Australian Government

PUAFIR304B Respond to marine emergencies

Release 2

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

PUAFIR304B Respond to marine emergencies

Modification History

Release	**TP Version**	**Comments**
2	PUA12 V2	Application of the Unit added Unit revised to reflect current work requirements Method of assessment added
1	PUA00 V8.1	Primary release on TGA

Unit Descriptor

This unit covers the competency required to work as a member of a team under supervision when responding to marine emergencies.
No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Application of the Unit

This unit applies to personnel required to respond to an incident involving a marine structure or vessel. The incident may involve fire, dangerous goods or hazardous substances.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

PUAFIR207B Operate breathing apparatus open circuit

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. Where ***bold italicised*** text is used, further information is detailed in the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Proceed to marine emergency	1.1 Information received about the ***vessel***, location and type of ***marine emergency*** is ***recorded*** in accordance with organisational requirements, and relevant ***stakeholders*** and ***support agencies*** are notified. 1.2 ***Personal protective clothing and equipment*** is donned in response to the type of marine emergency reported and anticipated conditions at the incident. 1.3 Most effective route to the marine emergency is identified. 1.4 Access to the marine emergency is gained, protecting life and minimising damage to property and environment in accordance with ***legislative requirements*** and organisational procedures.
2. Prepare extinguishing media and/or equipment for use	2.1 Water supplies at the incident to support firefighting are located. 2.2 ***Resources*** and equipment to access and assist in emergency operations are identified and assembled in accordance with organisational procedures. 2.3 Nominated extinguishing media and/or equipment is identified, obtained and/or accessed. 2.4 Equipment is used in accordance with manufacturer specifications and organisational procedures.
3. Access the vessel	3.1 ***Hazards and special risks*** are identified, monitored and controlled in accordance with organisational procedures. 3.2 Protective clothing selected is appropriate to the hazards and special risks. 3.3 Breathing apparatus is checked and donned in accordance with organisational procedures. 3.4 Breathing apparatus procedures are followed. 3.5 Access to the emergency is gained in an appropriate manner. 3.6 Nature and location of the emergency is determined.

4. Conduct search and rescue	4.1 Systematic primary and secondary searches are conducted. 4.2 All areas are searched and marked in accordance with organisational procedures. 4.3 Casualties are located, assisted and rescued in accordance with organisational procedures. 4.4 Fatalities are located and protected in accordance with organisational procedures and relevant legislation. 4.5 All persons are accounted for and information is communicated to Incident Controller.
5. Combat the emergency	5.1 Organisational ***firefighting objectives*** and ***strategies*** are received, confirmed and implemented under direction of supervisor. ***5.2 Firefighting tactics*** are selected according to the type of emergency and the actual or potential hazards are identified within the areas of operations. ***5.3 Firefighting considerations*** are taken into account when implementing tactics. 5.4 Emergency is located and access is gained in the safest and most effective manner to minimise damage to property or risk of injury to others or self. 5.5 Incident potential is anticipated and action taken to protect the safety of self and others to achieve the determined strategy. 5.6 Strategies and tactics are selected to minimise injury to persons, damage to property and impact on the environment. 5.7 Ongoing communication is maintained throughout the operations between firefighters, crew members and the supervisor at the incident.
6. Observe and react to changing conditions on the vessel and to the vessel itself	***6.1 Changing conditions at the emergency*** are observed and their effects on vessel behaviour are noted and reported. 6.2 Tactics are adapted to meet changing conditions and vessel behaviour. 6.3 Safe paths of egress are identified and maintained at all times.
7. Participate in ancillary operations	***7.1 Ancillary operations*** are undertaken to complement emergency operations and prevent further damage to the vessel and its contents. 7.2 Water run-off is monitored and conditions reported to supervisor. 7.3 Emergency operations and ***ancillary operations*** at

	the incident ensure risk and/or damage to the environment is avoided or minimised.
	7.4 Assistance is given to complete and record appropriate incident information.
8. Conclude operations	8.1 All equipment is removed from the site after completion of activities.
	8.2 Equipment is cleaned, serviced and restowed for operational use in accordance organisational procedures.
	8.3 Security of scene is maintained.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- apply extinguishing media to fire
- apply stability control techniques
- operate firefighting equipment on ship

Required Knowledge

- firefighting on a vessel
- safety considerations
- ship firefighting systems
- ship types and construction
- stability

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

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

Assessment must confirm the ability to:

- conduct emergency operations in accordance with organisational safe work practices
- apply incident/fireground priorities such as rescue, exposures, containment, extinguishment and overhaul
- monitor vessel stability

Consistency in performance

Competency should be demonstrated over time in a range of actual or simulated workplace environments.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed on-the-job and/or in a range of simulated environments.

