



Australian Government

MARH006 Forecast weather and oceanographic conditions

Release: 1

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Modification History

Not applicable.

Application

This unit involves the skills and knowledge required to forecast weather and oceanographic conditions during a near coastal voyage and to take appropriate actions based on predictions.

This unit applies to people working in the maritime industry on a range of vessels up to 80 metres.

This unit has links to legislative and certification requirements.

Pre-requisite Unit

Not applicable.

Competency Field

H – Navigation

Unit Sector

Not applicable.

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Interpret weather and oceanographic information

- 1.1 Ocean and weather conditions are observed and interpreted
- 1.2 Measurements of current local, meteorological and oceanographic parameters are made and recorded using appropriate shipboard instruments
- 1.3 Weather charts and satellite images are acquired and interpreted
- 1.4 Weather reports are obtained and interpreted

2 Use information to predict local weather and oceanographic

- 2.1 Forecasts of local weather and oceanographic conditions are correctly made using available information
- 2.2 Wave height and swell forecast is made using available

conditions	information
	2.3 Effects of local topographical features on wind flow and weather conditions are estimated using available information
	2.4 Potentially dangerous conditions are identified and appropriate action is taken to secure vessel
3 Maintain records of weather and oceanographic information and forecasts	3.1 Weather and oceanographic information and forecasts are recorded and filed according to organisational procedures
	3.2 Action on vessel operations initiated as a result of weather and oceanographic forecasts is documented according to organisational procedures
	3.3 Meteorological charts, publications and related documentation are updated and stored according to organisational procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Range is restricted to essential operating conditions and any other variables essential to the work environment.

- Ocean and weather conditions must include:
- air masses and fronts
 - cloud classifications
 - cyclones, storms and gales
 - ocean currents
 - pressure systems and cold fronts
 - sea state

- tide prediction

Shipboard instruments
include one or more of the
following:

- barograph
- barometers
- equipment for receiving weather maps and forecasts
- wet and dry bulb thermometers

Appropriate action
includes one or more of
the following:

- avoiding storm centres and dangerous quadrants by adjusting course and speed
- ensuring all vessel equipment is properly secured
- taking action to avoid extreme adverse weather conditions

Unit Mapping Information

This is a new unit. This unit is equivalent to MARH4001A Forecast weather and oceanographic conditions.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>

Assessment Requirements for MARH006 Forecast weather and oceanographic conditions

Modification History

Not applicable.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- ensuring currency of relevant reference material
- observing, interpreting and forecasting weather and oceanographic conditions
- reading, interpreting and applying weather and oceanographic information
- recognising problems that may occur when interpreting weather and oceanographic information
- selecting and using shipboard instruments to assist in forecasting weather and oceanographic conditions
- supporting reasons for intended action with statistical data and observations of actual conditions
- using tide tables to calculate height of tide.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- basic principles for making meteorological and oceanographic measurements
- effects on navigation and vessel handling of wind, currents and bottom topography
- heat exchange process
- principles and procedures of weather forecasting using information obtained from observations, charts, satellite images, reports and instruments
- procedures for filing and maintaining weather and oceanographic information
- procedures to be followed during gale conditions and tropical revolving storms
- sources of weather and oceanographic information, and methods for their interpretation
- topographical effects on wind flow
- typical problems in forecasting weather and oceanographic conditions
- vertical division of the atmosphere
- work health and safety (WHS)/occupational health and safety (OHS) requirements and work practices.

Assessment Conditions

Assessors must satisfy National Vocational Education and Training Regulator (NVR)/Australian Quality Training Framework (AQTF) assessor requirements.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- tools, equipment, machinery, materials and personal protective equipment currently used in industry
- applicable documentation such as legislation, regulations, codes of practice, workplace procedures and operational manuals
- range of relevant exercises, case studies and/or simulations.

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