REPORT ON THE FIFTEEN MEETING OF THE JCRB

_Held on 28 September 2005, in Sevres, France_

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1. Attendees

Dr William Anderson ............................................................ SIM
Dr Seton Bennett ............................................................. (Representative) EUROMET
Prof. Matey Bily .................................................................. COOMET
Dr Rohana Ediriweera ......................................................... APMP
Mr Luc Erard ........................................................................ EUROMET
Dr Pedro Espina ................................................................. (Executive Secretary) BIPM
Mr Ichiro Fujima ................................................................. (Representative) APMP
Mr Keith Jones .................................................................. APMP
Dr Chang Hsu ....................................................................... APMP
Dr Robert Kaarls .................................................................. CIPM
Dr Sergey Korostin ............................................................ (Alternate Representative) COOMET
Prof. Dr Michael Kühne .......................................................... EUROMET
Ms Dianne Lalla-Rodrigues ................................................ SIM
Dr Mukayi Musarurwa ......................................................... (Representative) SADCMET
Prof. Luis Mussio ................................................................. (Representative) SIM
Dr Akira Ono ...................................................................... APMP
Dr Attilio Sacconi ............................................................... EUROMET
Dr Claudine Thomas ............................................................. BIPM
Dr Takashi Usuda .................................................................. APMP
Prof. Andrew Wallard .......................................................... (Chairman) BIPM
Dr Nikolai Zhagora .............................................................. COOMET

0. Opening and welcome by the Chairman

The Chairman, Prof. Andrew Wallard, welcomed all to the meeting and made a short statement on safety at the BIPM which included evacuation instructions. Following the opening statements of the Chairman, the attendees introduced themselves.

0. Approval of the minutes and discussion on matters arising from the report of the 14th meeting held at the BelGIM, Minsk, Belarus

The Chairman requested approval of the JCRB 14/12 – the minutes from the 14th JCRB meeting. Prof. Mussio requested that for future meetings, a list of recommendations attained during the meeting be included in the minutes. The Chairman agreed to the request and proceeded to describe the new website, which is to appear as part of the BIPM website, dedicated to the CIPM MRA – this area that will provide the most up-to-date information on the implementation of the CIPM MRA.

Recommendation 15/1 JCRB Recommendations are to be clearly listed in the minutes of all future JCRB meetings.
Following, the Chairman clarified the roles of the JCRB and the CIPM in matters related to the CIPM MRA. He explained that JCRB is a body that is coordinating the activities among the RMOs in establishing confidence for the recognition of calibration and measurement certificates and makes policy suggestions on the operation of the CIPM MRA while the CIPM is the body that decides on the policy in these regards.

Next, the Chairman reviewed the action items rising from the 14th JCRB meeting. Prof. Kühne requested that the entries in the KCDB state the day of approval and/or latest review. Dr Thomas explained that the CMGs do show the date of the approval in the KCDB however, they do not show the day of last review. Dr Thomas went on to say that the information could be added if it is provided to the KCDB Office. She suggested that that information could be provided in additional comment columns which could be added on the right-hand side of the CMGs tables.

Dr Bennett highlighted a typo in Action 14/6 where the number of the document should read JCRB-14/06(3).

Action 15/1 The Executive Secretary is to correct the minutes of the JCRB 14 to reflect the correct number of the document in Action 14/6 to be JCRB-14/06(3) and repost them in all appropriate sections of the JCRB website.

The Chairman asked the JCRB to consider the question of re-designation of national laboratories for purposes of the CIPM MRA. He said that the original designation date is clear, as the designating laboratory informs the Director of the BIPM of the designation action. However, the Chairman wondered if there should be a fixed term for the re-notification of designation to the BIPM. Dr Kaarls said that he did not find a need for the re-designation as he thinks it is the responsibility of the designating authority to inform the BIPM of changes in its CIPM MRA national representation. The Chairman spoke of a case where problems had arisen because the CIPM MRA signatory did not inform the BIPM of a change in the status of a designated laboratory in its country. Prof. Mussio suggested that a re-notification every 5-years should take care of any such problem. The JCRB in May 2006 should take a decision on this and recommend a suitable interval to the CIPM for approval.

Pending 15/1 Decision on re-designation of national laboratories for purposes of the CIPM MRA: (a) no requirement of re-designation; (b) re-designation every 5-years.

Dr Sacconi asked if a comment made by Prof. Kühne on page 12 of the minutes needs to be changed in order to reflect the fact that the end of the CIPM MRA transition period for chemical metrology is December 31, 2005. Prof. Kühne said that the minutes are correct but EUROMET wants the introduction of a note stating the December 31, 2005 deadline.

Action 15/2 The Executive Secretary is to introduce a note onto the minutes of the JCRB 14 to reflect the fact that the end of the CIPM MRA transition period for chemical metrology is December 31, 2005.

Dr Usuda pointed that the CIPM MRA logo which appears in page 13 is not the selected one.

Action 15/3 The Executive Secretary is to change the CIPM MRA logo which appears in the minutes of the JCRB 14 by the correct one.

0. Report by the Chairman on progress since the 14th meeting

The Chairman provided a report to the JCRB on progress since its 14th meeting – JCRB-15/03.

Prof. Mussio asked for clarification of the Terms of Reference (ToR) of the JCRB – does the JCRB creates (i) guidelines or (ii) policy on the implementation of the CIPM MRA. Prof. Kühne
asserted that nothing that the JCRB concludes is final as those decisions have to be ratified by the RMOs’ General Assemblies. Dr Kaarls said that although final decision rest with the CIPM, it is best if the JCRB works by consensus among the Regional Metrology Organizations (RMOs). Prof. Kühne suggested that ratification of JCRB recommendations by the CIPM might delay time sensitive policy from being implemented. The Chairman asked if the committee thought that the ratification process could be fast-tracked (not to exceed one or two months). Prof. Kühne also pointed out that the lack of uniformity in the approach between the RMO Technical Committees might interfere with the approval process. Mr Jones thought that a one month consultation period might be too short if the consent of a wide audience is sought. Prof. Bily thought that as long as the policy proposed by the JCRB is not in conflict with existing RMO policy, a one-month consultation period might be adequate.

