



BALLAST WATER MANAGEMENT INSIGHTS

AUGUST 2020

INDUSTRY'S MOST FREQUENTLY ASKED QUESTIONS

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INTRODUCTION

As the maritime industry continues to navigate current and upcoming environmental and regulatory changes, stakeholders across the industry must adapt and respond to the latest compliance challenges. Understanding and complying with ballast water management (BWM) requirements remain a major hurdle for many shipowners and operators. As stakeholders in the maritime industry, we know firsthand the challenges that the industry faces. Through various engagement activities we have recently led, we have received a number of questions regarding ballast water management that are critical to owners and operators. This document outlines those questions and provides insights on key lessons learned and practical applications that can help owners and operators better navigate national and international ballast water regulations.



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BALLAST WATER MANAGEMENT SYSTEMS (BWMS) CODE

1. Please explain the meaning of “installed” for the International Ballast Water Management Certificate (IBWMC) and BWMS Code.

Resolution MEPC.279(70), the 2016 *Guidelines for Approval of Ballast Water Management Systems (G8) (2016 G8)*, and its superseding resolution MEPC.300(72), the *Code for Approval of Ballast Water Management Systems (BWMS Code)*, allowed BWMS approved in accordance with the superseded 2008 G8 no later than October 28, 2018 to be installed on ships until October 28, 2020. On or after October 28, 2020, BWMS are to be approved in accordance with the 2016 G8, and after October 13, 2019, to be approved in accordance with the BWMS Code.

These resolutions introduced a second use for the term “installed” for the BWM Convention. The word “installed,” for the 2016 G8 and BWMS Code, means the contractual date of delivery of the ballast water management system to the ship and in the absence of such a date, the word “installed” means the actual date of delivery of the ballast water management system to the ship.

The word installed, when used for the IBWMC, refers to the date the BWMS was commissioned (refer to BWM.2/Circ.66/Rev.1).

2. Compliance with the BWMS Code (or 2016 G8 before October 13, 2019) is required for new installations after October 28, 2020. Is there any impact on BWMS previously installed?

Refer to MSC.1/Circ.1221, *Validity of Type Approval Certification for Marine Products*. With that resolution, the Committee agreed that the validity of the type approval certificate itself has no influence on the operational validity of a product accepted and installed onboard a ship and that a product manufactured during the period of validity of the relevant type approval certificate need not be renewed or replaced due to expiration of such type approval certificate.

BWMS type approved before October 28, 2018, in accordance with resolution MEPC.147(58) and resolution MEPC.125(53), *Guidelines for Approval of Ballast Water Management Systems (G8)* installed on vessels before October 28, 2020, remain valid if installed and maintained in accordance with the applicable type approval certificate requirements.

Caution is advised when updating an Alternate Management System (AMS) accepted BWMS installed on mid-life vessels. When a system certified to a type approval issued by an IMO administration and accepted by the United States Coast Guard (USCG) in accordance with 33 CFR 151.2026 is upgraded to the applicable USCG approved configuration, modifications to the original IMO type approved configuration may require recertification. When modifications based on an updated type approval issued by an IMO administration matching the USCG approved are implemented, additional surveys may be required to recertify the revised configuration for IMO compliance.

3. If a BWMS is “installed” but not commissioned before October 28, 2020, can the owner get class approval? If so, what is the approval for?

Class may, on behalf of the vessel's flag, approve the installation of a BWMS (including ancillary components not explicitly specified in the type approval certificate). Following installation, the BWMS Code (and where applicable the 2008 G8 or 2016 G8) requires specific surveys and commissioning procedures following installation before issuance of the IBWMC. Class, acting as a recognized organization (RO), will conduct these verifications. During the class (acting as RO) review of the BWMS documentation, the type approval certificate validity will be checked and based on the October 28, 2020 deadline the BWMS should be allowed to be installed. If the contract for the acquisition of the BWMS includes the delivery to the vessel before the deadline, the type approval certificate would be considered valid. If the contract does not cite the delivery to the vessel before the deadline, then the actual delivery date should be reviewed by the RO for compliance with the 2016 G8/ BWMS Code deadlines.

If the contract does not require delivery of the BWMS to the vessel, a problem could be encountered for the BWMS retrofit if the actual delivery date is on or after the deadline. The RO will seek guidance from the administration issuing the type approval certificate and could provide suitable documentation confirming the actual date of delivery to the vessel if before the October 28, 2020 deadline.

The definition of “delivered to the vessel” is provided in the BWMS Code, and any considerations would need to be approved by the vessel’s flag administration. The BWMS may not be required to be physically installed on the ship by the deadline, and installation, if delayed, can be accounted for by documentation issued by the class (as RO), for example, with a statement of fact, etc.

