

MEPC 74 BRIEF

The IMO Marine Environment Protection Committee (MEPC) held its 74th session from May 13 to 17, 2019. This Brief provides an overview of the more significant issues progressed at this session. A full report of the meeting will be included in the next ABS International Regulatory News Update.

KEY DEVELOPMENTS

- Numerous guidelines for implementing the 2020 Global Sulphur Cap
- Updated Guidelines for EEDI Calculation
- Amendments to MARPOL permitting Electronic Record Books
- Amendments to BWM Convention related to BWMS Commissioning Testing
- Progress on IMO Strategy on GHG Emissions

ABS RESOURCES

- ABS Global Sustainability Center ([link](#))
- IMO DCS Services ([link](#))
- 2019 BWM Advisory ([link](#))
- ABS Regulatory News ([link](#))
- ABS Rules and Guides ([link](#))

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AIR POLLUTION AND ENERGY EFFICIENCY

Draft amendments to MARPOL Annex VI

The Committee approved amendments to regulations 1, 2, 14, 18, 20 21 and appendices I and VI of MARPOL Annex VI, with a view to adoption at MEPC 75, which:

- Provide definitions of sulphur content, low flashpoint fuel, MARPOL delivered sample, in-use sample and on board sample.
- Require mandatory reporting of required and attained EEDI and other relevant information for ships subject to Regulation 21 (required EEDI).
- Accelerate EEDI Phase 3 in 2022 (from 2025) and increase the reduction factors for specific ship types/sizes as follows (**bold text** indicates amendment to table 1 or table 2 of Regulation 21):

Ship type	Starting year	Reduction rate
Gas carriers	2022 (≥15,000 DWT)	30% (retain)
	2025 (10,000 – 15,000 DWT)	30% (retain)
	2025 (2,000 – 10,000 DWT)	0 – 30% (retain)
Containerships	2022 (200,000 DWT and above)	50%
	2022 (120,000 – 200,000 DWT)	45%
	2022 (80,000 – 120,000 DWT)	40%
	2022 (40,000 – 80,000 DWT)	35%
	2022 (15,000 – 40,000 DWT)	30% (retain)
	2022 (10,000 – 15,000 DWT)	15% - 30%
General cargo ships	2022 (15,000 DWT and above)	30% (retain)
	2022 (3,000 – 15,000 DWT)	0% - 30% (retain)
Refrigerated cargo ships	2025 (5,000 DWT and above)	30% (retain)
	2025 (3,000 – 5,000 DWT)	0% - 30% (retain)
Combination carriers	2025 (20,000 DWT and above)	30% (retain)
	2025 (4,000 – 20,000 DWT)	0 – 30% (retain)
LNG carriers	2022 (10,000 DWT and above)	30% (retain)
Cruise passenger ships having non-conventional propulsion	2022 (85,000 GT and above)	30% (retain)
	2022 (25,000 – 85,000 GT)	0% - 30% (retain)

- d) Amend the EEDI reference line parameters for bulk carriers. (Increase the required EEDI for large bulkers above 279,000dwt). In table 2 of Regulation 21 (Parameters for determination of reference values for the different ship types), row 2.25 for bulk carriers is replaced by the following:

Ship type defined in regulation 2	a	b	c
2.25 Bulk carrier	961.79	DWT of the ship where $DWT \leq 279,000$ 279,000 where $DWT > 279,000$	0.477

- e) Amend the Supplement of the IAPP Certificate for confirmation of the designated sampling point.
- f) Simplify the verification procedure in appendix VI of MARPOL annex VI for the “MARPOL delivered fuel oil sample” and to add verification procedure for the “in-use sample” and the “on board sample”. To ensure a consistent approach to verifying the sulphur limit of the fuel oil delivered to, in-use or carried for use on board a ship until the entry into force of the approved amendments, the Committee approved MEPC.1/Circ.881 inviting Member Governments to apply the approved amendments related to the verification procedure, in advance of their entry into force.

Draft 2019 guidelines for consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI

Taking into account the 1 January 2020 global implementation of 0.50% sulphur limit for the fuel oil used on board and the 1 March 2020 carriage ban of non-compliant fuel, the Committee adopted the subject Guidelines which will be published as a Resolution shortly. The draft final fuel oil non-availability report (FONAR) is included in the Guideline. The FONAR is to include a description of the voyage plan, evidence of past attempts, and future plans, to obtain compliant fuel, operational constraints that prevented the use of compliant fuel and records of previously filed FONARs.

