REPORT OF 11th JCRB MEETING, 6-7 OCTOBER 2003

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[BIPM, Sèvres, France]

1. OPENING AND WELCOME BY THE CHAIRMAN

The JCRB Chairman welcomed participants to the meeting. Following introductions, he requested comments on the Draft Agenda. [The Final Agenda is given in Appendix 1 incorporating all additions, and providing references to all Working Documents.]

2. MATTERS ARISING FROM THE REPORT OF THE 10TH JCRB MEETING

The Chairman reviewed Document JCRB-11/2.

Re: Action 16 from the 9th JCRB Meeting, the JCRB Exec Secretary demonstrated the three flowcharts that have been developed:

- Document JCRB-11/2(a): Flowchart of Key Comparison Process
- Document JCRB-11/2(b): Flowchart of Supplementary Comparison Process
- Document JCRB-11/2(c): Flowchart of JCRB CMC Review Process

ACTION 1: Comments on the three flowcharts are to be forwarded to the incoming JCRB Exec Secretary as soon as possible. He will then post them with the "Open-access documents" on the JCRB webpage.

Re: Action 5, the JCRB Exec Secretary noted that the KCDB Coordinator had advised that a general document on linkages between comparisons is not practical as the procedures are very much case-dependent. Where links are made between comparisons, details of how the link has been computed are provided in the KCDB.

Re: Action 8, the JCRB Chairman informed the Committee that his information is that Egypt will be submitting its CMCs via SADCMET.

Regarding Action 13, the JCRB Chairman noted that amendments to CIPM MRA documents would be discussed under the new Agenda Item 8.6.

Dr Sacconi requested that notification be provided by the JCRB Exec Secretary when changes are made on the JCRB pages, including the date of revision of documents.
ACTION 2: The JCRB Exec Secretary is to notify the Committee when changes are made to the JCRB pages.

3. REPORT BY CHAIRMAN ON PROGRESS SINCE THE 10TH MEETING

The JCRB Chairman drew the Committee's attention to the 4-year Report on the operation and activities of the JCRB, "Activities of the JCRB: 1999-2003", a copy of which was given to each Committee Member. The document is also available in the "Open-access documents" section of the JCRB webpage.

The Chairman summarized his report, provided in the first few pages of the document, noting the creation of the position of JCRB Exec Secretary and the development of the JCRB webpages, including the section for technical experts. He highlighted the importance of the JCRB's role in coordinating reviews of CMCs and providing policy and guidelines in the interpretation of the CIPM MRA and associated documents.

He then asked each RMO representative what use is currently being made of the Statement referring to the CIPM MRA on calibration certificates issued by NMIs.

APMP: Dr Imai responded that information has been provided at the APMP General Assembly and in APMP newsletters. NMIJ has not yet begun using the statement on certificates. Mr Jones stated that New Zealand is waiting until the completion of the accreditation process. Mr Lam added that Singapore has not yet begun using it either.

COOMET: The COOMET representatives stated that it is not yet being used within their NMIs.

EUROMET: Mr Hetherington replied that some EUROMET NMIs are using it but he was not sure if it is appearing on all certificates from an NMI. He added that Ireland is not yet using it. Prof Kühne noted that he believed that PTB is using it but is not sure to what extent. Dr Sacconi added that it is not yet in use in Italy.

SADCMET: Dr Hengstberger commented that NML-CSIR is using the Statement as part of the notes at the end of a certificate.

SIM: Ing Quím Mussio stated that Uruguay is not yet using the statement. Dr Semerjian informed the Committee that questions have been asked within NIST about who enforces the use of the statement, and whether it could be misused. The Chairman responded that there is no means of enforcing the use of the statement, except by vigilance. It is up to the NMIs and RMOs to monitor its use. Prof Wallard noted that, in ILAC's opinion, the use of the statement on calibration certificates would help enormously when accreditors are looking at traceability when accrediting laboratories.

The Chairman then invited comments on the Report.

Dr Semerjian expressed his appreciation for the effort of compiling the Report. Regarding Item 3.4 (Critical issues for the future/"The need to increase awareness among users of the existence and importance of the CIPM MRA and the KCDB"), he commented that the first response from government representatives and regulators is to ask what immediate benefits the CIPM MRA would bring to them? He urged that a systematic coordinated approach be developed to reach these groups, as this will be more effective than uni- or bilateral attempts.

The Chairman agreed, adding that what is needed is, for example, a mechanism to ensure that reference is made to the CIPM MRA (as appropriate) when international agreements are being developed.

Dr Hengstberger noted that approaches are being made at the regional level within SADC, and also bilaterally with the US; this is only possible in countries with strong liability legislation.

The Chairman reminded the Committee of the BIPM's ongoing efforts to achieve Observer Status on the WTO TBT Committee, noting that it is important that this is achieved.

Dr Kaarls noted that there is almost always reference to accreditation agreements at the EC-level when setting up trade agreements. The metrology community needs to ensure that metrology has a similar priority in these fora.

Dr Semerjian informed the Committee that SIM is trying to get metrology into the discussions of the Free Trade Area of the Americas (FTAA) but so far without success, as it is not seen as sufficiently important. He added that it might help if more pressure was applied by the smaller countries, and that what is needed is multiple points of attack.

ACTION 3: At the forthcoming CIPM meeting, the JCRB Chairman is to raise the question of how to develop a coordinated approach to raising awareness of metrology and the CIPM MRA among government and regulatory authority representatives.
NOTE: This Action resulted in modifications being made to Resolution 6 of the 22nd CGPM.
(see: http://www1.bipm.org/utils/en/pdf/Resol22CGPM-EN.pdf)

Mr Lam commented that Singapore has Free Trade Agreements with the US, Japan, Australia and New Zealand, while actively pursuing others as well. He requested for information on the trade agreement between the EU and US that refers to the CIPM MRA, so that he could forward that to his government officials as an example how that could be similarly adopted.

