

May 6, 2008

Minutes of the NRMM WG editorial committee Meeting

Ispira, 28 - 30 April 2008

Following members of the editorial committee were attending the meeting:

G. De Santi, EC, Chairman NRMM WG  
R. Hummel, EC  
G. Billi, Secretary NRMM WG  
G. Cornetti  
M. Shikata, LEMA Japan  
J. Davidson, Environment Canada  
C. Jackson, US EPA  
M. Lindgren, SRA Sweden  
S. Shimpi, Cummins, EMA  
J. Stein, Daimler, ISO  
H.-W. Knuth, Deutz, EUROMOT  
A. Stark, FPT, EUROMOT  
M. Ericsson, Scania, EUROMOT

R. Hummel welcomed the participants.

Giovanni De Santi, Chairman of the NRMM WG, emphasized the importance of keeping to the target of completing the NRMM gtr draft by end of 2008 and presenting the gtr draft as informal document to the GRPE meeting in January 2009. This target was again confirmed by all experts attending the meeting, after it had already been agreed to following the recommendation by the Chairman in the September 2007 Meeting.

The draft agenda (Enclosure 1) was reviewed and adopted. No remarks were received regarding the November minutes (Enclosure 2) and the minutes were approved.

Status reports for national NRMM regulations were given by:

- M. Shikata, on the latest Japanese developments for the 'Special Vehicles' regulation. M. Shikata on the Indian and Chinese non-road regulations (Enclosures 3, 4).
- C. Jackson on the new Marine and Locomotive Rule and the related changes to 1065.
- A. Krasenbrink, acting unit head EC, on the technical review of the European non-road Directive and on the PEMS measurement campaign for non-road mobile machinery.

Rudolf Hummel reported that the informal document of the draft NRMM gtr including the chapters 7 – 9 of the test procedure was presented to the NRMM WG and to the 55<sup>th</sup> GRPE meeting in January 2008 and that it was positively received.

This informal document (GRPE-55-21, Enclosure 5), being composed by the legal text only, had been extracted from the third level draft document as presented to the editorial committee in September 2007 and subsequently elaborated during the November editorial committee meeting. During December the latest version of the document was finalized based on the comments received.

After the presentation of the document to GRPE a new working document had been derived and distributed by end of January 2008 to the experts for comments. Based on these comments a first complete draft gtr document (including the guidance) had been developed (chapters 1 – 9, excluding 3) and distributed to the experts (Enclosure 6) on the 15<sup>th</sup> of April 2008.

This document was perceived to form the basis for the discussion during the 28 - 30 April 2008 editorial committee meeting.

At the beginning of the meeting the following documents were copied to all experts:

- complete draft document (Enclosure 6)
- current structure of gtr (Enclosure 7)

The different contributions received and the agreements found during the discussion as it proceeded were introduced into the working document by NRMM WG secretary Giorgio Billi, including the immediate feedback and final agreement by the experts. The resulting document (Enclosure 8) was distributed at the end of the meeting.

G. Cornetti started the work by presenting the working document and explaining its different parts.

The editorial committee reviewed the chapters 1 – 6 (without 3 on definitions). The chapters 1 – 6 (without 3) were accepted by the experts. Some changes were discussed and agreed. The updated document will be circulated by June. In parallel to this updated working document a clean version will be made available for ease of reading.

The editorial committee continued to review paragraphs in the chapters 7 – 9, discussing and solving the questions, as indicated by G. Cornetti.

The editorial committee looked at the changes being proposed by S. Shimpi from the new version of 1065. Not all changes were adopted. M. Shikata proposed to review the gtr draft in view of the latest 1065 changes within the PM procedure in the next September meeting.

List of decisions taken by the editorial committee (non exhaustive):

- the scope is limited to 19 – 560 kW engines. The G2 cycle is to be dropped from the text;
- the definition chapter 3 has to be extended by a number of elements, like engine system. Other definitions are shifted from the body of text into chapter 3;
- the reserved text in red in chapter 5.1.1. is for information only and will not be included in the gtr document to be presented;
- S. Shikata asks to maintain the same family definitions between WHDC and NRMM;

- Bio diesel is not part of the family definitions;
- according to J. Stein record keeping is not part of the gtr document; he stated that US EPA had already agreed to keep record keeping out off the off-cycle gtr, as it serves only in the context of US certification. G. Cornetti suggested that a phrase could be added on the recording of data; C. Jackson suggested that EPA may have some concerns with this approach and that the WHDC approach should not necessarily be taken as a final decision on how the Agency would like to proceed on this issue.
- annex 5 will be sent out with these minutes
- the terminology infrequent (periodic) will be used together;
- the mapping procedure will precede the testing procedure, which is divided by cycle types;
- proposal to be prepared by A. Stark and G. Cornetti for 7.6.1.1.3. steady state mapping by end of June 2008 on the basis of the 1065 text;
- C. Jackson will check the cycle validation criteria on behalf of the torque < 10% respectively < 13% and give an opinion by end June;
- validity of transient cycle validation criteria for ramped modal test, C. Jackson will validate and reply to editorial committee
- G. Cornetti will submit to the experts a short report on the partial flow dilution procedure in June 2008.

