

A2LA Measurement Advisory Committee (MAC) Meeting Summary
The Sheraton Columbia Hotel
Columbia, MD

Saturday, April 4, 2009
(08:00 AM– 5:00 PM)

Meeting Minutes

1. Preamble – Pamela Wright, Recording Secretary

Pam Wright introduced herself as the new calibration accreditation manager at A2LA and went over some procedural matters.

2. Introductions – Doug Cowles, Chairperson

3. Review and Approval of the Agenda

Doug Cowles noted that additional items from the February MAC teleconference had been voted on to be added to today's MAC Meeting. He mentioned the items will be brought up in the review of the February 2008 Meeting Minutes.

MOTION 1: T. Smith proposed a motion to approve the agenda. – **Motion Passed**

4. Z540.3 sub-clause 5.3 Training – NCSLI 171 Committee Members Steve Doty, Del Caldwell, Dennis Jackson.

The training began with Mr. Doty's discussion of the new Z540.3 Handbook [see [attachment 1](#)] with clarification made that it is a resource and not an interpretation of the standard nor is it a requirements document that organizations can be audited against. Mr. Doty further discussed the comparative analysis that was completed against 17025 and the additional Z540.3 requirements not already found in 17025. He noted the concept of Probability of False Accept [PFA] and Test Uncertainty Ratio [TUR]. A question arose regarding whether the requirement for inclusion of the unit under test is transparent in Z540.3 and whether it is required to be reported to the customer. Mr. Doty noted that laboratories are expected to track the two percent to see how they are performing and that they are required to produce assurance that the probability of false accept is two percent or less before calibrating the item with documentation retained of this information. A question was asked as to whether the calibration laboratories are expected to track that two percent to monitor how they are performing. It was noted that the calibration laboratory is required to ensure, prior to making the measurement, that the probability of false accept is less than two percent. The responsibility for determination of PFA is on the customer, not the calibration laboratory. A comment was noted regarding small "mom and pop" laboratories that may not understand the concept of the PFA nor their customers. A question was raised that, in cases of "as found/as left", all the customer is looking for is how does this PFA apply. It was noted this would be accomplished through the contract process. The contract would need to clearly indicate that the customer must agree to share the risk with the calibration laboratory that an inadequate calibration might be provided in these cases since no PFA was determined in advance of the

calibration or provided to the calibration laboratory. A question was asked regarding certain fields such as the medical field where the PFA of two percent may be too high. Mr. Doty agreed that this could exist in the medical field. A question also came up regarding whether certain dimensional areas, such as in the case of micrometers, are incompatible with the Z540.3 PFA concept. Mr. Doty agreed that these cases exist but that for the majority of areas PFA removes the “wobble room” of certain procedures. A question was raised as to what the difference was between equipment and standards and measuring and test equipment [M & TE] that is used to make measurements. Mr. Doty noted that Z540.3 does not distinguish between them. A question was noted as to whether the calibration laboratory was required to calculate the PFA or was it the responsibility of the customer providing the measuring and test equipment. It was further mentioned that the standard does not delegate responsibility for the PFA to the calibration laboratory or the end user. Mr. Doty discussed that there are core items needed by laboratories that are clearly defined and that the customer is responsible for providing PFA information. He further noted that evidence of this would normally be found in the contract. A question was asked as to whether it was necessary to know what the PFA was in order to calculate the TUR. Steve indicated that either the TUR or the PFA needed to be determined but not both and that the slide should state “or”. He further clarified that the biggest objective evidence is in contract review and that if a client could not meet PFA then they can determine a TUR.

