

1. Introduction

The Isle of Man Ship Registry has received several enquiries from operators experiencing issues with their Ballast Water Management Systems (BWMS) who are unable to discharge Ballast Water to the D2 standard prescribed within the International Convention for the Control and Management of Ships' Ballast Water and Sediments ('the Convention').

It should be noted that dispensations from the Convention cannot be issued due to equipment malfunction or operational issues. Guidance for ship operators where the quality of port water is too poor for the BWMS to function correctly may be found in MEPC.387(81) – 'Interim Guidance on the Application of the BWM Convention to Ships Operating in Challenging Water Quality Conditions'.

This notice provides a summary to operators of the key requirements from MEPC.387(81). It is highly recommended that the full text of MEPC.387(81) is consulted and the interim guidance contained within applied as soon as possible, regardless of whether the vessel is expected to encounter challenging water quality conditions.

Operators are to note that this guidance only covers issues relating to the operation of the BWMS that are caused by challenging water quality. Where the BWMS is inoperable due to stock issues relating to treatment chemicals or parts required to operate the BWMS, operators are advised to consult the guidance contained within BWM.2/Circ.62 – 'Guidance on contingency measures under the BWM Convention' and contact the Ship Registry who will work with the inbound Port State to reach resolution on the matter.

2. Definitions

MEPC.387(81) defines several key terms that should be used when developing contingency measures to address challenging water quality:

- Challenging water quality (CWQ) - Ambient uptake water having quality parameters (including but not limited to high total suspended solids, or turbidity) that cause a properly installed, maintained and operated type-approved BWMS to be temporarily inoperable due to an operational limitation or an inability to meet operational demand. However, temperature and salinity are not parameters that define CWQ.
- Operational demand - The minimum BWMS flow rate defined in the Ballast Water Management Plan (BWMP) that will permit the ship to continue cargo operations while using the BWMS, which should be no greater than 50% of the BWMS treatment rated capacity (TRC).
- Operational limitation - An automatic shutdown of the BWMS, a critical alarm for which the BWMS manufacturer's instructions direct a manual shutdown, or a safety-related circumstance that requires the shutdown of the BWMS for the protection of the BWMS equipment, the ship or its crew.
- Pre-emptive bypass - A BWMS bypass undertaken, prior to or during a ballasting operation, in anticipation of reaching an operational limitation or encountering an inability to meet operational demand.



- Reactive bypass - A BWMS bypass undertaken during a ballasting operation upon reaching an operational limitation or encountering an inability to meet operational demand.

3. Contingency Measures

Operators should update the BWMP for their vessel to detail the procedures to be followed when the ship is, or is expected to be, operating in areas with challenging water quality. This procedure should cover the entirety of the process where a decision is made to bypass the BWMS, from the actions taken in making the initial decision to bypass the system to the follow-up post bypass pertaining to record keeping.

Ultimately, the procedure should capture sufficient evidence along the process chain to demonstrate to Port State Control Officers that the vessel had taken all reasonable steps to address challenging water quality prior to bypassing the BWMS.

Such procedures will be vessel specific but should at a minimum cover the 7 steps (in order) of the Challenging Water Quality process outlined below:

- Assessment – The mechanical observations or indications from the self-monitoring system that allow it to be determined that the BWMS is not performing at its expected treatment rated capacity
- Troubleshooting and Mitigation – The steps taken to verify that poor performance is not due to factors other than CWQ (including that all necessary maintenance has been completed)
- Challenging Water Quality Triggering – Assess operational limits and operational demands that determine the BWMS is encountering challenging water quality
- Alternatives to Bypass – All additional steps to be considered prior to bypassing the treatment system such as restricting the flow to operational demand, optimising the BWMS for challenging water quality or loading less ballast (where vessel operations allow less ballast to be loaded – safety of the vessel should always be considered as the first priority)
- Bypass – Factors to be considered when a bypass is deployed such as partial bypass of the BWMS, loading the minimum safe amount of ballast or realignment of the ballast system to limit the number of tanks and amount of piping affected, segregating the contaminated part of the system from the compliant part
- Decontamination – Procedures to be followed post-bypass to lower the risk of not meeting D-2 standard at the next discharge, this may include exchanging to D1 standard or flushing/treatment when the vessel is mid-ocean. The preferred decontamination procedure should be discussed with the discharge ports PSC authority to confirm they are in agreement for the proposed methods prior to entering the port
- Record Keeping/Communication – The steps taken to regularly update the BW record book during the CWQ process and inform future ports where bypass of the BWMS has been undertaken

It should be noted that in general pre-emptive bypass of the BWMS is discouraged by the IMO, even in cases where the vessel is visiting a port where issues have previously been encountered.



Where any decision to bypass the BWMS is made, the decision should be reactive based on current operational limitation/demand and the CWQ procedures contained within the BWMP being followed.

Further, operators are reminded that additional non-mandatory procedures added to the BWMP do not require specific approval by the vessels RO. Where addendums for non-mandatory procedures are added to the plan (such as contingency measures to address CWQ) these may be voluntarily approved by the vessels RO but it is not an explicit requirement. Only where the BWMP is completely revised (new chapters, statutory procedure changes etc.) is re-approval by the vessels RO required.

In any case, wherever the vessel is unable to discharge ballast water to the D2 standard due to CWQ, operators must advise the Ship Registry and Port State as soon as practical and receive confirmation from the Port State of their acceptance for the specific CWQ measures being deployed.

Any final decision pertaining to discharge of the ballast water lies with the Port State, however, it should be noted that guidance provided to PSC officers within MEPC.387(81) states that in determining whether a ship has done all it can to meet the D-2 standard, a PSC officer should consider:

- .1 the nature and degree of the challenge
- .2 whether challenges arose despite proper BWMS operation and maintenance
- .3 whether steps were taken to avoid or limit the bypass of a BWMS, such as efforts to mitigate challenges while continuing to use the BWMS
- .4 whether the ship and crew followed the procedures in the BWMP and recorded this in the BWRB; and
- .5 whether decontamination was properly undertaken following any bypass.

Further, the IMO guidance states that Port States should consider that a ship fully applying this Guidance is minimizing its risk of non-compliance with the D-2 standard at subsequent discharge locations. Underscoring the importance of correctly following the CWQ procedure as outlined in MEPC.387(81) and ensuring evidence of the same is captured along the process chain to minimise any risks of issues being raised by PSC at the subsequent port.

4. Further Information

- BWM.2/Circ.62 - Guidance on contingency measures under the BWM Convention
- MEPC.387(81) – Interim Guidance on the Application of the BWM Convention to Ships Operating in Challenging Water Quality Conditions

Please note - The Isle of Man Ship Registry cannot give legal advice. Where this document provides guidance on the law it should not be regarded as definitive. The way the law applies to any particular case can vary according to circumstances - for example, from vessel to vessel. You should consider seeking independent legal advice if you are unsure of your own legal position.

