



EUROPEAN COMMISSION  
DIRECTORATE-GENERAL FOR MOBILITY AND TRANSPORT

Directorate D - ~~Logistics~~ maritime & land transport and passenger rights  
**D.1 - Maritime transport & logistics**

Brussels, 20 April 2017

**Minutes**  
**European Sustainable Shipping Forum**  
**12th meeting of the Sub-Group on Exhaust Gas Cleaning Systems (EGCS)**  
**Brussels, 11 April 2017**  
**Albert Borschette Conference Centre, room AB/2C**  
**(Rue Froissart 36, 1040 Brussels)**

**1. Approval of the agenda and of the minutes of previous meeting**

Minutes of previous meeting (11<sup>th</sup> sub-group session)

- Extended period for comments until de 21APR17.
- Approach accepted
- Problems with delivery of e-mails, minutes not received by some members.

Changes to the Agenda for the 12<sup>th</sup> sub-group meeting

- Antwerp University cancelled.
- Germany sent the washwater sampling guide just before the meeting – presentation to be considered at the meeting.

**Action Points (follow up):**

**1. Mailing list**

- Minutes not received by NO, Brittany Ferries. Need to check mailing list.
- Re-send minutes of the 11<sup>th</sup> EGCS meeting to the revised mailing list.

**2. Nature of the meeting**

Meeting held within the frame of Commission Decision C (2013) 5984 final of 24 September 2013 on setting-up the group of experts on maritime transport sustainability - The European Sustainable Shipping Forum (ESSF), as amended by Commission Decision C (2015) 9741 final, of 7 January 2016.

The meeting was non-public (only for invited members, Commission Services and EU institutions)

The main subjects of the 12<sup>th</sup> meeting where relevant actions can be extracted from the meeting were:

- a. **Sampling and Analysis of Washwater from EGC systems** (in particular for the 11<sup>th</sup> sub-group meeting the campaign exercises by EGCSA and Germany were discussed)
- b. **Washwater Sampling and Analysis Guidelines** (discussion on submission to IMO)
- c. **Operational/transient non-compliance scenarios** – discussion following the 1<sup>st</sup> Round of comments to the draft IMO Submission on operational/transient non-compliance

To be noted from the specific points in the 11<sup>th</sup> EGCS sub-group meeting agenda (Annex 1):

- a. A significant increase in the work of the ESSF EGCS has been noted, mainly due to the intensification on the washwater sampling & analysis exercises and to the work on the proposed amendments to the 2015 EGCS Guidelines.
- b. 1 (one) submission successfully sent to MEPC71: Submission with proposed amendments to the 2015 EGCS Guidelines – A 2 years' worth of work that has largely dictated the agenda of the EGCS sub-group for the past 6 (six) sessions.
- c. 3 (three) submissions are currently in preparation within the EGCS sub-group:
  - i. INF paper to MEPC 71 submitting the draft "Washwater Sampling & Analysis Guidelines"
  - ii. Submission to PPR 5 as a follow up of the INF paper on point i) above.
  - iii. Submission with proposal for specific guidance on accidental breakdown, instrument malfunction and perceived temporary non-compliance and transient performance of EGCS, under coordination by Norway.

The above listed submissions represent not only the different deliverables but also the main commitments of the EGCS sub-group in terms of contribution to the work at the international stage.

### 3. List of points discussed

The list of points discussed, listed below, reflect the outline of the Agenda for the 12<sup>th</sup> EGCS sub-group meeting. The list of points discussed can be found below:

#### .1 Update on state of play with regard to IMO submissions

- a. MEPC 71:  
Revision of the EGCS Guidelines  
INF on the need for harmonisation of EGCS washwater data collection
- b. PPR5:  
Operational malfunction guidelines  
Revision of appendix 3 to the EGCS guidelines (on washwater data collection)

#### .2 Report from the Sulphur Committee

#### .3 Work Package 7: EGCS (Sludge + Washwater + Bleed-off water)

Study on impact of the EGCS washwater discharges in Port of Antwerp (postponed to the next meeting)

#### .4 Work Package 7: EGCS (Sludge + Washwater + Bleed-off water)

- a. Awareness campaign
- b. EGCSA sampling – change of the laboratory
- c. German washwater sampling guide
- d. Submission with proposal for revision of Appendix-3 of the EGCS Guidelines

#### .5 Work Package 10: Handling of NaOH

#### .6 Revision of Work Packages

Proposal for revision of WP

#### .7 Work Package 9: Operational non-compliance scenarios

- a. Draft submission to IMO PPR5
- b. Discussion after 1st round of consultation

### 3.1. Update on state of play with regard to IMO submissions

- The Chair confirmed to the EGCS sub-group the finalization and submission of
  - *Revision of the 2015 IMO EGCS Guidelines*
  - *INF paper on the need for harmonisation of EGCS washwater data collection*
- Deadlines for submission to IMO PPR5 were informed to the sub-group – 16OCT17
- Revision of Appendix 3 of the EGCS Guidelines (consequential to the INF on the need for harmonisation of EGCS washwater data collection)
- FI raised the point that, as mentioned in paras 103 and 104 of the submission on the EGCS Guidelines revision, that there are still outstanding issues (PAH, PAH measurement) – indicated these issues it would be submitted separately to PPR5.

