1. Introduction

1.1 What is the Ballast Water Management Convention?
Loading and discharging ballast water is an essential part of a ship’s operation. This ballast water contains hundreds of micro and macroscopic species that will be carried to new destinations in the ballast water tanks of the ship (Figure 1). The transferred species may survive and establish themselves in the new environment, if biological and physical conditions are favourable. Such non-native species may cause serious ecological, economic and public health impacts, particularly when they become invasive.\(^1\)

Figure 1: Transfer of non-native species due to ballast operations (from IMO, 2019)\(^2\)

To help prevent the spread of potentially harmful aquatic organisms and pathogens in ships’ ballast water, the International Maritime Organisation (IMO) developed the International Convention for the Control and Management of Ships’ Ballast Water and Sediments (‘Ballast Water Management (BWM) Convention’ for short)\(^3\). The BWM Convention was adopted at a Diplomatic Conference during 2004 and entered into force internationally on 8 September 2017.

1.2 Who does the Ballast Water Management Convention apply to?
The UK has not yet ratified the BWM Convention but is currently drafting the legislation that will allow accession to take place. This is expected in 2020. Accession will take effect three months after the date of ratification.

Once the UK accedes to the BWM Convention, it will not apply to the UK Overseas Territories (OTs) unless and until: (1) the OT has enacted local legislation implementing the Convention and (2) the UK has agreed to extend the Convention to the OT.

If the Convention is extended to an OT, then it will apply to OT flagged ships\(^4\) that operate internationally and enter the waters of more than one Party to the BWM Convention. The BWM Convention does not apply to:

- ships that operate exclusively in the waters of only one OT (domestically operating vessels);
- ships that operate exclusively in the waters of only one OT and on the High Seas\(^5\);
- warships, naval auxiliary or ships owned or operated by the UK or OT and used only on government non-commercial service;
- ships not constructed/designed to carry ballast water;
- permanent ballast water in sealed tanks on ships that is not subject to discharge.

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\(^{1}\) A non-native species is defined as a species introduced outside its natural past or present distribution; an invasive non-native species is a species whose introduction and/or spread outside their natural past or present distribution threatens biological diversity

\(^{2}\) http://www.imo.org/en/MediaCentre/HotTopics/BWM/Pages/default.aspx


\(^{4}\) Relevant to: Bermuda, British Virgin Islands, Gibraltar, Anguilla, Falkland Islands, Montserrat, St Helena and Turks & Caicos Islands

\(^{5}\) “High Seas” refers to the open ocean, not part of the exclusive economic zone, territorial sea or internal waters of any state
It should be noted that although military ships are exempt, the BWM Convention does state that appropriate measures should be adopted to ensure that they act in a consistent manner, so far as it is reasonable and practicable, with the Convention. The guidance below is therefore also applicable to Royal Navy ships visiting any of the OTs.

2. Ballast Water Management in the UK Overseas Territories

2.1 What can UK Overseas Territories do now to ensure compliance with the BWM Convention?

Until the UK accedes to the BWM Convention, the OT has domestic legislation in place to implement it and the UK has extended the Convention to the OT, OTs have no powers to enforce compliance of visiting vessels under the Convention. This guidance provides recommendations of what actions OTs could take in the meantime. The appropriate actions should be determined by the level of biosecurity hazard represented by the ballast water.

Risk Assessment

A ballast water risk assessment tool has been designed to help determine the level of hazard that the ballast water of different vessels may pose. It aims to gather data and build up an evidence base on the vessels that visit the OTs. The questions asked within the risk assessment help to determine how likely the risk is that the ballast water contains a potential non-native species.

It is suggested that the evidence base from any completed risk assessments is reviewed every 6 months as a minimum to assess the number of very high / high risk vessels that are visiting the OT. If there is a high percentage of high-risk vessels, then a legislative framework may need to be developed (see below).

The risk assessment is in the form of an Excel spreadsheet which is completed using the drop-down selection boxes. Once the responses are selected, the level of potential risk is automatically displayed. If the vessel has a working ballast water management system onboard then the risk level would be assessed as minimal. In this case, the rest of the risk assessment does not need to be completed.