Dr Bennett alerted the group to the fact that there might be delays due to the ratification by the CIPM. He suggested that such decisions be made ready prior to September so they can be presented to the CIPM during their annual October meeting. The Chairman restated that he thought that the ratification by the CIPM can be fast-tracked and perhaps email might serve as a useful tool in this process. Dr Kaarls pointed out that typically the CIPM approves those items suggested by the JCRB and that they only pay more attention to items that have led to dispute among the RMOs.

Prof. Kühne summarized by saying – “the JCRB makes recommendations; the CIPM approves them”. The Chairman read aloud the ToR of the JCRB and pointed out that any recommendation needs the approval of the RMOs and/or of the CIPM. Dr Sacconi wondered if a distinction needs to be made between those items that are policy matters and those items that are considered operational matters only. The Chairman replied that policy matters need approval from the CIPM; operational matters not necessarily need such approval.

**Recommendation 15/2** As per the Terms of Reference of the JCRB, the JCRB makes recommendations on the implementation of the CIPM MRA. Those recommendations need to be approved by the RMOs and/or the CIPM prior to becoming policy.

**Recommendation 15/3** The Chairman will make every attempt to fast-track the approval of JCRB recommendations by the CIPM. Likewise, and concurrently with the above, the RMO representatives to the JCRB will make every attempt to fast-track the approval of JCRB recommendations by their RMO General Assemblies. If possible, these approval consultation processes will be done using email.

**0. Report on the present status of the KCDB**

Dr Thomas provided a report on the status of the KCDB – JCRB-15/04.

Prof. Mussio asked which CMCs have been reinstated since the removal decision by the JCRB on the spring of 2005. Dr Thomas replied that none had been reinstated as of that time. The Chairman said that once those National Metrology Institutes (NMIs) and Designated Institutes (DIs) are in compliance with the Quality System (QS) requirements of the CIPM MRA, they need to notify their respective RMOs, who will then notify the other RMOs, the KCDB Manager, and the JCRB Chair, prior to reinstatement.

Dr McLaren reported on the situation at INMS NRC Canada (CA) and said that the institute is committed to the full implementation of it QS within 2006. He explained that the delays have been the result of NRC seeking third-party accreditation – a process never before performed at the Canadian NMI. Mr Jones praised the Canadian effort and said that such example has helped bolster APMP’s confidence on the SIM QS review process.
The Chairman requested more information on the status in Argentina (AR), Chile (CL), and Mexico (MX). Prof. Mussio said that many of the QS supporting those withdrawn CMCs would be reviewed during the next SIM Quality Forum to take place in two weeks time.

0. Reports by RMO representatives to the JCRB

The Chairman took the opportunity to announce to the committee the signing of the CIPM MRA by two new Associates of the CGPM: Kazakhstan (KC) and Croatia (HR). Moldova is expected to sign up to the CIPM MRA by the end of 2005.

0.1. APMP

Dr Usuda provided a report on the status of activities in APMP – JCRB-15/05.1.

At the conclusion of his presentation, Dr Usuda announced that his term as APMP Secretariat had expired and asked for the support of the committee for his successor, Dr Ichiro Fujima. He also requested that both his and Dr Fujima’s emails be included in the JCRB mailing list.

Action 15/4 The Executive Secretary is to update the JCRB mailing list to reflect changes in APMP’s representation and is to maintain Dr Usuda in the mailing list.

Mr Jones mentioned that the CMC withdrawal process had been a difficult one but that he was confident that APMP was in a good condition.

The Chairman reminded all RMOs that he expects a letter of designation announcing any new such inclusions into the DI portfolio of any country. The Chairman also took the opportunity to thank Dr Usuda for all his contributions to the JCRB during his tenure as APMP Secretariat.

Action 15/5 All RMO Representative are to assure that letters of designation are received by the Director of the BIPM for Designated Laboratories in their region.

0.1. COOMET

Dr Korostin provided a report on the status of activities in COOMET – JCRB-15/05.2.

At the end of his presentation, Dr Korostin suggested that the JCRB should only meet once per year. The Chairman said that it was preferable if the frequency of meetings is reconsidered at each meeting, but he thought that the May 2006 meeting should remain as scheduled. Dr Korostin said that he would revise the COOMET TC chairs list and send it to the Executive Secretary.

Recommendation 15/4 The frequency of JCRB meetings is to be reconsidered at each meeting.

Action 15/6 Dr Korostin is to send updated list of COOMET TC chairs to the Executive Secretary.

Prof. Mussio asked if the items for consideration by COOMET’s quality forum will deal with new CMCs or if COOMET’s quality forum intended to review already approved quality systems. Prof. Bily explained that the items scheduled for consideration by the COOMET’s quality forum will deal with already approved quality systems. He explained that COOMET’s initial approval was based on an oral presentation but they will conduct peer reviews to increase confidence in their initial assessment. The Chairman asked what would happen if the peer reviews were to find a problem – are the CMCs attached to that area to be withdrawn.
from the KCDB? Prof. Bily replied that if the magnitude of the nonconformities is significant then, yes – the CMCs are to be withdrawn, but otherwise the more appropriate course of action would be to go ahead and work to bring them into compliance as soon as possible.

The Executive Secretary, Dr Pedro Espina, inquired if the peer reviews are to cover an entire institute or particular programs within an institute. Prof. Bily replied that the reviews are planned to be of an entire institute unless the director of that institute request otherwise. Dr Kaarls asked from where did the peer reviewers come from, and Prof. Bily explained that they come from everywhere in the World per the choice of the institute hosting them.

Mr Jones pointed out that the description provided by Prof. Bily highlights the differences between the QS review processes in the various RMOs. Prof. Bily stated that the reviews are meant to sample of the readiness of the institute and that they do not cover in detail the entire institute.

Prof. Bily presented a report on the status of the quality system related activities in COOMET – JCRB-15/05.2.QF.

At the conclusion of his presentation, Prof. Bily commented that the Directors of NMIs undergoing assessments are welcoming the peer visits as they provide much information helpful for future improvements. The Chairman commented that the JCRB wants to have assurance of the validity of the quality systems in laboratories with CMCs in the KCDB; the Chairman expressed discomfort with the notion that now on-site peer reviews with all its consequences take place after a recent quality system approval by the RMO. Prof. Bily assured the committee that the initial evaluation was done based on oral presentations and that those justified the validity of the quality systems in those institutes.

