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PREVENTION OF AIR POLLUTION FROM SHIPS

Comments on the outcome of BLG 12

Submitted by the Republic of the Marshall Islands

SUMMARY

Executive summary:	This document comments on the outcome of BLG 12 as noted in its report with regard to the revision of MARPOL Annex VI, indicates preferences with regard to some options, proposes an approach to assess net environmental benefit of applying NO_x standards to existing engines and proposes some wording changes to the Annex VI draft amendments
Strategic direction:	7.3
High-level action:	7.3.1
Planned output:	7.3.1.1
Action to be taken:	Paragraph 12
Related documents:	BLG 12/WP.6, BLG 12/WP.6/Add.1, BLG 12/WP.1 and MEPC 57/4/23

1 This document provides comments on MEPC 57/4/23 and is submitted in accordance with paragraph 4.10.5 of the Committees' Guidelines (MSC-MEPC.1/Circ.1) and the relaxed deadline for comments documents on the air pollution item to MEPC 57 with prior authorization of the MEPC Chairman following consultations with the Secretariat in line with paragraph 4.12 of the Committees' Guidelines.

Introduction

2 The twelfth session of the BLG Sub-Committee met in London from 4 to 8 February 2008. This document comments on a number of issues of concern to the Marshall Islands with regard to the report of BLG 12 on the review of MARPOL Annex VI and the NO_x Technical Code.

3 In BLG 12/WP.6, paragraph 5.3, it is noted that some delegations were of the view that more complete information is necessary to determine whether a NO_x standard should be created for existing engines. The Marshall Islands is among those delegations and, while certainly not averse to creating such a standard, feels that such a decision must be an informed one where the Committee understands all of the emissions implications, such as tradeoffs between NO_x

reduction with increase in CO_2, and a conscious decision is made based on a realized net environmental benefit. In this regard, during BLG 12, in the working group on revision of MARPOL Annex VI and the NO_x Technical Code, the Marshall Islands presented a summary of the results of its review of the Lloyd's Fairplay data base to determine the specific numbers of existing ships to which NO_x standards might apply, including pivot tables listing specific engine manufacturers and engine models that might serve to assist in assessing net environmental benefit. Other delegations also provided input to this important question.

Consideration of NO_x standards for existing engines

4 In BLG 12/WP.6, paragraph 5.6 it is noted that in developing a NO_x standard for existing engines, three critical elements needed to be addressed to facilitate a decision on the matter within the MEPC. The first element concerns the specific years to be included in such a standard. The second variable concerns how to define the engines covered (e.g., cylinder size, power, or an alternative mechanism). The third element is how such a system would be implemented.

5 With regard to the first element, the Sub-Committee agreed that the appropriate set of years to be considered for application of the proposed standards to existing engines was for ships constructed from 1990 to 1999. The Marshall Islands is in agreement with this range as a good beginning to further develop the emission implications created by the potential modification of existing engines within this range, as referenced in paragraph 3 of this submission. This is one of the timeframes considered by the Marshall Islands in its review noted in paragraph 3.

6 The second variable, regarding specific engines to be covered and how to define them in the amended text of Annex VI, raises several issues:

.1 First, agreement was not reached on what approach would be most effective for implementing a standard for existing engines, if inclusion of such a standard was decided. Some delegations favoured the "kit" based approach, while others favoured an approach applicable to all engines of a given type (e.g., 90 litres or 5000 kW) and time period (e.g., 1990 – 1999), as indicated in paragraph 5.12 of BLG 12/WP.6. The draft text for the amended Annex VI in BLG 12/WP.6/Add.1 presents these two options. However, the latter approach, presented as Option 1 in this draft text, does not define a specific sub-set of existing engines of a given type (e.g., 90 litres or 5000 kW) to be covered, and should be amended accordingly;

.2 Second, properly defining the specific subset of existing engines should create a better understanding of the implications to all emissions since it would further refine the number of engines to be covered within the 1990-1999 timeframe; and

