# IMO Pollution Prevention and Response Sub-Committee Tenth session (PPR 10)

## Agenda Preview

# Executive Summary

Below are some of the topics expected to be discussed at PPR 10 and will have some impact on current practices. These can be found in detail under the relevant subject headings in the document.

- **Prevention of Air Pollution from Ships**
  - Development on reduction of the impact on the Arctic of Black Carbon emissions from international shipping.
  - Attempt to finalise the draft standards for shipboard gasification of waste systems.
  - Development of amendments to MARPOL Annex VI and the NOx Technical Code on the use of multiple engine operational profiles for a marine diesel engine.
  - Potential finalisation of proposed amendments to regulation 13.2.2 of MARPOL Annex VI.
  - Potential finalisation of proposed unified interpretation of regulations 18.5 and 18.6 of MARPOL Annex VI.

- **Biofouling, Ballast water management and Anti-fouling**
  - Development of a form of the Biofouling Management plan and Biofouling Record Book.
  - Finalisation of the revised 2011 Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species (resolution MEPC.207(62)).
  - Finalisation of a draft unified interpretation of the ballast water management convention to clarify the "Date of construction" in the Form of the International Ballast Water Management Certificate (IBWMC).

- **Marine HNS Response Manual**
  - Development of an operational guide on the response to spills of Hazardous and Noxious Substances (HNS).

- **HFO as fuel by ships in Arctic waters**
  - Development of measures to reduce risks of use and carriage of heavy fuel oil as fuel by ships in Arctic waters further considering outcome of NSCR 9.

- **Revised IBTS Guidelines and amendment to the IOPP Certificate and Oil Record Book**
  - Finalisation of the draft 2020 Guidelines for systems for handling oily wastes in machinery spaces of ships incorporating guidance notes for an Integrated Bilge Water Treatment System (IBTS).
  - Finalisation the draft Amendments to MARPOL Annex I, appendix II (Form of the IOPP certificate and Supplements) and appendix III (Form of Oil Record Book).

- **MARPOL Annex IV and Marine Plastic Litter**
  - Development of additional draft amendments to the 2012 Guidelines on implementation of effluent standards and performance tests for sewage treatment plants (Type Approval Guidelines or TA Guidelines)
  - Development of draft amendments to the Guidelines on implementation of MARPOL Annex IV for sewage treatment plants.
  - Development of draft amendments to the MARPOL Annex IV.
  - Potential development of a new draft guidelines on clean-up of plastic pellets from ship-source spills.

# Introduction

PPR 10 will take place 24 – 28 April 2023. This briefing summarises the discussions which are significant to Lloyd's Register's work with our customers.

| **Additional Information** |
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| Lloyd's Register's Summary Report for PPR 9 |

The following ad-hoc working, technical or drafting groups are expected to be established during the PPR 10 session:

- Working Group on Marine Biosafety (WG 1)
- Working Group on Prevention of Air Pollution from Ships (WG 2)
- Working Group on Marine Plastic Litter from Ships (WG 3)
- Technical Group on Evaluation of Safety and Pollution Hazards of Chemicals (ESPH TG)
- Drafting Group on Pollution Response (DG)

# Safety and pollution hazards of chemicals and preparation of consequential amendments to the IBC Code

## Fast pyrolysis bio-oil

**Background:** The *Provisional Categorization of Liquid Substances in accordance with MARPOL Annex II and the IBC Code* is a compilation of products and their carriage requirements, established either under a tripartite agreement (with an expiry date) or that have been fully assessed by the IMO (no expiry date). An updated list is disseminated each December by IMO, incorporating any new products assessed or any modifications made to existing products during the year. Products in list 1 of the circular that have been formally reviewed by ESPH and are valid for all countries will be incorporated into the IBC Code when the Code is next updated.

**Summary:** It is proposed that the carriage requirements for "Fast pyrolysis bio-oil" be assigned for inclusion in List 1 of the MEPC.2/Circular (Expected to be MEPC.2/Circ.29) with no expiry date and validity for all countries.

**Application:** If accepted **"**Fast pyrolysis bio-oil" will be included in List 1 of the MEPC.2/Circular, until the IBC code is next updated and can be carried in bulk onboard.

**Impact:** If accepted shipowners will be able to ship **"**Fast pyrolysis bio-oil".

## OLOA 54013, OLOA 9999, and RBHC (Reformate Benzene Heart Cut) resubmission

**Background:** The 2019 amendments to the I*nternational Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk* (IBC Code) resulted in all products in chapters 17 & 18 being reassessed against the criteria for the new discharge requirements in MARPOL Annex II and the latest GESAMP Hazard Profiles for the products. PPR previously agreed that the products in Lists 2 & 3 of MEPC.2/Circular (Expected to be MEPC.2/Circ.29) on *Provisional categorization of liquid substances in accordance with MARPOL Annex II and the IBC Code* should also be reassessed in a similar manner. Any products contained within Lists 2 & 3 of

MEPC.2/Circular and not reassessed by 31 December 2025 can no longer be shipped. It is proposed that the following products maintain their inclusion in list 3 of the MEPC.2/Circular following reassessment in accordance with the guidance set out in PPR.1/Circ.10:

- OLOA 54013
- OLOA 9999

It is proposed that the following products are removed from the MEPC.2/Circular following reassessment and instead are considered as a MARPOL Annex I cargo:

- Reformate Benzene Heart Cut (RBHC)

**Application:** If accepted OLOA 54013 and OLOA 9999 will continue to be included in List 3 of the MEPC.2/Circular, whilst RBCH will be removed and considered as a MARPOL Annex I cargo.

