



Australian Government

SFIAQU410 Implement a program to operate, maintain or upgrade a recirculating aquaculture system

Release: 2

SFIAQU410 Implement a program to operate, maintain or upgrade a recirculating aquaculture system

Modification History

Release	Comments
Release 2	This version released with SFI Seafood Industry Training Package Version 2.0.
Release 1	This version released with SFI Seafood Industry Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to plan, implement and monitor a program for the operation, maintenance or upgrade of a recirculating aquaculture system.

This unit applies to individuals with the technical expertise to operate the system or facility, trial new processes and supervise staff within an aquaculture environment.

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

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

Pre-requisite Unit

Nil

Unit Sector

Aquaculture (AQU)

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. Plan operation and	1.1 Confirm operations, maintenance or design or upgrade

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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
maintenance of a recirculating aquaculture system	specifications in the culture or holding system or facility with senior personnel 1.2 Draw up work plans or schedules, order materials and arrange labour and appropriate equipment according to specifications and in consultation with senior personnel 1.3 Check raw and prefabricated materials against delivery manifest or specifications 1.4 Prepare worksite according to specifications, and secure for safety or loss prevention 1.5 Assess potential risks, including environmental and water quality parameters for the cultured or held stock, and prepare contingency plans 1.6 Brief staff members on work objectives relevant to the site, equipment being used and type of maintenance or upgrade activities 1.7 Quantify costs and confirm budget with senior personnel
2. Implement operations, maintenance or upgrade program	2.1 Implement work plan to minimise disruption to workplace operations and stress to cultured or held stock 2.2 Monitor progress of maintenance or upgrade program against the work plan, and adjust for unforeseen circumstances 2.3 Confirm availability of required materials, resource and supply provisions, and labour 2.4 Anticipate, avoid or minimise hazards and environmental implications and other potential problems through contingency planning
3. Monitor operations, maintenance or upgrade activities	3.1 Monitor operations, maintenance or upgrade activities and component or system performances against maintenance or upgrade plan 3.2 Monitor costs within workplace budget requirements 3.3 Give feedback to staff members on work progress and performance 3.4 Prepare records or reports to management on project progress 3.5 Check and ensure that the maintained or upgraded system or facility fits maintenance or design specifications, is operable and complies with biosecurity regulatory requirements 3.6 Check budget for operations, maintenance or upgrade, and report

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	major discrepancies to senior personnel
4. Finalise and review operations, maintenance and upgrade activities	4.1 Supervise clean-up of work area, including repairs and storage of equipment 4.2 Record relevant operations, maintenance and upgrade data, observations or information, and check any abnormal records 4.3 Prepare required reports for senior personnel

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 operational and maintenance schedules and workplace procedures - Interpret equipment manufacturer specifications and operating instructions - Analyse design plans to determine requirements
Writing	Write reports using workplace format, technical information and data
Numeracy	- Calculate and estimate volumes, measurements and quantities of inputs and outputs of liquids, gases and solids - Estimate and calculate resource costs, and reconcile against budget
Oral communication	Participate in verbal exchanges to report and present information and provide feedback to a range of personnel
Navigate the world of work	Work independently and collectively within broad parameters, taking responsibility for plans, decisions and outcomes relating to work area
Get the work done	- Plan and coordinate multiple and relatively complex activities and resources to achieve work outcomes - Use systematic processes to assess options that take into consideration a range of relevant factors and make improvements to a system or facility using high technology water treatment components

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
SFIAQU410 Implement a program to operate, maintain or upgrade a recirculating aquaculture system Release 2	SFIAQU410 Implement a program to operate, maintain or upgrade a recirculating aquaculture system Release 1	Minor update to performance criteria and performance evidence for clarity referencing biosecurity regulations	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=e31d8c6b-1608-4d77-9f71-9ee749456273>

Assessment Requirements for SFIAQU410 Implement a program to operate, maintain or upgrade a recirculating aquaculture 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 planned and implemented a program to operate, maintain or upgrade a recirculating aquaculture system on at least one occasion, including:

- documenting a work plan for the operations, maintenance or upgrade of the system that includes contingency plans and resources and labour requirements
- monitoring the operations, maintenance or upgrade for the system against work specifications and plan, ensuring it complies with biosecurity regulatory requirements
- effectively communicating information about operations, maintenance or upgrades to the work team and senior personnel
- maintaining accurate records and reports on progress and budget.

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:

- relevant legislative requirements relating to recirculating aquaculture systems
- approaches to coordinating operations
- impacts of inputs on systems and component operation and on maximum operation loads
- requirements for record-keeping, data collection and analysis
- forward planning and risk management for events, such as blackouts, brownouts and equipment breakdowns
- importance of optimised production to achieve sound economic outcomes

- mechanical and technical aspects of recirculation systems, including energy use, mass balance, water hydraulics and flow, and pumps and pipe work
- monitoring basic and advanced environmental and water quality parameters.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an aquaculture workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - recirculating aquaculture system to be maintained or upgraded
- specifications:
 - documentation relevant to the operations, maintenance or upgrade program, including design specifications for the components, system or facility to be maintained or upgraded
 - workplace forms and recording technology
- relationships:
 - evidence of interactions with senior personnel and staff.

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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