Draft 2019 guidelines for port State control under MARPOL Annex VI

The Committee adopted amendments to the 2009 PSC Guidelines intended to provide basic guidance on the conduct of port State control inspections for compliance with MARPOL Annex VI and afford consistency in the conduct of these inspections, the recognition of deficiencies and the application of control procedures. The 2019 PSC Guidelines would be issued as an MEPC resolution to support the consistent and effective implementation of the global 0.50% sulphur limit. A new appendix included in the revised Guidelines, providing guidance to port State control officers in the case that non-availability of compliant fuel is claimed by a ship used the Fuel Oil Non-Availability Report (FONAR).

Draft Guidance for port State control on contingency measures for addressing non-compliant fuel oil

The Committee approved the subject Guidance which will be published as MEPC.1/Circ.881. This new Circular provides guidance to the port State, flag State, ship-operators and other stakeholders concerned on how the ship should handle the remaining non-complaint fuel on board after a FONAR. In the case of non-compliant fuel oil, communication between the ship and the port State should occur. The ship and the port State should consider possible contingency measures like actions predetermined in the Ship implementation plan, discharging non-compliant fuel oil to another ship to be carried as cargo or to an appropriate shipboard or land-based facility, managing the non-compliant fuel oil, modifying sailing or bunkering schedules and/or retention of non-compliant fuel oil on board the ship. After the non-compliant fuel oil is completely used or discharged, further actions should include the possibility of cleaning and/or flushing through or dilution of remaining residues by using compliant fuel oil with the lowest sulphur content available.

Draft MEPC circular on Guidance on temporary indication of ongoing compliance in the case of the failure of a single monitoring instrument, and recommended actions to take if the EGCS fails to meet the provisions of the guidelines

The Committee approved the subject Guidance as MEPC.1/Circ.883, applicable for those ships that will operate an exhaust gas cleaning system (EGCS) which will provide guidance to the attention of Administrations, port State control authorities, industry, relevant shipping organizations, shipping companies and other stakeholders concerned on how they should handle unexpected issues during the operation of an EGCS such as:

- System malfunction that leads to emission exceedance
- Short-term exceedances of the applicable Emissions Ratio
- Interim indication of on-going compliance in the case of sensor failure,

Any EGCS malfunction that lasts more than one hour or repetitive malfunctions should be reported to the flag and port State's Administration along with an explanation of the steps the ship operator is taking to address the failure. At their discretion, the flag and port State's Administration could take such information and other relevant circumstances into account to determine the appropriate action to take in the case of an EGCS malfunction, including not taking action.

Draft amendments to the 2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships (resolution MEPC.308(73))

The Committee adopted amendments to the current 2018 EEDI Calculation Guidelines introducing a new factor (f_m) for ice-classed ships having IA Super and IA. The committee also noted and a new section 3 describing the information to be reported to the EEDI database for every ship subject to Regulation 21 (Required EEDI) for adoption at the next session.). Information to be reported are as follows:

1. applicable EEDI phase (e.g. phase 1, phase 2, etc.);
2. identification number (IMO Secretariat use only);
3. ship type;
4. common commercial size reference² (see Note (3) in appendix 5 of these Guidelines), if available;
5. DWT or GT (as appropriate);
6. year of delivery;
7. required EEDI value;
8. attained EEDI value;
9. dimensional parameters (length L_{pp} (m), breadth B_s (m), and draught (m));
10. V_{ref} (knots) and PME (kW);
11. use of innovative technologies (4th and 5th terms in the EEDI equation, if applicable);
12. short statement² describing the principal design elements or changes employed to achieve the attained EEDI (as appropriate), if available;
13. type of fuel used in the calculation of the attained EEDI, and for dual fuel engines, the fDF gas ratio; and
14. ice class designation (if applicable)

The above information is not required to be reported for ships for which the required and attained EEDI values had been already reported to IMO.