**Impact:** If accepted shipowners will be able to continue shipping OLOA 54013 and OLOA 9999 and RBHC as an Annex II cargo.

### Proposed Amendment to the IBC Code to include ventilation as an alternative means to determine a safe atmosphere for toxic products that do not have an atmospheric testing device

**Background:** The amendments to the IBC Code entered into force on 1 January 2021 and included a complete revision of the Chapter 17 & 18 carriage requirements. Following this revision 240 products now have newly assigned toxic ratings for vapour detection, with at least 20 having no means for testing the atmosphere for toxic vapours. Ventilation by dilution is an accepted means for ensuring an atmosphere in an enclosed space is acceptable for safe entry in ship repair work and has been proven as a robust methodology in cargo tanks.

**Summary:** It is proposed that the IBC Code is amended to allow the operational procedure of ventilation to be used as an alternative to testing for toxic vapours, since so many products have now been reassessed and assigned toxic vapour ratings, yet have no means of testing.

**Application:** If approved, this will apply to chemical tankers of any size carrying bulk cargoes of dangerous chemicals or noxious liquid substances, other than petroleum or products with similar flammability, which have a toxic rating in column k of chapter 17 of the IBC Code and have no vapour-detection equipment available.

**Impact:** If approved, Administrations would be able to approve ventilation calculations as an alternative to toxic-vapour detection equipment.

## Development of an operational guide on the response to spills of Hazardous and Noxious Substances (HNS)

During PPR 9, the “Marine HNS Response Manual - Multi-Regional Boon Agreement HELCOM, REMPEC” document has been used as a basis for further work on producing an *Operational Guide on the Response to Spills of HNS*. A draft guide has been agreed with no further additions to the basis document and with some proposed changes for PPR 10.

The proposed changes for finalisation of the draft manual are:

- Removal of information concerning regional specificities (mainly the three annexes and legislative framework section); and
- Division of the document into two volumes (one dedicated to preparedness and the other to response and the related fact sheets).

## Review of 2011 Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species (Resolution MEPC. 207(62))

**Background:** It is considered that biofouling is a significant medium for the transfer of invasive aquatic species thereby posing a threat to the local aquatic environment and, by extension, to the local economic and social activities. The 2011 *Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species* aim to provide a globally consistent approach to managing ship biofouling, recommending general measures to reduce the associated risk.

**Summary:** The Correspondence Group (CG) on the Review of the Biofouling Guidelines has continued to develop and finalise the update of these guidelines addressing the following issues:

- Developing practical definitions for microfouling, macrofouling, proactive versus reactive cleaning etc.
- A risk-based approach for determination of inspection intervals – the higher the level of risk profile of a ship's particular area is, the higher the inspection frequency should be.
- Guidance on proactive and reactive cleaning; the threshold for allowing cleaning without capture.
- Finding a consensus on capture rates for biological waste and harmful waste substances.
- A possible type approval regime to manage biosecurity risks.
- Proposals to further facilitate the uptake and effectiveness of the Guidelines.
- Testing and approval of cleaning technologies and services especially in connection with niche areas.

The correspondence group has identified the following areas that need further discussion and consideration before finalisation of the Guidelines:

- Risk assessment for determination of inspection intervals, including specific guidance on how to monitor biofouling risk parameters and how to evaluate indications of higher risk or higher biofouling pressure (Annex I).
- Addition of a new chapter on Contingency Measures.
- Clarification on inspection frequencies and alignment with the Cargo Ship Safety Construction Certificate.
- Clarification on cleaning and maintenance through the allowance of proactive cleaning, acceptable capture rates, and the possible establishment of threshold values.
- Best practices for biofouling inspection and for biofouling cleaning actions, respectively.

In order to increase uptake and effectiveness of the Guidelines, the following proposals could be agreed by PPR to be presented to MEPC:

- Consideration of a process to make the guidelines legally binding.
- Developing a step-by-step approach to implementing the guidelines in their current voluntary form, by periodically increasing the requirements to the cleaning outcome and capture rate to allow the industry to gradually gain experience.
- Organising regular uptake and implementation workshops.

- Request concrete proposals on how to develop standardised inspections to create more transparency and improve the ability to manage the biofouling.
- Consider the possibility of implementing economic or other incentives.
- Help facilitate access to in-water cleaning facilities and availability of service providers at ports, including reception facilities to manage biofouling-related waste.
- Develop concrete proposals on how to reduce the complexity and difficulty of the risk-based approach to improve and help developing practical ship-specific biofouling management plans.

The above work will need to be agreed by PPR whilst taking into account comments in various papers submitted to this session.

**Application:** Ship designers, builders, ship operators/owners/charterers operating ships of 400 GT and above engaged in international voyages, excluding fixed or floating platforms, FSUs, and FPSOs.

**Implication:** When agreed, the updated 2011 *Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species,* will assist shipowners and operators in minimising the transfer of potentially harmful aquatic species following globally agreed guidance.