The group should have a look at the outstanding issues that have been identified and continue with the work intersessionally and in the next sessions. PAH “phenanthrene equivalence”, PAH measurement, nitrates, amongst other points will have to be carefully considered in the Work Package revision.

#### Action Points (follow up)

##### 1. Outstanding issues identified in the EGCS Guidelines Revision submission

- Need to continue addressing these points with further work (to be planned following the revision of the Work Package structure).

##### 2. Submission with proposal for revision of Appendix 3 (Washwater Data Collection) with the result from the EGCS Sampling & Analysis Guidelines

- Actual submission to be based on the elements taken from the INF paper on the need for harmonisation of EGCS washwater data collection.
- Coordination for this work – DE volunteered with no objections from the sub-group (to be reflected in the new Work Package arrangement).

### **3.2. Report from the Sulphur Committee**

- Focus of MS in Implementation also in view of the 0.50% 2020 – the commitment of the SC towards implementation issues is high.
- Implementation of Inspection & Sampling Obligations.
- Base for information 9500 inspections (about) recorded in THETIS – shows compliance. Some of the MS however did not reach their sampling & inspection obligations.
- Remote sensing – not all data included into THETIS – it is important that all data inserted into the database.
- Information on how THETIS can be improved, including provisions for a targeting mechanism and encompassing how alerts can be brought into THETIS
- Emission Inventories developed by EMSA. ENV informed the sub-group. Following this information some members asked for the model, assumptions and different considerations behind this emissions calculator.
- SECA in the Mediterranean Sea – very preliminary discussions.
- On EGCS – The SC was informed on the extensive work on the revision of the Guidelines.
- No intentions to further legislate on the WFD or MSFD – they leave a lot of discretion to the MS. Allowing EGCS discharges would be a function of the assessment of particular cases. To establish the adequate measures to control EGCS washwater discharges, EU MS would have to assess the situation at the MS level by evaluating the potential impact of the discharges.
- No modification to the existing washwater acceptability table (Chair informed the sub-group that the updated table was distributed by e- mail to the sub-group on the 9/03/2017)

As immediate feedback following DG-ENV report from the last Sulphur Committee:

- Some members reiterated that they consider the relation of the WFD with the SD still very critical for the Industry.
- ENV confirmed no intention on drafting guidance on this, highlighting there are still washwater data collection exercises going on – still knowledge based elements being developed.
- The Washwater Acceptability Table still contains, in the opinion of some sub-group members, a considerable number of vague statements with low technical detail. Even after the contributions from the ESSF EGCS the table is still yet to be updated.
- Question on the Emission Inventories – are these intentional to develop further legislation?

#### Water Framework Directive

- The standards under the WFD are standards that need to be met by the MS
- They need to take into account the information from emission inventories and to develop modelling for different areas under consideration.
- MS representatives have expressed this is a process with its own difficulties and that more time is still needed to model and evaluate impact of EGCS washwater discharges into water bodies.

#### Action Points (follow up)

1. Information requested on EMSA emissions calculator
  - DG-ENV mentioned this was reported to the last Sulphur Committee where all Member States are represented.
  - Since data owners are the Member States, before disclosing anything on the Emissions calculator DG-ENV will have to check whether and how this is possible.
2. EU Member States washwater acceptability table
  - DG-ENV mentioned this was reported to the last Sulphur Committee where all Member States are represented. SECA MS were asked to provide update, non-SECA MS to provide information on the status.

