



Australian Government

PMAOPS242 Moor ships for transfer of bulk processed particulates or fluids

Release: 1

PMAOPS242 Moor ships for transfer of bulk processed particulates or fluids

Modification History

Release 1. Supersedes and is equivalent to PMAOPS242A Moor ships for transfer of bulk processed particulates or fluids

Application

This unit of competency covers the skills and knowledge required to moor ships that are transporting bulk fluids or particulates.

This unit of competency applies to the berthing of vessels transporting liquefied natural gas (LNG), liquefied petroleum gas (LPG), other bulk fluids and bulk processed particulates, such as iron ore or alumina. It applies to land-based moorings, floating storage and offtake (FSO)/floating production storage and offtake (FPSO) vessel/buoy or similar moorings.

This unit of competency applies to operators who are required to prepare the mooring area, identify and control hazards, follow instructions and procedures to position, secure and release vessel, and identify problems and take appropriate action.

This unit of competency applies to an individual who may work alone although under routine direction and supervision. They may work as part of a team or group and will work in liaison with other shift team members and the control room operator and 'shipping officer' (or other suitably authorised operator), as appropriate.

These operators will liaise with port/jetty personnel as well as relevant ship personnel. When not involved with ship loading/unloading they may be expected to fulfil more traditional plant operations roles.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Operations

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes.

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

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| 1 | Prepare for work | 1.1 | Identify work and compliance requirements |
| | | 1.2 | Identify and control hazards |
| | | 1.3 | Coordinate with appropriate personnel |
| | | 1.4 | Check operational status of required plant/equipment |
| | | 1.5 | Complete any required pre-berthing checks |
| 2 | Deploy hazard and environmental controls in accordance with procedures | 2.1 | Check required controls, including health, safety and environment (HSE) controls, are available and functional |
| | | 2.2 | Deploy controls |
| | | 2.3 | Prepare mooring area for operation |
| | | 2.4 | Withdraw controls |
| 3 | Berth ship in accordance with procedures | 3.1 | Communicate with relevant personnel |
| | | 3.2 | Receive and carry out instructions from shipping officer |
| | | 3.3 | Throw/heave ships lines and secure vessel |
| | | 3.4 | Guide ship to position required to receive/discharge |
| | | 3.5 | Use capstan winch to 'walk ship' to required position |
| | | 3.6 | Make fast to mooring (wharf, dolphin or buoy) |
| | | 3.7 | Ensure all hazard controls are followed |
| | | 3.8 | Connect equipment required for transfer |
| | | 3.9 | Set quick release hooks |
| 4 | Release ship in accordance with procedures | 4.1 | Communicate with relevant personnel |
| | | 4.2 | Receive and carry out instructions from shipping officer |
| | | 4.3 | Disconnect any connected equipment |

		4.4	Release vessel
		4.5	Ensure all hazard controls are followed
5	Recognise problems and take action	5.1	Monitor mooring operation throughout the process
		5.2	Adjust process as required by procedures
		5.3	Take actions to resolve problems

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

This field allows for 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.

Regulatory framework The latest version of all legislation, regulations, industry codes of practice and Australian/international standards, or the version specified by the local regulatory authority, must be used, and include one or more of the following:

- legislative requirements, including work health and safety (WHS)
- industry codes of practice and guidelines
- environmental regulations and guidelines
- Australian and other standards
- licence and certification requirements

All operations to which this unit applies are subject to stringent health, safety and environment (HSE) requirements, which may be imposed through state/territory or federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between performance criteria and HSE requirements, the HSE requirements take precedence.

Procedures All operations must be performed in accordance with relevant procedures.

Procedures are written, verbal, visual, computer-based or in some other form, and include one or more of the following:

- emergency procedures
- work instructions
- standard operating procedures (SOPs)
- safe work method statements (SWMS)
- formulas/recipes
- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant

Hazards

Hazards include one or more of the following:

- working over/near water
- electricity
- gas
- gases and liquids under pressure
- structural hazards
- structural collapse
- equipment failures
- industrial (machinery, equipment and product)
- equipment or product mass
- noise, rotational equipment or vibration
- plant services (steam, condensate and cooling water)
- working at heights, in restricted or confined spaces, or in environments subjected to heat, noise, dusts or vapours
- flammability and explosivity
- hazardous products and materials
- unauthorised personnel
- sharp edges, protrusions or obstructions
- slippery surfaces, spills or leaks
- extreme weather
- other hazards that might arise

Routine problems

Routine problems must be resolved by applying known solutions.