**Lloyd's Register's View**

Lloyd's Register are of the view that, without independent inspection organisations, there would be no mechanism to verify companies hired by the shipowner from a quality assurance or quality control (QA/QC) perspective. The draft guidelines do not provide selection/approval criteria for independent inspection organisations, so service supplier requirements may need to be developed and QA/QC criteria implemented.

Lloyd's Register believes that clarification on the use of inspection and cleaning reports is required. This may include but not be limited to:

- What form of report/evidence is acceptable?
- Is a report from independent inspection organisation acceptable? Would the inspection be carried out in the presence of surveyor/flag authorities similar to in-water surveys?
- What is the minimum information that the report should consist of (all video/pictures of inspected area or general assessment of hull with fouling rating)?

Lloyd's Register is of the view that biofouling inspection organisations should be independent. Assessment of regulatory compliance independent of the ship operator/manager is the established principle to prevent conflicts of interest. It should be noted that the draft guidelines do not provide requirements for the qualification/experience of the 'independent inspection organisation'.

## Development of a form of the Biofouling Management Plan

**Background**: As part of the work on the draft revised guidelines, appendix 3 provides guidance on how to prepare a Biofouling Management Plan (BFMP). It has been noted that a template format to give clear guidance for biofouling management would be beneficial. A new template format for this has been developed, which can be used as a starting point for further development.

**Implication**: If agreed, shipowners following the biofouling guidelines will be able to use the standard format of the BFMP.

**Application**: Ship designers, builders, ship operators/owners/charterers operating ships of 400 GT and above engaged in international voyages, excluding fixed or floating platforms, FSUs, and FPSOs.

## Development of a form of the Biofouling Record Book

**Background**: As part of the work on the draft revised guidelines, appendix 4 Biofouling Record Book (BFRB) requires an update to reflect the proposed Guideline revisions. A new BFRB template has been developed, which can be used as a starting point for further development.

**Implication**: If agreed shipowners following the biofouling guidelines will be able to use the standard format of the BFRB.

**Application**: Ship designers, builders, ship operators/owners/charterers operating ships of 400 GT and above engaged in international voyages, excluding fixed or floating platforms, FSUs, and FPSOs.

## Proposal for development of guidelines for verification of in-water cleaning systems

**Background**: To avoid the release of species with the potential of being invasive, and waste materials, during in-water cleaning, only verified in-water cleaning systems should be used. It is proposed that new guidelines for verification of in-water cleaning systems are developed as part of the existing output 1.21. At PPR 10 it is proposed to extend the target completion year to 2025 with amendment of the title to "Development of guidelines for verification of in-water cleaning systems" following completion of the review and update of the 2011 biofouling guidelines.

Key elements to be addressed when developing guidelines for verification tests of in water cleaning systems include:

- Removal rates of biofouling
- Capture rates of cleaning systems
- Effluents from in-water cleaning systems
- Limitations of in-water cleaning systems
- Determination of damage to anti-fouling coatings and paints
- Qualification of test organisations
- Data management and quality control
- Safety of operators and divers

It is proposed that the structure of verification of in-water cleaning systems could be divided into four phases (i) readiness evaluation; (ii) planning phase; (iii) verification phase; and (iv) evaluation & reporting phase.

**Implication**: If agreed shipowners following the revised 2011 *Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species,* will also be able to refer to these additional guidelines for the verification of in-water cleaning systems.

**Application**: Ship designers, builders, ship operators/owners/charterers operating ships of 400 GT and above engaged in international voyages, excluding fixed or floating platforms, FSUs, and FPSOs.

# Reduction of the impact on the Arctic of Black Carbon emissions from international shipping

**Background**: Black Carbon (BC) is a short-lived climate pollutant resulting in increased rates of sea ice melting when emissions reach the Arctic. IMO is currently considering amendments to MARPOL Annex VI to

reduce the impact on the Arctic of emissions of Black Carbon, to incorporate a requirement for ships to only use marine distillate fuel or other cleaner alternative fuels or methods of propulsion that are safe for ships when operating in or near to the Arctic along with the development of guidelines.

From the correspondence group discussions it was agreed that any development of a regulation or guideline should be goal-based and technology neutral.

Further work is expected on the guideline, based on resolution MEPC.342(77) *Protecting the Arctic from shipping black carbon emissions,* for data collection covering requirements for both new ships and existing ships, with separate guidelines for each.

To develop guidelines and regulations, the potential list of BC control measures (for further exploration) were narrowed down to:

1. a switch to distillate fuels;
2. a fuel standard based on aromatic content;
3. a BC Emission Control Area (ECA);
4. engine certification (long term);
5. further work to amend resolution MEPC.342(77); and
6. the mandatory installation of BC reduction technology, e.g. Diesel Particulate Filters (DPFs).

Slow steaming and port electrification as a potential BC control measure was ruled out due to lack of sufficient support, while engine age/maintenance issues could be recommended as best practice but probably could not be regulated.

**Implication**: If agreed shipowners will need to consider compliance with the additional regulatory requirements placed on ships operating in Arctic Waters.

**Application**: All ships entering Arctic waters.

# Standards for shipboard gasification of waste systems and associated amendments to regulation 16 of MARPOL Annex VI

Currently, the guidelines for thermal waste treatment devices and any amendments to regulation 16 of MARPOL Annex VI have been under discussion and review by the correspondence group for prevention of air pollution. A draft guideline has been developed to progress further at PPR .

