GOVERNMENT OF RAS AL KHAIMAH
RAK PORTS

MARINE SAFETY MANAGEMENT SYSTEM MANUAL

In line with the principles of
The UK Port Marine Safety Code (PMSC) &
Guide to Good Practice on Port Marine Operations

RAK PORTS INTEGRATED MANAGEMENT SYSTEM

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RAK PORTS MEMBERS

SAQR PORT

One of the world's leading bulk ports operating to highest international standards, the port is adjacent to the largest limestone quarry in the world. The port has established a reputation for efficient service and fast turnaround of vessels – just one of the value-added services that sets Saqr Port apart from other ports in the region. Fast, efficient cargo handling and reliable distribution are the key elements to Saqr Port's reputation for quality. Saqr Port is handling bulk cargoes such as aggregates, coal, oil, gypsum, clay and other bulk materials for local factories. It has a good commercial and warehousing property portfolio which supports a thriving business community.

Deep-Water Bulk Terminal: Situated adjacent to the main lee breakwater of Saqr Port Inner Harbour, the new facility is the largest bulk terminal in the Gulf region and accommodates large cape-size vessels.

RAK MARITIME CITY

The 6 million square metres land and waterfront free zone development. RMCFZA is reinforcing RAK's global business footprint. RMCFZA's harbour has 5 km of quay wall, with private jetties and common users berths and a draft alongside of 6.5m.

RAS AL KHAIMAH PORT

A unique city centre port offering a range of modern cargo handling facilities and services. The port also has a passenger/cruise terminal catering for the increasing interest in the leisure activities available in this northern emirate.

ALJAZEERA PORT

The port offers a full range of cargo handling services on 960 metres of quay wall in addition to a dry docking and ship repairing facility. This 50,000 square metres Dry Dock and Ship Lifting System has 12 dry berths – 8 berths are 67.5m long x 30m wide and 4 berths are 77.5m long x 30m wide. The lifting dock has a synchronised lifting capacity of 1,100 tonnes and can accommodate vessels up to 65m in length x 18m wide.

AL JEER PORT

Located at the RAK border with the Musandam, Oman. The port area is mostly for private tenants to berth layby vessels with a small area for leisure vessels.

GENERAL INTRODUCTION

RAK Ports has a primary responsibility to facilitate the safety of navigation and associated marine operations in the port limits. This aim should be achieved through the implementation of a Marine Safety Management System based on a formal risk assessment. A Marine Safety Management System has been formulated to align, where possible, with the concepts and standards of the UK Port Marine Safety Code.

FORMAL RISK ASSESSMENT

RAK Ports undertook a comprehensive risk assessment of marine operations, the purpose of this assessment is to ensure that all risks within the marine operations are identified and reduced to a level that is tolerable and as low as reasonably practical. That risk assessment is kept under review and adapted as circumstance, changing trades and experience dictate.

CONTACT INFORMATION

Group Office:

Saqr Port

Telephone: +971 (0)7 205 6000

E-mail: info@rakports.ae

PO Box 5130, Ras Al Khaimah, U.A.E

Harbour Master's Office

The Harbour Master's Office is located in the Marine department at Saqr Port, and co-ordinates the statutory compliance for navigational safety across all RAK Ports. All operational marine matters are dealt with by respective ports.

For general enquiries, please call on: +971 (07)7 205 6164.

Port Control should be contacted for all urgent matters pertaining to marine operations:

- Saqr Port (Control Tower): VHF Ch.16/14 - Tel.: +971 (0)7 205 61 61 – Email: spatower@rakports.ae
- RMC/Stevin Rock (Control Tower): VHF Ch.16/69 - Tel.: +971 (0)7 205 61 62 – Email: rmctower@rakports.ae
- Ras Al Khaimah Port (Control Tower): VHF Ch.16/71 - Tel.: +971 (0)7 228 11 90 – Email: khrtower@rakports.ae
- Al Jazeera Port (Control Tower): VHF Ch.16/68 - Tel.: +971 (0)7 244 66 27– Email: ajzpt@rakports.ae
- Al Jeer Port – Contact Control Tower at Saqr Port & Al Jeer Port Office at: Tel.: +971 (0)7 268 23 33.

WEBSITE OF THE PORT
https://rakports.ae/

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Distribution

The 'Marine Safety Management System Manual' for RAK Ports will be distributed as follows:

One copy will be posted on the company website and the following will be notified when there are any changes or amendments:

1. Harbour Master
2. Deputy Harbour Master
3. All Ports' Managers
4. Pilots, Tug Masters and Port Controllers
5. Marine Section Supervisors
6. Chief Executive Officer
7. HSEQ Manager

One PDF copy shall be filed in the Integrated Management System as an internal Document.

Amendments

Proposed amendments are to be sent to the document owner, Harbour Master, who will maintain a record of changes in accordance with the Control of documents and records Procedure.

Documents and records

The definition of documents and records is defined below:

- **Documents:** Documents may be in any form or type of medium such as paper, magnetic, electronic, photos and templates. They are designed to capture information on activities or results.
- **Records:** Records provide evidence that activities have been performed or results have been achieved. They always record the past.

REFERENCE DOCUMENTS
Document Title
International Ship & Port Facility Security Code (ISPS)
International Safety Management Code (ISM)
The UK Port Marine Safety Code (PMSC)
Guide to Good Practice on Port Marine Operations
GCC Regulations for Seaports
RAK Ports Regulations

Terms and definitions

Accident:	An uncontrolled or unplanned event, or sequence of events, that results in a fatality or injury.
ALARP:	As low as reasonably practicable. A term indicating that, after mitigation measures have been implemented, the residual risk is as low as reasonably practicable ie the cost or resources involved in reducing it further would be grossly disproportionate to the benefit gained.
AtoN:	Aid to Navigation.
Audit:	Systematic, independent, and documented process for obtaining audit evidence and evaluating it objectively to determine the efficiency of MSMS.
CHA:	Competent Harbour Authority.
Corrective action:	Action to eliminate the cause of a detected nonconformity.
DWBT:	Saqr Port's Deep-Water Bulk Terminal.
IALA:	International Association of Marine Aids to Navigation and Lighthouse Authorities.
Incident:	An uncontrolled or unplanned event, or sequence of events that results in damage, or threat, to the safety of personnel, the vessel, the environment, or property.
MAIB:	The Marine Accident Investigation Branch, UK.
MMT:	Marine Management Team. RAK Ports committee responsible for the management of marine safety within RAK Ports area.
MRF:	Marine Report Form.
MSMS:	RAK Ports Marine Safety Management System.
Near Miss:	An occurrence, which if left unchecked, could lead to a dangerous occurrence or incident.
NtM:	RAK Ports' Notice to Mariners.
PEC:	Pilotage Exemption Certificate.
Port Marine Safety Code: (PMSC)	The national standard for port safety within the UK.
STCW:	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (International Maritime Organisation).
Training Record:	Document stating qualifications and training provided on the job or new skills and result achieved following the training.
VTS:	Vessel Traffic Services.

COMMITMENT STATEMENT

RAK Ports is committed to undertaking and regulating marine operations to safeguard all its harbour areas, its users, and the marine environment. RAK Ports recognises that safe operations depend not only on organising and monitoring the arrival, departure and movement of vessels within RAK Ports but on competent people and an active marine safety culture and that no activity is so important that it cannot be done safely.

RAK Ports is fully committed to undertaking hazard identification and risk assessments to ensure that all reasonable steps are taken to reduce risks to as low a level as is reasonably practical in line with the ALARP (As Low As Reasonably Possible) principle. In line with this responsibility, RAK Ports has in place a MSMS that sets out the duties of Management and staff to assist them in achieving this goal and to continually monitor and improve their standards.

The MSMS Manual lays out the general philosophy and approach to managing marine operations of RAK Ports in a safe manner.

To achieve this, MSMS Manual has adopted procedures and processes that are in line with the principles of the UK Port Marine Safety Code and Guide to Good Practice on Port Marine Operations.

This document is supported by several other documents and records, which make up the safety management system, in particular:

- Policy documents
- Guidelines and regulations
- Marine operating procedures
- Standard forms
- Job descriptions
- Objectives and targets
- Incidents and investigation reports
- Risk assessment records

Harbour Master

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SECTION ONE
INTRODUCTION

Overview

1. The MSMS is part of, but separate from, the overarching Work/Occupational Health and Safety of Port. The MSMS Manual emphases specifically on those port marine activities and operations mainly undertaken in the waters of a port by vessels.
2. The MSMS Manual and associated documentation relates to the management of safety of marine operations which includes anchoring, berthing, un-berthing and shifting of vessels and other marine craft within the Port limits. It also provides clear safety and marine operational instructions and guidelines for vessels calling RAK Ports.
3. This document demonstrates RAK Ports' commitment to operate its harbours in a safe and environmentally sound manner to the benefit of staff, vessels and their crews, users, and the community at large. It gives guidance to staff and others involved in operations on best practice to achieve safe and efficient use of the harbours, their approaches, and environs.
4. The management of maritime safety is predicated on the protection and preservation of persons, property, and environment.

Purpose of this manual

5. The purpose of this manual is to describe the overall framework for the management and co-ordination of marine activities necessary to facilitate maritime safety. It encouraged the use of a systemised procedure for evaluating risks inherent in port marine operations and suggest ways to address and minimise those risks.
6. The main aim of MSMS is to provide guidance on good practice for the safe management of vessels in RAK Ports, focussing on the prevention of human injury or loss of life and including the avoidance of damage to the marine and associated terrestrial environment, property and infrastructure.
7. This document also provides essential reference for staff in planning and implementing operational safety management, assisting them to carry-out critical activities in a manner which is as safe and protective of the environment as is reasonably practical.
8. The Harbour Master is responsible for maintaining the design, the overall content, approval, and subsequent management of the MSMS.
9. As with many RAK Ports marine documents, the MSMS is a "live" document and, as such, will be subject to change from time to time as circumstances alter. The document will be available for viewing online and links to other relevant documents.

Scope of Marine Safety Management System

10. The MSMS is concerned with port responsibilities for port marine safety and do not attempt to cover all the safety responsibilities or in no way addresses the generic Occupational Health and Safety (OHS) risk associated within the port.
11. This MSMS will be developed and managed by the Harbour Master and other members of Marine Management Team (MMT) and where necessary in consultation with harbour users and stakeholders.

Implementation of Marine Safety Management System

12. The Safety Management System is implemented through several existing public documents, which, together, form a cohesive web of management. As appropriate, relevant sections of these documents are cross referenced to PMSC standards:

MSMS Documents	
RAK Ports Regulations	Admiralty Charts & Bathymetric Charts
Pilotage Directions	Notice to Mariners
PEC Regulations	Marine Safety Notices
Navigational Safety Policy	Agents Notification
Ruling Depth & Under Keel Clearances	Marine Emergency Response Plan
Harbour Master's Directions (To be published)	Marine Pollution Response Plan (To be published)
Marine Guidelines	First-strike Oil Spill Response Plan (To be published)
Towage Guidelines	Marine Report Form (MRF)
General Port Marine Information	Marine Investigation Form (MIF)
Marine Operating Procedure (AJZP) (To be published)	Marine Pollution Report (POLREP)
Pilotage Service	Berthing Request Form
Towage Procedure	Pre-arrival Forms
Port Control Procedure (In progress)	Non-Routine/Dead-ship Towage Application Form
Deep-Water Bulk Terminal 'Entry and Departure Guide for Vessels'	Notice of Proposed Vessel Movement to Request for RAK Ports Marine Assets
DUKC® System Guidelines	Anchorage Request Form
Application to Use the DUKC System (To be published)	Marine Tariff (SP & RMCFZA)
Al Jeer Port Marine Users' Guide	Tide Table Booklet
Passage Planning Guide (To be published)	Marine Tool-Box Talk (TBT)
Risk Assessment	Tug Inspection Checklist (TIC)

Table 1 : MSMS Documents

13. The overarching plans, policies, guidelines, and other documents of the MSMS are also contained in the RAK Ports Integrated Management System (RP IMS).

