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HARMFUL AQUATIC ORGANISMS IN BALLAST WATER

Clarification of the temporary storage of treated sewage and grey water in the ballast tanks under the BWM Convention

Submitted by IACS

SUMMARY

Executive summary:	This document raises concerns about the temporary storage of treated sewage and grey water in the ballast tanks and seeks clarification from the Committee on the permission of such practice under the BWM Convention; also, the document provides possible approaches to be considered, if the permission of such practice is confirmed
Strategic direction, if applicable:	1
Output:	1.22
Action to be taken:	Paragraph 15
Related documents:	MEPC 63/2/18 and MEPC 63/23

Introduction

1 Due to port State requirements for the discharge of sewage and grey water, more and more ships in service have an urgent need to store treated sewage or grey water in a ballast tank. Some ships have had modification or conversion of their ballast tanks to temporarily store treated sewage and grey water. A significant number of requests for such storage have been received by IACS members.

2 IACS recalls that document MEPC 63/2/18 (Norway) had raised a similar issue, i.e. whether grey water and sewage water, which is generated on board and stored in the ballast water tanks, are a ballast water or not, and whether these are covered by the BWM Convention or not. The document sought clarification from the Committee on the application of the BWM Convention to grey water and sewage water stored in the ballast tanks.

3 Based on the outcome of the consideration of document MEPC 63/2/18 at MEPC 63, the Committee agreed, after extensive discussions, that the handling of grey water and sewage water on board ships should be regulated under MARPOL Annex IV and invited Parties to

propose relevant amendments to that Annex for consideration at a future session of the Committee (MEPC 63/23, paragraph 2.36). However, there were no additional submissions to the subsequent MEPC or PPR sessions, and thus no further progress was made.

4 With the enforcement of the D-2 standard of the BWM Convention, the issue of whether the grey water and treated sewage stored in the ballast water tanks will contaminate the ballast water tank, resulting in the discharge of ballast water sequentially uploaded following sewage discharge, which would not meet the D-2 standard, has also aroused increasing concern. At present, both the BWM Convention and MARPOL Annex IV have no relevant provisions for the prohibition of the storage of grey water or treated sewage in the ballast water tanks. The industry has various interpretations on this issue. Although IACS considers that the temporary use of the ballast tanks for storage of grey water and treated sewage should not be encouraged, a clarification on this issue from the Committee to ensure the uniform implementation of the BWM Convention and MARPOL Annex IV is deemed to be necessary.

Discussion

5 More ports are imposing local discharge requirements for grey water and sewage treated by a sewage treatment plant (STP) in accordance with regulation 9.1.1 of MARPOL Annex IV, and, therefore, the temporary storage of grey water and treated sewage in the ballast water tanks is often considered as the "best" option for the industry since they are not regulated by the MARPOL Convention.

6 Although the conclusion of the consideration of document MEPC 63/2/18 at MEPC 63 was that grey water and sewage on board ships should be handled in accordance with MARPOL Annex IV, concern was expressed during the discussion at that session on how to avoid the contamination of the ballast tanks of a ship by sewage and grey water after the BWM Convention enters into force, especially when the D-2 standard is mandatory for that ship. Another view was expressed that, once treated sewage is allowed to be stored in a ballast tank, that ballast tank should also be regarded as a sewage holding tank, and then both the BWM Convention and MARPOL Annex IV should be complied with.

7 Different interpretations and opinions have been raised recently, which focused on the following:

.1 opinion 1: such practice is suitable and acceptable because the purpose of the storage of grey water or treated sewage in a ballast water tank is not to control trim, list, draught, stability or stresses of the ship. Thus, grey water or treated sewage stored in a ballast water tank should not be considered as ballast water, and, therefore, the discharge of grey water or treated sewage stored in a ballast water tank should not need to meet the D-2 standard;

.2 opinion 2: such practice should be avoided because a ballast tank, which is temporarily holding grey water or treated sewage, is still a ballast tank, which was designed for controlling trim, list, draught, stability or stresses of the ship. So treated sewage or grey water stored in those tanks should be regarded as ballast water, and, therefore, the discharge should be regulated under the BWM Convention;

.3 opinion 3: in principle, the ballast water tanks should not be used for grey water or treated sewage since they are easily contaminated by grey water or treated sewage. Once the ballast water tanks are contaminated, grey water

or treated sewage stored in such ballast tanks would have to be processed by the ship's sewage treatment plant or discharged as grey water. Subsequently, mandatory cleaning of tanks and piping systems would be required before restoring such tanks to ballast service. Hence, temporary storage of grey water or treated sewage in the ballast tanks should not be considered as a practical option; and

.4 opinion 4: whether the BWM Convention applies to grey water or treated sewage stored in the ballast water tanks should be determined by whether or not it is stored as "ballast". In such a case, it is necessary to evaluate the function of grey water or treated sewage stored in the ballast tanks, i.e. if it is acting as ballast water to control trim, list, draught, stability or stresses of the ship.

