



# **Vessel Discharge and Maintenance**

## **Guidelines for Owners, Masters and Agents**

Issued By:

Abu Dhabi Ports

Version 2.0

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**Revision History**

<b>Date</b>	<b>Issue / Version</b>	<b>Section</b>	<b>Description</b>
October 2013	1		Initial Issue
August 2018	2.0	1.4	New section relating to violations
		1.5	New section relating to Permits and Fees
		2.1	International law, clarification and BWM Convention coming into force with UAE ratification
		2.2.4	New section highlighting IMO Resolutions and Guidelines, to assist compliance
		3	Deletion of superfluous background ('issue') for each discharge
		3.2.2	Clarification of policy towards chain locker effluent
		3.4.7	New section relating to fuel quality and exhaust emissions
		3.4.8	New section relating to dark smoke emissions
		Throughout document	Editorial corrections

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## TABLE OF CONTENTS

<b>1. INTRODUCTION .....</b>	<b>1</b>
1.1 Abu Dhabi Ports Company .....	1
1.2 Purpose .....	1
1.3 Background .....	1
1.4 Violations .....	1
1.5 Payment of Fees .....	1
1.6 Coming Into Force .....	1
<b>2. LEGISLATION.....</b>	<b>2</b>
2.1 Introduction.....	2
2.2 International Law .....	2
2.3 Regional Law .....	3
2.4 UAE Federal Law.....	4
2.5 Emirate of Abu Dhabi Law.....	4
<b>3. DISCHARGE POLICY AND REQUIREMENTS .....</b>	<b>5</b>
3.1 Introduction.....	5
3.2 Aquatic Nuisance Species .....	9
3.3 Maintenance and Related Discharges.....	11
3.4 Engine Room and Contact Discharges .....	15
3.5 Passenger or Crew Waste .....	18



## **1. INTRODUCTION**

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### **1.1 Abu Dhabi Ports Company**

Abu Dhabi Ports Company ("Abu Dhabi Ports") has a responsibility under Abu Dhabi legislation to control the conditions under which vessels are permitted to use its ports.

### **1.2 Purpose**

These Vessel Discharge and Maintenance: Guidelines for Owners, Masters and Agents ("Vessel Discharge Guidelines") provide information on prohibited, and allowable, vessel discharges and maintenance activities within Abu Dhabi Ports.

These Vessel Discharge Guidelines are not intended to be a complete or comprehensive review of all statutory and other requirements relating to vessel discharges in port waters. It is the responsibility of the individual vessel master, owner and agent to ensure compliance with applicable law as may relate to activities performed.

### **1.3 Background**

Discharges from vessels contribute to water pollution in port. Modern maritime operations typically involve large vessels that use a variety of potentially toxic materials such as petroleum products, metallic and organic anti-fouling and anti-corrosion substances, and paints. They also discharge particulates into the air, and produce human wastes and refuse.

### **1.4 Violations**

These Vessel Discharge Guidelines are issued in accordance with the Abu Dhabi Maritime Sector Transport Regulations (General and Port Operations) and the Port Rules of Abu Dhabi Ports. In case of any contravention of the policy specified in these guidelines, the owner of the vessel, his agent and the master each commits a violation and is liable to a penalty as specified in the aforementioned Port Rules.

### **1.5 Permits and Fees**

Where reference is made in these Vessel Discharge Guidelines to a requirement to secure a permit and / or consent to perform an activity, interested parties should refer to the Abu Dhabi Ports' website for information on the application procedure or contact customer services on 800 102030.

The granting of a permit and / or consent will be subject to payment of a fee as specified in the Abu Dhabi Ports' Tariff.

### **1.6 Coming Into Force**

These Vessel Discharge Guidelines Version 2.0 come into force on 1 August 2018. Issue 1 of the guidelines are withdrawn.



## **2. LEGISLATION**

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### **2.1 Introduction**

Marine activities in Abu Dhabi Ports are controlled by an overlapping network of international, regional, federal and Amiri laws and standards as summarised below.

### **2.2 International Law**

#### **2.2.1 MARPOL Convention**

The International Convention for the Prevention of Pollution from Ships (MARPOL) is the main international convention covering prevention of pollution of the marine environment by vessels from operational or accidental causes. The MARPOL Convention currently includes six technical Annexes, namely:

- Annex I - Regulations for the Prevention of Pollution by Oil
- Annex II - Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk
- Annex III – Regulations for the Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form
- Annex IV – Regulations for the Prevention of Pollution by Sewage from Ships
- Annex V – Regulations for the Prevention of Pollution by Garbage from Ships
- Annex VI – Regulations for the Prevention of Air Pollution from Ships

With the exception of Annex III, all of the above apply controls on operational discharges from vessels noting that the Arabian Gulf, which includes all Abu Dhabi port waters, is designated a MARPOL Special Area under Annex I and Annex V.