Legal background

14. The rules and regulations in the port contribute to the safe, efficient, and environmentally responsible handling of shipping traffic.
15. The international rules of the International Maritime Organization (IMO), such as the SOLAS convention as amended and its supporting codes (e.g. the IMDG code), and RAK Ports Regulation Act No. (9) are in force in the RAK Ports.
16. Furthermore, this Manual and various other documents (e.g. Pilotage Directions, Towage Guidelines) are produced with general oversight of the Harbour Master for promoting best industry practice.
17. While these documents remain as the primary source to manage safety of navigation within the port limits, they also contribute to enforce compliance with international and local regulations. These documents have come into force after careful examination of the port's requirements.
18. All legislations and directions will be reviewed to ensure that it remains fit for purpose in changing circumstances.

Applicable Regulations

- RAK Ports Regulations.
- International Convention for the Safety of Life at Sea (SOLAS), 1974, including SOLAS Protocol 1978, always as amended.
- International Convention on Load Lines (LOAD LINES), 1966, including Protocol 88, always as amended.
- International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78), always as amended.
- International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC), 1990 including the protocol to this convention (HNS Protocol) covering marine pollution by hazardous and noxious substances, always as amended.
- International Convention for the Control and Management of Ships' Ballast Water and Sediments, Adoption: 13 February 2004, and its Resolutions, always as amended.
- International Convention on Tonnage Measurement of Ships (TONNAGE), 1969, always as amended.
- Convention on the International Regulations for Preventing Collisions at Sea (COLREGs), 1972, always as amended.
- International Convention on Standards of Training, Certification and Watch-keeping for Seafarers (STCW), 1995, always as amended.
- International Convention for Safe Containers (CSC), 1972, always as amended.
- ILO Code of Practice on safety and health in ports, 2005, always as amended.
- ILO Code of Practice on accident prevention on board ship at sea and in port, 2nd Edition 1996, always as amended.

- ILO C185 Seafarers' Identity Documents Convention (Revised), 2003, always as amended.
- ILO and IMO Code of Practice on security in ports, 2004, always as amended.
- Regional Organizations for the Protection of the Marine Environment (ROPME).

RAK Ports and UK Port Marine Safety Code (PMSC)

19. RAK Ports greatly welcomed the introduction of the UK Port Marine Safety Code and in line with the RAK Government' objectives will make best endeavour to align with compliance with the requirements of the Code.
20. RAK Ports is committed to developing and maintain an effective, positive marine safety culture in line with the principles of PMSC.
21. Refer to PMSC, at:

    https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/564723/port-marine-safety-code.pdf

RAK Ports regulations

22. RAK Ports will monitor all vessels activities to enforce compliance with the RAK Ports Regulations enacted by the Act No. (9) of 2008 with respect to RAK Ports. It should be noted that violations of RAK Ports Regulations shall be subject to penalty imposed by the Management ranging from minimum to maximum as detailed under provisions of Article (28).
23. In addition, international protocols and conventions relating to safety, laws of the sea and pollution apply to shipping and ports.

Port limits

24. Port limits are specified in the RAK Ports Regulations. Pease refer to RAK Ports Regulations' schedule (1) of article (98) at:

    https://rakports.ae/wp-content/uploads/2019/12/rak-ports-regulation-2008-1.pdf

Responsibility for Port Marine Safety

25. The MSMS proposes measures to warrant recognition of good practice of the PSMC therefore, ports should:
    a. Develop an effective MSMS, which employs a formal assessment of risks, framed by due diligence procedures.
    b. Produce directions, regulations, guidelines, and procedures relating to aspects such as pilotage, pilotage exemption, towage and vessel traffic management.
    c. Maintain appropriate plans and procedures for emergency response and associated training\exercises.
    d. Undertake and regulate marine operations in a way that, as far as is reasonably practicable, safeguards the harbour, its users, the public and the environment.
    e. Conserve and promote a safety culture within the harbour environment.

f. Ensure that procedures are in place for the effective maintenance, operation, improvement, or conservancy of the harbours.

g. Prevent loss or injury caused by the Authorities' negligence.

h. Manage the relevant assets of the Authority safely and efficiently.

i. Employ people who are competent for the positions they hold.

j. Use verification/audit systems.

26. All employees have a duty to:

a. Comply with all port safety procedures.

b. Ensure that marine operations are undertaken in a safe manner.

c. Report hazard, risk, accident, incident or near miss to Marine department.

d. Report deficiencies of visiting vessels.

27. Port users operating commercially and the public using the harbour for pleasure are responsible for:

a. Their own health and safety and that of other harbour users and the public who may be affected by their acts or omissions.

b. Complying with port rules, directions and other regulations aimed at ensuring the safe use of the harbour.

MSMS components

28. RAK Ports MSMS will be regularly reviewed and updated in line with good practice, and to reflect experiences and lessons learned by RAK Ports. RAK Ports has, undertaken marine operations risk assessments and adopted a generic MSMS that applies in all the harbours and marine facilities.

29. The RAK Ports MSMS focuses on the operational and administrative output of the Marine department including:

- Pilotage
- Towage
- Port control (Vessel Traffic Management)
- Mooring
- Marine conservancy
- Marine safety
- Emergency and pollution response
- Competence training

Measuring performance

30. MSMS requires a means of pro-active and reactive monitoring to ensure that the system is working well.

31. Proactive measures employed are monitoring by Port Control; Pilots; Tug Masters; boat crew; mechanical staff; survey crew and indeed any marine staff employed in an operational role.
32. Other relevant proactive measures include audit, reporting of near miss, review of documents, meetings, workshops, exercises, risk assessments, MSMS correspondence etc.
33. Reactive measures employed are monitoring marine accidents/incidents through MRF for learning opportunities. Investigation of marine accidents/incidents reported through MRF.
34. Other relevant reactive measures include: Investigation reports by FTA and other Flag States such as the MAIB and other sources.

Key measures

35. As part of the MSMS, certain measures are used in the completion of risk assessment**s**. All records of incidents occurring within RAK Ports and reported using Marine Report Form (MRF) are kept.
36. The key measures used within the ports and approaches are: -
    a. Collisions/Allisions
    b. Groundings
    c. Sinking/Capsize
    d. Fire/explosions
    e. Oil pollution

Risk control measures

37. In accordance with the ALARP principle, the general risk control measures employed by RAK Ports can be categorized as follows:
    a. **Documentary Risk control**
        (1) Training - appropriate training to staff which includes:
            - Oil Spill Training
            - Vessel Simulation Training to pilot
            - Risk Assessment Training
            - Accident/Incident Investigation Training
            - VTS Training
            - STCW
            - Marine Tool-box Talk (TBT)
            - Tug Inspection Checklist for RAK Ports tugs and vessels
            - Other relevant Port and professional training
        (2) Permits and permissions.
        (3) Notice to Mariners.
        (4) Marine Safety Notices

(5) Agents Notification

(6) Regulatory framework-including:

- RAK Ports Regulations
- PEC Regulations
- Pilotage Directions
- Diving Approved Code of Practice

(7) Guidelines including:

- Marine Guidelines
- General Port Marine Information
- Ruling Depth & Under Keel Clearances
- Towage Guidelines.

(8) Marine Operating Procedure (AJZP)

(9) Port Control Procedure (in progress)

(10) Passage Planning Guide

(11) Entry and Departure Guide for Vessels

(12) Bathymetric and Admiralty Charts, and other Navigational information

(13) Navigation warnings and weather advice

(14) Marine Pollution Response Plan

(15) First-strike Oil Spill Response Plan

(16) Marine Emergency Response Plan

(17) Towage Approval Certificates

(18) Approved Code of Practice for Towage Survey Companies

(19) Method Statement

(20) Risk Assessment

b. **Hardware Control**

(1) VHF Communication:

- A marine radio network covering marine operations and VHF Channel 16 (emergency and distress frequency).

(2) Tide gauges – system of tide gauges providing live tidal information.

(3) Radar

(4) AIS monitoring facilities

(5) CCTV surveillance system

(6) PC based integrated traffic display system operated at Saqr Port.

(7) Aids to Navigation – Buoys, beacons, marks, and lights etc.

(8) Anemometer

c. **Operational/Technical Control**

(1) RAK Ports Pilotage Service

(2) RAK Ports Tugs and Towage

(3) Approved Towage Service

(4) Mooring Services

(5) RAK Ports Hydrographic Service

(6) RAK Ports Incident Response Team

(7) Tier 1 Pollution Combating

(8) Tier 2/3 Responder

(9) Harbour Patrol

(10) Dynamic Under-keel Clearance Software (DUKC)

Consultation

38. RAK Ports recognises that for the MSMS to be effective and to operate in the way it is intended, it is essential to involve the senior personnel working in the marine department, eg: pilot, tug master.

39. Where risk assessments are being carried out and new systems are being implemented, Marine Management Team (MMT) will involve relevant Marine/Harbour personnel.

40. In the event of MMT proposing any changes or new systems are being implemented, the MMT committee may involve senior marine/harbour personnel at different levels and stakeholders and interested parties as possible, especially when an unusual operation requires a review to be undertaken.

41. There is also an open-door policy at the Marine department, whereby any stakeholder with an issue can call and discuss it with the appropriate personnel. Day-to-day matters have been dealt with in this way for very many years and the stakeholders express a general level of satisfaction.

42. Consultation with harbour users takes place through the Marine Liaison Meetings. Marine Liaison Meetings will be held every six months and attendees will be given opportunity to opinion on all aspects of marine operations and navigational safety.

Review

43. The MSMS shall be in place to ensure that all risks are controlled – the more severe ones must either be eliminated or kept ‘‘as low as reasonably practicable’’ (ALARP). Once a year MMT chaired by Harbour Master will review the MSMS. The MMT committee will undertake a review and their findings will be recorded in the minutes. This meeting will occur in the latter part of the year.

44. The MMT proposes to undertake a comprehensive review of all marine policies, regulations, guidelines, directions, procedures, and other relevant documents on a 3 to 5-year basis or as

circumstances dictate. In due course an independent audit of the MSMS will be commissioned following comprehensive review of all documents.

Accountability for Port Marine Safety Management

45. The MSMS includes information regarding the extent of accountability and the obligations of the port's management structure. Those responsible for marine safety management in a port should familiarise themselves with the extent of their obligations and accountability, including those set out in RAK Ports regulations.

Compliance checklist

46. This checklist is not exhaustive:

Marine SMS Section	Items to be Checked
Management of navigation	Any relevant Notice to Mariners promulgated in a timely fashion.
	Guidelines/Byelaws in place and enforced.
Conservancy	Bathymetric surveys conducted.
Marine operational staff	Training needs identified.
	Job descriptions in line with responsibilities.
	Appraisal carried out.
Marine fleet	Confirm certification of all vessels operating in harbour.
	Vessel inspections conducted and recorded.
Risk assessment	Confirm that risk assessments are being carried out for unusual or irregular occurrences.
Emergency response	Emergency exercises being carried out in accordance with plans.
	Harbour personnel appropriately trained for emergency response.
	Appropriate debriefing of exercises taking place.
Incident reporting	Reports being correctly logged.
	Written reports from master's being received.
	Remedial actions appropriately carried out.
	Information circulated to interested parties.
	Analysis/trends identified.
Document control	Document log kept up to date.
	ISO Controlled
Maintenance management system	Daily, Weekly and Monthly procedures being adhered to and correctly recorded.
	Missed maintenance correctly recorded and remedial action planned

Table 2 : Compliance Checklist

SECTION TWO
POLICIES AND STRATEGIC OBJECTIVES

Purpose and use

1. The primary purpose of these Marine Policies is to provide an overall standard for marine operations in relation to maritime safety throughout the RAK Ports. The fundamental objective of the MSMS is to demonstrate the consistent application of these Policies.