Prof. Mussio asked if the NMIs that will be reviewed in future peer-visits already have CMCs in the KCDB. Prof. Bily responded by saying that those NMIs which were not ready for oral presentations prior to the end of the transition period are now ready for peer visits. Prof. Bily also said that there was a change of name in one of Ukraine’s NMI and perhaps that was leading to some confusion. Dr Korostin listed the Ukrainian institutes participating in the CIPM MRA.

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<thead>
<tr>
<th>Former Name</th>
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<th>Current name</th>
<th>Current short-name</th>
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<td>NSC IM</td>
<td><a href="http://www.metrology.kharkov.ua">www.metrology.kharkov.ua</a></td>
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Mr Jones said that APMP is concerned over the time taken for COOMET to gain confidence in the quality systems of its institutes. Mr Jones then asked what was going to be done if an institute failed a peer review audit – will COOMET change the original oral review procedure to ensure that future oral evaluations are more inline with the results expected from peer reviews. Prof. Bily responded that if there are substantial nonconformities found during a peer review, which cannot be fixed in a reasonable amount of time, then COOMET would withdraw the CMCs of that institute from the KCDB. The Chairman asked what would happen if the peer review team found deficiencies in the uncertainty budgets – would the scope of the claims be revised accordingly.

Dr Kaarls praised the COOMET on-site peer review approach to the evaluation of quality systems and suggested that it might serve as an example to other regions. Prof. Bily concluded by praising the other RMOs which, by virtue of their withdrawal of CMCs have shown the rigor of their quality system evaluation.

**0.1. EUROMET**

Drs Bennett and Sacconi provided a report on the status of activities in EUROMET – JCRB-15/05.3.

The presentation did not generate significant comments.

**0.1. SADCMET**

Dr Musarurwa provided a report on the status of activities in SADCMET – JCRB-15/05.4.

At the end of the presentation, the Chairman thanked Dr Musarurwa for providing the names of the technical reviewers used in the evaluation of the quality systems in the region. The Chairman also expressed concern that the SADCMET web-based database might not be equivalent to the KCDB and thus lead to misinformation and confusion. He recommended that the SADCMET database be linked to the KCDB so that both of them contain the same data. Prof. Kühne said that he supports the availability of only one database worldwide to avoid problems arising from dissimilar information. Dr Kaarls went further by saying that the end-users might not understand the differences between the various databases and this can undermine the CIPM MRA. Prof. Mussio related the SIM experience with its database and told the committee that in his opinion the work required to maintain multiple databases makes this approach impractical – that is why, SIM is advising to all its members to become Associates of the CGPM and sign the CIPM MRA. Prof. Jones said that APMP is also
encouraging all its members to become Associates of the CGPM at the earliest possible opportunity.

The Chairman went on to say that the availability of multiple databases is also a big concern because of the adverse implications that it might have for regulators, ILAC, ISO, and the like. He said that the CIPM MRA structure should be as inclusive as possible to avoid the need for other databases. Dr Zhagora asserted that the KCDB might be the only database but that the regions might see the need to provide a translation of the material for local purposes. Dr Thomas pointed out that one of the many benefits of the KCDB is that all its information is obtained via a unique URL which remains invariant in perpetuity thus enabling the easy citation of its content by external applications.

Prof. Mussio pointed out that one of the problems with the KCDB is its large size. Dr Korostin agreed with this comment and said that the KCDB is in need of multiple language options and of more powerful tools for mining data – something that COOMET is trying to fix via its database. Dr Kaarls said that the different languages and the more powerful mining tools available in the COOMET database are not the problem, rather it is the implications that its existence might have in the eyes of others. Dr Korostin said that currently, only the data included in the KCDB is included in the COOMET database and this data is updated once a month to keep the consistency between the two databases. Dr Zhagora said that one of the intentions of SADCMET with the creation of its own regional database was to use it as a planning and coordination tool. Dr McLaren said that he saw the usefulness of such a tool for planning and coordination efforts in SIM. Dr Thomas suggested that one way of having multi databases which enable their use for regional needs, and yet not harm the CIPM MRA in the eyes of regulators, is for the regional databases to have access restricted via passwords.

The Chair promised to create a paper in this topic for consideration at the next JCRB.

**Action 15/7** The Chairman is to draft a paper on the pros and cons associated with the use of regional databases to aid local efforts and how their existence might lower the confidence of regulators on the CIPM MRA.

### 0.1. SIM

Prof. Mussio provided a report on the status of activities in SIM – JCRB-15/05.5.

At the end of the presentation the Executive Secretary mentioned that the emails of some of the SIM Technical Chairs were not working and gave some examples. Prof. Mussio promised that he would look into it asserting that some of the email address that the Executive Secretary was using might not be up to date. Once again, the Chairman requested that the new names of Technical Chairs and their contact information in all regions be sent to the Executive Secretary.

**Action 15/8** The RMO JCRB Representatives are to work with the JCRB Executive Secretary to assure that the most up to date information is available on all the Technical Chairs of Working Groups in the regions.

### 0. Status of CMC reviews

The Executive Secretary provided a summary of pending CMC reviews in all regions using the following Microsoft Excel file – JCRB_15/06.1. The Executive Secretary said that the process of Fast-Tracking CMC reviews is becoming more popular, reducing, in many instances, the time required for review to a few weeks or even days. No abnormalities with the CMC review processes were reported.
0.1. Reports from CC Working Groups on CMCs

The following reports were included in the agenda without comments.

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<thead>
<tr>
<th>Report</th>
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<tr>
<td>JCRB-15/06.2.CCEM</td>
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0. Report from the working group on the Redefinition of the term CMC

Prof. Kühne tabled and summarized document JCRB-15/07, and Mr Jones tabled and summarized JCRB-15/07.APMP.

After their presentations, Mr Jones asked the committee what deficiencies were present in document JCRB-8/18 that this working group was seeking to remediate. Prof. Kühne noted that in his opinion there are no problems with the definition of CMC as it appears in JCRB-8/18, but rather the working group was seeking to clarify the CMC definition for the benefit of people outside the CIPM MRA metrology community. Prof. Kühne went on to say that the new CIPM-ILAC agreement states that every CMC in the KCDB shall be accepted at face value by assessors and those assessors need to have a clear understanding of what is being offered in the KCDB. He said that in the area of Electricity and Magnetism the PTB CMC entries in the KCDB identically match the entries in the service catalogue of PTB.

