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## COVER NOTE

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From: Secretary-General of the European Commission,  
signed by Mr Jordi AYET PUIGARNAU, Director

date of receipt: 4 October 2017

To: Mr Jeppe TRANHOLM-MIKKELSEN, Secretary-General of the Council of  
the European Union

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Subject: COMMISSION STAFF WORKING DOCUMENT For the Council Shipping  
Working party IMO – Union submission to be submitted to the 5th session  
of the Sub-Committee on Pollution Prevention and Response (PPR 5) of  
the IMO in London from 5 - 9 February 2018 concerning review of the 2015  
Guidelines for Exhaust Gas Cleaning Systems (Resolution MEPC.259(68))  
– Guidance on accidental breakdown, instrument malfunction and  
perceived temporary non-compliance and transient performance of  
Exhaust Gas Cleaning Systems (EGCS)

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Delegations will find attached document SWD(2017) 334 final.

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EUROPEAN  
COMMISSION

Brussels, 4.10.2017  
SWD(2017) 334 final

**COMMISSION STAFF WORKING DOCUMENT**

**For the Council Shipping Working party**

**IMO – Union submission to be submitted to the 5th session of the Sub-Committee on  
Pollution Prevention and Response (PPR 5) of the IMO in London from 5 - 9 February  
2018 concerning review of the 2015 Guidelines for Exhaust Gas Cleaning Systems  
(Resolution MEPC.259(68))**

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**COMMISSION STAFF WORKING DOCUMENT**  
**For the Council Shipping Working party**

**IMO – Union submission to be submitted to the 5th session of the Sub-Committee on Pollution Prevention and Response (PPR 5) of the IMO in London from 5 – 9 February 2018 concerning review of the 2015 Guidelines for Exhaust Gas Cleaning Systems (Resolution MEPC.259(68))**

**PURPOSE**

The document in Annex contains a draft Union submission to the 5th session of the Sub-Committee on Pollution Prevention and Response (PPR 5) of the IMO concerning amendments to the (2015) IMO Exhaust Gas Cleaning Guidelines, in relation to guidance on accidental breakdown, instrument malfunction and perceived temporary non-compliance and transient performance. It is hereby submitted to the appropriate technical body of the Council with a view to achieving agreement on transmission of the document to the IMO prior to the required deadline of 3 November 2017<sup>1</sup>.

MARPOL Annex VI requirements, with regard to limitation of SOx emissions, are implemented in EU law in Directive (EU) 2016/802 of the European Parliament and of the Council of 11 May 2016 relating to a reduction in the sulphur content of certain liquid fuels<sup>2</sup>. The 2009 Guidelines on Exhaust Gas Cleaning Systems (adopted as Resolution MEPC.184(59)) are referred to in Annex II of Directive 2016/802/EU in relation to conditions for the use of Exhaust Gas Cleaning Systems under that Directive. Furthermore, an amendment of the Guidelines may influence the flexibility Member States have in their choices to achieve the mandatory quality objectives laid down in existing EU rules regulating surface water quality (Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (the 'Water Framework Directive') and Directive 2008/56/EC of the European Parliament and of the Council establishing a framework for community action in the field of marine environmental policy (the 'Marine Strategy

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<sup>1</sup> The submission of proposals or information papers to the IMO, on issues falling under external exclusive EU competence, are acts of external representation. Such submissions are to be made by an EU actor who can represent the Union externally under the Treaty, which for non-CFSP (Common Foreign and Security Policy) issues is the Commission or the EU Delegation in accordance with Article 17(1) TEU and Article 221 TFEU. IMO internal rules make such an arrangement absolutely possible as regards existing agenda and work programme items. This way of proceeding is in line with the General Arrangements for EU statements in multilateral organisations endorsed by COREPER on 24 October 2011.

<sup>2</sup> OJ L 132, 21.5.2016, p. 58.

Framework Directive') as well as the emissions of priority substances and other pollutants including excess nutrients to water (Water Framework Directive and Directive 2008/105/EC<sup>3</sup> of the European Parliament and of the Council on environmental quality standards in the field of water policy, amending and subsequently repealing Council Directives 82/176/EEC, 83/513/EEC, 84/156/EEC, 84/491/EEC, 86/280/EEC and amending Directive 2000/60/EC of the European Parliament and of the Council). In addition, on-board exhaust gas cleaning systems are listed in Commission Implementing Regulation (EU) 2017/306 indicating design, construction and performance requirements and testing standards for marine equipment<sup>4</sup>, which refers to IMO Resolution MEPC.259(68), and therefore have to comply with the requirements of Directive 2014/90/EU on marine equipment and repealing Council Directive 96/98/EC<sup>5</sup>. The said draft Union submission therefore falls under EU exclusive competence.