Navigational Safety Policy

2. RAK Ports' Navigational Safety Policy is available to all port in the ISO folder and is readily available to port users on RAK Ports' website, at:

   https://rakports.ae/wp-content/uploads/2020/09/RP_MSP-006_NSP-Rev.3-UC2.pdf

Health & Safety Policy

3. RAK Ports' Health & Safety Policy is available to all port in the ISO folder and is readily available to port users on RAK Ports' website, at:

   https://rakports.ae/wp-content/uploads/2020/09/RP_MSP-001-Health__Safety_Policy-UC2.pdf

Environmental Policy

4. RAK Ports' Environmental Policy is available to all port in the ISO folder and is readily available to port users on RAK Ports' website, at:

   https://rakports.ae/wp-content/uploads/2020/10/RP_MSP-002-Environment_Policy-UC2.pdf

Quality Policy

5. RAK Ports' Quality Policy is available to all port in the ISO folder and is readily available to port users on RAK Ports' website, at:

   https://rakports.ae/wp-content/uploads/2020/10/RP_MSP-003-Quality_Policy-UC2.pdf

Policy review

6. The Marine Management Team (MMT) will undertake a formal review of all Navigational Safety Policy on an ongoing basis and a maximum review period of three years.
7. Quality Policy, Health & Safety Policy, Environmental Policy and other pertinent policies and procedures will be reviewed by the HSEQ department.

Strategic Marine Objectives

8. RAK Ports has the following strategic safety objectives:
   - To identify and assess hazards to be encountered during all RAK Ports' marine activities with respect to Likelihood and Severely (= Risk)
   - To eliminate the major risks wherever possible, and for risks that cannot be eliminated, control and mitigation measures will be put in place to reduce the risks to a level that is demonstrated to be As Low As Reasonably Practicable (ALARP).

MSMS and its Objectives

9. The MSMS is a structured set of controls and procedures for managing safety in marine operations, to ensure and to demonstrate that RAK Ports objectives are met. The objectives of the MSMS are:

    a. To provide the principles and structured guidance for managing marine operational risks within the RAK Ports' jurisdictional areas.

    b. To provide an essential reference for staff in planning and implementing operational safety management, assisting them to carry-out critical activities in a manner which is as safe and protective of the environment as is reasonably practicable.

    c. To demonstrate to stakeholders that process controls are in place to ensure that hazards and risks to safety and environment are systematically identified, assessed, and controlled and that recovery measures are put in place in case control is lost.

    d. To define performance standards for managing marine safety, which are assessed and continually improved by performance monitoring, audit, and when the system matures to have it reviewed by an external specialist.

10. The MSMS is implemented through several existing public documents, which, together, form a cohesive web of management. As appropriate, relevant sections of these documents are cross referenced to PMSC standards:

    - RAK Ports Marine Guidelines
    - RAK Ports General Port Marine Information
    - Ruling Depth & Under Keel Clearances
    - Pilotage Directions
    - PEC Regulations
    - Towage Guidelines
    - Risk Assessments
    - Notices to Mariners
    - Marine Safety Notice
    - Marine Emergency Response Plan
    - Marine Pollution Response Plan
    - Admiralty Chart 3404 and 3174

International Maritime Dangerous Goods (IMDG)

11. The Harbour Master, Deputy Harbour Master, Port Manager, HSEQ Manager and Security Manager should be notified of any vessel carrying dangerous goods of any classification at least 48 hours prior to the arrival of vessel. The Marine agent shall send such notification prior to sending ***Berthing Request Form*** and pre-arrival forms to Port Control. All dangerous goods will be handled as per procedures detailed in the ***Dangerous Goods ACOP***.

Dangerous substance in the harbour area

12. The entry and presence of dangerous, hazardous and harmful cargoes in port areas and any consequential handling must be controlled to ensure the general safety of the area, the containment of such cargoes, the safety of all persons in or near the port area and the protection of the environment.
13. The Port Authority has the power to prohibit the entry into a port of any vessel carrying dangerous goods, if the condition of those goods, or their packaging, or the vessel carrying them is such as to create a risk to health and safety.

Incident reporting

14. RAK Ports requires that a master provides reports should his vessel be involved in any incident. However, all are encouraged to report safety observations and incidents, for only by understanding the causes and avoidance measures adopted in all such circumstances, can more serious incidents be avoided. Some incidents due to their gravity or circumstances may be reported to the FTA.
15. All marine incidents must be reported to the relevant Port Control immediately, to ensure that an appropriate response can be coordinated to recover from, and/or reduce further impact of the event.
16. When a vessel within the port limits or on the approaches to the port has touched the ground, or has been in collision with, or in dangerous proximity to any other vessel, or any fixed or floating object, that vessel shall report the occurrence to the Port Authority giving all the circumstances leading up to the occurrence. If the incident occurred in the waters approaching the port but outside the port limits, all such reports should also be passed to the Port Authority. All marine incidents, as well as being reported as per relevant regulations will be entered on the accident database.
17. All marine events will be recorded through Marine Report Form (MRF). An investigation will be initiated at the discretion of the Harbour Master. All major events (incidents or accidents) will be investigated and recorded through Marine Investigation Form (MIF).

    Marine incident/Event

    In relation to the MSMS, an Incident/Event is defined as:

    "An unplanned event involving a vessel at sea or within port-controlled waters, with potential to cause an accident or disrupt the shipping schedule or that affects the safety of operation".

    - The above definition encompasses:
        a. Injury or death to one or more persons;
        b. Damage to property (i.e. vessels, port infrastructure or aids to navigation);
        c. Damage to the environment;
        d. Damage to port business (i.e. financial loss or damage to RAK Ports' reputation); or
        e. Non-compliance with a statute or regulation.

Near miss

Note that the inclusion of 'liable to cause' brings Near misses into the definition of incident for the purposes of the MSMS.

- Examples of those to be considered include but are not limited to:
    a. Situations where a vessel or craft needs to take unconventional avoiding action.
    b. A vessel passing another so close as to create a risk of collision or interaction.
    c. A vessel passing so close to shoal water as to create a risk of grounding.
    d. A vessel or craft passing so close to a structure as to create a risk of contact.

Incident database

18. The Harbour Master maintains a database holding all reported maritime incidents and other occurrences having significance to the maintenance of maritime safety. It will be the responsibility of relevant section supervisors to ensure that incident data is accurately recorded, and the database remains current.

Incident investigation

19. An incident will be investigated to:
    a. determine the cause of the incident, with a view to preventing a recurrence of that incident (or similar).
    b. determine if an offence has been committed: if so, there may be the need on the part of a harbour authority to initiate enforcement action that may lead to prosecution in their own right or through relevant authority.
20. The Harbour Master will take into consideration the following factors in deciding if a formal investigation is required:-
    a. The seriousness of the incident.
    b. The possible outcomes that could have arisen from the incident: i.e. if it was a near miss. Whether or not it was a reportable incident.
    c. The detail and effectiveness of the initial investigation.
    d. Any recurring trends highlighted by the incident.
21. The Deputy Harbour Master (DHM) will conduct the formal investigation taking into consideration of above facts.
22. The DHM will report conclusions and any recommendations using the ***Marine Investigation Form*** – MIF, to the Harbour Master within 7 days, keeping the relevant Managers (Port Operations/Marine) informed.
23. Any lessons learned from investigations will be included in the MIF together with measures being taken to prevent a recurrence.

Investigation involving external agency/authority

24. Investigations for major marine incidents or accidents may not necessarily be carried out under the authority of the Harbour Master or relevant managers (e.g: - HSEQ Manager or Security

Manager) or combined. The investigation may be part of a criminal investigation and the primacy for the investigation will remain with the lead agency/authority. The Federal Transport Authority may investigate some incidents depending on the circumstances.

Explosives (Class I)

25. Explosives can be handled within Saqr Port at certain berths namely Berth No. 1, 2 or 3. All explosives will be handled under the provisions of the IMDG Code. Contact should be made with the Hutchison Ports/Security Manager/Security Officer at 48 hours prior to vessel arrival and handling a shipment of explosives. All explosives will be handled as per the ***Dangerous Goods ACOP***. Adequate security measures will always be ensured for vessel handling explosives.

Prevention of pollution

26. A Master of a vessel causing or observing pollution has a duty to report the pollution to the Port Control and Harbour Master if:-
    a. The pollution is discharged from the vessel into the territorial water around RAK Ports waters.
    b. Pollution is found to be escaping or to have escaped from a vessel in such waters.
    c. Pollution is found to be escaping into any such waters from a place on land.
    d. Pollution is observed but there is no identifiable source.
27. The Harbour Master has the power to:-
    a. Go on board and inspect the vessel or any part thereof, or any of the machinery, boats equipment or articles on board the vessel, for the purpose of ascertaining the circumstances relating to an alleged discharge of oil or mixture containing oil from a vessel into the waters of the port.
    b. If the Harbour Master has reason to believe a ship, which proposes to enter the port, does not comply with the requirements of the IMO Convention for the Prevention of Pollution by Ships (MARPOL), he may report the vessel to Port State Control and/or impose a fine as per RAK Port Regulations.
    c. RAK Ports 'Marine Pollution Response Plan' is maintained to effectively handle spills of oil.

Waste reception facility

28. RAK Ports has waste reception facilities for ship generated waste. Designated garbage skips are provided on the common user berths of the port, for normal ships generated waste. Disposal of unusual/hazardous waste, large amounts of waste, oily waste etc, will need to be organised through the ship's agent via waste contractor, which is subject to Port Authority approval.
29. The Port Authority maintains records of types and volumes of waste disposed of within the port by means of reports (Annual Waste Reception Form).
30. Waste Management Plan, issued in 2017, is in force for all RAK Ports harbours.

Collision regulations

31. There are no special rules which modify or exclude the application of any part of the International Regulations for Preventing Collisions at Sea. Port Control shall monitor all vessel movements and actions within the Port limits.

Audit

32. The MMT acknowledges that the process of port marine safety assessment is a continuous and on-going one. New hazards and changing risks should be identified promptly and addressed.
    a. As the MSMS matures independent audits of it will be carried out.
    b. Internal audits by the Quality department for the Integrated Management Systems (IMS) will be carried out in conjunction with Marine Safety Coordinator.
33. Due to the skills necessary to conduct an audit of appropriate depth, the Harbour Master may appoint appropriate marine personnel to assist auditees.
34. Regular staff meetings are held at which each member of staff is given the opportunity to raise any issue relating to port marine safety and marine operations.

Audit objectives

35. Audits are conducted to achieve the following objectives:
    - To determine if the Marine SMS is being operated in accordance with the RAK Ports Navigational Safety Policy and, in line with the principles of the Port Marine Safety Code.
    - To support the continuous improvement in marine safety performance.
    - To confirm that MSMS procedures are understood and being actioned by those involved.

Audit review process

36. The audit review process of MSMS aims to provide input into the system ensuring continuous development by independent feedback. This is a fundamental principal of the RAK Ports MSMS and is designed to ensure assessment and reduction of risks to as low a level as is reasonably practical (ALARP), followed by regular reviews, aims to achieve a process of continual improvement.

Competence assurance

37. The competence of employees is an essential element in the management of risk. The components of competence are the knowledge and the motivation of the employee. Competence can be influenced by recruitment, training, assignment, assessment and review.
38. MMT is responsible for ensuring the required level of competence of their staff is maintained and for setting the assessment standards for their competence.
39. The Harbour Master and Deputy Harbour Master are responsible for ensuring the competence of Pilots and PEC holders is maintained.
40. All operational staff including tugs and small vessels crew will receive appropriate training under the supervision of a competent person (as determined by Harbour Master) who will recommend when the new starter is to be considered competent.

41. Such staff will only be permitted to undertake work until their competency is assessed directly by Harbour Master or Deputy Harbour Master, which will be recorded.
42. The Marine department holds a training record for all relevant staff and the respective section heads are responsible for its upkeep. RAK Ports undertakes a formal appraisal of staff annually, where competency standards are assessed.