Mr. Doty then went on to discuss Calibration of M & TE and calibration intervals. It was noted in this discussion that a determination on where the responsibility lies is needed and it was further suggested that the responsibility issue should be discussed in the contract process regarding the data to adjust intervals and that “prior to use” should be added to the standard. Another question was raised regarding whether assessors are to determine whether the client has divulged information in the assessment for objective evidence during contract review. Mr. Doty noted that, if the customer wants the calibration laboratory to do the interval for them, this information must be found in contract review. He further noted that the auditor looks for a mechanism to take it out of the system in cases where the M&TE is out of specification and that the data for calibration intervals must be retained. So this would be applied both internally and externally and the end user will be sending the information during the contract review process. A question arose regarding what the definition of measurement reliability is. Mr. Doty noted it was found in RP-1. It was noted that the resolution of where the responsibility lies is still needed. That assessors need to know if the responsibility involves the customer then further feedback is needed from A2LA on how to apply this concept when seeking objective evidence during an assessment. Mr. Doty noted that the review applies within the four walls of the calibration lab controlling its own equipment. A question was raised as to whether a calibration laboratory can perform an in-house calibration to Z540.3. Mr. Doty noted that as long as the calibration laboratory met Z540.3 they can perform in-house calibrations to Z540.3.

Mr. Doty then discussed what the requirements of Z540.3 are in regards to procedures and the validation of all procedures, whether standard or non-standard. A question was raised as to what the purpose would be to have validation of the method and manufacturer specifications. Mr. Doty noted that it was needed to demonstrate that the method provides good results and that the Handbook goes into best practices. It was indicated that validation is the issue (as defined by the VIM) and citing the use of the word was an issue. It was further noted that lab developed methods need to be validated but that it is difficult to validate proven methods and that this adds difficulty to labs. Furthermore, the way the standard is written everything needs to be validated but the standard does not clarify by whom and when. There were also

implications that validating every procedure and maintaining records would place a great deal of pressure to a laboratory.

MOTION 2: D. Cowles proposed a motion to continue with the training but to view the presented material as only applying to the calibration laboratory. It was felt that was needed in order to move forward with the training and that going beyond the calibration laboratory would require guidance from A2LA on how to make it applicable to the customer. – **Motion Passed**

Mr. Caldwell then presented information regarding the need for Z540.3 and defined a calibration system [see attachment 2]. He further discussed typical questions asked in making the decision to calibrate M & TE or not. He also noted the differences between TAR and TUR. Mr. Jackson then presented information regarding PFA and calibration process error [see attachment 3] and the Excel PFA macro [see attachment 4]. A question was raised regarding whether all influences on the measurement result should be considered. It was argued that a calibration laboratory cannot possibly take all considerations into account; it would simply be too costly. Mr. Jackson noted that if it was considered then a record should be kept of it, even if it was determined to be negligible. He further cautioned that common sense is needed.

A question was raised as to how specific the new requirement was for conditionals and assumptions as a requirement for uncertainty analysis. It was further noted that it would be helpful to have clarification on the depth and level of assumptions to be made because without this information, an excess of deficiencies might be the result. Clarification was also requested as to the objective evidence needed, the assumptions made and whether the laboratory is using Type A or Type B. Mr. Jackson noted that a laboratory needs to account for Type A and Type B and that this was basically the definition of an uncertainty budget, not just a table. He further clarified that the 171 Committee was seeking volunteers for the working group designated for the creation of a handbook for accreditation to section 5.3 of Z540.3. A question was raised as to whether there was any double counting of uncertainty. Mr. Jackson noted that the uncertainty budget should not include anything from the UUT bias and that the resolution does need to be in there. It was commented that the way the uncertainty budget is being calculated this would not apply to all calibrations, for example in the dimensional measurements of steel. Mr. Jackson noted that the presentation model is only a particular application of uncertainty and that in the dimensional field the UUT bias is not needed and that it really depends on how the specifications are defined.