#### **2.2.2 BWM Convention**

The International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention), which came into force in September 2017, addresses the transfer of harmful aquatic organisms and pathogens in vessels' ballast water. The BWM Convention has been ratified by the United Arab Emirates (UAE) and, therefore, applies to all vessels using Abu Dhabi Ports. Pending full implementation of the BWM Convention, the ROPME requirements referred to in Section 2.3 must continue to be complied with.

#### **2.2.3 AFS Convention**

The International Convention on the Control of Harmful Anti-fouling Systems on Ships (AFS Convention) is an internationally binding instrument that addresses the use of harmful anti-fouling systems on vessels that are prohibited and / or restricted. The specific anti-fouling systems prohibited or controlled are listed in an Annex to the Convention.



#### **2.2.4 IMO Resolutions and Guidelines**

In addition to the Conventions introduced above, the IMO has adopted and published a wide range of Resolutions and Guidelines, typically in the form of Circulars, to assist compliance, for example Resolution MEPC.207(62)<sup>1</sup> – *2011 Guidelines For The Control And Management Of Ships' Biofouling To Minimize The Transfer Of Invasive Aquatic Species*. All said documents are available on the IMO website.

Unless incorporated by reference in one or more of the Conventions introduced above, IMO Resolutions and Guidelines are not binding. Nevertheless, they constitute Best International Practices to be complied with by each vessel entering an Abu Dhabi Port unless alternative arrangements are in place to fulfil an equivalent standard.

### **2.3 Regional Law**

The Kuwait Regional Convention for Co-Operation on The Protection of The Marine Environment from Pollution (Kuwait Convention) is the basic legal instrument binding the eight States of the Gulfs Region, coordinating their activities towards protection of their common marine environment.

The Regional Organization for the Protection of the Marine Environment (ROPME), as defined in Article XVI of the Kuwait Convention, was established to implement the Kuwait Action Plan, as well as the Kuwait Convention and its Protocols.

The Second Regional Steering Committee Meeting of ROPME was convened in the Kingdom of Bahrain on 4 and 5 November 2008 to discuss ballast water management in the ROPME Sea Area.

Taking into consideration the provisions of the regulation B-4 of the BWM Convention, the Steering Committee decided as follows:

- Vessels arriving from outside the ROPME Sea Area should undertake ballast water exchange en route in water over 200 nautical miles from the nearest land and in water at least 200 metres depth.
- If this is not possible for safety reasons, then vessels should be expected to make minor deviations to areas within the 200 nautical miles limit that can be identified as discharge area, so long as such areas are more than 50 nautical miles from the nearest land in waters at least 200 metres depth.
- If this is not achievable, then the vessel should provide the respective authority with the reason why she has not done so, and further ballast water management measures may be required, consistent with the Ballast Water Management Convention and other international laws.

These requirements took effect on 1 November 2009.

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<sup>1</sup> Resolution number 207 as adopted by the 62<sup>nd</sup> meeting of the Marine Environment Protection Committee (MEPC).



## **2.4 UAE Federal Law**

The principal instrument governing vessel discharge and maintenance activities in Abu Dhabi Ports is Federal Law No. (24) of 1999 concerning Protection and Development of the Environment, as amended.

Other UAE legislation of relevance includes:

- Council of Ministers Decree No. (23) of 2001 concerning the protection of ports, shores, and maritime territory from oil pollution incidents
- Council of Ministers Decrees No. (37) of 2001, and No. (12) of 2006, concerning the Executive Order of Federal Law No. (24) of 1999 which includes Regulations in relation to:
  - the protection of the marine environment; and
  - the handling of hazardous substances, hazardous and medical wastes.

Lists of hazardous materials restricted or banned from use in the UAE as specified in the aforementioned legislation is available from the website [www.hazmat.ae](http://www.hazmat.ae).