### **3.3. Work Package 7: EGCS (Sludge + Washwater + Bleed-off water)**

Study on impact of the EGCS washwater discharges in Port of Antwerp (postpone to the next meeting)

#### Action Points (follow up)

Reiterate Invitation to Port of Antwerp

### 3.4. Work Package 7: EGCS (Sludge + Washwater + Bleed-off water)

- a. Awareness campaign
- b. EGCSA sampling – change of the laboratory
- c. German washwater sampling guide
- d. Submission with proposal for revision of Appendix-3 of the EGCS Guidelines

#### a. EGCSA - Awareness campaign

- EGCSA outlined an idea for an improved accessibility to the EGCSA Sampling & Analysis Guidelines, consisting on the development of a video that could bring a more visual appealing interface that could help to disseminate the adequate procedures for washwater sampling & analysis.
- The idea described the development of a video that would be able to bring the procedures for onboard washwater sampling closer to the crews and involved personnel.
- General support expressed by the sub-group to EGCSA's idea for a video that could describe the essential and practical aspects of the EGCS
- Chair promised more information from the Commission side. The possibility for support is being evaluated. Financial support would require earlier budget planning.
- It was further suggested by one sub-group member suggested to also include information on the EGCS work on IMO (table with "easy to pick" information at the IMO main room entrance).
- DG-ENV suggested extending the idea of the video to the wider EGCS Guidelines without however gaining much support on that idea. LR has taken the opportunity to advise that the focus should be, for practical reasons, on the sampling & analysis guidelines.

#### b. EGCSA washwater sampling campaign – change of the laboratory

- In the context of the washwater sampling campaign led by EGCSA, in cooperation with EUROSORE, the subject of PAH laboratory methodologies for sample preparation and measurement were discussed. A change in laboratory, motivated by economical drivers has brought to light an important discussion on the different existing laboratory methodologies for both sample preparation and PAH measurement.
- EGCSA consulted the sub-group on the acceptability of the new laboratory, based on a comparison of back-to-back washwater sample analysis by both laboratories. Very different results for the different laboratories, with a higher detection of PAH for the same sample by the second laboratory, led to the formulation of the hypothesis that, being cheaper and detecting more PAHs it would probably be indisputably better.
- For the second laboratory, however, the results under comparison were for a different measurement methodology, High Performance Liquid Chromatography (HPLC), instead of the prescribed methodology in the IMO 2015 EGCS Guidelines (Gas Chromatography/Mass Spectrometry, GC-MS). Further to this, the HPLC methodology is found in many available references not to be the best measurement methodology for PAH and other non-polar compounds.
- In support of the discussion within the sub-group a table has been used summarizing the different laboratory standards and methodologies for sampling preparation and analysis:

	EGCSA LAB A	EGCSA LAB B – Method 1	EGCSA LAB B – Method 2	Germany (presentation delivered to the EGCS 11 sub-group meeting)
<b>Measurement method:</b>  (how the concentration of extracted PAH is then determined)	EPA 8270D (Gas Chromatography/Mass Spectrometry, GC-MS)	In-house method based on ISO 7981-2 (High Performance Liquid Chromatography, HPLC). Said to be comparable with EPA 8310	In house method based on ISO 28540:2011 and EPA8270C (Gas Chromatography/Mass Spectrometry, GC-MS)	DIN EN 16691:2015-12 (adapted) Water quality - Determination of selected polycyclic aromatic hydrocarbons (PAH) in whole water samples (gas chromatography-mass spectrometry (GC-MS))
<b>Sample preparation:</b>  (techniques used to extract dissolved and particle bound PAH from the samples)	EPA 3510 liquid-liquid extraction – full sample solvent extracted using separator funnel and dried prior to GC analysis. Concentrations of EPA 16 PAH's of total sample are measured including those bound to any particles that may be present	In house liquid-liquid extraction – full sample shaken, extracted with petroleum ether, dried and solvent exchanged for acetonitrile before dilution prior to LC analysis. Concentrations of EPA 16 PAH's are measured including those bound to any particles that may be present	In house liquid-liquid extraction – 80ml of sample used; ultrasonically shaken, solvent extracted with hexane and dried prior to GC analysis. Concentrations of EPA 16 PAH's are measured including those bound to any particles that may be present. Note the full sample is unfiltered and shaken for 5 minutes before 80ml is taken.	Method using solid phase extraction (SPE) with SPE-disks

