



**Australian Government**

# **SFIDIVE309A Work effectively as a diver in the seafood industry**

**Release 1**

## SFIDIVE309A Work effectively as a diver in the seafood industry

### Modification History

Release	TP Version	Comment
1	SFI11v2	Initial release. Supersedes and is not equivalent to <i>SFIDIVE301B Work effectively as a diver in the seafood industry</i>

### Unit Descriptor

This unit of competency covers the basic knowledge and skills relating to dive industry structures, diving principles and diving occupational health and safety (OHS) practices that an individual needs to work effectively as an occupational diver in the seafood industry, including public aquaria and other live holding facilities.

Licensing, legislative, regulatory or certification requirements may apply to this unit. Therefore it will be necessary to check with the relevant state or territory regulators for current licensing, legislative or regulatory requirements before undertaking this unit.

### Application of the Unit

Completion of this and other diving units may lead to further accreditation in occupational diving by industry and/or regulatory authorities. Check with the relevant industry or regulatory body for specific requirements.

All enterprise or workplace procedures and activities are carried out according to ***relevant government regulations, licensing and other compliance requirements***, including ***occupational health and safety (OHS) guidelines***, maritime and occupational diver codes of practice and procedures and ***ecologically sustainable development (ESD) principles***.

Equipment operation, maintenance, repairs and calibrations are undertaken in a safe manner that conforms to manufacturer instructions. Appropriate ***personal protective equipment (PPE)*** is selected, checked, used and maintained.

### Licensing/Regulatory Information

Refer to Unit Descriptor

## Pre-Requisites

HLTFA311A Apply first aid

## Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
---	--

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Apply knowledge of the roles of industry, government bodies and qualifications for diving operations	1.1. <b><i>Roles</i></b> of a diver in the seafood industry and diving <b><i>qualifications</i></b> are understood and complied with 1.2. The roles of industry, government bodies and various diving qualifications relating to diving work are identified and applied to diving work
2. Apply anatomy, diving physics and physiology principles when performing dives	2.1. The relationship between the pressure, volume and temperatures of gas, and the implications of this relationship for the <b><i>physical condition</i></b> of divers, are understood and <b><i>applied</i></b> to diving work 2.2. Partial pressure, solubility of gases, the behaviour of light and sound under water and buoyancy principles are understood and applied to diving work
3. Follow OHS procedures in diving operations	3.1. Guidelines and regulatory requirements for OHS in diving operations are understood and complied with 3.2. The needs of a diving casualty are <b><i>identified</i></b> and the correct procedures are applied

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Required skills include:

- assessing and establishing the needs of a diving casualty
- assisting in the treatment of diving-related health conditions and illnesses
- calculating:
  - volume changes with changing depths and pressures
  - pressure changes with changes in temperature
  - partial pressure of gases at different depths
  - buoyancies of various objects at different depths
- complying with any relevant codes of practice and OHS regulatory requirements
- complying with the general requirements of Australian standards for diving
- providing first aid to a diving casualty
- literacy skills to:
  - follow dive tables
  - read diving information and instruments
- numeracy skills to make calculations for diving operations

#### Required knowledge

Required knowledge includes:

- industry and government bodies associated with diving
- principles relating to:
  - buoyancy (Archimedes' Principle)
  - the partial pressure of gases (Dalton's Law)
  - the relationship between pressure and temperature (Charles' Laws)
  - the relationship between pressure and volume (Boyle's Law)
  - the solubility of gases (Henry's Law)
- procedures relating to maintaining the health and safety of the individual and others
- reciprocal recognition arrangements of dive standards with other countries
- advantages and limitations of the use of one hundred per cent oxygen in managing diving illnesses
- atmospheric, hydrostatic, absolute, ambient and gauge pressures
- Australian standards relating to diving, such as AS/NZ 2299.1:2007 Occupational diving operations - Standard operational practice and AS 2815 series - Training and certification of occupational divers
- different effects of saltwater and freshwater on buoyancy

**REQUIRED SKILLS AND KNOWLEDGE**

- equipment used to compensate for buoyancy changes
- equipment used to compensate for light and sound effects under water
- hazards other than those directly related to diving that may affect divers
- obligations, responsibilities and required health status for accreditation as an occupational diver
- positive, negative and neutral buoyancy
- recreational dive-industry qualifications relating to occupational diving
- statutory requirements for OHS in diving operations
- the Australian Diver Accreditation Scheme (ADAS)
- the behaviour of light and sound under water and their effect on divers
- the effect on divers of partial pressure and solubility of gases
- the effect on divers of pressure, volume and temperature changes
- the need for decompression as it relates to partial pressure and solubility of gases
- the relationship between the ADAS and diver-training establishments
- the use and effect of nitrox in surface-orientated diving operations using self-contained underwater breathing apparatus (SCUBA)