## Draft guidelines for thermal waste treatment devices as equivalent means to incineration

**Background:** A new set of guidelines are under development for thermal waste systems. These Guidelines, are written on the basis of a technology neutral, goal based approach that can be applied to any thermal waste treatment device using, for example, gasification, hydrothermal carbonisation, pyrolysis, plasma or other thermal means for the disposal of permitted garbage and other shipboard wastes generated during a ship's normal service.

**Application:** All ships fitted with thermal waste treatment devices as equivalent to shipboard incinerators under Regulation 16 of MARPOL Annex VI.

**Impact:** Ship operators, owners and managers will need to be aware of the applicable requirements under the guidelines and obtain the relevant certification for any thermal waste devices that are to be fitted in lieu of shipboard incinerators.

## Development of amendments to MARPOL Annex VI and the NOx Technical Code on the use of multiple engine operational profiles for a marine diesel engine

Operational profiles, particularly for modern electronically controlled engines, can be relatively easily adapted to behave differently at various loads, thereby presenting an opportunity to optimise engine performance. There is a balance between NOx emissions and Specific Fuel Oil Consumption (SFOC), i.e., an engine which is optimised for SFOC will produce higher NOx emissions, with the converse also being true. These operating modes are referred to as “maps” and clarification is sought under which conditions a “map” can be changed for an engine without contravening Regulation 13.9 of MARPOL Annex VI.

A correspondence group looking at this was able to achieve general agreement on several issues, however development of specific amendments is still needed to be further discussed and agreed. The group was unable to reach an agreement on the topic of multiple engine operational profiles (EOPs) and not-to exceed (NTE) zones/off-cycle NOx emission control.

At PPR 10, the WG on the Prevention of Air Pollution from Ships is expected to be tasked with the following:

1. Progress of the key issues related to multiple EOPs and NTE, as identified by the correspondence group.
2. Consider drafting the text for a proposal towards a new chapter for the NOx Technical Code (NTC, Chapter 8) covering amendments on multiple EOPs and NTE zones.

## Revision of regulation 13.2.2 of MARPOL Annex VI to clarify that a marine diesel engine replacing a boiler shall be considered a replacement engine

A revision to regulation 13.2.2 of MARPOL Annex VI and the related 2013 guidelines has been proposed to clarify that replacing a boiler with a more efficient marine diesel engine will not be considered as a major conversion. The proposal also includes amendments to the 2013 guidelines relevant to Regulation 13.2.2 of MARPOL Annex VI.

### Draft Amendments to the *2013 Guidelines as required by regulation 13.2.2 of MARPOL Annex VI in respect of non-identical replacement engines not required to meet the Tier III limit* (resolution MEPC.230(65)) (related to steam engine replacement)

**Background:** Further clarification is required for application of the 2013 guidelines for replacement of an existing steam engine with a marine diesel engine. Thereby, additional amendments have been proposed specific to replacement of existing steam engine with a marine diesel engine.

**Application:** This will apply to any marine diesel engines of more than130kW that replaces a boiler.

**Impact:** If the proposed amendments are adopted, replacement of the steam engine on existing vessels will require compliance with Regulation 13 of MARPOL Annex VI, taking into account the additional requirements adopted within the relevant guidelines.

## Development of measures to reduce risks of use and carriage of heavy fuel oil as fuel by ships in Arctic waters

### Draft guidelines on measures to reduce risks of use and carriage of heavy fuel oil as fuel by ships in Arctic waters

**Background:** Further work is required to develop the "*Draft guidelines on measures to reduce risks of use and carriage of heavy fuel oil as fuel by ships in Arctic waters*", in particular clarifying the permissible conditions to be met for appropriate fuel tank arrangements and the applicability of the arrangements to particular ship types considering the requirements already in place in MARPOL Annex I and the Polar Code.

**Application:** It is proposed that the arrangement of the tanks carrying Heavy Fuel Oil (HFO) as a fuel will apply to all ship operators planning a voyage in the Arctic from 1 July 2024, or are seeking temporary waivers (between 1 July 2024 and 1 July 2029) for operations in the jurisdictional waters of their Flag State, if that state has a coastline which borders Arctic waters (as per MARPOL Annex I regulation 43A).

Ships built after 1 August 2010 with an aggregate oil fuel capacity of 600m$^3$ and above (as per MARPOL Annex I, Regulation 12a) or ships covered by the structural requirements of part II-A, chapter 1 Regulation 1.2 of the Polar Code will not be permitted to use these proposed tank arrangements when carrying HFO as a fuel in Arctic waters from 1 July 2029.

**Impact:** Shipowners, masters and designers of applicable ships carrying HFO as a fuel in Arctic waters must ensure that one of the following conditions must be met:

I. the distance between the hull and the fuel tank shall be not less than 760 mm; or
II. the hydrostatic balance condition shall be satisfied.

### Draft Amendment to the definition of HFO in MARPOL Annex I regulation 43.1.2

**Background:** In order to meet the 2020 sulphur limit new HFO's have become available for use. These HFO's have different properties, resulting in the existing HFO definition in MARPOL Annex I regulation 43.1.2 needing amendment. Detailed technical consideration has been undertaken to define an upper pour limit for HFO,

which forms part of the expanded scope of measures being developed to reduce the risks of the use and carriage of HFO as fuel by ships in Arctic waters.

