



NEWS BRIEF: PPR 9

The IMO Sub-Committee on Pollution Prevention and Response (PPR) held its 9th session virtually from April 4 to 8, 2022. This Brief provides an overview of the more significant issues progressed at this session.

KEY DEVELOPMENTS

- Guidance on EGCS Discharges and Residues
- Implementing the AFS Convention Ban on Cybutryne
- Marine Plastic Litter – Draft MARPOL Annex V Amendments
- Performance of Sewage Treatment Plants – Draft MARPOL Annex IV Amendments

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PREVENTION OF AIR POLLUTION FROM SHIPS

Guidelines on the Delivery of EGCS Residues and Stored Discharge Water to Port Reception Facilities

The Sub-Committee finalized development of draft guidelines addressing the proper management and disposal of exhaust gas cleaning system (EGCS) waste types into port reception facilities. Terminology is introduced to distinguish between EGCS residue, washwater and bleed-off water. In sea areas including ports, harbours and estuaries where the discharge of EGCS discharge water is prohibited, ships should keep their discharge water on board in dedicated holding tank(s) for delivery to port reception facilities. However, outside these areas, the temporary stored discharge water could be discharged into the sea in accordance with the discharge criteria given the 2021 EGCS Guidelines. It is also clarified that EGCS residues (material removed from washwater or bleed-off water by a treatment system or discharge water either of which do not meet the discharge criterion for EGCS) should not be discharged to the sea, mixed with other waste streams or burned in the ship's incinerator, but should instead be appropriately managed onboard and delivered ashore to adequate reception facilities.

Next Steps: The draft 2022 Guidelines will be presented to MEPC 78 (Jun-2022) for further consideration and approval, and subsequent release as an MEPC circular.

Risk and Impact Assessments of Discharge Water from EGCS

The Sub-Committee finalized development of draft guidelines intended to provide a means of assessing impacts and risks associated with the discharge water from exhaust gas cleaning systems. These guidelines provide information on recommended methodology for risk and impact assessments that Member States should follow when setting local or regional regulations to protect sensitive environments from the discharge water from EGCS that complies with the Convention. These guidelines include assessments of the risks from a long-term perspective, with respect to aquatic quality, aquatic organism, and/or human health.

Next Steps: The draft 2022 Guidelines will be presented to MEPC 78 (Jun-2022) for further consideration and approval, and subsequent release as an MEPC circular.

Multiple Engine Operational Profiles

The Sub-Committee received for consideration a number of proposed amendments to MARPOL Annex VI and the NOx Technical Code 2008 regarding the use of multiple Engine Operational Profiles (EOP) as a means of managing NOx emission



performance. The proposed amendments establish criteria for permitting the use of multiple EOPs, and incorporating multiple EOPs into engine certification whilst ensuring an equivalent level of compliance with the NOx requirements set out in MARPOL Annex VI and the NOx Technical Code 2008. Proposals were also received to address the fact that current test cycle requirements do not adequately address application to variable-speed/variable-load engines used for main propulsion or ship power generation, with proposed amendments to clarify test cycle application.

Next Steps: Discussions on this subject will continue in an intersessional correspondence group and at PPR 10 (Apr-2023). The correspondence group will be tasked to identify what regulatory controls or amendments to MARPOL Annex VI and the NOx Technical Code 2008 may be needed in relation to the use of multiple engine operational profiles.

Unified Interpretations on Air Pollution Topics

The Sub-Committee agreed on two new Unified Interpretations related to MARPOL Annex VI and the NOx Technical Code 2008:

1) *Regulation 18.3 of MARPOL Annex VI – Use of Biofuels*

A proposal was made for a Unified Interpretation to provide clarity on the use of biofuels on board ships and possible implications on NOx emissions. The interpretation provides a definition for the term “biofuel”, and indicates that a fuel oil which is a blend of not more than 30% by volume of biofuel should meet the requirements of regulation 18.3.1 of MARPOL Annex VI, while a fuel oil which is a blend of more than 30% by volume of biofuel should meet the requirements of regulation 18.3.2 of MARPOL Annex VI. This interpretation was agreed, and will be presented for approval by MEPC 78 (Jun-2022) and subsequent inclusion in a revision of MEPC.1/Circ.795/Rev.5.

2) *Paragraph 4.4.6.1 of NOx Technical Code 2008 – Revised Interpretation of Engine Family and Engine Group Concept*

A proposal was made to modify the existing Unified Interpretation for this regulation, specifying that the unified interpretation should not be applied to the engine family, in principle, without clear evidence by the applicant that the different number of cylinders has no negative impact on the NOx emissions. This interpretation was agreed, and will be presented for approval by MEPC 78 (Jun-2022) and subsequent inclusion in a revision of MEPC.1/Circ.895.