A question was raised regarding fixed artifacts versus the measuring instrument. Mr. Jackson noted that instruments carry a range and fixed artifacts/value given are applied differently. Rounding that happens in the report adds an additional factor to the resolution and could be the highest resolution error contribution, playing a significant role in determining whether the equipment is in/out of specification. A question was raised as to what the definition of TUR was under the new standard. Mr. Jackson noted that the definition has not changed. It was noted that the definition is ambiguous. Mr. Jackson noted the purpose was to allow for asymmetry. A question was raised regarding whether the measurement reliability was for the calibrator system or the unit under test. Mr. Jackson noted it was for the UUT. A follow-up question regarding how a laboratory is to know the information and history of the UUT was raised. Mr. Jackson noted that the rest of his presentation will define this. A question was raised that for people who maintain records of the UUT data, does it take into account wear-and-tear and other factors and how those would impact the PFA because there are too many

ways for the record keepers to bring down the PFA dependent upon the situation. A follow-up comment was made that those factors need to be taken into account and that guard-banding must be taken into account.

A question was asked as to what measurement reliability was. Mr. Jackson noted that, at the equipment level, it is the probability that, at the end of the evaluation period, the equipment passes every test point during the calibration. A follow-up question was noted that if the line of work yields a TUR less than four, the PFA would never be able to be achievable as in the case of a Rockwell tester. Mr. Jackson noted that a laboratory may not meet a 4:1 TUR but they may meet a two percent PFA and that the basis of the process is to determine the probability of making an incorrect decision. A question was raised as to whether the ASTM should take precedence over Z540 if specified in the contract. Mr. Jackson noted that this was not the case.

MOTION 3: D. Cowles proposed a motion to allow the training to be extended for an additional 30 minutes after lunch with the stipulation that there are no questions or interruptions. – **Motion Passed**

D. Jackson continued his discussion on Z540.3 sub-clause 5.3 – Training. It was noted that there was nothing from the presentation that demonstrated that compliance with Z540.3 would reduce the cost of doing business. It was also mentioned that this was more of an orientation as more questions came out than answers. The committee members felt that more clarification is needed on the objective evidence to be looked for by assessors during the assessment and what calibration laboratories need to do to be in compliance and that accreditation to Z540-3 is premature. The committee members also recognized the need for guidance in the form of a handbook for accreditation to Z540.3.

A question was raised as to why the standard exists and why the calibration laboratories would be assessed to a document that will be affecting the end user (clients) and not the calibration laboratories themselves. A question was raised as to whether A2LA will continue to offer accreditation to Z540.1 in addition to Z540.3 and P. Wright confirmed that this would be the case. Some members felt the standard was appropriate to be audited against but other members noted it appeared to be impractical to do so at this time. Some of the laboratory committee members felt that feeding a system of adding requirements that are not understood would be pointless and that the standard does not appear to seek objective evidence. It was argued that the demand is not going to go away. For example, the FAA appears to be requiring the need for accreditation to Z540.3. A concern was raised that the calibration laboratory would be required to meet this standard by their clients but that the clients do not understand what their part would be in assisting the calibration laboratory to meet Z540.3. Too much is required of the clients who don't understand Z540.3 nor will they perform PFA.

A question was brought up as to whether scopes will need to clarify that the labs are accredited to only Z540-3 Section 5.3 and if so concern was expressed that this could cause their customers to question why the distinction was being made and if it would meet the needs of their specifiers. It was also brought up that the Navy has applied independently for a "certification" to Z540.s.3 and that the customers will get confused by accreditation vs. certification. It was noted that if a customer wants it, we need to be able to provide it to them. It was indicated that assessors will need further guidance/training to be prepared to perform audits. A question was raised as to who has the authority to develop a list of what would be appropriate objective evidence. A concern was brought up that, if a customer needs

compliance with all of Z540.3 but you only have one section (5.3) on the scope, this may not satisfy customer requirements.

MOTION 4: D. Cowles proposed a motion to add an agenda item to clearly discuss feedback to take to the CC meeting for discussion. D. Cowles has time allotted at the CC meeting to review the outcome of the training. – **Motion Passed**

MOTION 5: P. Wright requested a recommendation for A2LA on how to proceed with the Z540.3 document at this point. K. Jaeger proposed a motion to hold off on the implementation of the document until the Z540.3 guidance document is published to provide guidelines of objective evidence to which Z540.3 can be assessed. In addition, the published guidance document should be properly evaluated by A2LA – **Motion Passed**

ACTION ITEM 1: Review the status of the Z540.3 Guidance document being worked on. This action item is being assigned to P. Wright with a due date of the 2010 Conclave.