Publication of MSMS documents and forms

43. The MSMS consists of several documents each relating to a specialised area thereby making the acquisition of information readily available; all MSMS documents and forms and plans are regularly posted on port website.
44. In addition, any plan of unusual movements or operations, which are notified through Notice to Mariners at the port website.

SECTION THREE
STRUCTURE OF MARINE SAFETY MANAGEMENT SYSTEM

General

1. The MSMS has been structured to provide a concise documented Management System.
2. Four levels of documentation have been established. The structure of the component parts of the MSMS are illustrated on the chart below:

Structure of MSMS

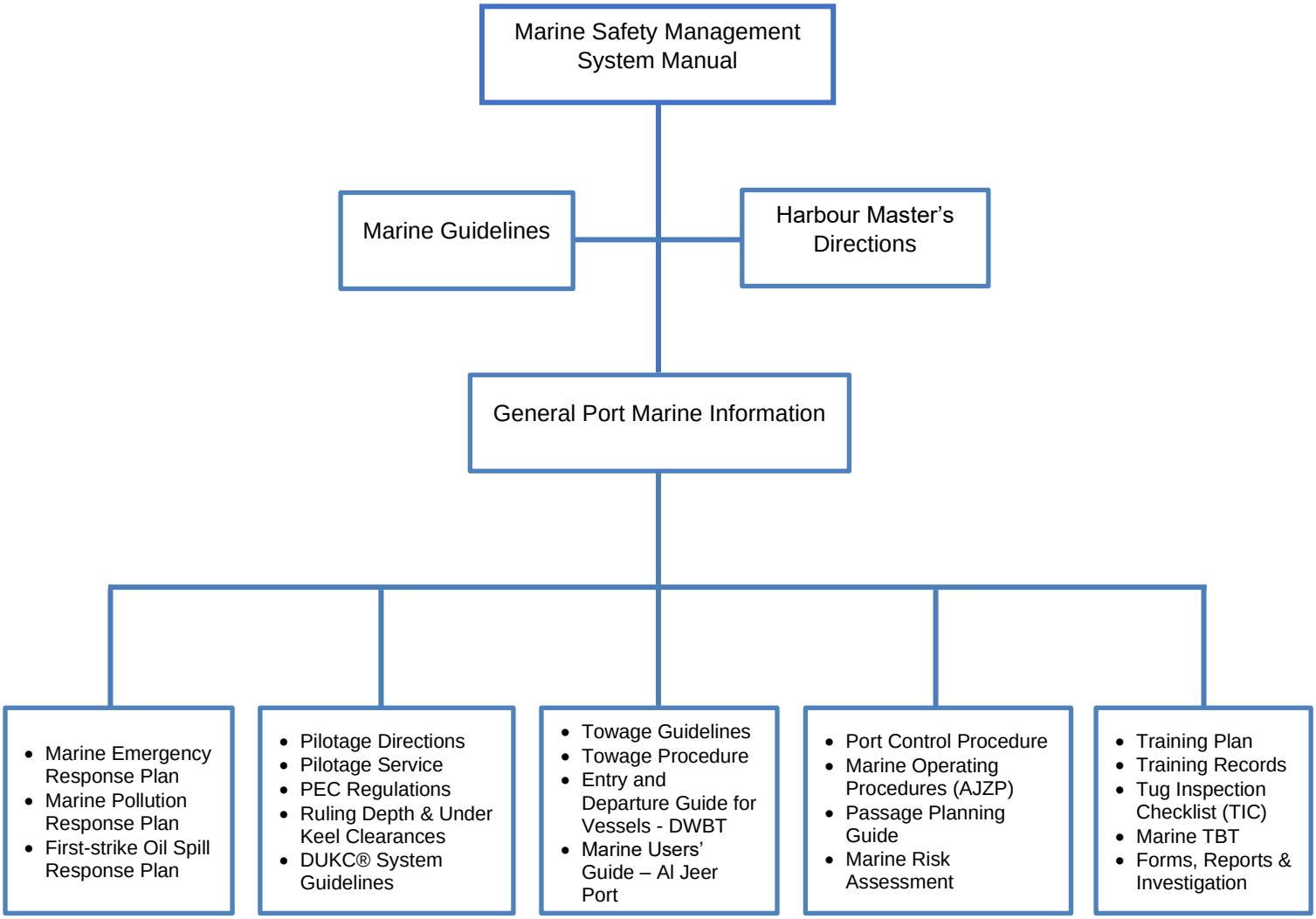


Figure 1 : Structure of the Marine Safety Management System

Marine Management Team (MMT)

3. The CHA and the Chief Executive Officer assign the following responsibilities on the MMT:
   a. Ensure that all harbours and marine facilities remain safe for all harbour users to undertake their marine activities, with the risk of accidents/incidents as low as reasonably practical.
   b. Develop and maintain appropriate policies, plans and procedures and ensure that assessments and reviews are undertaken as required.

c. Provide necessary appointment and seek authorisation from the Chief Executive Officer, and ensuring that appropriate services and facilities are available within the port (e.g. pilotage, traffic management, tugs, etc)

d. Report marine safety risks to the Chief Executive Officer.

e. The MMT consists of the following members:

- Harbour Master (Duty Holder)
- Deputy Harbour Master/Pilot
- Marine Safety Co-ordinator
- Sr. Hydrographic Surveyor
- Marine/Port Operations Supervisor – Al Jazeera Port
- Marine Engineer
- Marine Documentation Supervisor
- Port Control Supervisor
- Shore Bosun

4. Assisting the MMT the following members have the overall responsibility for the operational aspects of managing (non-statutory) navigation within their relevant port area:

- Port Manager, Ras Al Khaimah Port
- Port Manager, Al Jazeera Port
- Port Manager, Al Jeer Port
- Harbour Master/Deputy Harbour Master

5. The ultimate responsibility for implementation of MSMS plans, policies and procedures rests with the Harbour Master.
6. MMT members will extend their support to the Harbour Master in this regard.
7. The Deputy Harbour Master will assist the Harbour Master, to develop the plans by taking personal responsibility for planning how these are delivered effectively and efficiently.
8. The Marine Safety Coordinator is assigned to assist the Harbour Master for the endeavour of developing and maintaining the MSMS.
9. The Marine Safety Coordinator will liaise with the Harbour Master and MMT members on matters pertaining to marine safety compliance.

SECTION FOUR
MANAGEMENT RESPONSIBILITIES AND OBJECTIVES

General

1. RAK Ports is committed to safety as stated in the Navigational Safety Policy, which is required to be followed by all those involved in marine operations within RAK Ports.

The Competent Harbour Authority (CHA)

2. The Competent Harbour Authority (CHA - the port authority) recognises the requirement of an efficient MSMS for all ports managed by the Port Authority.

The Chief Executive Officer

3. The Chief Executive Officer is responsible for the development and maintenance of RAK Ports harbours and areas to meet the requirements of port users and safe operation of its harbour areas. The CEO will keep the RAK Ports Board appraised of Marine Safety matters.
4. He will ensure that an effective MSMS is in place, to this end, he has delegated that function to the Group Harbour Master. The Chief Executive Officer will ensure that adequate resources are available to discharge RAK Ports marine safety obligations in addition to making necessary recommendations for improvement of the system. Where required the necessary consents or authorisations will be granted. The Harbour Master has responsibility for all matters related to marine safety in RAK Ports, and is responsible for implementing, reviewing, providing resources and complying with the marine policies.

Group Harbour Master (Custody and Maintenance of the MSMS)

5. The custodian of the PMSC SMS is the Group Harbour Master who reports on safety matters directly to the Chief Executive Officer.
6. The Harbour Master duly appointed by the Port Authority is the RAK Ports official responsible for enforcing maritime Port Authority regulations for the good order and the safety of navigation within the RAK Ports area of jurisdiction. The Harbour Master has day-to-day responsibility for ensuring primary mechanisms for safety of navigation and the safe operation of associated marine activities in the harbour and its approaches. In this regard, he may delegate certain duties to the Deputy Harbour Master and senior members of the marine department for the purpose of compliance with applicable regulations.
7. He has powers of direction to regulate the time and manner of ships entry to, departure from and movement within the harbour waters. He can direct a vessel to leave the port, or remain outside the port, if in his opinion, the vessel or its contents might in any way pose a threat to the safety of persons or property.
8. He will ensure that appropriate mechanisms are in place to deliver high quality marine services, and that appropriate policies and plans are implemented effectively for efficiency of navigational safety, both directly and by delegation, as it considers appropriate. In relation to Marine operations, ensure that:
    a. Necessary guidelines, directions and procedures are introduced.
    b. All operations are in line with the principles of Port Marine Safety Code.
    c. Formal risk assessments are in place and carry out risk assessments, as necessary.

d. Notice to Mariners are issued.

e. Advising mariners of available water depths on approaches and in berths.

f. To liaise with the Statutory Bodies as required.

g. All harbours are safe for operational use by mariners, including infrastructure and navigational aids.

h. Pilots are competent and adequately trained.

i. PEC holders are competent and adequately assessed.

j. All assist tugs are compliant and certificated, including arranging for the annual inspections and maintenance.

k. Marine crews are appropriately trained.

l. Report regularly to the CEO on the effectiveness of the MSMS.

Port Managers – Saqr Port, Al Jazeera Port, RAK Maritime City, Ras Al Khaimah Port and Al Jeer Port

9. Manage all non-marine aspects of port operations and have the following responsibilities:

   a. Ensure efficient and safe interface between on one side, shore-based operations, and stevedores, and on the other side, the marine operations and vessels.

   b. Provide resources and finance for implementation of the PMSC SMS in their respective port.

   c. All berths in the harbour are safe for operational use by mariners.

   d. To work cooperatively with MMT members (and external organisations where appropriate) to meet and maintain the objectives of the MSMS.

   e. At RMC – to liaise with tenants to ensure full compliance with the highest marine standards at the berths.

   f. At RAK Port – to ensure the Control Tower function operates as required by the port and ensure safe marine operations are delivered.

Port Manager – Al Jazeera Port

10. In addition to the above manages marine assets and operations within the port. In relation to Marine operations:

    a. Ensure Marine assets are managed.

    b. Participate in decision-making about marine safety.

    c. Lessons learned from accidents or events are disseminated.

11. The MMT oversee the safety management system and provide statutory support.

12. Port Operations Supervisor will assist Port Manager in the implementation of marine operations activities.

HSEQ Manager

13. In respect of Marine Safety Operations:

a. Ensure compliance with the HSEQ Policy and standards set for the management of OHS function.

b. Manage the health and safety of employees and ensure that all key elements of health and safety management are in place.

c. Participate in or lead incident investigations (OHS) to ensure that appropriate steps are taken to prevent a re-occurrence.

Deputy Harbour Master

14. Deputy Harbour Master will assist and support the Harbour Master to manage marine operations efficiently. In addition, he is vested with authority to deputise for the Harbour Master, in his absence.

15. Deputy Harbour Master will ensure safe functioning of marine facilities (marine and navigational equipment and vessels).

16. He will ensure that:

a. High levels of marine safety awareness are provided to the staff and port users.

b. Implementation of MSMS is monitored.

c. All marine operations related safety issues within the port are addressed.

d. Risks have been identified and assessed, and that effective risk control measures are in place.

e. Safe marine operations are delivered.

f. Lessons learned from accidents or events are disseminated.

g. MSMS effectiveness in the port is reviewed, and suggestions are made where necessary for the improvements.

h. Participate in decision-making about marine safety.

i. Incidents are correctly reported and investigated.

Marine Safety Coordinator

17. Ensures the MSMS and its procedures are line with principle requirements of the Port Marine Safety Code and act in an independent manner, reporting directly to the Harbour Master:

a. Verify the effectiveness and compliance of the MSMS.

b. Liaising with the Harbour Master, Deputy Harbour Master and relevant MMT members and port managers having marine safety responsibility.

c. Be aware of progress and results of Hazard and Risk Control Reviews.

d. Verify that any necessary corrective actions have been implemented.

e. Oversee external Safety Management System audits and assess whether document control procedures are followed.

f. Participate in decision-making about marine safety.

g. Attend Marine Meetings and provide minutes when relevant.

h. Keep marine documents relevant, reviewed and up to date.