Recall that the definition of installed for the 2016 G8/BWMS Code differs from the unified interpretation of the date installed on the IBWMC (i.e., the date commissioning is completed).

4. How many makers are officially complying with the revised G8 standard? Where is this list available and how many will be there by October 2020?

The IMO publishes a list of BWMS approvals on its public access website. The list includes:

- a. Table 1: BWMS having received Basic Approval from IMO (also listed in BWM.2/Circ.34/Rev.8)
- b. Table 2: BWMS having received Final Approval from IMO (also listed in BWM.2/Circ.34/Rev.8)
- c. Table 3: BWMS that have received type approvals in accordance with either the 2016 G8 or BWMS Code
- d. Table 4: BWMS that have received type approvals in accordance with either the 2005 G8 or 2008 G8

The IMO’s current 2016 G8/BWMS Code type approvals list (Table 3) has six (6) entries.

[The list can be found at the IMO website](#) (clicking the link under the header “Approval of BWM systems”).

In addition to the IMO’s Table 3, there are other BWMS type approved to either the 2016 G8 or BWMS Code. These can be found by reviewing outputs of MEPC 72, MEPC 74 and the submittals to MEPC 75. (MEPC 75 was postponed and the MEPC 75 documents are not available on the IMO public access website until the completion of the meeting.) There are eight (8) additional type approval certificates reported to MEPC 75 to date.

By reviewing websites of RO’s issuing type approval certificates, at least 4 additional type approval certificates can be found – not having been reported to the MEPC Committee.

At the time of this publication, the following list provides, at minimum, the BWMS having been type approved in accordance with the 2016 G8 or BWMS Code. (Alphabetic order by model name. There may be others for which copies were not found.) Please refer to the website listed above for the latest list.

- Aquarius EC by Wärtsilä UK Limited (Norwegian Maritime Authority)
- Aquarius UV by Wärtsilä UK Limited (Norwegian Maritime Authority and the Hellenic Republic)
- BalClor® by SunRui Marine Environment Engineering Co., Ltd. (Norwegian Maritime Authority)
- BAWAT MK 2 by BAWAT A/S (Danish Environmental Protection Agency/Danish Maritime Authority)
- Blue Ocean Shield by COSCO (Weihai) Shipbuilding Marine Technology Co., Ltd. (Norwegian Maritime Authority)
- CompactClean by DESMI Ocean Guard A/S (Danish Environmental Protection Agency and Danish Maritime Authority)
- ECS HYCHLOR™ by Techcross Inc. (Norwegian Maritime Authority)
- ERMA FIRST (FIT) by ERMA First ESK Engineering Solutions S.A. (Hellenic Republic Ministry of Maritime Affairs and Insular Policy)
- Evolution by Caltheco Ltd. (Maritime & Coastguard Agency, UK)
- GloEn-Patrol 2.0 by Pania Co., Ltd. (Norwegian Maritime Authority)
- HiBallast™ by Hyundai Heavy Industries Co., Ltd. (Norwegian Maritime Authority)
- Hyde GUARDIAN-US by Calgon Carbon UV Technologies LLC dba Hyde Marine (Norwegian Maritime Authority)
- inTank™ by EnviroCleanse LLC (Norwegian Maritime Authority)
- Microfade II by Kuraray Co., Ltd. (Minister of Infrastructure and Water Management, The Netherlands)
- OceanGuard® by Qingdao Headway Technology Co., Ltd. (Norwegian Maritime Authority)
- Oceansaver MK IIB by TeamTec Oceansaver AS (Norwegian Maritime Authority)
- PureBallast 3.2 by Alfa Laval Tumba AB (Norwegian Maritime Authority)
- Seascape by Elite Marine Corp. (Norwegian Maritime Authority)
- oneTank by oneTank, LLC (Norwegian Maritime Authority)
- Ecochlor by Ecochlor Inc. (Norwegian Maritime Authority)

5. Regarding final approvals for freshwater and BWMS using active substances approved for use in freshwater – please elaborate. Could ABS provide more on freshwater final approvals?

At the time of this publication, Four (4) BWMS are close to being awarded the BWMS Code type approval certificates. These systems must be granted extensions of final approval for freshwater before type approvals can be awarded (refer to BWM.2/Circ.13/Rev.4 section 11 - Procedure for the Submission of New Data on Fresh Water Testing of Ballast Water Management Systems with Final Approval). One (1) other system has applied for final approval at MEPC 75. All five of these applications have been reviewed by GESAMP and recommended for approval but will need to wait for MEPC 75 (postponed) before being granted approvals. These systems are:

- EcoGuardian™ - submitted by Republic of Korea (MEPC 75/4)
- HiBallast™ - submitted by Republic of Korea (MEPC 75/4/1)
- Electro-Cleen™ - submitted by Republic of Korea (MEPC 75/4/2)
- CleanBallast® - submitted by Norway (MEPC 75/4/3)
- BALPURE® - submitted by the United Kingdom (MEPC 75/5/4)

COMMISSIONING TESTING

6. Regarding indicative test instruments, are there any IMO approved instruments? If not, who can approve their use for commissioning test requirements?

