St. Kitts and Nevis International Ship Registry

Flying the Flag of the Federation Worldwide

Stolt-Nielsen House
1-5 Oldchurch Road
Romford
RM7 0BQ
UK

Tel: +44 (0) 1708 380400
Fax: +44 (0) 1708 380401
Email: mail@StKittsNevisRegistry.net

www.StKittsNevisRegistry.net

Circular Letter to Maritime Registrars, Ship Owners and Ship Operators

Maritime Circular No. MC/87/19 DATE: 26 JULY 2019

IMO GUIDANCE ON 2020 SULPHUR LIMIT

This Maritime Circular should be read in conjunction with the Maritime Circulars MC 77/18, MC 78/18 and MC 79/18.

The International Maritime Organization (IMO) has approved and adopted a comprehensive set of guidance and guidelines to support the consistent implementation of the lower 0.50% limit on sulphur in ship' fuel oil, which will enter into effect from the 1st of January 2020. The related draft MARPOL amendments were also approved.

The 1st of January 2020 implementation date was adopted in 2008 and confirmed in 2016. IMO has been working with Member States and the industry to support implementation of the new limit, including the preparation of amendments to MARPOL Annex VI and development of guidance and guidelines.

The IMO Marine Environment Protection Committee (MEPC) at its 73rd session in October 2018 had already approved ***the Guidance on the Development of a Ship Implementation Plan for the Consistent Implementation of the 0.50% Sulphur Limit under MARPOL Annex VI*** (MEPC.1/Circ.878). The new 0.50% limit (reduced from 3.50% currently) on sulphur in ships' fuel oil will be in force under IMO's MARPOL treaty with benefits for the environment and human health.

The complementary MARPOL amendment will **prohibit the carriage of non-compliant fuel** oil for combustion purposes for propulsion or operation on board a ship, unless the ship has an Exhaust Gas Cleaning System ("scrubber") fitted. Installing a scrubber is accepted by flag States as an alternative means to meet the sulphur limit requirement. The complementary amendment is expected to enter into force on the 1st of March 2020, as per Resolution MEPC.305(73) on ***Amendments to MARPOL Annex VI (Prohibition on the Carriage of Non-Compliant Fuel Oil for Combustion Purposes for Propulsion or Operation on Board a Ship)***. The amendment does not change in any way the entry into force date of the 0.50% limit from the 1st of January 2020. It is intended as an additional measure to support consistent implementation and compliance and provide a means for effective enforcement by States, particularly Port State control.

The following instruments were additionally adopted or approved at the 74th session of the IMO Marine Environment Protection Committee (MEPC) in May 2019 and at the 101st session of the IMO Maritime Safety Committee (MSC) in June 2019:

- Resolution MEPC.320(74) on ***the 2019 Guidelines for Consistent Implementation of the 0.50% Sulphur Limit under MARPOL Annex VI.*** These Guidelines provide the following content for implementation of the 2020 Global Sulphur Cap, such as properties of fuel oil and the impact on fuel and machinery systems resulting from new fuel types or blends, verifications, control and actions by Flag States and Port State control, a standard for notification of fuel oil non-availability (Fuel Oil Non-Availability Report (FONAR); and possible safety implications relating to fuel oils meeting the 0.50% m/m sulphur limit.

- Resolution MEPC.321(74) on ***the 2019 Guidelines for Port State Control under MARPOL Annex VI Chapter 3 (2019 PSC Guidelines)***. These Guidelines are meant to provide consistency in conducting PSC inspections and to provide guidance to PSC officers on verifying compliance with the various requirements of MARPOL Annex VI including Regulation 13 on *Nitrogen Oxides (NOx)* and Regulation 14 on *Sulphur Oxides (SOx) and Particular Matter*. These PSC Guidelines will revoke *the 2009 Guidelines for Port State Control under the Revised MARPOL Annex VI* adopted by the Resolution MEPC. 181(59) from the 1st of January 2020.

- Circular MEPC.1/Circ.881 on ***the Guidance for Port State Control on Contingency Measures for Addressing Non-Compliant Fuel Oil.*** If a ship is unable to obtain compliant fuel oil despite its best efforts, the ship shall submit a Fuel Oil Non-Availability Report (FONAR) to Flag States and Port States, as stated in *the 2019 Guidelines for Consistent Implementation of the 0.50% Sulphur Limit under MARPOL Annex VI*. Under this circumstance, to address the case where the ship loads non-compliant fuel oil on board, it was agreed to issue this Circular.

  This Guidance invites, at next port of call, Port State to consider whether the non-compliant fuel oil may be discharged to the port or retained on board, taking into account of environmental, safety, operational and logical implications. The Port State, the Flag State and the ship are also invited to work together to agree on the most appropriate solution to address the non-compliant fuel oil on board.

- A revised Circular MEPC.1/Circ.864/Rev.1 on ***the 2019 Guidelines for on Board Sampling for the Verification of the Sulphur Content of the Fuel Oil Used on Board Ships***, which revokes MEPC.1/Circ.864. IMO has issued Guidance addressing the location of on board fuel sampling points and the handling of samples for the testing of sulphur content for MARPOL Annex VI compliance. IMO recommended the use of designated sampling points, as agreed with the vessel's Flag State. If there were no designated sampling points, advice should be given on selecting suitable sampling locations. The approved amendment imposes a new retroactive requirement for designating, or if necessary fitting, sampling points to facilitate taking the in-use sample as required by the Regulation 14 of MARPOL Annex VI. Ships will be required to designate sampling points no later than the first IAPP renewal survey that occurs 12 months or more after the entry into force of the regulation, expected to be in 2021. The 2019 Guidelines for on-board sampling describes how and where the designated sampling points are to be fitted.

- Circular MEPC.1/Circ.882 on ***Notification on Early Application of the Verification Procedures for a MARPOL Annex VI Fuel Oil Sample (Regulation 18.8.2 or Regulation 14.8),*** which aims at ensuring a consistent approach to verifying the sulphur limit of the fuel oil until the entry into force of the approved amendments to the Appendix VI of MARPOL Annex VI in 2021.

- A revised Circular MEPC.1/Circ.795/Rev.4 on ***Unified Interpretation to MARPOL Annex VI***. This Unified Interpretation (UI), interpreting the Regulation 14.1 of MARPOL Annex VI, states that the requirement that fuel oil used or carried for use on board a ship not exceed 0.50% should also be applied to the fuel oil of emergency equipment, e.g. lifeboats and emergency generators.

- Circular MSC-MEPC.5/Circ.15 on ***the Delivery of Compliant Fuel Oil by Suppliers***, as approved by MEPC 74 and MSC 101. The Circular recommends that Member States should take appropriate action to ensure that fuel oil suppliers deliver compliant fuel oil and should urge fuel oil suppliers take into account the following guidance, as relevant in MEPC.1/Circ.875 on *Guidance on Best Practice for Fuel Oil Purchasers/Users for Assuring the Quality of Fuel Oil Used on Board Ships* and MEPC.1/Circ.875/Add.1 on *Guidance on Best Practice for Fuel Oil Suppliers for Assuring the Quality of Fuel Oil Delivered to Ships.*

- Circular MSC-MEPC.2/Circ.17 on the ***2019 Guidelines for the Carriage of Blends of Biofuels and MARPOL Annex I Cargoes***, as approved by MEPC 74 and MSC 101. MEPC

recognized the need to make consequential amendments to *the 2011 Guidelines for the Carriage of Blends of Petroleum Oil and Biofuels* (MEPC.1/Circ.761), as a result of the inclusion of a new Annex 12 on energy-rich fuels in the MEPC.2/Circular, and had included a reference to Regulation 5.2 of SOLAS Chapter VI regarding the prohibition of the blending of bulk liquid cargoes and production processes during sea voyage. Ship owners, managers, operators of ships carrying bulk blends of biofuels and MARPOL Annex I cargoes should take into consideration above Guidelines to ensure the products are shipped under the correct Annex of MARPOL.

- Circular MEPC.1/Circ.883 on the ***Guidance on Indication of Ongoing Compliance in the Case of the Failure of a Single Monitoring Instrument, and Recommended Actions to Take if the Exhaust Gas Cleaning System (EGCS) Fails to Meet the Provisions of the 2015 EGCS Guidelines (Resolution MEPC.259(68))*.** The Guidance specifies procedures against a short-term temporary emission exceedance, and actions to take if long-term exceedance occurs, i.e. changeover to compliant fuel oil and notification to Flag States and Port States. This Guidance is meant for ship operators, Port States and Administrations on how to address scrubber malfunction, short-term exceedances or interim indications of ongoing compliance in the case of sensor failure.

This Administration invites ship owners and ship operators to familiarise themselves with objectives of the above mentioned Resolutions and Circulars, and take further actions as requested.

For more detailed information on the Sulphur 2020 Limit and its implementation, please visit the IMO Media Centre webpage on *Sulphur 2020 – Cutting Sulphur Oxide Emissions*:

http://www.imo.org/en/MediaCentre/HotTopics/Pages/Sulphur-2020.aspx

If you have any questions on this matter, please do not hesitate to contact us.

Yours truly,

Liam Ryan
International Registrar of Shipping and Seamen

تعديلات عام 2018 على مرفق بروتوكول عام 1997 لتعديل الاتفاقية الدولية
لمنع التلوث من السفن لعام 1973 ،
في صيغتها المعدّلة ببروتوكول عام 1978 المتعلق بها

تعديلات على المرفق VI لاتفاقية ماربول

(حظر نقل الوقود الذي لا يستوفي المعايير
المخصص للاحتراق لأغراض الدفع أو التشغيل على متن السفينة)

القرار MEPC.305(73)

修正《经 1978 年议定书修订的〈1973 年国际防止船舶造成污染公约〉》的 1997 年议定书附则的 2018 年修正案

《防污公约》附则 VI 修正案

(禁止船上载运用于燃烧以推进或操作的非合规燃油)

第 MEPC.305(73)号决议

2018 AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1997 TO AMEND THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973, AS MODIFIED BY THE PROTOCOL OF 1978 RELATING THERETO

Amendments to MARPOL Annex VI

(Prohibition on the carriage of non-compliant fuel oil for combustion purposes for propulsion or operation on board a ship)

RESOLUTION MEPC.305(73)

AMENDEMENTS DE 2018 À L'ANNEXE DU PROTOCOLE DE 1997 MODIFIANT LA CONVENTION INTERNATIONALE DE 1973 POUR LA PRÉVENTION DE LA POLLUTION PAR LES NAVIRES, TELLE QUE MODIFIÉE PAR LE PROTOCOLE DE 1978 Y RELATIF

Amendements à l'Annexe VI de MARPOL

(Interdiction de transporter du fuel-oil non conforme en vue de l'utiliser comme combustible pour la propulsion ou l'exploitation du navire)

RÉSOLUTION MEPC.305(73)

ПОПРАВКИ 2018 ГОДА К ПРИЛОЖЕНИЮ К ПРОТОКОЛУ 1997 ГОДА ОБ ИЗМЕНЕНИИ МЕЖДУНАРОДНОЙ КОНВЕНЦИИ ПО ПРЕДОТВРАЩЕНИЮ ЗАГРЯЗНЕНИЯ С СУДОВ 1973 ГОДА, ИЗМЕНЕННОЙ ПРОТОКОЛОМ 1978 ГОДА К НЕЙ

Поправки к Приложению VI к Конвенции МАРПОЛ

(Запрет на перевозку не соответствующего требованиям судового топлива, предназначенного для сгорания с целью обеспечения движения или эксплуатации судна)

РЕЗОЛЮЦИЯ MEPC.305(73)

ENMIENDAS DE 2018 AL ANEXO DEL PROTOCOLO DE 1997 QUE ENMIENDA EL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACIÓN POR LOS BUQUES, 1973, MODIFICADO POR EL PROTOCOLO DE 1978

Enmiendas al Anexo VI del Convenio MARPOL

(Prohibición de transportar fueloil no reglamentario para combustión destinado a ser utilizado en la propulsión o el funcionamiento a bordo del buque)

RESOLUCIÓN MEPC.305(73)

القرار MEPC.305(73)
(المعتمد في 26 تشرين الأول/أكتوبر 2018)

تعديلات على مرفق بروتوكول عام 1997 لتعديل الاتفاقية الدولية لمنع التلوث من السفن لعام 1973 ، في صيغتها المعدّلة ببروتوكول عام 1978 المتعلق بها

تعديلات على المرفق VI لاتفاقية ماربول

(حظر نقل الوقود الذي لا يستوفي المعايير
المخصص للاحتراق لأغراض الدفع أو التشغيل على متن السفينة)

إن لجنة حماية البيئة البحرية ،

إذ تشير إلى المادة 38(أ) من اتفاقية إنشاء المنظمة البحرية الدولية التي تتعلق بوظائف لجنة حماية البيئة البحرية التي أسندتها إليها اتفاقيات دولية لمنع التلوث البحري من السفن ومكافحته ،

وإذ تأخذ علماً بالمادة 16 من الاتفاقية الدولية لمنع التلوث من السفن لعام 1973 ، في صيغتها المعدّلة ببروتوكولي عامي 1978 و 1997 المتعلقين بها (اتفاقية ماربول) ، التي تحدد إجراءات التعديل وتُسنِد إلى الهيئة المختصة في المنظمة مهمة دراسة التعديلات عليها بغية اعتمادها من قِبل الأطراف ،

وقد نظرت ، في دورتها الثالثة السبعين ، في تعديلات مقترحة على المرفق VI لاتفاقية ماربول بشأن حظر نقل الوقود الذي لا يستوفي المعايير المخصص للاحتراق لأغراض الدفع أو التشغيل على متن السفينة ،

1 تعتمد ، بموجب المادة 16(2)(د) من اتفاقية ماربول ، التعديلات على المرفق VI لاتفاقية ماربول التي يرد نصّها في مرفق هذا القرار ؛

2 تقرر ، بموجب المادة 16(2)(و)(iii) من اتفاقية ماربول ، اعتبار التعديلات مقبولة في 1 أيلول/سبتمبر 2019 ، ما لم يقم ، قبل ذلك التاريخ ، ما لا يقلّ عن ثلث الأطراف أو أطراف تشكِّل أساطيلها التجارية مجتمعةً 50 % على الأقل من الحمولة الإجمالية للأسطول التجاري العالمي ، بإبلاغ المنظمة اعتراضها على التعديلات ؛

3 تدعو الأطراف إلى أن تأخذ علماً بأن التعديلات المذكورة ستدخل حيّز التنفيذ ، بموجب المادة 16(2)(ز)(ii) من اتفاقية ماربول ، في 1 آذار/مارس 2020 فور قبولها بموجب الفقرة 2 أعلاه ؛

4 تطلب من الأمين العام ، لأغراض المادة 16(2)(هـ) من اتفاقية ماربول ، أن يرسل إلى جميع الأطراف في اتفاقية ماربول نسخاً مصدّقة من هذا القرار ونصّ التعديلات الوارد في المرفق ؛

5 تطلب كذلك من الأمين العام أن يرسل إلى أعضاء المنظمة غير الأطراف في اتفاقية ماربول نسخاً من هذا القرار ومرفقه .

مرفق

تعديلات على المرفق VI لاتفاقية ماربول

**(حظر نقل الوقود الذي لا يستوفي المعايير
المخصص للاحتراق لأغراض الدفع أو التشغيل على متن السفينة)**

المرفق VI

لوائح منع تلوث الهواء من السفن

اللائحة 14
أكاسيد الكبريت والجُسيمات

المتطلّبات العامة

1 يُستعاض عن الفقرة 1 بما يلي :

"1 يجب ألاّ يتجاوز المحتوي الكبريتي لزيت الوقود الذي يُستخدَم على متن السفن أو الذي يُنقَل لأغراض الاستخدام على متن السفن 0,50 % كتلة/كتلة ."

المتطلّبات ضمن مناطق ضبط الانبعاثات

2 يُستعاض عن الفقرة 3 بما يلي :

"3 لأغراض هذه اللائحة ، فإن منطقة لضبط الانبعاثات هي أي منطقة بحرية ، بما في ذلك أي منطقة مينائية ، تعيّنها المنظمة بموجب المعايير والإجراءات المنصوص عليها في التذييل III لهذا المرفق . ومناطق ضبط الانبعاثات بمقتضى هذه اللائحة هي التالية :

.1 منطقة بحر البلطيق ، على النحو المعرّف في اللائحة 2.11.1 من المرفق I لهذه الاتفاقية ؛

.2 منطقة بحر الشمال ، على النحو المعرّف في اللائحة 6.14.1 من المرفق V لهذه الاتفاقية ؛

.3 منطقة أميركا الشمالية لضبط الانبعاثات ، على النحو الموصوف بالإحداثيات الواردة في التذييل VII لهذا المرفق ؛

.4 منطقة البحر الكاريبي التابعة للولايات المتحدة لضبط الانبعاثات ، على النحو الموصوف بالإحداثيات الواردة في التذييل VII لهذا المرفق ."

3 يُستعاض عن الفقرة 4 بما يلي :

"4 خلال عمل السفن ضمن منطقة لضبط الانبعاثات ، يجب ألاّ يتجاوز المحتوي الكبريتي لزيت الوقود الذي يُستخدَم على متنها 0,10 % كتلة/كتلة ."

4 يُحذَف العنوان الفرعي "شرط المراجعة" وتُحذَف الفقرات 8 و 9 و 10 .

التذييل I

نموذج الشهادة الدولية لمنع تلوث الهواء (شهادة IAPP) (اللائحة 8)

ملحق الشهادة الدولية لمنع تلوث الهواء (شهادة IAPP)

5 يُستعاض عن الفقرتين 1.3.2 و 2.3.2 بما يرد أدناه وتُضاف الفقرة 3.3.2 الجديدة على النحو التالي :

"1.3.2 عندما تعمل السفينة خارج منطقة لضبط الانبعاثات محددة في اللائحة 3.14 ، تستخدم هذه السفينة ما يلي :

.1 زيت وقود ذو محتوى من الكبريت ، على النحو الموثّق في مذكرات توريد زيت الوقود ، لا يتجاوز القيمة الحدّية التي تبلغ 0,50 % كتلة/كتلة ، ..... ☐

.2 و/أو ترتيب بديل مكافئ معتمد بموجب اللائحة 1.4 على النحو المدرج في البند 6.2 يكون على الأقل ذا فعالية من حيث تخفيض انبعاثات أكاسيد الكبريت مقارنةً باستخدام زيت وقود ذي محتوى من الكبريت تبلغ قيمته الحدّية 0,50 % كتلة/كتلة ..... ☐

2.3.2 عندما تعمل السفينة داخل منطقة لضبط الانبعاثات محددة في اللائحة 3.14 ، تستخدم هذه السفينة ما يلي :

.1 زيت وقود ذو محتوى من الكبريت ، على النحو الموثّق في مذكرات توريد الوقود ، لا يتجاوز القيمة الحدّية التي تبلغ 0,10 % كتلة/كتلة ..... ☐

.2 و/أو ترتيب بديل مكافئ معتمد بموجب اللائحة 1.4 على النحو المدرج في البند 6.2 يكون على الأقل ذا فعالية من حيث تخفيض انبعاثات أكاسيد الكبريت مقارنةً باستخدام زيت وقود ذي محتوى من الكبريت تبلغ قيمته الحدّية 0,10 % كتلة/كتلة ..... ☐

3.3.2 بالنسبة للسفينة غير المجهّزة بترتيب مكافئ معتمد بموجب اللائحة 1.4 على النحو المُدرَج في اللائحة 6.2 ، يجب ألاّ يتجاوز المحتوي الكبريتي لزيت الوقود المنقول لكي يُستخدَم على متنها 0,50 % كتلة/كتلة ، على النحو الموثّق في مذكرات توريد الوقود..... ☐ "

第 MEPC.305(73)号决议
（2018 年 10 月 26 日通过）

修正《经 1978 年议定书修订的〈1973 年国际防止船舶造成污染公约〉》的 1997 年议定书附则修正案

《防污公约》附则 VI 修正案

（禁止船上载运用于燃烧以推进或操作的非合规燃油）

海上环境保护委员会，

忆及《国际海事组织公约》关于防止和控制船舶造成海洋污染的国际公约赋予海上环境保护委员会的职能的第 38(a)条，

注意到经 1978 年和 1997 年议定书修订的《1973 年国际防止船舶造成污染公约》（《防污公约》）第 16 条规定的修正程序，以及赋予本组织适当机构审议和通过其修正案之职能，

在其第七十三届会议上，**审议了**关于禁止船上载运用于燃烧以推进或操作的非合规燃油的《防污公约》附则 VI 的建议修正案，

1 按《防污公约》附则 VI 第 16(2)(d)条，**通过**《防污公约》附则 VI 修正案，其文本载于本决议附件中；

2 按《防污公约》附则 VI 第 16(2)(f)(iii)条，**决定，**该修正案应于 2019 年 9 月 1 日被视为获得接受，除非在此日期之前，有不少于三分之一的缔约国或拥有合计商船总吨位不少于世界商船总吨位 50%的缔约国，已通知本组织其反对该修正案；

3 **提请**各缔约国注意，按《防污公约》第 16(2)(g)(ii)条，该修正案在按上述第 2 段获得接受后，应于 2020 年 3 月 1 日生效；

4 **要求**秘书长，按《防污公约》第 16(2)(e)条，将本决议及其附件中所含修正案文本的核正无误副本送交《防污公约》各缔约国；

5 **进一步要求**秘书长将本决议及其附件的副本送交非《防污公约》缔约国的本组织各会员。

附件

《防污公约》附则 VI 修正案

（禁止船上载运用于燃烧以推进或操作的非合规燃油）

附则 VI

防止船舶造成大气污染规则

第 14 条
硫氧化物(SO_x)和颗粒物质

一般要求

1 第 1 段由以下替代：

“1 船上使用的或载运供使用的燃油的硫含量不得超过 0.50% m/m。”