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<sup>3</sup> As amended by Directive 2013/39/EU

<sup>4</sup> OJ L 48, 24.2.2017, p. 1.

<sup>5</sup> OJ L 257, 28.8.2014, p. 146.

**REVIEW OF THE 2015 GUIDELINES FOR EXHAUST GAS CLEANING SYSTEMS  
(RESOLUTION MEPC.259(68))**

**Guidance on accidental breakdown, instrument malfunction and perceived temporary non-compliance and transient performance of Exhaust Gas Cleaning Systems (EGCS)**

**Submitted by the European Commission on behalf of the European Union**

**SUMMARY**

*Executive summary:* This document propose specific guidance on accidental breakdown, instrument malfunction and perceived temporary non-compliance and transient performance of EGCS.

*Strategic direction:* 7.2

*High-level action:* 7.2.2

*Output:* **To be inserted by the IMO Secretariat after Council approval of the new output**

*Action to be taken:* Paragraph 14

*Related documents:* RESOLUTION MEPC.259(68), MEPC 69/19/2, MEPC 69/19/5, and MEPC 71/9/1

## **Introduction**

1 Since the entry into force of regulation 14.4.3 of MARPOL Annex VI, where the sulphur content of the fuel oil used on board ships shall not exceed 0.10% while operating within emission control areas under regulation 14.3, an increased use of EGCS as an equivalent compliance option has been seen. A further increase in the use of EGCS is anticipated towards 2020 and after the entry into force of regulation 14.1.3.

2 The experiences gained so far with the use of EGCS show that there is a need for clarification regarding the representation of operational compliance in respect of different types of malfunctions and transitory non-compliance for these systems, and the related corrective actions required by the crew.

3 At MEPC 69, the Committee considered a new output for the *Review of the 2015 Guidelines for Exhaust Gas Cleaning Systems (resolution MEPC.259(68))*, and agreed to the following scope of work under the output:

- .1 further refinement of the EGCS Guidelines, including clarification of the terms "EGC system" and "EGC unit"; PAH (polycyclic aromatic hydrocarbons) monitoring; emission testing; approval of scrubbers in accordance with Schemes A and B;
- .2 development of specific guidance on accidental breakdown, instrument malfunction and perceived temporary non-compliance and transient performance of EGCS; if appropriate; and
- .3 development of consequential amendments to the *2009 Guidelines for port State control under the revised MARPOL Annex VI (resolution MEPC.181(59))*.

4 This document has been prepared by the European Sustainable Shipping Forum (ESSF), an expert group of the European Commission, bringing together 28 EU Member States and 32 maritime organisations. The forum aims at enabling, *inter alia*, a structured dialogue on the monitoring of compliance with the sulphur regulations, creating the framework conditions for the use of liquefied natural gas (LNG) as a ship fuel, the increasing use of EGCS technology in shipping, in particular its technical, economic, environmental and operational aspects, coordinating research and development activities and encouraging innovation, exploring all available financing opportunities, ensuring compatibility with the EU's broader environmental protection objectives (e.g. the effects of the use of EGCS on the aquatic environment and the need to also achieve the environmental objectives under EU Water Legislation<sup>6</sup>), and on identifying potential improvements in sustainability and competitiveness.

The ESSF, resulting from its engagement in a set of activities aimed at supporting sustainable shipping in the context of cost-efficient and coherent implementation of the more stringent regulations related to the sulphur content of marine fuel oil in European ECAs with respect to SOx air emissions, has identified a clear need for amendments to the 2015 EGCS Guidelines.

5. This document contains a proposed way forward for providing guidance on accidental breakdown, instrument malfunction and perceived temporary non-compliance and transient

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<sup>6</sup> - Subject for further consideration in view of the results of ongoing research.

performance of EGCS, in particular to bring washwater sampling and analysis to the attention of the Sub-Committee.

6 The guidance proposed in this document is intended to cover the situations as described below.

**Non-compliance, caused by an accidental breakdown of the EGCS.**

7 Like any machinery/system, accidental breakdown is possible and an EGCS is no different in this regard. A ship suffering such a breakdown should not be considered as being in immediate breach of the regulations as the non-compliance would be unintentional and the provisions of regulation 3.1.2 of MARPOL Annex VI would be applicable.

8 The ship should change over to compliant fuel if the EGCS does not function. If the ship does not have compliant fuel on board, the ship should be allowed to complete the current leg of its voyage without deviation and then carry out repair works or bunker compliant fuel oil. The flag State and the relevant port and coastal States should be notified without delay.