**Application:** All ship operators planning a voyage in the Arctic from 1 July 2024 or, are seeking temporary waivers (between 1 July 2024 and 1 July 2029) for operations in the jurisdictional waters of their Flag State, if that state has a coastline which borders arctic waters (as per MARPOL Annex I regulation 43A).

**Impact:** If agreed shipowners and operators will be prohibited from carrying HFO in Arctic waters when being used as a bulk cargo, ballast or for use as a fuel if its upper pour limit is 0°C.

# Review of the IBTS Guidelines and amendments to the IOPP Certificate and Oil Record Book

At PPR 7, a new draft MEPC Circular including '2020 Guidelines for Systems for Handling Oily Wastes in Machinery Spaces of Ships Incorporating Guidance Notes for an Integrated Bilge Water Treatment System (IBTS)' was prepared.

However, further discussions and comments had been submitted to MEPC 76 and MEPC 78 on the subject matter, which have been further deferred to PPR 10 for review and consolidation. It is noted that MEPC 78 agreed in principle that forced evaporation was acceptable as a means for the disposal of oily bilge water and invited proposals to PPR 10 to add an appropriate regulation in MARPOL Annex I accordingly. It is expected that PPR may defer finalisation of this output to PPR 11.

## Draft 2020 Guidelines for systems for Handling Oily wastes in Machinery spaces of ships incorporating guidance notes for an Integrated Bilge Water Treatment System (IBTS)

**Background:** The IMO had agreed to develop a set of consolidated and revised IBTS Guidelines (by amalgamating all relevant IBTS guidance and circulars into a single document based on the 2008 revised guidelines and it's amendments - MEPC.1/Circ.642, MEPC.1/Circ.676 and MEPC.1/Circ.760) and consequential draft amendments to the IOPP Certificate (IOPPC) and the Oil Record Book (ORB), with the aim of bringing up to date the IBTS Guidelines and allowing industry to implement new technology and management options on existing and new ships.

**Application:** This will apply to any IBTS system onboard existing and new ships certified at the time of IOPP certificate renewal, following adoption of the guidelines.

**Impact:** If the proposed amendments are adopted, the 2020 guidelines will be considered for acceptance of any IBTS onboard ships as part of the IOPP certification under MARPOL Annex I.

## Draft Amendments to MARPOL Annex I, appendix II (Form of the IOPP certificate and Supplements) and appendix III (Form of Oil Record Book)

**Background:** The revision of the IBTS guidelines (the 2020 IBTS Guidelines) have consequential amendments to MARPOL Annex I, appendix II (Form of the IOPP certificate and supplements) and appendix III (Form of Oil Record Book) to incorporate other acceptable means for the disposal of oily bilge water (regulation 17.2.4).

**Application:** This will apply to all new and existing ships that require an IOPP certificate.

**Impact:** If the proposed amendments are adopted, the form of the IOPP Certificate and Oil Record Book (ORB) will be updated for new ships and at renewal surveys for existing ships. The changes will be limited to include any accepted alternative arrangement for disposal of the oily bilge water.

# Revision of MARPOL Annex IV and associated guidelines

**Background:** It has been noted that 97% of ships tested did not meet sewage effluent discharge standards despite using approved sewage treatment plants (STP), with poor performance or failure being common causes. Regular maintenance of STP, monitoring of STP effluent and strengthening the STP type approval test process can help reduce such poor performance and failures. MARPOL Annex IV has been reviewed by a Correspondence Group to reduce the rates of STP poor performance and failure.

## Draft Amendments to *2012 Guidelines on implementation of effluent standards and performance tests for sewage treatment plants (Type Approval Guidelines or TA Guidelines)*

The Correspondence Group has made additional draft amendments to the *2012 Guidelines on implementation of effluent standards and performance tests for sewage treatment plants (Type Approval Guidelines or TA Guidelines)* including: type test evaluations; indicative Monitoring of effluent at the time of type approval; integral Sewage Treatment Plant (STP) effluent sampling points, to check through life performance; and accreditation of laboratories undertaking type approval testing against ISO 17025.

Topics requiring future additional discussion include, technical details of type approval test conditions, influent parameters and accreditation of organisations conducting or overseeing the type approval testing process. On the latter point it has been proposed that Administrations should be enabled to confirm type approval testing processes directly.

## Draft Amendments to *Guidelines on implementation of MARPOL Annex IV for sewage treatment plants*

A Correspondence Group has made further draft amendments to the *Guidelines on implementation of MARPOL Annex IV for sewage treatment plants* including requirements for sewage sludge tanks and effluent sampling points, finalisation of performance testing in conjunction with the renewal survey and draft provisions for indicative monitoring devices, PPR is expected to consider them.

Outstanding topics include consideration of the definitions and references to new and existing ships, commissioning testing and issuance/endorsement of the International Sewage Prevention Pollution Certificate and extension of the scope of application for sewage management plans and record books to all ships with a STP.

## Draft Amendments to MARPOL Annex IV

A Correspondence Group has made additional draft amendments to MARPOL Annex IV including:

- Prohibiting the use of comminuting and disinfecting systems (CDSs) on new ships, only allowing existing ships already equipped with CDSs to replace this equipment.
- Setting requirements for replacing existing ships sewage systems, in particular noting the same requirements as those for new ships should be applied; when replacing a sewage sludge holding tank, initial guidance should be sought from the manufacturer before a STP is installed.
- Requiring all existing ships covered by MARPOL Annex IV to maintain a sewage management plan and sewage record book (noting this will require agreement from MEPC to extend the scope of work).

