



**Australian Government**

# **Assessment Requirements for AHC MAR305 Monitor ocean conditions and marine environmental quality**

**Release: 1**

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## Modification History

| Release   | Comments                                                                                                                    |
|-----------|-----------------------------------------------------------------------------------------------------------------------------|
| Release 1 | This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0. |

## 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, on at least one occasion, planned and implemented an ocean monitoring program for conditions and environmental quality using sensors, sampling and laboratory analysis according to workplace procedures.

There must also be evidence that the individual has:

- scheduled monitoring activity within operating constraints, including:
  - seasonal effects
  - prevailing weather conditions
  - tides and currents
  - human impact
- obtained and assembled equipment and consumables for monitoring ocean conditions and marine environmental quality
- assembled, checked and tested monitoring and support equipment
- conducted a risk assessment prior to monitoring activity
- monitored ocean water quality, including:
  - temperature
  - salinity
  - turbidity
  - contaminants
  - flow
- monitored biological indicators and markers in marine environments, which must include sediment quality and indicator species
- cleaned, maintained, repaired or replaced water monitoring equipment
- briefed and de-briefed personnel on monitoring ocean conditions and marine environmental quality

- transported equipment and consumables for monitoring ocean conditions and marine environmental quality
- stored equipment and consumables for monitoring ocean conditions and marine environmental quality
- recorded, secured and stored data
- secured, labelled and stored samples for transport according to partner organisation 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:

- drivers of local and regional ocean circulation and conditions, including:
  - ocean current systems
  - weather patterns
  - tides
  - seasonal changes, including freshwater inflows
  - extraordinary storms, temperature events and sources of marine pollution
- factors that impact on local and regional ocean conditions, including:
  - season
  - weather
  - tides
  - currents
  - human impact
- the basic physics of the underwater environment and the interplay of factors such as depth, pressure, temperature, water chemistry, flow and light penetration
- biological markers and indicators of marine system health
- equipment and techniques used for monitoring ocean conditions and marine environmental quality
- techniques and processes used for taking, storing, processing and transporting ocean water samples
- sampling risks associated with contamination and storage
- planning monitoring operations for ocean conditions and marine environmental quality
- computer hardware and software systems that support monitoring
- techniques for cleaning and maintaining marine water monitoring equipment
- maritime regulations for commercial survey work on vessels
- risk assessments and safety considerations for conducting marine monitoring
- biosecurity measures for marine monitoring techniques and equipment
- operating and emergency procedures for marine monitoring work
- types of contaminants affecting water quality, including:
  - hydrocarbons
  - plastics and microplastics.

## 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 ocean environment
- resources, equipment and materials:
  - a vessel for transport to an ocean environment
  - tools and equipment for monitoring
  - personal protective equipment
- specifications:
  - workplace procedures and processes for monitoring in an ocean environment
  - manufacturer operating instructions for monitoring equipment
  - workplace instructions
- relationships:
  - team members
  - supervisor
- timeframes:
  - according to timeframes specified in monitoring program schedule.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

## Links

Companion Volumes, including Implementation Guides, are available at VETNet: -  
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>