Next Steps: The above noted Unified Interpretations were agreed and will be presented to MEPC 78 (Jun-2022) for further consideration and approval.

Correspondence Group on Prevention of Air Pollution from Ships

Due to time constraints of the virtual meeting, the Sub-Committee agreed to establish a Correspondence Group on Prevention of Air Pollution from Ships, and directed the following items to the correspondence group for further development:

1) Black Carbon (BC) Emissions in the Arctic

- Development of draft guidelines on recommendatory goal-based control measures to reduce the impact on the Arctic of BC emissions from shipping, allowing ships to implement a chosen low-BC emission solution which meets required thresholds;
- Identify the most suitable BC measurement method(s) and related sampling, measurement, reporting and calibration procedures;
- Consider regulating or directly control BC emissions from marine diesel engines.

2) Standards for Shipboard Gasification of Waste Systems

- Development of draft specifications/guidelines for thermal waste treatment devices, associated with MARPOL Annex VI / Regulation 16.

3) Volatile Organic Compound (VOC) emissions



- Development of work scope for reduction of VOC emissions
- 4) Multiple engine operational profiles (EOP)
- Development of criteria for use of multiple EOPs, as discussed in above section.

Next Steps: Discussions on the above subjects will continue in the intersessional Correspondence Group and at PPR 10 (Apr-2023).

MARINE BIOSAFETY

Revised Guidelines on Anti-fouling System Sampling, Inspection and Certification

Subsequent to the adoption at MEPC 76 of controls on anti-fouling systems containing cybutryne, the Sub-Committee noted the need to update three guidance documents related to the AFS Convention in order to reflect the regulations which will enter into force on 1 January 2023. The following guidance documents will be revised:

- 1) *Guidelines for Brief Sampling of Anti-Fouling Systems on Ships* (MEPC.104(49));
- 2) *2010 Guidelines for Inspection of Anti-Fouling Systems on Ships* (MEPC.195(61)); and
- 3) *2011 Guidelines for Survey and Certification of Anti-Fouling Systems on Ships* (MEPC 208(62))

A 2022 Edition of each of the above noted guidelines has been drafted for future adoption. The *2022 Guidelines for Inspection of Anti-Fouling Systems on Ships* will be added as a new appendix to the IMO Procedures for Port State Control by a future session of the III Sub-Committee.

The revisions made to these three guidelines incorporate the previously adopted implementation schedule for the ban on cybutryne, and also provide additional details for confirming compliance, such as:

- 1) Definition of compliance – sampling of the anti-fouling system paint should confirm cybutryne at a level which does not provide a biocidal effect (i.e. maximum 1,000 mg cybutryne per kg of dry paint);
- 2) Tolerance Range – the tolerance range is 250 mg cybutryne per kg of dry paint (25%) in addition to the threshold value.
- 3) Sampling – when testing for cybutryne, every sample to be taken in duplicate, providing one specimen for analysis and one for storage/back-up;
- 4) Analysis – details provided for one-step analysis of AFS samples to detect cybutryne;

Next Steps: The revised guidelines will be presented to MEPC 78 (Jun-2022) for further consideration and adoption of revised MEPC resolutions.

Ban on Cybutryne Under the AFS Convention – Implications for IHM Under the Ship Recycling Convention

Related to the adoption of controls on anti-fouling systems containing cybutryne, the Sub-Committee also considered whether it would be necessary to update the list of items in the Inventory of Hazardous Materials under the Hong Kong Convention to include cybutryne when the respective controls enter into force (taking into account that the Hong Kong Convention has not entered into force). After discussion, it was agreed that the relevant text in appendix 1 of the Hong Kong Convention, which contains the controls of hazardous materials relevant for the Inventory of Hazardous Materials, was generic enough and therefore did not require amendment, since the appendix utilizes the text "or any other anti-fouling system whose application or use is prohibited by the AFS Convention".

However, it was noted that there may be a need to amend the *2015 Guidelines for the development of the Inventory of Hazardous Materials* (MEPC.269(68)), as the Guidelines currently make specific reference to organotin compounds, and should therefore be amended to apply to any anti-fouling systems prohibited by the AFS Convention.



Next Steps: As revision of the 2015 Guidelines was outside of the scope of the current output assigned to the PPR Sub-Committee, further proposals must be submitted to include this work in the scope of the Sub-Committee at a future session.

Review of Biofouling Guidelines

The Sub-Committee considered the report of an intersessional Correspondence Group which was tasked to review the *2011 Guidelines for the Control and Management of Ships' Biofouling to Minimize the Transfer of Invasive Aquatic Species (Resolution MEPC.207(62))*. In certain regions, the primary mode of transport for invasive species is biofouling, and therefore consideration is now being given to improve the consistency and increase the application of these Guidelines.