2019 Guidelines for on board sampling for the verification of the sulphur content of the fuel oil used on board ships

PPR 6 had agreed to a draft MEPC circular on 2019 guidelines for on board sampling for the verification of the sulphur content of the fuel oil used on board ships which establish an agreed method for sampling to enable effective control and enforcement of liquid fuel oil being used on board ships under the provisions of MARPOL Annex VI. Following consideration, the Committee approved MEPC.1/Circ.864/Rev.1 (which supersedes the current MEPC.1/Circ.864) on the 2019 guidelines for on board sampling for the verification of the sulphur content of the fuel oil used on board ships.

Draft MSC-MEPC circular on delivery of compliant fuel oil by suppliers

As instructed by MSC 100, PPR 6 had developed a joint MSC-MEPC circular addressing the delivery of compliant fuels by suppliers, with a view to approval by MEPC 74 and MSC 101.

According to the draft MSC-MEPC circular it is recommended that Member States should take appropriate action to ensure that fuel oil suppliers under their jurisdiction deliver compliant fuel oil. Parties undertake to ensure that appropriate authorities designated by them take action as appropriate against fuel oil suppliers that have been found to deliver fuel oil that does not comply with that stated on the bunker delivery note.

Following consideration, the Committee approved, subject to concurrent approval by MSC 101, the draft MSC-MEPC circular on delivery of compliant fuel oil by suppliers.

Guidance for best practice for Member States/coastal States.

The Committee approved the subject Guidance as MEPC.1/Circ.884, intended to assist Member States in carrying out their responsibilities under MARPOL Annex VI, to ensure effective implementation and enforcement of statutory requirements of that Annex mainly related with:

- on how to promote availability of compliant fuel oil:
- handling of notifications of the non-availability of compliant fuel oil
- fuel oil quality
- inspection of bunker delivery notes by competent authorities
- the maintaining of a register of local suppliers of fuel oil:

Recognizing the usefulness of a voluntary licensing scheme for bunker suppliers to help ensure the quality and compliance of fuel oil a new paragraph included at the end of the Guidance recommending Member States, or other relevant authorities, desiring to do so may decide to establish or promote a licensing scheme for bunker suppliers.

MISCELLANEOUS

MARPOL Amendments for Electronic Record Books

The Committee adopted Resolutions MEPC.314(74), 316(74) and 317(74) containing amendments concerning the acceptability of using electronic record books in lieu of paper record books which are scheduled to enter into force on 1 October 2020 for:

- MARPOL Annex I, Regs 1 and 17: Oil Record Book Part I (Machinery space operations) and Part II, Reg 36: (Cargo/ballast operations)
- MARPOL Annex II, Regs 1 and 15: NLS Cargo Record Book
- MARPOL Annex V, Reg 1 and 10: Garbage Record Book
- MARPOL Annex VI, Reg 2, 12, 13 and 14: Ozone-depleting substances record book, the logbook on the on/off status of marine diesel engines for NOx Code Tier Standards and the logbook for fuel-oil-change-over operation when entering an ECA, and SOx log book.
- NOX Technical Code, Ch 1 1.3.20, Ch 6 6.2.2: Record Book of Engine Parameters

Supporting these amendments, the Committee adopted a MEPC resolution 312(74) on Guidelines for the use of electronic record books under MARPOL.

MARPOL Annex II Amendments – Cargo Residues/Tank Washings of Persistent Floating Products

The Committee approved resolution MEPC.315(74) containing amendments to MARPOL Annex II which regulate cargo residues and tank washings of persistent floating products with a high viscosity and/or a high melting point - *persistent floaters*. An approved MEPC.2/Circular contains a list of specific vegoils and waxes which are controlled

by these amendments. When operating in the areas defined as North West European waters, Baltic Sea area, Western European waters and the Norwegian Sea the revised prewash procedure for *persistent floaters* shall be applied. This procedure is to be included in a revised and approved Procedures and Arrangements Manual. Appendix IV of MARPOL Annex II provides a format for this manual, and guidance on the subject of persistent floaters has been added.

Residue/water mixture generated during the prewash is to be discharged to a reception facility at the port of unloading. Any water subsequently introduced into the tank may be discharged in accordance with the current discharge standards in MARPOL II, regulation 13.2:

- the ship is proceeding en route at a speed of at least 7 knots
- the discharge is made below the waterline through, and in accordance with the design of, the underwater discharge outlet
- the discharge is made at a distance of not less than 12 nautical miles from the nearest land in a depth of water of not less than 25 m.

