



Australian Government

MARM4001A Assess compliance with marine environment protection requirements

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 survey a commercial vessel to determine compliance with marine regulations for the protection of the environment.

Application of the Unit

This unit applies to people working in the maritime industry as a marine surveyor assistant and forms part of requirements for the Certificate IV in Domestic Commercial Vessel Survey.

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

- | | |
|-----------------------------------|--|
| 1 Prepare for survey | <ul style="list-style-type: none">1.1 Relevant <i>national and state/territory standards and regulatory requirements</i> for preventing pollution to marine environment are identified, reviewed and incorporated into survey plan1.2 <i>Sources and types of pollutants</i> common to a range of different commercial vessels are identified and verified with principal surveyor1.3 Powers of surveyor relevant to detecting and reporting marine pollution protection compliance in respect to vessel operations are identified and confirmed against regulatory requirements, and organisational policy and procedures1.4 <i>Preventative and remedial anti-pollution procedures</i> are identified according to relevant standards and regulatory requirements1.5 Survey plan is developed and survey schedule is agreed with <i>relevant personnel</i> |
| 2 Survey compliance levels | <ul style="list-style-type: none">2.1 Survey is carried out according to agreed schedule, and <i>machinery and equipment</i> are inspected for compliance with marine protection requirements2.2 <i>Flammable and hazardous materials</i> on board vessel are inspected for compliance with storage and anti-pollution requirements2.3 <i>Records</i> relevant to preventing pollution on board commercial vessels are reviewed for compliance with relevant national and state/territory legislation and regulatory requirements2.4 Procedures, systems and measures used to prevent a range of pollution types are reviewed with vessel owner/s or crew2.5 Management of <i>environmental issues that may not be covered under marine safety regulations</i> are identified and communicated to vessel owner/s and crew during survey |
| 3 Finalise survey | <ul style="list-style-type: none">3.1 Measures for treating a range of different pollutants, machinery and equipment identified as non-compliant are discussed with vessel owner/s and crew3.2 Action plan to rectify this non-compliance is agreed and documented in survey report3.3 Survey report is finalised and reviewed for completeness before submission to the authority3.4 Non-compliance relating to protecting marine environment is |

recorded and reported according to statutory requirements

Required Skills and Knowledge

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

Required Skills:

- Accurately identify statutory requirements for pollution prevention systems and procedures for commercial vessels
- Communicate effectively verbally and in writing
- Complete required documents related to breaches of environmental protection legislation
- Read and interpret instructions and procedures related to environmental considerations
- Recognise pollution control problems and hazards that may occur on a commercial vessel and take appropriate mitigating action
- Work safely and collaboratively with others when surveying environmental considerations
- Work under supervision of a marine surveyor

Required Knowledge:

- Certificates and other documents required by relevant Australian and/or international legislation, and conventions for protecting marine environment
- Effects on marine environment of various possible pollution incidents
- Operational characteristics of emission control equipment used on various types and sizes of commercial vessels
- Operational requirements of water, fuel, bilge, waste, pollution and recycling management processes used on various types and sizes of commercial vessels
- Pollution control problems and related measures to protect marine environment
- Powers of surveyors and regulatory authorities in respect to vessel operations related to pollution prevention and compliance to standards
- Relevant legislation, regulations, codes of practice, policies and procedures to protect marine environment
- Requirements under relevant Australian and/or international legislation and conventions for reporting incidents related to breaches of statutory codes and measures for protecting marine environment
- Sources of information and documentation, including:
 - certificates and other documents required by regulations for protecting marine environment
 - equipment manufacturer instructions and recommended procedures
 - instructions of relevant maritime authorities
 - operational orders
 - relevant regulations for type of vessel involved
 - relevant standards for protecting marine environment, including guidelines issued under the Australian Intergovernmental Agreement on a National System for the Prevention and Management of Marine Pest Incursions

- vessel log where relevant
- Work health and safety (WHS)/occupational health and safety (OHS) legislation, regulations, codes of practice, policies and procedures

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
- providing high quality reports
- ensuring currency of relevant reference material
- ensuring behaviour reflects relevant current legislative and regulatory requirements.

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 where assessing compliance with marine environment protection requirements can 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 assessing compliance with marine environment protection requirements
- direct observation of the candidate applying relevant

Guidance information for assessment

WHS/OHS requirements and work practices.

Holistic assessment with other units relevant to the industry 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.

National and state/territory standards and regulatory requirements may include:

- Australian Intergovernmental Agreement on a National System for the Prevention and Management of Marine Pest Incursions
- International Convention for the Prevention of Pollution from Ships (MARPOL)
- National Plan to Combat the Pollution of the Sea by Oil
- Protection of the Sea (Prevention of Pollution from Ships) Act 1983
- Relevant sections of National Standard for Commercial Vessels (NSCV) relating to protecting marine environment

Sources of pollutants may include:

- Bilges
- Deck equipment
- Engines
- Food waste
- Fuel:
 - containments and transfer systems
 - pumps
- Hydraulic pumps
- Lubricants, gas, cleaning and coating products
- Sewage pumps
- Vents, drains, toilets

Types of pollutants may include:

- Air
- Ballast water
- Batteries and gasses
- Cargo and packaging
- Engine:
 - exhaust fumes and ventilation systems
 - noise
- Grey water, black water and ventilation
- Noise
- Oil, sewage, garbage, noxious substances
- Unknown fluids

Preventative and remedial anti-pollution procedures may include:

- Design and construction features such as save-alls, vents, filling points, combing drains, scuppers, freeing ports, bilges and strum boxes
- Legislative requirements such as garbage disposal at

	sea guidelines for:
	• controlling gas and smoke polluting emissions • effectively managing waste, pollution and recycling processes • effectively managing ballast operations • preventing cargo spillages • preventing fuel and oil spillages
Relevant personnel may include:	• Operational procedures such as fuel transfer, ballast operations, cargo operations (including lashing) • Pollution control signage • Shipboard housekeeping • Attending surveyor • Environmental protection agency • Maritime authorities • Owner master or agent of vessel • Other interested parties
Machinery and equipment may include:	• Effective management of ballast operations • Emission control equipment • Pollution control instructions • Pumps • Shipboard housekeeping • Valves • Waste storage and recycling equipment • Water management equipment, including cooling water, ballast water and bilge systems
Flammable and hazardous materials may include:	• Chemicals • Cleaning products • LPG cooking gas • Lubricants • Spare fuel
Records may include:	• Ballast record book • Deck and engine room log books • Garbage record books • Oil record books • Sewage record books, including test results
Environmental issues that may not be covered under marine safety regulations may include:	• Ballast water management • Damage to sensitive environments through anchoring • Fishing restrictions • Laying pots/traps/moorings • Noise

Unit Sector(s)

Not applicable.

Competency Field

Marine Surveying