5. Approval of April 2008 and February 2009 meeting minutes:

P. Wright brought up two agenda items from the February 2009 Meeting Minutes to be added to new business.

MOTION 6: P. Wright proposed to add Action Item 4 from the February 2009 MAC Teleconference to the new business on the agenda. Volunteers were sought to participate in the formation of a working group for the purpose of creating a guidance document for the traceability of vector network analyzers. – **Motion Passed**

MOTION 7: P. Wright proposed to add Action Item 5 from the February 2009 MAC Teleconference to the new business on the agenda. Volunteers sought to join the working group formed to develop a proposed policy for laboratories who want to claim a frequency lower than 1 Hz on their scope of accreditation. – **Motion Passed**

MOTION 8: D. Cowles proposed motion to accept the meeting minutes from April 2008 [see attachment 5] and February 2009 [see attachment 6]. – **Motion Passed**

6. Old Business

Previous Action Item: Nominating sub-committee [Mike Suraci, Gerold Blossey, and Ray Gil with Dana Leaman as the staff contact] to present the candidates for the open Vice Chairperson position by June 30, 2008.

Doug Cowles presented on behalf of the Nominating sub-committee and indicated that, per the results of the election, Chuck Blank has been nominated as the new Vice Chair of the MAC. Action Item Closed.

Previous Action Item – Create a task group to review the consensus for inclusion of both repeatability and resolution for hardness in laboratory uncertainty budgets to determine whether both are needed or whether the laboratory would be allowed to include one or the other. Volunteers for the sub-committee are: Ray Gil, Ted Doiron, Jim Salsbury with Vincent Pugh as the staff contact. Report of findings/proposal due January 1, 2009.

Vincent Pugh presented the information found by the task group regarding the inclusion of both repeatability and resolution for hardness in uncertainty budgets. Findings of the group indicate that, per the GUM and other reference documents, [See Attachment 7] the inclusion of both repeatability and resolution is required. T. Doiron discussed the need for a definition of repeatability because transfer standards don't always have uniformity. R. Gil gave support for the inclusion of both factors into the budget and stressed the need for Type A uncertainties in addition to resolution. J. Salsbury obtained a paper from the NIST website from the Volume 113, May 2008 issue. The topic of the article was uncertainty due to finite resolution. J. Salsbury spoke to Mr. Phillips, the author of the article who also stated both repeatability and resolution should be included. In addition he noted that ASTM has examples and guidance on this topic that should be followed.

MOTION 9: D. Cowles proposed a motion to continue with the consensus from the 2008 MAC Meeting to have both resolution and repeatability included in the uncertainty budgets for hardness. – **Motion Passed / Action Item Closed**

Previous Action Item – P. Wright to create language for an application of 17025 with a provision that laboratories are able to treat humidity salts like an intrinsic standard without the need to meet the PT portion of the A2LA Calibration Program Requirements and forward to A2LA staff for review and comment before sending to the Criteria Council for approval. Due Date: June 30, 2008.

Pam Wright presented her findings to the MAC regarding this Action Item. The decision was made by A2LA to treat the humidity salts as intrinsic standards. The R205 requirements document has its language amended to include the decision made. It was voted on and approved by the CC. The language was added as a note to Section 2.1.2 of the R205. P. Wright requested the action item to be closed.

MOTION 10: D. Cowles proposed a motion to close Action Item 3 as it appears to have been satisfactorily resolved. – **Action Item Closed**

Previous Action Item – Dana Leaman to report to A2LA management that the MAC indicated that the calibration kits do not require an accredited calibration. Due Date: June 30, 2008.