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment evidence required to demonstrate competence in this unit</b>	<p>Assessment must confirm the ability to:</p> <ul style="list-style-type: none"> <li>• assess the needs of a diving casualty and provide first aid as required</li> <li>• assist in the treatment of diving-related health conditions and illnesses</li> <li>• complete calculations accurately relating to depth, pressure, temperature, gases and buoyancy</li> <li>• comply with regulations and industry standards relating to occupational diving</li> <li>• follow OHS requirements for diving operations</li> </ul> <p>Assessment must confirm knowledge of:</p> <ul style="list-style-type: none"> <li>• first aid principles as they relate to diving-related conditions, illnesses and accidents</li> <li>• hazards associated with diving</li> <li>• regulations, Australian standards and industry standards related to diving</li> <li>• the advantages and limitations of the use of gases</li> <li>• the laws and principles relating to depth, pressure, temperature, gases and buoyancy</li> <li>• the statutory requirements for OHS in diving operations</li> <li>• the use and effect of gases</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment is to be conducted at the workplace or in a simulated work environment.</p> <p>Resources may include:</p> <ul style="list-style-type: none"> <li>• current first aid manuals</li> <li>• manuals relating to the various regulations and codes of practice</li> <li>• relevant diving equipment</li> <li>• suitable dive sites</li> </ul>

<b>EVIDENCE GUIDE</b>	
<b>Method of assessment</b>	The following assessment methods are suggested: <ul style="list-style-type: none"><li>• observation of practical demonstration</li><li>• practical exercises</li><li>• project work</li><li>• written or oral short-answer testing</li></ul>
<b>Guidance information for assessment</b>	This unit may be assessed holistically with other diving units.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><b><i>Relevant government regulations, licensing and other compliance requirements</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• business or workplace operations, policies and practices</li> <li>• ecologically sustainable development (ESD) principles, environmental hazard identification, risk assessment and control</li> <li>• fisheries or aquaculture regulations, permits and licences</li> <li>• health and welfare of aquatic animals</li> <li>• Indigenous land rights and cultural activities</li> <li>• maritime and occupational diving operations, safety at sea and pollution control</li> <li>• OHS hazard identification, risk assessment and control</li> </ul>
<p><b><i>OHS guidelines</i></b> may include:</p>	<ul style="list-style-type: none"> <li>• appropriate workplace provision of first aid kits</li> <li>• codes of practice, regulations and/or guidance notes which may apply in a jurisdiction or industry sector</li> <li>• enterprise-specific OHS procedures, policies or standards</li> <li>• hazard and risk assessment of workplace, maintenance activities and control measures</li> <li>• induction or training of staff and contractors in relevant OHS procedures and/or requirements to allow them to carry out their duties in a safe manner</li> <li>• OHS training register</li> <li>• safe lifting, carrying and handling techniques</li> <li>• safe systems and procedures for outdoor work, including protection from solar radiation, confined space entry and the protection of people in the workplace</li> <li>• systems and procedures for the safe maintenance of property, machinery and equipment, including hydraulics and exposed</li> </ul>



<b>RANGE STATEMENT</b>	
	<p>moving parts</p> <ul style="list-style-type: none"> <li>the appropriate use, maintenance and storage of PPE</li> </ul>
<i>ESD principles</i> may include:	<ul style="list-style-type: none"> <li>improving energy efficiency</li> <li>increasing use of renewable, recyclable and recoverable resource</li> <li>managing environmental hazard identification, risk assessment and control</li> <li>protecting native and protected flora and fauna, marine or land parks or areas, adhering to the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES), the Ramsar Convention, World Heritage and other international treaties for which Australia is a signatory</li> <li>reducing emissions of greenhouse gases</li> <li>reducing energy use</li> <li>reducing use of non-renewable resources</li> </ul>
<i>PPE</i> may include:	<ul style="list-style-type: none"> <li>buoyancy vest or personal floatation device (PFD)</li> <li>personal locator beacon or Emergency Position Indicating Radio Beacon (EPIRB)</li> <li>sun protection (e.g. sun hat, sunscreen and sunglasses)</li> </ul>
<i>Roles</i> may include:	<ul style="list-style-type: none"> <li>act as standby</li> <li>supervise other divers</li> <li>support aquaculture operations</li> <li>support vessel maintenance</li> <li>support wild catch fishing operations, including ornamental species</li> <li>undertake cleaning and maintenance of aquaculture or holding facilities, including public aquaria</li> </ul>
<i>Qualifications</i> may include:	<ul style="list-style-type: none"> <li>ADAS</li> <li>industry</li> <li>recreational</li> </ul>
<i>Physical condition</i> may include:	<ul style="list-style-type: none"> <li>bite</li> <li>decompression sickness and predisposing factors</li> <li>hyperventilation</li> <li>hypothermia</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• lung or eardrum barotrauma</li> <li>• near drowning, drowning and saltwater fever</li> <li>• poisoning and toxicity:               <ul style="list-style-type: none"> <li>• carbon monoxide</li> <li>• carbon dioxide</li> <li>• oxygen</li> </ul> </li> <li>• stings and wounds inflicted by marine animals</li> <li>• shocks from bleeding</li> <li>• squeezes</li> </ul>
<i>Applied</i> may include:	<ul style="list-style-type: none"> <li>• Archimedes' Principle</li> <li>• Boyle's Law</li> <li>• Charles' Laws</li> <li>• Dalton's Law</li> <li>• Henry's Law</li> <li>• calculations</li> </ul>
<i>Identified</i> may include:	<ul style="list-style-type: none"> <li>• advised by a third party</li> <li>• directly</li> </ul>

## Unit Sector(s)

Diving operations