BALLAST WATER MANAGEMENT
CONVENTION 2004

What to Expect

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The Ballast Water Management (BWM) Convention has been around for a long time, but it is still surrounded by confusion and speculation.

**The Objective**

Drawing from experience gained in the Ballast Water Review Group at Marine Environment Protection Committee (MEPC) and Sub-Committee on Bulk Liquids and Gases (BLG), this presentation aims to provide some ideas of what to expect and some practical thoughts on compliance.
HOW WAS THE NEED FOR REGULATION RECOGNIZED AND HOW DID THIS DEVELOP INTO A CONVENTION?

- “The harmful effects of unwanted species in ships’ ballast water was first reported to IMO in 1988, when Canada informed the MEPC about invasive aquatic species in the Great Lakes”
- Voluntary guidance (1991)
- 1999 the Ballast Water Working Group was established to prepare a free-standing Convention
- The Convention was unanimously adopted by Diplomatic Conference in early 2004
- The aim – to establish a uniform set of rules that can be applied worldwide – simpler compliance
THE CONVENTION IS ADOPTED, BUT WHEN WILL IT BE ENFORCED?

- Require 30 countries with a combined 35% of the world's gross tonnage
- The total number of contracting Parties to the BWM Convention has reached 36 representing (29.07%)
- Where could the remaining 6% come from?
  - Panama alone (22.63%)
  - Hong Kong (5.84%) and China (3.54%)
  - Singapore (4.83%) and China (3.54%)
  - Combination – EU countries
- We do not know when the Convention will enter into force
ISSUES PREVENTING FURTHER RATIFICATION
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- Fixed dates in the implementation schedule of Regulation B-3 increase potential for a log jam of systems to be fitted
- Availability of Ballast Water Management Systems (BWMS)
- A perceived misalignment between Type Approval testing and port State control (PSC) guidance procedures for sampling
- Awareness of the cost to industry
Fixed dates in the implementation schedule of Regulation B-3 increase potential for a log jam of systems to be fitted

- Until the Convention is fully ratified, it's difficult to change the implementation schedule in the Convention
- Draft Resolution, providing a pragmatic approach to lower installation peaks inherent in the current Regulation B-3
- May not circumvent Article 19 of the Convention, but possible a “gentlemen’s agreement” can be achieved at MEPC 65
**IMPLEMENTATION SCHEDULE (continued)**

*Fixed dates in the implementation schedule of Regulation B-3 increase potential for a log jam of systems to be fitted (continued)*

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<th>Convention Schedule</th>
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| Example Alternative Schedule            |                      |              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                |
| Before 2009                             |                      | 1 Existing Ship |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | D2      |
| 1,500 ~ 5,000                          |                      |              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | D2      |
| <1,500 or >5,000                       |                      | 2 Existing Ship |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | D-2     |
| In or after 2009                        |                      | 3 New Ship |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                |
| 5,000                                   |                      | 3 Existing Ship |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                |
| Before 2012                             |                      | 4 Existing Ship |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | D-2     |
| In or after 2012                        |                      | 5 New Ship |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                |
| 5,000                                   |                      | 5 Existing Ship |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | D-2     |
AVAILABILITY OF BWMS

- The report of the Ballast Water Review Group indicates there is sufficient availability of treatment technologies.
- Is there a one-size-fits-all solution?
- “Approval of a system is intended to screen-out management systems that would fail to meet standards prescribed in regulation D-2 of the Convention. Approval of a system, however, does not ensure that a given system will work on all vessels or in all situations. To satisfy the Convention, a discharge must comply with the D-2 standard throughout the life of the vessel.”
AVAILABILITY OF BWMS (continued)

- A lack of transparency in the testing of BWMS leads to concerns of too great a degree of extrapolation from the actual test conditions.
- At MEPC 64, the decision was not to amend Resolution MEPC.174(58) – “Guidelines for approval of ballast water management systems (G8)”
- The United States (US) has chosen the same IMO Regulation D-2 ballast water discharge standard, however, the approval methodology (ETV) is slightly different from IMO.
- Does this mean anything if your goal is to have a US Coast Guard (USCG) Type Approval?
TYPE APPROVAL TESTING AND GUIDANCE PROCEDURES FOR SAMPLING