Dr Sacconi agreed with Prof. Kühne and said that a new definition is not under consideration but rather an expansion of the current definition. The Chairman inquired from the committee if the ultimate goal of the working group was to have the definition in JCRB-8/18 stand but provide a paragraph of clarification. At this point Dr Ono made a formal presentation on the subject with the help of a small Microsoft PowerPoint presentation: JCRB-15/07.APMP.2.

The Chairman had a concern with the right-hand-side of one of the diagrams in Dr Ono’s presentation which suggested that no NMI calibration should be provided outside of the scope of the CIPM MRA. The Chairman explained that a few NMIs would like to be able to offer special calibrations – of higher quality – outside of the scope of the CIPM MRA. According to the Chairman, many of such high-end calibrations are used for research and development and not in support of trade which is the main purpose of those calibrations performed within the scope of the CIPM MRA. Dr Kaarls reminded the committee that originally the CIPM MRA was crafted at the request of accreditors who needed a clear and concise way to show the traceability of measurements to the SI – something that is essential to trade agreements. Dr Kaarls went on to say that during the 9th JCRB, the committee had decided that the CMCs included in the KCDB should be as inclusive as possible thus covering the vast majority of the calibration services provided by NMIs. The Chairman argued that the proposed clarification of the term CMC is precisely aimed at avoiding any confusion thus helping accreditors.

Dr Kaarls agreed that, for these purposes, the proposed clarification is better than the statement in JCRB-08/18 and that if the JCRB-08/18 definition is not clear it might render the CIMP MRA less useful to those for whom it was originally intended. Prof. Kühne found the same slide in Dr Ono’s presentation also confusing and asserted that the definition should be as simple and clear as possible with: (a) CIPM MRA sanctioned calibrations being
internationally recognized, or (b) calibrations not sanctioned by the MRA not being internationally recognized.

Prof. Mussio spoke of matters addressed during the 9th JCRB and reminded the committee that a survey had showed that there are very few NMI calibrations performed outside the scope of the CIPM MRA. He said that the proposed new CMC definition was meant to be shorter and reminded the committee that ILAC and the CIPM need a common definition to avoid confusing the accredited. Dr Kaarls asserted that ILAC could not practically change the definition of the term BMC as this term is too widely used worldwide among the accreditation community. But he went on to say that he believes that there is no problem with the definition in JCRB-08/18 plus the proposed clarification.

Dr Bennett asserted that there are some problems with the definition as stated in JCRB-08/18 and said that the EUROMET Technical Chairs support the clarification proposed by Prof. Kühne. Dr Bennett then asked the representatives of APMP why in their view the proposed clarification would require a change in the CMCs already contained in the KCDB. Mr Jones responded that the CMCs in the KCDB were crafted in accordance to the definition in JCRB-08/18 and if some of the review criteria were dropped from the definition, the CMCs might change. Mr Jones then counter asked why some of the elements in JCRB-08/18 now appeared to be irrelevant.

Prof. Bily asserted that the committee should not consider measurements outside the scope of the MRA – especially within EUROMET as the CIPM MRA provisions are essential to the compliance with European Commission (EC) directives. Dr Bennett said that the EC is now reviewing some of their directives and they have invited a paper from EUROMET on the tools that can be used to support and improve metrology in Europe – the CIPM MRA is clearly one such tool. The Chairman said that the committee was considering a clarification of JCRB-08/18 because of the need to accommodate calibrations performed within and outside the CIPM MRA scope. Prof. Mussio made the point that a CMC is a CMC even if it is not peer reviewed.

Mr Jones reasserted that APMP wishes to minimize the delivery of calibrations outside the scope of the CIPM MRA which may have the potential to reduce trust in the international system of metrology. He added that APMP would not agree to an abandonment of the definition contained in JCRB-08/18. Dr Kaarls said that we were not considering the abandonment of JCRB-08/18, but currently there are situations in which this definition, by itself, is problematic. Dr Kaarls went on to say that even in APMP, there was no complete transparency as there were some accredited laboratories claiming uncertainties lower than those claimed by their local NMLs in their CMCs. Mr Jones said that the local accreditation bodies in the region take advice from APMP and that APMP is working to deliver the best system possible in the region.

Prof. Mussio tried to bring the discussion to closure by asking if the committee still wished to consider a change to the CMC definition in JCRB-08/18. The Chairman suggested that JCRB-08/18 be complemented by a short statement of clarification. Dr Thomas asserted that a short definition of the term CMC is needed by the users of the KCDB. The chair moved to propose a new CMC definition. Prof. Kühne reasserted that the CMC definition contained in JCRB-08/18 is too complicated to be useful to accreditors. The Chairman then suggested that the BIPM write a new paper which would clearly state when the definition contained in JCRB-08/18 is to be used and when the new short statement might be more appropriate – the committee was pleased by the suggestion.

Dr Sacconi said that it was most important to have a clear and unanimous understanding among the members of the committee. Dr Korostin asked for the paper to be drafted as soon as possible for the sake of the users of the KCDB. The Chairman said that the paper will be provided to the RMOs and the CIPM soon and he encouraged the committee to reach consensus by the next meeting in April 2006.

**Recommendation 15/5**  The CMC definition that appears in JCRB-08/18 is to be supplemented by a paper to be crafted by the BIPM.
reviewed by the RMOs, and approved by the CIPM. The purpose of this supplement is to clarify the current definition for the benefit of accreditors.

Action 15/9 The BIPM is produce a paper to supplement the definition of the term CMC that appears on JCRB-08/18 and forward it to the RMOs and CIPM for consideration prior to the 16th meeting of the JCRB.

0. A Guidelines for the use of the CIPM MRA Logo

The committee discussed a draft version of a guide to the use of the CIPM MRA logo. That document does not appear in the collection of meeting documents as its inclusion was considered to be premature.

The Chairman explained that the BIPM sought legal advice on the use of the CIPM MRA logo and there are legal implications, in regard to the protection of the logo, which were not considered when it was originally approved. The Chairman said that he will bring this matter to the attention of the CIPM at their next meeting. It is expected that the usage of the logo will be controlled through the BIPM website, where a list of users might be kept and a NMI identifier number might be issued. The Chairman explained that the CMC service identifier number couldn’t be use because not all CMCs in the KCDB make use of such number.