The IMO has provided guidance for the trial use of indicative analysis technologies for PSC use (refer to BWM.2/ Circ.42/Rev.1 – May 2015). These instruments could be used by PSC during inspections of vessels if the PSC “initial inspection” and “more detailed inspection” reveals the vessel may not be meeting the regulation D-2 discharge standard (these inspections are described in resolution MEPC.252(67) - *Guidelines for Port State Control under the BWM Convention* – October 2014). PSC, moving forward with the third stage inspection (indicative analysis testing), would not be considered undue delay of the vessel. Based on the indicative testing, PSC should be able to decide to release the vessel (if results indicate likely compliance) or delay the vessel to conduct detailed analysis. If PSC moves to detailed analysis, besides being delayed, the vessel could be exposed to sanctions, warnings, or exclusions.

The published guidance for conducting biological testing during BWMS commissioning in BWM.2/ Circ.70 – November 2018. Since the initial introduction of BWM.2/Circ.70, substantial work has been undertaken to better understand the suitability of commercially available instruments using different technologies for commissioning testing. During the IMO sub-committee on Pollution Prevention and Response (PPR) session 7 (February 2020), the Technical Group provided draft revisions to BWM.2/ Circ.42/Rev.1 and BWM.2/Circ.70. In the coming months, the IMO should be providing revised guidance to substantially improve methodologies for conducting biological commissioning testing for BWMS (and to improve PSC guidance).

It is important to note that, from the vessel owner’s perspective, after completing a BWMS retrofit, the vessel’s entire ballast water system with the integrated BWMS should be tested as an entire “system” to validate that the vessel can pass the third stage of the PSC inspection. This is particularly important during the Experience Building Phase (EBP), referring to resolution MEPC.290(71). (The EBP is likely to conclude in mid-2022.) During the EBP, there should be some flexibility for vessels due to the non-penalization provisions implemented for the EBP. However, after the EBP ends, those non-penalization provisions will no longer be available. It is imperative that the entire industry learn how to use BWMS properly to pass PSC inspections (i.e., third stage - indicative analysis challenges showing compliance with the discharge standard).

With MEPC 75 being postponed, we anticipate that the amendments to BWM Convention regulation E-1 will not be adopted until later this year (at best). This results in additional delays to the amendments entering into force. If delayed, the amendments will not take effect until the EBP is completed. This could expose many vessels to PSC without the flexibility provided with the non-penalization provisions of the EBP.

There are several indicative analysis test kits available. ABS has started detailed reviews of these and has started issuing Product Design Assessments (PDA) for some of them. In the coming months, we anticipate improved guidance from the Committee that will allow us to improve our reviews and assessments for these instruments. The ABS PDAs for these test kits are available on our website at www.eagle.org by entering the search term “Ballast Water Analyzer” in the keyword field.

7. What flag states already have guidelines for biological testing?

At the time of this publication, several administrations have provided guidance for conducting biological testing during BWMS commissioning. To date, Australia, Bahamas, Cyprus, France, Hellenic Republic, Malta and Singapore made biological testing mandatory. Panama and Liberia have recently reverted to optional testing.

With the adoption of the Survey Guidelines under the Harmonized System of Survey and Certification (HSSC) 2019 (January 2020) – referring to resolution A.1140(31), biological testing during BWMS commissioning may be required. Please refer to Regulation (EC) No 391/2009.

8. Who will be authorized to test the BWMS during commissioning?

ABS has published a revision to the *Guide for Ballast Water Treatment* (June 2020). ABS requires biological testing to be conducted by an approved service provider. (This is in line with developing discussions within IACS.)

ABS has started surveys and approvals for service providers. These organizations are [listed on www.eagle.org](http://www.eagle.org).

9. Another concern is compliance testing of newly installed BWMS before acceptance. There are a number of challenges (i.e., shipyards located in rivers or water not suitable for testing, etc.). What practical guidelines, taking into account specific problems with particular shipyards, are provided?

To date, there are at least seven (7) administrations making biological testing of BWMS during commissioning mandatory (i.e., Australia, Bahamas, Cyprus, France, Hellenic Republic, Malta and Singapore). The guidance provided to ROs from these administrations provides suitable instructions if the testing cannot be conducted due to equipment or vessel conditions, and the guidance can be extended to water quality challenges during the vessel's delivery.