Pilots

18. The Pilots are responsible for the safety of pilotage and compliance with the MSMS. The Pilots have the following safety responsibilities:

    a. Advising on pilotage safety issues.

    b. Raising pilotage safety issues as and when required.

    c. Participate in the Pilots Meeting.

    d. Monitoring safety performance during pilotage.

    e. Reviewing the MSMS to ensure its suitability and effectiveness regarding pilotage.

Hydrographic Surveyor

19. The Harbour Master has established an effective hydrographic survey programme for RAK Ports to establish and confirm the depths of berths, channels, and fairways and anchorages. For the purposes of the MSMS the Hydrographic Surveyor is responsible to:

    a. Carry out regular surveys, prepare and collate up to date harbour depth, berth, and channel data for the Harbour Master.

    b. Establish and operate tidal measuring equipment.

    c. Maintain and operate the survey vessel.

    d. Arrange routine maintenance and repairing of the survey vessel in liaison with Deputy Harbour Master and Marine Engineer.

    e. Maintain all hydrographic and surveying equipment.

    f. Provide with latest bathymetric charts.

    g. Provide the Harbour Master with a monthly summary on harbour surveys.

    h. Produce annual tide tables.

    i. Monitor navigation aids and assist where necessary.

Marine Engineer - SP

20. For the purposes of the MSMS the Marine Engineer is responsible to:

    a. Manage the planned hull maintenance and repair of Port tugs and marine plant and associated equipment.

    b. Ensure that adequate resources are available to minimise the downtime of RAK Ports Tugs.

    c. Ensure the department is suitably manned with appropriately trained personnel.

Port Operations Supervisor – Al Jazeera Port

21. For the purposes of the MSMS the Port Operations Supervisor – Al Jazeera Port is to:

    a. Supervise marine assets and port control staff.

b. Ensure all marine operations related safety issues within the port are reported to Port Manager and Harbour Master.

c. Ensure safe delivery of marine operations.

d. Lessons learned from accidents or events are disseminated.

e. Participate in decision-making about marine safety.

f. Ensure incidents are correctly reported to Port Manager/Harbour Master/Deputy Harbour Master

Port Control

22. For the purposes of the MSMS the Port Control is to:

a. Ensure safe management of all marine traffic navigating within the limits of port.

b. Advises Masters of all Commercial Shipping approaching, leaving, and navigating within the harbour, the movement of all shipping affecting their passage.

c. Ensure that Pilots, pilot boats and Tug crews and berthing parties are alerted for duty as required.

d. Initiate Emergency Plans in accordance with laid down procedures and respond to Marine incidents as appropriate.

e. Maintain a Log of all accidents, incidents and occurrences which may affect marine safety.

f. Advises relevant Port Manager or Deputy Harbour Master and Harbour Master of any Incident or untoward occurrence.

g. Oversee movement of commercial vessels using all appropriate means, radar, CCTV, AIS etc.

Marine section Supervisors

23. The Marine section Supervisors and Assistants are responsible to relevant Manager for the implementation of marine safety measures in accordance with policy and standard safe operating procedures. In-particular they are responsible for:

a. Contributing towards maintaining overall marine safety awareness.

b. Contribute to and/or participate in the Safety Committee.

c. Undertaking harbour patrols, as necessary.

d. Enforcing Harbour Master's directions with respect to the safe navigation of marine traffic.

e. Maintain and administer the incident database to ensure the effective recording, availability and archiving of marine incident information. Maintain records of the Marine investigation (MIF).

Tug Masters/Coxswain/Crew

24. Tug Masters/Coxswain/Crew are responsible to ensure the effective and efficient operation of their unit. They ensure that tugs/boats are operated correctly, safely and are securely moored at the port.

Designated Person (As yet not implemented)

25. The key responsibility of the Designated Person (DP) is to audit the RAK Ports' compliance with the Port Marine Safety Code and provide independent assurance to the Duty Holder (CEO) that the SMS is working effectively.
26. The DP is a qualified marine professional appointed by Duty Holder (CEO).
27. The DP does not have any management function in RAK Ports.
28. The DP has direct access to the Duty Holder (CEO).
29. The DP makes an annual presentation of the audit report to the Duty Holder (CEO).
30. The DP has:
    (1) Relevant first-hand experience of the marine environment and how ports operate.
    (2) Appropriate knowledge of shipping, shipboard operations, and port operations.
    (3) Understanding of the design, implementation, monitoring, auditing and reporting of Safety Management Systems.
    (4) Understanding of assessment techniques for examining, questioning, evaluating and reporting.

Marine personnel

31. All marine personnel have the following responsibilities:
    a. Undertake work in a safe manner having regard to Marine and OHS and ensure that items, equipment, tools, facilities etc are properly used and correctly maintained.
    b. Ensure their own and the health and safety of others affected by their acts or omissions whilst at work.
    c. Make full use of protective clothing and equipment where appropriate.
    d. Report all accidents, dangerous occurrences and near misses immediately to the appropriate Supervisor/Port Control.
    e. Refrain from drinking alcohol and the use of drugs etc, whilst at work.
    f. Report any hazards, defects or omissions in plant and equipment to the appropriate Supervisor/Port Control.
    g. Only operate plant and equipment where they have received adequate training and instruction and are competent to do so.
    h. Attend training sessions provided to support health and safety in the workplace.
    i. Maintaining a safe and tidy working area and taking effective measures to prevent hazards in the workplace.

All employees

32. All employees have a duty to:
    a. Comply with all safety procedures laid down by RAK Ports.
    b. Ensure that marine operations are undertaken in a safe manner.

c. Report hazard, risk, accident, incident or near miss to their line manager or other appropriate officer.

Collective responsibility

33. The Port Authority acknowledges that it has an obligation regarding efficiency and safety of marine operations in respect to the services and facilities provided. The Port Authority acknowledges it has an express duty to take such actions as it considers necessary or desirable for the maintenance, operation, improvement and conservancy of the harbour.

Harbour users

34. Harbour users operating commercially and the general public using the harbour areas for pleasure are responsible for their own health and safety and that of other harbour users and the general public who may be affected by their acts or omissions, and complying with byelaws, directions and other regulations aimed at ensuring the safe use of the harbours.

Management Objectives

Number	Service provision/Activity	Objective
1	To ensure that empowering legislation available to RAK Ports is appropriate and fit for purpose	Review legislation and required risk assessment control measures a minimum of every two-year.
2	Provide a safe environment for all employees, stakeholders, and harbour users.	To maintain an effective MSMS. Consult with stakeholders on the MSMS and risk assessment review.
3	Conservancy: Provide a safe and navigable harbour for all users.	i. To survey and maintain navigation channels at charted depth. ii. To maintain aids to navigation. iii. Issue NtMs in a timely manner.
4	Provide management and/or support in any emergency within the harbour or close to its boundaries.	To maintain emergency response and pollution plans and the ability to implement them.
5	Monitor and review navigational incidents.	Aim to prevent serious incidents, major injuries or Tier 2 level pollution incidents as the result of a failure of RAK Ports MSMS.
6	Provide a safe, efficient, and effective pilotage service.	i. Maintain a roster of authorised pilots ii. Review the pilotage directions bi-annually. iii. No serious incidents resulting from errors made by authorised RAK Ports PEC holder. iv. Maintain aids to navigation. v. Issue NtMs in a timely manner.
7	Provide safe cost-effective marine services for the benefit of all stakeholders and harbour users	To reduce the occurrence of accidents or incidents at our commercial marine services.
8	Provide suitably qualified management structure to the benefit of all stakeholders and harbour users.	To ensure those with marine safety responsibilities are competent and trained to undertake their duties.

Table 3: Management Objectives

SECTION FIVE
MARINE MEETINGS

General

1. RAK Ports' MMT is committed, as part of its remit, to developing the culture of marine safety across RAK Ports. This culture must encourage:
    a. Employees to believe in continuous improvement of marine safety performance through implementation of the MSMS.
    b. Participation and involvement in MSMS by all marine employees.
    c. Individuals to accept responsibility and accountability for marine safety performance.
    d. The sharing of best practice.
    e. Measures to achieve this culture include:
        - promote and review the MSMS to influence employees;
        - attitudes and behaviours to improve marine safety performance;
        - and developing marine safety culture through leadership and commitment.
2. To effectively manage marine safety and the operation of the MSMS, a number of meetings have been established.

Marine Management Team meeting

3. The Harbour Master or Deputy Harbour Master chairs relevant meeting in connection with the MSMS, and review the progress, monitor the overall marine safety performance and co-ordinate action for continuous improvement in line with RAK Ports strategy. The meeting will be held once per year.

Pilotage Management quarterly meeting

4. The main objective of this meeting is to discuss Marine Safety issues and other relevant Port/ Pilotage operational and safety issues. The Harbour Master or Deputy Harbour Master chairs this meeting. To be held twice per year.

Consultation with stakeholders

5. RAK Ports is committed to maintain a consensus about safe navigation through stakeholder engagement and feedback from port users, tenants, and authorities. All are actively encouraged to be involved in the management of marine safety. Communication with individual stakeholders is encouraged and is achieved through promulgation of information via our website and an open-door policy at the Marine department office. Examples of consultation and involvement employed by the MSMS include:
    a. Stakeholders liaison meetings.
    b. Risk assessment consultations
    c. Legislation and enforcement consultation process
    d. Harbour development consultations
    e. Marine emergency drills and exercise participation and consultation

f. RAK Ports Marine section website

Stakeholders liaison meeting (Biannually)

6. A formal meeting with the stakeholders' representatives should be held at respective ports or at convenient port location to facilitate discussion on safety matters pertaining to that port.
7. This should include a safety presentation by the Ports Marine Team, Stakeholders' attendees are: Shipping Agents, Tenants, Oil Company Operators within RMC, Hutchison Port Terminal, Stevin Rock Harbour, RAK Gas, EPDA, Coastguard and Federal Transport Authority (FTA).
8. The Port Authority attendees are: Harbour Master, Deputy Harbour Master, Relevant Port Manager, and Marine Safety Coordinator. The Harbour Master or Deputy Harbour Master will chair the meeting.
9. The provisional agenda for the meeting will be distributed at least two-weeks prior to the meeting to all stakeholders for feedback to include matters arising.
10. The meeting agenda and minutes of the meeting will be circulated post-meeting.
11. The purposes of the meeting are to discuss issues related to marine operations and navigational safety.

General Marine coordination meeting (Every fortnight)

12. The Harbour Master or Deputy Harbour Master chairs this meeting. The members attending this meeting are:
    - Harbour Master
    - Deputy Harbour Master
    - Sr. Hydrographic Surveyor
    - Marine Safety Co-ordinator
    - Marine Engineer
    - Marine Documentation Supervisor
    - Port Control Supervisor
    - Shore-bosun, and
    - Marine/Port Operations Supervisor Al Jazeera (Separate meeting to be held in Al Jazeera Port with Harbour Master).
13. The purposes of this meeting are to provide a forum through which all aspects of marine operation can be addressed. This meeting will also discuss general issues that need to be referred to other department such as OHS, port operations, security matters concerning marine operations and marine safety.

SECTION SIX
PROCEDURES FOR MANAGEMENT OF COMMERCIAL NAVIGATION

Port passage planning

1. RAK Ports Competent Harbour Authority (CHA) promotes the use of appropriately detailed passage plans within its harbours and approaches.
2. All vessels over 500 gross tonnages and calling RAK Ports are encouraged to prepare and maintain a Port Passage Plan, appropriate for use during the vessel's routine passage and should be discussed with the Pilot on boarding.
3. Vessels with large or unusual tows are required to consult with the Harbour Master. Special directions and port passage plans are issued when the situation requires, e.g. unusual berthing and large vessels movement or dredgers.
4. RAK Ports will create a generic passage plan to assist vessels to create their own Port Passage Plan. This will be posted on the RAK Ports website when completed.