Dr Bennett said that it was urgent to have such guidelines available as soon as possible and asked if the CIPM MRA Logo is to replace the CIPM MRA statement that appears in JCRB-8/Cal_Cert_Statement, and which has been in use by some NMI for some time now. The Chairman answered that that was not the intention as the logo is meant to be complementary with the CIPM MRA Statement. Prof. Mussio inquired if the RMOs and NMIs need permission to make use of the logo in their marketing material (brochures, etc.). The Chairman said that in fact they needed to contact the BIPM to request permission – to do otherwise might lead to the misuse of the logo and thus lower its value to the users. Dr Korostin stated that COOMET liked the guidelines contained in the draft document circulated prior to the meeting. The Chairman said that the issue was not with the merits of the draft document, but rather with the legal complications of protecting the use of the logo.

The Chairman assured the committee that some further guidance was to be available within the next three weeks.

Action 15/10 The Chairman is to forward guidance on the use of the CIPM MRA Logo to the RMOs prior to the next JCRB meeting.

0. Report from the working group on developing the Criteria for the Selection of Peer-Reviewers for NMIs

Mr Jones tabled and summarized JCRB-15/09 – Recommendations for On-Site Peer Reviews and the Selection of Visiting Reviewers.

Mr Jones explained that the material contained in this document is very important to the membership of APMP and he said that the comments included in the document are meant to cover the needs of APMP and others. Prof. Kühne said that originally, Mr Jones and he were in agreement in all elements of the document with the exception of the title, but the Executive Secretary changed the document after their agreement. Prof. Kühne said that now he wanted a change in the title. The Executive Secretary agreed with the changed title that was requested. The title was changed to “Recommendations for On-Site Visit by Peers and the Selection Criteria for On-Site Peer Reviewers”
Prof. Kühne asked for a change in section 2.3 — Notification procedures and settlement of disputes. In response to Prof. Kühne’s request, Mr Jones said that in his opinion, the committee should give reviewers guidance on the elements that they should look for during reviews. The Chairman said that in his opinion items 2 and 3 should be included in the document. Prof. Kühne said that EUROMET does not wish for item 2 to be prescriptive as per APMP’s suggestions. Dr Kaarls said that reviewers can inspect both quality of technical competence of the program assessed, but only technical matters should come to the attention of the Consultative Committees and thus, in his opinion, item 2 is applicable. Prof. Kühne asserted that it makes no sense to limit the scope of the peer reviews. Dr Ediriweera said that the suggestions proposed by APMP in item 2 are meant to be a minimal list that should be considered by reviewers and not intended as a limiting list. The Chairman said that the list should be viewed as a recommendation and in that scope, it might prove useful. If further information or guidance is needed, then the Consultative Committees can be approached. Dr McLaren said that he supports the comments made by Dr Kaarls; in the CCQM they have been receiving many CMCs that are not supported by comparisons and there, technical peer review reports are most useful. The Chairman insisted that it was appropriate to include the list provided by APMP as a suggestion.

Dr Bennett said that the paper presented by Mr Jones is clear about the scope of quality and technical reviews but it might not apply to the EUROMET as EUROMET follows a different methodology for the review of quality and technical competence in their laboratories. Prof. Kühne asked the committee why the recommendation needed to be as prescriptive as APMP suggested. Dr Kaarls suggested that the use of such a list might be warranted as the Consultative Committees might have a need for further guidance. He reminded the JCRB that at the Consultative Committee level there was a need to convince all RMOs of the merits of any procedure and thus item 2, as suggested by APMP, is germane. Prof. Kühne insisted that the committee was considering requirements that are not needed; he asked if perhaps the language could be changed from ‘requirements’ to ‘guidelines’ (as a compromise), but he said that in his opinion requirements are being disguised as guidelines. Dr McLaren said that it is useful to have a minimal set of guidelines to make sure that all areas of metrology are operating under the same scope.

Prof. Bily agreed with Prof. Kühne and said that if reviewers follow ISO 17011 the scope of the review is up to the assessors. They can determine the balance between competence and capability – although in his opinion, the assessors should check for both. Prof. Bily went on to say that the standard ISO 10019 applies to consultants. Dr Bennett said the EUROMET Technical Committees do not feel the need for these minimal guidelines and thus they do not want to be bounded by them. The Chairman then asked Dr Bennett what is to be done in the case that the assessor does not collect the minimal information deemed as essential during the assessment. Dr Bennett understood the Chairman’s point but asserted that guideline lists become de facto mandates to assessors and EUROMET does not wish to be limited by them. Dr Kaarls insisted that the suggestions proposed by APMP in item 2 made much sense and Mr Jones insisted that the purpose of APMP at proposing this minimal list of guidelines was not to be dictate requirements but rather to make sure that the reviews meet the needs of the users of the CIPM MRA. Mr Jones went on to say that guidelines help build confidence of outsiders on the comprehensiveness of the CIPM MRA process.

Prof. Bily said that item 2.2.1, as written, appears to be mandating peer reviews, and suggested that perhaps it should read “in all applicable cases” or “may rely on”. Dr McLaren agreed and said that there are many cases where a peer review is not needed. The Chairman reminded the committee that the aim was to provide some helpful advice. Prof. Kühne suggested that the committee adopted the old wording of section 2.2.1. The Chairman reminded that at this point the committee was considering whether or not to add item 2.2.2 to the original document. Mr Jones insisted that item 2 should be added as a typical list of topics to be considered by an assessment team. Dr Ediriweera said that the list should be added as a new section to the document. Prof. Kühne disagreed; he said that if it must appear at all, it should be contained in section 2.2.2 to avoid giving it undue importance.

The Chairman concluded the discussion by tasking Prof. Kühne, Mr Jones and the Executive Secretary with drafting a new version of the document which strikes a compromise.
between the positions of APMP and EUROMET. Prof. Mussio said that care should be taken in making sure that the new document references the correct JCRB documents. The Chairman said the new document should be sent to all for review in preparation for final approval during the next meeting.

Action 15/11 The Prof. Kühne, Mr Jones and the Executive Secretary are to draft a new version of JCRB-15/09 which strikes a compromise between the positions of APMP and EUROMET. The document should properly reference existing JCRB documents and be sent to the committee for review prior to the next meeting.