## **2.5 Emirate of Abu Dhabi Law**

As a matter of course, all Federal environmental law has been adopted by the Government of the Emirate of Abu Dhabi. Additional legislation relating to vessel discharge and maintenance activities within the Emirate includes:

- Law No. (16) of 2005 concerning the Responsibilities of the Environment Agency of Abu Dhabi; and
- Law No. (21) of 2005 for Waste Management in Abu Dhabi Emirate.





### 3. DISCHARGE POLICY AND REQUIREMENTS

#### 3.1 Introduction

Every vessel ultimately needs to discharge a range of commodities as part of its normal operations, including maintenance, for example liquid waste generated by passengers and / or crew.

The following sections identify some of the discharges from vessels that may occur in port waters, detailing Abu Dhabi Ports’ requirements, as reflected in the legislation introduced in Section 2 and the Best Management Practices of IMO, and others that should be followed. These requirements are summarised in Table 1 below.

It is important to note that any discharge from a vessel in port waters that contains pollutants or materials potentially harmful to water quality, fish, plant life, mammals, or bird life constitutes a violation. Any accidental discharge should immediately be terminated and reported to Abu Dhabi Ports and other relevant competent authorities.

**Table 1 – Summary of Vessel Discharge Requirements**

Activity	Abu Dhabi Ports Policy	Comments
<b><i>Aquatic Nuisance Species</i></b>		
Discharge of ballast water	Permitted with restrictions	Vessels intending to discharge ballast water must notify Abu Dhabi Ports in advance and, pending full of implementation of the BWM Convention, comply with ROPME regulations
Discharge of chain locker effluent	Permitted with restrictions	Chain locker effluent may only be discharged in port waters if the vessel is required to remain in port waters (does not go to sea) and then only if free from visible pollutants
Discharges from seawater piping biofoul prevention	Prohibited	No pesticides or chemicals may be discharged in port waters
Discharges from anti-fouling hull coatings	Permitted with restrictions	Hull coatings must conform to the requirements of the AFS Convention



Activity	Abu Dhabi Ports Policy	Comments
Underwater hull cleaning	Permitted with restrictions	Permitted only if essential to ensure vessel safety, or efficiency in compliance with MARPOL Annex VI. Waste should be secured and disposed of by an Abu Dhabi Ports' licensed waste contractor
<b><i>Maintenance and Related Discharges</i></b>		
Deck washdown	Permitted with restrictions	Permitted only in an emergency or if the vessel does not leave port waters. Run off should not enter the water
Above water hull cleaning and painting	Permitted with restrictions	Permitted only if the cleaning or painting is essential. Paint drips or other residues should not fall into the water or onto land
Sandblasting	Prohibited	Sandblasting may be available in an Abu Dhabi Ports' licensed vessel repair facility
Propeller polishing	Permitted with restrictions	Permitted only if essential to ensure vessel safety, or efficiency in compliance with MARPOL Annex VI. Waste should be secured and disposed of by an Abu Dhabi Ports' licensed waste contractor
Discharge of aqueous film forming foam (AFFF)	Permitted with restrictions	Permitted only in an emergency or if the vessel does not leave port waters and is required to perform a statutory equipment test
Operation of cathodic protection	Permitted with restrictions	Where possible, Impressed Current Cathodic Protection (ICCP) systems should be used



Activity	Abu Dhabi Ports Policy	Comments
<b><i>Engine Room and Contact Discharges</i></b>		
Bilgewater discharge	Prohibited	Bilgewater should be retained onboard the vessel or discharged to an Abu Dhabi Ports' licensed waste contractor
Operation of boiler / economizer blow-down	Permitted with restrictions	Permitted only for safety reasons prior to repair
Discharge of elevator pit effluent	Prohibited	Elevator pit effluent should be retained onboard the vessel or discharged to an Abu Dhabi Ports' licensed waste contractor
Discharge of gas turbine wash water	Prohibited	Gas turbine wash water should be retained onboard the vessel or discharged to an Abu Dhabi Ports' licensed waste contractor
Gasoline and compensating discharge	Prohibited	Gasoline and compensating discharge should be retained onboard the vessel or discharged to an Abu Dhabi Ports' licensed waste contractor
Welldeck discharge	Permitted with restrictions	Permitted only in an emergency or if the vessel does not leave port waters. Run off should not enter the water. Waste should be collected and discharged to an Abu Dhabi Ports' licensed waste contractor
Fuel quality and exhaust emissions	Permitted with restrictions	All fuel used in main and auxiliary vessels' machinery, together with SO <sub>x</sub> , NO <sub>x</sub> and particulate matter emissions should, where practicable, conform to MARPOL Annex VI
Dark smoke emissions	Permitted with restrictions	Visible dark smoke emissions permitted only where consequential to essential vessel operations