**Temporary malfunction of the monitoring system only, which does not interfere with the performance of the EGCS**

9 When running on a fuel oil with a constant sulphur content, all parameters monitored according to Guidelines for Exhaust Gas Cleaning Systems 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. Scheme A certified EGCS depends on this interrelation between parameters since there is no requirement for continuous monitoring of the Emission Ratio.

10 This interrelation also works as an indicator in case of instrumentation malfunction; i.e. if a single sensor signal starts to deviate or even falls out, the effect on the other parameters will tell whether the changes in signals are caused by sensor failure or if the EGCS itself shows a change in performance. If the other parameters are continuing at the normal levels, it is an indication that there is only an instrumentation malfunction, and there is no signal of non-compliance with regard to levels allowed in the exhaust gas emissions and the washwater discharge.

**An EGCS suffers from transitory non-compliance**

11 During the start-up and shut-down of an EGCS or due to significant changes in engine load due to adverse weather and sea conditions, there may be a short period during which the Emission Ratio limit might exceed the applicable limit. This is a common issue with EGCS and

should not be considered as a breach of the requirements unless the exceedances last for a sustained period.

12 It is therefore proposed to include a new footnote in the proposed amendments to the Guidelines for port State control in order to make Port State Control Officers (PSCO) aware of this matter and that such isolated peaks should not automatically be regarded as non-compliance with the requirements.

### **Proposal**

13 The guidance proposed in this document are suggested to be included as amendments to the 2015 Guidelines for Exhaust Gas Cleaning Systems (Resolution MEPC.259(68)) (Annex 1) and amendments to the 2009 Guidelines for port state control under the revised MARPOL Annex VI (Resolution MEPC.181(59)) (Annex 2).

14 The paragraphs in the proposed text be included in Resolution MEPC.259(68) follows the proposed amendments and numbering to these Guidelines as presented in MEPC 71/9/1.

15 Proposed new text is underlined, and proposed deleted text are shown as ~~strikethrough~~.

### **Action requested by the Committee**

16 The Sub-Committee is invited to consider this proposal and to take action as appropriate.

## Annex 1

### Proposed amendments to the 2015 Guidelines for Exhaust Gas Cleaning Systems, MEPC.259(68)

- 1 It is proposed to add a new paragraph in section 4 (ETM-A) and 5 (ETM-B) of the guidelines in relation to the carriage of spare parts:

'4.2.2.1.3 bis The recommended spare parts to facilitate repair or replacement of a failed component, if that failed component has an impact on compliant operation of the EGCS.'

'5.6.1.3 bis The recommended spare parts to facilitate repair or replacement of a failed component, if that failed component has an impact on compliant operation of the EGCS.'

- 2 It is proposed to add new paragraphs in the sections for ETM A and ETM B on which actions to take if the EGCS fails to meet the requirements:

(for ATM A)

'4.2.2.1.10 In the instance where an EGCS fails, does not perform as required or otherwise does not meet the requirements of these Guidelines the SECP should:

.1 detail the actions which should be taken in that instance in order to rectify the situation at the earliest opportunity and to limit the amount of resulting non-compliant emissions;

.2 outline the information to be gathered while operating in a non-compliant condition as to the actions taken to rectify the situation and to limit non-compliant emissions;

.3 detail the procedure to be followed in order to meet the requirements of regulation 5.6 of MARPOL Annex VI;

.4 detail the procedure to notify the flag State and those port and coastal State authorities in whose waters the ship will be operating in a non-compliant condition, or in a condition where the [temporarily] on-going compliance would be temporary indicated in accordance with 8.2.7 ter.

(for ATM B)

'5.6.1.7 In the instance where an EGCS fails, does not perform as required or otherwise does not meet the requirements of these Guidelines the SECP should:

.1 detail the actions which should be taken in that instance in order to rectify the situation at the earliest opportunity and to limit the amount of resulting non-compliant emissions;

.2 outline the information to be gathered while operating in a non-compliant condition as to the actions taken to rectify the situation and to limit non-compliant emissions;

.3 detail the procedure to be followed in order to meet the requirements of regulation 5.6 of MARPOL Annex VI;

.4 detail the procedure to notify the flag State and those port and coastal State authorities in whose waters the ship will be operating in a non-compliant condition, or in a condition where the [temporarily] on-going compliance would be temporary indicated in accordance with 8.2.7 ter.

3 It is proposed to add three new paragraphs in section 8 in relation to the functioning of the monitoring system:

'8.2.7 bis The minimum of spare parts which should be carried onboard in order that the required monitoring devices continue to function as required'.