0. Discussion on providing recommendations to the CCs for establishing relationships between CMC and Key Comparison results (i.e., how far the light shines criteria)

The Executive Secretary inquired if the committee should provide recommendations to the Consultative Committees for establishing relationships between CMCs and Key Comparison results (i.e., how far the light shines criteria). Dr McLaren said that the CCQM is already doing this and Dr Korostin said that the CCRI is also performing this task. Dr Kaarls asserted that this task is very complex in the areas considered by the CCQM. Dr Anderson said that it would be a good idea for the JCRB to remind the Consultative Committees that they should consider the need to support CMCs when devising the scope of new Key Comparisons. Dr Ono spoke on this subject with the help of a PowerPoint presentation: JCRB-15/10 APMP.

Mr Jones was of the opinion that the JCRB should establish guidelines for this – he said that the JCRB should tell the Consultative Committees that there are problems with CMCs that are not supported by the results of Key Comparisons and ask them to address this deficiency with future Key Comparisons. The Chairman agreed and said that the JCRB should stress to the Consultative Committees to consider the need for support of CMCs in the design of future Key Comparisons. The Chairman said that he would write a letter to the Consultative Committees Presidents asking them to address this problem. Dr Sacconi reminded the committee that under no circumstances, would all the CMCs ever be supported by the results of Key Comparisons, however the Quality Systems are designed to fill this gap.

Action 15/12 The Chairman is to send a letter to the Consultative Committees Presidents asking them to stress the need to support CMCs when devising the scope of new Key Comparisons.

0. Recommendations for new criteria for review of CMCs after the end of transition period

Mr Jones tabled and summarized JCRB-15/11 QS APMP – APMP clarification on QS review processes.

Prof. Anderson said that the only recommendation that SIM would support is for RMOs to extend invitations to members of other RMOs to attend their Quality System (QS) review meetings. Mr Jones said that the common format proposed in JCRB-11 QS APMP for report of findings of QS reviews was not meant to be burdensome but rather to enable members of other RMOs to rapidly review the findings of other RMOs. Dr Sacconi asserted that there was no need for a uniform report format because the RMOs are following different approaches to the review of QS and the concept of a common report format is neither appropriate nor feasible.

Dr Anderson said that if the intent was to build confidence in the QS review process, SIM was willing to share the Terms of Reference of its Quality Forum (SIM document 9) with those in other RMOs and Prof. Kühne said that, likewise, EUROMET is willing to share its Guide 1 (Terms of Reference of its Technical Committee: Quality). Mr Jones said that the intention of
APMP was not to force all RMOs to do the same but rather to learn how other RMOs are performing the QS review process.

The Chairman summarized by saying that the RMOs have agreed to have guests attending their QS review meetings and share the Terms of Reference of the QS review committees. Dr Bennett suggested that each RMO makes a small presentation during the next JCRB meeting describing the QS review process in their region. Dr Kaarls said that such presentations should cover most aspects of the QS review process, perhaps only leaving out the highly technical aspects of their programs. Mr Jones said that in the APMP approach, the QS review covers the highly technical aspects of the programs, and reasserted that APMP just would like to have a better understanding of how the QS review process is conducted in other regions. He went on to say that the invitations to attend the QS meetings of other RMOs should be sent to the Technical Committee Chairs of other RMOs as well as the heads of the RMOs.

Recmmendation 15/6 RMOs are to invite Chairs of Technical Committees from other RMOs, as well as the heads of those RMOs, to the meetings of their Quality System review groups. The Chairman and Executive Secretary should also be notified of upcoming meetings.

Action 15/13 The RMOs are to make a small presentation during the next JCRB meeting describing the QS review process in their region.

Dr Ono tabled and summarized JCRB-15/11.CMC – Proposed Criteria for Acceptance of Data for Appendix C after the Transition Period. He went on to speak on this subject with the help of a PowerPoint presentation: JCRB-15/11.CMC.2.

Dr Korostin liked the proposal of Dr Ono because it is similar in scope to what COOMET is requiring from NMIs submitting new CMCs. He went on to say that COOMET is in favour of a second transition period – one where after the second round of Key Comparisons, NMIs submitting new CMCs might be subjected to more stringent requirements. Prof. Mussio objected by saying that this subject had been thoroughly reviewed during the last two JCRB meetings. He went on to say that there are areas where it is clear that Key Comparisons might never be possible (e.g., Chemistry) and he thought that such stringent requirements as those proposed in Dr Ono’s presentation might adversely affect small NMIs for whom the cost of participation in Key Comparisons is a real burden. Mr Jones acknowledged that agreement had already been achieved during the last JCRB meeting at Minsk, Belarus. Dr Korostin concurred with Mr Jones and Prof. Kühne joined with others in saying that the criteria for CMC acceptance had been agreed upon during the last JCRB meeting. He reminded that the committee had concluded that the strict-criteria [JCRB-14/06(2b)] would hinder progress of the CIPM MRA and that is why the flexible-criteria [JCRB-14/06(2a)] was accepted. Prof. Kühne added that there should be a moratorium on items to be reconsidered by the JCRB – of at least a few meetings – as otherwise the committee is always reconsidering items recently agreed upon thus yielding no progress.

Dr Kaarls said that now that the transition period had ended, CMCs reviews are much tougher, even if there are many CMCs that remain unsupported by Key Comparisons. However it is widely accepted that we cannot have the results of Key Comparisons supporting every CMC entry. Dr Kaarls went on to say that new CMCs might require a supplementary comparison if a Key Comparison already concluded; it is clear that bilateral comparisons might also help those seeking to enter new CMCs into the KCDB. Finally, he said that the results of pilot studies should not be considered when assessing the validity of claims made by new CMCs.