排放控制区内的要求

2 第 3 段由以下替代：

“3 就本条而言，排放控制区系指本组织按本附则附录III中所列衡准和程序而指定的任何海域，包括任何港口区域。本条中的排放控制区有：

.1 本公约附则I第1.11.2条中定义的波罗的海区域；

.2 本公约附则V第1.14.6条中定义的北海区域；

.3 本附则附录VII中坐标所述的北美排放控制区；和

.4 本附则附录VII中坐标所述的美国加勒比海排放控制区。”

3 第 4 段由以下替代：

“4 当船舶在排放控制区内营运时，船上使用的燃油硫含量不得超过 0.10% m/m。”

4 删除“审核条款”和第 8、9 和 10 段。

附录 I

国际防止空气污染（IAPP）证书格式（第 8 条）

国际防止空气污染证书（IAPP 证书）附页

5 第 2.3.1 和 2.3.2 段由以下替代并增加新的第 2.3.3 段如下：

“2.3.1 当船舶在第 14.3 条规定的排放控制区外营运时，该船使用：”

.1 燃油装舱单记录的硫含量不超过 0.50% m/m 限值的燃油，和/或 …….....□

.2 第 2.6 段中所列的按第 4.1 条获认可的等效布置，该等效布置在硫氧化物减排方面至少与使用硫含量为 0.50% m/m 限值的燃油一样有效 ……..……...□

2.3.2 当船舶在第 14.3 条规定的排放控制区内营运时，该船使用：

.1 燃油装舱单记录的硫含量不超过 0.10% m/m 限值的燃油，和/或 …….....□

.2 第 2.6 段中所列的按第 4.1 条获认可的等效布置，该等效布置在硫氧化物减排方面至少与使用硫含量为 0.10% m/m 限值的燃油一样有效 ……..……...□

2.3.3 未使用第 2.6 段中所列的按第 4.1 条获认可的等效布置的船舶，船上载运供使用的燃油的硫含量不得超过 0.50% m/m（燃油装舱单记录）……..□”

RESOLUTION MEPC.305(73)
(adopted on 26 October 2018)

AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1997 TO AMEND THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973, AS MODIFIED BY THE PROTOCOL OF 1978 RELATING THERETO

Amendments to MARPOL Annex VI

(Prohibition on the carriage of non-compliant fuel oil for combustion purposes for propulsion or operation on board a ship)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee conferred upon it by international conventions for the prevention and control of marine pollution from ships,

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocols of 1978 and 1997 relating thereto (MARPOL), which specifies the amendment procedure and confers upon the appropriate body of the Organization the function of considering amendments thereto for adoption by the Parties,

HAVING CONSIDERED, at its seventy-third session, proposed amendments to MARPOL Annex VI concerning the prohibition on the carriage of non-compliant fuel oil for combustion purposes for propulsion or operation on board a ship,

1 ADOPTS, in accordance with article 16(2)(d) of MARPOL, amendments to MARPOL Annex VI, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article 16(2)(f)(iii) of MARPOL, that the amendments shall be deemed to have been accepted on 1 September 2019 unless, prior to that date, not less than one third of the Parties or Parties the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;

3 INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of MARPOL, the said amendments shall enter into force on 1 March 2020 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purposes of article 16(2)(e) of MARPOL, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Parties to MARPOL;

5 REQUESTS FURTHER the Secretary-General to transmit copies of the present resolution and its annex to Members of the Organization which are not Parties to MARPOL.

ANNEX

AMENDMENTS TO MARPOL ANNEX VI

(Prohibition on the carriage of non-compliant fuel oil for combustion purposes for propulsion or operation on board a ship)

ANNEX VI

REGULATIONS FOR THE PREVENTION OF AIR POLLUTION FROM SHIPS

Regulation 14
Sulphur oxides (SO_X) and particulate matter

General requirements

1 Paragraph 1 is replaced by the following:

"1 The sulphur content of fuel oil used or carried for use on board a ship shall not exceed 0.50% m/m."

Requirements within emission control areas

2 Paragraph 3 is replaced by the following:

"3 For the purpose of this regulation, an emission control area shall be any sea area, including any port area, designated by the Organization in accordance with the criteria and procedures set forth in appendix III to this Annex. The emission control areas under this regulation are:

.1 the Baltic Sea area as defined in regulation 1.11.2 of Annex I of the present Convention;

.2 the North Sea area as defined in regulation 1.14.6 of Annex V of the present Convention;

.3 the North American Emission Control Area, which means the area described by the coordinates provided in appendix VII to this Annex; and

.4 the United States Caribbean Sea Emission Control Area, which means the area described by the coordinates provided in appendix VII to this Annex."

3 Paragraph 4 is replaced by the following:

"4 While a ship is operating within an emission control area, the sulphur content of fuel oil used on board that ship shall not exceed 0.10% m/m."

4 The subtitle "Review provision" and paragraphs 8, 9 and 10 are deleted.

Appendix I

Form of International Air Pollution Prevention (IAPP) Certificate (Regulation 8)

Supplement to International Air Pollution Prevention Certificate (IAPP Certificate)

5 Paragraphs 2.3.1 and 2.3.2 are replaced by the following and a new paragraph 2.3.3 is added as follows:

"2.3.1 When the ship operates outside of an emission control area specified in regulation 14.3, the ship uses:

.1 fuel oil with a sulphur content as documented by bunker delivery notes that does not exceed the limit value of 0.50% m/m, and/or

…….....☐

.2 an equivalent arrangement approved in accordance with regulation 4.1 as listed in paragraph 2.6 that is at least as effective in terms of SO_X emission reductions as compared to using a fuel oil with a sulphur content limit value of 0.50% m/m

…….……....☐

2.3.2 When the ship operates inside an emission control area specified in regulation 14.3, the ship uses:

.1 fuel oil with a sulphur content as documented by bunker delivery notes that does not exceed the limit value of 0.10% m/m, and/or

……☐

.2 an equivalent arrangement approved in accordance with regulation 4.1 as listed in paragraph 2.6 that is at least as effective in terms of SO_X emission reductions as compared to using a fuel oil with a sulphur content limit value of 0.10% m/m

……...……..☐

2.3.3 For a ship without an equivalent arrangement approved in accordance with regulation 4.1 as listed in paragraph 2.6, the sulphur content of fuel oil carried for use on board the ship shall not exceed 0.50% m/m as documented by bunker delivery notes

……..……☐"

RÉSOLUTION MEPC.305(73)
(adoptée le 26 octobre 2018)

AMENDEMENTS À L'ANNEXE DU PROTOCOLE DE 1997 MODIFIANT LA CONVENTION INTERNATIONALE DE 1973 POUR LA PRÉVENTION DE LA POLLUTION PAR LES NAVIRES, TELLE QUE MODIFIÉE PAR LE PROTOCOLE DE 1978 Y RELATIF

Amendements à l'Annexe VI de MARPOL

(Interdiction de transporter du fuel-oil non conforme en vue de l'utiliser comme combustible pour la propulsion ou l'exploitation du navire)

LE COMITÉ DE LA PROTECTION DU MILIEU MARIN,

RAPPELANT l'article 38 a) de la Convention portant création de l'Organisation maritime internationale, qui a trait aux fonctions conférées au Comité de la protection du milieu marin aux termes des conventions internationales visant à prévenir et à combattre la pollution des mers par les navires,

NOTANT l'article 16 de la Convention internationale de 1973 pour la prévention de la pollution par les navires, telle que modifiée par les Protocoles de 1978 et de 1997 y relatifs (MARPOL), qui énonce la procédure d'amendement et confère à l'organe compétent de l'Organisation la fonction d'examiner les amendements à ladite convention, aux fins d'adoption par les Parties,

AYANT EXAMINÉ, à sa soixante-treizième session, les propositions d'amendements à l'Annexe VI de MARPOL concernant l'interdiction de transporter du fuel-oil non conforme en vue de l'utiliser comme combustible pour la propulsion ou l'exploitation du navire,

1. ADOPTE, conformément à l'article 16 2) d) de MARPOL, les amendements à l'Annexe VI de MARPOL dont le texte figure en annexe à la présente résolution;

2. DÉCIDE que, conformément à l'article 16 2) f) iii) de MARPOL, ces amendements seront réputés avoir été acceptés le 1er septembre 2019, à moins que, avant cette date, une objection à ces amendements n'ait été communiquée à l'Organisation par un tiers au moins des Parties à MARPOL ou par des Parties dont les flottes marchandes représentent au total au moins 50 % du tonnage brut de la flotte mondiale des navires de commerce;

3. INVITE les Parties à noter que, conformément à l'article 16 2) g) ii) de MARPOL, ces amendements entreront en vigueur le 1er mars 2020, lorsqu'ils auront été acceptés dans les conditions prévues au paragraphe 2 ci-dessus;

4. PRIE le Secrétaire général de communiquer, en application de l'article 16 2) e) de MARPOL, des copies certifiées conformes de la présente résolution et du texte des amendements qui y est annexé à toutes les Parties à MARPOL;

5. PRIE ÉGALEMENT le Secrétaire général de communiquer des copies de la présente résolution et de son annexe aux Membres de l'Organisation qui ne sont pas Parties à MARPOL.

ANNEXE

AMENDEMENTS À L'ANNEXE VI DE MARPOL

(Interdiction de transporter du fuel-oil non conforme en vue de l'utiliser comme combustible pour la propulsion ou l'exploitation du navire)

ANNEXE VI

RÈGLES RELATIVES À LA PRÉVENTION DE LA POLLUTION DE L'ATMOSPHÈRE PAR LES NAVIRES

Règle 14
Oxydes de soufre (SO_x) et particules

Prescriptions générales

1 Le texte du paragraphe 1 est remplacé par le suivant :

"1 La teneur en soufre du fuel-oil utilisé ou transporté en vue d'être utilisé à bord d'un navire ne doit pas dépasser 0,50 % m/m."

Prescriptions applicables dans les zones de contrôle des émissions

2 Le paragraphe 3 est remplacé par le suivant :

"3 Aux fins de la présente règle, une zone de contrôle des émissions est toute zone maritime, y compris toute zone portuaire, désignée par l'Organisation conformément aux critères et procédures décrits dans l'appendice III de la présente Annexe. Les zones de contrôle des émissions en vertu de la présente règle sont :

.1 la zone de la mer Baltique, telle que définie à la règle 1.11.2 de l'Annexe I de la présente Convention;

.2 la zone de la mer du Nord, telle que définie à la règle 1.14.6 de l'Annexe V de la présente Convention;

.3 la zone de contrôle des émissions de l'Amérique du Nord, qui correspond à la zone délimitée par les coordonnées indiquées dans l'appendice VII de la présente Annexe; et

.4 la zone de contrôle des émissions de la zone maritime caraïbe des États-Unis, qui correspond à la zone délimitée par les coordonnées indiquées dans l'appendice VII de la présente Annexe."

3 Le texte du paragraphe 4 est remplacé par le suivant :

"4 Lorsqu'un navire est exploité dans une zone de contrôle des émissions, la teneur en soufre du fuel-oil utilisé à son bord ne doit pas dépasser 0,10 % m/m."

4 Le sous-titre "Dispositions relatives au réexamen" et les paragraphes 8, 9 et 10 sont supprimés.

Appendice I

Modèle de Certificat international de prévention de la pollution de l'atmosphère (Certificat IAPP) (règle 8)

Supplément au Certificat international de prévention de la pollution de l'atmosphère (Certificat IAPP)

5 Le texte des paragraphes 2.3.1 et 2.3.2 est remplacé par le suivant et le nouveau paragraphe 2.3.3 ci-après est ajouté :

"2.3.1 Lorsqu'il est exploité à l'extérieur d'une zone de contrôle des émissions spécifiée à la règle 14.3, le navire utilise :

.1 un fuel-oil dont la teneur en soufre, telle qu'attestée par les notes de livraison de soutes, ne dépasse pas la valeur limite de 0,50 % m/m; et/ou

..... ☐

.2 un arrangement équivalent approuvé conformément à la règle 4.1, tel qu'indiqué au paragraphe 2.6, qui est au moins aussi efficace pour réduire les émissions de SO_x que l'utilisation d'un fuel-oil d'une teneur en soufre d'une valeur limite de 0,50 % m/m

..... ☐

2.3.2 Lorsqu'il est exploité à l'intérieur d'une zone de contrôle des émissions spécifiée à la règle 14.3, le navire utilise :

.1 un fuel-oil dont la teneur en soufre, telle qu'attestée par les notes de livraison de soutes, ne dépasse pas la valeur limite de 0,10 % m/m; et/ou

..... ☐

.2 un arrangement équivalent approuvé conformément à la règle 4.1, tel qu'indiqué au paragraphe 2.6, qui est au moins aussi efficace pour réduire les émissions de SO_x que l'utilisation d'un fuel-oil d'une teneur en soufre d'une valeur limite de 0,10 % m/m

..... ☐

2.3.3 Dans le cas d'un navire qui n'utilise pas d'arrangement équivalent approuvé conformément à la règle 4.1, tel qu'indiqué au paragraphe 2.6, la teneur en soufre du fuel-oil transporté à bord du navire ne doit pas dépasser 0,50 % m/m, telle qu'attestée par les notes de livraison de soutes

..... ☐"

РЕЗОЛЮЦИЯ MEPC.305(73)
(принята 26 октября 2018 года)

ПОПРАВКИ К ПРИЛОЖЕНИЮ К ПРОТОКОЛУ 1997 ГОДА ОБ ИЗМЕНЕНИИ МЕЖДУНАРОДНОЙ КОНВЕНЦИИ ПО ПРЕДОТВРАЩЕНИЮ ЗАГРЯЗНЕНИЯ С СУДОВ 1973 ГОДА, ИЗМЕНЕННОЙ ПРОТОКОЛОМ 1978 ГОДА К НЕЙ

Поправки к Приложению VI к Конвенции МАРПОЛ

(Запрет на перевозку не соответствующего требованиям судового топлива, предназначенного для сгорания с целью обеспечения движения или эксплуатации судна)

КОМИТЕТ ПО ЗАЩИТЕ МОРСКОЙ СРЕДЫ,

ССЫЛАЯСЬ на статью 38 a) Конвенции о Международной морской организации, касающуюся функций Комитета по защите морской среды, возложенных на него международными конвенциями по предотвращению загрязнения моря с судов и борьбе с ним,

ОТМЕЧАЯ статью 16 Международной конвенции по предотвращению загрязнения с судов 1973 года, измененной протоколами 1978 года и 1997 года к ней (Конвенция МАРПОЛ), которая устанавливает процедуру внесения поправок и возлагает на соответствующий орган Организации функцию рассмотрения поправок к ней для принятия Сторонами,

РАССМОТРЕВ на своей семьдесят третьей сессии предложенные поправки к Приложению VI к Конвенции МАРПОЛ, касающиеся запрета на перевозку не соответствующего требованиям судового топлива, предназначенного для сгорания с целью обеспечения движения или эксплуатации судна,

1 ОДОБРЯЕТ в соответствии со статьей 16 2) d) Конвенции МАРПОЛ поправки к Приложению VI к Конвенции МАРПОЛ, текст которых изложен в приложении к настоящей резолюции;

2 ПОСТАНОВЛЯЕТ в соответствии со статьей 16 2) f) iii) Конвенции МАРПОЛ, что поправки считаются принятыми 1 сентября 2019 года, если до этой даты Организации не будут сообщены возражения против поправок не менее одной трети Сторон или Сторон, общая валовая вместимость торговых судов которых составляет не менее 50% валовой вместимости судов мирового торгового флота;

3 ПРЕДЛАГАЕТ Сторонам принять к сведению, что в соответствии со статьей 16 2) g) ii) Конвенции МАРПОЛ упомянутые поправки вступают в силу 1 марта 2020 года после их принятия в соответствии с пунктом 2 выше;

4 ПРОСИТ Генерального секретаря, для целей статьи 16 2) e) Конвенции МАРПОЛ, направить заверенные копии настоящей резолюции и текста поправок, содержащегося в приложении, всем Сторонам Конвенции;

5 ПРОСИТ ДАЛЕЕ Генерального секретаря направить копии настоящей резолюции и приложения к ней членам Организации, которые не являются Сторонами Конвенции МАРПОЛ.

ПРИЛОЖЕНИЕ

ПОПРАВКИ К ПРИЛОЖЕНИЮ VI К КОНВЕНЦИИ МАРПОЛ

(Запрет на перевозку не соответствующего требованиям судового топлива, предназначенного для сгорания с целью обеспечения движения или эксплуатации судна)

ПРИЛОЖЕНИЕ VI

ПРАВИЛА ПРЕДОТВРАЩЕНИЯ ЗАГРЯЗНЕНИЯ ВОЗДУШНОЙ СРЕДЫ С СУДОВ

Правило 14
Окислы серы (SOx) и твердые частицы

Общие требования

1 Пункт 1 заменяется следующим:

«1 Содержание серы в судовом топливе, используемом или перевозимом для использования на судне, не должно превышать 0,50% по массе».

Требования, применяемые в пределах районов контроля выбросов

2 Пункт 3 заменяется следующим:

«3 Для целей настоящего правила районом контроля выбросов является любой морской район, включая любой портовый район, назначенный Организацией в соответствии с критериями и процедурами, изложенными в дополнении III к настоящему Приложению. Районами контроля выбросов согласно настоящему правилу являются:

.1 район Балтийского моря, как он определен в правиле 1.11.2 Приложения I к настоящей Конвенции;

.2 район Северного моря, как он определен в правиле 1.14.6 Приложения V к настоящей Конвенции;

.3 Североамериканский район контроля выбросов, который означает район, обозначенный координатами, указанными в дополнении VII к настоящему Приложению; и

.4 район контроля выбросов Карибского моря Соединенных Штатов, который означает район, обозначенный координатами, указанными в дополнении VII к настоящему Приложению».

3 Пункт 4 заменяется следующим:

«4 Когда судно эксплуатируется в районе контроля выбросов, содержание серы в судовом топливе, используемом на этом судне, не должно превышать 0,10% по массе».

4 Подзаголовок «Проведение обзора» и пункты 8, 9 и 10 удаляются.

Дополнение I

Форма Международного свидетельства о предотвращении загрязнения воздушной среды (Свидетельство IAPP) (Правило 8)

Добавление к Международному свидетельству о предотвращении загрязнения воздушной среды (Свидетельство IAPP)

5 Пункты 2.3.1 и 2.3.2 заменяются следующими, и добавляется новый пункт 2.3.3 следующего содержания:

«2.3.1 Когда судно эксплуатируется за пределами района контроля выбросов, указанного в правиле 14.3, на нем используется:

.1 судовое топливо с содержанием серы, как документально оформлено накладными на поставку бункерного топлива, не превышающим предельного значения 0,50% по массе, и/или

..... ☐

.2 одобренное в соответствии с правилом 4.1 и указанное в пункте 2.6 эквивалентное средство, эффективность которого в отношении снижения выбросов SO_X по меньшей мере равна эффективности использования судового топлива с содержанием серы, не превышающим предельного значения 0,50% по массе

..... ☐

2.3.2 Когда судно эксплуатируется в районе контроля выбросов, указанном в правиле 14.3, на нем используется:

.1 судовое топливо с содержанием серы, как документально оформлено накладными на поставку бункерного топлива, не превышающим предельного значения 0,10% по массе, и/или

..... ☐

.2 одобренное в соответствии с правилом 4.1 и указанное в пункте 2.6 эквивалентное средство, эффективность которого в отношении снижения выбросов SO_X по меньшей мере равна эффективности использования судового топлива с содержанием серы, не превышающим предельного значения 0,10% по массе

..... ☐

2.3.3 На судне, не имеющем эквивалентного средства, одобренного в соответствии с правилом 4.1 и указанного в пункте 2.6, содержание серы в судовом топливе, перевозимом для использования на этом судне, не должно превышать 0,50% по массе, как документально оформлено накладными на поставку бункерного топлива,

.....☐»

RESOLUCIÓN MEPC.305(73)
(adoptada el 26 de octubre de 2018)

ENMIENDAS AL ANEXO DEL PROTOCOLO DE 1997 QUE ENMIENDA EL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACIÓN POR LOS BUQUES, 1973, MODIFICADO POR EL PROTOCOLO DE 1978

Enmiendas al Anexo VI del Convenio MARPOL

(Prohibición de transportar fueloil no reglamentario para combustión destinado a ser utilizado en la propulsión o el funcionamiento a bordo del buque)

EL COMITÉ DE PROTECCIÓN DEL MEDIO MARINO,

RECORDANDO el artículo 38 a) del Convenio constitutivo de la Organización Marítima Internacional, artículo que trata de las funciones del Comité de protección del medio marino conferidas por los convenios internacionales relativos a la prevención y contención de la contaminación del mar ocasionada por los buques,

TOMANDO NOTA del artículo 16 del Convenio internacional para prevenir la contaminación por los buques, 1973, modificado por los Protocolos de 1978 y de 1997 (Convenio MARPOL), en el que se especifica el procedimiento de enmienda y se confiere al órgano pertinente de la Organización la función de examinar las enmiendas correspondientes para su adopción por las Partes,

HABIENDO EXAMINADO, en su 73º periodo de sesiones, propuestas de enmienda al Anexo VI del Convenio MARPOL relativas a la prohibición de transportar fueloil no reglamentario para combustión destinado a ser utilizado en la propulsión o el funcionamiento a bordo del buque,

1 ADOPTA, de conformidad con lo dispuesto en el artículo 16 2) d) del Convenio MARPOL, enmiendas al Anexo VI del Convenio MARPOL, cuyo texto figura en el anexo de la presente resolución;

2 DECIDE, de conformidad con lo dispuesto en el artículo 16 2) f) iii) del Convenio MARPOL, que las enmiendas se considerarán aceptadas el 1 de septiembre de 2019, salvo que, con anterioridad a esa fecha, un tercio cuando menos de las Partes, o aquellas Partes cuyas flotas mercantes combinadas representen como mínimo el 50 % del arqueo bruto de la flota mercante mundial, hayan notificado a la Organización que rechazan las enmiendas;

3 INVITA a las Partes a que tomen nota de que, de conformidad con lo dispuesto en el artículo 16 2) g) ii) del Convenio MARPOL, dichas enmiendas entrarán en vigor el 1 de marzo de 2020, una vez aceptadas de conformidad con lo estipulado en el párrafo 2 anterior;

4 PIDE al Secretario General que, a los efectos del artículo 16 2) e) del Convenio MARPOL, remita a todas las Partes en dicho convenio copias certificadas de la presente resolución y del texto de las enmiendas que figura en el anexo;

5 PIDE ADEMÁS al Secretario General que remita copias de la presente resolución y de su anexo a los Miembros de la Organización que no son Partes en el Convenio MARPOL.