Answers to the risk assessment questions can be requested as part of the documentation that vessels are required to submit before arriving into port. Alternatively, the questions could be asked quickly during a radio call with the vessel before permission is given to dock. Once the relevant questions have been answered, a risk score is generated.

The following are the recommended actions that the port should take depending upon the risk score (column N):

- **Very High and High-risk vessels**: Voluntary Ballast Water Record Book check (see information below) and recommend that the vessel does not release any ballast water within the port area.
- **Medium risk vessels**: Raise awareness of potential hazards of ballast water, encouraging the vessels to undertake ballast water exchange at least 200 nautical miles from land and in water at least 200 metres deep.
- **Low or Minimal risk vessels**: No action required / continue to raise awareness and best practice.

5 “High Seas” refers to the open ocean, not part of the exclusive economic zone, territorial sea or internal waters of any state
Voluntary Ballast Water Record Book checks

Until the UK accedes to the BWM Convention, the OT has the necessary domestic legislation in place and the UK has extended the Convention to the OT, no OT has the legal authority to undertake any inspections of vessels to check compliance with the BWM Convention – this includes checking Ballast Water Record Books.

If the risk assessment indicates that a vessel is potentially a high or very high biosecurity risk, then a voluntary check on the Ballast Water Record Book could be undertaken by port officers if the Captain of the vessel agrees.

### IMPORTANT INFORMATION

Care needs to be taken that any inspection is not seen as an unnecessary inconvenience to the visiting ship and a potential problem in terms of the Convention on Facilitation of International Maritime Traffic or the rules for Port State Control, potentially leading to the UK being challenged under international law.

If the Captain of the ship agrees to a voluntary Ballast Water Record Book check, then this could involve checking that:

- the details of any ballast water operations carried out are recorded;
- any exemptions granted are recorded;
- any accidental or exceptional discharges and instances where ballast water was not exchanged in accordance with the BWM Convention are recorded.

Inspection of the ballast water record book should be carried out as quickly as possible to avoid causing the vessel to be unreasonably delayed.

Regulation B-2 of the BWM Convention states that the Ballast Water Record Book should be in an approved format. This may be an electronic record system, which may be integrated into another record book or system. The Ballast Water Record Book should be kept onboard the ship for a minimum of two years after the last entry. Each operation concerning ballast water must be fully recorded without delay in the Ballast Water Record Book. Each entry must be signed by the officer in charge of the operation concerned and each completed page must be signed by the ship’s master. Further details about the Ballast Water Record Book are provided in Appendix 1.

Legislative framework

For OTs where a review of the risk assessment indicates that there is a high or very high biosecurity risk from ballast water (for example due to the volume of international shipping or the source of visiting vessels), they may want to consider imposing limited requirements within their territorial waters through domestic legislation, rather than international law. This could be done before the UK accedes to the BWM Convention.

In order to take advantage of and enforce all that the BWM Convention offers however, it is recommended that the necessary legislation is prepared to ensure that this can be implemented once the UK accedes to the BWM Convention. The Maritime & Coastguard Agency (MCA) is currently working with some of the Caribbean OTs to develop draft ballast water regulations. Any other OTs interested in developing their own domestic legislation should either engage their own drafters to produce the legislation or contact the MCA for further information.

Awareness-raising

For OTs where the risk assessment indicates that there is generally a medium to low biosecurity risk from ballast water, the most effective action that can be taken is to raise awareness amongst visiting vessels as well as amongst port and harbour staff.
Actions could include providing opportunities for training as well as dissemination of information for port and harbour staff. This should focus on raising environmental awareness about the potential impacts of invasive non-native species brought by ballast water as well as on the provisions of the BWM Convention.

Information provided to vessels before they arrive in port could encourage ballast water exchange mid-ocean prior to entering and after leaving the territory’s maritime zone or where this is not possible, at least 50 nautical miles from the nearest land and in water at least 200 metres deep for those vessels that are not yet required to undertake ballast water treatment (see Section 3.4 below for further information). Note that the OTs currently have no legal authority to enforce this.