It is anticipated that the RO will discuss the problems with the administration and either issue (or request where applicable) a short-term IBWMC to provide enough time for the owner/operators to complete repairs or additional testing, etc. and get the ship/system ready for the testing in suitable water conditions.

2013 VGP

10. Are there testing laboratories, by state, that are approved by ABS for evaluating treated test samples?

ABS does not approve testing laboratories for the 2013 Vessel General Permit (VGP) testing. (Note that the 2013 VGP has been administratively continued during the Vessel Incidental Discharge Act (VIDA) development.) The selection criteria for a laboratory for VGP testing is available at the U.S. Environmental Protection Agency's [EPA VGP website at www.epa.gov](http://www.epa.gov).

[Additional guidance from the US EPA is available here.](#)

EXPERIENCE BUILDING PHASE

11. When do you think the experience building phase will conclude?

The experience building phase (EBP) as described in resolution MEPC.290(71) is a three-stage program that began with entry into force of the Convention (i.e., September 8, 2017) and will end with the entry into force of the package of priority amendments. In the resolution, the figure illustrating the sequence of the EBP indicates some overlapping between phases and the non-penalization to all ships in certain circumstances is indicated to be provided throughout the entire EBP.

BWM.2/Circ.67/Rev.1 (May 2019) provides the latest version of the data gathering and analysis planning for the EBP associated with the BWM Convention. In this Circular, the EBP timeline is described as "...short enough to ensure that the outcomes of the EBP are relevant to the Convention review stage, but long enough to generate a reasonable picture of the implementation of the Convention."

The Circular explains the undertakings of the EBP and suggests the Convention, after being in force for five years (Autumn 2022), that the package of amendments should be submitted to the parties.

This suggests that the EBP could end as soon as Autumn 2022 or, based on the timing of adopting amendments, by the end of 2023. The following figure provides an illustration of the timeline for the EBP.

Table 1: Summary of the EBP Timeline

MEPC Session	Timing	Milestone	EBP/MEPC Action
73	Fall 2018	Convention has been in force one year	
74	Spring 2019		First year of data available
75	Spring 2020	Convention has been in force two years	Second year of data available. Stocktaking of EBP timeline.
76	Fall 2020	Convention has been in force three years	Partial third year of data available, enough to agree to data analysis report terms of reference.
77	Spring 2021		Full third year of data available. Draft analysis report received.
78	Spring 2022	Convention has been in force four years	Final analysis report received. Convention issues agreed.
79	Fall 2022	Convention has been in force five years	Package of amendments submitted to the Parties.

CONTINGENCY MEASURES

12. Can a vessel take ballast water without treatment in case of BWTS failure if the vessel is certified to only D-2 in the IBWMC?

Yes. Ballasting without the BWMS is allowed when the water quality falls outside of the system design limitations (SDL) of the BWMS. However, the vessel may not be authorized to de-ballast unmanaged water unless allowed by the destination.

The BWM Convention does not clearly provide a vessel to discharge noncompliant ballast water to open ocean after the vessel's regulation B-3 date (as amended). The vessel can still use ballast water reception facilities. However, many flag administrations are approving BWMPs with contingency measures allowing discharge of noncompliant (i.e., improperly treated) ballast water to the high seas (i.e., outside any administration's EEZ). We anticipate that the BWM Convention may be amended to include this operation when necessary for vessels to regain properly treated, compliant ballast water for discharges to coastal waters.

The vessel's BWMP should contain detailed contingency measures that indicate where and how improperly treated and/or noncompliant ballast water will be discharged. Additionally, the contingency measures should provide clear and realistic procedures for the vessel to use to regain ballast water compliance. When the vessel's BWMP is approved (by the RO on behalf of the flag or by the flag when applicable), the method of disposing noncompliant ballast water would be considered approved by the flag.

13. If the vessel is certified to both D-1 and D-2 in the IBWMC, and the BWTS stops functioning, is there a requirement to inform flag/class?

Yes (depending on the significance of the repairs to restore the BWMS to operating condition). This may be appropriate to maintain the validity of the IBWMC. The owner/operator must notify class and flag (when appropriate) about the out-of-service condition, all repairs to the BWMS, and the BWMS recertification status (Additional Survey per regulation E-1.1.5).

For vessels certified to D-1 and D-2, the decision to use D-1 in lieu of D-2 is at the discretion of the owner/operator unless the destination PSC requires D-2 before the vessel's regulation B-3 date.

14. Our proposed contingency measures are based on BWMS maker's suggestions. If the contingency measures are approved by class, can that be utilized for PSC and USCG inspections?