(Note: JCRB Executive Secretary provided Mr Lam the web reference of the declaration: http://www.ustr.gov/regions/eu-med/westeur/calib.html)

Prof Wallard noted that the European Union-funded RegMet project (which is developing a template for use by regulators to ensure appropriate references are made to metrology when developing legislation) would be referenced in the forthcoming EU Groundwater Directive. He also said that, at the recent ILAC General Assembly, there had been an announcement that regional initiatives were to be launched that dealt with the use and lack of use by regulators of mutual acceptance under the ILAC Arrangement. An APLAC meeting will be held in Washington in 2004 and be hosted by Pete Unger of A2LA.

Dr Sacconi asked that any documents on increasing awareness of the CIPM MRA be circulated to other regions, given that everyone is working on the same problem.

ACTION 4: The JCRB Exec Secretary is to ensure that documents relating to awareness- raising of metrology and the CIPM MRA are distributed to the RMO representatives to the JCRB when available.

Dr Imai also expressed his appreciation for the summary report and requested permission to reproduce sections in order to inform developing countries as well as relevant organisations in the “new” fields of food analysis and laboratory medicine, for example.

The Chairman agreed, repeating that the document is available on the open-access section of the JCRB webpage.

Prof Bily commented that his impression is that “metrology” is viewed poorly within the European Commission. The Chairman responded that perhaps the officials do not yet appreciate the significance of metrology.

4. REPORT ON THE PRESENT STATUS OF THE KCDB

The Chairman invited Dr Claudine Thomas, the KCDB Coordinator, to present her Report (Document JCRB-11/4). Dr Thomas summarised the progress made since the 10th JCRB meeting regarding entries in Appendix B and C. She reminded the RMO representatives to the JCRB that final amendments to files (i.e., non-scientific matters) can be undertaken by the KCDB Office.

She also noted that, based on modelling of visits to the KCDB:

- the number of "useful" visits (defined as a contact plus additional use of other KCDB pages) has increased by around 30% between January and August 2003;
- it is clear that the .pdf files of CMCs are being downloaded;
- at the beginning of 2003, there was virtually no use (0.3% of visits) of the Appendix C search engines, although this is now increasing. The low usage may reflect that there is not yet enough data or it may be that the search engines are too complex for some users and should be modified to be more accessible.

The lack of Thermometry and Time & Frequency CMCs was highlighted; the issue of Thermometry CMCs will be discussed separately under Agenda Item 6. With regard to Time & Frequency, Dr Semerjian commented that, from the information he had, the experts consider that Appendix C is not relevant in this area, and that there is intense activity in this field without it. The Chairman agreed that this had been his perception from the outset, and that it is certainty true in terms of time-scales, but there is a need for CMCs re: calibrations of frequency and time equipment. The Chairman concluded that it is up to the CCTF to determine if it wants to make use of Appendix C.

Dr Thomas informed the Committee that in the area of Electricity & Magnetism (E&M), there has been a change in the classification of services from Version 6 to Version 7.2 BUT the two classifications do *not* overlap. CMCs from all NMIs must therefore be re-imported into the KCDB (by removing access to all E&M CMCs for around 2 hours). She noted that APMP, SADCMET and SIM have re-submitted their CMCs using the new service categories. However, EUROMET have actually made changes to their "original" CMCs and these are now undergoing inter-regional review. Therefore, the "new" E&M CMCs (i.e., using the new classification of services), will not be published until the EUROMET CMCs are ready so that all CMCs using version 7.2 can be published at the same time.

Dr Semerjian inquired if there is a general problem across fields regarding the finalisation of service categories? Dr Thomas responded that this had been a specific issue in the E&M area.

Dr Korostin inquired about the structuring of the KCDB across fields. When the COOMET Information and Training Technical Committee had tried to re-create KCDB data, it had found a discrepancy in the presentation of information. Dr Thomas responded that there are in fact three databases in Appendix C for three service classification types: the normal tree-structure for most fields; the RI structure; and the chemistry structure. This reflects the fact that there are three different Excel templates. It is not clear how these could be merged into one scheme. The Chairman agreed that it would be very difficult to have a single structure that would be applicable for chemistry, biology and physics. Dr Semerjian added that his understanding is that it is up to each CC to determine the appropriate classification scheme for its field.

Dr Sacconi requested clarification on how to access the KCDB Newsletter. Dr Thomas demonstrated how one subscribes to the Newsletter using the link from the

KCDB home page. She added that the first newsletter would be written in December 2003. Dr Semerjian suggested that people could be signed up as subscribers at PITTCON and other conferences at which the KCDB is being demonstrated.

On behalf of the Committee, the JCRB Chairman thanked Dr Thomas and the KCDB Office for all the work undertaken.

5. REPORTS BY RMO REPRESENTATIVES TO THE JCRB

5.1 APMP: Dr Imai

Dr Imai tabled Document JCRB-11/5(1) and (1a), summarising the main points. He noted that the APMP TCTF is planning to re-start its review of CMCs. Mr Lam noted the use made of the Singapore NMI, SPRING Singapore, during the SARS crisis due to the thermal imaging requirements.

Dr Sacconi asked whether the letter sent by the Chairman (as Director of the BIPM) to ISO CASCO could be sent on to other regions for information. The Chairman responded that this will be raised at the Directors meeting on 15 October, and has resulted in an invitation to attend the ISO CASCO 5 Meeting in November at which Dr Kaarls would represent the Metre Convention/BIPM.
ACTION 5: The letter to ISO CASCO and the response will be sent by the Director of the BIPM to NMI Directors.

