



Report of the 29th Meeting of the JCRB

Held on September 25-26, 2012

NIST, Gaithersburg

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Participants

BIPM-CIPM

Prof. Michael Kühne (Chairman) BIPM
 Dr Martin Milton..... BIPM
 Dr Robert Karls..... CIPM
 Mr Ahmet Ömer Altan (Executive Secretary) BIPM
 Mr Andy Henson BIPM
 Mr Chingis Kuanbayev BIPM

Delegations

Mr Dennis Moturi (Representative) AFRIMETS
 Mr Mohammed Berrada..... AFRIMETS
 Dr Yadong Yu (Representative) APMP
 Dr Yukinobu Miki APMP
 Dr Ilya Budovsky APMP
 Dr Pavel Neyezhnikov (Representative) COOMET
 Ms Natalia Sedova COOMET
 Dr Kamal Hossain.....(Representative) EURAMET
 Dr Pavel Klenovsky.....EURAMET
 Ms Maguelonne ChambonEURAMET
 Dr Claudia Santo(Representative) SIM
 Dr Alan SteeleSIM
 Dr Claire Saundry.....SIM
 Dr James OlthoffSIM

Guests

Mr Adel Fakhroo GULFMET
 Mr Omar S. Kanakrieh GULFMET
 Mr Saeed Al Shahrani GULFMET
 Mr Salah Alem Alrumaihi..... GULFMET

1. Welcome by the Chairman and approval of the agenda

The chairman, M. Kühne, welcomed the delegates.

M. Kühne then informed the JCRB about his upcoming retirement on December 31, 2012. He then introduced Dr. Martin Milton, the Director Designate of the BIPM, who will take over directorship of the BIPM on January 1, 2013.

Members of the JCRB delegations were then asked to introduce themselves.

The agenda of the 29th JCRB meeting was approved without amendments.

2. Approval of the minutes of the 28th meeting of the JCRB and a review of pending actions.

The minutes of the 28th meeting of the JCRB were approved without amendments.

M. Kühne reviewed the actions agreed upon at the 28th meeting noting that the outcomes of Action 28/2 would be reported under the agenda item 7 (Issues from Consultative Committees), Action 28/5 would be reported under agenda item 8 (Discussion of Action 28/5: Document on proposal to develop web platform for CMC reviews) and Action 28/8 would be dealt with under agenda item 10 (Discussion on the proposed CMC Review Best Practices Workshop).

I. Budovsky reported that, in accordance with Action 28/7, he had proposed to the CCEM WGMRO to have CMC files in the EM area split by category but that the proposal had not been endorsed due to the opinion that splitting the CMC files would not produce benefits that outweighed the amount of work required.

M. Kühne informed the JCRB that the CIPM had approved the changes to the document CIPM MRA-D-05 that changed the procedure for the approval of supplementary comparison reports with the modification that the three-week

3. Report by the Chairman on progress since the 28th JCRB meeting

M. Kühne presented the report on developments at the BIPM since the 28th meeting of the JCRB. Important points in the report included:

- The appointment of Dr. Martin Milton as of October 1, 2012 as Deputy Director/Director Designate of the BIPM. He will take over as the Director of the BIPM on January 1, 2013.
- Other changes to BIPM staff and new secondments, including the appointment of Chingis Kuanbayev as JCRB Executive Secretary as of December 1, 2012.
- New members of the BIPM and associates to the CGPM and new signatories to the CIPM MRA

- Progress of the CC strategic planning process in accordance with Recommendation 2 of the *ad hoc* Working Group
- The signing of an MoU with IAEA on June 25, 2012

Additionally, M. Kühne reported on CCLs proposal, adopted at its meeting on September 20-21, on the subject of changing the expression of uncertainty for CMCs in the area of length, which was the subject of Action 28/1, decided at the 28th meeting of the JCRB. According to the proposal, length CMCs in which uncertainty is expressed in terms of a numerical value equation would be changed so that their uncertainties would be expressed as a quantity value equation, a format that would be in compliance with VIM3 and in line with the requirements of some accreditation bodies for expression of uncertainty. The text adopted by the CCL requests that the BIPM Director consider the matter and take appropriate actions. In this context, as the BIPM Director, M. Kühne opened the discussion on the matter.