USCG does not require class to approve the BWMP. For discharges to U.S. waters, the contingency measures should be compliant with the guidance provided by the USCG. Guidance for contingency measures, including communication with PSC, are available in NVIC 01-18 and CVC Policy Letter 18 02.

15. What operational techniques have been found adequate in high turbidity waters (e.g. Mississippi River)?

When the BWMS uses primary filtration as a BWM technology and the water quality prevents the BWMS from operating at or near the treatment rated capacity (TRC), the owner/operator has limited flexibility to continue treating ballast water. When the filter clogging is beyond the BWMS capability to continue self-cleaning and/or is reduced below the BWMS minimum TRC, the system may automatically shut down or alarm/log improperly treated ballast water. To discharge ballast water at the destination port, the improperly treated ballast water may need to be re-treated or exchanged and properly treated during re-ballasting.

The BWMP should have contingency measures to provide operators guidance on how to proceed and could include:

- Communicate with destination PSC to get authorization to bypass the filter and use the balance of the BWMS for partial treatment. The destination PSC can authorize the vessel to use this method if it is acceptable.
- Bypass the entire BWMS and conduct sequential BWE (at sea) and use the BWMS during re-ballasting (i.e., BWE + BWT). The receiving PSC may be more likely to approve this corrective measure than bypassing the filter and using the BWMS for partial BWT. However, the operator and PSC should be aware that this method has limited efficacy because, with the vessel at sea, the use of eductors/stripping is not feasible leading to some unmanaged unpumpable water remaining in the tanks following sequential BWE. (Note that BWE in accordance with regulation D-1 has an efficiency of at least 95% volumetric exchange of ballast water.) PSC may require additional volumetric exchange and/or treatment/discharge and re-ballasting to increase the efficacy of this contingency measure.
- The availability of ballast water reception facilities may become more prevalent soon. PSC may be aware of these facilities and request the vessel to utilize them when available and feasible.

16. Will the BWMS have turbidity limitations declared in the type approval certificate (e.g., in many China rivers, etc., most BWT systems using filters are failing because of clogging.)? How does class plan to help?

Vessels with 2008 G8 compliant Type Approval Certificates (TAC) are not required to have fully developed SDLs. Vessels with 2016 G8/BWMS Code TACs are expected to have substantially developed SDLs, and the BWMP for these vessels should be developed based on the BWMS SDLs compared to anticipated water quality for the vessel's typical/anticipated voyages.

It is anticipated that many BWMS approved in accordance with the 2008 G8 will use similar BWM technologies for the newer 2016 G8/BWMS Code TACs including the SDLs. Owners of 2008 G8 BWMS should consider efforts to work with the BWMS vendors newer model SDLs and estimate/create limits for their older BWMS based on anticipated performance in different water qualities.

When water quality is encountered outside the SDLs, the BWMP should have clear instructions for the owner/operators to determine the most appropriate contingency measure and how to communicate that to the destination PSC to get approval to discharge.

17. Some type approval certificates (TAC) may have restrictions such as seawater salinity or seawater temperature. Should these restrictions be posted in the IBWMC?

No. The form of the IBWMC (BMW Convention Appendix I) does not provide data entry to include SDLs of the BWMS and/or BWM technologies used with the BWMS other than the name of the manufacturer and a brief description of how D-2 compliance is achieved.

The most appropriate place to include the SDLs is in the BWMP. When the TAC cites limiting water quality, these should match the BWMS SDLs. When water quality being ballasted is outside the limits of the TAC, that water would be considered noncompliant for discharge to the destination port. The BWMS self-monitoring (i.e., part of the computer-based controls) should record the influent water quality and where the system does not automatically record those conditions, the operators would need to monitor water quality and make appropriate entries in the ballast water record book (BWRB).

Guidelines for the format and content of the BWMP have been revised to include optional (and where mandatory by the vessel's flag administration) contingency measures. Refer to resolution MEPC.306(73). The details for contingency measures are not mandatory for all flag administrations but should be sufficiently developed in the vessel-specific BWMP to provide the operators clear instructions how to respond to water quality outside of the SDLs.

18. Should the vessel continue treating ballast water despite alarm conditions? BWE could be allowed by first informing PSC prior to discharge of ballast water. Would this be the correct measure to take?

Based on the vessel-specific BWMP with contingency measures, the operators should stop ballasting long enough to determine the cause of the BWMS outage and seek guidance and/or approval from PSC before determining the applicable contingency measures.

Some PSCs may allow simpler open-ocean BWE to give the vessel additional time to get the BWMS vendor to provide technical assistance (during the port call), particularly during the EBP. However, to avoid being rejected by the next port where the use of just BWE may not be approved, the BWMP should have prepared contingency measures to provide increased biological efficacy if the destination port requires something better than just BWE.