Prof Wallard inquired whether there are any APMP member laboratories that will not have a Quality System in place that covers all their CMCs by the end of 2003? Dr Usuda responded that the review of CMCs is still in progress but it is expected that all will be covered. Dr Imai added that this would be clarified at the APMP General Assembly in early December. Dr Sacconi asked what the success rate has been so far in reviewing CMCs. Dr Usuda responded that this depended on the NMI but that more than approximately 80% of CMCs are confirmed.

5.2 COOMET: Dr Belotserkovskiy

Dr Belotserkovskiy tabled Document JCRB-11/5(2) and (2a). He noted that the current links on the BIPM website to COOMET need to be updated to point to www.coomet.org.

ACTION 6: The JCRB Exec Secretary is to inform the BIPM Web Manager to update the links on the BIPM website to COOMET. (DONE)

Prof Wallard asked whether COOMET laboratories are undergoing 3rd Party Accreditation and, if so, if this is using a Guide 58 organisation? Prof Bily responded that some are, but this is being undertaken by the national accreditation body which is not, at present, part of the international system. The whole system is currently under the surveillance of Gosstandart.

Dr Semerjian inquired whether there is a list of which COOMET NMIs are undergoing 3rd Party Accreditation and which are self-declaring? Prof Bily replied that this is not currently available.

5.3 EUROMET: Mr Hetherington

Mr Hetherington tabled Document JCRB-11/5(3). He noted the reduction in the number of CMCs, partly due to the reduction in the E&M area and rationalisations in the RI area. Regarding the EUROMET review of the coverage of published CMCs by an adequate Quality System, he stated that the success rate is around 50%. A pre-review analysis is being undertaken, using two experts to check each NMI's CMCs. A summary report is to be completed and submitted to the EUROMET Chairman. A process of on-going monitoring has also begun.

Dr Semerjian inquired how many European laboratories there are in total. Dr Sacconi responded that 101 presentations have been made through the QS Forum process, including designated laboratories, however some presentations have covered more than one laboratory. Mr Hetherington added that this does not comprise all the NMIs as there are still two full members who have not yet submitted CMCs, for example, plus a number of applicants. It was decided to undertake the review for those laboratories already in the system before going on to next stage of acceptance.

Dr Semerjian asked how many laboratories are accredited and how many have self-declared? Prof Kühne responded that about a year ago, of 25 Full Members 13 had self-declared and 12 had been accredited. The proportions are around 50/50.

5.4 SADCMET: Dr Hengstberger/Dr Musururwa

Dr Hengstberger tabled Document JCRB-11/5(4). He noted that the SADCMET Time & Frequency CMCs are currently with APMP.

5.5 SIM: Ing Quím Mussio

Ing Quím Mussio tabled Documents JCRB-11/5(5), (5a) and (5b).

Dr Semerjian drew attention to Section 3.3.3 in Doc JCRB-11/5(5a), under the heading "Self-declared Quality System":
"3.3.3. NMIs may arrange for peer reviews of their capabilities and quality systems. When a peer review is undertaken, the SIM QS TF will take into account the qualifications and independence of the 'peer' reviewers in evaluating their report."
In relation to the JCRB discussions regarding providing the names of assessors, etc, he informed the Committee that SIM has decided that this is the prerogative of the NMI, but when a peer review is undertaken the reviewers will look at qualifications of reviewers, independence, expertise, etc, and decide how to weight this. Dr Kaarls asked whether for self-declaration, the same requirement was made regarding the qualifications of assessors. Dr Semerjian responded that there is no statement to this effect but it is desirable to know who the assessors are. He referred to Section 3.3.2 of the document.
"3.3.2. Where the quality system is not based on ISO/IEC 17025, the following must be addressed:
…
Technical requirements including:

- Personnel;
- Accommodation and environment conditions;
- Test and calibration methods and method validation;
- Equipment;
- Calibration and measurement traceability;
- Assuring the quality of results;
- Reporting of results; and

- Sampling and handling of items (where applicable)."

Dr Semerjian added that perhaps ILAC should be asked if this presents a problem. Prof Wallard responded that he did not think this would be a problem for ILAC but Dr Kaarls thought it may be a problem for EA. Dr Semerjian asked whether EUROMET is asking for the names of assessors? Dr Sacconi responded that it had in the beginning but it was not possible in some cases due to confidentiality. Dr Semerjian commented that it would be helpful to know whether the confidentiality agreement states that neither the accreditor nor the laboratory being accredited can divulge the names of the assessors.

Prof Bily stated that the accreditors must release the names to the laboratory being accredited and the laboratory has the right to refuse an assessor.

Prof Wallard noted that under Section 1.1 of Document JCRB-11/5(5), Point 2.3 refers to the Argentinian situation in Electricity, concerning whether the laboratory can have two CMCs in the same subject area but at different levels. The Chairman responded that two different Institutes from one country cannot submit the same CMCs, but that an Institute can of course submit two CMCs in the same subject area where the measurement techniques are at higher and lower levels of accuracy, for example.

Prof Wallard also referred to Point 2.7 and asked whether, in the case where an NMI provides services that no other NMI within the same region has, another RMO can provide the review? Dr Semerjian responded that the JCRB had agreed that, if there is no other NMI within the same RMO that can review the CMC, then the NMI can send the CMCs to another RMO for review. However, he then asked what should be done if the service is a unique capability? Does this mean it does not enter Appendix C? The Chairman responded that a guidance note will be written to address this, but that it fits into the requirements for CMCs in the absence of KCs, in which cases all the other criteria can be used to demonstrate compliance.

ACTION 7: The JCRB Chairman and JCRB Executive Secretary are to draft a statement for consideration by the Committee on what procedure to follow when an NMI provides a unique capability that, therefore, cannot be the subject of comparisons with other NMIs.