The entry-into-force date of these amendments was adjusted to take place on 1 January 2021, to align with the entry into force of the related IBC Code Amendments.

NOx Technical Code Amendment - SCR Systems

The Committee adopted resolution MEPC.317(74) containing amendments to sub-paragraph 2.2.5.1 of the NOx Technical Code 2008 concerning certification requirements for Selective Catalytic Reduction (SCR) systems. The amendments continue to specify the established principles that:

- a NOx-reducing device is to be included within the engine's certification;
- the device must be recognized as a component of the engine;
- the device must be recorded in the engine's Technical File.

However, the amendments clarify the equivalency and application of Scheme B of the 2017 SCR Guidelines. In all cases, the applicable test procedure is to be performed and the combined engine/NOx-reducing device shall be approved and pre-certified by the Administration taking into account the amended 2017 SCR Guidelines noted below.

For engines not pre-certified on a test-bed in combination with the SCR, pre-certification in accordance with Scheme B of these Guidelines (which allows for analytic modeling to estimate the effect that the proposed SCR design and arrangement will have on the NOx emissions from the engine) may be applied. Under Scheme B, the pre-certification survey procedure may be accepted for an Individual Engine or for an Engine Group represented by the Parent Engine only, but it is not to be accepted for an Engine Family certification. The single applicant principle, that the applicant for certification should be the entity responsible for the complete engine system fitted with SCR, remains applicable.

Associated amendments to the 2017 Guidelines addressing additional aspects to the NOx Technical Code 2008 related to marine diesel engines fitted with Selective Catalytic Reduction (SCR) Systems (resolution MEPC.291(71)) were also subject to adoption in resolution MEPC.313(74).

IBC Code Amendment – Prewash Procedures and H₂S Detection Equipment

The Committee adopted resolution MEPC.318(74) containing amendments to several chapters of the IBC Code. Amendments to chapter 15 will require that vessels carrying bulk liquids prone to H₂S formation must be provided with H₂S detection equipment. Toxic vapour detection instruments complying with 13.2.1 of the Code for testing for H₂S may be used to satisfy this requirement.

The amendment made to chapter 16 introduces prewash requirements which are referenced from new paragraph 13.7.1.4 of MARPOL Annex II, for substances which are designated as persistent floaters.

Additionally, a complete replacement of chapters 17, 18, 19 and 21 has been issued to incorporate references to the above amendments. Carriage requirements for chemicals have also been reviewed, and toxicity categorization of products has been revised.

These amendments enter into force on 1 January 2021, for new and existing ships to which the IBC Code applies.

BCH Code Amendment – Prewash Procedures and H₂S Detection Equipment

The Committee adopted resolution MEPC.319(74) containing amendments to chapters IV and V of the BCH Code which correlate to the amendments made to the IBC Code at this session. The amendment to chapter IV requires that vessels carrying bulk liquids prone to hydrogen sulphide formation under this Code must also be provided with H₂S detection equipment. Toxic vapour detection instruments complying with 3.11.1 of the Code for testing for H₂S may be used to satisfy this requirement.

Additionally, the amendment made to chapter V introduces prewash requirements which are referenced from new paragraph 13.7.1.4 of MARPOL Annex II, for substances which are designated as persistent floaters.

Marine plastic litter from ships

Following up on the work of the Correspondence Group on Marine Plastic Litter from Ships, the Committee approved the Terms of Reference for the IMO Study on Marine Plastic Litter from Ships. The terms of this study call for assessment of the availability of port reception facilities and recycling technologies available to ships, as well as assessment of the volume and types of plastic litter being collected during fishing operations. It was also recognized that other United Nations groups, such as GESAMP and FAO, are also conducting studies related to plastic litter in the ocean environment, and their findings should be considered. It is anticipated that the IMO Study on Marine Plastic Litter will be established in late 2020, after being informed by ongoing work in other United Nations group also researching this issue.