In general, the JCRB delegates were in agreement in their opposition to the requested change due to considerations of the work that would be required to change the large number of CMCs that would be involved and the high possibility of errors in making the necessary conversions from the current uncertainty expression format to the new one. The benefits of the change were deemed to be outweighed by its costs. At the end of the discussion the JCRB agreed to the following resolution:

Resolution 29/1: The JCRB does not endorse the CCL's proposal to change the expression of uncertainty from a numerical value equation to a quantity value equation for CMCs published in the KCDB

4. Report from the CIPM

R. Kaarls gave a presentation that included the following points:

- New Member States of the BIPM and Associates to the CGPM
- Outcomes from Session I of the 101st Meeting of the CIPM in June 2012
- New CIPM members
- An agreement with the Dominican Republic on payments in arrears

5. Highlights of the RMO reports to the JCRB:

5.1. SIM

C. Santo presented the highlights of the SIM report.

5.2. EURAMET

K. Hossain presented the highlights of the EURAMET report.

5.3. COOMET

P. Neyezhnikov presented the highlights of the COOMET report.

5.4. APMP

I. Budovsky presented the highlights of the APMP report.

5.5. AFRIMETS

D. Moturi presented the highlights of the AFRIMETS report.

6. KCDB report

On behalf of C. Thomas, O. Altan presented the highlights of the KCDB report. The presentation included the following the points:

- A study has been completed to analyze the age of 24840 published CMCs in the KCDB. It was determined that 42 % of the CMCs currently available in the KCDB were published by the end of 2004. Since then, CMCs have been added to the KCDB at an approximate rate of 1900 per year.
- In accordance with Action 28/6, the KCDB office has completed the work to divide the excel CMC files that are made available to NMIs and RMOs on the JCRB CMC review website by category in the areas of AUV, M, RI and L. No decision has been made to divide the files in the areas of EM, PR, T and TF.
- 65% of the total 1134 comparisons (both key and supplemental) have results published in the KCDB. There is an increase in the rate of key and supplemental comparison registration over the last year.
- There been an increase in the average number of monthly visits to the KCDB pages – from an average of approximately 7200 visits/month in 2010 to approximately 9600 visit/month between January and June 2012.
- The KCDB will undergo some modifications within the context of a refresh of the main BIPM website. It is expected that there will be more direct access to graphs of equivalence and CMC tables.

After the end of the presentation, K. Hossain asked whether it would be possible to have more information on the status of those comparisons whose results were not yet available on the KCDB. In response the following action was agreed:

Action 29/1: The KCDB office will provide information to the JCRB on the status of comparisons whose results are not yet available in the KCDB

7. Status of CMCs submission and review / Issues from Consultative Committees

O. Altan reported that there were no current issues to be brought before the meeting concerning CMC submissions and reviews.

The JCRB delegates were then informed of an issue referred to the JCRB by the CCL WGMRA. The issue concerned a specific case in which both an NMI and its RMO TC failed to respond to repeated communications from the CCL WGMRA informing them of a discrepancy between the results obtained by the NMI and the uncertainties it claimed in relevant published CMCs. The recommended procedure in document CIPM MRA-D-05 pertaining to such cases offered no guidance on what actions to take in the case that both the NMI and the RMO TC responsible for area in which the comparison took place were unresponsive to notices for corrective action to be taken. After discussion, the JCRB agreed to the following actions to address the problem:

Action 29/2: The JCRB chairman will inform the RMO Quality TC/WG and the RMO Chairperson of the issue raised by the CCL WGMRA related to inconsistencies between a NMIs comparison results and its published CMCs and request timely feedback on the matter.

Action 29/3: The JCRB executive secretary will change the procedure for monitoring the impact of comparisons detailed in document on CIPM MRA-D-05 to include a provision for addressing communications related to inconsistencies between comparison results and published CMCs to the Quality TC/WG of the RMO to which the NMI in question belongs. The JCRB chairman will present the changes to the CIPM for approval.