Port Control responsibilities

5. The key responsibility of the Port Control is to oversee and monitor the safe operations of all vessels within Port Limits, ensuring proper control over vessel movements within the Port Limits, and provision of timely information regarding safe navigation, tides and weather conditions.
6. Port Control monitors harbour radars and CCTV surveillance system and act accordingly to any safety and security breaches noted.
7. During emergency incidents, act as initial Emergency Controller and call out essential personnel and emergency services.
8. The Port Control staff will also broadcast any order issued by the Harbour Master to ensure proper control over vessel movements within the Port Limits.
9. Standard Berthing Request and Pre-arrival Checklists for RAK Ports are incorporated within the MSMS and are posted on the RAK Ports website.
10. Port Control co-ordinates traffic movements within the port limits, including setting criteria for:
    a. The conduct of navigation in restricted visibility, adverse weather etc.
    b. Circumstances which might require restriction on navigational movements.
    c. Restricting movement in the main channel to one major vessel at a time.
    d. Provide relevant information to vessels inside and outside the controlling area for the Safety of Navigation.
    e. Co-ordinate and facilitate shipping and landing of Pilots.
    f. Maintain records of ship movements, communications, and significant events within the controlling area, including the recording of radar and VHF radio traffic data.

Communications

11. Communications with vessels and crafts within the ports are by relevant Port Control VHF radio channels.

Pilotage operations

12. Pilotage is compulsory for all vessels over 50 metres in length.
13. Exceptions are made for those vessels whose Master or First Mate holds a valid Pilotage Exemption Certificate or are exempted under the provisions of the ***Pilotage Directions***. The service is available to any other vessel that requests it, on due notice. The requirements have been promulgated in the ***Pilotage Directions***.

Towage operations

14. RAK Ports' Competent Harbour Authority reviews both the provision of towage and ***Towage Guidelines*** for RAK Ports and Stevin Rock Harbour. Where relevant Pilots, Senior Tug Masters and Towage providers are consulted as part of the review process. Refer to ***Towage Guidelines*** on the RAK Ports website.

Mooring services

15. RAK Ports maintains compulsory moorings services and set standard orders for mooring vessels and barges and are based on risk assessment. However, certain RAK Maritime City tenants are permitted to use their own mooring services within their limits.
16. All vessels, whatever their size must be properly moored, and lines tended when alongside. If vessels are left unattended, the owner/tenant/operator must make arrangements for moorings to be checked and tended regularly. If one vessel of a group moored abreast leaves, then the operator must ensure that moorings of the remaining vessels are left in a satisfactory condition.
17. All mooring staff engaged/employed in mooring/unmooring operations must wear appropriate Personal Protective Equipment (PPE), including life-vests. They should set a good example to others so employed.
18. The Mooring supervisors are responsible for ensuring the implementation of this policy for the safety of personnel.
19. Staff should ensure that members of the public and other personnel not engaged in a mooring operation keep a safe distance from mooring/unmooring operations.

Conservancy

20. RAK Ports Competent Harbour Authority (CHA) shall endeavour to conserve its harbour, port and approaches to ensure they are reasonably fit for use as a harbour and port, taking reasonable care to ensure that each is in a fit condition for a vessel to resort to it.
21. RAK Ports carries out all its functions with special regard to the possible environmental impact, protecting from damage and pollution the marine environment of RAK.

Hydrography

22. Identifying the extent and frequency of which hydrographic surveying should be undertaken is an essential component of a formal assessment of navigational risks. The Hydrographic department maintains regular hydrographic surveys in the harbour and approaches. The frequency of surveys is determined by experience, operational requirement and the reporting of incidents.
23. The RAK Ports harbours are surveyed at least once in a year, or prior to and after maintenance dredging operations, or as required. The result of these surveys are published in the form of

charts and provided to the Harbour Master in order to monitor the depth within the port and its approaches. This information is also used in setting "allowances" to be applied to the Admiralty Chart Datum (ACD) tidal predictions for the port, harbour and berths.

24. Hydrographic information from local surveys is submitted to the United Kingdom Hydrographic Office (UKHO), where it is used in the compilation of British Admiralty Charts. In addition, Notices to Mariners may disseminate some information of a particularly urgent or temporary nature.

25. Regular inspections of the seabed, specifically in areas subject to high siltation build-up and high use, are undertaken. Tide-Tables are published annually by the Harbour Master's Office.

Admiralty charts

26. Admiralty charts 3404 (INT 7213) and 3174 (INT 7209) refer to RAK Ports harbours and their approaches.

Aids to navigation

27. Many devices are used to assist navigation within RAK Ports, including navigational marks, lights, and buoys. All navigational aids used within the port meet the criteria laid down by the IALA (See the details of AtoN in the RAK Ports ***General Port Marine Information***).

28. The harbour has well maintained system of aids to navigation and the provision of routine inspection and maintenance is carried out by M/S. AMRO. A planned maintenance programme for navigational lights should also be determined in accordance with the risk assessment and records kept of maintenance undertaken. Any defects should be reported to the appropriate tower for onward reporting to M/S. AMRO.

29. Every port is responsible for the maintenance of the navigation aids within the port limits and details of defects/repairs are to be coordinated through the Harbour Master. All navigational devices are maintained by the contractor and the Port Authority.

30. Reports of AtoN failures are usually reliant on reports from Harbour users. Where an AtoN failure does occur and it is not possible to effect repairs quickly a Navigation Warning may be issued and promulgated through relevant Port Control.

Severe weather

31. Forecasts on severe weather are distributed to vessels alongside berths in the harbour and broadcasted on VHF radio channels through Port Control.

Anchorages

32. Anchorage are as specified in the ***General Port Marine Information*** at:

    https://rakports.ae/wp-content/uploads/2019/12/Marine-Information.pdf

33. Subject to approval, the specified anchorage areas may be repositioned and extended within the jurisdiction of port, to take reasonable safety measures for the protection of navigational safety.

Deficient vessel

34. The Harbour Masters have powers to issue directions in respect of specific vessels or groups of vessels restricting their activities or requiring special provisions whenever such vessels use

the harbours. Such directions may include restrictions to daylight or certain states of wind and/or tide – in extreme cases prohibition from the port.

Incidents

35. An incident occurring within the RAK Ports will be graded depending on the nature of the incident, the possible effects on life, the environment, the port operations, and the level of response required:

    a. Minor incidents: Minor incidents are those that can be handled within the everyday resources of each of the individual harbours. Although the emergency services or other organisations may be notified or required to assist, such assistance will be routine.

    b. Major incidents: A major incident may be defined as being beyond the normal day-to-day capacity of the port authority and will require the special and extensive mobilisation of extra resources and/or the emergency services. Examples of major incidents may include:-

    - Death or serious injury to any number of people;
    - Extensive damage or contamination to the environment;
    - Extensive damage to vessel, installations, berth facilities and quayside equipment;
    - Serious disruption to the operation of the harbour

36. When a marine incident has occurred, a relevant member of the Marine Emergency Response Team should be informed immediately as per the ***Marine Emergency Response Plan***. Non-Marine related incidents procedure is covered by the Health and Safety Plan.

Incidents Procedures

37. Incident assessment, response and alarm procedures as specified in the RAK Ports ***Marine Emergency Response Plan***. Refer to plan at:

    https://rakports.ae/wp-content/uploads/2019/12/rpmp-008-merpwebsite-2.pdf

SECTION SEVEN
DOCUMENTS FOR MANAGEMENT OF COMMERCIAL NAVIGATION

Marine Guidelines

1. The Marine Guidelines aims to promote good practice in the conduct of safe marine operations. See the guidelines, at:

   https://rakports.ae/wp-content/uploads/2019/12/Marine-Guidelines-1.pdf

Harbour Master's Directions

2. The Harbour Master has powers of directions to regulate the time and manner of ship's entry to, departure from and movement within the Harbour waters. These powers are for the purpose of giving specific directions. *(Currently under prep.)*

General Port Marine Information

3. The ***General Port Marine Information*** aims to provide information for Masters of seagoing vessels, shipping lines, publishers of nautical information and any other party that needs nautical information. See more at:

   https://rakports.ae/wp-content/uploads/2019/12/Marine-Information.pdf

Pilotage Directions

4. The ***Pilotage Directions*** designates compulsory pilotage and exemptions to compulsory pilotage for certain vessels navigating within the Port. See more at:

   https://rakports.ae/wp-content/uploads/2019/12/Pilotage-Directions.pdf

Pilotage Exemption Certificate

5. RAK Ports Competent Harbour Authority (CHA) will ensure the provision of appropriate formal procedures for assessing the suitability of PEC applicants. See more at:

   https://rakports.ae/wp-content/uploads/2019/12/PEC-Regulations.pdf

Pilotage Service

6. Pilotage services are provided in accordance with the procedures contained in the document ***Pilotage Service***. Refer to:

   https://rakports.ae/wp-content/uploads/2019/12/Pilotage-Service.pdf

Towage Guidelines

7. The ***Towage Guidelines*** are intended to provide generic and specific guidance to ship masters, pilots and tug crews engaged in tug assisted navigation and scope for using tugs as a means of reducing navigational risk within RAK Ports limits. See more, at:

   https://rakports.ae/wp-content/uploads/2019/12/Towage-Guidelines.pdf

Towage Procedure

8. The ***Towage Procedure*** has been produced to provide a source of information on RAK Ports tugs, towage service and procedure. See more, at:

   https://rakports.ae/wp-content/uploads/2019/12/Towage-Procedure.pdf

Retention	@ Office	@ Archives
	0-2 years	3-5 years

Ruling Depth & Under Keel Clearances

9. The ***Ruling Depth and Under Keel Clearances*** are intended to provide basic guidance on determination of ship's minimum under keel clearance (UKC) to provide safe navigation within RAK Ports and Stevin Rock Harbour with restricted available depth of water and thus enhancing safety of shipping and protection of environment. Refer to:

   https://rakports.ae/wp-content/uploads/2020/05/RDUKC.pdf

DUKC® System Guidelines

10. The DUKC® System Guidelines have been produced to provide basic information regarding Dynamic Under Keel Clearance and procedure for the optimal utilisation of DUKC System at RAK Ports. Please see the DUKC System Guidelines at:

    https://rakports.ae/wp-content/uploads/2020/11/DUKC_System.pdf

Saqr Port Deep-Water Bulk Terminal 'Entry and Departure Guide for Vessels'

11. The 'Entry and Departure Guide for Vessels' has been produced to provide guidance for vessels calling Saqr Port Deep-Water Bulk Terminal. See the Guide at:

    https://rakports.ae/wp-content/uploads/2020/09/DWBT-Entry-and-Departure-Guide.pdf

Al Jeer Port Marine Users 'Guide

12. Al Jeer Port Marine Users' Guide has been written for vessel Masters, ship-owners, port users, shipping agents and any other parties that need information on operational parameters and procedures pertaining to marine operations and navigational safety at Al Jeer Port. See the Guide at:

    https://rakports.ae/wp-content/uploads/2020/09/AJRP-Marine_Users_Guide.pdf

Passage Planning Guide

13. The Passage Planning Guide has been developed for the benefit of Masters and mates of ships for planning a port passage within the Compulsory Pilotage Areas of RAK Ports. *(Currently under prep.)*

Marine Operating Procedure – Al Jazeera Port

14. The 'Marine Operating Procedure – Al Jazeera Port' aims to provide guidance on Al Jazeera Port requirements for the planning and conduct of marine operations. *(Currently under prep.)*

Port Control Procedure

15. This document has been produced to provide information on procedures of Vessel Traffic Management in RAK Ports. See more at:

    https://www.rakports.ae/marine/Portcontrol-Procedure.pdf *(Currently under prep.)*

Marine Emergency Response Plan

16. RAK Ports ***Marine Emergency Response Plan*** is the contingency plan developed to deal with shipping related emergencies. See the plan, at:

    https://rakports.ae/wp-content/uploads/2019/ 12/rpmp-008-merpwebsite-2.pdf

Marine Pollution Response Plan

17. This ***Marine Pollution Response Plan*** is designed to provide a framework to enable RAK Ports to protect, or where this is not possible, minimise the impact on the marine environment from any marine pollution incident within the port and its associated waters, through the initiation of a rapid, effective and appropriate incident response.