- From the table in the previous page, the sub-group has concluded that the information contained therein is the perfect illustration of the subject complexity. For PAH determination, out of one distinct washwater sample, 4 (four) different routes are followed. How harmonization can be derived in this context was a challenge that should, to a large extent, be addressed by the EGCS sub-group submission on the revision of the Appendix-3 of the EGCS Guidelines (submission to IMO to be drafted to PPR5).
- With regards to a potential decision on laboratory this was discussed and mentioned that with such a limited number of samples (single sample actually) it would be almost impossible to determine which would be the “right” one. Indications on accuracy of the instruments, uncertainty associated to the methodologies were not under consideration and without statistical consideration of a wider number of samples it would not be possible to achieve a conclusive opinion.
- In addition to the above, and reflecting the continuation of the discussion on which standards would be relevant for the selection of the laboratories, the following comments were made:
  - ISO standards are preferred. IMO has a clear preference for ISO standards in footnotes, guidelines, circulars, etc. No references to standards are made in the text but IMO considers well the inclusion of reference standards in footnotes and technical guidance. ISO is always considered preferred when compared to any regional, national or other standards.
  - ISO 17025 is an important standard to take into account but should not be taken as sufficient condition for a selection. It is a very important standard for quality but not directly related to the actual sampling & analysis methodologies.
- EGCSA informed the sub-group, taking all elements into account, that the newly selected laboratory would be selected, continuing however to use the GC-MS methodology for measurement (i.e. – Lab B – Method 2 from the table above).

**c. German washwater sampling guide**

- Germany presented a newly developed sampling guide for the German Study on impact of washwater from EGCS (for comments, deadline to be confirmed), which differs from the sampling protocol developed by EGCSA with support of the EGCS Sub-group
- As presented, the initiative concurs, together with the previously presented EGCSA/EUROSHORE and CLIA, towards a harmonized approach.
- The sub-group asked for the possibility of providing comments to the German document. This possibility has been given without however having been fixed a deadline for comments.

**d. Towards harmonized EGCS washwater data collection**

Based on experience of the ESSF EGCS Sub-group members, and following INF submission to MEPC 71 on the need for improvement of EGCS washwater data collection, as a second step a submission to PPR5 to be developed, proposing actual amendments to Appendix 3 of the EGCS Guidelines. Germany volunteered for coordination of this work. It is going to be an EU submission. Main goals of this submission:

- Harmonization
- Results from different labs have to be comparable.

**Action Points (follow up)**

1. EGCSA – Awareness Campaign
  - Details on the idea for video on Sampling & Analysis guidance to be shared with the sub-group.
  - Sampling & Analysis of EGCS washwater to be the focus for video.
2. EGCSA washwater sampling campaign – change of the laboratory
  - EGCSA/EUROSHORE campaign to change laboratory for a new lab using the following methods:
    - Measurement Method: In-house method based on ISO 28540:2011 and EPA8270C (*Gas Chromatography/ Mass Spectrometry* - GC-MS)
    - Sample Preparation: In-house liquid-liquid extraction.
 (More information to be shared with the sub-group on the continuation of the EGCSA sampling & analysis campaign)
3. German washwater sampling guide
  - Germany welcomes any comments to be provided by the sub-group on its washwater sampling guide as presented at this session.
  - No deadline indicated but not much time for comments to be effective as exercise is close to its start.

### **3.5. Work Package 10: Handling of NaOH**

- The Secretariat delivered a presentation on safe handling & bunkering of NaOH, including transcriptions of the EGCS 5<sup>th</sup> sub-group meeting, back from February 2015, where the subject was last discussed. The preparation of NaOH solution and its use onboard ships with EGCS systems had been previously concluded by the coordinators of WP10 (Clean Marine and RCCL) as deserving the attention of the ESSF EGCS for possible development of guidance on safe handling & bunkering of such substance.
- The presentation had the intention to recover the earlier substance from this Work Package, whilst enquiring the sub-group on the possible way forward.
- The following options had been proposed to the sub-group:
  - Do nothing: close WP10 and keep the conclusions from previous work for future reference.
  - Promote series of presentations on the subject: In addition to the previous work, allow/promote series of presentations on safe handling & bunkering of NaOH.
  - Develop Guidance on safe handling & bunkering of NaOH for ships equipped with EGCS using this hazardous substance in
- The majority of sub-group members indicated preference for the last option listed above, with guidance on the matter to be drafted as part of the EGCS sub-group work, together with possible amendments to be further proposed to Section 3 (Safety) of the IMO EGCS Guidelines.
- One member of the sub-group suggested the reference to provisions in the IBC Code. This hasn't however been supported since the reference to the IBC Code, notwithstanding the potential relevance of many aspects, would inevitably be related to NaOH as cargo. Important aspects related to the use and handling of NaOH solutions as working fluids inside or close to machinery spaces would have to be addressed.
- Some concerns have been expressed by some sub-group members whereas this would be a topic that could be scoped under the remit of the EGCS sub-group. The Chair reminded the sub-group members that this was a Work Package defined since the beginning of the EGCS sub-group work. The summary presented at this sub-group was, in fact, only a transcription of the 5<sup>th</sup> meeting, back in February 2015, where further work on this topic had been decided.
- Safety Check-List for bunkering of NaOH has been received by the Port of Rotterdam as a contribution on this specific matter. A document entitled *Sodium Hydroxide 50% Bunkering Procedure and Safety Check-List Barge to Ship* is now ready for comments by the sub-group, for potential consideration on how this can be potentially used as an example for further work.
- An important additional comment from one member of the sub-group has highlighted that chemicals other than caustic soda can also be used in EGCS systems, also as alkali additives to the washwater circuit or with any other purpose.