Discussions on effluent sampling points, indicative monitoring and performance test requirements were not concluded and will be further discussed. It is anticipated that discussions will focus on:

- Requirements for mandatory performance testing for existing ships.
- Checking of the Sewage Management Plan and Record Book by the Administration or Recognised Organisation.
- Requirements for manufacturers to revise the Onboard Management Manual to ensure STP performance is not affected.
- Indicative monitoring requirements and whether they should be mandatory or voluntary for existing ships.

**Lloyd's Register's View**

Lloyd's Register is of the view that testing facilities should be encouraged to be ISO 17025 compliant to ensure uniformity. It is of note that some testing facilities appear to be waived from the requirement of testing it to the ISO QA standard and this runs the danger of not having a level playing field between manufacturers.

In regard to the performance testing for STPs onboard existing ships, Lloyd's Register is of the view that if performance tests are to be made mandatory for existing ships, STPs should only be tested to the standard that they have been originally certified against.

## Proposal to introduce the definition of zero discharge system and to include the use of zero discharge system as an exemption from MARPOL Annex IV

**Background:** The operation and maintenance of STPs installed on existing ships are relatively complicated, and the effluent quality is easily affected. To comply with MARPOL Annex IV ships must have either a STP, holding tank or CDS. Ecological toilets fall out of scope of MARPOL Annex VI and are therefore currently a non-compliant option. However, their use has been successfully demonstrated on a number of ships operating in inland waters in China. Ecological toilets have no drainage, and sewage can be completely decomposed into vapour, carbon dioxide and other gases by microorganisms. Maintenance of the sanitary unit is relatively simple by means of regular replacement of microorganisms. It is proposed to include a definition of Zero Discharge systems in MARPOL Annex IV to enable the use of such systems onboard as an exemption to the current requirements.

**Application:** New ships ≥ 400 GT or <400 GT and certified to carry > 15 persons, existing ships ≥ 400 GT or <400 GT and certified to carry > 15 persons built on or after 28 September 2008.

**Impact:** If approved, shipowners will be able to use zero discharge systems (such as ecological toilets) onboard ships in lieu of STPs, holding tanks or CDS.

**Lloyd's Register's View**

Lloyd's Register is of the view that the proposal for use of zero discharge system as an exemption from MARPOL Annex IV needs further review and consideration. There are concerns noted regarding the following topics within the proposal:

- Crew training and overall maintenance of the system for daily use
- Discharge of the by-products (small amounts of ammonia)
- Maintenance and discharge of unused microorganisms
- Exemption of vessel from survey and certification under MARPOL Annex IV

LR also believes the following points should be addressed specifically on survey and certification:

- With reference to the certification, there needs to be a record that this equipment is fitted onboard, and Flag Authorities have given an exemption. Otherwise, there will be problems with Port State Control.
- With reference to the survey, there will need to be checks that the approved system is working as approved, and records maintained.

# Follow-up work emanating from the Action Plan to address marine plastic litter from ships

## Loss and Discharge of Fishing Gear

Fishing gear may be lost or discarded at sea, adding to the growing quantity of plastic waste at sea and on beaches. As part of the IMO's action plan to address marine plastic litter a correspondence group has been established to address marine plastic pollution from lost or discarded fishing gear.

Based on the discussions in the correspondence group, it is anticipated that the following deliverables will be further developed:

- Draft Amendments to MARPOL Annex V;
- Amendments to the 2017 Guidelines for the implementation of MARPOL Annex V; and
- Development of Guidelines for the development of a database to manage and record the loss or discharge of fishing gear.

### Draft amendments to MARPOL Annex V on the loss and discharge of fishing gear

Fishing gear may be lost or discarded at sea, adding to the growing quantity of plastic waste at sea and on beaches. As part of the IMO's action plan to address marine plastic litter a correspondence group has been established to address marine plastic pollution from lost or discarded sighing gear.

To enhance the reporting of the loss or discharge of fishing gear, and improve the understanding of the problem at a global level, the following data collection objectives were agreed:

- To better understand the spatial distribution of lost/discharged fishing gear and its contribution to marine plastic.
- To support robust data analysis (at international and national levels) to monitor trends and prevent and reduce lost and discharged fishing gear.
- To facilitate the identification of fishing gear which may present a hazard to surface and sub surface navigation.

- To better assess the level and impact of marking fishing gear and the compliance of such marking requirements by international and regional organisations.

Based on the continued discussions, it is anticipated that the proposed amendments to MARPOL Annex V, including the following, will be further developed:

- Amendment to regulation *7.1.3 - Exceptions*
  - Refining the exception of fishing gear being prohibited from discharge into the sea from in or outside special areas and fixed or floating platforms to simply loss, rather than accidental loss of fishing gear.
- Regulation *10 - Placards, garbage management plans, and garbage record-keeping*
  - Amending 10.6 reflecting the proposed options for continuous and periodic data reporting and the possible inclusion of recreational vessels.
  - Including new regulations 10.7 - 10.10 as consequential amendments to reflect the new requirements.
  - Including a new Appendix III on data to be collected and submitted to the database.