ANEXO

ENMIENDAS AL ANEXO VI DEL CONVENIO MARPOL

(Prohibición de transportar fueloil no reglamentario para combustión destinado a ser utilizado en la propulsión o el funcionamiento a bordo del buque)

ANEXO VI

REGLAS PARA PREVENIR LA CONTAMINACIÓN ATMOSFÉRICA OCASIONADA POR LOS BUQUES

Regla 14
Óxidos de azufre (SOx) y materia particulada

Prescripciones generales

1 El párrafo 1 se sustituye por el siguiente:

"1 El contenido de azufre del fueloil utilizado o transportado para su utilización a bordo de un buque no excederá del 0,50 % masa/masa."

Prescripciones aplicables en las zonas de control de las emisiones

2 El párrafo 3 se sustituye por el siguiente:

"3 A efectos de la presente regla, una zona de control de las emisiones será cualquier zona marítima, incluidas las portuarias, designada por la Organización de conformidad con los criterios y procedimientos indicados en el apéndice III del presente anexo. Las zonas de control de las emisiones en virtud de la presente regla son:

.1 la zona del mar Báltico definida en la regla 1.11.2 del Anexo I del presente convenio;

.2 la zona del mar del Norte definida en la regla 1.14.6 del Anexo V del presente convenio;

.3 la zona de control de las emisiones de Norteamérica, por la cual se entiende la zona definida por las coordenadas que figuran en el apéndice VII del presente anexo; y

.4 la zona de control de las emisiones del mar Caribe de los Estados Unidos, por la cual se entiende la zona definida por las coordenadas que figuran en el apéndice VII del presente anexo."

3 El párrafo 4 se sustituye por el siguiente:

"4 Mientras un buque opere dentro de una zona de control de las emisiones, el contenido de azufre del fueloil utilizado a bordo no excederá del 0,10 % masa/masa."

4 Se suprimen el subtítulo "Examen de la norma" y los párrafos 8, 9 y 10.

Apéndice I

Modelo de Certificado internacional de prevención de la contaminación atmosférica (Certificado IAPP) (regla 8)

Suplemento del Certificado internacional de prevención de la contaminación atmosférica (Certificado IAPP)

5 Se sustituyen los párrafos 2.3.1 y 2.3.2 por los siguientes y se añade el nuevo párrafo 2.3.3 siguiente:

"2.3.1 Cuando opera fuera de una zona de control de las emisiones especificada en la regla 14.3, el buque utiliza:

.1 fueloil con un contenido de azufre, según consta en las notas de entrega de combustible, que no excede del valor límite de 0,50 % masa/masa, y/o ..... □

.2 un medio equivalente aprobado de conformidad con la regla 4.1, según se indica en 2.6, que es al menos tan eficaz en cuanto a la reducción de las emisiones de SO_X como la utilización de fueloil con un contenido de azufre de un valor límite de 0,50 % masa/masa □

2.3.2 Cuando opera dentro de una zona de control de las emisiones especificada en la regla 14.3, el buque utiliza:

.1 fueloil con un contenido de azufre, según consta en las notas de entrega de combustible, que no excede del valor límite de 0,10 % masa/masa, y/o ..... □

.2 un medio equivalente aprobado de conformidad con la regla 4.1, según se indica en 2.6, que es al menos tan eficaz en cuanto a la reducción de las emisiones de SO_X como la utilización de fueloil con un contenido de azufre de un valor límite de 0,10 % masa/masa ..... □

2.3.3 En el caso de un buque que no cuente con un medio equivalente aprobado de conformidad con la regla 4.1, según se indica en 2.6, el contenido de azufre del fueloil transportado para su utilización a bordo del buque no excederá del 0,50 % masa/masa, según consta en las notas de entrega de combustible

.....□"

نسخة صادقة مصدّقة من نصّ التعديلات على مرفق بروتوكول عام 1997 لتعديل الاتفاقية الدولية لمنع التلوث من السفن لعام 1973 ، في صيغتها المعدّلة ببروتوكول عام 1978 المتعلق بها (اتفاقية ماربول) ، الذي اعتمدته لجنة حماية البيئة البحرية التابعة للمنظمة البحرية الدولية في دورتها الثالثة والسبعين ، في 26 تشرين الأول/أكتوبر 2018 ، بموجب المادة 16(2)(د) من اتفاقية ماربول ، على النحو الوارد في مرفق القرار MEPC.305(73) ، وقد أودع النصّ الأصلي لدى الأمين العام للمنظمة البحرية الدولية .

此件系国际海事组织海上环境保护委员会于公元二零一八年十月二十六日在其第七十三届会议上按《防污公约》第 16(2)(d)条通过并载于第 MEPC.305(73)号决议附件中的修正《经 1978 年议定书修订的〈1973 年国际防止船舶造成污染公约〉》的 1997 年议定书附则修正案文本的核正无误副本，其原件由国际海事组织秘书长保存。

CERTIFIED TRUE COPY of the text of the amendments to the Annex of the Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL), adopted on 26 October 2018 by the Marine Environment Protection Committee of the International Maritime Organization at its seventy-third session, in accordance with article 16(2)(d) of MARPOL and set out in the annex to resolution MEPC.305(73), the original of which is deposited with the Secretary-General of the International Maritime Organization.

COPIE CERTIFIÉE CONFORME du texte des amendements à l'Annexe du Protocole de 1997 modifiant la Convention internationale de 1973 pour la prévention de la pollution par les navires, telle que modifiée par le Protocole de 1978 y relatif (MARPOL), adoptés le 26 octobre 2018 par le Comité de la protection du milieu marin de l'Organisation maritime internationale à sa soixante-treizième session, conformément à l'article 16 2) d) de MARPOL, lequel figure à l'annexe de la résolution MEPC.305(73) et dont l'original est déposé auprès du Secrétaire général de l'Organisation maritime internationale.

ЗАВЕРЕННАЯ КОПИЯ текста поправок к Приложению к Протоколу 1997 года об изменении Международной конвенции по предотвращению загрязнения с судов 1973 года, измененной Протоколом 1978 года к ней (Конвенция МАРПОЛ), одобренных 26 октября 2018 года Комитетом по защите морской среды Международной морской организации на его семьдесят третьей сессии в соответствии со статьей 16 2) d) Конвенции МАРПОЛ и изложенных в приложении к резолюции MEPC.305(73), подлинник которых сдан на хранение Генеральному секретарю Международной морской организации.

COPIA AUTÉNTICA CERTIFICADA del texto de las enmiendas al Anexo del Protocolo de 1997 que enmienda el Convenio internacional para prevenir la contaminación por los buques, 1973, modificado por el Protocolo de 1978 (Convenio MARPOL), adoptadas el 26 de octubre de 2018 por el Comité de protección del medio marino de la Organización Marítima Internacional en su 73º periodo de sesiones, de conformidad con lo dispuesto en el artículo 16 2) d) del Convenio MARPOL, y que figuran en el anexo de la resolución MEPC.305(73) del Comité, cuyo texto original se ha depositado ante el Secretario General de la Organización Marítima Internacional.

عن الأمين العام للمنظمة البحرية الدولية :

国际海事组织秘书长代表：
For the Secretary-General of the International Maritime Organization:
Pour le Secrétaire général de l'Organisation maritime internationale :
За Генерального секретаря Международной морской организации:
Por el Secretario General de la Organización Marítima Internacional:

لندن ، في

于伦敦，
London,
Londres, le 23 MAR 2019
Лондон,
Londres,

J/11764 (A/C/E/F/R/S)

RESOLUTION MEPC.320(74)

2019 GUIDELINES FOR CONSISTENT IMPLEMENTATION OF THE 0.50% SULPHUR LIMIT UNDER MARPOL ANNEX VI

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution from ships,

RECALLING ALSO that, at its fifty-eighth session, the Committee adopted, by resolution MEPC.176(58), a revised MARPOL Annex VI which significantly strengthens the emission limits for sulphur oxides (SO_X),

RECALLING FURTHER that, at its seventieth session, the Committee adopted, resolution MEPC.280(70), *Effective date of implementation of the fuel oil standard in regulation 14.1.3 of MARPOL Annex VI*, confirming "1 January 2020" as the effective date of implementation for ships to comply with global 0.50% m/m sulphur content of fuel oil requirement,

NOTING ALSO that, at its seventy-third session, the Committee approved circular MEPC.1/Circ.878 on the *Guidance on the development of a ship implementation plan for the consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI*,

HAVING CONSIDERED, at its seventy-fourth session, draft 2019 Guidelines for consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI, prepared by the Sub-Committee on Pollution Prevention and Response, at its sixth session,

1 ADOPTS the *2019 Guidelines for consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI*, as set out in the annex to the present resolution;

2 REQUESTS Parties to MARPOL Annex VI and other Member Governments to bring these Guidelines to the attention of shipowners, ship operators, fuel oil suppliers and any other interested groups;

3 AGREES to keep these Guidelines under review in the light of experience gained with their application.

ANNEX

2019 GUIDELINES FOR CONSISTENT IMPLEMENTATION OF THE 0.50% SULPHUR LIMIT UNDER MARPOL ANNEX VI

1 Introduction

1.1 Objective

1.1.1 The purpose of these Guidelines is to ensure consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI. These Guidelines are intended for use by Administrations, port States, shipowners, shipbuilders and fuel oil suppliers, as appropriate.

1.2 Definitions

1.2.1 For the purpose of these Guidelines, the definitions in MARPOL Annex VI apply.

1.2.2 The following definitions of fuel oils are used, as applicable:

.1 Distillate marine fuels (DM) are as specified in ISO 8217:2017[1] (e.g. DMA, DMB, DMX, DMZ);

.2 Residual marine fuels (RM) are as specified in ISO 8217:2017[1] (e.g. RMD 80, RMG 380);

.3 Ultra-low sulphur fuel oil (ULSFO) are as specified in ISO 8217:2017[1] (e.g. maximum 0.10% S ULSFO-DM, maximum 0.10% S ULSFO-RM);

.4 Very low sulphur fuel oil (VLSFO) (e.g. maximum 0.50% S VLSFO-DM, maximum 0.50% S VLSFO-RM); and

.5 High sulphur heavy fuel oil (HSHFO) exceeding 0.50% S.

2 Ship implementation planning for 2020

2.1 MEPC 70 agreed to "1 January 2020" as the effective date of implementation for ships to comply with the 0.50% m/m fuel oil sulphur content limit requirement and adopted resolution MEPC.280(70) on the *Effective date of implementation of the fuel oil standard in regulation 14.1.3 of MARPOL Annex VI*[2].

2.2 In this context, MEPC 73 agreed that Administrations should encourage ships flying their flag to develop implementation plans, outlining how the ship may prepare in order to comply with the required sulphur content limit of 0.50% by 1 January 2020. The plan should be complemented with a record of actions taken by the ships in order to be compliant by the applicable date.

2.3 MEPC 73, recognizing the need for guidance to support the consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI, approved MEPC.1/Circ.878 on the *Guidance on the development of a ship implementation plan for the consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI*.

---

1 The latest edition of the ISO standard is recommended.

2 Regulation 14.1.3 of MARPOL Annex VI, was amended by resolution MEPC.305(73).

3 Impact on fuel and machinery systems

3.0.1 The experiences and lessons learned from the transition to the 0.10% m/m SO_X-ECA limit indicated that current ship machinery operations should be sufficiently capable of addressing the concerns regarding combustion of the new 0.50% m/m limit fuel oils.

3.0.2 Currently most of the marine diesel engines and boilers on ships operating outside Emission Control Areas (ECAs) are optimized to operate on heavy fuel oil. From 2020 ships are required to use fuel oils with a sulphur content of 0.50% m/m or lower, unless fitted with an approved equivalent means of compliance.

3.1 Distillate fuels

3.1.1 A major challenge with distillate fuels is low viscosity. Low viscosity may cause internal leakages in diesel engines, boilers and pumps. Internal leakages in fuel injection system may result in reduced fuel pressure to the engine, which may have consequences for the engine performance (e.g. starting of the engine). Equipment makers recommendations should be taken into account, and adequate testing, maintenance and possible installation of coolers, etc., may be performed.

3.1.2 Cold Filter Plugging Points (CFPP) and Cloud Points (CP) as well as the Pour Point (PP) for distillate fuels need to be considered in light of the ship's intended operating area and ambient temperatures.

3.1.3 These issues are critical concerns as they can result in the formation and accumulation of wax sediment, which can cause costly and avoidable maintenance. In the worst-case scenario, sediment can cause engine fuel starvation and power loss.

3.1.4 ISO 8217:2017[3] limits the cold flow properties of a fuel through setting a limit on the PP. However, given that wax crystals form at temperatures above the PP, fuels that meet the specification in terms of PP can still be challenging to operations in colder operating regions, as the wax particles can rapidly block filters, potentially plugging them completely. For cold weather, additional cold flow properties, CFPP and CP, should be reported by the supplier when the receiving ship has ordered distillate fuel for cold weather operations, a requirement that is specified in ISO 8217:2017[3].

3.1.5 Since the residual fuels are usually heated and distillate fuels are not heated, particular attention needs to be given to the cold flow properties of distillates. Cold flow property challenges can be managed by heating the fuel. CIMAC has issued "01 2015 CIMAC Guideline Cold flow properties of marine fuel oils"[4].

3.1.6 Fuel temperature should be kept approximately 10°C above the PP in order to avoid any risk of solidification, however this may not reduce the risk of filter blocking in case of high CFPP and CP.

3.1.7 It is good practice to review the possibilities of heating arrangements for distillate fuels on board. This is usually very limited, as it is not standard practice to have heating arrangements in distillate storage, settling or service tanks. Transfer arrangements may be adapted to pass through a residual fuel oil heat exchanger should the need arise.

---

[3] The latest edition of the ISO standard is recommended.

[4] https://www.cimac.com/cms/upload/workinggroups/WG7/CIMAC_WG7_2015_01_Guideline_Cold__Flow_Properties_Marine_Fuel_Oils_final.pdf

3.1.8 Knowing the fuel properties before bunkering will assist in taking the necessary precautions where and when necessary. If the ship is heading towards colder climates and the cold flow properties are inferior, the fuel may be:

.1 either used before entering cold regions, or

.2 used with suitable heating arrangement, as mentioned above.

3.1.9 If the approach of applying heat is being followed it should be ensured that the fuel is not overheated resulting in the viscosity dropping below the minimum recommendation of 2 cSt at any point in the fuel system, including the engine inlet. In order to reduce this risk, heating should be limited to max 40°C.

3.2 Distillate fuel with FAME content

3.2.1 Increased demand for Distillate fuels may result in more land based products making their way into the marine supply pool, some of these fuels (e.g. biodiesel) may contain Fatty Acid Methyl Ester (FAME).

3.2.2 There are various technical challenges associated with use of fuel having FAME content, e.g. potential oxidation of biodiesel, its biodegradable nature etc. with adverse implications, limitations in storage life etc. It also needs to be tested for stability.

3.2.3 The ISO 8217:2017[3] standard includes a maximum FAME content of 7.0% by volume for DFA/DFZ/DFB fuel oil grades since some ports may offer automotive diesel fuel as the only fuel available, which contains FAME and could violate the fuel flashpoint requirements addressed in SOLAS chapter II-2. The maximum 7.0% (v/v) has been chosen as this aligns with the concentrations allowed in some of the countries applying environmental regulations.

3.2.4 Manufacturers of engines and equipment like oily water separators, overboard discharge monitors, filters, coalescers etc. need to be consulted to confirm the ability of engines and equipment to handle biodiesel blends of up to B7 (i.e. 7.0% v/v).

3.2.5 It is recommended to avoid using such biodiesel blend fuels for lifeboat engines, emergency generators, fire pumps, etc. where it is stored in isolated individual unit fuel tanks and subjected to conditions for accelerated degradation.

3.2.6 CIMAC has provided a Guideline for Shipowners and Operators on Managing Distillate Fuels up to 7.0% v/v Fame (Biodiesel).[5]

3.3 Residual fuels

3.3.1 Stability and compatibility

3.3.1.1 It is essential to distinguish between "Fuel stability" within a single batch of fuel and "Fuel compatibility" between different fuel batches.

3.3.1.2 Regarding stability: the fuel shall be stable and homogeneous at delivery and it is the responsibility of the fuel oil blenders and suppliers to ensure this.

3.3.1.3 A wide range of blends of refined products will be used to make the new 0.50% sulphur fuels, and the stability and compatibility of the blends will be an important concern for shipowners/operators. Unstable fuels can separate on their own and incompatible ones can do so when mixed in a single bunker tank, forming sludge that can block filters and ultimately cause engine failures.

---

5 https://www.cimac.com/cms/upload/workinggroups/WG7/CIMAC_WG7_Guideline_for_Ship_Owners_and_Operators_on_Managing_Distillate_Fuels_May_2013.pdf

3.3.1.4 It is recommended that ships have a commingling procedure. The procedure should primarily aim to ensure new bunkers are loaded into empty tanks to the extent possible. In the event that a ship finds itself possibly having to commingle a new bunker with bunkers already on board, then it is important that the ship determines the compatibility between the two said bunkers before comingling.

3.3.1.5 The reference test method shall be the total potential sediment test in accordance with ISO 10307-2:2009.

3.3.2 Catalytic fines (cat fines)

3.3.2.1 Cat fines are a by-product of refining and consist of small particles of metal that are deliberately introduced as catalysts to "crack" the fuel oil. Unless reduced by purification, cat fines will become embedded in engine parts and cause serious and rapid engine damage. Reference should be made to engine manufacturer's guidance with respect to managing cat fines.

3.4 Key technical considerations for shipowners and operators

3.4.1 Ship tank configuration and fuel system – the viscosity of most of these blended residual fuels is such that they cannot be used in distillate fuel-only systems and machinery, as they require heating for cleaning and combustion. A fully segregated fuel system for both distillate fuels and these new fuels is recommended.

3.4.2 Tank cleaning is recommended when using a residual fuel tank for storing these new fuels. This is to prevent sludge that has built up in these tanks from entering the fuel system. Further information on tank cleaning is set out in appendix 3 of MEPC.1/Circ.878 on *Guidance on the development of a ship implementation plan for the consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI*.

3.4.3 Heating requirements – due to the cold flow properties of most of these new fuels, permanent heating of the fuel may be necessary to minimize the risk of wax formation, also in storage. This is especially important in colder regions.

3.4.4 Fuel treatment system – Some of these new fuels may contain cat fines and/or sediments and therefore need on board cleaning. Separator temperature and settings should be adjusted to the fuels' viscosity and density. Please refer to recommendations from OEM and fuel supplier.

3.4.5 Considering that many of these new fuels have lower viscosities compared to conventional residual fuels, care should be taken to ensure no overheating occurs.

3.5 ISO Standard for residual fuels

3.5.1 The bunker market uses ISO 8217:2017[6] specifications to ensure that the properties of the fuels it delivers conform to a standard that mean they comply with MARPOL Annex VI.

3.5.2 The existing ISO 8217:2017[6] specification for marine fuels takes into consideration the diverse nature of marine fuels and incorporates a number of categories of distillate or residual fuels, even though not all categories may be available in every supply location it covers all marine petroleum fuel oils used today as well as the 0.50% Sulphur fuels of 2020. The General requirements, in the ISO 8217:2017[6] specification for marine fuels and characteristics, included in table 1 and 2 of ISO 8217:2017[6] identified safety, performance and environmental concerns and further takes into consideration the on board handling requirements, including

[6] The latest edition of the ISO standard is recommended.

storage, cleaning and combustion aspects of all fuel oils used today and the anticipated fuel blends of 2020, irrespective of the sulphur content of the fuel oils.

3.5.3 It is important that any new standards address and do not preclude the use of renewable and alternative non-fossil crude derived products, so long as they comply with the chemical properties specified for these fuel oils.