.3 Lastly, Annex VI as currently written defines regulated engines and emissions in terms of power (kW) output. This concept is generally retained throughout the proposed amended text of Annex VI, and the use of power output as a means of engine designation is a recognized norm with regard to industry databases, such as Lloyds Fairplay, and vessel documentation forms, such as the IAPP Supplement or EIAPP certificate. The Marshall Islands is of the view that power output is a preferred discriminator over cylinder volume to determine discrete numbers of engines to be regulated for the sake of consistency with the current text of Annex VI and practicality concerns. Power output is in general use as a regulatory parameter and is well understood by all parties in ship Administration, management and operations. However, if use of cylinder volume is deemed more appropriate than power output for this purpose and other regulatory matters, then

within regulation 2, Definitions, a basic conversion factor between cylinder volume and power output should be included. For example, in order for the Marshall Islands to carry out the Lloyd's Fairplay data base review as noted in paragraph 3, an estimated correlation between cylinder volume and engine power output had to be used to convert the 30 litre per cylinder swept volume limit to an approximate 4475 kW (6000 hp) typical engine power output limit to define some 6,900 specific existing ships to which retrospective NO_x standards might apply. The review could be easily modified to employ a different conversion factor, if deemed appropriate.

7 Finally, the last criteria concerns how the system would be implemented. As described in paragraph 6 of this submission, two options were developed in this regard, which would either be through the "kit" concept as proposed in BLG 12/WP.6, paragraphs 5.9 to 5.10 and detailed in BLG 12/WP.6/Add.1, regulation 13(7), (Option 2), or, by application to all engines of a given type, based on cylinder volume or power, including potential alternative measures to be implemented where an engine cannot comply with the standard (Option 1). For long-term application, the Marshall Islands prefers the latter approach due to complexities and practical concerns with regard to the effective implementation of the "kit" based approach as currently portrayed in the draft text. Furthermore, for the short-term objective of achieving an assessment of net environmental benefit through the development of current information (positively identifying specific engines which may be covered and their emission characteristics), Option 1, combined with the first two elements, might better allow an informed decision with regard to NO_x regulation of existing engines. Obtaining similar information under Option 2 may not be realistic, since the extent of affected engines cannot be anticipated until the market response to the concept is realized.

8 Additionally, with regard to the alternative measures proposed in Option 1, regulation 13(7)(c), the Marshall Islands is of the view that the alternative measures as drafted would be inappropriate, considering these engines were manufactured to be in compliance with all applicable standards at the time of construction, but have absolutely no physical possibility to meet the new standard (no kit available or no further in engine adjustments are possible). Therefore, it is proposed to re-instate draft text allowing an exemption clause for ships where it is determined that compliance with the standard would be unreasonable or impossible, or if the ship will be permanently taken out of service within [2] years after the implementation date of the amended regulation, and/or consideration be given to deleting the alternative measures as presently drafted.

9 The Marshall Islands, in its Lloyd's Fairplay data base review noted in paragraph 3, has basically modelled this 3-element process for the purposes of an initial review and determination of the engines potentially subject to NO_x regulation. While some refinement of the data base parameters might be necessary, review of this data base and engine manufacturer pivot tables, as well as results from other similar studies carried out (such as the European Commission data developed by Germanischer Lloyd), by persons knowledgeable in the characteristics of the machinery might provide data concerning NO_x reduction potential balanced against possible fuel penalty CO_2 increase for a realistic assessment of the tradeoffs and a quantification of the consequential net environmental benefit so that a final informed decision might be made regarding application of NO_x standards to existing engines.

Reception facilities for EGCS residues

10 Paragraph 8.4 of BLG 12/WP.6 addresses concerns expressed by the Marshall Islands and a number of other delegations that the present draft wording in BLG 12/WP.6/Add.1, regulation 17(2), as written, allows an easy means for ports and terminals to exempt themselves

from the provision of appropriate EGCS residue reception facilities. A related issue is the continued lack of information on the characteristics of EGCS residues. The Marshall Islands proposes that, in lieu of deleting the paragraph in its entirety, the wording of regulation 17(2) be amended to limit this provision to apply to only those terminals and ports of Parties that are so remotely located and so lacking in industrial infrastructure to manage and process such wastes, the only recourse for dealing with the waste, once received, would be to ship it by sea to the port of another Party for reception and processing.

11 Therefore, the Marshall Islands proposes regulation 17(2) to be amended as follows:

> "(2) If a particular port or terminal of a Party [is so remotely located and so lacking in industrial infrastructure to manage and process the substances referred to in paragraph 1 of this regulation, the only recourse for dealing with such wastes, once received, would be to ship it by sea to the port of another Party for reception and processing], then the Party shall inform the Organization of any such port or terminal so that this information may be circulated to all Parties for their information and any appropriate action."

Action requested of the Committee

12 The Committee is invited to note the information provided and take such action as appropriate.