#### **Action Points (follow up)**

##### **NaOH safe handling & bunkering**

- Guidance on safe handling, preparation and bunkering of NaOH to be further developed by the EGCS sub-group.
- Need for further work on WP10 to be considered by the revision of the Work Package structure.
- Existing industry guidance, best practice and standards to be taken into account as reference for the work.

### **3.6. Revision of Work Packages**

- The Rapporteur delivered a presentation with a proposal for re-organization of the Work Package structure. The need for this revision had already been identified previously mainly due to the inactivity and conclusion of some WP titles.
- The table below reflects the proposal by the Rapporteur, noting in particular that the numbering of the Work Packages is kept from the structure before revision

Work Package	Observation/Comments
<b>WP 1 - EGCS Alternative Technologies</b>	<p>Previously named “Dry-Scrubbing Technology”, WP1 should now be open to the discussion not only of the aspects related to dry scrubbing but also to other EGCS technologies.</p> <p><u>Aspects to be addressed:</u></p> <ul style="list-style-type: none"> <li>• Technology barriers for non-wet based EGCS technologies</li> <li>• Environmental impact of different EGCS technologies (life-cycle evaluation)</li> <li>• Economical aspects/ business cases of different EGCS technologies</li> </ul>
<b>WP 2- EGCS Residues – Waste Handling</b>	<p>Focus on EGCS sludge and solid residues</p> <p><u>Aspects to be addressed:</u></p> <ul style="list-style-type: none"> <li>• Different types of EGCS waste</li> <li>• EGCS sludge sampling &amp; analysis</li> <li>• Dehydration and compacting techniques</li> <li>• PRF for EGCS waste delivery at port</li> </ul>
<b>WP 4 – EGCS Certification &amp; Approval</b>	<p>Focus on the outstanding issues on EGCS certification. In particular would be important to address the subject of trials and commissioning following the entry into force of the global sulphur cap in 2020.</p>
<b>WP 7 – EGCS Washwater &amp; Discharge Water Criteria</b>	<p>WP7 is kept with the same designation – Intended to cover not strictly washwater data collection but a wider range of aspects of washwater discharge.</p> <p><u>Aspects to be addressed:</u></p> <ul style="list-style-type: none"> <li>• pH criteria</li> <li>• PAH “phenanthrene equivalent”</li> <li>• PAH measurement methodology and measurement</li> <li>• Nitrates</li> </ul>
<b>WP 8 – EGCS Guidelines</b>	<p>WP8, following the extensive work on the revision of the EGCS Guidelines, will now allow for the continuation of the EGCS Guidelines revision. This WP will allow considering, discussing and integrating different aspects of the EGCS Guidelines that are still needed to be addressed.</p> <p><u>Aspects to be addressed:</u></p> <ul style="list-style-type: none"> <li>• Follow up of EGCS Guidelines revision following MEPC71 and PPR5.</li> <li>• Further consideration for the possible integration of work developed by other WP (remarkably WP7 and WP9)</li> </ul>
<b>WP 9 – Accidental breakdown, Instrument malfunction, perceived temporary non-compliance and transient performance of EGCS</b>	<p>Currently one of the main focuses of the EGCS sub-group. The work on EGCS accidental breakdown, instrument malfunction and transitory non-compliance has in fact already started but only now, under Norwegian coordination, it is evolving towards a submission to IMO.</p> <p><u>Aspects to be addressed:</u></p> <ul style="list-style-type: none"> <li>• Accidental breakdown</li> <li>• Instrument malfunctions</li> <li>• Transient/ temporary non-compliance</li> </ul>
<b>WP 10 – Chemicals Handling safety/ logistics</b>	<p>Guidance on safe handling, preparation and bunkering of NaOH to be further developed by the EGCS sub-group.</p> <p>Other chemical handling safety aspects to be also considered.</p>
<b>WP 11 – Washwater Sampling &amp; Analysis</b>	<p>New WP proposed dedicated to the different ongoing washwater sampling &amp; analysis exercises, including the development of EGCS washwater sampling &amp; analysis guidelines.</p>