### Development of Guidelines for the development and management of the lost or discharged fishing gear IMO database

This is to facilitate data collection within the GISIS database and to support the implementation of the amended MARPOL regulations.

### Amendments to the 2017 Guidelines for the implementation of MARPOL Annex V

The amendments specifically include section *2.2 Fishing Gear* to provide additional guidance on data reporting and details to promote more consistent implementation.

## Reducing the environmental risk associated with the maritime transport of plastic pellets (Nurdles)

In response to the MV X-Press Pearl incident in 2021 (which resulted in the spillage of 11,000 tonnes of plastic pellets off the shore of Sri Lanka) a correspondence group has been tasked to consider options for reducing the environmental risk associated with the maritime transport of plastic pellets.

The following primary measures were discussed and agreed as appropriate for development:

- notification of containers containing plastic pellets in order for them to be identified;
- stowage requirements/recommendations for containers containing plastic pellets;
- packing requirements/recommendations for plastic pellets carried at sea.

It was noted that CCC 8 had endorsed amendments to SOLAS chapter V and Article V of protocol I of the MARPOL Convention regarding mandatory reporting of freight containers lost or observed at sea. As such this measure was determined to be out of scope of the discussions of the correspondence group.

Based on the agreed primary measures and additional discussions of the correspondence group it is anticipated that the following deliverables will be further developed:

- A Mandatory Instrument.
- Draft circular recommending carriage requirements of plastic pellets by sea.
- Development of best practice guidelines to clean up plastic pellet spills.

### Mandatory Instrument to reduce the environmental risk from the maritime transport of plastic pellets

Although it was agreed that a mandatory instrument was required, there was no conclusion on the most appropriate instrument. Further experience gained from the implementation of voluntary measures may help in the future consideration of the best mandatory option. Further discussion on this matter is expected on this at PPR 10.

### Development of a draft Circular on the carriage of plastic pellets by sea

It was concluded that a draft circular should be developed containing recommendations for the carriage of plastic pellets by sea, covering packaging, notification and stowage. It is therefore anticipated that PPR 10 will further develop the draft circular and invite MEPC 80 to instruct CCC 9 to undertake further work.

### Development of best practice guidelines to clean up spills of plastic pellets

Discussion is also anticipated on the possible development of best practice guidelines to clean up plastic pellets from ship-source spills, based on previous experiences of such spills.

# Unified interpretation (UI) of provisions of IMO environment-related conventions

## Unified interpretation for the form of the Bunker Delivery Note referred to in regulation 18 (Fuel oil availability and quality) of MARPOL Annex VI

The proposed UI will be considered with potential to finalise at PPR. During this session some discussion is expected on:

- Whether the BDN is a certificate and if sections 4 and 5 of FAL.5/Circ.39/Rev.2 (*IMO Guidelines for the use of electronic certificates*) are appropriate to reference in this UI.
- How signatures from the bunker supplier and chief engineer/master will be handled in an electronic BDN system.

**Background**: The Bunker Delivery Note (BDN) is a signed declaration from the fuel oil suppliers representative to confirm that the fuel oil delivered to, in use or carried for use onboard ships meets the correct requirements as stated in MARPOL Annex VI. There is no stipulation in MARPOL Annex VI on the form (physical or electronic) of the BDN, however typically they are provided in physical hard copy. Those BDNs that are produced and managed electronically face recognition challenges. A UI is proposed to confirm that BDNs are acceptable in either physical or electronic form providing they meet the requirements of MARPOL Annex VI.

**Application**: All ships ≥ 400 GT and every fixed and floating drilling rig or other platform.

**Implication**: If accepted shipowners could choose to use either a physical or electronic BDN, with assurance that it would be acceptable in either format.

## Clarification on the issue regarding "Date of construction" in the Form of International Ballast Water Management Certificate (IBWMC)

It is noted that clarification is required on the issue regarding the item "Date of construction" in the Form of International Ballast Water Management Certificate (IBWMC) in appendix I of the BWM Convention for a ship which has undergone a major conversion. Therefore, a proposal with draft unified interpretations for "Date of construction" in the Form of IBWMC and related provisions of the BWM Convention is submitted for further discussion and finalisation at this sub-committee session.

### Recording "Date of construction" and "Date of major conversion" on the IBWM Certificate

**Background**: The Ballast Water Management (BWM) Convention provides definitions for both "Constructed" and "Major conversion". However the Form of the International Ballast Water Management Certificate (IBWMC) only incudes provision for the "Date of construction" to be noted. When a ship undergoes a major conversion and needs a new IBWMC it is unclear if the original "Date of construction" field should be updated to show the "Date of major conversion". Two options are proposed to differentiate between the date of major construction and date of construction on the IBWMC.

**Application**: All ships and offshore structures (i.e. vessels of any type operating in the aquatic environment, including submersibles, floating craft, floating platforms, floating storage units (FSUs) and floating production, storage and offloading (FPSO) units) that load and discharge ballast.

**Implication**: Shipowners and operators will need to ensure that for any ships undergoing major conversion, the date of commencement of works for major conversion are clearly noted on the IBWMC in accordance with the agreed interpretation.

### Application of BWM standards after a ship has undergone a Major Conversion

**Background**: BWM should be conducted following the D-2 standard:

- For ships constructed on or after 8 September 2017, or
- For ships constructed before 8 September 2017 from the first or second IOPPC renewal survey.