- There is a perceived misalignment between Type Approval testing and PSC guidance procedures for sampling
- Article 9 “Inspection of ships” specifically allows sampling
- Compliance testing to the D-2 standard: a performance based objective, rather than the more common prescriptive regulation; i.e. the difference between “you will achieve” and “you will install”
- A majority in the Ballast Water Review Group who expressed an opinion, considered sampling is very unlikely, only applicable when there is obvious reason to expect a very significant chance of demonstrating gross non-compliance
Likely PSC inspection scenario:
- Verify certification
- Inspect ballast water record books
- Witness crew familiarity with the operation of the BWMS
- Possibly a test to show the system runs up and operates
- Problems with these basics are then grounds to investigate further

- The cost of taking samples and lab analysis is going to be prohibitive
- Sampling confirms gross non-compliance
- Difficulty of demonstrating a small sample is representative of a much larger discharge
AWARENESS OF THE COST TO THE INDUSTRY

- Though not often openly discussed at MEPC, Administrations are aware that today's economic climate is a bad time to embark on a huge retro-fitting program
- The application of Regulation D-5.2 in future reviews
CONCLUSION

- There is no way of knowing when the BWM Convention will finally be enforced, but events have overtaken us. The US ruling affects all worldwide charter parties; effectively it enforces the BWM Convention.
- It's likely that IMO will be under pressure to adopt a revised implementation schedule.
- Parties to the Convention need to manage the expectation and content of PSC guidelines. The Chairman of MEPC acknowledged a statement made in Plenary that guidelines for sampling and analysis should be no more robust than those for Type Approval testing.
- US waters will form a proving ground for the available technology – developing a de facto approval standard for the BWM Convention.
- If the Convention isn’t implemented soon it will lead to fragmented regulation.
PRACTICAL THOUGHTS ON COMPLIANCE
DO YOU NEED A BWMS?

- Article 3 – application
- Regulation A-4 – Exemptions
DO YOU NEED A BWMS? (continued)

Coastal / Flag State agreement:

- **Specified port locations** – discharge untreated ballast water – full assessment to show the environment is unaffected
- **Trade coast and the high seas**
- **Ballasting from approved sources**
- **Trading on clean tanks – no mixing**

Flag State agreement:

- **Remote treatment** systems
EXAMPLES

- Shuttle tankers delivering cargoes between an FPSO and a shore terminal
- Dedicated trades on international voyages between specific ports
- MODU using a remote treatment system

Start work on this immediately, this is not going to be a quick review process
THE PLAN

- Whatever you do, **plan ahead and develop a process** that works for you
- Do everything now – do some now – do nothing
- Install now versus install later
  - Price expectations, many BWMS makers are desperate to sell units now
  - New ships – plan for space, power generation, piping, etc.
  - Existing ship – plan dry docking schedule, 3D modeling

Until the Convention is enforced, Republic of the Marshall Islands regulation leaves this decision to the owner / operator
CHOOSING THE SYSTEM

- **Gather data** to make informed decisions:
  - Various treatment technologies
  - Same technology different parameters
  - Judge corrosive effects (coating standard for G9 approvals)
- **Compare test data for the treatment system to those expected in-service**
- **Compare individual systems**
  - Treatment dosage and flow rates: Why does one system require a higher dosage per cbm than another? Are the manufacturers’ claims realistic?
- **On going maintenance**
  - Redundancy of equipment
  - Off the shelf parts may be easier to supply than proprietary items
Work with the BWMS manufacturer, shipyard and the Class Societies to enhance reliability

- More than just a footprint in a machinery space, the installation environment can be important to reliability
- It’s a system rather than a piece of equipment; pipe runs and positioning of key components can be the difference between a reliable system and an unreliable one
- To be successful, operational changes may be needed at certain ports
CONFIDENCE AT THE MOMENT OF PSC

- The ability to collect indirect or indicative water quality measures demonstrates to PSC that appropriate treatment conditions have been achieved.
- Drive water for an eductor coming from outside the ship would ruin a good sample!
- Fit an appropriate sample point if you don’t want delays.
CONCLUSION

- Work with the application and exemptions of the Convention
- Systems versus System comparison
- Take advice from experts
- Consider operational changes

“Fail to plan and you plan to fail”
THANK YOU

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