



Australian Government

MARM5005A Participate in investigating marine incidents

Release 1

MARM5005A Participate in investigating marine incidents

Modification History

Release 1

This is the first release of this unit.

Unit Descriptor

This unit involves the skills and knowledge required to participate in planning, conducting and reporting investigations of marine incidents that have resulted in, or have a potential to result in, injury or damage to persons, vessels, property or marine environment.

Application of the Unit

This unit applies to people working in the maritime industry as a domestic commercial vessel marine surveyor and may form part of accreditation requirements for surveyors under Australian legislation.

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 Undertake initial assessment of incident | 1.1 Statutory and legal obligations are identified and relevant government agencies are advised as required

1.2 Key stakeholders and interested parties are identified and notified as appropriate

1.3 Factors affecting complexity of investigation are determined and surveyor competency to conduct investigation is determined based on required specialised skills and knowledge

1.4 Area is checked to ensure it is safe

1.5 Integrity of site and personnel is established and maintained according to legal requirements and to ensure objectivity of information collected |
| 2 Participate in establishing investigation processes | 2.1 Organisational policies and procedures, and national law for marine incident investigation are accessed and applied

2.2 Scope of investigation is defined taking account of legislative requirements and client instructions

2.3 Investigation team appropriate to level of responsibility in investigation is convened

2.4 Involvement of stakeholders and interested parties is managed according to legislative requirements

2.5 Resources and expert advice required to assist in incident assessment are identified and sourced

2.6 Barriers to investigation are identified and addressed

2.7 Development and implemented of action plans and timelines is ensured |
| 3 Collect information and data for analysis | 3.1 Sources of information and data are identified and accessed

3.2 Incident site, equipment and other evidence is inspected

3.3 Gathering of information and data by others is facilitated

3.4 Photographs, measurements and documentary evidence are taken and recorded, taking objectivity, confidentiality and legal implications into account

3.5 Site, evidence and necessary documentation is appropriately secured |

- 4 **Analyse information and data**
 - 4.1 Understanding and identification of *conceptual basis for analysis* is ensured
 - 4.2 *Timeline of events* leading up to incident is constructed using vessel records and other available data
 - 4.3 Causative event/s and *conditions and circumstances* that may have contributed to causative event are accurately identified and documented
 - 4.4 Intervention points on timeline for prevention are identified
- 5 **Compile investigation report**
 - 5.1 Results of analysis are documented in a format to suit required *target audience* and legal requirements
 - 5.2 Report is phrased in objective terms, and evidence and reasons for conclusions are cited
 - 5.3 Recommendations for prevention are included in report
 - 5.4 Relevant information and data is disseminated to key personnel, stakeholders and external agencies as appropriate, following appropriate authorisation
 - 5.5 Findings from report are used to develop further prevention strategies

Required Skills and Knowledge

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

Required Skills:

- Access data on marine investigations, accidents and incidents from a variety of sources
- Access relevant marine incident information and data
- Analyse relevant workplace information and data
- Carry out calculations (such as vessel stability)
- Communicate effectively with personnel at all levels of the organisation, marine incident specialists and, as required, emergency services personnel
- Conduct effective formal and informal meetings
- Consult and negotiate with others to develop plans and to implement and monitor designated actions
- Contribute to assessing resources needed to systematically manage marine incidents and, where appropriate, access these resources
- Identify areas for improvement with the survey of marine incidents
- Make observations of workplace tasks and interactions between people, their activities, equipment, environment and systems
- Manage:
 - incident and responsibilities of self and others
 - own tasks within a timeframe
- Pay attention to detail when making observations and recording outcomes
- Prepare reports for a range of target groups and stakeholders
- Produce accurate information and data related to vessel, crew and/or marine environment
- Use a range of communication media
- Use basic measuring equipment including reading scales and dials applicable to selected hazards
- Use language and literacy skills appropriate to task
- Work independently and unsupervised

Required Knowledge:

- Characteristics, mode of action and survey tasks for major and minor marine incidents
- Concept of common law duty of care
- Ethics related to professional practice
- Formal and informal communication and consultation processes, and key personnel related to communication
- How the characteristics and composition of the workforce impact on risk and the systematic approach to managing a marine incident, for example:

