

MARINE ENVIRONMENT PROTECTION  
COMMITTEE  
73rd session  
Agenda item 4

MEPC 73/4/8  
17 August 2018  
Original: ENGLISH

## HARMFUL AQUATIC ORGANISMS IN BALLAST WATER

### Contingency measure guidance in ballast water management plans

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#### SUMMARY

<i>Executive summary:</i>	This document proposes elements related to contingency measures that might be included in ballast water management plans
<i>Strategic direction, if applicable:</i>	1
<i>Output:</i>	Not applicable
<i>Action to be taken:</i>	Paragraph 9
<i>Related documents:</i>	BWM.2/Circ.62; MEPC 72/17, MEPC 72/WP.9 and MEPC 73/INF.8

#### Introduction

1 At its seventy-second session, the Marine Environment Protection Committee (MEPC) invited submissions of proposals for when elements of the *Guidance on contingency measures under the BWM Convention* (BWM.2/Circ.62) should be included in ballast water management plans (BWMP).

2 This document identifies four areas related to contingency measures that might be included in the BWMP:

- .1 contingency measure elements from BWM.2/Circ.62;
- .2 corrective actions applicable to ballast water management systems (BWMS) that might eliminate the need for contingencies;
- .3 corrective actions applicable to BWMS that might increase the effectiveness of contingency measures; and
- .4 preparations for port-based and/or shore-based contingency measures.

**Discussion**

- 3 The elements of BWM.2/Circ.62 that would be useful to include in the BWMP are:
- .1 detailed pre-determined actions specific to the ship and the installed BWMS (as applicable) that are to be undertaken in the event ballast water management to meet the applicable discharge standard (i.e. regulations D-1 or D-2) is not possible;
  - .2 indication if the ship is fitted with appropriate equipment to discharge ballast water to another ship or to an appropriate port-based and/or shore-based reception facility, where available;
  - .3 details of the ballast water exchange methods suitable for the specific ship, and in accordance with the approved plan;
  - .4 details of operational actions that are suitable for the specific ship, such as internal ballast water transfer or ballast water retention; and
  - .5 procedures for communication with port State control, in advance of port arrival, about ballast water management issues and any contingency measures utilized.

4 With respect to BWMS, certain initial corrective actions may be taken at the time improper BWMS operation is identified and prior to ship arrival in port, which might eliminate the need for subsequent contingency measures. Performing a correction action, in a timely manner and in accordance with the BWMS requirements, may result in the ability to resume effective treatment prior to taking up unmanaged ballast water and/or discharging non-compliant ballast water. The BWMP should be closely coordinated with the BWMS operations manual to avoid replication of instructions. The BWMP might include a corrective action plan with the following elements:

- .1 Pre-determined operational responses to treatment process upset conditions. Such conditions might be environment-based such as excessive sediment, low salinity, or extreme environmental conditions, or they could be mechanical such as a failed sensor. Operational responses could include increased supervision of ballast water operations, implementing any system redundancies, reducing the ballasting rate or shutting down ballast water operations.
- .2 Pre-determined troubleshooting methods to relieve upset conditions. The BWMP could direct the crew to the BWMS operations manual which should include detailed methods to identify the likely root cause of the upset condition, explain operational measures that could be taken, and identify when an operational correction or a repair might be required.
- .3 Pre-determined repair plan. The BWMP could direct the crew to the BWMS operations manual which should include minimum training requirements so that crew can quickly return BWMS equipment to proper operation, include minimum spare parts so that critical repairs and replacements are possible, and identify the availability of external resources such as the BWMS service agents for on-site or remote support.

5 Certain alternative BWMS corrective actions may provide some level of treatment, although not in full compliance with a BWMS manufacturers' type approval certificate. These corrective actions could reduce the need for, or increase the effectiveness of, subsequent contingency measures that may be required by port State control when a ship arrives in port. Implementing alternative corrective actions assumes that initial corrective actions to restore effective treatment were not possible. The BWMP might include a detailed list of such corrective actions based on the specific upset condition, such as:

- .1 a filter overwhelmed by environmental conditions or sustaining a mechanical failure might be bypassed such that a disinfection unit can continue to partially treat the ballast water; and
- .2 a disinfection unit that is operable at reduced capacity or is overwhelmed by environmental conditions may still have some efficacy. It might continue to be operated to partially treat the ballast water.

6 Ballast water exchange (BWE) through the BWMS has been identified as a potential contingency measure (MEPC 73/INF.8). It is noted that this method often requires a sequential BWE, which requires analysis to assure that ship stability is maintained and hull stress limits are not exceeded. With the phasing out of BWE as a ballast water management practice, it is possible that some BWMPs may no longer include detailed instructions on how to safely perform BWE. Should BWE through the BWMS as a contingency measure be considered, then the BWMP should include detailed instructions on how to safely perform this measure.

7 Port locations may offer port-based and/or shore-based contingency measures to provide options for compliance with ballast water discharge standards and/or minimize invasive aquatic species risks. The BWMP should include procedures for ship crew to initiate such that these port-based and/or shore-based contingency measures can be practically implemented, when available and applicable to a ship. Such measures might include:

- .1 some port-based contingency measures require that ballast water be transferred to a port-based containerized treatment system. The BWMP might then include protocols to implement such a transfer activity;
- .2 some port-based contingency measures require access to each ballast water tank. The BWMP might then include specific instruction on how to provide such tank access; and
- .3 the BWMP should consider potential port-based and/or shore-based contingency measures that are available at planned ports of call and provide instructions for how to integrate these available measures.

8 Additionally, there are resources available to assist in the development of guidance within the BWMP in order to support contingency measures. These may be considered and relevant elements included in the BWMP where available and applicable. Some of these resources may include:

- .1 flag States may have guidance on recommended practices and measures;
- .2 port States may have guidance on acceptable contingency measures, available port- and/or shore-based contingency measures, and reporting and recordkeeping requirements;

- .3 classification societies may have guidance on compliance with flag and port State guidance and requirements;
- .4 professional organizations and societies may have guidance on contingency measures. For example, INTERTANKO (MEPC 73/INF.8) has developed contingency measure guidance; and
- .5 BWMS manufacturers and service agencies may have guidance specific to their supplied systems, in particular on possible corrective actions including repairs.

**Action requested of the Committee**

9 The Committee is invited to consider the information in this document as it relates to the *Guidance on contingency measures under the BWM Convention* (BWM.2/Circ.62) and associated elements that should be included in BWMP.

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