Routine problems are predictable and include one or more of the following:

- poor weather
- language issues with crew
- problems with ship's equipment

Known solutions are drawn from one or more of the following:

- procedures
- training
- remembered experience

Non-routine problems must be reported according to relevant procedures.

Logs and reports

Logs and reports include one or more of the following:

- paper or electronic-based logs and reports
- verbal/radio reports
- reporting items found which require action

Action

Action in accordance with procedures includes the following:

- determining problems needing action
- determining possible fault causes
- rectifying predictable problems using appropriate solution from procedures
- following through items initiated until final resolution has occurred
- reporting problems outside area of responsibility/scope of procedures to designated person

Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875>

Assessment Requirements for PMAOPS242 Moor ships for transfer of bulk processed particulates or fluids

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Performance Evidence

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

- operate mooring equipment to achieve smooth berthing and release of vessel and correct positioning to receive/discharge product
- recognise conditions which will lead to out-of-range conditions
- convey information relevant to the operation clearly and effectively
- read and interpret workplace documents and technical information
- identify hazards and apply hazard control procedures
- apply health, safety and environment (HSE) controls
- communicate with team and supervisors.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- types and application of equipment associated with mooring operations
- principles of mooring
- desirable parameters and limits (e.g. location relative to loading/unloading equipment and speed of approach)
- potential equipment and site hazards
- procedures and relevant documentation
- isolation devices type and purpose
- emergency, fire suppression, fire alert and disaster procedures
- environmental incident management procedures
- hazard identification and risk assessment response procedures
- relevant work health and safety (WHS), environmental and heritage legislation and policies
- communication protocols (e.g. radio, phone, computer, paper and permissions/authorities)
- typical issues causing problems and the resolution of those problems.

Assessment Conditions

- The unit should be assessed holistically and the judgement of competence based on a holistic assessment of the evidence.

- The collection of performance evidence:
 - should occur over a range of situations which include typical disruptions to normal, smooth operation of an operating plant
 - will typically include a supervisor/third-party report or other evidence, focusing on consistent performance and problem recognition and solving. A supervisor/third-party report must be prepared by someone who has a direct, relevant, current relationship with the person being assessed and who is in a position to form a judgement on workplace performance relevant to the unit of competency
 - must include undertaking at least one (1) mooring activity under supervision
 - may use industry-based simulation for part only of the unit where safety, lack of opportunity or significant cost is an issue.
- Assessment should occur in operational workplace situations. Where this is not possible, or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment reflecting realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Assessment in a simulated environment should use evidence collected from one or more of:
 - walk-throughs
 - pilot plant operation
 - demonstration of skills
 - industry-based case studies/scenarios
 - 'what ifs'.
- Knowledge evidence may be collected concurrently with performance evidence (provided a record is kept) or through an independent process, such as workbooks, written assessments or interviews (provided a record is kept).
- 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.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.
- The regulatory framework will be reflected in workplace policies and procedures and is not required to be independently assessed.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- In addition, the assessor or anyone acting in subject matter expert role in assessment must demonstrate both technical competency and currency. If the assessor cannot demonstrate technical competency and currency they must assess with a subject matter expert who does meet these requirements.
- Technical competence can be demonstrated through one or more of:
 - relevant VET or other qualification/Statement of Attainment

- appropriate workplace experience undertaking the type of work being assessed under routine and non-routine conditions
- appropriate workplace experience supervising/evaluating the type of work being assessed under routine and non-routine conditions
- Currency can be demonstrated through one or more of:
 - being currently employed undertaking the type of work being assessed
 - being employed by the organisation undertaking the type of work being assessed and having maintained currency in accordance with that organisation's policies and procedures
 - having consulted/had contact with an organisation undertaking the type of work being assessed within the last twelve months, the consultation/contact being related to assessment
 - conducting on-the-job training/assessments of the type of work being assessed
 - being an active member of a relevant professional body and participating in activities relevant to the assessment of this type of work.

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