



Australian Government

FBPOPR2054 Operate a water purification process

Release: 1

FBPOPR2054 Operate a water purification process

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, adjust and shut down a water purification process.

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 a water purification process 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 for work in processing area	1.1 Confirm materials are available to meet operating requirements 1.2 Identify and confirm cleaning and sanitising requirements and status 1.3 Wear appropriate personal protective clothing and ensure correct

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2. Prepare the water purification equipment and process for operation	2.1 Complete batch records or process documentation according to workplace procedures 2.2 Enter processing and operating parameters to meet safety and production requirements 2.3 Check equipment performance and adjust as required 2.4 Carry out pre-start checks according to operating procedures
3. Operate and monitor the water purification process	3.1 Start, operate and monitor the process for variation in operating conditions 3.2 Identify hazards and take corrective action according to operating procedure and work health and safety requirements 3.3 Monitor the process to confirm that water purification specifications are met 3.4 Identify, rectify and report out-of-specification equipment, product or process outcomes according to workplace requirements 3.5 Follow and apply work cleaning and environmental working procedures
4. Shut down the water purification process	4.1 Identify the appropriate shutdown procedure and implement 4.2 Identify and report maintenance requirements according to operating procedures 4.3 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

Skill	Description
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 work	- Apply workplace procedures to own role and responsibilities - 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
FBPOPR2054 Operate a water purification process	FDFOP2054A Operate a water purification process	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 FBPOPR2054 Operate a water purification process

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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 a water purification process on at least one occasion, including:

- accessing workplace information to identify water purification process requirements
- selecting, fitting and using personal protective clothing and/or equipment
- responding appropriately to hazards, including chemical spills
- confirming supply of necessary materials and services
- conducting pre-start checks, including:
 - inspecting equipment condition to identify any signs of wear
 - selecting appropriate settings and/or related parameters
 - cancelling isolation or lock-outs
 - confirming that equipment is clean and correctly configured for water purification process requirements
 - positioning sensors and controls correctly
 - ensuring any scheduled maintenance has been carried out
 - confirming that all safety guards are in place and operational
- starting, operating, monitoring and adjusting water purification process equipment to achieve required outcomes, including monitoring control points and conducting inspections to confirm process remains within specification, including:
 - flow rates
 - pressure
 - operation of dosing equipment
 - alarms
- monitoring supply and flow of materials to and from the water purification process
- taking corrective action in response to out-of-specification results
- maintaining a purification system free of physical, chemical and biological contaminants
- responding to and/or reporting equipment failure within level of responsibility

- locating emergency stop functions on equipment
- following isolation and lock-out/tag-out procedures to take water purification process and related equipment off-line in preparation for cleaning/back-flushing and/or maintenance within level of responsibility
- carrying out cleaning, sanitising, regenerating and back-flushing
- completing workplace records
- maintaining work area to meet housekeeping standards
- following relevant work health and safety procedures, including responding appropriately to hazards, including chemical spills.

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:

- purpose and basic principles of the water purification process, including methods used to purify water appropriate to workplace requirements
- basic operating principles of equipment, including:
 - main equipment components
 - status and purpose of guards
 - equipment operating capacities and applications
 - purpose and location of sensors and related feedback instrumentation
- services required and action to take if services are not available
- the flow of the water purification process and the effect of outputs on downstream processes
- quality characteristics to be achieved by the water purification process
- quality requirements of inputs to the purification process and the effect of variation on process performance
- operating requirements and parameters, and corrective action required where operation is outside specified operating parameters
- typical equipment faults and related causes, including:
 - following troubleshooting and problem-solving guidelines
 - recognising signs and symptoms of faulty equipment and early warning signs of potential problems
- basic operating principles of process control as appropriate, including the relationship between control panels and systems and the physical equipment
- methods used to monitor the water purification process, including inspecting, measuring and testing by the process
- inspection or test points (control points) in the water purification process and the related procedures and recording requirements
- Good Manufacturing Practice (GMP)/food safety requirements (as appropriate) associated with the purification process and related control measures
- common causes of variation and corrective action required
- work health and safety hazards and controls

- requirements of different shutdowns as appropriate to the water purification process and workplace production requirements, including emergency and routine shutdowns
- isolation, lock-out and tag-out procedures and responsibilities
- cleaning and sanitation procedures
- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the water purification process.

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
 - washing and drying equipment and services, including water and sanitiser
 - raw materials to be processed
 - sampling schedules and test procedures and equipment
 - 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
 - production schedule/batch instructions
 - specifications and inspection or control points
 - documentation and recording requirements 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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