### 3.7. Work Package 9: Operational non-compliance scenarios

- a. Draft submission to IMO PPR5
  - b. Discussion after 1st round of consultation
- Following submission from Norway to MEPC 69 (developed in cooperation with the sub-group) and as instructed by the Plenary, the sub-group launched a discussion on a submission to IMO, addressing operational non-compliance guidelines. Norway, being coordinator of the work, prepared a first draft of the submission. The first round of comments was held by correspondence. Several members of the group and the Commission provided comments to the draft.
  - Based on the matrix prepared by the coordinator, at the meeting it was possible to address only principles for the submission:
    - on the “placeholder” for the draft proposals on non-compliance – consensus reached. Relevant additions to the provisions for the ETM, OMM and SECP were agreed in principle, constituting new elements to be included in the main text of the EGCS Guidelines
    - on the temporary exceedances of Emission Ratio and pH ('allowances') - consensus could not be reached due to (possible) contradiction to requirements of the sulphur directive (requiring achieving 'continuous compliance').
    - The discussion on the draft provisions for exceedance allowances was based on the draft proposal for IMO submission on operational non-compliance as presented by Norwegian coordination. The following text, proposed for sections 5, 7 and 10 of the EGCS Guidelines is transcribed from the draft submission:
      - 1 It is proposed to include two new paragraphs in the *2015 Guidelines for Exhaust Gas Cleaning Systems, MEPC.259(68)* in order to provide guidance on incidents when the EGC System suffers from transitory non-compliance:  
*'5.5.3 The EGCS should not exceed the Emission Ratio limit value for more than a total of 15 minutes in any 12-hour period.'*  
*'10.1.2.2 The pH discharge value, at the overboard monitoring position, should not be below the relevant minimum limit value or, where also applicable, exceed the maximum limit value more than a total of 15 minutes in any 12-hour period.'*
      - 2 It is proposed to add a requirement for the data recording and processing device to be capable of recording the following issues related to temporary non-compliance.  
*'7.2.2 (Scheme B only) recording the aggregated time in excess of 15 minutes over any 12 hour period that the Emission Ratio limit value is exceeded as stated in 5.5.3;'*  
*'7.2.4 recording the total aggregated time in excess of 15 minutes over any 12 hour period that the overboard pH value is a) below the relevant minimum limit value or b) where applicable, above the maximum limit value;'*
  - The Secretariat highlighted to the sub-group that a compromise on the text above, as proposed, would be difficult to agree on, based on the following observations:
    1. Emission Ratio exceedances should not be considered a possibility because Sulphur Directive Article 8.2) includes the expression “continuously achieving” emission reduction.  
As extracted from the Sulphur Directive Article 8:  
*“2. Ships using the emission abatement methods referred to in paragraph 1 shall continuously achieve reductions of sulphur dioxide emissions that are at least equivalent to the reductions that would be achieved by using marine fuels that meet the requirements of Articles 6 and 7. Equivalent emission values shall be determined in accordance with Annex I.”*
    2. Equipment should be designed with a driver for continuous improvement (with allowances for exceedances this will be more difficult to happen).
    3. The EGCS should be designed in a manner that is able to deal with transient engine behaviour. Even if a peak exceedance is impossible to avoid during start up and shutdown of the engine, if these events are logged together with the ER measurement readings than a correlation could be established that would allow discriminating

between transient behaviour and equipment malfunction. Exceedance allowance as proposed, for ER, in the Technical Secretariat's view, would be limiting to technology development.

4. Similar logging of other events that could result in ER peak exceedances should also be possible.
  5. In addition to the above the clear description of such exceedances and justification in the ETM would do more to the understanding of any peak exceedances and possible momentary excursions above the ER limit.
- In a similar way to the concerns described for the case of ER, above, also allowances for pH discharge limit would have a similar list of concerns. No sufficient time for discussion on this matter was however possible in the meeting.
  - Despite the concerns above, expressed by the Secretariat and the Chair, the majority of EGCS sub-group members expressed their support for a "practical approach" that could be based on the definition of an allowance for peak exceedances just as the draft proposals included in the draft submission.
  - With little time during the meeting for continuation of discussions, no agreement was possible that could represent a compromise with the EC endorsement.
  - With a view for a possible agreement with the proposed draft provisions with exceedances on ER and pH the Secretariat, and the Chair, requested the coordinator for this work, and the sub-group experts to draft/outline a brief list of technical arguments that would possibly be used to assist the Commission's interpretation and final decision on the subject matter.

#### Action Points (follow up)

- Urgent follow –up with DG ENV to define Commission's position regarding suggested approach to emission exceedances
- Continuation of drafting (by correspondence)
- Submission to IMO PPR5 (to be held in Mid- January 2018 (t.b.c.))
- Deadline for submissions of bulky documents: mid October 2017 (t.b.c.)
- effective date for starting internal consultation process in the Commission: 1 September 2017 (t.b.c.)