Some BWMS use technologies that may provide improvements for partially conducted BWE followed by treatment after exchange during re-ballasting. For example, when bypassing the entire BWMS with unmanaged ballast water and conducting BWE, there could be unmanaged, unpumpable water after sequential BWE. Partially treating the water during ballasting (i.e., bypassed filter, all but a few UV bulbs, alarm conditions for low salinity or temperature, or insufficient UVI, etc.) may be more desirable to the destination PSC. The operators should have enough detailed guidance in the BWMP to properly communicate this information to the PSC when seeking approval.

Each contingency measure, when developed, has an increase of time (delayed voyage, etc.) and operating costs. (retreating, conducting exchange and treatment, etc.). The exact cause of the inability to properly treat the ballast water during the normal sequence (i.e., most often during ballasting but sometimes in-tank/during the voyage, etc.), would need to be assessed by the operators. Enough detailed guidance should be included in the BWMP contingency measures to allow the operators to offer the destination PSC.

19. Is it compulsory to add contingency measures in BWMPs and get it approved by class, or can we add them into our ISM procedures without class approvals?

The IMO provided guidance for including contingency measures in the vessel's BWMP. The BWMP needs to be reviewed including the contingency measures because many times, the baseline operation for contingency measures will likely include BWE. If the vessel's BWE for D-1 compliance was flow-through but the vessel adopts an active substance based BWMS, then flow-through exchange during treatment may cause more harm than benefit (i.e., overflowing ballast tanks with active-substance BWMS should be avoided since it discharges excess disinfectant, etc.). The entire set of actions to be taken should be approved by the RO on behalf of flag (and where applicable directly by flag) to prevent unforeseen operational conditions from causing unintended consequences.

COVID-19

20. What is the process for extending SOVCs for D-1 to match USCG extensions?

The BWM Convention does not allow a vessel to be certified to regulation D-1 beyond the vessel's regulation B-3 date (as amended). However, during the COVID-19 pandemic, in response to Circular Letter CL.4204/Add.1, CL.4204/Add.6 and CL.4204/Add.19, some flag administrations are working towards authorizing extended periods for vessels certified to regulation D-1. To create these periods of authorized operations, the IOPP certificate may need to be extended because regulation D-2 compliance is based on the completion of the IOPP Renewal Survey. The duration of such authorization should be long enough to complete the BWMS retrofits and be certified to regulation D-2.

In accordance with MSIB14-20, the USCG is willing to review and grant short term (i.e., 12-month) extensions for vessels affected by COVID-19. However, there is no USCG or IMO cooperation guaranteed to allow vessels to match their IMO regulation B-3 dates (as amended) to the USCG compliance dates (original or extended).

21. Can an extension on IMO requirements be granted for a BWTS to be installed onboard by IOPP renewal?

In response to the COVID-19 pandemic, the IMO has issued a set of Circular Letters, CL.4204. In CL.4204/Add.1, CL.4204/Add.6 and CL.4204/Add.19. The IMO recognized that during the pandemic, completion of BWMS installations including commissioning and issuance of the IBWMC for D-2 may not be possible (i.e., limited travel capability by BWMS vendor technicians, delays of spare parts, etc.). The IMO is working to provide

guidance on how to allow vessels to continue operating in compliance with regulation D-1. This may include substantial extension of the vessel's IOPP certificate (since the BWM Convention regulation B-3 compliance is tied to the completion of the IOPP Renewal Survey). Vessels affected by the COVID-19 pandemic may have to have another out-of-service period to finish the BWMS installation and commissioning. Another likely problem is the rest of the world's fleet will need to get their BWMS retrofits completed resulting in a shortage of docking space that could create a backlog, and the availability for vendor's technical service may not be sufficient to complete all work simultaneously.

The owner should consult class to help convey to the flag administration the urgencies that may require extended certificates to allow continued operations certified under regulation D-1.

22. If our USCG extension letter recently expired, can we apply for the extension for 1 year per the latest MSIB from USCG?

In general, yes - if the vessel's extended compliance date ended after April 1, 2020. MSIB 14-20 indicates the USCG will consider granting short term (i.e., 12-month) extensions for vessels with compliance dates (original or extended) between April 1, 2020 and April 1, 2021. However, for vessels that were affected by COVID-19 but had compliance dates before April 1, 2021, the USCG will review an extension request. In those requests, the owner should provide proof of acquisition of a BWMS and documentation of a specific date of installation of a BWMS with a USCG type approval (or expected to receive type approval). Please contact the USCG for further clarification.

