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UNIFIED INTERPRETATIONS TO MARPOL ANNEX VI

Sulphur Limits in Fuel and Fuel Oil Verification Procedure for MARPOL Annex VI

1 The Marine Environment Protection Committee, at its fifty-seventh session, approved, on 4 April 2008, the Unified Interpretations to MARPOL Annex VI (see MEPC 57/21, paragraph 4.58.14).

2 The Unified Interpretations, annexed hereto, should be applied from the date of approval and until the 2008 amendments to MARPOL Annex VI enter into force.

ANNEX

**UNIFIED INTERPRETATIONS TO MARPOL ANNEX VI RELATED TO
SULPHUR LIMITS IN FUEL AND FUEL OIL VERIFICATION****Regulation 14 – Sulphur Oxides (SO_x)**

Regulation 14(1) reads as follows:

“The sulphur content of any fuel oil used on board ships shall not exceed 4.5% m/m.”

Regulation 14(4)(a) reads as follows:

“the sulphur content of fuel oil used on board ships in a SO_x emission control area does not exceed 1.5% m/m;”

Interpretation:

The limits should be read as given with two decimal digits, 4.50% m/m and 1.50% m/m respectively.

Regulation 18 – Fuel oil quality

Regulation 18(6) reads as follows:

“The bunker delivery note shall be accompanied by a representative sample of the fuel oil delivered taking into account guidelines developed by the Organization.¹ The sample is to be sealed and signed by the supplier’s representative and the master or officer in charge of the bunker operation on completion of bunkering operations and retained under the ship’s control until the fuel oil is substantially consumed, but in any case for a period of not less than twelve months from the time of delivery.”

Interpretation:

If an Administration requires the representative sample to be analysed, it should be done in accordance with the verification procedure set forth in the appendix hereto to determine whether the fuel oil meets the requirements of MARPOL Annex VI.

¹ Refer to resolution MEPC.96(47), “Guidelines for the sampling of fuel oil for determination of compliance with Annex VI of MARPOL 73/78.”

APPENDIX

Fuel Oil Verification Procedure for MARPOL Annex VI Fuel Oil Samples

The following procedure should be used to determine whether the fuel oil delivered to and used on board ships is compliant with the sulphur limits required by regulation 14 of MARPOL Annex VI.

1 General Requirements

1.1 The representative fuel oil sample, which is required by paragraph 8(a) of regulation 18 (the “MARPOL sample”) shall be used to verify the sulphur content of the fuel oil supplied to a ship.

1.2 An Administration, through its competent authority, should manage the verification procedure.

1.3 The laboratories responsible for the verification procedure set forth in this appendix should be fully accredited² for the purpose of conducting the test method(s).

2 Verification Procedure Stage One

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

2.2 The laboratory should:

- .1 record the details of the seal number and the sample label on the test record;
- .2 confirm that the condition of the seal on the MARPOL sample has not been broken; and
- .3 reject any MARPOL sample where the seal has been broken.

2.3 If the seal of the MARPOL sample has not been broken, the laboratory should proceed with the verification procedure and should:

- .1 ensure that the MARPOL sample is thoroughly homogenized;
- .2 draw two sub-samples from the MARPOL sample; and
- .3 reseal the MARPOL sample and record the new reseal details on the test record.

² Accreditation is in accordance with ISO 17025 or an equivalent standard.

2.4 The two sub-samples should be tested in succession, in accordance with the specified test method referred to in Appendix V. For the purposes of this verification procedure, the results of the test analysis should be referred to as “A” and “B”.

- .1 If the results of “A” and “B” are within the repeatability (r) of the test method, the results should be considered valid.
- .2 If the results of “A” and “B” are not within the repeatability (r) of the test method, both results should be rejected and two new sub-samples should be taken by the laboratory and analysed. The sample bottle should be resealed in accordance with paragraph 2.3.3 above after the new sub-samples have been taken.

2.5 If the test results of “A” and “B” are valid, an average of these two results should be calculated thus giving the result referred to as “X”.

- .1 If the result of “X” is equal to or falls below the standards required by Annex VI, the fuel oil should be deemed to meet the requirements.
- .2 If the result of “X” is greater than the standards required by Annex VI, Verification Procedure Stage 2 should be conducted; however, if the result of “X” is greater than the specification limit by 0.59R (where R is the reproducibility of the test method), the fuel oil should be considered non-compliant and no further testing is necessarily.

3 Verification Procedure Stage Two

3.1 If Stage 2 of the verification procedure is necessary in accordance with paragraph 2.5.2 above, the competent authority should send the MARPOL sample to a second accredited laboratory.

3.2 Upon receiving the MARPOL sample, the laboratory should:

- .1 record the details of the reseal number in accordance with 2.3.3 and the sample label on the test record;
- .2 draw two sub-samples from the MARPOL sample; and
- .3 reseal the MARPOL sample and record the new reseal details on the test record.

3.3 The two sub-samples should be tested in succession, in accordance with the test method specified in Appendix V. For the purposes of this verification procedure, the results of the test analysis should be referred to as “C” and “D”.

- .1 If the results of “C” and “D” are within the repeatability (r) of the test method, the results should be considered valid.
- .2 If the results of “C” and “D” are not within the repeatability (r) of the test method, both results should be rejected and two new sub-samples should be taken by the laboratory and analysed. The sample bottle should be resealed in accordance with paragraph 3.1.3 after the new sub-samples have been taken.

3.4 If the test results of “C” and “D” are valid, and the results of “A”, “B”, “C”, and “D” are within the reproducibility (R) of the test method then the laboratory should average the results, which is referred to as “Y”.

- .1 If the result of “Y” is equal to or falls below the standards required by Annex VI, the fuel oil should be deemed to meet the requirements.
- .2 If the result of “Y” is greater than the standards required by Annex VI, then the fuel oil fails to meet the standards required by Annex VI.

3.5 If the result of “A”, “B”, “C”, and “D” are not within the reproducibility (R) of the test method then the Administration may discard all of the test results and, in its discretion, repeat the entire testing process.

3.6 The results obtained from the verification procedure are final.