**Operation of UK military vessels in Overseas Territories**

As noted above, military vessels are exempt from the BWM Convention. They should however, act in a consistent manner, so far as it is reasonable and practicable, with the Convention. The Secretary of State for Defence’s Policy Statement, June 2018 states: “Overseas we apply our UK standards and arrangements where reasonably practicable and, in addition, respond to host nations’ relevant health, safety and environmental protection expectations”. It also notes that where defence has exemptions (e.g. to international treaties), departmental arrangements are required to “produce outcomes which are, so far as reasonably practicable, at least as good as those required by legislation”. In order to meet these requirements, the environmental impact of Royal Naval activity is limited globally during operations through the use of appropriate Standard Operating Procedures, which have environmental protection elements embedded within them. As such, the UK government (through the MCA) is working with the Ministry of Defence to ensure that they are aware of the requirements of the BWM Convention and apply equivalent standards.

Once the UK has acceded to the BWM Convention, UK military ships should therefore act in a responsible manner in regards to ballast water when they are operating within OT waters. Where there is imminent or actual threat of environmental damage occurring as a result of UK military ship activity in OT waters, then the relevant statutory regulator within that OT should be immediately informed.

**2.2 What will UK Overseas Territories be able to do to ensure compliance with the BWM Convention in the future?**

Once the UK has acceded to the BWM Convention, any OTs who wish to will need to enact their own domestic legislation. The Foreign and Commonwealth Office will not extend the Convention to an OT until the UK is satisfied that the OT has the necessary laws in place. For those OTs that operate shipping registers from their jurisdiction, this will require any registered vessels that operate outside of OT controlled waters to manage their ballast water and sediments in accordance with the provisions within the BWM Convention as described in Section 3 below. OTs will then have the legal powers to inspect visiting vessels to determine whether the ship is compliant with the BWM Convention. They will also be able to prosecute vessels where a violation is found to have occurred and where the ship poses a threat to the environment, human health, property or resource. In the case of those OTs which choose not to enact their own domestic legislation, the BWM Convention will not be extended to them and they will have no legal authority to enforce it.

**3. What are the requirements of the Ballast Water Management Convention?**

Ships subject to the BWM Convention requirements will be obliged to manage their ballast water and sediments to a certain standard, in accordance with the provisions within the BWM Convention, as outlined below. The IMO has also produced a useful infographic, which is available here: [http://www.imo.org/en/ MediaCentre/HotTopics/BWM/Documents/BWM%20infographic_FINAL.pdf](http://www.imo.org/en/MediaCentre/HotTopics/BWM/Documents/BWM%20infographic_FINAL.pdf)

**3.1 Ballast Water Management Plan**

Ships are required to have onboard, and implement, a Ballast Water Management Plan that has been approved by the relevant administration. The Ballast Water Management Plan is specific to each ship and must include details of the safety procedures for the ship and crew and provide a detailed description of the actions to be taken to implement the ballast water management requirements.
3.2 Ballast Water Record Books
Ships must have a Ballast Water Record Book which must be completed after each ballast water operation. It should record when ballast water is taken onboard, circulated or treated for ballast water management purposes and discharged into the sea. It should also record when ballast water is discharged to a reception facility and accidental or other exceptional discharges of ballast water. An example Ballast Water Record Book is provided in Appendix 1.

3.3 International Ballast Water Management Certificate
The BWM Convention requires that all ships of 400 gross tonnage and above be surveyed and have onboard an International Ballast Water Management Certificate (or a Statement of Compliance if the vessel’s flag State has not ratified the BWM Convention). This certifies that the ship carries out ballast water management in accordance with the BWM Convention. The BWM Convention requires that administrations establish appropriate measures to ensure compliance for those ships that are under 400 gross tonnage but which are still required to hold an approved Ballast Water Management Plan. This may be implemented differently in different states. For example, the UK is likely to require that all vessels that operate internationally, regardless of their gross tonnage, comply with this requirement.