23. Is the USCG 12-month extension only for vessels whose docking is scheduled during the COVID-19 period, or is the 12-month extension applicable to all the vessels which do not have BWTS?

MSIB 14-20 provides vessels affected by the COVID-19 pandemic an opportunity to request short-term (i.e., 12-month) extensions. These extensions are available for vessels with compliance dates (original or extended) between April 1, 2020 and April 1, 2021.

Other vessels can continue extension requests per the current extension policy letter and NVIC 01 18.

24. Are there any changes in USCG enforcement schedule due to COVID-19 for all vessels with installed BWTS?

At the time of this publication and to the best of our knowledge, no. The USCG's BWM regulations (33 CFR 151 Subparts C and D) and U.S. EPA's 2013 VGP have not been revised. For vessels with installed BWMS beyond the USCG compliance date (original or extended), the nearest COTP or District Commander should be notified if the vessel cannot conduct BWT. (As recommended in CVC Policy Letter 18-02, the destination port COTP should also be notified.) The COTP or District Commander should be advised of the vessel's contingency measures available (in accordance with the BWMP). The COTP or District Commander may request additional measures, grant permission to conduct the recommended contingency measures, or deny the vessel authorization to discharge unmanaged ballast water at the destination port.

The COTP or District Commander should be advised of any COVID-19 related service interruptions, and the Master should have prepared information related to how and when the BWMS will be returned to service. In order to remain aware of the latest updates to these regulations, visit www.ECFR.gov.

25. The USCG 12-month extension (MSIB 14-20) is applicable for ships trading to the U.S. What percentage of the ABS fleet do you believe will take advantage of this assuming it can only be relevant for ships that decoupled the IOPP certificate?

Extensions for vessels with compliance dates between April 1, 2020 and April 1, 2021 is not only for vessels with de-harmonized IOPP certificates. This short-term modification to the USCG extension program provides a way for vessels having completed all necessary preparations to conduct their BWMS retrofits during the one-year period but have been (or will likely be) affected by the COVID-19 pandemic to continue operating in U.S. waters including discharging exchanged ballast water until the vessel can complete the retrofit. The program can also be used for vessels that could not complete their retrofits (i.e., left the shipyard but could not get vendor technical assistance to commission the BWMS due to travel restrictions, etc.).

For vessels that have been granted 90-day extensions for their dockings including the duration of certificates but cannot complete the BWMS retrofit to be certified for D-2 at the completion of the IOPP Renewal Survey will need to work with class and flag to allow the vessel to operate with D-1 for enough time to finish the BWMS retrofit. The IMO has requested cooperation between administrations in Circular Letter CL.4204 (emphasized in CL.4204/Add.1, CL.4204/Add.6, and CL.4204/Add.19). The guidance from IMO includes the BWM Convention.

Every vessel unable to retrofit (or complete a retrofit) by the completion of the IOPP Renewal Survey should request guidance from class and the flag related to extending the vessel's IOPP certificate to allow continued operations in accordance with regulation D-1. (Refer to CL.4204/Add.19 – the BWM Convention does not allow extensions of an IBWMC for D-1 beyond the completion of the IOPP Renewal Survey. The IMO will continue to develop guidance for the problem.)

26. What is the length of extension (time) that flags are allowing, due to the COVID-19 outbreak?

The IMO continues to develop guidance for COVID-19 affected vessels. The BWM Convention does not allow an extension of an IBWMC for regulation D-1 beyond the completion of the IOPP Renewal Survey. However, if the IMO provides guidance for longer term extension of the vessel's IOPP certificate, continued operations in accordance with regulation D-1 could be allowed for the vessel.

As of publication of this document, The IMO is continuing to work on guidance.

27. For retrofits, industry's immediate main concern is about systems approved to the 2016 G8 or BWMS Code and applicable October 28, 2020 deadline and complications resulting from COVID-19 including postponement of MEPC 75. Where does that leave the implementation of this regulation? Are there any waivers from IMO like AMS and other extensions in the case of USCG?

The implementation schedule for the BWM Convention includes BWMS approved in accordance with the 2016 G8 (and after October 13, 2019 in accordance with the BWMS Code). The COVID-19 pandemic has created additional problems because vessels ready to complete BWMS retrofits were turned away from shipyards and many have continued missing opportunities to complete their BWMS retrofits.

For BWMS that have been granted type approvals in accordance with 2016 G8 or the BWMS Code, some BWMS Code type approvals are being delayed because of COVID-19 (i.e., MEPC 75 has been postponed delaying the extension of Final Approval for some BWMS for freshwater, etc.). Additionally, a chain of events started in early 2020 when shipyards were forced to reject vessels. These dockings for renewal will eventually be completed, and if the BWMS cannot be moved from the original yard to the shipyard where the dockings happen, additional docking might be necessary before the vessel's next scheduled out of service period. There may be a secondary effect – a backlog of vessels with delayed dockings due to limited shipyard capacity, if these delays extend beyond October 2020.