At its 28th meeting, the JCRB agreed on Action 28/2 for the BIPM to consider a new policy adopted by the CCPR WG-CMC to ensure that all CMCs linked to a key comparison in the PR area are supported by the most recent CIPM or RMO comparison. According to this policy, those NMIs that do not participate in repeats of key comparisons that were used to support their CMCs in the PR area would have their CMCs greyed out within 2 months of the publication of the final comparison report. The NMIs will then be expected to arrange and participate in a bilateral comparison within 5 years, the results of which, if consistent with values declared in the CMCs, will allow the greyed out CMCs to be re-instated. NMIs that do not take such action within the 5 year period will face having their CMCs deleted from KCDB.

O. Altan reported that the BIPM took the view that the CCPR's policy conformed to the terms of reference set by the CIPM for CC working groups on CMCs as listed in Document CIPM MRA-D-04, Section 8 and to responsibilities of CCs as detailed in T.8 of the Technical Supplement to the CIPM MRA. However, in the ensuing discussion

among the delegations to the JCRB, the consensus view emerged that while the CCPR was justified in its concern that NMIs demonstrate their continued capability to perform measurements in line with their declared CMCs by participating in repeats of key comparisons, there was insufficient ground for them to enforce penalties that included the greying out of CMCs, which, according to current policy, is solely within the area of responsibility of the RMO TCs/WGs responsible for QMS approvals, which is the mechanism by which the continued vitality of published CMCs is ensured. At the end of the discussion, the JCRB agreed on the following resolution:

Resolution 29/2: The JCRB resolves that, whilst the expectation and routine practice is that NMIs will participate in repeats of relevant comparisons supporting CMCs organized by CC or RMOs, it is not within the remit of a CC to initiate the greying-out CMCs where an NMI has not participated.

It is the responsibility of the RMO TC for QMS review to establish the continued validity of all published CMCs covered by the quality system, taking into account all supporting technical evidence, including participation in comparisons. If the TC for QMS review is not satisfied that a particular CMC remains valid then it initiates the process of greying out the CMC in question.

8. Discussion of Action 28/5: Document on proposal to develop web platform for CMC reviews

O. Altan made a brief presentation of the paper prepared by C. Thomas in accordance with Action 28/5. The paper explored the utility and feasibility of developing a web-based platform for entering new CMC declarations and facilitating their review, which would replace the current system of using Excel files during the process of drafting and reviewing new and modified CMC declarations.

The paper is structured to respond to main issues concerning the technical aspects of the CMC entry and review processes (mainly, the drawbacks of using Excel files) that were raised in EURAMET's position paper on CMC review processes that was presented at the 28th meeting of the JCRB (Doc. 28/10) The paper suggests a number of interim measures to address the challenges of using Excel files, such as splitting the files covering entire areas into categories within areas to make their handling by reviewers more manageable, which has been implemented for Mass, Ionizing Radiation, Length, Acoustics, and Photometry & Radiometry. Another suggestion is make use of cloud computing facilities, Dropbox, for example, so that all reviewers share and work on a single Excel file, which would make the compilation of reviews and corrections to reviewed CMC entries easier.

The paper also details a wider variety of technical considerations that must be taken into account in the event that a web platform for CMC entry and reviews is

implemented. In summary, the conclusion is that such an undertaking would require a significant amount financial resources and expertise for its design and implementation.

9. Discussion on Status of ILAC P10 Document

A. Henson reported on the latest developments concerning the ILAC P10 document. An agreement that had been reached concerning the non-hierarchical treatment of the evidence of traceability during accreditation reviews dissolved due to objections from a number of ILAC members. The current prevailing view is to lend preference to the establishment of traceability through either the CIPM MRA or the ILAC MRA and only utilize the third option of allowing the laboratory undergoing accreditation to provide other evidence of traceability when no other option exists.

A. Henson stressed that the text of the document had not been finalized after the latest developments and that the discussion on the subject would continue at the AIC meeting to take place in Rio de Janeiro on October 21-22. There is the possibility that the paper might be opened to comment once again.

After a discussion of the issue, centering on the utility of continuing NMI and BIPM input into P10 document drafting process, the JCRB agreed to the following action:

Action 29/4: A. Henson will attend at the AIC meeting to be held in Rio de Janeiro in October 2012 and continue to represent the JCRB views on relevant topics with ILAC.