3.6 Cylinder lubrication

3.6.1 The choice of cylinder lubricating oils will often follow the fuel type in use. So, when changing to VLSFO operation from RM operation the choice of appropriate cylinder lubricating oil should be considered in accordance with the recommendations of the engine manufacturer.

4 Verification issues and control mechanism and actions

4.1 Survey and certification by Administrations

4.1.1 When undertaking a survey in accordance with regulation 5 of MARPOL Annex VI, the Administration should conduct a survey of a ship to verify that the ship complies with the provisions to implement the 0.50% sulphur limit. In particular, the Administration should check whether the ship carries compliant fuel oils for use, based on the Bunker Delivery Note (BDN) on board, any other document or fuel oil samples as appropriate consistent with the provisions of regulation 18 of MARPOL Annex VI. If carriage of HSHFO for use is identified, the Administration should check whether regulation 3.2, regulation 4 of MARPOL Annex VI are applied to the ship, or if the ship encountered a fuel availability problem and is operating pursuant to regulation 18.2 of MARPOL Annex VI.

4.1.2 When an Administration decides to analyse a fuel oil sample to determine compliance with the sulphur limits in regulation 14.1 or 14.4, the final analysis should be carried out in accordance with ISO 8754:2003 by a laboratory that is accredited for the purpose of conducting the test in accordance with ISO/IEC 17025 or an equivalent standard. The test results should be in accordance with ISO 8754 reporting protocol, meaning a tested value at or above 0.10% sulphur should be reported with no more than two decimal places.

4.1.3 According to regulation 11.4 of MARPOL Annex VI, the Administration shall investigate any report of an alleged violation and thereafter promptly inform the Party which made the report, as well as the Organization, of the action taken. When informing the Organization, the MARPOL Annex VI GISIS module should be used.

4.2 Control measures by port States

4.2.1 Port States should take appropriate measures to ensure compliance with the 0.50% of sulphur limit under MARPOL Annex VI, in line with the regulation 10 of MARPOL Annex VI and the *2019 Guidelines for port State control under MARPOL Annex VI* (resolution MEPC.321(74)) (2019 PSC Guidelines). Specifically, the port State should conduct initial inspections based on documents and other possible materials, including remote sensing and portable devices. Given "clear grounds" to conduct a more detailed inspection, the port State may conduct sample analysis and other detailed inspections to verify compliance to the regulation, as appropriate.

4.2.2 Regulation 18.2.3 of MARPOL Annex VI requires a Party to take into account all relevant circumstances and the evidence presented to determine the action to take, including not taking control measures. Administrations and port State control authorities may take into account the implementation plan when verifying compliance with the 0.50% sulphur limit requirement.

4.2.3 Inspections based on documents and other possible targeting measurements

4.2.3.1 During the port State control and other enforcement activities, the port State should investigate whether a ship carries either compliant fuel oils or HSHFOs for use, based on the documents listed in paragraph 2.1.2 of the 2019 PSC Guidelines additionally records required to demonstrate compliance should also then be viewed. Results from remote sensing could be used to trigger inspections and portable devices could be used during the initial inspections, as appropriate. Remote sensing and portable devices are, however, of indicative nature and should not be regarded as the evidence of non-compliance, but may be considered clear grounds for expanding the inspection.

4.2.3.2 Port state should determine if regulations 3.2, 4 or 18.2.3 apply together with retained bunker delivery notes and IAPP Certificate when considering the status of any HSHFO being carried for use on board.

4.2.4 Fuel oil sample analysis

4.2.4.1 When the port State identifies clear grounds of suspected non-compliance of a ship based on initial inspections, the port State may require samples of fuel oils to be analysed. The samples to be analysed may be either the representative samples provided with BDN in accordance with regulation 18.8.2, MARPOL delivered samples or samples from designated sampling points in accordance with 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) (in-use fuel oil samples) or other samples obtained by the port State.

4.2.4.2 Where the MARPOL delivered sample is taken from the ship a receipt should be provided to the ship. The outcome of the analysis undertaken with appendix VI of MARPOL Annex VI should be advised to the ship for its records.

4.2.4.3 In detecting suspected non-compliance, the sample analysis should be conducted in a uniform and reliable manner as described in paragraph 4.1.2. The verification procedure for MARPOL delivered samples should be in accordance with appendix VI[7] of MARPOL Annex VI. For other samples taken on board the ship, the in-use and onboard sample, the sample should be deemed to meet the requirements provided the test result from the laboratory does not exceed the specification limit +0.59R (where R is the reproducibility of the test method) and no further testing is necessary.

4.2.4.4 Notwithstanding the above process, all possible efforts should be made to avoid a ship being unduly detained or delayed. In particular, sample analysis of fuel oils should not unduly delay the operation, movement or departure of the ship.

4.2.4.5 If a non-compliance is established, consistent with regulation 18.2.3 the port State may prevent the ship from sailing until the ship takes any suitable measures to achieve compliance which may include de-bunkering all non-compliant fuel oil. In addition, the port State should report the information of the ship using or carrying for use non-compliant fuel oil to the Administration of the ship and inform the Party or non-Party under whose jurisdiction a bunker delivery note was issued of cases of delivery of non-compliant fuel oil, giving all relevant information. Upon receiving the information, the Party detecting the deficiency should report the information to the MARPOL Annex VI GISIS module in accordance with paragraph 3.4 of these Guidelines.

4.2.4.6 The Parties (the port and flag States), however, may permit, with the agreement of the destination port authority, a single voyage for bunkering of compliant fuel oil for the ship, in accordance with regulation 18.2.4 of MARPOL Annex VI. The single voyage should be one

---

[7] Amendments to MARPOL VI, Appendix VI, *Verification procedures for a MARPOL Annex VI fuel oil sample (regulation 18.8.2 or regulation 14.8)*, expected to be adopted in Spring 2020 and set out in annex 11 to document MEPC 74/18.

way and minimum for bunkering, and the ship proceeds directly to the nearest bunkering facility appropriate to the ship. In the case that the parties permit a single voyage of a ship, the port State should confirm that the Administration of the ship has advised the authority at the destination port of the approval for a single voyage including information on the ship granted with the approval and the certified record of analysis of the sample as the evidence. Once confirmation has been provided the port State should permit the ship to sail as agreed.

4.2.4.7 If the port State is made aware that a ship is carrying non-compliant fuel oil, which is not for use through an equivalent method under regulation 4 or a permit under regulation 3.2 of MARPOL Annex VI, the port State should take action to confirm the fuel is not being used. Action to confirm should include, but is not limited to the examination of the oil record book and the record of tank soundings. Where necessary the port State may require tank soundings to be undertaken during the inspection. Where it is determined that the fuel has been used the control action in paragraph 4.2.4.5 should be applied.

4.2.5 Other open-sea compliance monitoring tools:

.1 fuel oil changeover calculator;

.2 data collection system for fuel oil consumption of ships (resolution MEPC.278(70)); and

.3 continuous SO_X monitoring.

4.3 Control on fuel oil suppliers

4.3.1 Designated authorities should, if deemed necessary, take a sample and test fuel oils from bunker barges or shore bunker terminals. Sampling of fuel oils in bunker barges or shore bunker terminals can be taken and tested in the same manner that the MARPOL delivered fuel oils are tested by the PSC. All possible efforts should be made to avoid a ship being unduly detained or delayed. If a sample is analysed, sample analysis of fuel oils should not unduly delay the operation, movement or departure of the ship.

4.3.2 If non-compliance, such as issuance of an incorrect BDN or a BDN without measurement of sulphur content, was found, the designated authorities should take appropriate corrective measures against the non-compliant supplier. In such case, the designated authorities should inform the Organization for transmission to the Member States of the non-compliant supplier, in accordance with the regulation 18.9.6 of MARPOL Annex VI and paragraph 4.4 of these Guidelines.

4.4 Information sharing related to non-compliances under MARPOL Annex VI

4.4.1 When a Party finds a non-compliance of a ship or a fuel oil supplier, the information of the non-compliance should be reported to the MARPOL Annex VI GISIS module (regulation 11.4).

4.4.2 Publication of information on non-compliant ships/fuel oil suppliers or a reporting scheme to IMO to be registered on centralized information platforms are proposed as elements of an effective enforcement strategy. Various PSC regimes have successfully used the publishing of information related to substandard ships/fuel suppliers as a deterrent to non-compliance. Port States also need to report detentions of ships to IMO which may affect the future PSC targeting of the ship. The IMO GISIS database already makes available certain information related to non-compliances with the MARPOL Annex VI regulations.

5 Fuel oil non-availability

5.1 Guidance and information sharing on fuel oil non-availability

5.1.1 Regulation 18.2.1 of MARPOL Annex VI provides that in the event compliant fuel oil cannot be obtained, a Party to MARPOL Annex VI can request evidence outlining the attempts made to obtain the compliant fuel oil, including attempts made to local alternative sources. Regulations 18.2.4 and 18.2.5 then require that the ship notifies its Administration and the competent authority of the port of destination on the inability to obtain compliant fuel oil, with the Party to notify IMO of the non-availability. This notification is commonly referred to as a Fuel Oil Non-Availability Report (FONAR).

5.1.2 Guidance on consistent evidence

5.1.3 Regulation 18.2.1.2 of MARPOL Annex VI requires that evidence be provided to support a claim that all efforts were made to obtain compliant fuel oil. In this regard, a Party may develop more detailed guidance for the consistent use and acceptance of these reports, including what evidence is needed to accompany a report to ensure that port States are applying the provisions under regulation 18.2.3, consistently.

5.1.4 Should a ship, despite its best effort to obtain compliant fuel oil, be unable to do so, the master/company must:

.1 present a record of actions taken to attempt to bunker correct fuel oil and provide evidence of an attempt to purchase compliant fuel oil in accordance with its voyage plan and, if it was not made available where planned, that attempts were made to locate alternative sources for such fuel oil and that despite best efforts to obtain compliant fuel oil, no such fuel oil was made available for purchase; and

.2 best efforts to procure compliant fuel oil include, but are not limited to, investigating alternate sources of fuel oil prior to commencing the voyage. If, despite best efforts, it was not possible to procure compliant fuel oil, the master/Company must immediately notify the port State Administration in the port of arrival and the flag Administration (regulation 18.2.4 of MARPOL Annex VI).

5.1.5 In order to minimize disruption to commerce and avoid delays, the master/company should submit a FONAR as soon as it is determined or becomes aware that it will not be able to procure and use compliant fuel oil.

5.1.6 Investigating non-availability

5.1.7 A Party should investigate the reports of non-availability. This process is important to ensure a consistent supply of compliant fuel to industry, as well as prevent incentives for ships to use ports where it is known that compliant fuel is not available on an ongoing basis. Critical to this process will be the sharing of information between Member States on reported compliant fuel oil supply issues.

5.1.8 Regulation 18.2.5 of MARPOL Annex VI provides that a Party to MARPOL Annex VI notify the Organization when a ship has presented evidence of the non-availability of compliant fuel oil in a port or at their terminal. For this purpose, MARPOL Annex VI GISIS module provides the platform for Parties to upload such notifications.

5.1.9 Regulation 18.1 of MARPOL Annex VI provides that each Party take all reasonable steps to promote the availability of above compliant fuel oil and inform the Organization through MARPOL Annex VI GISIS module of the availability of compliant fuel oils in its ports and terminals.

5.1.10 Port State control authority may contact the submitter (and/or shipowner or operator), including in the event of an incomplete submission, and request additional information, or to pursue an enforcement action such as a Notice of Violation.

5.2 Standard format for reporting fuel oil non-availability

5.2.1 For ships which are unable to purchase fuel oil meeting the requirements of regulations 14.1 or 14.4 of MARPOL Annex VI, the standard format for reporting fuel oil non-availability is set out in appendix 1 to this document, pursuant to regulation 18.2.4 of MARPOL Annex VI.

6 Possible safety implications relating to fuel oils meeting the 0.50% m/m sulphur limit

6.1 MEPC 73 (October 2018) approved MEPC.1/Circ.878 on *Guidance on the development of a ship implementation plan for the consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI* (hereafter the "Ship Implementation Plan Guidance") addresses some safety issues identified with regard to 0.50% maximum sulphur fuel oil, in particular through the section on risk assessment (section 1 of the Ship Implementation Plan Guidance) and additional guidance provided on impact on machinery systems and tank cleaning (appendix 2 and appendix 3 of the Ship Implementation Plan Guidance, respectively).

6.2 Identified potential safety implications include, but are not limited to, the following:

.1 stability of blended fuel oil;

.2 compatibility, including new tests and metrics appropriate for future fuels;

.3 cold flow properties;

.4 acid number;

.5 flash point;

.6 ignition and combustion quality;

.7 cat fines;

.8 low viscosity; and

.9 unusual components.

6.3 Additional technical information and a review, displayed in tabular format, of the possible potential safety implications is set out in appendix 2.

6.4 Reference should also be made to general industry guidance on potential safety and operational issues related to the supply and use of 0.50% maximum sulphur fuels[8].

8 ICS, ASA and ECSA Guidance to shipping companies and crews on preparing for compliance with the 2020 global sulphur limit can be accessed at the following link: http://www.ics-shipping.org/free-resources/2020-sulphur-compliance

APPENDIX 1

FUEL OIL NON-AVAILABILITY REPORT (FONAR)

Note:

1 This report is to be sent to the flag Administration and to the competent authorities in the relevant port(s) of destination in accordance with regulation 18.2.4 of MARPOL Annex VI. The report shall be sent as soon as it is determined that the ship/operator will be unable to procure compliant fuel oil and preferably before the ship leaves the port/terminal where compliant fuel cannot be obtained. A copy of the FONAR should be kept on board for inspection for at least 36 months.

2 This report should be used to provide evidence if a ship is unable to obtain fuel oil compliant with the provisions stipulated in regulations 14.1 or 14.4 of MARPOL Annex VI.

3 Before filing a FONAR, the following should be observed by the ship/operator:

3.1 A fuel oil non-availability report is not an exemption. According to regulation 18.2 of MARPOL Annex VI, it is the responsibility of the Party of the destination port, through its competent authority, to scrutinize the information provided and take action, as appropriate.

3.2 In the case of insufficiently supported and/or repeated claims of non-availability, the Party may require additional documentation and substantiation of fuel oil non-availability claims. The ship/operator may also be subject to more extensive inspections or examinations while in port.

3.3 Ships/operators are expected to take into account logistical conditions and/or terminal/port policies when planning bunkering, including but not limited to having to change berth or anchor within a port or terminal in order to obtain compliant fuel.

3.4 Ships/operators are expected to prepare as far as reasonably practicable to be able to operate on compliant fuel oils. This could include, but is not limited to, fuel oils with different viscosity and different sulphur content not exceeding regulatory requirements (requiring different lube oils) as well as requiring heating and/or other treatment on board.

1 Particulars of ship

1.1 Name of ship: _____
1.2 IMO number: _____
1.3 Flag: _____
1.4 (if other relevant registration number is available, enter here): _____

2 Description of ship's voyage plan

2.1 Provide a description of the ship's voyage plan in place at the time of entry into "country X" waters (and ECA, if applicable) (Attach copy of plan if available):

_____
_____
_____

2.2 Details of voyage:

1 – Last port of departure

_____

2 – First port of arrival in "country X":

_____

3 – Date of departure from last port (dd-mm-yyyy):

_____

4 – Date of arrival at first "country X" (dd-mm-yyyy):

_____

5 – Date ship first received notice that it would be transiting in "country X" waters (and ECA, if applicable) (dd-mm-yyyy):

_____

6 – Ship's location at the time of notice:

_____

7 – Date ship operator expects to enter "country X" waters (and ECA, if applicable) (dd-mm-yyyy):

_____

8 – Time ship operator expects to enter "country X" waters (and ECA, if applicable) (hh:mm UTC):

_____

9 – Date ship operator expects to exit "country X" waters (and ECA, if applicable) (dd-mm-yyyy):

_____

10 – Time ship operator expects to exit "country X" waters (and ECA, if applicable) (hh:mm UTC):

_____

11 – Projected days ship's main propulsion engines will be in operation within "country X" waters (and ECA, if applicable):

_____

12 – Sulphur content of fuel oil in use when entering and operating in "country X" waters (and ECA, if applicable):

_____

3 Evidence of attempts to purchase compliant fuel oil

3.1 Provide a description of actions taken to attempt to achieve compliance prior to entering "country X" waters (and ECA, if applicable), including a description of all attempts that were made to locate alternative sources of compliant fuel oil, and a description of the reason why compliant fuel oil was not available:

_____
_____
_____

3.2 Name and email address of suppliers contacted, address and phone number and date of contact (dd-mm-yyyy):

_____
_____
_____
_____
_____

Please attach copies of communication with suppliers (e.g. emails to and from suppliers)

4 In case of fuel oil supply disruption only

4.1 Name of port at which ship was scheduled to receive compliant fuel oil:

_____
_____
_____
_____
_____

4.2 Name, email address, and phone number of the fuel oil supplier that was scheduled to deliver (and now reporting the non-availability): _____

5 Operation constraints, if applicable

5.1 If non-compliant fuel has been bunkered due to concerns that the quality of the compliant fuel available would cause operational or safety problems on board the ships, the concerns should be thoroughly documented.

5.2 Describe any operational constraints that prevented use of compliant fuel oil available at port:

_____

5.3 Specify steps taken, or to be taken, to resolve these operational constraints that will enable compliant fuel use:

_____

6 Plans to obtain compliant fuel oil

6.1 Describe availability of compliant fuel oil at the first port-of-call in "country X", and plans to obtain it:

_____

6.2 If compliant fuel oil is not available at the first port-of-call in "country X", list the lowest sulphur content of available fuel oil(s) or the lowest sulphur content of available fuel oil at the next port-of-call:

_____

7 Previous Fuel Oil Non-Availability Reports

7.1 If shipowner/operator has submitted a Fuel Oil Non-Availability Report to "country X" in the previous 12 months, list the number of Fuel Oil Non-Availability Reports previously submitted and provide details on the dates and ports visited while using non-compliant fuel oil, as set out below:

Report: _____
Date (dd-mm-yyyy): _____
Port: _____
Type of fuel: _____
Comments: _____

8 Master/Company information

Master name: _____
Local agent in "country X": _____
Ship operator name: _____
Shipowner name: _____
Name and position of official: _____
Email address: _____
Address (street, city, country, postal/zip code): _____
Telephone number: _____

Signature of Master: _____

Print name: _____
Date (DD/MM/YYYY): _____

APPENDIX 2

TECHNICAL REVIEW OF IDENTIFIED POTENTIAL SAFETY IMPLICATIONS ASSOCIATED WITH THE USE OF 2020 COMPLIANT FUELS

Fuel Property	Potential Challenges	Remarks
Stability	The consequences of a ship receiving an unstable fuel, or one that becomes unstable during storage or handling, can be serious. Sludge may build up in the storage tanks, piping systems or centrifuges and filters can become totally blocked by voluminous amounts of sludge.	The challenge for the fuel producer is to blend a fuel which is not only stable but also has a degree of reserve stability such that it will remain stable during periods of storage and treatment at elevated temperatures. More paraffinic blend components are expected for Very Low Sulphur Fuel Oil (VLSFO) compared to existing fuels. Whereas aromatic components have a stabilizing effect on asphaltenes, paraffins do not. Fuel suppliers are responsible for ensuring that the supplied fuel is stable.
Compatibility issues	Challenges are the same as with stability (above).	An incompatible mix may be harmful to ship's operation. VLSFOs are expected to be paraffinic based in some regions and aromatic based in other regions. There is a risk of experiencing incompatibility when mixing an aromatic fuel with a paraffinic fuel. The same risk exists today, but with the wide range of products which may exist post 2020, it is important to segregate fuels as far as possible and to be cautious of how to manage/handle incompatible fuels on board.
Cold flow properties and Pour Point	ISO 8217:2017 limits the cold flow properties of a fuel through setting a limit on the pour point (PP). However, given that wax crystals form at temperatures above the PP, fuels that meet the specification in terms of PP can still be challenging when operating in colder regions. Wax particles can rapidly block filters, potentially plugging them completely. The paraffin's may crystallize and/or deposit in the storage tanks leading to blockages at the filters and reduced fuel flow to the machinery plants. If fuels are held at temperatures below the pour point, wax will begin to precipitate. This wax may cause blocking of filters and can deposit on heat exchangers. In severe	VLSFO products are expected to be more paraffinic compared to existing fuels. As such, it is important to know the cold flow properties of the bunkered fuel in order to ensure proper temperature management on board. It is important to note that for additives to be effective, they have to be applied before crystallization has occurred in the fuel. Reference 1.