Activity	Abu Dhabi Ports Policy	Comments
Exhaust gas scrubber washwater discharge	Permitted with restrictions	Discharges must not contain any pollutants. Waste should be collected and discharged to an Abu Dhabi Ports' licensed waste contractor
Operation of engines with wet exhaust	Permitted with restrictions	Should be used only by boats required for vessel or crew safety
Discharge of distillation or reverse osmosis brine	Prohibited	Distillation or reverse osmosis brine should be retained onboard the vessel or discharged to an Abu Dhabi Ports' licensed waste contractor
Operation of fire main systems	Permitted with restrictions	Discharges from fire mains only permitted in an emergency or if the vessel does not leave port waters and is required to perform a statutory equipment test
Discharge of refrigeration and air condensate discharge	Permitted	Clean condensate may be discharged
Discharge from seawater cooling	Permitted	Seawater discharges should be minimized in port waters
<b><i>Passenger or Crew Waste</i></b>		
Discharge of untreated or treated sewage (blackwater)	Prohibited	Blackwater, untreated or treated, should be retained onboard the vessel or discharged to an Abu Dhabi Ports' licensed waste contractor
Graywater discharge	Prohibited	Graywater should be retained onboard the vessel or discharged to an Abu Dhabi Ports' licensed waste contractor



Activity	Abu Dhabi Ports Policy	Comments
Discharge from waste incinerators	Prohibited	Operation of vessel waste incinerators prohibited. Incinerator waste should be retained onboard the vessel or discharged to an Abu Dhabi Ports' licensed waste contractor

### 3.2 Aquatic Nuisance Species

#### 3.2.1 Ballast Water

*Abu Dhabi Ports Policy:* Other than for safety reasons, which should be documented, ballast water must not be discharged in port waters unless the water complies with the requirements of the BWM Convention, for example, through treatment onboard.

Pending full implementation of the BWM Convention vessels intending to discharge ballast water in port waters must ensure the water has been exchanged in accordance with ROPME requirements.

*Required Action:* At least forty eight (48) hours prior to port arrival, a ROPME Ballast Water Declaration must be submitted to Abu Dhabi Ports by the vessel master, owner or agent. No discharge of ballast water may commence without the consent of the Harbour Master.

*Best Management Practices:* The following Best Management Practices should be implemented by vessels using Abu Dhabi ports:

- Discharge only the minimal amount of ballast water in port waters essential to operations
- Minimise discharge and uptake of ballast water in marine sanctuaries, marine preserves, marine parks, or coral reefs
- Minimise or avoid uptake of ballast water in:
  - Areas with known infestations of non-indigenous organisms;
  - Areas near a sewage outfall;
  - Areas for which the master has been informed of the presence of a toxic algal bloom;
  - Areas of poor tidal flushing or high turbidity;
  - Periods of darkness when bottom dwelling organisms may rise up in the water column;
  - Areas where sediments have been disturbed, for example near dredging operations.
- Clean ballast tanks regularly in mid-ocean waters or in drydock.



### 3.2.2 Chain Locker Effluent

*Abu Dhabi Ports Policy:* Chain lockers must not be rinsed or pumped out in port waters unless this is essential for safety, which should be documented.

*Required Action:* Chain locker effluent should be transferred to the bilge tank for discharge to a licensed waste disposal contractor. If this is not possible, effluent without visible pollutants may be discharged in port waters with the consent of the Harbour Master. Otherwise the effluent must be removed from the chain locker by a licensed waste disposal contractor.

### 3.2.3 Seawater Piping Biofoul Prevention

*Abu Dhabi Ports Policy:* No pesticides or chemicals whose use is banned in the UAE may be discharged in port waters. This includes any substance or material harmful to fish, plant life, mammals, or bird life.

*Best Management Practices:* The minimum amount of biofouling chemicals needed to keep fouling under control should be used. Fouling organisms should be removed from seawater piping on a regular basis and disposed of as hazardous waste.

### 3.2.4 Anti-Fouling Leachate from Anti-Fouling Hull Coatings

*Issue:* Vessel hulls are often coated with anti-fouling compounds to prohibit the attachment and growth of aquatic life. Coatings are formulated for different conditions and purposes, and many contain biocides. Those that contain biocides prevent the attachment of aquatic organisms to the hull by continuously leaching substances that are toxic to aquatic life into the surrounding water. Additional releases of these substances are caused by hull cleaning activities, particularly if hulls are cleaned within the first 90 days following application.