The Correspondence Group progressed the development of the revised Guidelines in several aspects:

- 1) The definitions of cleaning, including proactive cleaning and reactive cleaning, where both in-water cleaning and dry-dock cleaning are encompassed, have been updated to increase clarity;
- 2) A risk-based approach introduced with focus on the operating profile of the ship and the anti-fouling system as indicators for determining inspection frequency while the establishment of a GISIS module has been considered for monitoring locations with high-risk organisms, in support of the Guidelines' risk-based approach to assessing biofouling.
- 3) An inspection interval based on the ship-specific risk assessment determined. The higher the level of risk profile of a ship's particular area is, the higher the inspection frequency to reduce risk for biofouling.
- 4) Based on the inspection interval, specific cleaning actions are recommended. In general, and more specific on proactive and reactive cleaning including in-water and dry-dock cleaning.

Several aspects remain to be addressed before finalizing the Guidelines, including:

- 1) the process for determining the biofouling risk profile of a particular area;
- 2) appropriate inspection intervals based on the risk assessment;
- 3) guidance on proactive vs. reactive cleaning; and
- 4) the threshold for allowing cleaning without capture, and determining appropriate capture rates for biological wastes from cleaning activities.

Next Steps: The re-established Correspondence Group on this subject will continue to revise the Biofouling Guidelines and submit a report to PPR 10 (Apr-2023).

Unified Interpretations of the BWM Convention

The Sub-Committee considered one new Unified Interpretation related to the BWM Convention:

1) *Appendix I to the BWM Convention*

The Sub-Committee considered an interpretation of Appendix I (Form of the IBWM Certificate) of the BWM Convention, which provided examples of specific circumstances in which the "Other Approach" section of the IBWM Certificate should be utilized. This interpretation was supported by the Sub-Committee.

Next Steps: This unified interpretation will be presented to MEPC 78 (Jun-2022) for further consideration and approval, and subsequent incorporation into BWM.2/Circ.66/Rev.3.

Enumerating Viable Organisms for Type Approval of Ballast Water Management Systems

Continuing on subject matter discussed at PPR 7, the Sub-Committee finalized a draft revision to the *Guidance on Methodologies that May Be Used for Enumerating Viable Organisms for Type Approval of Ballast Water Management Systems (BWM.2/Circ.61)*. Within this circular, the table listing methodologies for enumerating viable organisms has



been revised, and the row addressing the “Most Probable Number Dilution Culture + Motility (MPN+M)” methodology has been revised to update the provided reference for examples of this methodology’s application.

Next Steps: The draft Guidance will be presented to MEPC 78 (Jun-2022) for further consideration and approval, and subsequent release as BWM.2/Circ.61/Rev.1.

Revised Protocol for the Verification of Ballast Water Compliance Monitoring Devices

The Sub-Committee received the report of a correspondence group on development of a protocol for verification of ballast water compliance monitoring devices. The intent of this work is to support the “Experience-Building Phase” of the BWM Convention’s implementation, by providing a framework for verifying the ability of a compliance monitoring device (CMD) to assess non-compliance with the D-2 biological standard of the BWM Convention. These devices may be used for a variety of purposes, such as during commissioning testing of ballast water management systems (BWMS), during port State control inspections, and during ships' self-monitoring. The draft protocol applies a combination of laboratory and field tests to verify the performance of these devices.

Next Steps: Due to time limitations and extended discussions on this subject, the Working Group’s report on this subject will be finalized as part of the PPR 9 proceedings, but will not be considered by the Sub-Committee until PPR 10 (Apr-2023). A correspondence group will address remaining details of this work prior to PPR 10.

MARINE PLASTIC LITTER FROM SHIPS

Draft Amendments to MARPOL Annex V

The Sub-Committee finalized draft amendments to MARPOL Annex V to expand the requirement for a garbage record book by lowering the threshold down to ships of 100 gross tonnage and above (from the current threshold 400 gross tonnage and above). This is done in an effort to expand tracking and reporting of accidental discharges to the sea that may involve plastics. Additionally, the IMO Secretariat has been requested to compile a list of guidelines requiring consequential amendments due to the draft amendments to MARPOL Annex V regarding the garbage record book. Consideration will be given to associated guidelines during PPR 10 (Apr-2023).

Next Steps: The proposed amendments will be presented to MEPC 78 (Jun-2022) for further consideration and approval, and subsequent adoption at MEPC 79 (Dec-2022).