However, for ships constructed before 8 September 2017 and subsequently having undergone major conversion on or after 8 September 2017, it is unclear when the D-2 standard should be applied.
It is proposed that if the ship has undergone a major conversion after the first or second IOPPC renewal survey the ship must meet the D-2 standard for BWM from the date of the first or second IOPPC renewal survey.

**Application**: All ships and offshore structures (i.e. vessels of any type operating in the aquatic environment, including submersibles, floating craft, floating platforms, floating storage units (FSUs) and floating production, storage and offloading (FPSO) units) that load and discharge ballast.

**Implication**: For ships constructed before 8 September 2017, and having undergone a major conversion after this date, the ship should be considered as being constructed on or after this date and will need to comply with the D-2 BWM standard. However:

- If the major conversion has taken place before the first or second IOPPC renewal survey (as noted in Regulation B-3.10) the ship should meet the D-2 standard from the date of completion of the major conversion.

- If the major conversion has taken place after the first or second IOPPC renewal survey (as noted in Regulation B-3.10) the ship should meet the D-2 standard from the date of completion of the first or second IOPCC renewal survey.

# Any other business

## Matters relating to ballast water management and anti-fouling systems

### Development of a Protocol for Verification of Ballast Water Compliance Monitoring Devices

PPR 10 will be invited to note the progress achieved by the Working Group at PPR 9 and to consider the report of the Correspondence Group with a view to finalising the draft protocol for verification of ballast water compliance monitoring devices at this session; depending on the outcome of the discussion this may be referred to the working group on marine biosafety.

## Matters related to volatile organic compound emissions and other matters relating to prevention of air pollution from ships

### Volatile Organic Compounds (VOCs)

The report from the correspondence group highlights that the following points have been agreed to progress more work on reduction of Volatile Organic Compounds (VOC) emissions:

- Scope of work shall be based on an examination of the existing regulatory framework.
- Reduction of VOC emissions can only be achieved by active participation of shore terminals to receive VOCs from tankers.

It is noted that there are also outstanding issues to be further discussed, as shown below:

- Method to estimate VOC emissions.
- Any amendments to MARPOL.
- Finalisation of scope.

PPR will consider the above progress and may refer the matter for further consideration to the working group on prevention of air pollution from ships.

## Any additional matters

### Proposal to revise the 2015 Guidelines for the development of the Inventory of Hazardous Materials (IHM)(resolution MEPC.269(68))

**Background**: A proposal has been made to amend the *2015 Guidelines for the development of the Inventory of Hazardous Materials* (Resolution MEPC.269(68), to include reference to the adopted amendment to the Anti Fouling System (AFS) Convention (Resolution MEPC.331(76)) which introduced controls on Cybutryne from 1 January 2023.

**Implication**: If agreed the AFS containing Cybutryne as a biocide, with a threshold value of 1,000 mg/kg (for samples taken directly from hull) or 200 mg/kg (for samples taken from wet paint containers), will be prohibited from being newly installed into a ships structure or fitted equipment if over the stated threshold

amount. If any existing ship has this material included in the ships structure or fitted equipment in quantities over the threshold amount, it must be recorded in the IHM.

**Application**: All ships, (submersibles, floating craft, floating platforms, self-elevating platforms, Floating Storage Units (FSUs), and Floating Production Storage and Offloading Units (FPSOs), including a vessel stripped of equipment or being towed), ≥500 GT operating on international voyages.

### Fuel oil sampling point for the emergency diesel generator fuel oil tank (Regulation 14.10 of MARPOL Annex VI and associated guidelines (MEPC.1/Circ.864/Rev.1))

MEPC.1/Circ.864/Rev.1 provides advice on the location of the designated fuel sampling point or points. A proposal has been submitted suggesting that due to the limited space between the fuel oil tank and the emergency generator, it is necessary to address in the *2019 Guidelines for on board sampling for the verification of the sulphur content of the fuel oil used on board ships* the particular case of the emergency generator fuel oil sampling point and proposes a revision of the circular.

### Re-certification of marine diesel engines on-board of ships under regulation 13 of MARPOL Annex VI and NOx Technical Code 2008

A submission has been made to highlight the need to introduce a definition of “retrofit” and a procedure within the NOx Technical Code to allow existing ships to be retrofitted with modern engine technologies when improving their energy efficiency, whilst maintaining their Tiers for nitrogen oxide emission regulations.

### Proposal to amend the 2019 Guidelines for on board sampling for the verification of the sulphur content of the fuel oil used on board ships

**Background**: A proposal has been made to amend the 2019 Guidelines for on board sampling for the verification of the sulphur content of the fuel oil used on board ships (MEPC.1/Circ.864/Rev.1), to include the following additional requirements:

1. Fuel-oil sample location conditions for ships operating in cold waters.
2. Fuel oil sample to be taken by the method of continuous trickling.
3. Sub-sample size to be typically 500 to 750 ml and not less than 400 ml in any case.

**Implication**: If agreed, ship operators and managers need to be aware that the fuel sampling will also need to consider the above newly proposed requirements while doing the fuel sample for compliance against Regulation 14 of MARPOL Annex VI.

**Application**: All ships, (submersibles, floating craft, floating platforms, self-elevating platforms, Floating Storage Units (FSUs), and Floating Production Storage and Offloading Units (FPSOs), including a vessel stripped of equipment or being towed).

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