NOTE: The Statement proposed is as follows:

Occasionally, NMIs offer unique calibration or measurement capabilities, whose confidence can not be underpinned by interlaboratory comparisons. The JCRB recommends that, in those cases, experts from other NMIs are asked to review the CMC claim, based on the "Criteria for acceptance of data for Appendix C" (Document JCRB-8/13(1b)).

Prof Wallard commented that, at the general level, RMOs are following similar procedures but there appears to some divergence in terms of working practice. He asked Mr Hetherington, since he has looked at how each RMO is doing this at some level, whether these approaches should be harmonised? Mr Hetherington responded that there is no reason why RMOs should not follow different approaches as long as they are compliant with the Guidelines [Document JCRB-10/8(1c), "JCRB Guidelines for the monitoring and reporting of the operation of Quality Systems by RMOs"]. Dr Sacconi added that the names of assessors should be available within the region but it is not necessarily useful to include these as part of the report sent to other regions.

Dr Semerjian inquired whether all the self-declaring NMIs are basing their Quality Systems on ISO 17025. Prof Kühne responded that this is the EUROMET policy. The technical competence is gauged by technical experts when reviewing CMCs. Dr Usuda stated that this is not necessarily the case in APMP.

The Chairman noted that the technical expertise must be evaluated by visits to the NMIs. Dr Sacconi replied that, in EUROMET, 95% of the laboratories know each other very well. Dr Kaarls commented that this will not be the case with the newer laboratories.

Dr Hengstberger stated that in the SADC region, 3rd Party accreditation is required, since many of the laboratories are new and they are geographically dispersed, etc. He added that a SADC process for reviewing Quality Systems is being developed, which is largely based on the APMP QS review process.

6. INTER-REGIONAL REVIEW OF CMCs

6.1 Status of CMC reviews

The Chairman invited the JCRB Exec Secretary to review the status of reviews of CMCs as given in Document JCRB-11/6(1). Dr Samuel noted the outstanding actions for each RMO.

a) Chemistry CMCs:
In particular, she drew attention to the current status of review of Chemistry CMCs. She has now received the Cycle III CMCs of all RMOs from NIST and these are posted on the webpage for final formal approval. She highlighted that these CMCs have already been approved by the technical experts. The Chairman proposed that, if all RMO representatives agreed and unless any information to the contrary was received before the end of the week, all of these CMCs would be approved by the JCRB Exec Secretary on Friday 10 October to proceed to publication.

ACTION 8: RMO representatives to the JCRB are to send any objections to final approval of the Cycle III Chemistry CMCs to the JCRB Exec Secretary before Friday 10 October. In the absence of any such notifications, these CMCs will be approved on Friday 10 October 2003.

The JCRB Exec Secretary added that NIST has promised to forward the Cycle IV CMCs during the week of October 6-10, so that outstanding issues could be raised during a conference call between experts in November, and the CMCs could then proceed to publication by December 2003. *(NOTE: These have still not yet been received: JCRB Exec Sec, 31/10/2003.)*

b) Flow CMCs:
The Chairman then reminded the Committee that he had sent Members an e-mail proposing a solution to the impasse between the RMO technical experts in determining an appropriate Service Classification scheme in Flow. He had requested the KCDB Coordinator, Dr Thomas, to prepare a template that concatenated the views of the RMO technical experts. He invited Dr Thomas to present this to the Committee. After summarizing the proposal, Dr Thomas noted the two particular issues regarding the scheme:

- 9.9: As services are normally defined as quantities, she proposed that the appropriate *quantity* relating to heat meters be given here, i.e., heat flow rate;
- The services “Density” and “Viscosity” already appear in the Classification of Services for Mass and related quantities, so these CMCs will be published using the appropriate existing mass classification service.

Dr Imai and Ing Quím Mussio informed the Committee that the flow technical experts in APMP and SIM agree with the proposal. Mr Hetherington agreed to ask the EUROMET technical experts to revise their CMCs accordingly.

The JCRB approved the Classification of Services for Fluid Flow as proposed by the JCRB Chairman.
ACTION 9: EUROMET is to revise its CMCs EUROMET.M.2.2003 using the Classification scheme proposed by the JCRB Chairman, and to re-submit these to the JCRB Exec Secretary. It is also to clarify the cases where two Service Categories are provided for one CMC, and where a CMC refers to preceding CMCs.
ACTION 10: The KCDB Office is to provide cross-references in the KCDB section in which Flow services are published to relevant "flow" CMCs in Density and Viscosity that have been published together with the other Density/Viscosity services within the Mass services section.

Dr Semerjian suggested that meetings of the CCM Working Groups in Liquid Density and Fluid Flow be coordinated to enable discussions to take place between the two Working Groups as appropriate.

ACTION 11: The JCRB Chairman is to request that the CCM coordinates meetings of the Working Groups in Liquid Density and Fluid Flow to enable cross communication.

c) Thermometry CMCs:
Dr Semerjian commented that the ongoing impasse in Thermometry is a serious problem that may require intervention by the JCRB Chairman or the President of the CIPM. He proposed that a report be provided by the CCT WG on CMCs to the next JCRB Meeting on progress to date, describing the obstacles and how these will be addressed, and providing a date by when the Working Group expects to submit these CMCs. Dr Pokhodun stated that CCT Working Group 8 is meeting in November and hopefully will resolve the outstanding problems.

ACTION 12: The JCRB Chairman is to write to the Chairman of CCT Working Group 8 on CMCs (Dr Martin de Groot) requesting that a report be submitted 3 weeks before the 12th JCRB Meeting providing details of the progress being made to resolve the outstanding issues re: thermometry CMCs and providing a date by which these CMCs will be submitted for inter-regional review.

