

MARINE ENVIRONMENT PROTECTION  
COMMITTEE  
74th session  
Agenda item 10

MEPC 74/10/11  
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## **POLLUTION PREVENTION AND RESPONSE**

### **Sulphur verification process**

**Submitted by IBIA and IPIECA**

#### **SUMMARY**

*Executive summary:* PPR 6 has developed draft amendments to appendix VI of MARPOL Annex VI as part of output 1.17 on Consistent implementation of regulation 14.1.3 of MARPOL Annex VI. The proposed changes to appendix VI of MARPOL Annex VI aimed at simplifying the sulphur verification process for the MARPOL delivered sample would have unintended consequences in leading to an increased risk that ships, having purchased compliant fuel, may be alleged as having procured non-compliant fuel without further legal recourse to challenge the allegation. This document outlines the potential problem and suggests solutions to address the problem.

*Strategic direction, if applicable:* 1

*Output:* 1.17

*Action to be taken:* Paragraph 10

*Related documents:* PPR 6/20, PPR 6/20/Add.1 and MEPC 74/10

### **Introduction**

1 This document is submitted in accordance with the provisions of paragraph 6.12.5 of the document on *Organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.5/Rev.1) and comments on document MEPC 74/10 (Secretariat).

### **Background**

2 PPR 6 has developed proposed amendments to MARPOL Annex VI to support the consistent implementation of regulation 14.1.3. The proposed amendments include changes to appendix VI, the sulphur verification procedure referred to in regulation 18.8.2 of MARPOL Annex VI. The changes to appendix VI include the addition of a part 2 that covers the procedure to determine whether a representative sample of the fuel oil used or carried on board meets the requirements of the Annex. In addition, part 1, covering the procedure for the MARPOL

delivered sample was simplified by dropping stage 2 of the procedure and considering the result of an analysis by a single laboratory as final to determine whether the sample meets the requirements of the Annex.

### **Potential unintended consequences and ways to address them**

3 The co-sponsors of this document are concerned about unintended consequences of the simplification of the verification procedure for the MARPOL delivered sample. These consequences are the result of the inherent variation in analytical results when different laboratories measure the same property following the same analytical procedure. This so-called reproducibility R represents the range of results that would be considered as representative for laboratories that execute the analytical procedure in a well-controlled way. In the case of sulphur analysis using ISO 8754:2003 in the 0.50% range, the reproducibility range R amounts to 0.05%. This means that in case the same sample is analysed in two different laboratories where one laboratory finds 0.47% sulphur and the other laboratory finds 0.51%, both lab results would be considered valid. The most likely true sulphur level in this case would be 0.49%.

4 The example quoted in paragraph 3 could result in the unintended consequence of a highly undesirable and unfair situation. In the case where a fuel supplier manufactures fuel with a target sulphur level of 0.47%<sup>1</sup>, the manufacturer's lab may confirm the fuel's sulphur level at 0.47%. When final quality control in the delivery process confirms the fuel has not been contaminated, a BDN may be issued showing the fuel oil's sulphur level at 0.47%. Such BDN will be a legal document, providing proof that the ship has procured and bunkered compliant fuel. Given the reproducibility of the ISO 8754:2003 method, it remains possible that upon checking the MARPOL delivered sample at a third party laboratory a result of 0.51% would be obtained. Under the simplified appendix VI procedure this third party laboratory result would be considered final<sup>2</sup> and the fuel oil would be considered as not having met the requirement, in other words, it would be considered non-compliant.

5 This unintended consequence of the simplification of part 1 of appendix VI could easily be addressed by retaining the current stage 2 of the procedure. In case of the example of paragraph 4, if the fuel manufacturer and supplier have correctly followed their internal quality management system and have delivered compliant fuel, it is highly likely that in case the MARPOL delivered sample would be analysed at a second third party laboratory, a result at or below 0.50% would be found. Following the procedure in the current appendix VI, the average of the two third party laboratory results could be at or below 0.50% and the fuel oil would be considered compliant, confirming the validity of the BDN.

6 On the other hand, if the manufacturer's and/or supplier's processes were not well controlled and the fuel oil's actual sulphur level was higher than indicated on the BDN, this would likely be confirmed by the second third party laboratory results and the fuel oil would be considered non-compliant. This result should then trigger, in line with regulation 18.9.4, a notification to the Party under whose jurisdiction the fuel supplier operates, reporting the finding that the BDN did not correctly reflect the fuel oil's sulphur level.

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<sup>1</sup> Consistent with paragraph 5.13 of the *Guidance on best practice for fuel oil suppliers for assuring the quality of fuel oil delivered to ships* (MEPC.1/Circ.875/Add.1).

<sup>2</sup> Paragraph 2.6 of the proposed revised appendix VI.

7 While the current stage 2 of appendix VI adds complexity to the verification process, the example in paragraph 5 illustrates the value of retaining stage 2, in avoiding the situation where a ship has procured truly compliant fuel oil, yet is found to be non-compliant on the basis of a single laboratory's results. The consequences of such a situation could be severe, up to requiring the ship to debunker. When the ship then attempts to recover incurred costs from its supplier, the supplier may be able to demonstrate that the fuel as delivered was compliant, leaving the ship with all consequences of the alleged non-compliance.

8 A second option to address the unintended consequence of the simplification would be to apply the same procedure as has been agreed for the in-use and onboard samples, implying that no further action is taken unless the third party laboratory's analysis demonstrates with at least 95% confidence that the fuel oil is non-compliant. This approach would virtually eliminate any situation where an unjustified conclusion of non-compliance would be reached. While concern has been expressed that following this procedure would potentially leave use of (marginally) non-compliant fuel undetected, fuel oil from a supplier that delivers fuel marginally above the regulatory limit would likely be found to be non-compliant on the basis of the verification procedure in part 2 of the proposed revised appendix VI.

### **Recommendation**

9 The co-sponsors recommend to either maintain the current stage 2 of appendix VI for the MARPOL delivered sample as outlined in paragraph 5 or to align the procedure with the procedure for the in-use and onboard samples as outlined in paragraph 8.

### **Action requested of the Committee**

10 The Committee is invited to note the observations made in this document, consider the recommendations made in paragraphs 5, 8 and 9 and take action, as appropriate.

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