Fuel Property	Potential Challenges	Remarks
	cases the wax will build up in storage tank bottoms and on heating coils, which can restrict the coils from heating the fuel (fuel will become unpumpable from the bunker tanks).	
Acid number	The fuel shall be free from strong, inorganic acids. Fuels with high acid number test results arising from acidic compounds cause accelerated damage to marine diesel engines. Such damage is found primarily within the fuel injection equipment.	There is currently no recognized correlation between an acid number test result and the corrosive activity of the fuel. ISO 8217:2017, appendix E covers the topic.
Flashpoint	Flashpoint is considered to be a useful indicator of the fire hazard associated with the storage of marine fuels. Even if fuels are stored at temperatures below the determined flash point, flammable vapours may still develop in the tank headspace.	SOLAS requirement.
Ignition and combustion quality	Fuels with poor ignition & combustion properties can, in extreme cases, result in serious operational problems, engine damage and even total breakdown. Poor combustion performance is normally characterized by an extended combustion period and/or poor rates of pressure increase and low "p max" resulting in incomplete combustion of the fuel. The resulting effects are increased levels of unburned fuel and soot that may be deposited in the combustion chamber, on the exhaust valves and in the turbocharger system, exhaust after treatment devices, waste heat recovery units and other exhaust system components. Extended combustion periods may also result in exposure of the cylinder liner to high temperatures which may disrupt the lubricating oil film, leading to increased wear rates and scuffing. Unburnt fuel droplets may also carry over impinging on the liner surfaces causing further risk of damage to the liner.	High and medium-speed engines are more prone to experience operational difficulties due to poor ignition and combustion properties than low speed two stroke types. With four stroke engines, poor ignition can result in excessive exhaust gas system deposits, black smoke, engine knocking and difficulties operating at low load. If the ignition process is delayed for too long a period by virtue of some chemical quality of the fuel, too large a quantity of fuel will be injected into the engine cylinders and will ignite at once, producing a rapid pressure and heat rise and causing associated damage to the piston rings and cylinder liners of the engine. Reference 2.

Fuel Property	Potential Challenges	Remarks
Cat fines	Cat fines will cause abrasive wear of cylinder liners, piston rings and fuel injection equipment if not reduced sufficiently by the fuel treatment system. High wear in the combustion chamber can result.	Major engine manufacturers recommend that the fuel's cat fines content does not exceed 10 mg/kg (ppm) at engine inlet.
Low viscosity	Low-viscosity fuels (less than 2 cSt at engine inlet) challenge the function of the fuel pump in the following ways: .1 breakdown of the oil film, which could result in seizures; .2 insufficient injection pressure, which results in difficulties during start-up and low-load operation; and .3 insufficient fuel index margin, which limits acceleration.	Low fuel viscosity does not only affect the engine fuel pumps. Most pumps in the external fuel oil system (supply pumps, circulating pumps, transfer pumps and feed pumps for the centrifuge) also need viscosities above 2 cSt to function properly. Viscosity is highly temperature dependent and the crew must take proper care of fuel oil temperature management to avoid viscosity related issues. Reference 3.
Unusual components	The below components and group of components can be linked to the risk of encountering the following problems: Polymers (e.g. polystyrene, polyethylene, polypropylene) Associated with filter blocking Polymethacrylates Associated with fuel pump sticking Phenols Occasionally Associated with filter blocking/fuel oil pump sticking Tall oils Associated with filter blocking Chlorinated hydrocarbons Associated with fuel pump seizures Estonian shale oil Associated in the past with excessive separator sludging Organic acids Associated with corrosion as well as fuel pump sticking	Only for few components, there exists a clear cause and effect between component and associated operational problems. There is no statistical study performed of which components are typically found in marine fuels and in which concentration. As per ISO 8217:2017, annex B: The marine industry continues to build on its understanding of the impact of specific chemical species and the respective critical concentrations at which detrimental effects are observed on the operational characteristics of marine fuels in use. Only in some of the past cases the origin of the unusual components found in bunkers were revealed and were due to various reasons such as: .1 Russia/Baltic states 1997, cross contamination in storage/piping (polypropylene); .2 Singapore 2001, 4 bunker barges received material from road

Fuel Property	Potential Challenges	Remarks
		tankers which, in addition to transporting fuel, also collected/transported waste oil from shipyards and motor shops (esters); .3 Ventspils 2007, Estonian shale oil to convert HSHFOs to LSFOS; and .4 Houston 2010/11, bunker barges that were not cleaned between cargoes (polyacrylates) Reference 4.

References

1 CIMAC WG7 Fuels Guideline 01/2015: "Cold flow properties of marine fuel oils"
2 CIMAC WG7 Fuels 2011: "Fuel Quality Guide: Ignition and Combustion"
3 MAN Service Letter SL2014-593/DOJA
4 Bureau Veritas Verifuel, Investigative analysis of marine fuel oils: Pros & Cons

ANNEX 15

RESOLUTION MEPC.321(74)
(adopted on 17 May 2019)

2019 GUIDELINES FOR PORT STATE CONTROL UNDER MARPOL ANNEX VI CHAPTER 3

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee conferred upon it by the international conventions for the prevention and control of marine pollution,

RECALLING ALSO that, at its fifty-eighth session, the Committee adopted, by resolution MEPC.176(58), a revised MARPOL Annex VI which significantly strengthens the controls on emissions,

NOTING that articles 5 and 6 of the MARPOL Convention and regulations 10 and 11 of MARPOL Annex VI provide control procedures to be followed by a Party to the 1997 Protocol with regard to foreign ships visiting its ports,

RECALLING that, at its fifty-ninth session, the Committee adopted, by resolution MEPC.181(59), *2009 Guidelines for port State control under the revised MARPOL Annex VI*,

NOTING that the revised MARPOL Annex VI entered into force on 1 July 2010 and since then there have been several amendments to the provisions,

RECOGNIZING the need to revise the *2009 Guidelines for port State control under the revised MARPOL Annex VI*, in accordance with provisions of the MARPOL Annex VI, as amended,

HAVING CONSIDERED, at is seventy-fourth session, draft 2019 Guidelines for port State control under MARPOL Annex VI prepared by the Sub-Committee on Pollution Prevention and Response, at its sixth session, following a review by the Sub-Committee on Implementation of IMO Instruments, at its fifth session,

1 ADOPTS the *2019 Guidelines for port State control under MARPOL Annex VI Chapter 3* (2019 PSC Guidelines), as set out in the annex to the present resolution;

2 INVITES Governments, when exercising port State control under MARPOL Annex VI, to apply the 2019 PSC Guidelines from 1 January 2020;

3 INVITES Governments, when exercising port State control under MARPOL Annex VI, to apply the provisions of MARPOL Annex VI concerning the prohibition on the carriage of non-compliant fuel oil for combustion purposes for propulsion or operation on board a ship from 1 March 2020;

4 INVITES Governments, when exercising port State control under MARPOL Annex VI, to apply the provisions of MARPOL Annex VI concerning electronic record books from 1 October 2020;

5 AGREES to keep these Guidelines under review in the light of experience gained with their application;

6 REVOKES the *2009 Guidelines for port State control under the revised MARPOL Annex VI* adopted by resolution MEPC.181(59), from 1 January 2020.

ANNEX

2019 GUIDELINES FOR PORT STATE CONTROL UNDER MARPOL ANNEX VI CHAPTER 3

Chapter 1 GENERAL

1.1 This document is intended to provide basic guidance on the conduct of port State control inspections for compliance with MARPOL Annex VI (hereinafter referred to as "the Annex") and afford consistency in the conduct of these inspections, the recognition of deficiencies and the application of control procedures.

1.2 Chapters 1 (General), 4 (Contravention and detention), 5 (Reporting requirements) and 6 (Review procedures) of the *Procedures for Port State Control,* as adopted by the Organization, as may be amended, also applies to these Guidelines.

Chapter 2 INSPECTIONS OF SHIPS REQUIRED TO CARRY THE IAPP CERTIFICATE

2.1 Initial inspections

2.1.1 The PSCO should ascertain the date of ship construction and the date of installation of equipment on board which are subject to the provisions of the Annex, in order to confirm which regulations of the Annex are applicable.

2.1.2 On boarding and introduction to the master or responsible ship's officer, the port State control officer (PSCO) should examine the following documents, where applicable:

.1 the International Air Pollution Prevention Certificate (IAPP Certificate) (regulation VI/6), including its Supplement;

.2 the Engine International Air Pollution Prevention Certificate (EIAPP Certificate) (paragraph 2.2 of the NO_X Technical Code) including its Supplement, for each applicable marine diesel engine;

.3 the Technical File (paragraph 2.3.4 of the NO_X Technical Code) for each applicable marine diesel engine;

.4 depending on the method used for demonstrating NO_X compliance for each applicable marine diesel engine:

.1 the Record Book of Engine Parameters for each marine diesel engine (paragraph 6.2.2.7 of the NO_X Technical Code) demonstrating compliance with regulation VI/13 by means of the marine diesel engine parameter check method; or

.2 documentation relating to the simplified measurement method; or

.3 documentation related to the direct measurement and monitoring method;

.5 for a ship to which regulation VI/13.5.1 applies for a particular NO_X Tier III emission control area and that has one or more installed marine diesel engines certified to both Tier II and Tier III or which has one or more marine diesel

engines certified to Tier II only[1] that there are the required log book and the recordings for the tier and on/off status of those marine diesel engines while the ship is within an applicable NO_X Tier III emission control area;

.6 the Approved Method File (regulation VI/13.7);

.7 the written procedures covering fuel oil change over operations (in a working language or languages understood by the crew) where separate fuel oils are used in order to achieve compliance (regulation VI/14.6);

.8 the approved documentation relating to exceptions and/or exemptions granted under regulation VI/3;

.9 the approved documentation (SECC where issued, ETM, OMM, SECP) and relating to any installed Exhaust Gas Cleaning System (EGCS) or equivalent means, to reduce SO_X emissions (regulation VI/4);

.10 that the required EGCS monitoring records have been retained and show compliance. Additionally, that the EGCS Record Book including nitrate discharge data and performance records,[2] or approved alternative, has been duly maintained;

.11 the bunker delivery notes (BDNs) and representative samples or records thereof (regulation VI/18);

.12 the copy of the type approval certificate of applicable shipboard incinerator (resolutions MEPC.76(40) or MEPC.244(66));

.13 the Ozone Depleting Substances Record Book (regulation VI/12.6);

.14 the VOC Management Plan (regulation VI/15.6);

.15 any notification to the ship's flag Administration issued by the master or officer in charge of the bunker operation together with any available commercial documentation relevant to non-compliant bunker delivery, regulation VI/18.2; and

.16 if the ship has not been able to obtain compliant fuel oil, the notification to the ship's flag Administration and the competent authority of the relevant port of destination as set out in the appendix.

The Record Books referenced in sub-paragraphs .1, .5, .10 and 13 above may be presented in an electronic format. A declaration from the Administration should be viewed in order to accept this Electronic Record Book. If a declaration cannot be provided, a hard copy Record Book will need to be presented for examination.

[1] Unified Interpretation to regulation 13.5.3 set out in MEPC.1/Circ.795/Rev.4.

[2] In assessing the Emission Ratio and discharge water records the PSCO should be mindful that such factors as transient engine operation or analyser performance outputs may result in isolated "spikes" in the recorded output which, while these measurements in themselves may be above the required Emission Ratio or discharge water limit values, do not indicate that overall the EGCS was not being operated and controlled as required and hence should not be taken as evidence of non-compliance with the requirements.

2.1.3 As a preliminary check, the IAPP Certificate's validity should be confirmed by verifying that the Certificate is properly completed and signed and that required surveys have been performed.

2.1.4 Through examining the Supplement to the IAPP Certificate, the PSCO may establish how the ship is equipped for the prevention of air pollution.

2.1.5 In the case where the bunker delivery note or the representative sample as required by regulation VI/18 presented to the ship are not in compliance with the relevant requirements (the BDN is set out in appendix V of MARPOL Annex VI), the master or officer in charge of the bunker operation may have documented that through a Notification to the ship's flag Administration with copies to the port authority under whose jurisdiction the ship did not receive the required documentation pursuant to the bunkering operation and to the bunker deliverer.

2.1.6 In addition, if the BDN shows compliant fuel, but the master has independent test results of the fuel oil sample taken by the ship during the bunkering which indicates non-compliance, the master may have documented that through a Notification to the ship's flag Administration with copies to the competent authority of the relevant port of destination, the Administration under whose jurisdiction the bunker deliverer is located and to the bunker deliverer.

2.1.7 In all cases, a copy may be retained on board the ship, together with any available commercial documentation, for the subsequent scrutiny of port State control.

2.2 Initial inspection on ships equipped with equivalent means of SO_X compliance.

2.2.1 On ships equipped with equivalent means of compliance, the PSCO will look at:

.1 evidence that the ship has received an appropriate approval for any installed equivalent means (approved, under trial or being commissioned);

.2 evidence that the ship is using an equivalent means, as identified on the Supplement of the IAPP certificate, for fuel oil combustion units on board or that compliant fuel oil is used in equipment not so covered; and

.3 BDNs on board[3] which indicate that the fuel oil is intended to be used in combination with an equivalent means of SO_X compliance or the ship is subject to a relevant exemption to conduct trials for SO_X emission reduction and control technology research.

2.2.2 In the case where an EGCS is not in compliance with the relevant requirements for other than transitory periods and isolated spikes in the recorded output, the master or officer in charge may have documented that through a Notification to the ship's flag Administration with copies to the competent authority of the relevant port of destination, and present those corrective actions taken in order to rectify the situation in accordance with the guidance given in the EGCS Technical Manual. If a malfunction occurs in the instrumentation for the monitoring of emission to air or the monitoring of washwater discharge to sea, the ship may have alternative documentation demonstrating compliance.[4]

[3] Resolution MEPC.305(73) *Prohibition on the carriage of non-compliant fuel oil for combustion purposes for propulsion or operation on board a ship* is not applicable to fuel oil carried as cargo or for ships fitted with an approved equivalent means of compliance.

[4] MEPC.1/Circ.883 on *Guidance on indication of ongoing compliance in the case of the failure of a single monitoring instrument, and recommended actions to take if the Exhaust Gas Cleaning Systems (EGCS) fails to meet the provisions of the 2015 EGCS Guidelines (resolution MEPC.259(68))*, ships should have documented notification of system non-compliance to relevant authorities as in paragraph 2.2.2.

2.3 Initial inspection within an ECA

2.3.1 When a ship is inspected in a port in an ECA designated for SO_X emission control, the PSCO should look at:

.1 evidence of fuel oil delivered to and used on board with a sulphur content of not more than 0.10% m/m through the BDNs and appropriate onboard records including records of bunkering operations as set out in the Oil Record Book Part 1 (regulation VI/18.5 and VI/14.4); and

.2 for those ships using separate fuel oils for compliance with regulation VI/14, evidence of a written procedure (in a working language or languages understood by the crew) and records of changeover to fuel oil with a sulphur content of not more than 0.10% m/m before entering the ECA such that compliant fuel was being used while sailing in the entire ECA as required in regulation VI/14.6.

2.3.2 When a ship to which regulation VI/13.5.1 applies for a particular NO_X Tier III emission control area is inspected in a port in that area, the PSCO should look at:

.1 the records in respect of the tier and on/off status, together with any changes to that status while within that NO_X Tier III emission control area, which are to be logged as required by regulation VI/13.5.3 in respect of an installed marine diesel engine certified to both Tier II and Tier III or which is certified to Tier II only[5]; and

.2 the status of an installed marine diesel engine which is certified to both Tier II and Tier III showing that that engine was operating in its Tier III condition on entry into that NO_X Tier III emission control area and that status was maintained at all times while that marine diesel engine was in operation within that area; or

.3 the records related to the conditions associated with an exemption granted under regulation VI/13.5.4 have been logged as required by that exemption and that the terms and duration of that exemption have been complied with as required.

2.4 Initial inspection outside an ECA or first port after transiting an ECA

2.4.1 When a ship is inspected in a port outside ECA the PSCO will look to the same documentation and evidence as during inspections in ports inside the ECA. The PSCO should in particular look at:

.1 evidence that the sulphur content of the fuel oil is in accordance with regulation VI/14.1[6] through the BDNs and appropriate onboard records including records of bunkering operations as set out in the Oil Record Book Part 1 (regulation VI/18.5 and VI/14.4); and

---

5 Unified Interpretation to regulation 13.5.3 set out in MEPC.1/Circ.795/Rev.4.

6 Resolution MEPC.305(73) *Prohibition on the carriage of non-compliant fuel oil for combustion purposes for propulsion or operation on board a ship* is not applicable to fuel oil carried as cargo or for ships fitted with an approved equivalent means of compliance.

.2 evidence of a written procedure (in a working language or languages understood by the crew) and records of changeover from fuel oil with a sulphur content of not more than 0.10% m/m after leaving the ECA such that compliant fuel was being used while sailing in the in the entire ECA.

2.4.2 When a ship to which regulation VI/13.5.1 applies for a particular NO_X Tier III emission control area is inspected in a port outside that area, the PSCO should look at the records required by 2.3.2.1 and 2.3.2.2 or 2.3.2.3 to ensure that the relevant requirements were complied with for the whole period of time the ship was operating in that area.

2.5 Outcome of initial inspection

2.5.1 If the certificates and documents are valid and appropriate and, after an inspection of the ship to check that the overall condition of the ship meets generally accepted international rules and standards, the PSCO's general impressions and observations on board confirm a good standard of maintenance, the inspection should be considered satisfactorily concluded.

2.5.2 If, however, the PSCO's general impressions or observations on board give clear grounds (see paragraph 2.5.3) for believing that the condition of the ship or its equipment do not correspond substantially with the particulars of the certificates or the documents, the PSCO should proceed to a more detailed inspection.

2.5.3 "Clear grounds" to conduct a more detailed inspection include:

.1 evidence that certificates required by the Annex are missing or clearly invalid;

.2 evidence that documents required by the Annex are missing or clearly invalid;

.3 the absence or malfunctioning of equipment or arrangements specified in the certificates or documents;

.4 the presence of equipment or arrangements not specified in the certificates or documents;

.5 evidence from the PSCO's general impressions or observations that serious deficiencies exist in the equipment or arrangements specified in the certificates or documents;

.6 information or evidence that the master or crew are not familiar with essential shipboard operations relating to the prevention of air pollution, or that such operations have not been carried out;

.7 evidence of inconsistency between information in the bunker delivery note and paragraph 2.3 of the Supplement to the IAPP certificate;

.8 evidence that an equivalent means has not been used as required; or

.9 evidence, for example by fuel calculators, that the quantity of bunkered compliant fuel oil is inconsistent with the ship's voyage plan; and

.10 receipt of a report or complaint containing information that the ship appears to be non-compliant including but not limited to information from remote sensing surveillance of SO_X emissions or portable fuel oil sulphur content measurement devices indicating that a ship appears to use non-compliant fuel while in operation/underway;

.11 evidence that the tier and/or on/off status of applicable installed marine diesel engines has not been maintained correctly or as required;

.12 receipt of a report or complaint containing information that one or more of the installed marine diesel engines has not been operated in accordance with the provisions of the respective Technical File or the requirements relevant to a particular NO_X Tier III emission control area; and

.13 receipt of a report or complaint containing information that the conditions attached to an exemption granted under regulation VI/13.5.4 have not been complied with.

2.6 More detailed inspections

2.6.1 The PSCO should verify that:

.1 there are effectively implemented maintenance procedures for the equipment containing ozone-depleting substances; and

.2 there are no deliberate emissions of ozone-depleting substances.

2.6.2 In order to verify that each installed marine diesel engine with a power output of more than 130 kW is approved by the Administration in accordance with the NO_X Technical Code and maintained appropriately, the PSCO should pay particular attention to the following:

.1 examine such marine diesel engines to be consistent with the EIAPP Certificate and its Supplement, Technical File and, if applicable, Record Book of Engine Parameters or Onboard Monitoring Manual and related data;

.2 examine marine diesel engines specified in the Technical Files to verify that no unapproved modifications, which may affect NO_X emission, have been made to the marine diesel engines;

.3 in the case of an installed marine diesel engine certified to Tier III that the required records, if applicable, in accordance with regulation VI/13.5.3 or in the Technical File, including those required by 2.3.6 of the NO_X Technical Code, have been maintained as necessary and that the marine diesel engine, including any NO_X control device and associated ancillary systems and equipment, including, where fitted, bypass arrangements, is maintained in accordance with the associated Technical File and is in good order;

.4 if applicable, examine whether the conditions attached to an exemption granted under regulation VI/13.5.4 have been complied with as required;

.5 examine marine diesel engines with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 litres installed on a ship constructed on or after 1 January 1990 but prior to 1 January 2000 to verify that they are certified, if so required, in accordance with regulation VI/13.7;

.6 in the case of ships constructed before 1 January 2000, verify that any marine diesel engine which has been subject to a major conversion, as defined in regulation VI/13, has been approved by the Administration; and

.7 emergency marine diesel engines intended to be used solely in case of emergency are still in use for this purpose.

2.6.3 The PSCO should check and verify whether fuel oil complies with the provisions of regulation VI/14 taking into account appendix VI[7] of this Annex.

2.6.4 The PSCO should pay attention to the record required in regulation VI/14.6 in order to identify the sulphur content of fuel oil used by the ship depending on the area of trade, or that other equivalent approved means have been applied as required. The fuel oil consumed in and outside the ECA, and that there is enough fuel in compliance with regulation VI/14 to reach the next port destination.

2.6.5 Where EGCS is used, the PSCO should check that it has been installed and operated, together with its monitoring systems, in accordance with the associated approved documentation according to the survey procedures as established in the OMM.

2.6.6 If the ship is equipped with an EGCS as an equivalent means of SO_X compliance, the PSCO should verify that the system is properly functioning, is in operation, there are continuous-monitoring systems with tamper-proof data recording and processing devices,[8] if applicable and the records demonstrate the necessary compliance when set against the limits given in the approved documentation and applies to relevant fuel combustion units on board. Checking can include but is not limited to: emissions ratio, pH, PAH, turbidity readings as limit values given in ETM-A or ETM-B and operation parameters as listed in the system documentation.

2.6.7 If the ship is a tanker, as defined in regulation VI/2.21, the PSCO should verify that the vapour collection system approved by the Administration, taking into account MSC/Circ.585, is installed, if required under regulation VI/15.