While a variety of different ingredients may be used in anti-fouling compounds, the one most commonly used is copper. Copper can inhibit photosynthesis in plants and interfere with enzyme function in both plants and animals in concentrations as low as 4µg/l.

A second metal-based biocide is organotin-based, typically tributyltin (TBT), which was historically applied to vessel hulls but is now prohibited by the AFS Convention although it may still be found on older vessels, or on vessels operating between countries that have not ratified the AFS Convention. TBT and other organotins cause deformities in aquatic life, including deformities that disrupt or prevent reproduction. TBT and other organotins are also stable and persistent and resist natural degradation in water bodies.

*Abu Dhabi Ports Policy:* All vessels in port waters must comply with the relevant requirements of the IMO Convention. The application of anti-fouling paint containing TBT or other organotins is strictly prohibited other than in an Abu Dhabi Ports' licensed vessel repair facility.

*Required Action:* If a vessel has previous hull coatings containing TBT, this should be covered by a non-organotin-based product prior to entering port.



*Best Management Practices:* While Abu Dhabi Ports does not apply any specific restrictions on the type of anti-fouling coatings acceptable for use (other than prohibiting organotin based coatings), if a vessel spends considerable time in port waters (defined as more than 30 days per year), or uses an Abu Dhabi port as its home port, the owner / operator should consider using antifouling coatings that rely on a rapidly biodegradable biocide or another alternative rather than copper-based coatings.

If after consideration of alternative biocides, vessel operators continue to use copper-based anti-foulant paints, they should document how this decision was reached.

At the time of initial application or scheduled reapplication of anti-fouling coatings, vessel operators should give consideration, as appropriate for vessel class and vessel operations, to the use of hull coatings with the lowest effective biocide release rates, rapidly biodegradable components (once separated from the hull surface), or non-biocidal alternatives, such as silicone coatings.

### **3.2.5 Underwater Hull Cleaning**

*Abu Dhabi Ports Policy:* The underwater cleaning of vessel hulls in port waters is permissible only where this is essential to ensuring vessel safety and / or maintaining efficient operation in fulfilment of IMO regulatory requirements.

*Required Action:* The consent of the Harbour Master must be secured prior to undertaking any underwater hull cleaning operation, who will determine the conditions to be applied to any permit granted. Granting of a permit for underwater hull cleaning will normally only be considered if the vessel is at anchor and has been engaged on voyages within the Arabian Gulf region; underwater hull cleaning alongside will be permitted strictly for emergencies only, for example seawater intakes. It should be noted that a number of separate permits may be required for the activity.

*Best Management Practices:* Vessel owners who remove fouling organisms from hulls while the vessel is waterborne should employ methods that ensure there is no discharge of anti-fouling hull coatings and / or organisms. These include:

- Selection of appropriate cleaning brush or sponge rigidity
- Limiting the use of hard brushes and surfaces to remove hard growth
- Use of vacuum control technologies to recover dislodged organisms and / or materials.

## **3.3 Maintenance and Related Discharges**

### **3.3.1 Deck Washdown and Runoff**

*Abu Dhabi Ports Policy:* Deck washdowns are not permitted in port waters unless essential to vessel safety or are the result of precipitation.



*Required Action:* For programmed activities, the consent of the Harbour Master must be secured prior to commencing any deck washdown, who will advise the specific conditions to be complied with. Under no circumstances will the use of high pressure water jets be permitted.

Should precipitation occur, vessels should take appropriate steps to prevent the discharge of the following as a result of runoff:

- Refuse, including garbage, deck debris, etc.
- Chemicals, including grease, fuel, hydraulic fluid, caustics, detergents, etc.
- Metals
- Paint droplets or other debris occurring as a result of deck and/or hull cleaning.

*Best Management Practices:* The following Best Management Practices should be used to minimise the potential for pollutants to reach port waters as the result of deck runoff:

- Clear decks of debris, garbage, cargo residue and spills before:
  - Deck washdowns;
  - Entering and leaving port;
- If fitted, use perimeter spill rails and scuppers
- Drain machinery drip pans for proper disposal or periodically wiped and cleaned
- If washing down the deck, use cleaners and detergents that are:
  - Non-toxic;
  - Phosphate free;
  - Biodegradable;
  - Minimally caustic or non-caustic.