3.4 Ballast water management standards
The BWM Convention introduces the phased implementation of two ballast water standards:

- D-1 Ballast Water Exchange Standard; and

Any ballast water discharged from a ship shall be required to meet either the D-1 or D-2 standard until such time as the ship is required to implement the D-2 standard. Please see Section 4 below for further information.

3.5 Sediment management for ships
All ships shall remove and dispose of sediments from spaces designed to carry ballast water in accordance with the ship’s Ballast Water Management Plan.

3.6 Exemptions
The requirement to meet the ballast water management standards will not apply to:

- the uptake and discharge of ballast water necessary for ensuring the safety of the ship in emergency situations;
- the accidental discharge or uptake of ballast water as a result of damage to the ship or its equipment;
- the uptake or discharge of ballast water for the purpose of avoiding or minimising pollution incidents from the ship;
- the uptake and subsequent discharge on the high seas;
- the discharge of ballast water from a ship at the same location where the whole of the ballast water originated, provided no mixing of unmanaged ballast water from other areas has occurred.

3.7 Equivalent compliance
Vessels that are used solely for recreation or competition or that are used primarily for search and rescue, that are less than 50 m in overall length and have a maximum ballast capacity of 8 m³ may apply to their administration for equivalent compliance.

3.8 Regional guidelines for ballast water exchange
Article 13 of the BWM Convention states that Parties with common interests to protect the environment, human health, property and resources in a given geographical area, particularly areas that border enclosed and semi-enclosed seas, shall try to improve regional cooperation, through the development of regional agreements consistent with the BWM Convention. Details on regional guidelines for the Caribbean wider region and the Antarctic treaty area as well as information on ballast water management in the United States of America are provided in Appendix 2.
4. What are the ballast water management standards?
From the date of entry into force of the BWM Convention, all ships must conform to at least the D-1 standard; and all new ships, to the D-2 standard. Eventually, all ships will have to conform to the D-2 standard. For most ships, this involves installing special equipment to treat the ballast water.

4.1 D-1 Ballast water exchange
The D-1 standard requires ships to exchange ballast water in the open ocean away from coastal areas. It specifies that ships performing ballast water exchange shall do so with an efficiency of at least 95% volumetric exchange of ballast water. Ships undertaking ballast water exchange should conduct the operation at least 200 nautical miles from the nearest land and in water at least 200 metres deep; or in cases where the ship is unable to conduct ballast water exchange in accordance with the above, as far from the nearest land as possible, and in all cases at least 50 nautical miles from the nearest land and in water at least 200 metres deep. By doing this, fewer organisms will survive and so ships will be less likely to introduce potentially invasive species when they release the ballast water.

In sea areas where the minimum distance and depth criteria cannot be met, the Parties to the Convention have the ability to designate ballast water exchange areas within their waters.

4.2 D-2 Ballast water performance standard
The D-2 standard specifies the amount of viable organisms allowed to be discharged, including specified indicator microbes harmful to human health. This usually involves installing a ballast water management system. Treatment of ballast water with onboard systems, is considered to be the ultimate management technique. Treatment can be carried out using mechanical, physical, chemical or biological processes. In practice, most ballast water management systems use a combination of methods because no single technology is entirely effective against the great diversity of organisms.

Want to know more about the Ballast Water Management Convention?
International Maritime Organisation website:
http://www.imo.org/en/MediaCentre/HotTopics/BWM/Pages/default.aspx

GloBallast website:
http://archive.iwlearn.net/globallast.imo.org/
APPENDIX 1

Example Ballast Water Record Book

Entries in the Ballast Water Record Book should be made on each of the following occasions:

3.1 When ballast water is taken onboard:
   .1 date, time and location, port or facility of uptake (name of port or latitude/longitude), depth if outside of port
   .2 estimated volume of ballast water uptake in cubic metres
   .3 signature of the officer in charge of the operation

3.2 Whenever ballast water is circulated or treated for ballast water management purposes:
   .1 date and time of operation
   .2 estimated volume circulated or treated (in cubic metres)
   .3 whether conducted in accordance with the ballast water management plan
   .4 signature of the officer in charge of the operation