For all vessels where BWMS type approval in accordance with the 2008 G8 is planned, each owner and management team should review the BWMS acquisition contract and make sure the delivery date before October 28, 2020 is specified. If the contract has this requirement and the system installation is delayed, it could still be installed after October 28, 2020. However, if the contract does not cite a delivery date before October 28, 2020 and the system installation is delayed beyond that date, then the flag administration might not allow that BWMS to be installed.

COMPLIANCE

28. Will Ballast Water Management - not treatment - Systems utilizing only fresh municipal sources as ballast continue to be accepted?

The MEPC committee has determined potable water is not authorized for ballast water compliance for the BWM Convention.

The use of U.S. Public Water System (PWS) is approved for discharges to U.S. waters after cleaning the tanks in accordance with 33 CFR 151.2025(a)(2). (The U.S. EPA 2013 VGP allows U.S. PWS or Canadian drinking water systems – but since that conflicts with 33 CFR Subpart D, it remains impractical.)

29. Is it possible that a vessel has two IBWM certificates and/or plans – one for compliance with D-1 and one for compliance with D-2?

When retrofitting a BWMS, the owner is advised to keep the BWE (D-1) BWMP or, when taking delivery of a newbuild vessel with a BWMS, to get the shipyard (or a third-party engineering firm) to provide a BWE BWMP. These will be invaluable when the vessel needs to use a contingency measure that includes BWE (i.e., to dispose of unsuitable ballast water, etc.). PSC may accept BWE for compliance during the experience building phase.

30. What are you doing about the application of BWM Convention on ships below 400 GT (in addition to contacting the Maritime Administration)? What are your recommendations for this ship size?

Vessels less than 400 GT are not exempt from the BWM Convention but may not require regulation E-1 surveys. For these smaller vessels, in lieu of installing permanent BWMS, it may be more economical to use temporary (i.e., portable) BWMS, use shore-based reception facilities, or comply by use of permanently sealed tanks (i.e., no discharge). Refer to the question related to offshore vessels for additional information.

ABS has reviewed and issued an Approval in Principal (AIP) for an innovative ballast water management procedure referred to as “clean-to-clean.” The method was developed by an ATB/barge owner and is fully compliant with the IMO BWM Convention. The owner, with support by ABS, is presenting this method to the USCG and we hope to get an acknowledgement that it is considered compliant with 33 CFR 151 Subpart D. The method will be made available to the industry likely as a new appendix to the *Guide for Ballast Water Treatment* (BWT Guide) as soon as feasible.

31. Are there any exemptions for an OSV without space to install a BWMS?

No. However, OSVs and other offshore vessels can take advantage of the guidance provided in BWM.2/Circ.44 and/or BWM.2/Circ.46.

Specifically, for OSVs, while working in one administration waters for extended durations, the BWM Convention would no longer apply to that vessel. When moving the OSV from one administration waters to another, the guidance provided in BWM.2/Circ.52/Rev.1 would be useful.

Note that for USCG compliance, the guidance provided in the MEPC circulars would not be sufficient since the OSVs may likely operate between different COTP zones when servicing vessels outside 12 NM. Initially, extensions of compliance may be requested but vessel owner/operators will need to create other mechanisms for compliance.

32. What type of compliance checks will Port State inspectors carry out on existing interim BWTS that are not type approved?

When a BWMS is used as a prototype (i.e., in accordance with regulation D-4), regulation D-2 would not apply for that vessel during the five-year prototype period. Note that during the prototype period, the BWMS must be operated consistently and as designed.

We recommend contacting your specific port state for further information.

33. What if I need an ABS BWMP?

The ABS BWMP template is available for free [download at www.eagle.org](http://www.eagle.org).

BIOFOULING

34. Are we going to see more restrictions and legislation for biofouling rules and regulations?

Biofouling is another major aquatic invasive species (AIS) transfer vector. (Ballast water and biofouling have different propagule pressures, but both contribute to the spread of AIS.) As BWM becomes more effective, biofouling will become the predominant problem if nothing substantial is done to reduce the root causes.

The MEPC launched GloFouling Partnerships (like the GloBallast program). Additionally, many marine-centric organizations have created correspondence and working groups to address biofouling control technologies and advise the MEPC on this important AIS problem.

The MEPC will continue working to improve the effectiveness of biofouling control measures and the marine industry should anticipate more regulations and practices to reduce the impact of biofouling on AIS transfer.



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