### **3.3.2 Above Water Line Hull Cleaning and Painting**

*Abu Dhabi Ports Policy:* Hull cleaning and painting above the water line in port waters is not permitted unless this is essential to vessel operations or undertaken in an Abu Dhabi Ports' licensed vessel repair facility.

*Required Action:* The consent of the Harbour Master must be secured prior to commencing above water hull cleaning or painting, who will advise the specific conditions to be complied with. Under no circumstances will the use of high pressure water jets or spray painting be permitted unless undertaken in a controlled repair facility.

*Best Management Practices:* For maintenance cleaning of the hull above the water line (above the antifouling coating boundary):

- Only use soft brushes and ensure that any debris is captured and discarded on land





- Cleaning materials should be non-toxic, biodegradable, and phosphate-free
- Discarded material that contains any potentially hazardous materials should be handled appropriately

For vessel painting:

- Painting should occur in dry conditions only
- Paint and solvent mixing should take place in a contained location either onshore or on the vessel to ensure no spillage into the water or storm drains
- Store materials such as paints, tools, and ground cloths indoors or in a covered area when not in use
- Painting to be performed from a proper raft, suspended from the deck of the vessel, designed for the purpose of vessel painting
- Raft should be held as tight as possible against the side of the vessel
- Protective canvas overhanging the sides of the raft should be deployed, should any drops fall from the rollers
- If painting from the wharf or jetty, ensure protective canvas is properly installed to contain drips
- Only one half-full paint drum (10 litres max) should be allowed on the suspended raft
- Task should be carried out by fully qualified, experienced, able seamen only
- Raft personnel should be in VHF Radio contact with Port Control
- Spill equipment should be ready at vessel bunkering station.

### **3.3.3 Sandblasting**

*Abu Dhabi Ports Policy:* Sandblasting of vessels is not permitted unless undertaken in an Abu Dhabi Ports' licensed vessel repair facility.

### **3.3.4 Propeller Polishing and Maintenance of Other Machinery Below the Waterline**

*Abu Dhabi Ports Policy:* Propeller polishing and other maintenance below the waterline in port waters is permissible only where this is essential to ensuring vessel safety and / or maintaining efficient operation in fulfilment of IMO regulatory requirements.

*Required Action:* The consent of the Harbour Master must be secured prior to commencing propeller polishing or other in-water maintenance, who will advise the specific conditions to be complied with. It should be noted that a number of separate permits may be required for the activity



*Best Management Practices:* Regular maintenance of oil to sea interfaces is recommended to ensure all parts are in good working order, to reduce the potential for leaks. Significant vessel maintenance relating to the propeller and related parts should take place only in an Abu Dhabi Ports' licensed vessel repair facility.

In the event that crew and / or vessel safety is of concern, the following should be followed to minimize the potential for the release of pollutants:

- Vessel owner / operators should apply lubricants and maintain all seals so that discharges do not result in a visible sheen or are otherwise harmful
- Before being placed in service and after periodic lubrication, wire ropes or cables and other equipment should be thoroughly wiped down to remove excess lubricant
- If maintenance or emergency repair should occur on stern tubes or other oil-to-sea interfaces that have a potential to release oil in quantities that may be harmful, appropriate spill response resources (e.g. oil booms) should be used to contain any oil leakage
- Operators of the vessel should have ready access to any spill response resources to clean any potential oil spills
- Use of an environmentally preferable lubricant, including vegetable oil, synthetic ester, or polyalkylene glycol as a base for these applications is recommended, when feasible
- Use of an environmentally preferable lubricant does not authorize the discharge of any lubricant in a quantity that may be harmful or cause a visible sheen as these oils still cause many undesirable environmental impacts.

### **3.3.5 Aqueous Film Forming Foam (AFFF)**

*Abu Dhabi Ports Policy:* The discharge of AFFF in port waters is allowable only during an emergency or where the testing of firefighting equipment in port is essential to comply with statutory requirements.

*Required Action:* Other than in an emergency, the consent of the Harbour Master must be secured prior to operating any equipment discharging a synthetic firefighting agent in port waters, who will advise the specific conditions to be complied with. In the case of an emergency discharge, this should be reported to Abu Dhabi Ports with an explanation for the reason.

For vessels that sail outside of UAE territorial waters more than once per month, maintenance and training discharges of fluorinated AFFF in port will not be authorised. If firefighting equipment is required to be operated for regulatory certification and inspection purposes, authorisation may be granted subject to using a substitute foaming agent, i.e., non-fluorinated.