3.3 When ballast water is discharged into the sea:
   .1 date, time and location, port or facility of discharge (port name or latitude/longitude)
   .2 estimated volume discharged in cubic metres plus remaining volume in cubic metres
   .3 whether approved ballast water management plan had been implemented prior to discharge
   .4 signature of the officer in charge of the operation

3.4 When ballast water is discharged to a reception facility:
   .1 date, time and location of uptake
   .2 date, time and location of discharge
   .3 port or facility
   .4 estimated volume discharged or taken up in cubic metres
   .5 whether approved ballast water management plan had been implemented prior to discharge
   .6 signature of officer in charge of the operation

3.5 Accidental or other exceptional uptake or discharges of ballast water:
   .1 date and time of occurrence
   .2 Port or position of the ship at time of occurrence
   .3 estimated volume of ballast water discharged
   .4 circumstances of uptake, discharge, escape or loss, the reason therefore and general remarks
   .5 whether approved ballast water management plan had been implemented prior to discharge
   .6 signature of the officer in charge of the operation

3.6 Additional operational procedure and general remarks

An example Ballast Water Record Book is shown below.
Ballast Water Record Book

INTERNATIONAL CONVENTION FOR THE CONTROL AND MANAGEMENT OF SHIPS’ BALLAST WATER AND SEDIMENTS

| Name of ship: |  |
| IMO ship identification number: |  |
| Gross tonnage of ship: |  |
| Flag: |  |
| Total ballast water capacity (m$^3$): |  |

This ship is provided with a ballast water management plan: [ ]

Period from: [ ] to: [ ]

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RECORD OF BALLAST WATER OPERATIONS

**EXAMPLE BALLAST WATER RECORD BOOK PAGE**

**Name of Ship:** ..........................................................

**Distinctive number or letters:** .................................

This column should have been filled in here

This column should reflect the numbering used in the BWM Convention as shown above

<table>
<thead>
<tr>
<th>Date</th>
<th>Item (number)</th>
<th>Record of operations/signature of officers in charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>25/12/2019</td>
<td>3.1</td>
<td>Ballast water uptake</td>
</tr>
<tr>
<td>3.1.1</td>
<td></td>
<td>25 December 2019, 1000 hrs, Port of Liverpool UK</td>
</tr>
<tr>
<td>3.1.2</td>
<td></td>
<td>3813 m$^3$</td>
</tr>
</tbody>
</table>

This should have been signed by the officer in charge of the operation

| 06/01/2020 | 3.2           | Ballast water exchange                                |
|           |              | 6 January 2020, 1500 hrs                             |
|           | 3.2.1        | 3813 m$^3$                                           |
|           | 3.2.2        | Exchange done in compliance with the plan            |

This should have been completed to show the estimated volume circulated / treated in m$^3$

This should have been signed by the officer in charge of the operation

---

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<table>
<thead>
<tr>
<th>Date</th>
<th>Item (number)</th>
<th>Record of operations/signature of officers in charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>30/01/2020</td>
<td>3.3</td>
<td>Discharge of ballast water</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30 January 2020, 0815 hrs, Port Purcell, British Virgin Islands</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Discharge done in compliance with the plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4383 m³, 216 m³</td>
</tr>
<tr>
<td></td>
<td>3.3.4</td>
<td>This should have been completed to show</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the estimated volume discharged plus the remaining volume in m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Discharge done in compliance with the plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If any ballast water has been discharged to a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>reception facility, the details should have</td>
</tr>
<tr>
<td></td>
<td></td>
<td>been recorded in the table as per item 3.4 above</td>
</tr>
<tr>
<td></td>
<td></td>
<td>This should have been completed to note whether</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the treatment / circulation was conducted in</td>
</tr>
<tr>
<td></td>
<td></td>
<td>accordance with the ballast water management plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Each completed page should have been signed by the ship’s master</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If there have been any accidental or other</td>
</tr>
<tr>
<td></td>
<td></td>
<td>exceptional uptakes or discharges of ballast water,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the details should have been recorded in the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>table as per item 3.5 above</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signature of master ………………………………………</td>
</tr>
</tbody>
</table>