The editorial committee discussed the formal lay-out of the emission calculation annexes A8 and A9. This was necessary in order to allow efficient progress during the summer months of 2008. The experts agreed to dedicate annex A8 to the mass calculation and annex A9 to the molar calculation. The mass calculation is taken from ISO standard 8178 and the molar calculation from CFR 40 part 1065. The original equations, symbols and subscripts are maintained for the ease of reading. The annexes A8 and A9 will be introduced by a table of all parameters and subscripts used. The US rule CFR 40 part 1065 confirms in 1065.601 the equivalency of the two calculation approaches. Consequently, the two formulations represent a simplification for the user but not an option. The editorial committee agreed that H. Knuth and S. Shimpi will work together with G. Cornetti to prepare the calculation part. In order to offer to the experts a comment opportunity on an early, although incomplete, draft it was agreed that a first subsection will be distributed to the experts by July, as suggested by J. Stein.

The proposal by S. Shimpi for the editorial committee to meet in Geneva contemporaneously with the GRPE meeting in June 2008, was very welcomed by the chairman, but proved not feasible due to the non-availability of some of the experts.

C. Jackson stated that he will evaluate the issues raised during the April editorial committee meeting and discuss them at EPA. C. Jackson will supply a summary document of this evaluation to the editorial committee. Given the fact that other experts will also provide their feedback on possible changes to the GTR (updates and calculations, etc) it seems appropriate to pull together a summary of all of the experts contributions in July 2008. C. Jackson hopes that this will solve the majority of unfinished issues from the April 2008 meeting. C. Jackson suggested holding a conference call of all experts of the editorial committee by end of July 2008, in order to trace progress.

The editorial committee agreed to report to GRPE as suggested by R. Hummel: 'The drafting work by the editorial committee progresses, even though harmonisation between important legislations is not easy. All the experts of the editorial committee confirm respectively their target to present a complete document of the NRMM draft gtr as informal document to GRPE in January 2009'.

Next meetings:

Morning 3<sup>rd</sup> June 2008 NRMM WG, Geneva

5<sup>th</sup> June 2008 GRPE

The editorial committee will meet another two times in 2008:

- 29 + 30 September + 1 October 2008 at JRC in Ispra
- 19 + 20 + 21 November 2008 at JRC in Ispra

The dates were agreed by all members of the editorial committee.

(From the minutes of the April 2007 meeting: All experts agreed that the presence of all members of the editorial committee is indispensable for the success (usefulness) of the meetings).

Having completed the agenda, the chairman thanked all the WG members for their participation and closed the meeting.

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- Enclosure<sup>1</sup>:
1. draft agenda
  2. November 2007 minutes
  3. copy from Indian and Chinese non-road regulations
  4. Japanese remarks
  5. Informal document (GRPE-55-21)
  6. Working document 15 April 2008
  7. Structure
  8. Working document with all comments and changes from April 2008 meeting
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21 February 2008

Editorial Committee Meeting of NRMM WG  
28 – 30 April 2008  
JRC Ispra, Italy  
(Chairman: Giovanni De Santi. Secretary: Giorgio Billi)

Proposed Agenda

1. Welcome of participants
  - a) Introductory remarks
  - b) Welcome to Ispra and organizational Details
2. Adoption of Draft Agenda, Approval of November 2007 NRMM minutes
3. Status of the 3rd Level Document  
(Draft NRMM GTR – ‘Technical Procedure’ based on informal document 15 January 2008 and send to experts as complete text on 28 January 2008)
4.
  - a) Review of paragraphs from test procedure not yet discussed
  - b) Amendments 1065 (based on updated third level document)
5. Review of chapters 1 – 6 (without 3: definitions)
6. Next activities  
e.g. emission calculations
7. Definition of work 2008 and upcoming meetings:
  - a) Preparation of next NRMM meeting in Geneva 3 June 2008
  - b) Determine # of meetings in 2008 to arrive at document for January 2009  
(#, venue and date to be determined)
8. Other issues

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<sup>1</sup> As all enclosures have been distributed at the end of the meeting in electronic form, they are not included in this document. Please write to the secretary if you need an electronic copy of a document.