2.6.8 If the ship is a tanker carrying crude oil, the PSCO should verify that there is on board an approved VOC Management Plan.

2.6.9 The PSCO should verify that prohibited materials are not incinerated.

2.6.10 The PSCO should verify that shipboard incineration of sewage sludge or sludge oil in boilers or marine power plants is not undertaken while the ship is inside ports, harbours or estuaries (regulation VI/16.4).

2.6.11 The PSCO should verify that the shipboard incinerator, if required by regulation VI/16.6.1, is approved by the Administration. For these units, it should be verified that the incinerator is properly maintained, therefore the PSCO should examine whether:

.1 the shipboard incinerator is consistent with the certificate of shipboard incinerator;

---

7 Amendments to MARPOL VI, Appendix VI, *Verification procedures for a MARPOL Annex VI fuel oil sample (regulation 18.8.2 or regulation 14.8)*, expected to be adopted in Spring 2020 and set out in annex 13 to document MEPC 74/18/Add.1.

8 Equivalent emission values for emission abatement methods are 4.3 and 21.7 SO2 (ppm)/CO2 (% v/v) for marine fuels with a sulphur content of 0.10 and 0.50 (% m/m) respectively.

.2 the operational manual, in order to operate the shipboard incinerator within the limits provided in appendix IV to the Annex, is provided; and

.3 the combustion chamber flue gas outlet temperature is monitored at all times the unit is in operation (regulation VI/16.9).

2.6.12 If there are clear grounds as defined in paragraph 2.5.3, the PSCO may examine operational procedures by confirming that:

.1 the master or crew are familiar with the procedures to prevent emissions of ozone-depleting substances;

.2 the master or crew are familiar with the proper operation and maintenance of marine diesel engines, in accordance with their Technical Files or Approved Method file, as applicable, and with due regard for Emission Control Areas for NO_X control;

.3 the master or crew are familiar with fuel oil bunkering procedures in connection to the respective bunker delivery notes and onboard records including the Oil Record Book Part 1 (regulation VI/18.5 and VI/14.4) and retained samples as required by regulation VI/18;

.4 the master or crew are familiar with the correct operation of an EGCS or other equivalent means on board together with any applicable monitoring and recording, and record keeping requirements;

.5 the master or crew are familiar and have undertaken the necessary fuel oil changeover procedures, or equivalent, associated with demonstrating compliance within an Emission Control Area;

.6 the master or crew are familiar with the garbage screening procedure to ensure that prohibited garbage is not incinerated;

.7 the master or crew are familiar with the operation of the shipboard incinerator, as required by regulation VI/16.6, within the limits provided in appendix IV to the Annex, in accordance with its operational manual;

.8 the master or crew are familiar with the regulation of emissions of VOCs, when the ship is in ports or terminals under the jurisdiction of a Party to the 1997 Protocol to MARPOL 73/78 in which VOCs emissions are to be regulated, and are familiar with the proper operation of a vapour collection system approved by the Administration (in case the ship is a tanker as defined in regulation VI/2.21); and

.9 the master or crew are familiar with the application of the VOC Management Plan, if applicable.

2.7 Detainable deficiencies

2.7.1 In exercising his/her functions, the PSCO should use professional judgment to determine whether to detain the ship until any noted deficiencies are corrected or to allow it to sail with certain deficiencies which do not pose an unreasonable threat of harm under the scope of the Annex provided they will be timely addressed. In doing this, the PSCO should be guided by the principle that the requirements contained in the Annex, with respect to the construction, equipment and operation of the ship, are essential for the protection of the marine

environment, the navigational safety or the human health and that departure from these requirements could constitute an unreasonable threat of harm to the mentioned protection aspects and should be avoided.

2.7.2 In order to assist the PSCO in the use of these Guidelines, there follows a list of deficiencies, which are considered, taking into account the provisions of regulation VI/3, to be of such a serious nature that they may warrant the detention of the ship involved:

.1 absence of valid IAPP Certificate, EIAPP Certificates or Technical Files, if applicable;

.2 a marine diesel engine, with a power output of more than 130 kW, which is installed on board a ship constructed on or after 1 January 2000, or a marine diesel engine having undergone a major conversion on or after 1 January 2000, which does not conform to its Technical File, or where the required records have not been maintained as necessary or where it has not met the applicable requirements of the particular NO_X Tier III emission control area in which it is operating;

.3 a marine diesel engine, with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 litres, which is installed on board a ship constructed on or after 1 January 1990 but prior to 1 January 2000, and an approved method for that engine has been certified by an Administration and was commercially available, for which an approved method is not installed after the first renewal survey specified in regulation VI/13.7.2;

.4 on ships not equipped with equivalent means of SO_X compliance, based on the methodology of sample analysis in accordance with appendix VI[9] of MARPOL Annex VI, the sulphur content of any fuel oil being used or carried for use on board exceeds the applicable limit required by regulation VI/14. If the master claims that it was not possible to bunker compliant fuel oil, the PSCO should take into account the provisions of regulation VI/18.2 (see the appendix).

.5 on ships equipped with equivalent means of SO_X compliance, absence of an appropriate approval for the equivalent means, which applies to relevant fuel combustion units on board. With regard to combustion units not connected to an EGCS, the sulphur content of any fuel oil being used on these combustion units exceeds the limits stipulated in regulation VI/14, taking into account the provisions of regulation VI/18.2 (see the appendix).

.6 non-compliance with the relevant requirements while operating within an Emission Control Area for SO_X and particulate matter control;

.7 an incinerator installed on board the ship on or after 1 January 2000 does not comply with requirements contained in appendix IV to the Annex, or the standard specifications for shipboard incinerators developed by the Organization (resolutions MEPC.76(40) and MEPC.244(66)); and

[9] Amendments to MARPOL VI, appendix VI, Verification procedures for a MARPOL Annex VI fuel oil sample (regulation 18.8.2 or regulation 14.8), expected to be adopted in Spring 2020 and set out in annex13 to document MEPC 74/18/Add.1.

.8 the master or crew are not familiar with essential procedures regarding the operation of air pollution prevention equipment as defined in paragraph 2.5.12 above.

Chapter 3 INSPECTIONS OF SHIPS OF NON-PARTIES TO THE ANNEX AND OTHER SHIPS NOT REQUIRED TO CARRY THE IAPP CERTIFICATE

3.1 As this category of ships is not provided with the IAPP Certificate, the PSCO should judge whether the condition of the ship and its equipment satisfies the requirements set out in the Annex. In this respect, the PSCO should take into account that, in accordance with article 5(4) of the MARPOL Convention, no more favourable treatment is to be given to ships of non-Parties.

3.2 In all other respects the PSCO should be guided by the procedures for ships referred to in chapter 2 and should be satisfied that the ship and crew do not present a danger to those on board or an unreasonable threat of harm to the marine environment.

3.3 If the ship has a form of certification other than the IAPP Certificate, the PSCO may take such documentation into account in the evaluation of the ship.

APPENDIX

NON-AVAILABILITY OF COMPLIANT FUEL OIL CLAIMED

In case non-availability of compliant fuel oil is claimed the master/owner must present a record of actions taken to attempt to bunker compliant fuel oil and provide evidence:

.1 of attempts to purchase compliant fuel oil in accordance with its voyage plan;

.2 if the fuel oil was not made available where expected, that attempts were made to locate alternative sources for such fuel oil; and

.3 that despite best efforts to obtain compliant fuel oil no such fuel oil was made available for purchase.

Best efforts to procure compliant fuel oil include, but are not limited to, investigating alternative sources of fuel oil prior to commencing the voyage or en route.

The ship should not be required to deviate from its intended voyage or to unduly delay the voyage in order to achieve compliance.

If the ship provides the information, as above, the port State should take into account all relevant circumstances and the evidence presented to determine the appropriate action to take, including not taking control measures.

The master/owner may provide evidence as below to support their claim (not exhaustive):

.1 a copy (or description) of the ship's voyage plan, including the ship's port of origin and port of destination;

.2 the time the ship first received notice it would be conducting a voyage involving transit/arrival in the port and the ship's location when it first received such notice;

.3 a description of the actions taken to attempt to achieve compliance, including a description of all attempts that were made to locate alternative sources of compliant fuel oil, and a description of the reason why compliant fuel was not available (e.g. compliant fuel oil was not available at ports on the "intended voyage", fuel oil supply disruptions at port, etc.);

.4 the cost of compliant fuel is not considered to be a valid basis for claiming non-availability of fuel;

.5 include names and addresses of the fuel oil suppliers contacted and the dates on which contact was made;

.6 in cases of fuel oil supply disruption, the name of the port at which the ship was scheduled to receive compliant fuel oil and the name of the fuel supplier that is reporting the non-availability of compliant fuel oil;

.7 the availability of compliant fuel oil at the next port-of-call and plans to obtain that fuel oil; and

.8 if applicable, identify and describe any operational constraints that prevented use of compliant fuel oil, e.g. with respect to viscosity or other fuel oil parameters.

If, despite best efforts, it was not possible to procure compliant fuel oil the master/owner must notify the port State control authorities in the port of arrival and the flag Administration (regulation VI/18.2.4).

***

INTERNATIONAL MARITIME ORGANIZATION

E

4 ALBERT EMBANKMENT
LONDON SE1 7SR
Telephone: +44 (0)20 7735 7611 Fax: +44 (0)20 7587 3210

MEPC.1/Circ.881
21 May 2019

GUIDANCE FOR PORT STATE CONTROL ON CONTINGENCY MEASURES FOR ADDRESSING NON-COMPLIANT FUEL OIL

1 The Marine Environment Protection Committee, at its seventy-fourth session (13 to 17 May 2019), approved the *Guidance for port State control on contingency measures for addressing non-compliant fuel oil*, as set out in the annex.

2 Member Governments are invited to bring the annexed Guidance to the attention of their Administration, industry, relevant shipping and fuel industry organizations, shipping companies and other stakeholders concerned, as appropriate.

***

ANNEX

GUIDANCE FOR PORT STATE CONTROL ON CONTINGENCY MEASURES FOR ADDRESSING NON-COMPLIANT FUEL OIL

1 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 the following as possible contingency measures:

.1 actions predetermined in the Ship implementation plan, if available, for consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI (MEPC.1/Circ.878);

.2 discharging non-compliant fuel oil to another ship to be carried as cargo or to an appropriate shipboard or land-based facility, if practicable and available;

.3 managing the non-compliant fuel oil in accordance with a method acceptable to the port State; and

.4 operational actions, such as modifying sailing or bunkering schedules and/or retention of non-compliant fuel oil on board the ship. The port State and the ship should consider any safety issues and avoid possible undue delays.

2 Having considered all of the options in paragraph 1 above, the non-compliant fuel oil may be discharged to the port or retained on board, as acceptable to the port State. Port State consideration may include environmental, safety, operational and logistical implications of allowing or disallowing the carriage of non-compliant fuel oil. The carriage of non-compliant fuel oil is subject to any conditions of the port State.

3 The port State, the flag State and the ship should work together to agree on the most appropriate solution, taking into account the information provided in the Fuel Oil Non-Availability Report (FONAR),[*] to address the non-compliant fuel oil.

4 After the non-compliant fuel oil is completely used or discharged, such 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.

---

[*] Appendix 1 of the *2019 Guidelines for consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI* (MEPC.320(74)).

INTERNATIONAL MARITIME ORGANIZATION

E

4 ALBERT EMBANKMENT
LONDON SE1 7SR
Telephone: +44 (0)20 7735 7611 Fax: +44 (0)20 7587 3210

MEPC.1/Circ.864/Rev.1
21 May 2019

2019 GUIDELINES FOR ON BOARD SAMPLING FOR THE VERIFICATION OF THE SULPHUR CONTENT OF THE FUEL OIL USED ON BOARD SHIPS

1 The Marine Environment Protection Committee, at its seventy-fourth session (13 to 17 May 2019), approved the *2019 Guidelines for on board sampling for the verification of the sulphur content of the fuel oil used on board ships*.

2 Member Governments are invited to bring the annexed Guidelines to the attention of Administrations, industry, relevant shipping organizations, shipping companies and other stakeholders concerned.

3 This circular revokes MEPC.1/Circ.864.

***

ANNEX

2019 GUIDELINES FOR ON BOARD SAMPLING FOR THE VERIFICATION OF THE SULPHUR CONTENT OF THE FUEL OIL USED ON BOARD SHIPS

1 Preface

The objective of these Guidelines is to 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.

2 Sampling location

The in-use[1] representative sample or samples should be obtained from a designated sampling point or points. The number and location of designated fuel oil sampling points should be confirmed by the Administration following consideration of possible fuel oil cross-contamination and service tank arrangements. Fuel oil sampling points to be used should fulfil all of the following conditions:

.1 be easily and safely accessible;

.2 take into account different fuel oil grades being used for the fuel oil combustion machinery item;

.3 be downstream of the in-use fuel oil service tank;

.4 be as close to the fuel oil combustion machinery as safely feasible taking into account the type of fuel oil, flow-rate, temperature, and pressure behind the selected sampling point;

.5 be clearly marked for easy identification and described in either the piping diagram or other relevant documents;

.6 each sampling point should be located in a position shielded from any heated surface or electrical equipment and the shielding device or construction should be sturdy enough to endure leaks, splashes or spray under design pressure of the fuel oil supply line so as to preclude impingement of fuel oil onto such surface or equipment; and

.7 the sampling arrangement should be provided with suitable drainage to the drain tank or other safe location.

[1] In-use sample means the sample of fuel oil in use on a ship.

3 Sample handling

The fuel oil sample should be taken when a steady flow is established in the fuel oil circulating system. The sampling connection[2] should be thoroughly flushed through with the fuel oil in use prior to drawing the sample. The sample or samples should be collected in a sampling container or containers and should be representative of the fuel oil being used. The sample bottles should be sealed by the inspector with a unique means of identification installed in the presence of the ship's representative. The ship should be given the option of retaining a sample. The label should include the following information:

.1 sampling point location where the sample was drawn;

.2 date and port of sampling;

.3 name and IMO number of the ship;

.4 details of seal identification; and

.5 signatures and names of the inspector and the ship's representative.

---

[2] The sampling connection is the valve and associated pipework designated for sample collection which is connected to the fuel oil service system.

INTERNATIONAL MARITIME ORGANIZATION

E

4 ALBERT EMBANKMENT
LONDON SE1 7SR
Telephone: +44 (0)20 7735 7611 Fax: +44 (0)20 7587 3210

MEPC.1/Circ.882
16 July 2019

EARLY APPLICATION OF THE VERIFICATION PROCEDURES FOR A MARPOL ANNEX VI FUEL OIL SAMPLE (REGULATION 18.8.2 OR REGULATION 14.8)

1 The Marine Environment Protection Committee, at its seventy-fourth session (13 to 17 May 2019), approved amendments to appendix VI of MARPOL Annex VI on Verification procedures for a MARPOL Annex VI fuel oil sample (regulation 18.8.2 or regulation 14.8), providing an agreed method to determine whether the fuel oil delivered to, in-use or carried for use on board a ship is in accordance with the applicable sulphur limit of regulation 14 of MARPOL Annex VI.

2 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, Member Governments are invited to apply the approved amendments to appendix VI of MARPOL Annex VI related to the verification procedure for a MARPOL Annex VI fuel oil sample (regulation 18.8.2 or regulation 14.8), as contained in the annex to this Circular, in advance of their entry into force.

3 Member Governments are invited to bring the annexed Guidance to the attention of Administrations, port State control authorities, industry, fuel oil suppliers, relevant shipping organizations, shipping companies and other stakeholders concerned.

4 This circular expires on entry into force of the amendments.

***

ANNEX

THE APPROVED AMENDMENTS TO THE VERIFICATION PROCEDURES FOR A MARPOL ANNEX VI FUEL OIL SAMPLE (REGULATION 18.8.2 OR REGULATION 14.8)

Regulation 2
Definitions

1 New paragraphs 52, 53, 54, 55 and 56 are added as follows:

"52 *Sulphur content of fuel oil* means the concentration of sulphur in a fuel oil, measured in % m/m as tested in accordance with a standard acceptable to the Organization.[1]

53 *Low-flashpoint fuel* means gaseous or liquid fuel oil having a flashpoint lower than otherwise permitted under paragraph 2.1.1 of SOLAS regulation II-2/4.

54 *MARPOL delivered sample* means the sample of fuel oil delivered in accordance with regulation 18.8.1 of MARPOL Annex VI.

55 *In-use sample* means the sample of fuel oil in use on a ship.

56 *On board sample* means the sample of fuel oil intended to be used or carried for use on board that ship."

Regulation 14
Sulphur oxides (SO_X) and particulate matter

2 "In-use and on board fuel oil sampling and testing" and a new paragraph 8 and 9 are added at the end of regulation 14 as follows:

"**In-use and on board fuel oil sampling and testing**

8 If the competent authority of a Party requires the in-use or on board fuel oil sample to be analysed, it shall be done in accordance with the verification procedure set forth in appendix VI to determine whether the fuel oil being used or carried for use on board meets the requirements in paragraph 1 or paragraph 4 of this regulation. The in-use fuel oil sample shall be drawn taking into account the guidelines developed by the Organization.[2] The on board fuel oil sample shall be drawn taking into account the guidelines to be developed by the Organization.[3]

"[1] Refer to ISO 8754: 2003 Petroleum products – Determination of sulfur content – Energy-dispersive X-ray fluorescence spectrometry."

"[2] Refer to 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)."

"[3] Refer to the Guidelines to be developed prior to entry into force of the provision."

9 The sample shall be sealed by the representative of the competent authority with a unique means of identification installed in the presence of the ship's representative. The ship shall be given the option of retaining a duplicate sample."

3 "In-use fuel oil sampling point" and new paragraphs 10, 11, 12 and 13 are added at the end of regulation 14 as follows:

"In-use fuel oil sampling point

10 For each ship subject to regulations 5 and 6 of this Annex, sampling point(s) shall be fitted or designated for the purpose of taking representative samples of the fuel oil being used on board the ship taking into account guidelines developed by the Organization.[2]

11 For a ship constructed before entry into force of these requirements, the sampling point(s) referred to in paragraph 10 shall be fitted or designated no later than the first renewal survey that occurs 12 months or more after the entry into force of this regulation.

12 The requirements of paragraphs 10 and 11 above are not applicable to a fuel oil service system for a low-flashpoint fuel for combustion purposes for propulsion or operation on board the ship.

13 The competent authority of a Party shall, as appropriate, utilize the sampling point(s) which is fitted or designated for the purpose of taking representative sample(s) of the fuel oil being used on board in order to verify the fuel oil complies with this regulation. Taking fuel oil samples by the competent authority of the Party shall be performed as expeditiously as possible without causing the ship to be unduly delayed."

Regulation 18
Fuel oil availability and quality

4 Paragraph 8.2 is replaced with the following:

"8.2 If a Party requires the representative sample to be analysed, it shall be done in accordance with the verification procedure set forth in appendix VI to determine whether the fuel oil meets the requirements of this Annex."

Appendix VI
Fuel verification procedure for MARPOL Annex VI fuel oil samples (regulation 18.8.2)

5 Appendix VI is replaced with the following:

"**Verification procedures for a MARPOL Annex VI fuel oil sample (regulation 18.8.2 or regulation 14.8)**

The following relevant verification procedure shall be used to determine whether the fuel oil delivered to, in-use or carried for use on board a ship has met the applicable sulphur limit of regulation 14 of this Annex.

This appendix refers to the following representative MARPOL Annex VI fuel oil samples:

Part 1 – sample of fuel oil delivered[4] in accordance with regulation 18.8.1, hereafter referred to as the "MARPOL delivered sample" as defined in regulation 2.54.

Part 2 – sample of fuel oil in use,[5] intended to be used or carried for use on board in accordance with regulation 14.8, hereafter referred to as the "in-use sample" as defined in regulation 2.55 and "on board sample"[6] as defined in regulation 2.56.

Part 1 – MARPOL delivered fuel oil sample

1 General Requirements

1.1 The representative fuel oil sample, which is required by regulation 18.8.1 (the MARPOL delivered sample) shall be used to verify the sulphur content of the fuel oil delivered to a ship.

1.2 A Party, through its competent authority, shall manage the verification procedure.

1.3 A laboratory undertaking the sulphur testing procedure given in this appendix shall have valid accreditation[7] in respect of the test method to be used.

2 Verification Procedure Part 1

2.1 The MARPOL delivered sample shall be conveyed by the competent authority to the laboratory.

2.2 The laboratory shall:

.1 record the details of the seal number and the sample label on the test record;

.2 record the condition of the seal of the sample as received on the test record; and

.3 reject any sample where the seal has been broken prior to receipt and record that rejection on the test record.

2.3 If the seal of the sample as received has not been broken, the laboratory shall proceed with the verification procedure and shall:

.1 unseal the sample;

.2 ensure that the sample is thoroughly homogenized;

"[4] Samples taken in accordance with the *2009 Guidelines for the sampling of fuel oil for determination of compliance with the revised MARPOL Annex VI* (resolution MEPC.182(59))."

"[5] Samples taken in accordance with the *2019 Guidelines for onboard sampling for the verification of the sulphur content of the fuel oil used on board ships* (MEPC.1/Circ.864/Rev.1)."

"[6] Refer to the Guidelines to be developed by the Organization prior to entry into force of the provision."

"[7] The laboratory is to be accredited to ISO/IEC 17025:2017 or an equivalent standard for the performance of the given sulphur content test ISO 8754:2003."