LIFETIME PERFORMANCE OF SEWAGE TREATMENT PLANTS

Draft Amendments to MARPOL Annex IV

The Sub-Committee considered the work progressed by an intersessional Correspondence Group for amendments to MARPOL Annex IV for enhancing and monitoring the performance of sewage treatment plants (STPs). The amendments include both STP commissioning requirements as well as periodic performance evaluations via sampling and testing. New regulations would also require ships equipped with STPs to maintain onboard a sewage management plan and a sewage record-keeping book for recording all discharges, incinerations and sampling related to the STP. Sampling points for the STP effluent would also be required to be fitted to facilitate performance monitoring. A new Appendix II to MARPOL Annex IV would provide testing standards for effluent parameters (including turbidity, total suspended solids, biochemical and chemical oxygen demand, pH and total residual oxidant)



for new STPs and, retroactively, to existing STPs. A new Appendix III would provide a format of the Sewage Record Book.

Consideration still remains to be finalized regarding application provisions for existing ships, the adequacy of supporting STP standards and implementation guidance, and a possible prohibition of fitting comminuting and disinfecting systems (CDS) on new ships.

Next Steps: The draft amendments and STP standards will be further developed in an intersessional correspondence group and at PPR 10 (Apr-2023).

REGIONAL ARRANGEMENTS FOR PORT RECEPTION FACILITIES IN THE ARCTIC

Draft Amendments to MARPOL Annexes I, II, IV, V and VI

Following on proposals from MEPC 74, the Sub-Committee received several proposed amendments to MARPOL which would allow States with coastline bordering Arctic waters to meet their obligations for providing adequate port reception facilities for disposal of ships' wastes. These amendments acknowledge the infrastructure limitations faced by ports in Arctic regions, and provide the option for States in these regions to provide adequate reception facilities by means of agreed regional arrangements. The implementation of such "Regional Arrangements" will require the development of a Regional Reception Facility Plan (RRFP) based on the *Guidelines for Development of a Regional Reception Facility Plan* (MEPC.221(63), as amended).

The amended regulations addressing Reception Facilities include:

- 1) MARPOL Annex I – Regulation 38.4 and 38.6
- 2) MARPOL Annex II – Regulation 18
- 3) MARPOL Annex IV – Regulation 12
- 4) MARPOL Annex V – Regulation 8
- 5) MARPOL Annex VI – Regulation 17

Additionally, it was recognized that some Arctic states may have multiple coastlines, some of which do not border Arctic waters. The amended regulations would allow such states to enter into "Regional Arrangements" agreements, but only to support the needs of their ports in Arctic waters. Use of this "Regional Arrangements" concept cannot be applied to any ports outside of Arctic waters. Such States will still be obligated to provide adequate reception facilities for wastes at their non-Arctic ports.

Next Steps: The proposed amendments will be presented to MEPC 78 (Jun-2022) for further consideration and approval, and subsequent adoption at MEPC 79 (Dec-2022).

Draft Amendments to the 2012 Guidelines for Development of a Regional Reception Facility Plan (MEPC.221(63))

In relation to the MARPOL amendments noted above, the Sub-Committee also agreed to amendments to the *2012 Guidelines for Development of a Regional Reception Facility Plan* (MEPC.221(63)). Whereas these Guidelines previously only addressed small island developing States (SIDS), the amendments proposed will extend the guidelines to also apply to States with coastline bordering Arctic waters.

Next Steps: The revised guidelines will be presented to MEPC 79 (Dec-2022) for further consideration and adoption of a revised MEPC resolution, in conjunction with the adoption of the above noted draft amendments to MARPOL Annexes I, II, IV, V and VI.



EVALUATION OF SAFETY AND POLLUTION HAZARDS OF CHEMICALS

Provisional Categorization of Liquid Substances in Accordance with MARPOL Annex II and the IBC Code (MEPC.2 Circular) – Evaluation of Products and Cleaning Additives

The Sub-Committee was presented with the report of the 27th session of the Working Group on the Evaluation of Safety and Pollution Hazards of Chemicals (ESPH), which is tasked to regularly review safety and pollution prevention requirements for various chemical cargoes and chemicals used onboard ships. The Working Group is responsible for maintaining the MEPC.2 Circular, *Provisional Categorization of Liquid Substances in Accordance with MARPOL Annex II and the IBC Code*, and to provide carriage guidance for substances which have not yet been fully categorized and reflected in the IBC Code.

In the course of the Working Group's activity:

- 1) 13 new substances were added in the MEPC.2 Circular;
- 2) 3 existing substances were revised in the MEPC.2 Circular;
- 3) 38 cargo tank cleaning additives were added in the MEPC.2 Circular; and
- 4) 34 products were deleted from the MEPC.2 Circular, after reassessment finding them to meet the criteria for complex mixtures in MEPC.1/Circ.512/Rev.1, and will now be shipped under MARPOL Annex I.

Next Steps: The above assessment of products and cleaning additives will be reflected in the current MEPC.2/Circ.27.

