

**Modification history**

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

<b>SFIAQU313</b>	<b>Monitor operations of high technology water treatment components</b>
<b>Application</b>	<p>This unit of competency describes the skills and knowledge required to monitor the operation and maintenance of a range of high technology water treatment components to optimise conditions for aquaculture stock breeding and growth, or holding environment. It includes the ability to brief team members on operations and routine maintenance and record and analyse data.</p> <p>The unit applies to individuals who are responsible for monitoring processes and operations in an aquaculture environment, working under broad direction and having limited responsibility for the work of others</p> <p>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.</p> <p>No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.</p>
<b>Prerequisite Unit</b>	Nil
<b>Unit Sector</b>	Aquaculture (AQU)

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 for the operation and maintenance of high technology water treatment components	1.1 Interpret and confirm operations and routine maintenance work plan or schedule with supervisor 1.2 Confirm labour and equipment requirements with supervisor 1.3 Identify workplace requirements for optimal ranges for basic environmental parameters, advanced environmental parameters and water quality parameters affecting cultured or held stock 1.4 Brief team members on basic operations and routine maintenance according to work plan or schedule 1.5 Confirm contingency plans and relay to team members
2. Optimise operations of high technology water treatment components	2.1 Identify and prepare appropriate components for operations, including personal protective equipment according to manufacturer instructions and health and safety requirements 2.2 Make and record routine pre-operational checks and calibrations 2.3 Monitor operation of components and report abnormal conditions to supervisor 2.4 Alter operation or production schedule as required to compensate for factors affecting cultured or held stock during operations 2.5 Collate and analyse data on the performance and efficiency of components or system operation

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
3. Monitor maintenance and repair of high technology water treatment components	3.1 Confirm maintenance schedule with team members 3.2 Monitor repairs and maintenance for pre-operation, standard operation and post-operation according to maintenance schedule 3.3 Identify worn or damaged parts or areas, or malfunctioning components and repair on site or send to manufacturer or specialist 3.4 Check and confirm optimal operation of components following maintenance 3.5 Monitor team progress and outcomes against the maintenance schedule and give support as required
4. Finalise operation, monitoring and maintenance activities	4.1 Check cleaning of work area and disposal of waste materials is completed according to workplace procedures and environmental requirements 4.2 Check condition, maintenance requirements and storage of tools and equipment 4.3 Record relevant data and observations and report any abnormal records to supervisor 4.4 Feedback on work performance is provided to staff

Foundation Skills	
<i>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.</i>	
Skill	Description
Reading	<ul style="list-style-type: none"> <li>Interpret work plan and operational and maintenance schedules</li> <li>Interpret equipment manufacturer specifications and safety data sheet (SDS) labels</li> </ul>
Writing	<ul style="list-style-type: none"> <li>Complete workplace records and checklists legibly and accurately using correct technical terminology</li> </ul>
Numeracy	<ul style="list-style-type: none"> <li>Estimate time and resources needed for required activities</li> <li>Calculate volumes and quantities of inputs and outputs of liquids, gases and solids</li> <li>Calculate dosage rates for medications and treatments and determine withholding periods</li> </ul>
Oral communication	<ul style="list-style-type: none"> <li>Explain basic operations and routine maintenance requirements using language appropriate for audience</li> </ul>
Interact with others	<ul style="list-style-type: none"> <li>Understand what to communicate, with whom and how, in routine work situations</li> <li>Collaborate, cooperate and assist others with job requirements</li> </ul>
Get the work done	<ul style="list-style-type: none"> <li>Use key functions and features of high technology water treatment components and workplace systems to record data and observations</li> </ul>

Unit Mapping Information			
Code and title current version	Code and title previous version	Comments	Equivalence status
SFIAQU313 Monitor operations of high technology water treatment components	SFIAQUA313B Oversee operations of high technology water treatment components	Updated to meet Standards for Training Packages. Revised unit title and minor amendments to elements and performance criteria to better reflect outcomes.	Equivalent unit

<b>Links</b>	Companion Volumes, including Implementation Guides, are available at VETNet: <a href="https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=e31d8c6b-1608-4d77-9f71-9ee749456273">https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=e31d8c6b-1608-4d77-9f71-9ee749456273</a>
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<b>TITLE</b>	<b>Assessment requirements for Monitor operations of high technology water treatment components</b>
<b>Performance Evidence</b>	
<p>An individual demonstrating competency must satisfy all the elements and performance criteria of this unit. There must be evidence that the individual has monitored operations and routine maintenance of high technology water treatment components on at least one occasion including:</p> <ul style="list-style-type: none"> <li>• communicating with supervisor on operations and maintenance schedule, labour and equipment requirements</li> <li>• communicating and monitoring work team activities to ensure the operation and maintenance of high technology water treatment components</li> <li>• applying risk assessment processes and putting controls in place to mitigate risk and minimise impact</li> <li>• adjusting systems to optimise conditions for stock breeding and growth, or holding environment</li> <li>• reporting on effectiveness of operation, monitoring and maintenance</li> <li>• repairing and replacing components</li> <li>• applying work health and safety and environmental requirements</li> <li>• monitoring cleaning work area and equipment and disposing of waste.</li> </ul>	
<b>Knowledge Evidence</b>	
<p>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:</p> <ul style="list-style-type: none"> <li>• procedures for the operation and maintenance of high technology water treatment components</li> <li>• main biological and environmental requirements of the culture or holding species</li> <li>• key impacts of inputs on systems and component operation, such as maximum stocking, feeding and waste loads</li> <li>• water quality, optimal and critical limits for various parameters and non-standard conditions</li> <li>• health and safety practices and risks associated with operation and maintenance of high technology water treatment components</li> <li>• risk management for events, such as blackouts, brownouts and equipment breakdowns</li> <li>• procedures for data collection, recording, analysis and reporting on operation, monitoring and maintenance activities</li> <li>• relevant legislation relating to monitoring operations of high technology water treatment components.</li> </ul>	

<b>Assessment Conditions</b>	
<p>Assessment of this unit of competency must take place under the following conditions:</p> <ul style="list-style-type: none"> <li>• physical conditions:                             <ul style="list-style-type: none"> <li>• skills must be demonstrated in an aquaculture workplace or an environment that accurately represents workplace conditions</li> </ul> </li> <li>• resources, equipment and materials:                             <ul style="list-style-type: none"> <li>• personal protective equipment</li> <li>• high technology water treatment components</li> <li>• water monitoring equipment</li> <li>• other equipment as needed to operate the system and maintain water quality</li> <li>• spare parts and repair materials</li> <li>• forms or systems for recording data</li> </ul> </li> <li>• specifications:                             <ul style="list-style-type: none"> <li>• workplace requirements for basic and advanced environmental parameters, and water quality parameters for culture or holding stock</li> <li>• work plan, schedule or work instructions for high technology water treatment system or component operation and maintenance</li> <li>• workplace procedures for water treatment system or component operation and maintenance, that includes advice on health and safety and environmental requirements</li> <li>• manufacturer instructions for operating and maintaining high technology water treatment system or components</li> </ul> </li> <li>• relationships                             <ul style="list-style-type: none"> <li>• interactions with supervisor and team members.</li> </ul> </li> </ul> <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>	

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