'8.2.7 ter The means by which on-going compliance would be temporarily indicated in the case of the failure of a single monitoring device'.

'8.2.7 quater A system to investigate the failure of any monitoring device or related support components and the documentation of actions which should be taken to avoid the repetition of such failures and / or a revision of the quantity of consumables or the number of replacement parts carried onboard'.

4 It is proposed to include a new Appendix 6 to the 2015 Guidelines for Exhaust Gas Cleaning Systems, MEPC.259(68), in order to provide guidance on how temporary indication of on-going compliance should be appropriately documented, and the appropriate actions to take in those instances when the EGCS fails.

**Guidance on temporary indication of on-going compliance in the case of the failure of a single monitoring device, and recommended actions to take if the EGCS fails to meet the requirements of the Guidelines**

1 When running on a fuel oil with a constant sulphur content and at constant wash water engine load ratio, all parameters monitored according to these Guidelines (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.

2 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 are 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.

3 If a malfunction occurs in the instrumentation for the monitoring of Emission Ratio or discharge water (pH, PAH, Turbidity), the ship should present alternative documentation for demonstrating compliance in accordance with 4.2.2.1.10 or 5.6.1.7, as applicable, of these Guidelines. The documentation and actions should include (but is not limited to):

.1 The recording of the data at the time of malfunction confirms 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 fuel oil in use has a sulphur content similar to or lower than the fuel oil being used at the time when the malfunction started;

.3 The ship operator should log the malfunctioning of the monitoring equipment and record all parameters that might be suitable to indicate compliant operation in accordance with 7.4 of these Guidelines. This record could serve as an alternative documentation demonstrating compliance until the malfunction is rectified.

.4 The monitoring equipment that has suffered a malfunction should be repaired or replaced as soon as practicable.

4 A ship suffering an accidental breakdown of the EGCS should changeover to compliant fuel oil. If the ship does not have compliant fuel oil or sufficient amount of compliant fuel oil on board, the ship should be allowed to complete the current leg of its voyage without deviation

and then carry out repair works or bunker compliant fuel oil. If no compliant fuel oil was available at the next port of call, Regulation 18.2 of MARPOL Annex VI would apply.

5 The flag, port and coastal State Administrations should be notified without delay regarding any of the incidents described above, and the ship should take action to repair the EGCS as soon as possible.

## Annex 2

### Proposed amendments to the 2009 Guidelines for port State control under the revised MARPOL Annex VI

1 It is proposed to include a more detailed description of the initial inspections for ships fitted with an EGCS and required to carry the IAPP Certificate. It is also proposed to include a footnote making PSCO aware that isolated peaks in the emission ratio should not be regarded as indications of non-compliant performance alone.

2.1.2.7 approved documentation and performance records<sup>7</sup> relating to any installed exhaust gas cleaning systems, or equivalent means, to reduce SOx emissions (regulation VI/4);

2.1.1.7 bis that the required EGCS monitoring records have been retained and show compliance. Additionally, that the EGCS Record Book, or approved alternative, has been duly maintained.

2 It is proposed to include a new paragraph providing guidance to the PSCO in relation to notifications and rectifying actions onboard the ship in those instances where compliance with the relevant requirements are not met.

2.1.5 bis In the case where an exhaust gas cleaning system is not in compliance with the relevant requirements, the master or officer in charge should have documented that through a Notification to the ship's flag Administration with copies to the port Authority, and present the actions taken in order to rectify the situation. If a malfunction occurs in the instrumentation for the monitoring of emission to air or the monitoring of wash water discharge to sea, the ship should present alternative documentation demonstrating compliance in accordance with the requirements of the Onboard Monitoring Manual until the monitoring system is repaired or replaced.

3 It is proposed to include a new paragraph to include evidence that the equivalent approved means have not been applied as required as a "Clear ground" to conduct a more detailed inspection.

2.1.7.7 bis evidence that an exhaust gas cleaning system has not been applied as required; or

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<sup>7</sup> In assessing the Emission Ratio 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 in themselves may be above the required Emission Ratio limit value, 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.

4 It is proposed to provide the PSCO with more guidance on what to check during a more detailed inspection of an EGCS.

*2.2.3 The PSCO should check whether the quality of fuel oil used on board the ship conforms to the provisions of regulations VI/14 and VI/18\*, taking into account appendix IV to the Annex. Furthermore, 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 while the ship is within an Emission Control Area under regulation VI/14.3, or that other equivalent approved means have been applied as required.*

*2.2.3 bis 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.*

*2.2.9.3 bis the master or crew are familiar with the correct operation of any EGCS fitted together with the associated monitoring and recording, and record keeping requirements.*