First-strike Oil Spill Response Plan

18. The purpose of this plan is to ensure that there is a timely, measured and effective response to any first-strike (Tier 1) oil spill incidents within RAK Ports waters. This plan will co-exist with RAK Ports ***Marine Pollution Response Plan*** (MPRP), RAK Ports ***Marine Emergency Response Plan*** (MERP) as well as National Oil Spill Contingency Plan (NOSCP).

Notices to Mariners/Agents Notification/Marine Safety Notices

19. NTM, Agents Notification and MSN provide essential information that covers permanent or short-term advice and directives on navigation and/or marine safety. These notices are issued by the Harbour Master and copies are sent to relevant local, national, and international contacts. See at: https://rakports.ae/marine/

Emergency Contact Directory

20. This document provides lines of communication for effective handling of marine based emergencies within RAK Ports. See the Directory at:

    https://rakports.ae/wp-content/uploads/2019/12/Emergency-Contact-Directory.pdf

Tide tables

21. Tide tables provide times and heights of high and low waters within RAK Ports. See the Tables, at: https://rakports.ae/marine/

Marine forms

22. All relevant marine forms for vessel pre-arrival notification and incident reporting (MRF) are accessible at: https://rakports.ae/marine/

Bunkers, slops and sludge

23. The Safety department approval is required for all bunker operations including transfer of any sludge/slops oil waste ashore. The HSEQ Manager issues ***Bunkering/Fuel Transfer Operations*** SOP (As per H&S department procedures).

24. Prior to commencing bunkering operations, permission shall be obtained from the Port Control. Bunkering at anchorage or ship to ship bunker transfer, shall only be permitted at the discretion of Harbour Master. Vessels receiving bunkers shall comply with their own safety management systems and Shipboard Oil Pollution Emergency Plan (SOPEP) manual. The Harbour Master and HSEQ Manager may issue special instructions about bunkering from time to time.

Diving operations

25. RAK Ports has a responsibility to ensure that any diving works within the limits of the harbours are carried out safely, by competent divers, in accordance with RAK Ports ***Diving Approved Code of Practice*** (Diving ACOP). Refer to Diving ACOP, at:

    https://rakports.ae/wp-content/uploads/2019/12/Diving-ACoP.pdf

26. Any requirement for scientific diving within the limits of the harbours are carried out safely, by competent divers, in accordance with RAK Ports ***Scientific Diving Approved Code of Practice*** (Scientific Diving ACOP).
27. Any commercial diving is subject to the ***Diving Operation PTW*** issued and administered by the Safety department. Any diving works on behalf of RAK Ports will be carried out by competent diving contractors, operating with a risk-based safety management system. Contractors must provide evidence of their competence and SMS at the time of tendering.
28. Diving must be suspended when there are increased risks from passing vessels or other activities in the harbour, or when other conditions change significantly. The Harbour Master may order the cessation of diving if the operation appears unsafe.

SECTION EIGHT
EMERGENCIES

Emergencies in the harbour

1. Emergencies where life is in danger must be notified at once to the emergency services by dialing 999 and Port Security or through VHF channel 16 to Port Control.

Reporting marine incidents/accidents

2. All marine incidents/accidents, including near misses, occurring within port's statutory waters must be reported to relevant Port Control, and all calling vessels and relevant Marine staff are obliged to report Marine Safety Incidents / accidents using Marine Report Form (MRF). Diving incidents, and any incidents, causing death, injury and near miss shall be reported to Health & Safety department by the port control. The reports will be used to review accidents and incidents, for assessing whether any action is necessary to reduce the risk of recurrence.

Training

3. All officers, supervisors and staff are to be suitably trained to be competent to fulfill their roles within the organisation and can demonstrate competence in critical areas of harbour safety.

Risk assessment process

4. RAK Ports MSMS is informed by and based upon a formal system of risk assessment.
5. RAK Ports has undertaken a formal safety assessment of its harbour operations to:
    a. ensure that a systematic approach was taken to the identification and the management of risks.
    b. There is a preferred hierarchy of risk control principles:
        - eliminate risks - by avoiding a hazardous procedure, or substituting a less dangerous one;
        - combat risks - by taking protective measures to prevent risk;
        - minimise risk - by suitable systems of working.
6. The MSMS maintains a record of all formal risk assessments and these will be reviewed at least every two-years. In addition, all employees and port users are encouraged to use dynamic risk assessments to determine and reduce hazard levels for any activity or operation not detailed by formal risk assessment.This process allows to eliminate the risk or, failing that, to reduce risks to as low as reasonably practicable.

Risk control measures

7. RAK Ports uses and maintains risk control measures which include but are not limited to:
    a. Directions and guidelines
    b. Notices to Mariners
    c. Operating procedures
    d. Permits to work/operate
    e. Appropriate Personal Protective Equipment

f. Training
g. Briefings
h. Aids to Navigation
i. Equipment surveys and inspections
j. VHF radio communications
k. CCTV Coverage
l. Tide Gauges
m. Exclusion zones for diving/special operation

Emergency plans

8. The MSMS shall include preparations for emergencies – and these should be identified as far as practicable from the formal risk assessment. Emergency plans need to be published and exercised.

Relevant emergency response plans

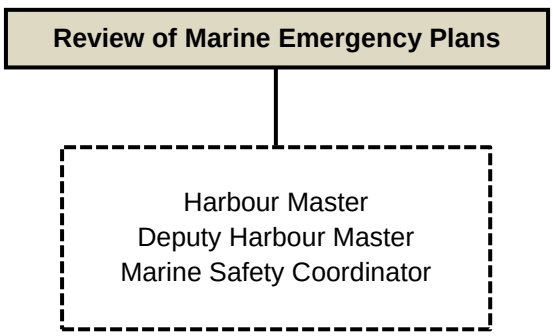
9. The principal emergency procedures under which the harbours operate are:
   a. Marine Emergency Response Plan
   b. Marine Pollution Response Plan
   c. First-strike Oil Spill Response Plan
10. Copies of relevant plans are available for downloads at RAK Ports website.

Exercise and drills

11. RAK Ports Marine department arranges periodic exercises based on the emergency plans.

Emergency Organisation and Management Responsibility

i.



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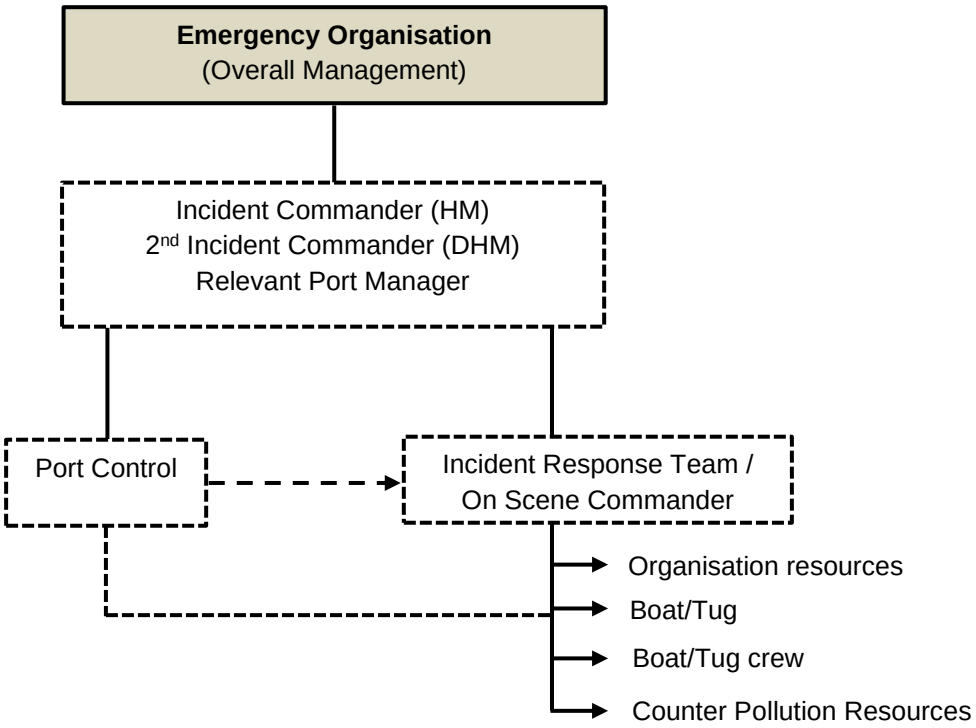

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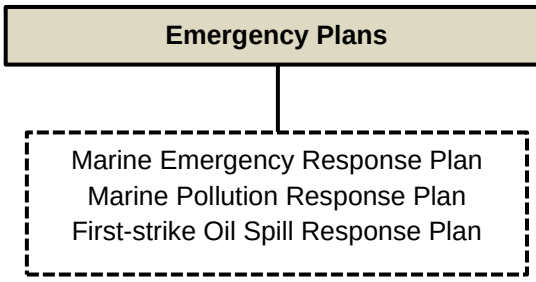

Figure 2: Emergency Organisation and Management Responsibility

SECTION NINE
RISK MANAGEMENT

Definitions

1. Following are simple definitions of hazards, risks, and associated processes.

   Hazard means the potential to cause:

   - Harm including ill-health and injury.
   - Damage to property, plant, products, the environment, or reputation; and
   - Interruption to operations or increased liabilities.

   Risk is the 'measure' of the hazard, where:

   - Risk = Severity of Harm x Likelihood of Occurrence ***or***
   - Risk = Consequences x Probability of the event.

   Risk Assessment used in this context is provided in subsequent page below.

   Hazard identification

   - Identifying hazards which could cause harm.

   Risk assessment

   - Assessing the risk which may arise from those hazards.

   Risk control

   - Implementing appropriate measures to eliminate, reduce or control risk.

   ALARP

   - Reducing risks to As Low as Reasonably Practical.

   Risk measurement

   - A risk measurement matrix follows on subsequent page.

Hazard Identification and Risk Assessment

2. A fundamental part of the MSMS is to undertake a formal assessment of hazards and risks of its marine operations so that appropriate policies and procedures can be prepared to eliminate significant risks or, if that is not practical, to reduce risks as low as reasonably practical. An independent and comprehensive risk assessment covering RAK Ports marine operations of its port facilities was undertaken by a professional consultant. The objectives of the HazID Study were to:

   a. Identify the Major Accident Events (MAEs) capable of posing serious and immediate risk to health and safety.

   b. Identify the hazards that cause or contribute to cause those MAEs.

   c. Identify existing engineering or operational (e.g. procedural) controls and measures and include in the design for prevention or mitigation;

   d. Identify those controls that are safety critical to the identified MAE's;

e. Rank the risks using a Risk Assessment Matrix (RAM);

3. Where appropriate, identify additional prevention and/or mitigation measures for improvement to reduce the risk to As Low As Reasonably Practicable (ALARP).