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APPENDIX 2

Regional guidelines for ballast water exchange

Caribbean wider region
The IMO has produced some specific guidelines for ballast water exchange and sediment management in wider Caribbean region areas. The guidelines state that:

- ships entering the wider Caribbean region from the Atlantic Ocean or from the Pacific Ocean through the Panama Canal that do not meet the D-2 standard should:
  - undertake ballast water exchange before entering the wider Caribbean region according to the D-1 standard, at least 200 nautical miles from the nearest land and in waters at least 200 metres deep
  - in situations where this is not possible, either due to deviating the ship from its intended voyage or delaying the ship, or for safety reasons, such exchange should be undertaken as far from the nearest land as possible, and in all cases in waters at least 50 nautical miles from the nearest land and in waters at least 200 metres deep
- ships that are engaged in traffic between ports located within the wider Caribbean region that do not meet the D-2 standard should:
  - undertake ballast water exchange, according to the D-1 standard, as far from the nearest land as possible, and in all cases in waters at least 50 nautical miles from the nearest land and in waters at least 200 metres deep
  - where possible, conduct ballast water exchange within the same IUCN biographic region where the ballast water was taken on, prior to entering another biographic region
- release of sediments during the cleaning of ballast tanks should be avoided in the wider Caribbean region
- governments are encouraged to exchange information on invasive marine species or anything that will help change the perceived risk associated with ballast water and sediment

Antarctic Treaty area
The IMO has produced some specific guidelines for ballast water exchange in the Antarctic Treaty area. The guidelines state that:

- a Ballast Water Management Plan should be prepared for each vessel with ballast tanks entering Antarctic waters, taking into account problems of ballast water exchange in Antarctic conditions
- each vessel entering Antarctic waters should keep a record of ballast water operations
- for vessels needing to discharge ballast water within the Antarctic Treaty area, ballast water should first be exchanged before arrival in Antarctic waters (preferably north of either the Antarctic Polar Frontal Zone or 60°S, whichever is the furthest north) and at least 200 nautical miles from the nearest land in water at least 200 metres deep (if this is not possible for operational reasons then such exchange should be undertaken in waters at least 50 nautical miles from the nearest land in waters at least 200 metres deep)
- release of sediments during the cleaning of ballast tanks should not take place in Antarctic waters
- vessels that have spent significant time in the Arctic should discharge and clean tanks before entering Antarctic waters - if this is not possible, then sediment accumulation in ballast tanks should be monitored and sediment disposed of in accordance with the ship’s Ballast Water Management Plan
- governments are invited to exchange information on invasive marine species or anything that will change the perceived risk associated with ballast water

6 The Wider Caribbean Region area is defined by the Cartagena Convention as the marine environment of the Gulf of Mexico, the Caribbean Sea and the areas of the Atlantic Ocean, south of 30° north latitude and within 200 nautical miles of the Atlantic coasts of the Territories and States of the following Countries: Antigua and Barbuda, the Bahamas, Barbados, Belize, Colombia, Costa Rica, Cuba,Dominica, Dominican Republic, France, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, the Kingdom of the Netherlands, Nicaragua, Panama, Saint Kitts & Nevis, Saint Lucia, Saint Vincent & the Grenadines, Suriname, Trinidad & Tobago, United Kingdom, United States of America and Venezuela

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The United States of America

The USA has not ratified the BWM Convention. However, it has its own stringent ballast water management regulations under domestic law. Any non-recreational ships operating in US waters must comply with these regulations regardless of a vessel's status under the BWM Convention. The regulations provide a list of approved ballast water management methods. These include:

- use of a ballast water management system (either one approved by the US Coast Guard or one that is accepted as an alternative management system)
- use of ballast water from a US public water system
- performing complete ballast water exchange in an area 200 nautical miles from any shore
- retaining all ballast water while in US waters
- discharging to a shore-side facility