.3 draw two subsamples from the sample; and

.4 reseal the sample and record the new reseal details on the test record.

2.4 The two subsamples shall be tested in succession, in accordance with the specified test method referred to in regulation 2.52 of this Annex. For the purposes of this Part 1 verification procedure, the results of the test analysis shall be referred to as "1A" and "1B":

.1 results "1A" and "1B" shall be recorded on the test record in accordance with the requirements of the test method; and

.2 if the results of "1A" and "1B" are within the repeatability (r)[8] of the test method, the results shall be considered valid; or

.3 if the results "1A" and "1B" are not within the repeatability (r) of the test method, both results shall be rejected and two new subsamples shall be taken by the laboratory and tested. The sample bottle shall be resealed in accordance with paragraph 2.3.4 after the new subsamples have been taken.

.4 in the case of two failures to achieve repeatability between "1A" and "1B", the cause of that failure shall be investigated by the laboratory and resolved before further testing of the sample is undertaken. On resolution of that repeatability issue, two new subsamples shall be taken in accordance with paragraph 2.3. The sample shall be resealed in accordance with paragraph 2.3.4 after the new subsamples have been taken.

2.5 If the test results of "1A" and "1B" are valid, an average of these two results shall be calculated. The average value shall be referred to as "X" and shall be recorded on the test record:

.1 if the result "X" is equal to or less than the applicable limit required by regulation 14, the fuel oil shall be considered to have met the requirement; or

.2 if the result "X" is greater than the applicable limit required by regulation 14, the fuel oil shall be considered to have not met the requirement.

Table 1: Summary of Part 1 MARPOL delivered fuel oil sample procedure

<table>
<tr><td colspan="3">On the basis of the test method referred to in regulation 2.52 of this Annex</td></tr>
<tr><td>Applicable limit % m/m: V</td><td>Result 2.5.1: X ≤ V</td><td>Result 2.5.2: X > V</td></tr>
<tr><td>0.10</td><td rowspan="2">Met the requirement</td><td rowspan="2">Not met the requirement</td></tr>
<tr><td>0.50</td></tr>
<tr><td></td><td colspan="2">Result "X" reported to 2 decimal places</td></tr>
</table>

"[8] Repeatability (r) calculation in accordance with ISO 4259:2017-2 and as defined in the test method used."

2.6 The final results obtained from this verification procedure shall be evaluated by the competent authority.

2.7 The laboratory shall provide a copy of the test record to the competent authority managing the verification procedure.

Part 2 – In-use and onboard fuel oil samples

3 General Requirements

3.1 The in-use or onboard fuel oil sample, as appropriate, shall be used to verify the sulphur content of the fuel oil as represented by that sample of fuel oil at the point of sampling.

3.2 A Party, through its competent authority, shall manage the verification procedure.

3.3 A laboratory undertaking the sulphur testing procedure given in this appendix shall have valid accreditation[9] in respect of the test method to be used.

4 Verification Procedure Part 2

4.1 The in-use or onboard fuel oil sample shall be conveyed by the competent authority to the laboratory.

4.2 The laboratory shall:

.1 record the details of the seal number and the sample label on the test record;

.2 record the condition of the seal of the sample as received on the test record; and

.3 reject any sample where the seal has been broken prior to receipt and record that rejection on the test record.

4.3 If the seal of the sample as received has not been broken, the laboratory shall proceed with the verification procedure and shall:

.1 unseal the sample;

.2 ensure that the sample is thoroughly homogenized;

.3 draw two subsamples from the sample; and

.4 reseal the sample and record the new reseal details on the test record.

"[9] The laboratory is to be accredited to ISO/IEC 17025:2017 or an equivalent standard for the performance of the given sulphur content test ISO 8754:2003."

4.4 The two subsamples shall be tested in succession, in accordance with the specified test method referred to in regulation 2.52 of this Annex. For the purposes of this Part 2 verification procedure, the results obtained shall be referred to as "2A" and "2B":

.1 results "2A" and "2B" shall be recorded on the test record in accordance with requirements of the test method; and

.2 if the results of "2A" and "2B" are within the repeatability (r)[10] of the test method, the results shall be considered valid; or

.3 if the results of "2A" and "2B" are not within the repeatability (r) of the test method, both results shall be rejected and two new subsamples shall be taken by the laboratory and tested. The sample bottle shall be resealed in accordance with paragraph 4.3.4 after the new subsamples have been taken.

.4 in the case of two failures to achieve repeatability between "2A" and "2B", the cause of that failure shall be investigated by the laboratory and resolved before further testing of the sample is undertaken. On resolution of that repeatability issue, two new subsamples shall be taken in accordance with paragraph 4.3. The sample shall be resealed in accordance with paragraph 4.3.4 after the new subsamples have been taken.

4.5 If the test results of "2A" and "2B" are valid, an average of these two results shall be calculated. That average value shall be referred to as "Z" and shall be recorded on the test record:

.1 if "Z" is equal to or less than the applicable limit required by regulation 14, the sulphur content of the fuel oil as represented by the tested sample shall be considered to have met the requirement;

.2 if "Z" is greater than the applicable limit required by regulation 14 but less than or equal to that applicable limit + 0.59R (where R is the reproducibility[11] of the test method), the sulphur content of the fuel oil as represented by the tested sample shall be considered to have met the requirement; or

.3 if "Z" is greater than the applicable limit required by regulation 14 + 0.59R, the sulphur content of the fuel oil as represented by the tested sample shall be considered to have not met the requirement.

"[10] Repeatability (r) calculation in accordance with ISO 4259:2017-2 and as defined in the test method used."

"[11] Reproducibility (R) calculation in accordance with ISO 4259:2017-2 and as defined in the test method."

Table 2: Summary of in-use or onboard fuel oil sample procedure[12]

On the basis of the test method referred to in regulation 2.52 of this Annex				
Applicable limit %m/m: V	Test margin value: W	Result 4.5.1: Z ≤ V	Result 4.5.2: V < Z ≤ W	Result 4.5.3: Z > W
0.10	0.11	Met the requirement	Met the requirement	Not met the requirement
0.50	0.53			
		Result "Z" reported to 2 decimal places		

4.6 The final results obtained from this verification procedure shall be evaluated by the competent authority.

4.7 The laboratory shall provide a copy of the test record to the competent authority managing the verification procedure."

[12] "Results of testing undertaken by the Company or other entities are outside the MARPOL process and hence should be considered within the approach given by ISO 4259:2017-2 regarding recipient drawn samples."

INTERNATIONAL MARITIME ORGANIZATION

E

4 ALBERT EMBANKMENT
LONDON SE1 7SR
Telephone: +44 (0)20 7735 7611 Fax: +44 (0)20 7587 3210

MEPC.1/Circ.795/Rev.4
21 May 2019

UNIFIED INTERPRETATIONS TO MARPOL ANNEX VI

1 The Marine Environment Protection Committee, at its seventy-fourth session (13 to 17 May 2019), approved unified interpretations to MARPOL Annex VI, which included:

.1 regulation 13.2.2 of MARPOL Annex VI in relation to the time of the replacement or addition of an engine;

.2 regulation 13.5.3 of MARPOL Annex VI in relation to the applicability of recording requirements to replacement engines (Tier II) subject to resolution MEPC.230(65));

.3 regulation 14.1 of MARPOL Annex VI in relation to applying the requirement of sulphur content of fuel oil to emergency equipment; and

.4 regulation 16.9 of MARPOL Annex VI in relation to shipboard incinerators.

2 The updated consolidated text of all existing unified interpretations to MARPOL Annex VI, including those set out in circular MEPC.1/Circ.795/Rev.4, are set out in the annex.

3 Member Governments are invited to apply the annexed unified interpretations to MARPOL Annex VI, as appropriate, and bring them to the attention of all Parties concerned.

4 This circular revokes MEPC.1/Circ.795/Rev.3.

***

ANNEX

UNIFIED INTERPRETATIONS TO MARPOL ANNEX VI

1 Definition of "new ship"

Regulation 2
Definitions

Regulation 2.23 reads as follows:

"*New ship* means a ship:

.1 for which building contract is placed on or after 1 January 2013; or

.2 in the absence of a building contract, the keel of which is laid or which is at a similar stage of construction on or after 1 July 2013; or

.3 the delivery of which is on or after 1 July 2015."

***Interpretation*:**

1.1 For the application of the definition "new ship" as specified in regulation 2.23 to each phase specified in table 1 of regulation 21, it should be interpreted as follows:

.1 the date specified in regulation 2.23.1 should be replaced with the start date of each phase;

.2 the date specified in regulation 2.23.2 should be replaced with the date six months after the start date of each phase; and

.3 the date specified in regulation 2.23.3 should, for Phase 1, 2 and 3, be replaced with the date 48 months after the start date of each phase.

1.2 With the above interpretations, the required EEDI of each phase is applied to the following new ship which falls into one of the categories defined in regulations 2.25 to 2.31 and to which chapter 4 is applicable:

.1 the required EEDI of Phase 0 is applied to the following new ship:

.1 the building contract of which is placed in Phase 0, and the delivery is before 1 January 2019; or

.2 the building contract of which is placed before Phase 0, and the delivery is on or after 1 July 2015 and before 1 January 2019; or

in the absence of a building contract:

.3 the keel of which is laid or which is at a similar stage of construction on or after 1 July 2013 and before 1 July 2015, and the delivery is before 1 January 2019; or

.4 the keel of which is laid or which is at a similar stage of construction before 1 July 2013, and the delivery is on or after 1 July 2015 and before 1 January 2019.

.2 the required EEDI of Phase 1 is applied to the following new ship:

.1 the building contract of which is placed in Phase 1, and the delivery is before 1 January 2024; or

.2 the building contract of which is placed before Phase 1, and the delivery is on or after 1 January 2019 and before 1 January 2024; or

in the absence of a building contract:

.3 the keel of which is laid or which is at a similar stage of construction on or after 1 July 2015 and before 1 July 2020, and the delivery is before 1 January 2024; or

.4 the keel of which is laid or which is at a similar stage of construction before 1 July 2015, and the delivery is on or after 1 January 2019 and before 1 January 2024.

.3 the required EEDI of Phase 2 is applied to the following new ship:

.1 the building of which contract is placed in Phase 2, and the delivery is before 1 January 2029; or

.2 the building contract of which is placed before Phase 2, and the delivery is on or after 1 January 2024 and before 1 January 2029; or

in the absence of a building contract:

.3 the keel of which is laid or which is at a similar stage of construction on or after 1 July 2020 and before 1 July 2025, and the delivery is before 1 January 2029; or

.4 the keel of which is laid or which is at a similar stage of construction before 1 July 2020, and the delivery is on or after 1 January 2024 and before 1 January 2029.

.4 the required EEDI of Phase 3 is applied to the following new ship:

.1 the building of which contract is placed in Phase 3; or

.2 in the absence of a building contract, the keel of which is laid or which is at a similar stage of construction on or after 1 July 2025; or

.3 the delivery of which is on or after 1 January 2029.

2 Major conversion

Regulation 2
Definitions

Regulation 2.24 reads as follows:

"*Major conversion* means in relation to chapter 4 of this Annex a conversion of a ship:

.1 which substantially alters the dimensions, carrying capacity or engine power of the ship; or

.2 which changes the type of the ship; or

.3 the intent of which in the opinion of the Administration is substantially to prolong the life of the ship; or

.4 which otherwise so alters the ship that, if it were a new ship, it would become subject to relevant provisions of the present Convention not applicable to it as an existing ship; or

.5 which substantially alters the energy efficiency of the ship and includes any modifications that could cause the ship to exceed the applicable required EEDI as set out in regulation 21 of this Annex."

***Interpretation*:**

2.1 For regulation 2.24.1, any substantial change in hull dimensions and/or capacity (e.g. change of length between perpendiculars (L_{PP}) or change of assigned freeboard) should be considered a major conversion. Any substantial increase of total engine power for propulsion (e.g. 5% or more) should be considered a major conversion. In any case, it is the Administration's authority to evaluate and decide whether an alteration should be considered as major conversion, consistent with chapter 4.

Note: Notwithstanding paragraph 2.1, assuming no alteration to the ship structure, both decrease of assigned freeboard and temporary increase of assigned freeboard due to the limitation of deadweight or draft at calling port should not be construed as a major conversion. However, an increase of assigned freeboard, except a temporary increase, should be construed as a major conversion.

2.2 Notwithstanding paragraph 2.1, for regulation 2.24.5, the effect on Attained EEDI as a result of any change of ships' parameters, particularly any increase in total engine power for propulsion, should be investigated. In any case, it is the Administration's authority to evaluate and decide whether an alteration should be considered as major conversion, consistent with chapter 4.

2.3 A company may, at any time, voluntarily request re-certification of the EEDI, with IEE Certificate reissuance, on the basis of any new improvements to the ships' efficiency that are not considered to be major conversions.

2.4 In regulation 2.24.4, the terms "new ship" and "existing ship" should be understood as they are used in MARPOL Annex I, regulation 1.9.1.4, rather than as the defined terms in regulations 2.22 and 2.23.

2.5 The term "a ship" referred to in regulation 5.4.2 is interpreted as "new ship".

3 Ships dedicated to the carriage of fruit juice in refrigerated cargo tanks

Regulation 2
Definitions

Regulation 2.30 reads as follows:

> "*Refrigerated cargo carrier* means a ship designed exclusively for the carriage of refrigerated cargoes in holds."

***Interpretation*:**

3.1 Ships dedicated to the carriage of fruit juice in refrigerated cargo tanks should be categorized as refrigerated cargo carrier.

4 Timing for existing ships to have on board a SEEMP

Regulation 5
Surveys

Regulation 5.4.4 reads as follows:

> "For existing ships, the verification of the requirement to have a SEEMP on board according to regulation 22 shall take place at the first intermediate or renewal survey identified in paragraph 1 of this regulation, whichever is the first, on or after 1 January 2013."

Regulation 6
Issue or endorsement of a Certificate

Regulation 6.4 reads as follows:

> "An International Energy Efficiency Certificate for the ship shall be issued after a survey in accordance with the provisions of regulation 5.4 of this Annex to any ship of 400 gross tonnage and above before that ship may engage in voyages to ports or offshore terminals under the jurisdiction of other Parties."

Regulation 22
Ship Energy Efficiency Management Plan (SEEMP)

Regulation 22.1 reads as follows:

> "Each ship shall keep on board a ship specific Ship Energy Efficiency Management Plan (SEEMP). This may form part of the ship's Safety Management System (SMS)."

***Interpretation*:**

4.1 The International Energy Efficiency Certificate (IEEC) should be issued for both new and existing ships to which chapter 4 applies. Ships which are not required to keep an SEEMP on board are not required to be issued with an IECC.

4.2 The SEEMP required by regulation 22.1 is not required to be placed on board an existing ship to which this regulation applies until the verification survey specified in regulation 5.4.4 is carried out.

4.3 For existing ships, a SEEMP required in accordance with regulation 22 should be verified on board according to regulation 5.4.4, and an IEEC should be issued, not later than the first intermediate or renewal survey, in accordance with chapter 2, whichever is earlier, on or after 1 January 2013, i.e. a survey connected to an intermediate/renewal survey of the IAPP Certificate.

4.4 The intermediate or renewal survey referenced in paragraph 4.3 relates solely to the timing of the verification of the SEEMP on board, i.e. these IAPP Certificate survey windows will also become the IEEC initial survey date for existing ships. The SEEMP is, however, a survey item solely under chapter 4 and is not a survey item relating to IAPP Certificate surveys.

4.5 In the event that the SEEMP is not available on board during the first intermediate/renewal survey of the IAPP Certificate on or after 1 January 2013, the RO should seek the advice of the Administration concerning the issuance of an IEEC and be guided accordingly. However, the validity of the IAPP Certificate is not impacted by the lack of a SEEMP as the SEEMP is a survey item solely under chapter 4 and not under the IAPP Certificate surveys.

4.6 With respect to ships required to keep on board a SEEMP, such ships exclude platforms (including FPSOs and FSUs) and drilling rigs, regardless of their propulsion, and any other ship without means of propulsion.

4.7 The SEEMP should be written in a working language or languages understood by ships' personnel.

5 Section 2.3 of the supplement to the IAPP Certificate

Regulation 8
Form of Certificates

Regulation 8.1 reads as follows:

> "The International Air Pollution Prevention Certificate shall be drawn up in a form corresponding to the model given in appendix I to this Annex and shall be at least in English, French or Spanish. If an official language of the issuing country is also used, this shall prevail in case of a dispute or discrepancy."

Appendix I
Form of International Air Pollution Prevention (IAPP) Certificate (Regulation 8)

Section 2.3 of the supplement to International Air Pollution Prevention Certificate reads as follows:

"2.3 Sulphur oxides (SO_X) and particulate matter (regulation 14).

2.3.1 When the ship operates outside of an emission control area specified in regulation 14.2, the ship uses:

.1 fuel oil with a sulphur content as documented by bunker delivery notes that does not exceed the values of:

- 4.50% m/m (not applicable on or after 1 January 2012); or.....☐
- 3.50% m/m (not applicable on or after 1 January 2020); or.....☐
- 0.50% m/m.....☐

.2 an equivalent arrangement approved in accordance with regulation 4.1 as listed in 2.6 that is at least as effective in terms of SO_X emission reductions as compared to using a fuel oil with a sulphur content limit value of:

- 4.50% m/m (not applicable on or after 1 January 2012); or.....☐
- 3.50% m/m (not applicable on or after 1 January 2020); or.....☐
- 0.50% m/m.....☐

2.3.2 When the ship operates inside an emission control area specified in regulation 14.3, the ship uses:

.1 fuel oil with a sulphur content as documented by bunker delivery notes that does not exceed the limit value of:

- 1.00% m/m (not applicable on or after 1 January 2015); or.....☐
- 0.10% m/m.....☐

.2 an equivalent arrangement approved in accordance with regulation 4.1 as listed in 2.6 that is at least as effective in terms of SO_X emission reductions as compared to using a fuel oil with a sulphur content limit value of:

- 1.00% m/m (not applicable on or after 1 January 2015); or.....☐
- 0.10% m/m.....☐"

***Interpretation*:**

5.1 Section 2.3 of the Supplement ("as documented by bunker delivery notes") allows for an "x" to be entered in advance of the dates indicated in all of the relevant check boxes recognizing that the bunker delivery notes, required to be retained on board for a minimum period of three years, provide the subsequent means to check that a ship is actually operating in a manner consistent with the intent as given in section 2.3.

6 Identical replacement engines

Regulation 13
Nitrogen oxides (NO_X)

Regulation 13.1.1.2 reads as follows:

> "Each marine diesel engine with a power output of more than 130 kW which undergoes a major conversion on or after 1 January 2000 except when demonstrated to the satisfaction of the Administration that such engine is an identical replacement to the engine which it is replacing and is otherwise not covered under paragraph 1.1.1 of this regulation."

Regulation 13.2.2 reads as follows:

> "For a major conversion involving the replacement of a marine diesel engine with a non-identical marine diesel engine or the installation of an additional marine diesel engine, the standards in this regulation in force at the time of the replacement or addition of the engine shall apply."

Interpretation:

6.1 In regulation 13.1.1.2, the term "identical" (and hence, by application of the converse, in regulation 13.2.2 the term "non-identical") as applied to engines under regulation 13 should be taken as:

6.2 An "identical engine" is, as compared to the engine being replaced,[1] an engine which is of the same:

.1 design and model;

.2 rated power;

.3 rated speed;

.4 use;

.5 number of cylinders; and

[1] In those instances where the replaced engine will not be available to be directly compared with the replacing engine at the time of updating the Supplement to the IAPP Certificate reflecting that engine change it is to be ensured that the necessary records in respect of the replaced engine are available in order that it can be confirmed that the replacing engine represents "an identical engine".

.6 fuel system type (including, if applicable, injection control software):

.1 for engines without EIAPP certification, have the same NO_X critical components and settings;[2] or

.2 for engines with EIAPP certification, belonging to the same Engine Group/Engine Family.

7 Time of replacement of an engine

Regulation 13
Nitrogen oxides (NO_X)

Regulation 13.2.2 reads as follows:

"For a major conversion involving the replacement of a marine diesel engine with a non-identical marine diesel engine, or the installation of an additional marine diesel engine, the standards in this regulation in force at the time of the replacement or addition of the engine shall apply."

Interpretation:

7.1 The term "time of the replacement or addition" of the engine in regulation 13.2.2 should be taken as the date of:

.1 the contractual delivery date of the engine to the ship;[3] or

.2 in the absence of a contractual delivery date, the actual delivery date of the engine to the ship,[3] provided that the date is confirmed by a delivery receipt; or

.3 in the event the engine is fitted on board and tested for its intended purpose on or after six months from the date specified in sub-paragraphs of regulation 13.5.1.2, as appropriate, the actual date that the engine is tested on board for its intended purpose applies in determining the standards in this regulation in force at the time of the replacement or addition of the engine.

---

[2] For engines without EIAPP Certification there will not be the defining NO_X critical component markings or setting values as usually given in the approved Technical File. Consequently, in these instances, the assessment of "... same NO_X critical components and settings ..." shall be established on the basis that the following components and settings are the same:

Fuel system:

.1 fuel pump model and injection timing; and

.2 injection nozzle model;

Charge air:

.1 configuration and, if applicable, turbocharger model and auxiliary blower specification; and

.2 Cooling medium (seawater/freshwater).