The Chairman said that the text of the CIPM MRA supports the position of Dr Ono, but he explained that the JCRB had reviewed this point on numerous occasions and found it impractical to implement the letter of the CIPM MRA on this particular item. Dr Usuda said that the Technical Chairs of APMP fear that the text of the flexible-criteria [JCRB-14/06(2a)] might lead some to think that Key Comparisons are no longer required – he hoped that the JCRB could emphasize that the results of Key Comparisons remain the preferred way to
support claims made by CMCs. The Chairman reminded the committee that the CIPM expects participation in Key Comparisons when they become available. Dr Anderson pointed out that this requirement of the CIPM might not be practical due to the large number of laboratories that might be able to participate in a given Key Comparison. As an example, Dr Anderson reminded the committee that the CCEM does limit the number of participants of each Key Comparison in the interest of expedience. Dr Kaarls said that the CIPM has gone along with such restrictions on CC Key Comparisons assuming that there will be RMO Key Comparisons that will fill the gaps. Dr Anderson said that for SIM to make such a commitment to RMO Key Comparisons, which link with every CC KC to every CMC of the region, would represent a financial burden that might not be sustainable. The Chairman reminded the committee that there is no evidence that any region is losing interest in participating in Key Comparisons and most NMIs continue to support them based on the benefits that they derive for these technical exercises.

Dr Ono insisted in that the JCRB should make a statement emphasising the value of Key Comparisons. Dr Usuda clarified that APMP does prefer the flexible-criteria as expressed in JCRB-14/06(2a) but they are just afraid that over time the participation in Key Comparisons might become less popular. Dr McLaren said that there is a misinterpretation in regards to the participation in Key Comparisons – he reminded the committee that participation in Key Comparisons is mandatory. Dr McLaren went on to suggest that perhaps JCRB-14/06(2a) should be recast in the form of a prioritized list. He asserted that the CCQM is extremely strict on the enforcement of participation in Key Comparisons. Dr Bennett said that perhaps there is a need for a networking tool to enable latecomers to gain access to the benefits of an already concluded Key Comparison. Dr Thomas said that the KCDB already provides that benefit but that it is essential that the supplementary comparisons be reported to the KCDB Office a priori.

The Chairman concluded the discussion by saying that the JCRB endorses the flexible-criteria as expressed in JCRB-14/06(2a) and encouraged the RMO representatives to inform their Technical Chairs of this decision. He added that the JRCB would also like to remind all NMIs and DIIs that participation in Key Comparisons is obligatory when available – to choose not to participate in a Key Comparisons will result in adverse action against the laboratory choosing not to participate. The Chairman went on to say that the JCRB also request that all Key Comparisons (CC and RMO) be notified to the KCDB Office in a timely fashion. Dr Bennett said that he still sees a need for a networking tool available to those laboratories in need of supporting evidence for their CMCs when no KC is planned for the immediate future. The Chairman said that the CC Technical Working Groups are the place to vent those issues.

**Recommendation 15/7** The JCRB endorses the flexible-criteria as expressed in JCRB-14/06(2a) and encourages the RMO representatives to inform their Technical Chairs of this decision. The JRCB goes on to remind all that participation in Key Comparisons is obligatory when available – to choose not to participate in a Key Comparisons will result in adverse action against the laboratory choosing not to participate. The JCRB requests that all Key Comparisons (CC and RMO) be notified to the KCDB Office in a timely fashion.

0. Activities aimed at NMIs in the developing countries

The Chairman tabled and summarized documents: (a) **JCRB-12.1.1** – Report on the 5th meeting of the Joint Committee on coordination of technical assistance to Developing Countries in Metrology, Accreditation and Standardization (JCDCMAS), and (b) **JCRB-12.1.2** – JCDCMAS: Background paper.

At the end of the Chairman’s presentation, Prof. Kühne reminded the committee that PTB has been conducting work on behalf of developing countries for many years through its Department of Technical Cooperation. The Chairman agreed that the efforts of PTB have
been most helpful towards the advancement of metrology in developing countries. Dr Zhagora thanked PTB – through Prof. Kühne – for all the support that they have invested in COOMET over the years.

Dr Musarurwa asked the Chairman what the BIPM is doing on behalf of developing countries. Dr Musarurwa pointed out that SADCMET only has three members who are signatories of the CIPM MRA and from those, only South Africa is active. Dr Musarurwa went on to challenge the committee to come up with ways in which to encourage inactive members to participate in the CIPM MRA process. The Chairman explained that the BIPM is not explicitly funded by the Member States and the Associates of the CGPM to aid the advancement of metrology in the developing world; however, he said that the BIPM took the issue seriously. The Chairman went on to say that the BIPM has to strike a balance between helping those in need and getting in the way of the national program of Member States who are already trying to help. The chairman said that he welcomes the discussion and thanked Dr Musarurwa for bringing it to the attention of the committee.

Ms Lalla-Rodrigues also thanked PTB for their assistance. She went on to say that the SIM General Assembly might offer an opportunity for training of metrology staff in developing countries. She added that most developing countries in SIM have problems with ISO because ISO only engages their member states leaving behind those countries that are not members. According to her, the major obstacle to ISO membership is lack of funding available to pay the ISO dues. This is becoming a critical issue due to the fact that conformity assessment is restricting trade and ISO standards are rapidly becoming the de facto World Law for trade. She asked what is to be the future of those countries that are too poor to afford membership in ISO. Prof. Bily said that conformity assessment is essential to global trade and agreed that the ISO standards are becoming the de facto worldwide law for trade.

### 0. The CIPM/ILAC Joint Statement


This item was an information point during the meeting which did not generate discussion.

### 0. Progress on JCTLM

Dr Robert Wielgosz appeared before the committee to table and summarize JCRB-14 – JCTLM Report.

### 0. Other JCRB business

#### 0.1. The new CIPM MRA website and the future use of the JCRB website

The Executive Secretary reminded the committee of the availability of a new CIPM MRA website within the BIPM web domain. He informed the committee that this will be the web location where the most comprehensive and up-to-date information about the CIPM MRA will be contained.
2.0. Topics for the next JCRB

The committee expressed a desire to discuss, among other things, the following items in the next meeting:

- Presentations by the RMOs on the evaluation of Quality System in their regions.
- A report from the Chair on how the suggestions about how the light shines were welcomed by the Consultative Committees and what measures they have suggested to address the relationship between future Key Comparisons and the need for supporting evidence of CMCs.
- The need for a consolidation of the JCRB operational rules on a series of CIPM MRA Guides, the first of which will be on all items related to CMCs.
- A discussion on the use of ISO Guide 34 to support CMCs in areas other than Chemical metrology – how it should be approached by the other Consultative Committees and suggestions for a time table for its implementation.

The agenda for the next meeting will be adjusted by the Executive Secretary per the wishes of any of the committee members.