6.2 CC Working Groups on CMCs

The Chairman drew the Committee's attention to Document JCRB-11/6(2), the Terms of Reference for the CC Working Groups on CMCs, noting the slight modification requested by the CCRI Working Group extending the reference in points (d) and (e) from "key" to "key and supplementary" comparisons. The Committee agreed to this change, and the document was finalised.

ACTION 13: The JCRB Exec Secretary is to post the final version of the Terms of Reference for CC Working Groups (Document JCRB-11/6(2)) on the JCRB webpage.

The Chairman reiterated that the members of the CC Working Groups on CMCs are the RMOs, and it is up to each RMO to determine its representatives in the Working Groups.

6.2(a) CCQM

The Chairman tabled the report from the Chairman of the CCQM Working Group on Key Comparisons and CMC Reviews. He highlighted the draft terms of reference given, the membership of the Working Group and the schedule for review of CMCs (as discussed by the JCRB Exec Secretary earlier).

COOMET inquired whether it is still possible to nominate representatives to the Working Group. Dr Kaarls responded that this is still open.

6.2(b) CCRI

The Chairman reviewed the documents of the CCRI Working Group (*Docs JCRB-11/6(2b),(2b[i]), (2b[ii]), (2b[iii]), (2b[iv]), (2b[v])*.

Letter to the JCRB Chairman (Doc JCRB-11/6(2b[i]):
In response to the issues raised by the Chairman of the Working Group:

- As discussed above, it was agreed that points d) and e) in the Terms of Reference for the CC Working Groups be extended from "key" to "key and supplementary" comparisons.
- Note: The JCRB requested that the CCRI Working Group replace all references to "Chairman"/"he" with "Chairperson"/"he or she".
- Regarding the location of WG Documents on the web, the JCRB stated that these should be located on the CC pages rather than the JCRB pages.

Modus Operandi (Doc JCRB-11/6(2b[ii]):
The JCRB did not agree with points 5, 7 and 8 of the *Modus Operandi*, given below.

5. The Executive Secretary of the JCRB will send the draft agenda, as soon as it is available, and the call for participants to the Ionising Radiation Technical Committee Chairman/Convenor in each of the APMP, COOMET, EUROMET, SADCMET and the SIM (also see 9).

7. The Executive Secretary of the JCRB will ensure the meeting arrangements at the chosen venue are put in place.

- JCRB response: The Meeting arrangements, call for participants and distribution of the draft Agenda are the responsibility of the WG Chairperson.

8. The Chairman shall ensure that a report of the WG decisions is prepared for the JCRB. This report must also include any recommendations for revisions to published CMCs.

- The report from the Chairperson of the Working Groups should be submitted to the CC rather than the JCRB, as the WGs operate under the auspices of the CCs.

Questions to the JCRB (Doc JCRB-11/6(2b[iii]):

1. Is it permissible for two laboratories in the same country to submit CMCs for exactly the same quantities?

JCRB Response: No, and the decision as to which CMCs should be submitted is to be made by the Member State.

2. Would it be possible for the JCRB to make certain documents available on the open access web page, particularly Document JCRB-8/20 "JCRB CMC Review Process"?

JCRB Response: Yes.

ACTION 14: The JCRB Executive Secretary is to post Document JCRB-8/20, the "JCRB CMC Review Process" in the open-access section of the JCRB webpage.

3. Would it be possible for the JCRB Executive Secretary to write a document describing the CMC review process that could be made available, on the open access web page, to all incoming Technical Committee Chairmen and Convenors?

JCRB Response: Yes

ACTION 15: The incoming JCRB Executive Secretary is to write a procedural document on the CMC review process for the benefit of incoming RMO Technical Committee Chairmen and Convenors.

4. Would the JCRB support the identification of global supplementary comparisons as CCRI comparisons rather than using the RMO label of the pilot laboratory?

JCRB Response: No, this should be a Key Comparison.

5. With a view to facilitating and sharing the review process, would it be possible for the JCRB Executive Secretary to copy e-mails to the IR TC Chairs when signalling the posting of a new batch of CMCs, at the same time as they are sent to the RMO representatives on the JCRB? This would enable us to synchronise the start of a shared review process within the RMOs.

JCRB Response: Yes.

ACTION 16: The JCRB Executive Secretary is to copy e-mails signalling the posting of new batches of CMCs to TC Chairs, at the same time as they are sent to the RMO representatives to the JCRB.

6. Would it be possible for the WG to have a password-restricted section of the JCRB web page allocated for WG documents?

JCRB Response: As stated above, this should be located in the CC pages rather than the JCRB pages.

Letter re: End of Transition Period (Doc JCRB-11/6(2b[iv]):

This was noted for information. It was agreed that a similar situation regarding the period of validity of "provisional evidence" would be likely to exist in other fields. The Chairman noted that this matter would be discussed further under Agenda Item 7.

ACTION 17: JCRB Chairman is to write to the Chairman of the CCRI WG on CMCs, responding to the various requests to the JCRB.

6.2(c) CCPR

The Chairman invited Dr Hengstberger to address this Item. Dr Hengstberger presented the new meeting paper, Document JCRB-11/6(2c), reporting on the establishment of the CCPR Working Group on CMCs (CCPR WG-CMC).

7. END OF TRANSITION PERIOD OF CIPM MRA

The Chairman tabled Document JCRB-11/7(a), "Proposed JCRB Recommendation re: Monitoring the Impact of Key and Supplementary Comparison Results on CMC Claims". After some discussion, the proposal was endorsed.

Note: The JCRB endorsed Document JCRB-11/7(a), "Proposed JCRB Recommendation re: Monitoring the Impact of Key and Supplementary Comparison Results on CMC Claims".
ACTION 18: JCRB Exec Secretary is to post Document JCRB-11/7(a) on the "Open-Access" section of the JCRB webpage.