[3] The engine is to be fitted on board and tested for its intended purpose within six months after the date specified in sub-paragraphs of regulation 13.5.1.2, as appropriate.

7.2 Entry of the date in paragraph 7.1 above, provided the conditions associated with those dates apply, should be made in the item 8.a "Major conversion – According to regulations 13.2.1.1 and 13.2.2" of the Supplement of IAPP Certificate.

7.3 If the engine is not tested within six months after the date specified in sub-paragraphs of regulation 13.5.1.2, as appropriate due to unforeseen circumstances beyond the control of the shipowner, then the provisions of "unforeseen delay in delivery" may be considered by the Administration in a manner similar to UI4 of MARPOL Annex I.

8 Engine changeover/on-off recording requirements

Regulation 13
Nitrogen oxides (NO_X)

Regulation 13.5.3 reads as follows:

> "The tier and on/off status of marine diesel engines installed on board a ship to which paragraph 5.1 of this regulation applies which are certified to both Tier II and Tier III or which are certified to Tier II only shall be recorded in such logbook as prescribed by the Administration at entry into and exit from an emission control area designated under paragraph 6 of this regulation, or when the on/off status changes within such an area, together with the date, time and position of the ship."

Interpretation:

8.1 For the application of this regulation:

.1 "marine diesel engines installed on board a ship to which paragraph 5.1 of this regulation applies" includes additional or replaced engines[4]; installed on or after the relevant emission control area takes effect;

.2 "certified to Tier II only" means a Tier II engine that is installed on board a ship which is constructed on or after the emission control area where the ship is operating takes effect;

.3 Tier II engines stipulated under the Tier II requirement of regulation 13.4, i.e. Tier II engines installed on board a ship constructed before the entry into force of the emission control area where the ship is operating, are not considered to be a "Tier II only" engine in the context of record keeping. Such exclusion is extended to Tier II engines replaced after the entry into force of the relevant emission control areas on board ships of this category, if the replacement engines meet resolution MEPC.230(65);

.4 if an engine installed on a ship constructed before the entry into force of the emission control area where the ship is operating has undergone a major conversion as described in regulation 13.2.1, those engines are to be Tier III engines; thus the above interpretation in .1 above applies; and

.5 recording is required for the Tier II engine operation in a NECA under the exemption according to regulation 13.5.4.

[4] Additional or replaced engine: refer to section 7.1 of MEPC.1/Circ.795/Rev.4.

9 Application of sulphur limit to emergency equipment

Regulation 14
Sulphur oxides (SO_X) and particulate matter

Regulation 14.1 reads as follows:[5]

> "The sulphur content of fuel oil used or carried for use on board a ship shall not exceed 0.50% m/m."

Interpretation:

9.1 Regulation 14.1 of MARPOL Annex VI for the prohibition on carriage of non-compliant fuel oil should be applied to the fuel oil of emergency equipment.

10 VOC management plan

Regulation 15
Volatile organic compounds (VOCs)

Regulations 15.6 and 15.7 read as follows:

> "6 A tanker carrying crude oil shall have on board and implement a VOC management plan approved by the Administration. Such a plan shall be prepared taking into account the guidelines developed by the Organization. The plan shall be specific to each ship and shall at least:
>
> .1 provide written procedures for minimizing VOC emissions during the loading, sea passage and discharge of cargo;
>
> .2 give consideration to the additional VOC generated by crude oil washing;
>
> .3 identify a person responsible for implementing the plan; and
>
> .4 for ships on international voyages, be written in the working language of the master and officers and, if the working language of the master and officers is not English, French or Spanish, include a translation into one of these languages.
>
> 7 This regulation shall also apply to gas carriers only if the types of loading and containment systems allow safe retention of non-methane VOCs on board or their safe return ashore.[†]"

***Interpretation*:**

10.1 The requirement for a VOC management plan applies only to a tanker carrying crude oil.

---

[5] Unified Interpretation is applicable when resolution MEPC.305(73) enters into force on 1 March 2020.

[†] Resolution MSC.30(61), International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk.

11 Continuous-feed type shipboard incinerators

Regulation 16
Shipboard incineration

Regulation 16.9 reads as follows:

> "For incinerators installed in accordance with the requirements of paragraph 6.1 of this regulation the combustion chamber gas outlet temperature shall be monitored at all times the unit is in operation. Where that incinerator is of the continuous-feed type, waste shall not be fed into the unit when the combustion chamber gas outlet temperature is below 850°C. Where that incinerator is of the batch-loaded type, the unit shall be designed so that the combustion chamber gas outlet temperature shall reach 600°C within five minutes after start-up and will thereafter stabilize at a temperature not less than 850°C."

***Interpretation*:**

11.1 For the application of this regulation, the term "waste shall not be fed into the unit" should be interpreted as follows:

> For continuous-feed incinerators solid waste shall not be fed into the unit when the combustion chamber flue gas outlet temperature is below 850°C. Sludge oil generated during normal operation of a ship should not be regarded as waste in connection with this regulation, and can be fed into the unit when the required preheat temperature of 650°C in the combustion chamber is achieved.

11.2 For the application of this regulation, the term "the unit shall be designed so that the combustion chamber gas outlet temperature shall reach 600°C within five minutes after start up" should be interpreted as follows:

> Batch loaded incinerators should be designed so that the temperature in the actual combustion space where the solid waste is combusted should reach 600°C within five minutes after start up.

12 Applicability of the requirements for a bunker delivery note

Regulation 18
Fuel oil availability and quality

Regulation 18.5 reads as follows:

> "For each ship subject to regulations 5 and 6 of this Annex, details of fuel oil for combustion purposes delivered to and used on board shall be recorded by means of a bunker delivery note that shall contain at least the information specified in appendix V to this Annex."

Regulation 18.6 reads as follows:

> "The bunker delivery note shall be kept on board the ship in such a place as to be readily available for inspection at all reasonable times. It shall be retained for a period of three years after the fuel oil has been delivered on board."

Interpretation:

12.1 For the application of these regulations, they should be interpreted as being applicable to all ships of 400 gross tonnage or above and, at the Administration's discretion, to ships of less than 400 gross tonnage.

13 Confirmation of compliance for new ships

Regulation 5
Surveys

Regulation 5.4.5 reads as follows:

> "The Administration shall ensure that for each ship to which regulation 22A applies, the SEEMP complies with regulation 22.2 of this Annex. This shall be done prior to collecting data under regulation 22A of this Annex in order to ensure the methodology and processes are in place prior to the beginning of the ship's first reporting period. Confirmation of compliance shall be provided to and retained on board the ship."

Regulation 22
Ship Energy Efficiency Management Plan (SEEMP)

Regulation 22.2 reads as follows:

> "On or before 31 December 2018, in the case of a ship of 5,000 gross tonnage and above, the SEEMP shall include a description of the methodology that will be used to collect the data required by regulation 22A.1 of this Annex and the processes that will be used to report the data to the ship's Administration."

Regulation 22.3 reads as follows:

> "The SEEMP shall be developed taking into account guidelines adopted by the Organization."

Interpretation:

13.1 For Ships that are delivered on or after 1 January 2019 should keep on board both a SEEMP that is in compliance with regulation 22.2 and confirmation of compliance as required by regulation 5.4.5.

14 Boil-off gas consumed on board ships

Regulation 2
Definitions

Regulation 2.9 reads as follows:

> "*Fuel oil* means any fuel delivered to and intended for combustion purposes for propulsion or operation on board a ship, including gas, distillate and residual fuels."

Regulation 22A
Collection and reporting of ship fuel oil consumption data

Regulation 22A.1 reads as follows:

> "From calendar year 2019, each ship of 5,000 gross tonnage and above shall collect the data specified in appendix IX to this Annex, for that and each subsequent calendar year or portion thereof, as appropriate, according to the methodology included in the SEEMP."

Appendix IX
Collection and reporting of ship fuel oil consumption data

Appendix IX reads as follows:

> "Fuel oil consumption, by fuel oil type in metric tonnes and methods used for collecting fuel oil consumption data"

Interpretation:

14.1 For Data relating to Boil-off Gas (BOG) consumed on board the ship for propulsion or operation is required to be collected and reported as fuel as part of the Data Collection System for fuel oil consumption of ships.

15 Access to the disaggregated data

Regulation 22A
Collection and reporting of ship fuel oil consumption data

Regulation 22A.8 reads as follows:

> "Except as provided for in paragraphs 4, 5 and 6 of this regulation, the disaggregated data that underlies the reported data noted in appendix IX to this Annex for the previous calendar year shall be readily accessible for a period of not less than 12 months from the end of that calendar year and be made available to the Administration upon request."

Interpretation:

15.1 The disaggregated data is not required to be kept onboard the ship provided that the disaggregated data can be made available by the Company.

INTERNATIONAL MARITIME ORGANIZATION

E

4 ALBERT EMBANKMENT
LONDON SE1 7SR
Telephone: +44 (0)20 7735 7611 Fax: +44 (0)20 7587 3210

MSC-MEPC.5/Circ.15
24 June 2019

DELIVERY OF COMPLIANT FUEL OIL BY SUPPLIERS

1 The Marine Environment Protection Committee, at its seventy-fourth session (13 to 17 May 2019), and the Maritime Safety Committee, at its 101st session (5 to 14 June 2019), recommended that Member States should take appropriate action to ensure that fuel oil suppliers under their jurisdiction deliver compliant fuel oil.

2 SOLAS and MARPOL contain provisions applicable to the supply of compliant fuel oil to ships that relate to both safety and environmental requirements. Specifically, safety and fuel oil quality are addressed in SOLAS chapter II-2 and regulations 14 and 18 of MARPOL Annex VI.

3 A Party to MARPOL Annex VI is required to take all reasonable steps to promote the availability of fuel oils that comply with MARPOL Annex VI. Fuel oil for combustion purposes delivered to and used on board ships to which MARPOL Annex VI applies shall meet the requirements set out in regulation 18.3 of MARPOL Annex VI.

4 Pursuant to regulation 18.9 of MARPOL Annex VI, 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.

5 Members States should urge fuel oil suppliers to take into account the following guidance, as relevant:

.1 *Guidance on best practice for fuel oil purchasers/users for assuring the quality of fuel oil used on board ships* (MEPC.1/Circ.875); and

.2 *Guidance on best practice for fuel oil suppliers for assuring the quality of fuel oil delivered to ships* (MEPC.1/Circ.875/Add.1).

6 Member States are invited to bring this guidance to the attention of Administrations, recognized organizations, port authorities, shipowners, ship operators, fuel oil suppliers, shippers/manufacturers and other parties concerned.

INTERNATIONAL MARITIME ORGANIZATION

E

4 ALBERT EMBANKMENT
LONDON SE1 7SR
Telephone: +44 (0)20 7735 7611 Fax: +44 (0)20 7587 3210

MSC-MEPC.2/Circ.17
4 July 2019

2019 GUIDELINES FOR THE CARRIAGE OF BLENDS OF BIOFUELS AND MARPOL ANNEX I CARGOES

1 The Marine Environment Protection Committee, at its sixty-second session (11 to 15 July 2011), recognizing the need to clarify how biofuels subject to MARPOL Annex II, when blended with MARPOL Annex I cargoes, can be shipped in bulk, approved the *2011 Guidelines for the carriage of blends of petroleum oil and bio-fuels* (MEPC.1/Circ.761).

2 The Marine Environment Protection Committee, at its sixty-fourth session (1 to 5 October 2012), approved amendments to the 2011 Guidelines, as set out in annex 3 to document BLG 16/16, relating to deck fire-fighting system requirements and the fire protection assignment (column l) given for the entry "Biofuel blends of Gasoline and Ethyl alcohol (>25% but <99% by volume)", and issued MEPC.1/Circ.761/Rev.1 accordingly.

3 The Marine Environment Protection Committee, at its seventy-fourth session (13 to 17 May 2019), recognizing the need to make consequential amendments to the 2011 Guidelines as a result of the inclusion of a new annex 12 on energy-rich fuels in the MEPC.2/Circular on *Provisional categorization of liquid substances in accordance with MARPOL Annex II and the IBC Code*, and the Maritime Safety Committee, at its 101st session (5 to 14 June 2019), recognizing the need to include reference to SOLAS regulation VI/5.2 regarding the prohibition of the blending of bulk liquid cargoes and production processes during sea voyages, approved the *2019 Guidelines for the carriage of blends of MARPOL Annex I cargoes and biofuels*, as set out in the annex.

4 Member Governments and international organizations are invited to bring the annexed Guidelines to the attention of Administrations, recognized organizations, port authorities, shipowners, ship operators and other parties concerned.

5 This circular revokes MEPC.1/Circ.761/Rev.1.

***

ANNEX

2019 GUIDELINES FOR THE CARRIAGE OF BLENDS OF BIOFUELS AND MARPOL ANNEX I CARGOES

1 APPLICATION

1.1 These Guidelines apply to ships carrying bulk blends of biofuels and MARPOL Annex I cargoes, subject to MARPOL Annexes I and II, respectively.

2 SCOPE

2.1 These Guidelines have been developed to clarify how biofuels subject to MARPOL Annex II, when blended with MARPOL Annex I cargoes, can be shipped in bulk.

3 DEFINITIONS

For the purpose of these Guidelines:

3.1 *Biofuels* are ethyl alcohol, fatty acid methyl esters (FAME) and vegetable oils (triglycerides), as identified in chapters 17 and 18 of the IBC Code or the MEPC.2/Circular. Following circulation of these Guidelines, further biofuels identified as falling under the scope of the Guidelines will be recorded in annex 11 of the MEPC.2/Circular.

3.2 *Biofuel blends* are mixtures resulting from the blending of those biofuels identified in paragraph 3.1 above with a MARPOL Annex I cargo.

4 CARRIAGE OF BIOFUEL BLENDS

The carriage requirements for biofuel blends are assigned based on their volumetric composition, as follows:

4.1 Biofuel blends containing ≥75% of a MARPOL Annex I cargo

4.1.1 When the biofuel blend contains ≥75% of a MARPOL Annex I cargo, it is subject to MARPOL Annex I.

4.1.2 When carrying biofuel blends as described in paragraph 4.1.1, Oil Discharge Monitoring Equipment (ODME – see resolution MEPC.108(49)) shall be in compliance with regulation 31 of MARPOL Annex I and approved for the mixture being transported.

4.1.3 When considering the deck fire-fighting system requirements of SOLAS chapter II-2, regulations 1.6.1 and 1.6.2, when carrying biofuel blends containing more than 5% ethyl alcohol, then alcohol resistant foams should be used.

4.2 Biofuel blends containing >1% but <75% of a MARPOL Annex I cargo

4.2.1 Biofuel blends containing >1% but <75% of a MARPOL Annex I cargo are subject to MARPOL Annex II, with the carriage requirements set out in chapter 17 of the IBC Code.

4.2.2 With respect to any new biofuels identified as falling under the scope of these guidelines, carriage requirements for specific blends of biofuels and MARPOL Annex I cargoes to be shipped in accordance with MARPOL Annex II will be incorporated into list 1 of the MEPC.2/Circular, as appropriate.

4.3 Biofuels blended with ≤1% of a MARPOL Annex I cargo

Biofuels blended with ≤1% of a MARPOL Annex I cargo are not considered as blends and are therefore to be shipped in accordance with MARPOL Annex II, under the appropriate product entry in the IBC Code.

5 BLENDING OF MARPOL ANNEX I CARGOES AND BIOFUELS ON BOARD

5.1 Blending on board describes the mixing of two products resulting in one single product (a blended mixture) and reflects only physical mixing as distinct from any chemical processing. Such mixing operations should only be undertaken whilst the ship is within port limits.

5.2 The physical blending on board of biofuels and MARPOL Annex I cargoes during a sea voyage to create new products is prohibited, in accordance with regulation 5.2 of SOLAS chapter VI.

6 CERTIFICATION REQUIREMENTS

The certification for the biofuel blend to be shipped should be in compliance with MARPOL Annex II, where appropriate. If the biofuel blend, based on its composition, is shipped in accordance with MARPOL Annex I, no certification is required.

INTERNATIONAL MARITIME ORGANIZATION

E

4 ALBERT EMBANKMENT
LONDON SE1 7SR
Telephone: +44 (0)20 7735 7611 Fax: +44 (0)20 7587 3210

MEPC.1/Circ.883
21 May 2019

GUIDANCE ON INDICATION OF ONGOING COMPLIANCE IN THE CASE OF THE FAILURE OF A SINGLE MONITORING INSTRUMENT, AND RECOMMENDED ACTIONS TO TAKE IF THE EXHAUST GAS CLEANING SYSTEM (EGCS) FAILS TO MEET THE PROVISIONS OF THE 2015 EGCS GUIDELINES (resolution MEPC.259(68))

1 The Marine Environment Protection Committee, at its seventy-fourth session (13 to 17 May 2019), approved the *Guidance on indication of ongoing compliance in the case of the failure of a single monitoring instrument, and recommended actions to take if the Exhaust Gas Cleaning System (EGCS) fails to meet the provisions of the 2015 EGCS Guidelines (resolution MEPC.259(68))*.

2 Member Governments are invited to bring the annexed Guidance to the attention of Administrations, port State control authorities, industry, relevant shipping organizations, shipping companies and other stakeholders concerned.

***

ANNEX

GUIDANCE ON 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 2015 EGCS GUIDELINES (MEPC.259(68))

System malfunction

1 An Exhaust Gas Cleaning System (EGCS) malfunction is any condition that leads to an emission exceedance, with the exception of the short-term temporary emission exceedance cases described in sections 7 and 8, or an interim indication of ongoing compliance in the case of sensor failure described in sections 9 to 11.

2 As soon as possible after evidence of a malfunction (e.g. alarm is triggered), the ship should take action to identify and remedy the malfunction.

3 The ship operator should follow the process to identify and remedy the malfunction in the Exhaust Gas Cleaning System – Technical Manual that is approved at the time the EGCS is certified or in other documentation provided by the EGCS manufacturer.

4 The trouble-shooting process specified by the EGCS manufacturer should describe how to determine, within a reasonable amount of time, if the system itself is not working properly and whether the system fault must be addressed through adjustment and/or repair. The procedure would describe events that can trigger a monitoring alarm or other evidence of a scrubber malfunction (e.g. pump flow rates) and the troubleshooting process to identify and remedy the malfunction. The process should include at a minimum the following:

.1 a checklist for the operator to use to identify a malfunction; and

.2 a list of remedial actions that can be taken to resolve the malfunction after it is identified.

5 An EGCS malfunction event should be included in the EGCS Record Book including the date and time the malfunction began and, if relevant, how it was resolved, the actions taken to resolve it and any necessary follow-up actions.

6 A system malfunction that cannot be rectified is regarded as an accidental breakdown. The ship should then change over to compliant fuel oil if the EGCS cannot be put back into a compliant condition within one hour. If the ship does not have compliant fuel oil or sufficient amount of compliant fuel oil on board, a proposed course of action, in order to bunker compliant fuel oil or carry out repair works, should be communicated to relevant authorities including the ship's administration, for their agreement.

Short-term exceedances

7 A short-term temporary emission exceedance is an exceedance of the applicable Emissions Ratio that may occur due to the EGCS dynamic response when there is a sudden change in the exhaust gas flow rate to the EGCS. There may be a short period during which the measured emission values might indicate that the applicable Emissions Ratio limit has been exceeded. This is a common behaviour of monitoring equipment and EGCS dynamic response (due to a sudden change in exhaust gas flow rate). A time lapse between when the sensor takes its reading and when the unit responds may trigger an alarm from the continuous

emission monitoring device even though the EGCS has not malfunctioned. Thus, transitory periods and isolated spikes in the recorded output do not necessarily mean exceedance of emissions and should therefore not be considered as a breach of the requirements.

8 The typical operating conditions that may result in a short-term temporary emission exceedance should be specified by the EGCS manufacturer in the EGCS Technical Manual that is approved at the time the EGCS is certified.

Interim indication of ongoing compliance in the case of sensor failure

9 When running on a fuel oil with a constant sulphur content and at constant washwater engine load ratio, all parameters monitored according to the 2015 EGCS Guidelines (MEPC.259(68)) (i.e. Emission Ratio, washwater pH, etc.) will be in a certain interrelation, all depending on each other. If one of the parameters changes, some other(s) will necessarily also have to change.

10 This interrelation also serves as an indicator of instrumentation malfunction; i.e. if a single sensor signal starts to deviate or even does not display, the effect on the other parameters may indicate whether the change in signal is caused by sensor failure or whether the performance of the EGCS itself has changed. If the other parameters are continuing at the normal levels, it is an indication that there is only an instrumentation malfunction rather than non-compliance with regard to the levels allowed in the exhaust gas and the discharge water.

11 If a malfunction occurs in the instrumentation for the monitoring of Emission Ratio or discharge water (pH, PAH, Turbidity), the ship should keep records of interim indication for demonstrating compliance. The documentation and actions should include (but are not limited to):

.1 the manual or automatic recording of the data at the time of malfunction may be used to confirm that all other relevant data as recorded for the performance of the EGCS are showing values in line with values prior to the malfunction;

.2 the ship operator should record the sulphur content of the various grades of fuel oil used in the affected fuel oil combustion units from the time when the malfunction started;

.3 the ship operator should log the malfunctioning of the monitoring equipment and (for Scheme A) record all parameters that might be suitable to indicate compliant operation. This record could serve as an alternative documentation demonstrating compliance until the malfunction is rectified; and

.4 the monitoring equipment that has suffered a malfunction should be repaired or replaced as soon as practicable.

Notifications to relevant Authorities

12 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.