Furthermore, in support of the Action Plan to Address Marine Plastic Litter from Ships (Resolution MEPC.310(73)), the Committee developed a grouping of short-, mid-, long-term and continuous actions to address marine plastic litter from ships. Progress of mid- and long-term actions may be delayed pending outcomes of the above noted studies. However, short-term actions will be referred to relevant sub-committees to begin work. These include:

- Guidance to Member States on their responsibilities in enforcement of MARPOL Annex V on fishing vessels, and collection of information on accidental loss of fishing gear;
- Consideration of making the Garbage Record Book mandatory for ships of 100G GT and above;
- Improvement of seafarer training, through STCW Code, to increase marine environmental awareness for personnel on fishing vessels.
- Consider ways to communicate the location of lost shipping containers, and establish a compulsory system for declaration of lost containers.

This work to be undertaken on short-term measures is anticipated to begin in 2020, with the goal remaining to complete and implement actions by 2025.

BALLAST WATER MANAGEMENT

Appendix I of the BWM Convention (Form of the International Ballast Water Management Certificate)

The Committee agreed to an updated unified interpretation (UI) of appendix I (Form of the International Ballast Water Management Certificate) of the BWM Convention. Since MEPC 74 is the last session of the Committee before the BWMS Code's effective date is 13 October the 2019, the UI will also become applicable on 13 October 2019. Considering that the 2016 Guidelines for approval of ballast water management systems (G8), adopted by



resolution MEPC.279(70), will be revoked when the BWMS Code takes effect, the references to the Guidelines (G8) in the original UI have been replaced with references to the BWMS Code in the updated UI.

The Committee approved amendments to the form of the International Ballast Water Management Certificate. The amendments add a selection of “other approach in accordance with regulation” in addition to the current selections (in accordance with regulation D-1, or D-2, or D-4) under “The principal Ballast Water Management method(s) employed on this ship is/are” with a view to adoption by MEPC 75.

Revised Data Gathering Analysis Plan for the experience-building phase

The Committee approved a revision of the circular for data gathering and analysis plan for the experience-building phase associated with the BWM Convention (BWM.2/Circ.67/Rev.1).

Amendments to Regulation E-1 of the BWM Convention (including BWM System Commissioning Test)

The Committee approved amendments to regulations E-1.1 and E-1.5 of the BWM Convention – survey and certification requirements for ballast water management adding confirmation that a commissioning test has been conducted to validate the installation of any BWMS to demonstrate that its mechanical, physical, chemical and biological processes are working properly, taking into account guidelines developed by the Organization.

BWMS Commissioning Testing

The Committee endorsed the view that commissioning testing should begin as soon as possible in accordance with BWM.2/Circ.70. As an interim measure, the Committee urges Administrations to provide the Recognized Organizations, which act on their behalf, with written and clear instructions in relation to the conduct of indicative analysis testing at the time of their commissioning on ships that fly their flag; including what actions are to be taken in the event of testing demonstrating non-compliance.

BW Management System Approvals

Basic Approval was granted by the Committee for CleanBallast® - Ocean Barrier System submitted by Norway. CleanBallast – Ocean Barrier System treats ballast water by filtration and in-line electrochlorination during uptake and neutralization with sodium thiosulfate at discharge.

Basic Approval was granted by the Committee for the FlowSafe Ballast Water Management System submitted by Cyprus. FlowSafe uses a SeaWater Conditioning Unit (SWCU or Trident Unit) and a side-stream electrochlorination unit during uptake and, as needed, sodium thiosulfate for neutralization during discharge.

Final Approval was granted by the Committee for the Envirocleanse inTank™ (Bulk Chemical Variation) submitted by Norway. The Envirocleanse inTank™ Bulk Chemical Variation injects sodium hypochlorite as the Active Substance after uptake based on concentration-time (CT) treatment approach. During the voyage, in-tank recirculation is used to monitor residual oxidant levels and redoes as needed to achieve the minimum target CT and, prior to discharge, in-tank recirculation to check for residual oxidant levels and apply sodium thiosulfate to neutralize any remaining oxidant.

Final Approval was granted by the Committee for the MICROFADE II submitted by the Netherlands. MICROFADE II uses a filter and injection of sodium dichloroisocyanurate dihydrate (SDCC) as an Active Substance during uptake and sodium sulfite for neutralization during discharge.

Final Approval was extended by the Committee for the Purimar™ Ballast Water Management System submitted by the Republic of Korea on freshwater. The Purimar BWMS uses a filter and side-stream electrochlorination during uptake and sodium thiosulfate for neutralization during discharge.