The Chairman then invited Dr Imai to present Document JCRB-11/7(b). Dr Imai tabled the APMP proposal regarding the 'JCRB Guidelines for the monitoring and reporting of the operation of Quality Systems by RMOs' [Doc JCRB-10/8(1c)].

Professors Kühne and Bily expressed concern that the proposal is shifting the emphasis regarding support for CMCs from Key Comparison results to Quality System documentation. Dr Kaarls noted that, in certain areas, claims are not underpinned by comparisons. The Chairman agreed that, while recognising that key and supplementary comparisons provide the technical support for CMCs, not all CMCs have this supporting evidence and asked whether the QS Guideline document should be revised on the basis of the APMP proposal, noting that it should not be changed for small clarifications.

Mr Hetherington responded that, while the APMP proposal is valid, the document should not be revised unless major changes are proposed.

Note: The JCRB endorsed the interpretation provided by APMP in Document JCRB-11/7(b).

The JCRB Executive Secretary then informed the Committee that Dr Rohana Ediriweera, the Chairman of the APMP Technical Committee on Quality Systems, had requested that Clause B in the Document JCRB-9/12 "End of Transition Period of CIPM MRA: Review of Published CMCs" be further clarified to reflect the need for RMOs to report on the coverage of *all* published CMCs by a Quality System, not just on those that are not adequately covered.

Dr Semerjian proposed that each RMO present a comprehensive report on the status of review of the Quality System of each NMI, stating the range of parameters covered and, for those that are not covered, providing a timeframe by which these will also be supported.

The Chairman proposed that the JCRB Executive Secretary(ies) prepare a template of the report to be completed by each RMO (including member designated institutes), which will be circulated to the JCRB in six weeks. RMO representatives to the JCRB are then to forward their reports one month in advance of the 12th JCRB meeting, for review at the meeting. He also proposed that Document JCRB-9/12 be revised to reflect the changes agreed here.

ACTION 19: The JCRB Executive Secretary is to prepare a template for each RMO to report on the status of coverage of *all* of their published CMCs by a Quality System, and to forward this template to the Committee by 10 November 2003.

ACTION 20: The RMO representatives to the JCRB are to complete these templates and forward their full reports to the JCRB Executive Secretary by 5 April 2004, to be tabled at the 12th JCRB Meeting.

ACTION 21: The JCRB Executive Secretary(ies) is to revise Document JCRB-9/12 according to the discussion here.

The Chairman again noted the request from the CCRI Working Group on CMCs that provisional evidence in their area be permitted until such time as the appropriate supporting key and supplementary comparisons have been completed.

ACTION 22: The JCRB noted that, as highlighted by the CCRI Working Group on CMCs, provisional evidence that has been used to support CMCs should be considered adequate until such time as the appropriate key and supplementary comparisons have been completed.
ACTION 23: The JCRB Executive Secretary(ies) is to further clarify this point in Document JCRB-9/12.
NOTE: The new version of Document JCRB-9/12 has been posted as Document JCRB-11/7.

Dr Semerjian noted that SIM plans to complete its reviews by the end of 2004.

8. OTHER BUSINESS

8.1 Publicity

The Chairman noted that this Agenda Item was intended for discussing mechanisms to encourage participation by small and developing countries in the CIPM MRA. Dr Semerjian stated that all 34 SIM countries are participating in general metrology activities, so there is certainly an understanding of the system. Participation in the CIPM MRA itself is often a question of money rather than any lack of awareness.

8.2 Progress on JCDCMAS

The Chairman invited Prof Wallard to provide the report on JCDCMAS. Prof Wallard provided an overview of the discussions relating to the Terms of Reference for the JCDCMAS activity and tabled the current version of these, Document JCRB-11/8(2a).

Dr Hengstberger noted that another relevant grouping is the UNCTAD/WTO International Trade Centre (ITC) and suggested that this group be brought into the Committee. He also expressed his support for this activity, in the context of the importance of bringing together all of the MAS elements for the benefit of developing countries. Prof Wallard responded that the Committee is intended to be open for all relevant parties to participate.

Mr Lam also suggested that the APEC Secretariat and ASEAN could be approached for relevant advice/information.

8.3 ILAC Report, BIPM-ILAC MoU and related issues – Progress report from Joint BIPM-ILAC Working Group

The Chairman again invited Prof Wallard to update the Committee regarding this activity. Prof Wallard presented ILAC's apologies for not having a representative at the meeting. He then tabled Document JCRB-11/8(3a), re: accreditation bodies being asked to accredit a calibration laboratory that has a calibration certificate with an uncertainty significantly smaller than that claimed by the NMI in the corresponding CMC in the KCDB.

Dr Semerjian stated that there is an inconsistency between the third point of the Document and the following line. One assumes that, for particular services, NMIs may provide calibrations with smaller uncertainties than those given in their CMCs and substantiated by key comparisons – this does not mean, though, that they need to undertake comparisons in support of these special calibrations.

Prof Kühne was concerned that the proposal suggests that the accreditation body is the highest authority in metrology. If an NMI makes these *special* claims, the highest authority should be the CC. He suggested that wording be "…the responsibility of the NMI to demonstrate to the CC…", not to the accreditation body. Dr Hengstberger responded that it should not be the CC that makes the judgement – the CMC should undergo the normal inter-regional review process.

The Chairman proposed that, given that these are not in fact one-off cases but *special* calibrations undertaken on a regular basis to provide a calibration service, they should in fact go through the MRA process.
NOTE: The JCRB agreed to this in principle.

Dr Kaarls added that, if there are one-off situations, these should be evaluated by the CC.