10. Discussion on the proposed CMC Review Best Practices Workshop

O. Altan presented the latest version of the proposed Workshop on Best Practices in CMC Reviews.

In discussion, it emerged that JCRB had a consensus on scheduling the workshop before the 30th meeting of the JCRB so that its conclusions – in the form of recommendations – could be immediately discussed by the JCRB at its meeting.

There was also agreement on ensuring that the issues to be discussed at the workshop be defined before the meeting.

The possibility of including discussion of quality management system reviews by RMOs in the workshop was discussed however no consensus was reached on this matter and it was agreed to maintain the agenda as it was presented with the scope of the workshop being limited to a discussion of the review process for new and modified CMCs.

In the end, the JCRB agreed to the following actions:

Action 29/5: The following will be incorporated into the agenda of the Workshop on Best Practices in CMC Reviews as objectives:

- To help reduce the resource and time required for the review of new and modified CMCs, whilst not compromising their integrity, and
- To improve communication and the sharing of knowledge between all involved within the processes of review of CMCs and necessary quality system review, by
 - Learning how the (5) RMOs undertake their tasks
 - Learning how the (9) CCs undertake their tasks
- To agree actions/recommendations to disseminate/adopt and implement the “best practices” / opportunities for further efficiencies identified.”
- (If time permits), to extend the scope of the above with a session addressing “re-review”

Action 29/6: RMOs will provide papers on issues faced during the CMC workshop by the end of January 2013 to the JCRB Executive Secretary who will develop a summary document that will be circulated to participants by the end of February 2013.

11. Presentation by GULFMET Delegation and Q & A Session

After an introduction by A. Fakhroo, Vice-President of GULFMET, thanking the JCRB for inviting the GULFMET delegation to attend the 29th meeting of the JCRB, O. Kanakrieh, Secretary of GULFMET, made a presentation on the recent progress and future roadmap of GULFMET.

In the question and answer session that followed, O. Kanakrieh and the other members of the GULFMET delegation responded to questions by clarifying the following issues concerning GULFMET:

- Although GULFMET plans to become administratively independent of the Gulf Cooperation Council (GCC) within 3 years, GULFMET may open up membership to non-GCC countries before this happens. A. Fakhroo stated that a letter could be sent to the JCRB confirming GULFMET's intention to expand its membership beyond GCC member countries.
- GULFMET is open to the possibility of visits by parties interested in evaluating the capabilities of its technical committees. The qualifications of those taking part in GULFMET technical committees can be provided upon request.
- GULFMET continues to concentrate on building up the capabilities of its member institutions and laboratories. A MoU signed recently with UME (Turkey) is expected to bolster this effort. GULFMET also has a standing MoU with KRISS (Rep. of Korea).
- The GULFMET website contains only partial information on the measurement capabilities of its member institutions. Full capabilities are greater than those that are listed.

12. Discussion of GULFMET Presentation and Conclusions

After the presentation by GULFMET and the subsequent question and answer session, the JCRB delegates held a closed session to discuss the GULFMET's presentation was followed by a discussion in which there was consensus among the RMO delegates that GULFMET has established the required structures and is ready to progress to the next phase; that is engaging with the NMI community in the other RMOs to build mutual confidence and trust and to gain experience in the operation of an RMO.

The JCRB welcomed the MoU signed by GULFMET with UME (Turkey) which will enable GULFMET to benefit from the experience of UME. Although one member of GULFMET has made initial contacts and submitted requests to attend the meetings of some CCs, GULFMETS is some way from fulfilling the criteria that requires that at least one of its members have the technical competence required to participate in the CC activities.

It was further noted that there is still only one Member State of the BIPM and one Associate State of the CGPM within GULFMET; although indications are that additional applications from GULFMET member states will be made in the near future.

Overall, the JCRB welcomed the significant progress GULFMET has made since the 28th meeting of the JCRB but acknowledged there is still some distance to cover towards meeting the criteria required for provisional JCRB membership. The JCRB encouraged GULFMET to intensify its engagement with established RMOs, through attendance at TC and Quality System review meetings, as a means towards gaining the experience

necessary to operate as an RMO, and all present RMOs formally confirmed their willingness to welcome GULFMET representatives to their activities.

13. Documents to be submitted to the CIPM for approval

13.1. Changes to the CIPM MRA-G-01

O. Altan presented proposed changes to the CIPM MRA-G-01 which consist of updating references within the document to other CIPM MRA documents. The JCRB approved the changes without discussion.

