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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 EGCS GUIDELINES

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))* (MEPC.1/Circ.883).

2 The Marine Environment Protection Committee, at its seventy-seventh session (22 to 26 November 2021), adopted resolution MEPC.340(77) on *2021 Guidelines for exhaust gas cleaning systems* (2021 EGCS Guidelines).

3 Recognizing the need to extend the scope of MEPC.1/Circ.883 to also include the EGCS installed in accordance with resolution MEPC.184(59), the 2009 EGCS Guidelines, and resolution MEPC.340(77), the 2021 EGCS Guidelines, MEPC 77 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 EGCS Guidelines*, set out in the annex.

4 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.

5 This circular revokes MEPC.1/Circ.883.

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 EGCS GUIDELINES¹

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 recorded in the EGCS Record Book including the date and time the malfunction began, the duration of the malfunction 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 a breakdown. The ship should then change over to compliant fuel oil if the EGCS cannot be put back into a compliant condition within a maximum of 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 and relevant port State for their agreement.

Short-term exceedances

7 A short-term temporary emission exceedance is an event where the maximum applicable Emissions Ratio is exceeded for a short period. This short period of non-compliance may be due to sudden changes in exhaust gas flow rate or the EGCS's sensor dynamic response. 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

¹ Resolutions MEPC.184(59), MEPC.259(68) and MEPC.340(77).

has not malfunctioned. Thus, transitory periods of emission exceedances and/or isolated spikes in the recorded output in the Emissions Ratio do not necessarily mean non-compliant 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 and the limits of these exceedances 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 flow rate to engine load ratio, all parameters monitored according to the EGCS Guidelines² (i.e. Emission Ratio, washwater pH, etc.) will be in a certain interrelation, all depending on each other. If one of the parameters changes significantly, some other(s) may 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 normal levels, it is a possible indication that there is only an instrumentation malfunction rather than a 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.

² Resolutions MEPC.184(59), MEPC.259(68) and MEPC.340(77).

Notifications to relevant Authorities

12 Any EGCS malfunction that lasts more than one hour or repetitive malfunctions should be reported to the Flag Administration and the 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 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. Should the ship exceptionally need to continue on its intended voyage in a non-compliant condition, this should be communicated to the relevant port State to decide on appropriate action in accordance with the Convention.