Risk Assessment Flow Chart

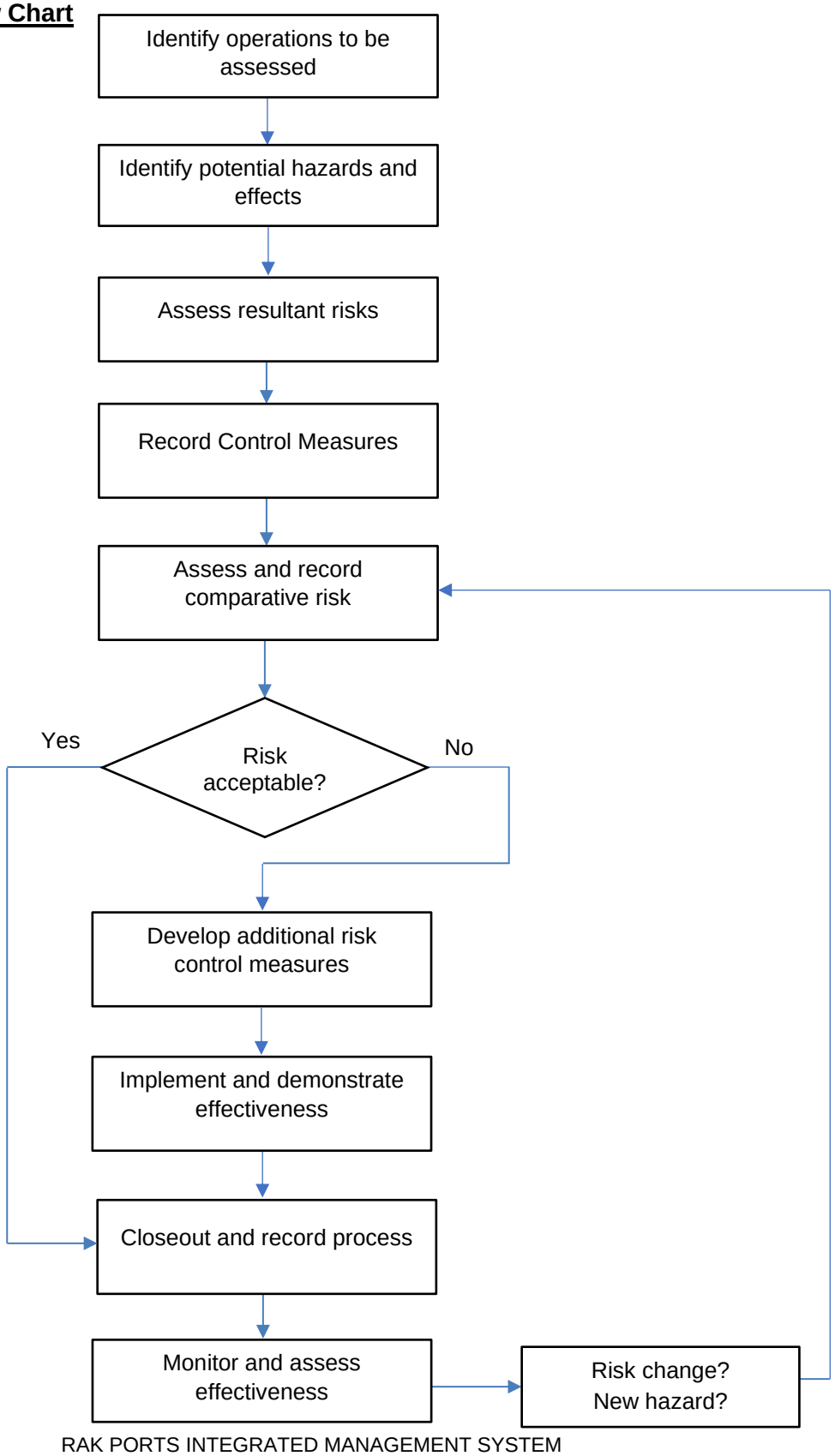

Figure 3: Risk Assessment Flow Chart

Retention	@ Office	@ Archives
	0-2 years	3-5 years

Risk assessment factors

Sl. No	Likelihood (L)		Consequences (C)		Manageability (M)	Mitigation Factor (MF) Scale (0.1 – 1.0)	
1	Event is unlikely to occur	1	Little or no consequence	1	Event easily managed	0.1	Risk can be mitigated
2	Event may occur	2	Minor consequences	2	Event can be managed	0.2	↓
3	Event will occur from time to time	3	Moderate consequences	3	Event difficult to manage	0.3	
4	Event will occur	4	Major consequences	4	Event highly difficult to manage	0.4	
5	Event occurs frequently	5	Catastrophic consequences	5	Event unmanageable	0.5	**Unable to mitigate risk**
	< 10 Low Risk		**10 – 19 Moderate Risk**		**20-39 High Risk**		**> 40 Very High Risk**

Table 4: Risk Assessment Factors

Total Risk (TR) = L x C x M, Resultant Risk (RR) = TR x MF

Note: Marine activities under the control of RAK Ports - Marine. Risks assessed in view of damage to port infrastructure and impact on operations. The above Risk Assessment Factors are for comparison purposes only.

- Low risk: Keep under review for any increased levels.
- Moderate risk: Maintain adequate control by risk reduction measures and specific procedures to reduce probability or consequences and achieve a lower risk value. If not achievable then further review of the activities and need should take place.
- High risk: Such activities should not normally continue.
- Very High risk: Such activities should be ceased.

ALARP Principles: The Authority endorses the principle of ALARP. This requires that hazards be properly identified in a structured manner, resultant risks assessed and then control, and reduction measures implemented to reduce those risks to *As Low As Reasonably Practicable.* An illustrative diagram follows on the next page.

ALARP Principles

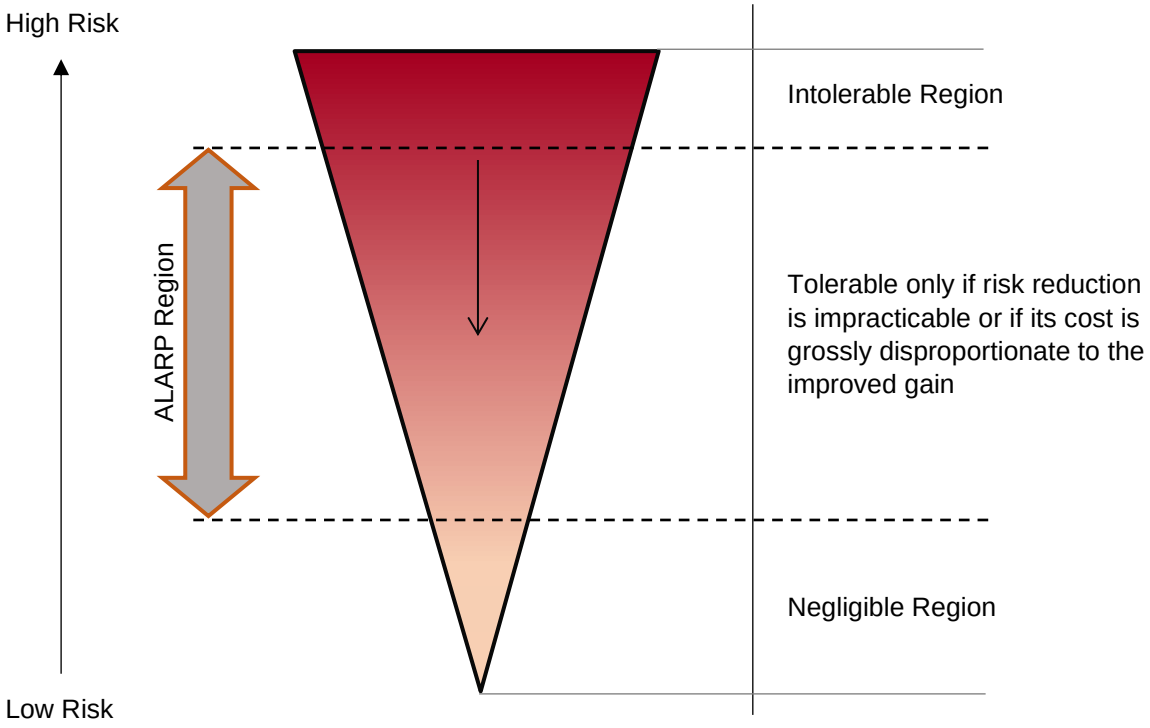

Figure 4: ALARP Principle

Retention	@ Office	@ Archives
	0-2 years	3-5 years

Toolbox talk

4. A toolbox talk is an informal safety meeting. Toolbox meetings are generally conducted at the job site prior to the commencement of a job or work shift. A toolbox talk covers special topics on safety aspects related to the specific job. Meetings are normally short in duration and cover topics such as workplace hazards and safe work practices.
5. All routine operations involving potential hazards should be preceded by a Toolbox Talk. Such routine operations may include:
    a. mooring/unmooring operations;
    b. port tugs operations;
    c. navaid maintenance;
    d. manoeuvring larger vessels in and out of the harbours;
    e. unusual quayside operations;
6. The person in charge of the particular operation is responsible for implementing toolbox talks using the ***Marine Tool-Box Talk*** form.

Unusual/exceptional operations

7. All and any non-routine operations maybe subject to a risk assessment. Depending upon the potential hazards and complexity of the task it can vary from a simple Toolbox Talk to a formal risk assessment meeting or workshop. Examples of such unusual operations include vessels of unusual size or configuration; dredging; re-floating a grounded/stranded vessel; dead-ship towage; lightering; salvage removal of derelicts.

New risk assessments

8. Whenever circumstances change to bring in activities outside the existing scope of the MSMS, the Harbour Master will, in full collaboration with the relevant stakeholders, undertake a risk assessment of the intended operation. This process is likely to include the activation of a meeting of the Maritime Advisory Panel.

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Retention	@ Office	@ Archives
	0-2 years	3-5 years

Annex 1

Incident Investigation
Introduction 1. All incidents reported through MRF (Marine Report Form) will be reviewed by Deputy Harbour Master and Harbour Master, to ensure that all necessary detail and necessary immediate corrective actions are taken and recorded. 2. As appropriate, OHS accidents will be referred to Health & Safety department for action.
Requirement 3. The investigation of all reported marine incidents shall be started by the Deputy Harbour Master with the involvement of relevant member of MMT/ port personnel within 48 hours of the report being received. 4. Marine Investigation Form (MIF) will be used to record the investigation. 5. Reported marine events, which relate directly to or involve equipment/ infrastructure/facilities and port operations, will be referred to the appropriate department/parties. 6. When the incident/accident requires further investigation by other departments/parties, reports from these departments/parties will be sought to supplement the investigation report. 7. All marine events will be subject to final review by the Harbour Master. 8. The Harbour Master will decide whether an event can be closed, or further corrective action is required before closure can take place. 9. The focus of the investigation team when considering incident investigation reports will be: ○ to consider and discuss the findings and conclusions of the ***Marine Investigation Form*** (MIF). ○ to consider and discuss the corrective actions and recommendations of the MIF. ○ consider any relevant failures of the MSMS.
Monitoring of Safety Standards 10. Marine Incidents report records shall be held by Marine Documentation Office and numbered sequentially. 11. Records shall continue to be reviewed at each MMT meeting until they are no longer considered to be relevant safety issues.

Retention	@ Office	@ Archives
	0-2 years	3-5 years

Annex 1 [Cont'd]

Incident Investigation
Dissemination of Information 12. Following the submission of MIF, the HM will decide whether immediate dissemination of the lessons learned from the event is required. If immediate notification is required at this stage the most appropriate method of notification shall be decided upon. This may take the form of: o Information notified on the Port Control Hand Over Logbook. o The issue of a Notice to Mariners or Marine Safety Notices. o General Memo. o Individual notification. 13. Where immediate notification is not required but the event has learning value to marine staff, this information shall be issued by the relevant Manager, DHM or HM as part of the regular staff briefings. 14. Additionally, the HM will identify and disseminate any accident and safety information which may be of interest to the other Ports. 15. The same principles as described above, shall be applied to any information received from any other external source or authority, where it is identified that lessons may be learned from a marine incident.
Incident Closure 16. The Harbour Master will decide when an incident can be closed, i.e. when all corrective actions and recommendations have been completed / are in place.
Procedure 17. Each Port will provide marine incidents data, records, and reports to Marine documentation Office, for a continuous record of accident reports.
Analysis of Incidents 18. The marine incident data, records, and reports, held in the Marine Documentation Office, will be collated and analysed to: o Identify trends which may have adverse impacts on safety performance. o Assist in the formulation of corrective actions to arrest any trends.

Retention	@ Office	@ Archives
	0-2 years	3-5 years