Final Approval was not granted for JFE BallastAce® that makes use of NEO-CHLOR MARINE® submitted by Japan.

IMO STRATEGY ON GHG EMISSIONS

The Committee continued to develop their method of work to implement the Initial IMO Strategy on reduction of GHG emissions from ships (resolution MEPC.304(72)) and considered how to formally progress on the development of candidate measures into actionable steps in the reduction of GHG emissions from ships.

Procedure for Assessing Impacts on States of Candidate Measures

The Committee approved the Procedure for Assessing Impacts on States of Candidate Measures, which will be released as a MEPC Circular. For States and organizations who are proponents of a given candidate measure to reduce GHG emissions, this procedure requires the proponent to submit an initial impact assessment as part of their proposal to the Committee. Documents commenting on this proposal may be submitted up until the next meeting of the Committee. If any clarifications are requested, the proponent will have until the following meeting of the Committee to provide a comprehensive response.

At that stage, if the Committee so decides, a comprehensive impact assessment would be initiated, taking into account the comments raised and a detailed qualitative and/or quantitative assessment of specific negative impacts on States.

If no commenting documents are submitted during designated period for comments, then the Committee may consider whether a comprehensive impact assessment is required, or if sufficient detail has already been submitted in the initial impact assessment for development of new regulation to proceed.

Commencement of the Fourth IMO GHG Study

Continuing the progress made at the Intersessional Working Group on GHG Reduction, the Committee approved the Terms of Reference which will govern the 4th IMO GHG Study. The terms of the study will require collection of data on global emissions of GHGs emitted from ships of 100 GT and above engaged in international voyages. This inventory of emissions will focus on the period from 2012 to 2018, as far as statistical data are available, and will seek to differentiate emissions from domestic voyages as compared to international voyages. The study will also provide a projection of transport demand and shipping emissions out to 2050.

The Terms of Reference for the study also provide the criteria by which potential tenderers of the study will be evaluated. The Committee has requested the IMO Secretariat to issue the Invitation to Tender, and organizations applying to assist the IMO in conducting this study will have until the end of June 2019 to submit their bids. A steering committee of Member States will also be established to participate in the evaluation of applicants. The IMO will consider their recommendation and will award the contract for this study in October 2019.

With these guiding principles in place, the Committee agreed to initiate this process, and anticipates receiving the final report of the 4th IMO GHG Study at MEPC 76 in Autumn 2020.

Streamlining of Proposals on Candidate Short-term Measures

In support of progressing the ambitious goals of the IMO Initial Strategy on GHG Reduction, numerous proposals of candidate measures to reduce GHG emissions in shipping have already been submitted by Member States for consideration. A total of 37 proposals have been noted so far, which were initially categorized into 14 different approaches to address these emissions. The Committee noted that there were multiple interlinkages between these different approaches, and have streamlined them into 3 approaches for further development:

- a) Consideration of proposals to improve the operational efficiency of existing ships, with a view to developing amendments to Chapter 4 of MARPOL Annex VI (and associated guidelines, as appropriate);
- b) Consideration of proposals to reduce methane slip and emissions of Volatile Organic Compounds (VOCs); and
- c) Consideration of proposals to encourage uptake of alternative low-carbon and zero-carbon fuels, including the development of lifecycle GHG/carbon intensity guidelines for all relevant fuel types (and associated incentive schemes, as appropriate).

Proposals for candidate measures to reduce GHG emissions will be considered under one of these three approaches, which will also help facilitate the comparison of impact assessments for each proposal.

Cooperation between Port and Shipping Sectors on GHG Emissions

The Committee adopted Resolution MEPC.323(74), calling for voluntary cooperation between the port and shipping sectors to facilitate the reduction of GHG emissions from ships. As discussed in the IMO Initial Strategy on GHG Reduction, it was acknowledged that cooperation between ports and the maritime industry would be needed to aid in the reduction of GHG emissions of the maritime transport system. This resolution calls for Member States to address this at ports within their jurisdiction through initiatives such as improving onshore power supply to ships at dock (and providing that power from renewable energy sources), increasing access to bunkering of alternative low-carbon fuels, and supporting the optimization of port calls.