#### **4. Next meeting**

Tentative new meeting to be held before Plenary.



**EUROPEAN COMMISSION**  
 DIRECTORATE-GENERAL FOR MOBILITY AND TRANSPORT

Directorate D - Waterborne  
 D.1 - Maritime transport & logistics

**European Sustainable Shipping Forum**  
**12th meeting of the Sub-Group on Exhaust Gas Cleaning Systems (EGCS)**  
**Brussels, 11 April 2017**  
**Albert Borschette Conference Centre, room AB/2C**  
**(Rue Froissart 36, 1040 Brussels)**  
**DRAFT AGENDA**

<b>08:30-09:00</b>	<b>Registration</b>
<b>09:00</b>	<p><b>Welcome and opening</b></p> <p><u>EGCS Sub-Group:</u></p> <ul style="list-style-type: none"> <li>- Adoption of Minutes of the previous meeting</li> <li>- Adoption of the Agenda</li> </ul> <p><i>DG MOVE</i></p>
<b>09.15</b>	<p><b>Update on state of play with regard to IMO submissions</b></p> <p>1) MEPC 71:</p> <ul style="list-style-type: none"> <li>- on revision of the EGCS Guidelines</li> <li>- INF on the need for harmonisation of EGCS washwater data collection</li> </ul> <p>2) PPR5:</p> <ul style="list-style-type: none"> <li>- on operational malfunction guidelines</li> <li>- on revision of appendix 3 to the EGCS guidelines (on washwater data collection)</li> </ul> <p><i>Chairman</i>  <i>Discussion + group's recommendation(s) for a way forward</i></p>
<b>9.30</b>	<p><b>Report from the Sulphur Committee</b></p> <p><i>Roel Hoenders (DG ENV)</i></p>
<b>09.45</b>	<p><b>Work Package 7: EGCS (Sludge + Washwater + Bleed-off water)</b></p> <p>Study on impact of the EGCS washwater discharges in Port of Antwerp</p> <p><i>University of Antwerp (t.b.c.)</i>  <i>Discussion</i></p>
<b>10.30</b>	<b>Coffee break</b>
<b>10.45</b>	<p><b>Work Package 7: EGCS (Sludge + Washwater + Bleed-off water)</b></p> <ul style="list-style-type: none"> <li>• Awareness campaign</li> <li>• Harmonisation of washwater sampling in context of future submission on revision of Appendix 3 to the EGCS Guidelines</li> </ul> <p><i>EGCSA (Donald Gregory), Mark West (Euroshore) t.b.c.</i></p>

11.15	<p><b>Work Package 10: Handling of NaOH</b>  State of play  Discussion on way forward</p> <p><i>Chair/EMSA</i></p>
11.45	<p><b>Revision of Work Packages</b>  Proposal for revision of WP</p> <p><i>Chair/EMSA/ Rapporteur</i></p>
12.30	<i>Lunch break</i>
14.30	<p><b>Work Package 9: Operational non-compliance scenarios</b>  Draft submission to IMO PPR5  Discussion after 1<sup>st</sup> round of consultation</p> <p><i>Lars Christian Espenes (Norwegian Maritime Authority)</i>  <i>Discussion + group's recommendation(s) for a way forward</i></p>
15.30	<i>Coffee break</i>
15.45	<p><b>Work Package 9: Operational non-compliance scenarios (continuation)</b>  <i>Lars Christian Espenes (Norwegian Maritime Authority)</i>  <i>Discussion + group's recommendation(s) for a way forward</i></p>
16.00	<b>AOB – Don Gregory (EGCSA)</b>
16.30	<p><b>Concluding remarks</b></p> <ul style="list-style-type: none"> <li>- List of follow-up actions</li> <li>- Need for correspondence group</li> <li>- Next meeting</li> </ul>
17:00	<b>End of meeting</b>

ANNEX 2 – Work Package Table (updated following 12<sup>th</sup> sub-group meeting – 15FEB2017)

