



Australian Government

FBPOPR2045 Operate pumping equipment

Release: 1

FBPOPR2045 Operate pumping equipment

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 1.0

Application

This unit of competency describes the skills and knowledge required to set up, operate and monitor pumping equipment.

This unit applies to individuals who work under general supervision and exercise limited autonomy in a food processing environment. It typically applies to the production worker responsible for applying basic operating principles to the operation and monitoring of pumping and associated equipment.

All work must be carried out to comply with workplace procedures, in accordance with State/Territory work health and safety, and food 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

Nil

Unit Sector

Operational (OPR)

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 pumps for operation	1.1 Confirm pumps and related equipment are available to meet operating requirements 1.2 Wear appropriate personal protective clothing and ensure correct fit

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Carry out pre-start checks on pumps and related equipment according to work health and safety and operating procedures 1.4 Select appropriate settings to meet safety and production requirements 1.5 Monitor and maintain condition of pumps and related equipment, and identify and report maintenance requirements according to workplace reporting requirements
2. Monitor pump operation	2.1 Start and monitor pumps and related equipment to identify variation in operating conditions 2.2 Take corrective action to maintain pump operation within equipment capacity and operating parameters
3. Complete pump operation	3.1 Prepare pumps for cleaning and/or maintenance according to work health and safety and food safety requirements 3.2 Conduct work in accordance with workplace environmental guidelines 3.3 Maintain the work area according to workplace procedures 3.4 Maintain workplace records 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
Reading	- Interpret workplace and standard operating procedures relevant to job role - Interpret production requirements
Writing	Record operating, routine maintenance and shutdown information on paper-based and electronic media
Numeracy	- Monitor and interpret production and process control indicators and data - Monitor supply and flow of materials to and from the process
Navigate the world of	Apply workplace procedures to own role and responsibilities

Skill	Description
work	- Identify skills, knowledge and experience required for performing own role in the workplace - Ask questions to clarify understanding or seek further information
Interact with others	- Communicate and report operational and safety information to relevant personnel - Use modes of communication suitable to purpose to confirm understanding when conducting operational start-up and shutdown procedures
Get the work done	- Access and interpret process control panels and system - Maintain a clean and hazard-free work area - Identify out-of-specification standards and maintain quality specifications - Confirm equipment status and condition - Interpret process and equipment information to monitor process and respond to abnormal performance and variations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOPR2045 Operate pumping equipment	FDFOP2045A Operate pumping equipment	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPOPR2045 Operate pumping equipment

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Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has operated pumping equipment on at least one occasion, including:

- accessing workplace information to identify pumping requirements
- selecting, fitting and using personal protective clothing and/or equipment
- confirming supply of materials to be pumped and necessary services
- conducting pre-start checks, including:
 - inspecting pump flanges, gaskets and seals to identify any signs of wear
 - checking related valve assemblies to identify any signs of leaks
 - cancelling isolation or lock-outs (where pumps have variable settings that involve selecting appropriate settings and confirming that related pipework is correctly configured for pumping requirements)
- monitoring and adjusting pump operation, including identifying variation in amperage and adjusting pump speeds/flow rates to meet pumping requirements
- monitoring supply and flow of materials to and from the pump
- following isolation and lock-out/tag-out procedures to take pumps and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility
- responding to and/or reporting pump equipment failure within level of responsibility
- locating stop and reset functions on pumps
- maintaining work area to meet housekeeping standards
- operating pumps using process control systems according to workplace procedures
- cleaning pumps and related equipment according to workplace procedures
- following relevant work health and safety requirements.

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:

- basic operating principles of pumps and related equipment, including:
 - main pump components
 - status and purpose of guards
 - pump system configuration, including valves, taps and pipework
- the effect of pumping system design on operating performance, including flow resistance, pressure and head
- operating capacities of pumps used in the work area, including different pump types to perform pumping operations
- effect of raw material characteristics on pump performance, including variables that include soluble solids, temperature and viscosity
- effect of pump operating parameters on product/materials pumped
- corrective action required where pump operation is outside specified operating parameters
- typical equipment faults and related causes relevant to operating pumping equipment, including:
 - signs and symptoms of faulty equipment
 - early warning signs of potential problems
 - services required
- isolation, lock-out and tag-out procedures and responsibilities required for operating pumping equipment
- work health and safety hazards and controls relevant to operating pumping equipment
- procedures and responsibility for reporting problems
- environmental issues and controls, including action required in the event of significant leaks or spills
- basic operating principles of process control, including the relationship between control panels and systems and the physical equipment
- cleaning procedures required for operating pumping equipment.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - personal protective clothing and equipment
 - pumps, related equipment and services
 - materials to be pumped
 - routine preventative maintenance schedule as required
 - cleaning procedures, materials and equipment
- specifications:
 - work procedures, including advice on safe work practices, food safety, quality and environmental requirements
 - information on equipment capacity and operating parameters.

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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