Specific resources for assessment

Access is required to:

- range of controlled or simulated vessel fires

Method of assessment

In a public safety environment assessment is usually conducted via direct observation in a training environment or in the workplace via subject matter supervision and/or mentoring, which is typically recorded in a competency workbook.

Assessment is completed using appropriately qualified assessors who select the most appropriate method of assessment.

Assessment may occur in an operational environment or in an agency-approved simulated work environment. Forms of assessment that are typically used include:

- direct observation
- interviewing the candidate
- journals and workplace documentation
- third party reports from supervisors
- written or oral questions

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 in the Performance Criteria is detailed below.	

Vessel may include:	• commercial:
	  • barges
	  • bulk carriers
	  • container vessels
	  • fishing vessels
	  • floating restaurant
	  • hovercraft
	  • hydrofoils
	  • passenger ship
	  • roll-on roll-off
	  • special ships
	  • tankers
	  • tugs
	• military:
	  • army
	  • naval
	  • recreational:
	  • motor vessel
	  • multi-hull
	  • sail

Marine emergency must include:	• fire on-board and on-water • hazardous materials incidents • rescue • collisions • explosions • groundings • sinking
Recording of information may include:	• attendance records • completing personal notebooks, logs and/or report forms • equipment used • objectives set • owner/occupant details • problems encountered • strategies and tactics • values at risk

Stakeholders may include:	• Australian maritime safety authority (AMSA) • insurers • international marine organisation (IMO) • marine authorities • port operators • port owners • shipping agents • volunteer coast guard

Support agencies may include:	• Organisations covered by existing emergency management arrangements such as:
	  • environmental agencies
	  • police

Personal protective clothing and equipment must include:	• turnout uniforms and gloves • life jacket, including whistle and strobe light • safety harness and lines • breathing apparatus • chemical protective clothing
and may also include:	• gas monitoring equipment • off shore survival suits • proximity suits
Legislative requirements may include:	• relevant state, national and international acts and conventions for example, safety of life at sea
Resources must include:	• access craft • bulk extinguishing agent • communication equipment • extrication equipment • hi-x foam equipment • international shore connection • positive pressure ventilation fan • pumps • ship fire control plans • ship manifest • thermal imaging equipment
and may also include:	• aircraft/helicopter • deep lift and volume • water drill
Hazards and special risks must include:	• access • at anchor etc. • cargo • compartment

	• competency of crews • confined spaces • electrical • environmental impact • free surface effect • inability to communicate • incompatibility of equipment • installed firefighting systems (carbon dioxide systems, inert gas generators) • nautical terminology, port, starboard, leeward, fore, aft, along side • languages other than English • radioactive sources • sea conditions • ship construction • stability • underway • vessel • weather • ventilation • water supplies
Firefighting objectives must include:	• confining the spread of fire • extinguishment • protecting exposures • rescuing occupants • salvage and overhaul • ventilation
Firefighting strategies must include:	• defensive mode • offensive mode • direct attack • indirect attack • combination attack • overhead • direction of attack
Firefighting tactics must include:	• cooling the fuels • diluting the fuel • excluding oxygen • interrupting the chemical chain reaction • removing fuels • ventilation
Firefighting considerations	• available firefighting resources

must include:	• extinguishing media • fire exposures • signs of compromised structural integrity • size of fire • location • type of fire
Changing conditions at the emergency may include:	• increase/decrease in fuel available to fire • increase/decrease in heat of fire • increase/decrease in oxygen available to fire • impending structural collapse • other materials becoming involved in fire • fire spread • flame colour and size • signs of structural collapse • smoke colour • weather conditions
Ancillary operations may include participating in:	• damming water run off • guarding against hazards • making-up equipment • overhaul • salvage • securing the area • ventilation

Unit Sector(s)

Not applicable.