- communication skills
- cultural background/workplace diversity
- gender
- language, literacy and numeracy
- structure and organisation of workforce (part-time, casual and contract workers, shift rosters, geographical location)
- workers with specific needs
- Internal and external sources of information and data
- Language, literacy and cultural profile of the work group
- Legislative requirements for marine incident information and data, and consultation
- Marine incident causation for a range of different incidents including marine environment incidents
- Methods of providing evidence of compliance with maritime legislation
- Nature of workplace processes (including work flow, planning and control) and hazards relevant to particular workplace, vessel and vessel operations
- Organisational policies and procedures
- Other functional areas that impact on managing marine incidents
- Principles and practices of continuity and validity of evidence retention for potential legal action
- Requirements for:
 - recordkeeping that addresses privacy, maritime and other applicable legislation
 - reporting marine incidents under legislation, organisational policy and procedures, codes of practice including notification and reporting of incidents
- Requirements under hazard specific legislation and codes of practice
- Rights of marine safety inspectors
- Roles and responsibilities of vessel employees and other stakeholders including agents and contractors
- Standard industry controls for a range of hazards
- State/territory and commonwealth maritime legislation (acts, regulations, codes of practice, associated standards and guidance material) including prescriptive and performance approaches and links to other relevant legislation such as industrial relations, work health and safety (WHS)/occupational health and safety (OHS) and duty of care
- WHS/OHS requirements and safe work practices

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
- communicating effectively with others as required
- producing accurate and reliable information
- effectively liaising with internal and external authorities/agencies
- providing high quality reports.

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 participating in investigating marine incidents 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 participating in investigating marine incidents

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

Guidance information for assessment

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.

- | | |
|--|--|
| Relevant government agencies may include: | <ul style="list-style-type: none">• Australian Maritime Safety Authority (AMSA)• Australian Transport Safety Bureau (ATSB)• Environment protection agencies• Maritime authorities• Police and other emergency services• WHS/OHS specialists |
| Stakeholders and interested parties may include: | <ul style="list-style-type: none">• Community• Coroner• Government agencies, including WHS/OHS and emergency service agencies• Importers• Installers• Insurance companies• Managers• Manufacturers• Media• Naval architects and marine engineers• Organisation board or advisory council• Persons in control of workplaces• Politicians• Ship personnel• Sub-contractors• Suppliers and distributors• Unions• Workgroup members and people who may be exposed to similar situations |
| Complexity may include: | <ul style="list-style-type: none">• Administrative implications• Conflict of interest issues• Existence of secondary hazards• International conventions• Involvement of external agencies• Language competencies of parties involved• Legal implications arising from incident or post incident related matters• Level of public or political interest• Number of other parties, including sub-contractors• Privacy laws |

- Investigation team may include:
- Seriousness of injury or other outcomes
 - Technical implications
 - Emergency service personnel
 - Government representatives
 - Legal advisors and technical experts
 - Other surveyors
 - Photographers
- Barriers to investigation may include:
- Availability of:
 - research data and analysis or testing equipment
 - technical design information and data relevant to investigation
 - Changes to incident scene
 - Condition of witnesses
 - Cultural issues
 - Economic implications
 - Geographical location and/or accessibility
 - Lack of records
 - Legal restrictions or limitations (temporary, short-term or long-term)
 - Length of time from when incident occurred/first identified
 - Limited resources available
 - Political and community stakeholder sensitivity
 - Ship personnel (attitude and or desire to protect self and others)
 - Time limits imposed
 - Weather, tides
- Conceptual basis for analysis may include:
- Focusing on ‘why’ and ‘how’ rather than ‘what’
 - Emphasising analysis of operations at time of incident
 - Encouraging an open minded, objective approach
 - Not focusing on individual behaviour or fault
- Timeline of events may include:
- Events that extend back in time as far as required, not just immediate events
 - Verbal reports from crew
 - Vessel records and logs
- Conditions and circumstances may include:
- Cargo
 - Equipment failure
 - Fatigue
 - Key person absence
 - Number of crew
 - Onboard safety systems and WHS/OHS procedures

- Target audience may include:
- Stability
 - Type of:
 - equipment
 - vessel
 - Vessel operations
 - Weather
 - Environment protection agencies
 - Insurance agents
 - Maritime authorities
 - Organisation
 - Police or coroner
 - Vessel owner/s

Unit Sector(s)

Not applicable.

Competency Field

Marine Surveying