



**Australian Government**

# **MARC4002A Monitor and manage vessel operations**

**Release 1**

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## **Modification History**

Release 1

This is the first release of this unit.

## **Unit Descriptor**

This unit involves the skills and knowledge required to plan and oversee activities associated with the regulatory and operational requirements for the continued performance and safety of a coastal vessel.

## **Application of the Unit**

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

## **Licensing/Regulatory Information**

Not applicable.

## **Pre-Requisites**

Not applicable.

## **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 required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

- |   |   |
|---|---|
| <b>1 Develop operational strategies and procedures</b>          | <ul style="list-style-type: none"><li>1.1 <i>Action plan</i> is developed to provide a clear and coherent direction according to organisational goals and objectives</li><li>1.2 <i>Work health and safety (WHS)/occupational health and safety (OHS) and environmental issues</i> are identified, and strategies are implemented to minimise risk factors</li><li>1.3 Quality system is developed for vessel in line with industry standards, compliance and organisational requirements</li><li>1.4 Performance measures and <i>operational targets</i> are developed to conform with business plan</li><li>1.5 Procedures are established and implemented according to organisational and legislative requirements</li><li>1.6 Procedures are communicated to crew members</li></ul> |
| <b>2 Supervise crew compliance with regulatory requirements</b> | <ul style="list-style-type: none"><li>2.1 Regulatory body requirements are correctly interpreted and applied</li><li>2.2 Instructions for crew members are developed and implemented</li><li>2.3 Crew members are briefed</li><li>2.4 Liaison with regulatory body officials is undertaken</li></ul>  |
| <b>3 Plan resources for vessel operations</b>                   | <ul style="list-style-type: none"><li>3.1 <i>Vessel resource and equipment requirements</i> are investigated and documented</li><li>3.2 Resource needs are prioritised and matched to vessel budget, and priorities are confirmed after consultation with crew members</li><li>3.3 Procurement plan with prioritised purchasing is devised and resources are procured accordingly</li></ul>   |
| <b>4 Plan vessel operations logistics</b>                       | <ul style="list-style-type: none"><li>4.1 <i>Operational work plans</i> are developed</li><li>4.2 Operations are checked to ensure optimum use of human and physical resources</li><li>4.3 Tasks are implemented according to plans and specifications</li><li>4.4 Operational plans are implemented and crew members are briefed as to roles and responsibilities</li><li>4.5 Operational plans are documented and amended according to procedures and crew expectations</li></ul>   |

**5 Evaluate operational processes**

- 4.6 Proposed variations are investigated and negotiated in consultation with crew members
- 5.1 Operational progress is closely monitored against required quality of work and adherence to both budget and time schedule
- 5.2 Opportunities for preventative or corrective changes are identified using outcomes of monitoring activities and feedback from crew members
- 5.3 Preventative and/or corrective action is recommended and implemented
- 5.4 Changes are communicated to appropriate persons in a logical and easily understood manner
- 5.5 Changes are monitored to confirm improvement in crew efficiency
- 5.6 Records are maintained of key information pertaining to operational processes according to organisational procedures

## Required Skills and Knowledge

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

### Required Skills:

- Collect, organise and understand information related to vessel resource and logistic requirements
- Communicate ideas and information to enable input from crew and understanding by crew of plans developed
- Liaise with other crew members on a range of operational issues and challenges
- Monitor and respond to compliance issues and measure progress against agreed objectives
- Plan and organise activities including consulting with crew to determine resource and logistics requirements, and developing, implementing and reviewing operational plans
- Undertake a job safety analysis for working in areas of high risk
- Use information gathering techniques to determine crew requirements and develop strategies to address these
- Use mathematical techniques to correctly interpret budgets and estimate material requirements

### Required Knowledge:

- Analytical tools
- Decision-making models and techniques
- Information gathering strategies
- Logistics and procurement management techniques
- Operational plan development
- Resource availability

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, the required skills and knowledge, the range statement and the Assessment Guidelines for the Training Package.

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the Elements, Performance Criteria, Required Skills, Required Knowledge and include:

- developing effective planning documents
- completing a review of and updating the process for vessel operations.

### Context of and specific resources for assessment

Performance is demonstrated consistently over time and in a suitable range of contexts.

Resources for assessment include access to:

- industry-approved marine operations site or simulation where monitoring and managing vessel operations may be conducted
- tools, equipment and personal protective equipment currently used in industry
- relevant regulatory and equipment documentation that impacts on work activities
- range of relevant exercises, case studies and/or other simulated practical and knowledge assessments
- appropriate range of relevant operational situations in the workplace.

In both real and simulated environments, access is required to:

- relevant and appropriate materials and equipment
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals.

### Method of assessment

Practical assessment must occur in an:

- appropriately simulated workplace environment and/or
- appropriate range of situations in the workplace.

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate to this unit:

- direct observation of the candidate monitoring and managing vessel operations
- direct observation of the candidate applying relevant WHS/OHS requirements and work practices.

### Guidance information for

Holistic assessment with other units relevant to the industry

**assessment**

sector, workplace and job role is recommended.

In all cases where practical assessment is used it should be combined with targeted questioning to assess Required Knowledge.

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

## 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.

Action plan must include:

- Cargo plan
- Dry-docking and slipping operations
- Planned maintenance system
- Safety management plan
- Voyage planning

Work health and safety (WHS)/occupational health and safety (OHS) and environmental issues must include:

- Working at heights
- Working in:
  - confined spaces
  - freezer spaces

Operational targets may include:

- Working overside on stages
- Achievement of key performance indicators (KPIs) from the business plan
- Optimum fuel usage
- On time completion of survey and docking operations
- Passage planning to achieve safe and efficient routing

Vessel resource and equipment requirements may include:

- Charts and publications for the intended voyage
- Stores, fuel and spare parts sufficient for the voyage
- Tools and equipment necessary to conduct planned maintenance

Operational work plans may include:

- Docking and repair plans
- Managing confined space entry
- Passage planning
- Periodic survey requirements

## Unit Sector(s)

Not applicable.



## **Competency Field**

Equipment Operations