For vessels that do not leave UAE territorial waters more than once per month, if maintenance and training discharges are required, authorisation may be granted subject to the AFFF being collected and stored for onshore disposal if technologically feasible. If not feasible, a non-fluorinated substitute should be used.

### 3.3.6 Fire Main Systems

*Abu Dhabi Ports Policy:* Discharges from a vessel fire main system in port waters are allowable only during an emergency or where the testing of firefighting equipment in port is essential.

*Required Action:* Other than in an emergency, the consent of the Harbour Master must be secured prior to operating a vessel fire main system, who will advise the specific conditions to be complied with. In the case of the emergency discharge of a fire main, this should be reported to Abu Dhabi Ports with an explanation for the reason.

For all vessels that sail outside of UAE territorial waters more than once per month, maintenance and training discharges from a fire main will not be authorised unless required for regulatory certification and inspection purposes.

### 3.3.7 Cathodic Protection

*Abu Dhabi Ports Policy:* Only ICCP systems should be used on vessels operating in port waters.

*Best Management Practices:* For sacrificial anode systems, it is recommended that vessel operators select the least toxic anode material that is practicable, in the order of preference of magnesium, then aluminum, then zinc.

Sacrificial anodes should be used in conjunction with corrosion control coatings to minimize the release of dissolved metals. Furthermore, sacrificial anodes should not be used more than is necessary to adequately prevent corrosion of the vessel's hull, sea chest, rudder, and other exposed vessel areas. Vessel operators should appropriately clean and / or replace anodes in periods of maintenance (such as drydocking), so that release of these metals to waters is minimized.

## 3.4 Engine Room and Contact Discharges

### 3.4.1 Bilgewater

*Abu Dhabi Ports Policy:* Bilgewater must not be discharged in port waters.

*Required Action:* Bilgewater should only be discharged to an Abu Dhabi Ports' licensed waste disposal contractor.

*Best Management Practices:* Bilgewater generation can be reduced by practising proper maintenance of vessel and equipment. Routine cleaning and maintenance activities associated with vessel equipment and structures are considered to be the normal operation of a vessel.



### **3.4.2 Boiler / Economizer Blow-Down**

*Abu Dhabi Ports Policy:* Vessels are prohibited from blowing-down a boiler in port waters, except when the vessel is required to conduct a blow-down immediately prior to entering an Abu Dhabi Ports' licensed vessel repair facility or for safety purposes.

*Required Action:* The consent of the Harbour Master must be secured prior to undertaking any boiler blow-down, who will advise the specific conditions to be complied with.

### **3.4.3 Elevator Pit Effluent**

*Abu Dhabi Ports Policy:* Discharges of elevator pit effluent are prohibited within port waters.

*Required Action:* Elevator pit effluent should only be discharged to an Abu Dhabi Ports' licensed waste disposal contractor.

### **3.4.4 Gas Turbine Wash Water**

*Abu Dhabi Ports Policy:* Gas turbine washwater must not be discharged in port waters.

*Required Action:* Gas turbine washwater should only be discharged to an Abu Dhabi Ports' licensed waste disposal contractor.

### **3.4.5 Gasoline and Compensating Discharge**

*Abu Dhabi Ports Policy:* The discharge of gasoline and compensating effluent that comes into contact with oil is prohibited in port waters.

*Required Action:* Gasoline and compensating effluent should only be discharged to an Abu Dhabi Ports' licensed waste disposal contractor.

### **3.4.6 Welldeck Discharges**

*Abu Dhabi Ports Policy:* Welldeck discharges must not contain any pollutants including graywater, oil or garbage.

*Best Management Practices:* Vessel operators should practice good housekeeping to ensure that no garbage or wastes that can cause a visible sheen are discharged from welldecks. Should these wastes be present, the vessel operator should retain for discharge to an Abu Dhabi Ports' licensed waste disposal contractor.

### **3.4.7 Fuel Quality and Exhaust Emissions**

*Abu Dhabi Ports Policy:* Vessels should ensure machinery exhaust emissions are compliant with relevant MARPOL Annex VI requirements. All fuel used by vessels should similarly comply with MARPOL Annex VI requirements.