8 Recently IACS members have been receiving a significant number of requests for case-by-case decisions confirming the manual transfer of grey water and treated sewage to the ballast tanks, due to the requirements in some ports. With the requests from the industry and communications with relevant flag Administrations, some agreements on a case-by-case basis were provided to ships. However, due to the different understanding of such practice, IACS believes that the issue of temporary storage of grey water and treated sewage in the ballast water tanks should be addressed at the IMO level, and the confirmation of this practice under the BWM Convention from IMO would be necessary.

9 IACS is of the view that the temporary storage of grey water or treated sewage in the ballast tanks is not prohibited by either the BWM Convention or MARPOL Annex IV. Such arrangements, although not favoured, could provide an option for ships where the quantities of grey water or treated sewage generated on that ship cannot be stored on board and local port restrictions do not allow the discharge, based on an adequate justification by the ship's managers.

10 Since ballast water mixed with grey water or treated sewage could cause malfunctions of the ballast water management system (BWMS) to be considered as non-compliant with the D-2 standard, mixing of grey water/treated sewage with ballast water should be avoided.

11 If the Committee confirms that the temporary storage of grey water and treated sewage in the ballast water tanks is acceptable in principle, IACS would like to provide the following technical and operational points for further consideration:

.1 the pumps and pipelines of grey water/treated sewage should be separated or isolated physically from those of the ballast system to avoid any possible mixing of ballast water and grey water or treated sewage;

.2 means of isolation between the ballast water system and treated sewage/grey water systems, with a specific operational procedure, are to be made available on board addressing at least the following points:

.1 change-over procedure showing the use of isolating devices (spectacle flanges, valves, etc.) between the two systems; and

.2 details of effective drainage, flushing and/or cleaning of the ballast tanks;

.3 the hull strength and stability of the ship should not be compromised;

.4 such operation and management method of the ballast tank should be described in the Ballast Water Management Plan of the ship, which should be approved by the Administration/recognized organization;

.5 the ballast tank should be properly emptied and cleaned to have no residual ballast water and sediments prior to the transfer of grey water/treated sewage into it;

.6 the ballast tank should be properly emptied and cleaned thoroughly to remove any residual grey water or treated sewage before being used as a ballast tank again;

.7 during the period, in which the ballast tank is holding grey water/treated sewage, the ballast tank should be redefined temporarily as a grey water/treated sewage holding tank and it should be disconnected from the ballast system, i.e. temporarily isolated from the ballast system, e.g. by means of closed and sealed valves; and

.8 the storage of untreated sewage, including comminuted and disinfected sewage using a sewage comminuting and disinfecting system in accordance with regulation 9.1.2 of MARPOL Annex IV, in a ballast tank should be avoided.

12 In addition, the arrangements for the temporary storage of grey water or treated sewage in the ballast water tanks and operations of the discharge of ballast water and grey water/treated sewage should adhere to the following principles:

.1 the discharge of ballast water should be in compliance with the BWM Convention;

.2 the discharge of treated sewage should be in compliance with MARPOL Annex IV; and

.3 grey water is not covered by the MARPOL or BWM Conventions, but the discharge of all mixtures of grey water with ballast water or treated/untreated sewage should be in compliance with either the BWM Convention or MARPOL Annex IV or both.

Proposals

13 In light of the discussion in paragraphs 5 to 12, IACS believes that it is necessary to provide clear guidance on this issue due to the existence of different interpretations of the requirements, and establish a unified approach to the implementation of the BWM Convention and MARPOL Annex IV.

14 IACS would like to seek the Committee's confirmation of the permission for the temporary storage of grey water or treated sewage in the ballast water tanks under the BWM Convention, and, if the permission is confirmed, to provide the following two possible approaches to address this issue:

.1 to develop guidance on the temporary storage of grey water or treated sewage in ballast water tanks, which may be issued as an MEPC circular; or

.2 to develop amendments to MARPOL Annex IV and the BWM Convention, respectively, to reflect the permission for the temporary storage of grey water or treated sewage in the ballast water tanks.

Action requested of the Committee

15 The Committee is invited to:

.1 consider the discussion in paragraphs 5 to 12, in particular the technical and operational elements in paragraph 11 and the principles in paragraph 12;

.2 consider the request for the confirmation and the suggested approach to address this issue, both in paragraph 14; and

.3 take action as appropriate.