ACTION 24: The JCRB Exec Secretary is to modify Document JCRB-11/8(3a) according to the discussion here.
ACTION 25: The RMO Representatives to the JCRB are to survey the number of *special* calibrations that are undertaken by member NMIs, based on the calibration certificates issued. The results of these surveys are to be presented at the 12th JCRB meeting.
ACTION 26: Prof Wallard will ask ILAC if it could conduct a similar survey within the accreditation community.

Prof Wallard informed the Committee that the joint BIPM-ILAC Working Group is making slow but positive progress. The next meetings are scheduled for early 2004. The issues of mutual interest being discussed are:
- consistency in the expression of uncertainty
- the proposal for a logo for "CIPM MRA-compliant" calibration certificates issued by NMIs;
- quality procedures: there had been some misunderstanding about the dual approach outlined in Clause 7.3 of the CIPM MRA. ILAC's current position was that in principle they would have confidence in QMS' at NMIs that did not have third party accreditation provided that there is adequate transparency and rigour in the peer review and RMO review processes.

Dr Semerjian noted that it is strictly up to each NMI to decide if it wishes to use the accreditation approach to demonstrate confidence in its capabilities.

Criteria for Assessors:

Dr Imai then raised the question of setting up criteria for assessors of NMIs. The Chairman noted that ILAC had requested this list earlier but at that time the JCRB had thought it would be inappropriate. However, this issue is open for re-consideration.

Prof Kühne commented that the JCRB should concern itself with MRA matters only. To tell accreditors what requirements should be used for assessors is outside the Terms of Reference of the Committee.

Dr Imai noted that, when evaluating the peer review process in APMP, a review team has been set up that included technical experts but there are no guidance criteria to make the selection. Dr Kaarls suggested that providing such guidance would also help ILAC do a good job. Prof Wallard added that confidence in technical competence is the important issue.

Prof Bily noted that COOMET has a database of all reviewers agreed by NMIs and the COOMET Quality Forum. The accreditation body cannot interfere with this. Dr Kaarls commented that it can nevertheless question it and what is wanted is transparency.

The Chairman stated that if an NMI chooses peer review it should be clear that the reviewers have met some criteria. This would also help smaller NMIs. Dr Kaarls agreed that this would be helpful for young NMIs and those active in the new areas of chemistry, etc.

Dr Hengstberger added that it would be beneficial to have consistency between the two routes of accreditation and self-declaration and that he sees nothing wrong with discussing criteria with ILAC.

Dr Semerjian stated that it is important to separate the accreditation process from the process of peer review of laboratories. The Chairman then said that there have been some concerns for the technical competence of assessments during the accreditation process, whereas there are questions on the thoroughness of quality system assessments during peer reviews.

Mr Hetherington commented that it is important that the criteria identified are tailored according to the CMCs being assessed.

The Chairman then asked the Committee if they wished to establish criteria?

Mr Jones expressed his surprise that a distinction is being made between peer review and 3rd Party accreditation, adding that what is requested is <u>appropriate</u> criteria.

Prof Bily stated that, if the criteria are offered as recommendations, that would be acceptable, not that they be obligatory.

The Chairman proposed that a Working Group be established.
ACTION 27: Mr Lam Kong Hong (APMP) is to chair a Working Group to develop appropriate *recommended* criteria for the selection of peer reviewers for NMIs. The Working Group members are: Prof Bily (COOMET), Prof Kühne (EUROMET), Dr Hengstberger (SADCMET) and Ing Quím Mussio (SIM). A draft set of criteria is to be tabled at the 12th JCRB Meeting.

<u>8.4 Progress on JCTLM</u>

The Chairman informed the Committee that the JCTLM structure is about to be formalized through an exchange of letters. The next stage is to establish a database of lists of reference materials and reference methods on both the BIPM and IFCC websites. In due course these materials and methods may appear in the KCDB. In parallel, the WHO (a producer of international standard reference materials) together with the BIPM, will conduct a global consultation of regulatory authorities in

laboratory medicine in Geneva – this may be a way of making contact with regulators.

Dr Kaarls added that there are plans to conduct comparisons through the CCQM on higher order reference materials.

8.5 Supplementary Comparisons

The Chairman tabled Document JCRB-11/8(5), which attempts to provide a definition of Supplementary Comparisons. In light of the discussion at this meeting, he suggested that the first sentence in the second paragraph be modified as: "Comparisons involving more than one region should be called CC 'key' comparisons."

Dr Semerjian added that the reference in T.10 of the Technical Supplement should be corrected also. He summarized his understanding as follows: Any comparison coordinated by a CC is a key comparison. An RMO key comparison should follow this protocol and have appropriate linkages to the CC key comparison. RMOs themselves may decide to carry out comparisons for which there are no established protocols by the CC – those with no connection to the CC are identified as supplementary comparisons.

The Chairman agreed that it is not the intention that CCs carry out Supplementary Comparisons, adding that Supplementary Comparisons do not have a KCRV (key comparison reference value). The message is that CCs should not undertake Supplementary Comparisons except in very special cases and clearly the total number of comparisons (key/supplementary) should be kept to an appropriate minimum to reduce the workload on NMIs.

ACTION 28: The JCRB Executive Secretary(ies) is to amend Document JCRB-11/8(5), "Supplementary Comparisons – definition", according to the discussion here. T.10 of the Technical Supplement is also to be amended to remove the reference to CCs and the BIPM.

Dr Semerjian noted that supplementary comparisons do not exist by themselves, but that there would be participant NMI(s) that have also participated in a Key Comparison to provide confidence. He added that the difference between key and supplementary comparisons is who is responsible for developing the comparison protocol. The Chairman agreed that some laboratories would normally transfer this confidence, although this is not explicitly required. However it is required when reviewing CMCs.

It was agreed that the report of this discussion in the Meeting Report would be used to help explain the JCRB views.