Sub-Group: EGCS (15 February 2017) – updated after ESSF EGCS 11 <sup>th</sup> meeting						
Agenda Item	WP	Work-Package Title	Coordinator	Members	Expected Deliveries	Comments/Milestones/Deadlines
	1	Dry scrubbing technology	-	-	No further work has taken place on WP1 since the first EGCS sub-group meetings. Continuation of the Work package to be re-evaluated on the basis of new contributions to be made.	No developments to report following the 11th sub-group meeting.
Identified barriers hampering scrubbing technology take-up	2	EGCS waste handling (see WP7 for <u>washwater</u> )	EGCSA	ESPO LR/IACS EUROSHORE	<ul style="list-style-type: none"> <li>Additional information to be gathered/compiled on sludge composition and H<sub>2</sub>S – Sampling &amp; Analysis exercise on EGCS sludge (Need to promote consolidated table with information on EGCS waste, taking into account different technologies and operational aspects)</li> <li>Information to the ESSF PRF subgroup as contribution to the revision of the PRF guidelines</li> <li>INF paper to IMO (PPR3) on EGR bleed-off submitted.</li> </ul>	<ul style="list-style-type: none"> <li>Questionnaire sent attached to the EGCS Progress Report to Plenary</li> <li>Final Report with consolidated replies on EGCS waste submitted to the PRF sub-group.</li> </ul> <p>No developments to report following the 11th sub-group meeting.</p>
Financing Opportunities (Business Case)	3	Fuel oil quality and availability	CONCAWE	EMSA	<ul style="list-style-type: none"> <li>IMO+CONCAWE Sulphur Monitoring &amp; Survey Reports</li> <li>CO<sub>2</sub> saving potential reflected in the report for Plenary (4 Dec)</li> </ul>	<p>No further actions required. (Note: Need to discuss the continuation of WP3)</p> <p><b>NOTE: Currently Fuel oil availability is the subject of an ongoing debate in IMO to which different studies are concurring (to support decision on the possible 2020/25 0,50% global Sulphur cap</b></p> <p>No developments to report following the 11th sub-group meeting.</p>
Addressing barriers hampering scrubbing technology take-up	4	Approval aspects related to EGCS in the MED, IMO EGCS Guidelines and Directive	Rapporteur UK MCA	EGCS SG	<ul style="list-style-type: none"> <li>IMO BDN submission to PPR3 (following proposed amendment to the BDN in MEPC 67/12/7).</li> <li>ETM Guidance (WARTSILA) – to be checked with new WARTSILA representative – Need to define what to expect from WP4</li> </ul>	No further action expected with regards to Bunker Delivery Note.

ANNEX 2 – Work Package Table (updated following 12<sup>th</sup> sub-group meeting – 15FEB2017)

5	Trials vs commissioning applying rules (see WP4)	Rapporteur EC/EMSA	EGCS SG	See above deliveries (WP4)	See above (WP4)
6	Possibility of using HFO during commissioning (see WP4&5)	Rapporteur EC/EMSA	EGCS SG	See above deliveries (WP 4)	See above (WP4)
7	Washwater discharge criteria (pH value) (see also WP2)	EC/EMSA	EGCSA,ESP O MS,PA	<ul style="list-style-type: none"> <li>Washwater study following from ongoing sampling &amp; analysis campaign, coordinated/led by EGCSA/EUROSHORE initiative</li> </ul>	<u>WASHWATER SAMPLING &amp; ANALYSIS</u> <ul style="list-style-type: none"> <li>Ongoing: <ul style="list-style-type: none"> <li>Awareness campaign</li> <li>EGCSA sampling – change of the laboratory</li> <li>German washwater sampling guide</li> <li>Submission with proposal for revision of Appendix-3 of the EGCS Guidelines</li> </ul> </li> </ul>
8	Verification and approval of pH criteria according to 10.1.2.iii externally from the ship	TRAFI	EC/EMSA EGCSA + Members LR, DNV	Proposal for amendments to the 2015 EGCS Guidelines – submission successful to IMO.	<u>PROPOSAL FOR AMENDMENTS TO 2015 EGCS GUIDELINES</u> <ul style="list-style-type: none"> <li>Proposals for amendments to 2015 EGCS Guidelines (RES. MEPC.259 submitted to IMO MEPC71</li> </ul>
9	On operational non-compliance scenarios (see WP4,5&6)	Rapporteur	EGCS SG	<ul style="list-style-type: none"> <li>Accidental breakdown/Instrumentation malfunction provisions for 2015 EGCS Guidelines,</li> <li>Operational non-compliance to be considered as proposed amendments to be included in the IMO Guidelines for Port State Control under MARPOL Annex VI.</li> </ul>	<u>ACCIDENTAL BREAKDOWN, INSTRUMENTATION MALFUNCTION &amp; OPERATIONAL NON-COMPLIANCE</u> <ul style="list-style-type: none"> <li>Discussion following 1<sup>st</sup> round of comments on the draft submission to IMO PPR5.</li> </ul>
10	Safe NaOH handling/logistics	Clean Marine	EGCS SG	Information on best-practices being gathered/compiled	On-going work - joint stakeholders exercise with technical input from EGCS SG members