Recommendation 29/1: The JCRB recommends to the CIPM to approve changes to document CIPM MRA-G-01 that involve the updating of references to other CIPM MRA documents

13.2. Changes to the CIPM MRA-D-05

Changes to CIPM MRA-D-05 consist of the modification agreed by the JCRB (Action 29/3) to the procedure on monitoring the impact of comparison results on CMCs that specified in Section 9 of the document.

Recommendation 29/2: The JCRB recommends to the CIPM to approve changes in Section 9 of the document CIPM MRA-D-05 amending the procedure to monitor the impact of comparisons.

14. Any Other Business

There were no other issues discussed under this agenda item.

15. Next Meetings

The JCRB agreed to the following:

Resolution 29/3: The 30th meeting of the JCRB will begin on the afternoon of March 19, continuing for a full day March 20, 2013, following the Workshop on Best Practices in CMC Reviews, which will be held on March 18 and the morning of March 19, 2013.

Resolution 29/4: The 31st meeting of the JCRB will be hosted by NIM (China) on September 18-19, 2013.

16. Meeting closure

Before closing the meeting, JCRB delegates, noting the pending retirement of Michael Kühne, expressed their gratitude for his service to the JCRB since the beginning of his participation in 2003.

With no other items on the agenda, the meeting was adjourned.

17. Actions

Action 29/1: The KCDB office will provide information to the JCRB on the status of comparisons whose results are not yet available in the KCDB

Action 29/2: The JCRB chairman will inform the RMO Quality TC/WG and the RMO Chairperson of the issue raised by the CCL WGMRA related to inconsistencies between a NMI's comparison results and its published CMCs and request timely feedback on the matter.

Action 29/3: The JCRB executive secretary will change the procedure for monitoring the impact of comparisons detailed in document on CIPM MRA-D-05 to include a provision for addressing communications related to inconsistencies between comparison results and published CMCs to the Quality TC/WG of the RMO to which the NMI in question belongs. The JCRB chairman will present the changes to the CIPM for approval.

Action 29/4: A. Henson will attend at the AIC meeting to be held in Rio de Janeiro in October 2012 and continue to represent the JCRB views on relevant topics with ILAC.

Action 29/5: The following will be incorporated into the agenda of the Workshop on Best Practices in CMC Reviews as objectives:

To help reduce the resource and time required for the review of new and modified CMCs, whilst not compromising their integrity, and

To improve communication and the sharing of knowledge between all involved within the processes of review of CMCs and necessary quality system review, by

- Learning how the (5) RMOs undertake their tasks
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To agree actions/recommendations to disseminate/adopt and implement the “best practices” / opportunities for further efficiencies identified.”

(If time permits), to extend the scope of the above with a session addressing “re-review”

Action 29/6: RMOs will provide papers on issues faced during the CMC workshop by the end of January 2013 to the JCRB Executive Secretary who will develop a summary document that will be circulated to participants by the end of February 2013.

18. Resolutions

Resolution 29/1: The JCRB does not endorse the CCL’s proposal to change the expression of uncertainty from a numerical value equation to a quantity value equation for CMCs published in the KCDB

Resolution 29/2: The JCRB resolves that, whilst the expectation and routine practice is that NMIs will participate in repeats of relevant comparisons supporting CMCs organized by CC or RMOs, it is not within the remit of a CC to initiate the greying-out CMCs where an NMI has not participated.

It is the responsibility of the RMO TC for QMS review to establish the continued validity of all published CMCs covered by the quality system, taking into account all supporting technical evidence, including participation in comparisons. If the TC for QMS review is not satisfied that a particular CMC remains valid then it initiates the process of greying out the CMC in question.

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Resolution 29/4: The 31st meeting of the JCRB will be hosted by NIM (China) on September 18-19, 2013

19. Recommendations

Recommendation 29/1: The JCRB recommends to the CIPM to approve changes to document CIPM MRA-G-01 that involve the updating of references to other CIPM MRA documents.

Recommendation 29/2: The JCRB recommends to the CIPM to approve changes in Section 9 of the document CIPM MRA-D-05 amending the procedure to monitor the impact of comparisons.