Dr Castelazo proposed to review existing supplementary comparisons to see which ones could in fact be key comparisons.

8.6 CIPM MRA Modifications

The Chairman presented a new meeting paper, Document JCRB-11/8(6), "Proposal related to interpretation of the *CIPM MRA*, *Technical Supplement* and *Guidelines for CIPM Key Comparisons*. He stated that this document would be presented to the CIPM when it meets this week.

9. FUTURE OPERATION OF JCRB

The Chairman noted that it is useful to have the JCRB meet twice each year as long as there are substantive issues to discuss, and that it is clear that this has helped to facilitate understanding between the regions.

Mr Hetherington suggested that members submit topics of interest to the JCRB Executive Secretary before each meeting.

Prof Wallard agreed. He suggested that the 12th meeting be combined with a workshop on how the quality-forum –type arrangements are going in each region, as well as at the BIPM, bringing together the "quality" chairs from each region.

ACTION 29: JCRB members are to forward suggestions for discussion topics for the 12th meeting to the JCRB Executive Secretary at least two weeks in advance of the meeting.
Note: A "Quality Forum"-type Workshop is proposed to be held with the 12th JCRB Meeting, at which "Quality" Chairs from each region, and the BIPM, are to be invited to present progress in their region.

The JCRB Executive Secretary informed the Committee that, together with the development of the new BIPM Website, the JCRB pages are being modified to improve access by RMO representatives and RMO technical experts. This includes consideration of optimising the restricted access sections to reduce the number of passwords required.

10. APPROVAL OF DOCUMENTS TO BE POSTED ON RMO TC/WG WEBSITE

It was agreed that the following documents be posted on the RMO TC/WG Website:

- Agenda,
- Participants,
- Matters arising,
- Flowcharts,
- KCDB report,
- RMO reports,
- Document JCRB-11/7(a),
- CCPR Report.

Dr Semerjian inquired whether it would be a good idea to combine the proposed PTB international metrology meeting with a JCRB meeting and a CIPM meeting to help justify travel costs. Prof Wallard responded that perhaps this could be done with a Workshop for Developing Countries in 2005.

11. DATE AND PLACE OF NEXT MEETING

Prof Wallard informed the Committee that CENAM has offered to host the 12th JCRB meeting in Queretaro, Mexico, around the time of its anniversary celebrations (on 29 April). He also proposed to organise a strategic planning session with this meeting.

Note: It was agreed that, pending agreement with CENAM, the 12th JCRB meeting would be held on 3-4 May 2004.

Mr Hetherington noted that the timing would allow EUROMET to provide feedback on the MERA project.

12. CLOSE OF MEETING

Dr Semerjian expressed the Committee's appreciation of the excellent work undertaken by Dr Samuel in her role as JCRB Executive Secretary. The Chairman thanked Angela Samuel for the great deal of help she had given him – without which the JCRB would not be in the sound position that it is. He also wished here well in her future career in Australia. He welcomed Dr Castelazo as the incoming Executive Secretary.

As this is his last meeting, Dr Quinn thanked the Committee for its work over the period of his Chairmanship and for the progress that had been achieved. He wished the Committee and Prof Wallard all success in the future.

He then closed the meeting.

ELEVENTH MEETING OF THE JCRB

The meeting was held at the BIPM, Sèvres, France, beginning on Monday 6 October at 2 pm and finishing on Tuesday 7 October 2003.

Agenda

1. Opening and welcome by the Chairman.
2. Matters arising from the report of the 10th meeting held at the NMIJ, Tsukuba, Japan : *Doc JCRB-11/2, 2(a), 2(b), 2(c)*
3. Report by the Chairman on progress since the 10th meeting
4. Report on present status of the KCDB : *Doc JCRB-11/4*
5. Reports by RMO representatives to the JCRB
   - 5.1 APMP : *Doc JCRB-11/5(1), (1a)*
   - 5.2 COOMET : *Doc JCRB-11/5(2), (2a)*
   - 5.3 EUROMET : *Doc JCRB-11/5(3)*
   - 5.4 SADCMET : *Doc JCRB-11/5(4) + QS Documentation*
   - 5.5 SIM : *Doc JCRB-11/5(5), (5a), (5b)*
6. Inter-regional review of CMCs
   - 6.1 Status of CMC reviews overall : *Doc JCRB-11/6(1)*
   - 6.2 CC Working Groups on CMCs : *Doc JCRB-11/6(2)*
     - (a) QM : *Doc JCRB-11/6(2a)*
     - (b) RI : *Docs JCRB-11/6(2b),(2b[i]), (2b[ii]), (2b[iii]), (2b[iv]), (2b[v])*
     - (c) PR : *Doc JCRB-11/6(2c)*
7. End of transition period of MRA : *Doc JCRB-11/7, 7(a), 7(b)*
8. Other business
   - 8.1 Publicity – Presentations by RMO representatives on “How to extend the range of participation of countries in RMO and MRA activities”?
   - 8.2 Progress on JCDCMAS : *Doc JCRB-11/8(2a), (2b)*
   - 8.3 ILAC Report, BIPM-ILAC MoU and related issues – Progress report from Joint BIPM-ILAC Working Group : *Doc JCRB-11/8(3a)*
   - 8.4 Progress on JCTLM
   - 8.5 Supplementary Comparisons : *Doc JCRB-11/8(5)*
   - 8.6 Proposed interpretation of MRA Documents : *Doc JCRB-11/8(6)*
9. Future operation of JCRB
10. Approval of documents to be posted on RMO TC/WG website, and to be disseminated to RMO memberships in general
11. Date and place of the next meeting
12. Close of meeting

11th Meeting of the JCRB –BIPM, Sèvres, France: 6-7 October 2003
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