operate a bagasse fuel supply system**

**Release: 1**

## FBPSUG2019 Operate a bagasse fuel supply system

### Modification History

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

### Application

This unit of competency describes the skills and knowledge required to operate a bagasse fuel system and related auxiliary fuel system to supply a boiler. The auxiliary fuel supply system is typically an oil system.

The unit applies to individuals who work under supervision in the sugar milling industry.

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

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

### Pre-requisite Unit

Nil

### 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 the fuel supply system for operation  | 1.1 Select, fit and use personal protective equipment according to workplace safety procedures<br>1.2 Conduct pre-operational checks according to operating procedures<br>1.3 Identify and control health and safety hazards<br>1.4 Identify and report maintenance requirements according to |

| Elements                                                 | Performance Criteria                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Elements describe the essential outcomes.</i>         | <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>                                                                                                                                                                                                                           |
|                                                          | workplace procedures<br>1.5 Ensure primary and auxiliary fuel is available to meet combustion requirements<br>1.6 Confirm services are available and ready for operation                                                                                                                                                         |
| 2. Start and monitor operation of the fuel supply system | 2.1 Start and operate the system to meet workplace requirements<br>2.2 Confirm process performance is maintained within operating requirements<br>2.3 Ensure work area meets workplace cleaning standards                                                                                                                        |
| 3. Analyse and respond to abnormal performance           | 3.1 Identify causes of abnormal performance in the system<br>3.2 Take corrective action in response to hazards and abnormal plant performance<br>3.3 Implement emergency procedures according to health and safety procedures                                                                                                    |
| 4. Hand over fuel system operations                      | 4.1 Maintain workplace records according to workplace procedures<br>4.2 Carry out handover according to workplace procedures<br>4.3 Ensure operators are aware of system and related equipment status at completion of handover                                                                                                  |
| 5. Shut down the fuel supply system                      | 5.1 Safely shut down the system according to workplace procedures<br>5.2 Prepare the system for storage in shutdown mode according to operating procedures<br>5.3 Identify and report operational maintenance requirements according to workplace procedures<br>5.4 Store fuel to meet fuel requirements and workplace standards |

## 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 |
|-------|-------------|
|-------|-------------|

| Skill                      | Description                                                                                                                                                                                                                       |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reading                    | <ul style="list-style-type: none"> <li>Interpret information in workplace documentation</li> </ul>                                                                                                                                |
| Numeracy                   | <ul style="list-style-type: none"> <li>Interpret production and process control indicators and data</li> </ul>                                                                                                                    |
| Navigate the world of work | <ul style="list-style-type: none"> <li>Apply workplace procedures to own role and responsibilities</li> </ul>                                                                                                                     |
| Interact with others       | <ul style="list-style-type: none"> <li>Use modes of communication suitable to purpose to confirm and clarify understanding</li> </ul>                                                                                             |
| Get the work done          | <ul style="list-style-type: none"> <li>Access and interpret bagasse fuel supply system process control panels and system</li> <li>Make routine decisions to correct abnormal performance of bagasse fuel supply system</li> </ul> |

## Unit Mapping Information

| Code and title current version                     | Code and title previous version                    | Comments                                        | Equivalence status |
|----------------------------------------------------|----------------------------------------------------|-------------------------------------------------|--------------------|
| FBPSUG2019<br>Operate a bagasse fuel supply system | FDFSUG219A<br>Operate a bagasse fuel supply system | 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 FBPSUG2019 Operate a bagasse fuel supply system

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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 operated a bagasse fuel supply system in line with workplace contexts and demonstrated each of the following points at least once:

- selected, fitted and used required personal protective equipment (PPE)
- conducted pre-start checks of equipment, fuel and services
- followed start-up procedures in both manual and automatic modes
- safely operated, monitored and adjusted a bagasse fuel system and related auxiliary fuel system to supply a boiler
- cleared fuel blockages or chokes throughout the system according to workplace procedures
- applied fuel storage and/or reclamation procedures
- applied procedures for test firing burners
- removed, inspected, cleaned and replaced oil burners
- carried out shift handover procedures
- taken a fuel supply system off-line according to workplace procedures
- taken corrective action in response to abnormal or unacceptable performance
- reported fuel system operations and maintenance requirements
- controlled work health and safety risks
- safely shut down bagasse fuel supply system.

## 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:

- properties of bagasse and bagacillo, and impact of variation on combustion
- impact of bagasse belt levels on system capacity to supply
- principles of flame management systems, including understanding of when and how to purge boiler before relighting in a flame-out situation

- purpose and operation of auxiliary fuel supply
- functions and basic operating principles of fuel supply system, components and auxiliary equipment
- fuel storage requirements relevant to a bagasse fuel system
- fuel reclamation options and procedures
- the effect of fuel quality and supply on boiler operation
- bagasse fuel supply system layout to supply a boiler
- relationship between viscosity and temperature for burner operation
- purpose of atomising steam and/or air
- purpose of purge cycle for the burner
- relationship between fuel supply system and other processes
- key health and safety requirements relevant to operating a bagasse fuel system:
  - hazards related to operation of fuel supply system, and associated control measures
  - correct use of PPE
  - methods used to render equipment safe to inspect, maintain and clean, including lock-out, tag-out and isolation procedures
  - procedures for responding to emergency situations, including emergency shutdown
- handover and long-term shutdown and storage procedures
- procedures and responsibility for reporting problems relevant to operating a bagasse fuel system
- environmental and waste handling requirements and procedures relevant to operating a bagasse fuel system
- recording requirements and procedures for operating a bagasse fuel system.

## 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
  - bagasse fuel supply equipment
  - fuel and services as required
  - maintenance tools
  - workplace information recording system
- specifications:
  - operating procedures and related advice on equipment operation, including advice on safe work practices and environmental requirements
  - product and process specifications and operating parameters
  - workplace cleaning standards and procedures
  - workplace information recording procedures

- sampling schedule and procedures.

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

## **Links**

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