### 3.4.8 Dark Smoke Emissions

*Abu Dhabi Ports Policy:* Vessels may only emit smoke which is as dark as, or darker than, Shade 2 on the Ringelmann Chart<sup>2</sup> whilst manoeuvring or where other essential operations impact the engine load. Under no circumstances must a berthed vessel continuously emit smoke which is as dark as, or darker than, Shade 2 on the Ringelmann Chart for 3 minutes or more at any one time.

*Best Management Practices:* Vessel operators should ensure the main engine(s), auxiliary engines and all other machinery / boilers is in good operating condition, ensuring the requirements applied to the International Air Pollution Prevention Certificate, where issued, are complied with at all times.

### 3.4.9 Exhaust Gas Scrubber Washwater Discharges

*Abu Dhabi Ports Policy:* Sludge generated from exhaust gas scrubber washwater discharge must not be discharged in port waters. Exhaust gas scrubber washwater discharge may only be discharged in port waters if free from pollutants.

*Required Action:* Exhaust gas scrubber sludge should be discharged to an Abu Dhabi Ports' licensed waste disposal contractor.

*Best Management Practices:* Operators of vessels with exhaust gas cleaning systems that generate washwater discharges should follow the guidelines set out in the IMO Resolution MEPC.170(57) 'Guidelines for Exhaust Gas Cleaning Systems'.

### 3.4.10 Boat Engine Wet Exhaust

*Abu Dhabi Ports Policy:* Vessels generating wet exhaust should be used in port waters only for activities relating to vessel and / or crew safety.

*Required Action:* Vessels generating wet exhaust should be maintained in good operating order, well-tuned, and functioning according to manufacturer specifications. Low sulphur or alternative fuels should be used, where available, to reduce the concentration of pollutants in the discharge.

*Best Management Practice:* Operators are encouraged to use only 4-stroke engines.

### 3.4.11 Distillation and Reverse Osmosis Brine

*Abu Dhabi Ports Policy:* Brine from a vessel distillation system and / or reverse osmosis water that comes in contact with machinery or industrial equipment, toxic or hazardous materials, or wastes must not be discharged in port waters. Distillation and reverse osmosis brine that has not come in contact with machinery or industrial equipment, toxic or hazardous materials, or wastes may be discharged in port waters in small quantities.

*Required Action:* General release of brine should only occur where it can be appropriately diluted by the receiving water. Contaminated brine may only be discharged to an Abu Dhabi Ports' licensed waste disposal contractor.

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<sup>2</sup> See United States Bureau of Mines Information Circular 8333.



### 3.4.12 Refrigeration and Air Condensate Discharge

*Abu Dhabi Ports Policy:* Clean condensation discharge is permitted in port waters.

*Required Action:* If condensate is discharged, it should not come into contact with oily or toxic materials.

### 3.4.13 Seawater Cooling Discharge

*Abu Dhabi Ports Policy:* Seawater cooling discharge should be minimised in port waters and should not contain any trace metals or oils.

## 3.5 Passenger or Crew Waste

### 3.5.1 Sewage (Blackwater)

*Abu Dhabi Ports Policy:* The discharge of sewage in port waters is prohibited. This includes treated sewage.

*Required Action:* Sewage should be retained onboard for discharge at sea, as provided for in MARPOL Annex IV and UAE environmental legislation, or may be discharged to an Abu Dhabi Ports' licensed waste disposal contractor.

### 3.5.2 Graywater

*Abu Dhabi Ports Policy:* The discharge of untreated graywater – that is, drainage from dishwasher, showers, baths, sinks, and laundry facilities, but does not include drainage from toilets - in port waters is prohibited unless no onboard storage facility is available. Where no storage facility is provided, the discharge of graywater must comply with the Best Management Practices detailed below.

*Best Management Practices:* These Best Management Practices are designed to reduce the impact graywater has on the marine environment:

- The introduction of kitchen oils should be minimized to the graywater system
- When cleaning dishes, as much food and oil residue as practicable should be removed prior to rinsing
- Oils used in cooking should not be added to the graywater system
- Phosphate-free and non-toxic soaps and detergents should be used where the graywater will be discharged in port waters.

Note: Graywater mixed with sewage (treated or untreated) should be considered as sewage, Section 3.5.1 above applying.

### 3.5.3 Waste Incinerators

*Abu Dhabi Ports Policy:* The use of incinerators in port is prohibited. In addition, the discharge of waste (ash) generated by vessel incinerators in port waters is prohibited.

*Required Action:* Incinerator waste should be retained onboard or discharged to an Abu Dhabi Ports' licensed waste disposal contractor.