

List of potential considerations needed regarding the entry into force of the BWM Convention 8 September 2017

Ship

- potential alternative solutions:
 - “technical” water or freshwater taken on board in discharge ports as ballast
 - de-ballasting to a BWMS facility (barge or shore based)
 - NOBOB (no ballast on board) or use of permanent ballast water in a closed and sealed system
- ballast system characteristics (ie the number of independent ballast systems on board chemical and oil tankers, topside tanks on bulk carriers, potential pressure drops, etc)
- ballast volumes carried during normal operation compared with ballast pumping rates and BWMS flow rates
- location of compliant sampling points
- excess on board power generating capacity for operating a BWMS
- pre-planning, class appraisal process of intended design and class survey after installation
- space limitations versus space required for a BWMS
- type, age, size & trade of the ship.

BWM system

- availability & delivery time
- compatibility with ship design and construction (pipelines and possible pressure drop)
- efficacy and reliability in all commonly experienced sea water conditions
- explosion proof/intrinsically safe installations if needed
- flexibility in terms of installation location
- on board maintenance requirements
- possibility for expanding the scope of compliance to future more stringent ballast water discharge standards by upgrading and/or add-on possibilities
- repair & service availability for the BWMS (after-sales support, spare parts, etc)
- BWM system capacity and efficiency to be warranted by the manufacturer
- up and running time needed for the BWMS
- type approval for worldwide operation, including in US waters, to be guaranteed by the manufacturer.

Installation

- in drydocking or repair yard
- inclusion of installation or retrofitting specifications for new buildings
- on board in service retrofitting, which requires careful planning and logistical preparation.

Cost

- operating costs (OPEX)
- life cycle costs (CAPEX and OPEX)
- additional cost for maintenance of other equipment ie ballast pumps wear & tear due to increased running hours.

Commercial

- consideration of trading areas
- contractual impact as operations could take a longer time to complete
- contractual implications of risk of ship not being compliant.

Crew

- health and safety
- training and familiarisation
- workload – a BWMS should be easy to operate for the crew.

Operational

- amendment of the safety management system
- development and implementation of a BWM plan
- implementation and proper use of a BWM record book
- operation, control and monitoring, ie the potential use of tamper-proof electronic logs incorporated in the BWMS to record ballast water management operations for compliance purposes
- safe and compliant operation of BWMS in all possible shipboard conditions
- safe operation (loading, discharging and bunkering) in terms of stability and strength of the ship; Updated ballasting/de-ballasting procedures as use of gravity might not be possible depending on the chosen BWMS.

The BWM Convention's requirements for Ballast Water Management (BWM) specifies the following:

- Regulation D-1 "Ballast Water Exchange Standard" requires an efficiency of 95% volumetric exchange of ballast water with marine water (at least 200 nautical miles from the nearest land and in water at least 200 meters in depth if possible)
- Regulation D-2 "Ballast Water Performance Standard" concerns water quality for discharge, related to specified maximum concentrations of micro-organisms.

USCG compliance beside utilisation of BWE and BWMS as applicable includes:

- the use of potable water from the us public water system; all ballast tanks and the piping system have to be cleaned, and any sediments removed beforehand
- discharge to a facility onshore or to another ship or barge for the purpose of ballast water management or treatment
- no discharge of ballast water. Please note that under the USCG regulations, ships do not need to install a ballast water management system (BWMS), if the ship is able to comply by using one of the three ballast water management options listed above.

Furthermore, the USCG BWM regulations provide the following temporary options for compliance:

- use of a BWMS with status granted as an alternate management system (AMS) by the USCG

- AMS status is intended as an interim measure to allow the use of foreign type-approved BWMS, until coast guard type approved BWMS become available
- an AMS status of a BWMS provides no guarantee for subsequent USCG type-approval. This could result in additional costs being incurred to either modify the AMS BWMS to the required performance capabilities and standard required by an USCG type approval or to install a new USCG type approved BWMS
- compliance-wise, the AMS will cover five years' operation for the BWMS on board, unless the BWMS is either type-approved before the expiry for the AMS installation. The US Environmental Protection Agency (EPA) "accepts" the use of an AMS as compliant with the EPA Vessel General Permit (VGP) requirements.

Extension application

- if compliance proves impossible ie by installing an AMS, an application can be made for an extension to the implementation schedule subject to sufficient documentation proving that every effort had been made to comply with the BWM requirements
- any extension request should be made no later than twelve months before the scheduled implementation date for the ship
- however, upon the USCG's type approval of a BWMS suitable for use on the ship, such a ship is required to install a BWM system at the earliest opportunity unless reason for extension can be documented
- the extension granted and issued by the USCG cannot exceed five years from the ship's implementation date but in practice, the extensions granted are based on definite dates, which do not necessarily cover the full five years
- if an extension period proves to be inadequate, the owner, operator, agent, master or person in charge of a ship may submit an additional extension request for the ship. Any additional extension request should be submitted not less than 90 days prior to the termination date specified in the original extension granted
- the vessel general permit (VGP) under the EPA enforcement policy provides no guarantee that owners and operators granted extensions by the USCG will not be subject to potential administrative, civil and criminal fines for non-compliance with the 2013 VGP requirements to install BWMS according to the EPA's schedule and regardless of the USCG not having type approved any BWMS.

For the EPA VGP enforcement response policy letter to apply to a ship, compliance with all other provisions of the 2013 VGP, including the submission of a valid notice of intent (NOI), is vital.

A copy of the extension letter must be kept on board the vessel and made available to USCG vessel inspectors and port state control officers, as well as other federal, state, and local officials with jurisdiction over ballast water discharges into US waters.