0.1. Update on the proposals for Materials Metrology

Dr Bennett, Chair of the CIPM Working Group on Metrology on Materials, spoke about the challenges faced in this area (see DIRECTORS/05-PRES5f for more details).

At the end of Dr Bennett’s presentation, Dr Kaarsl asked Dr Bennett if he was aware of any CMCs that could be considered as belonging in this metrology area. Dr Kaarsl added that until such time when there is a clear demand for intervention from the JCRB, nothing should be done. Prof. Kühne asked if perhaps it was not better for these interdisciplinary CMCs to be addressed within the current Consultative Committee structure or if there is a need for the creation of a new Consultative Committee to deal with them. The Chairman said that the feedback that he has received suggests that the Consultative Committees are trying to address these problems as they appear but the real challenge for the entire metrology infrastructure within the CIPM is that they do not yet know the scope of the problem. Prof. Bily said that there is a problem because material properties involve multi-physical metrology sometimes with components done within another Consultative Committee while there are others which are even more problematic as the metrology community doesn’t even know how to make the measurements required. He asserted that the main challenge of material property metrology resides in its multi-component nature. Dr Sacconi suggested that the CIPM should consider the formation of a new Consultative Committee which will consider all those metrology problems not considered by the current Consultative Committees – a Consultative Committee for multi-component metrology.

Pending 15/2 Decision on what the response of the CIPM MRA should be to problems in the area of Material Metrology.

0.1. Discussion on the frequency of JCRB meetings

The Chairman said that the frequency of JCRB meetings should be an item reconsidered at each meeting and adjusted accordingly to the need present at that time. EUROMET supported the proposal of COOMET for a lower frequency of meeting but was in agreement with holding the next meeting as proposed in the spring of 2006.
0. Date and place of next meeting

The next meeting was scheduled for April 20-21, 2006 in Berlin, Germany. It will be followed by laboratory visits to the PTB Berlin-Charlottenburg facilities.

0. Close of meeting

The meeting was drawn to a close by the Chairman who thanked all for the attendance and contributions.

0. Summary of action items

| Action 15/1 | The Executive Secretary is to correct the minutes of the JCRB 14 to reflect the correct number of the document in Action 14/6 to be JCRB-14/06(3) and repost them in all appropriate sections of the JCRB website. |
| Action 15/2 | The Executive Secretary is to introduce a note onto the minutes of the JCRB 14 to reflect the fact that the end of the CIPM MRA transition period for chemical metrology is December 31, 2005. |
| Action 15/3 | The Executive Secretary is to change the CIPM MRA logo which appears in the minutes of the JCRB 14 by the correct one. |
| Action 15/4 | The Executive Secretary is to update the JCRB mailing list to reflect changes in APMP’s representation and is to maintain Dr Usuda in the mailing list. |
| Action 15/5 | All RMO Representative are to assure that letters of designation are received by the Director of the BIPM for Designated Laboratories in their region. |
| Action 15/6 | Dr Korostin is to send updated list of COOMET TC chairs to the Executive Secretary. |
| Action 15/7 | The Chairman is to draft a paper on the pros and cons associated with the use of regional databases to aid local efforts and how their existence might lower the confidence of regulators on the CIPM MRA. |
| Action 15/8 | The RMO JCRB Representatives are to work with the JCRB Executive Secretary to assure that the most up to date information is available on all the Technical Chairs of Working Groups in the regions. |
| Action 15/9 | The BIPM is produce a paper to supplement the definition of the term CMC that appears on JCRB-08/18 and forward it to the RMOs and CIPM for consideration prior to the 16th meeting of the JCRB. |
| Action 15/10 | The Chairman is to forward guidance on the use of the CIPM MRA Logo to the RMOs prior to the next JCRB meeting. |
| Action 15/11 | The Prof. Kühne, Mr Jones and the Executive Secretary are to draft a new version of JCRB-15/09 which strikes a compromise between the positions of APMP and EUROMET. The document should properly reference existing JCRB documents and be sent to the committee for review prior to the next meeting. |
| Action 15/12 | The Chairman is to send a letter to the Consultative Committees Presidents asking them to stress the need to support CMCs when devising the scope of new Key Comparisons. |
| Action 15/13 | The RMOs are to make a small presentation during the next JCRB meeting describing the QS review process in their region. |
## 0. Summary of pending items

**Pending 15/1** Decision on re-designation of national laboratories for purposes of the CIPM MRA: (a) no requirement of re-designation; (b) re-designation every 5-years.

**Pending 15/2** Decision on what the response of the CIPM MRA should be to problems in the area of Material Metrology.

## 0. Summary of recommendations

### Recommendation 15/1
JCRB Recommendations are to be clearly listed in the minutes of all future JCRB meetings.

### Recommendation 15/2
As per the Terms of Reference of the JCRB, the JCRB makes recommendations on the implementation of the CIPM MRA. Those recommendations need to be approved by the RMOs and/or the CIPM prior to becoming policy.

### Recommendation 15/3
The Chairman will make every attempt to fast-track the approval of JCRB recommendations by the CIPM. Likewise, and concurrently with the above, the RMO representatives to the JCRB will make every attempt to fast-track the approval of JCRB recommendations by their RMO General Assemblies. If possible, these approval consultation processes will be done using email.

### Recommendation 15/4
The frequency of JCRB meetings is to be reconsidered at each meeting.

### Recommendation 15/5
The CMC definition that appears in JCRB-08/18 is to be supplemented by a paper to be crafted by the BIPM, reviewed by the RMOs, and approved by the CIPM. The purpose of this supplement is to clarify the current definition for the benefit of accreditors.

### Recommendation 15/6
RMOs are to invite Chairs of Technical Committees from other RMOs, as well as the heads of those RMOs, to the meetings of their Quality System review groups. The Chairman and Executive Secretary should also be notified of upcoming meetings.

### Recommendation 15/7
The JCRB endorses the flexible-criteria as expressed in JCRB-14/06(2a) and encourages the RMO representatives to inform their Technical Chairs of this decision. The JCRB goes on to remind all that participation in Key Comparisons is obligatory when available – to choose to not participate in a Key Comparisons will result in adverse action against the laboratory choosing not to participate. The JCRB requests that all Key Comparisons (CC and RMO) be notified to the KCDB Office in a timely fashion.