Pam Wright was reassigned the Action Item from D. Leaman. She found evidence that the 2008 Management Review Minutes indicated discussion of Action Item 4 [The findings indicate that Calibration Kits do not require an Accredited Calibration.] P. Wright requested that the Action Item be closed.

MOTION 11: D. Cowles proposed a motion to close Action Item 4. – **Action Item Closed.**

Previous Action Item – Liz Smith to work with Pam Wright to get a copy of the paper sent to the members by May 31, 2008.

Liz Smith and P. Wright obtained copies of the paper and sent them to the members. P. Wright requested the action item to be closed.

MOTION 12: D. Cowles proposed a motion to close Action Item – **Action Item Closed**

Previous Action Item – Dana Leaman to supervise the inclusion of an article in the A2LA newsletter regarding artifact calibration as guidance for our laboratories and will work with R. Kletke and his group to get the article together by September 30, 2008

Pam noted that, since this action item was closed by D. Leaman prior to her departure from A2LA, the Action Item should be closed.

Post Meeting Note: It appears that a newsletter article has not yet been published. This action item is to remain open and be reassigned to Pam Wright for completion.

MOTION 13: D. Cowles proposed a motion to close Action Item. – **Action Item Closed.**

Previous Action Item – Dana Leaman to contact Bill Sorrells regarding working on a study of artifact calibration for the HP 3458 and the HP 8508 per committee recommendation. Due Date: 2009 MAC Meeting.

Vincent Pugh was reassigned the Action Item from D. Leaman. It was indicated that B. Sorrells was never contacted by D. Leaman regarding this Action Item and therefore the action was not completed. Discussion ensued as to whether the Action Item should be reopened and reassigned.

MOTION 14: D. Cowles proposed a motion to reopen this Action Item and to seek volunteers for a working group to address the issue. – **Motion Passed**

ACTION ITEM 2: B. Sorrells, R. Kletke, and B. Brown to continue working on a study of artifact calibration for the HP 3458 and the Fluke 8508 per committee recommendation. The staff contact for this will be P. Wright with a due date of the 2010 MAC Meeting.

Previous Action Item – Dana Leaman to review the A2LA appeals process regarding why the assessor is not contacted for his rebuttal and to speak with the operations manager regarding our guidance provided in the Assessor Instruction Manual and A2LA SOP for the appeals process. Due Date: September 30, 2008.

Pam Wright was reassigned this Action Item from D. Leaman. She informed the MAC that this issue had come up in every technical committee and the wording in the Internal SOP has already been amended. To summarize the new wording, if a lab is contesting a deficiency and it is sent to the AC for voting, A2LA will go to the assessor first to obtain their contentions to submit along with the lab's contentions prior to sending it to the AC. P. Wright requested this item be closed.

MOTION 15: D. Cowles proposed a motion to close the Action Item. – **Action Item Closed.**

Previous Action Item – D. Leaman to research with other Accreditation Bodies to determine their requirements for listing information on the scope of accreditation for Microwave Calibrations in an effort to determine whether they require the listing of network analyzers, connector family, and the device. Due by June 30, 2008.

Pam Wright was reassigned this task from D. Leaman. Research indicated that none of the other Accreditation Bodies nationally and internationally have additional requirements for

listing network analyzers, connector families and the device itself. P. Wright requested the action item to be closed.

MOTION 16: D. Cowles proposed a motion to close the action item. – **Action Item closed.**

Previous Action Item: Task group to provide clarification as to how A2LA assessors determine what a standard method is for surface plate flatness and to determine whether there is any current publication available to the public for this standard method. Volunteers include: Dave Lorenzen, Carl Haynes, Henrik Nielsen, Bob Brown with Samantha Dizon as staff liaison. Due Date: December 31, 2008.

Rob Knake was reassigned this Action Item for S. Dizon. The presentation opened up the issue that there is no concrete standard method for the calibration of surface plate flatness. The discussion centered on determining if a viable standard method exists for surface plate flatness and to determine whether there is any current publication available to the public for this standard method. The findings of the group are that there are currently no acceptable standard methods available; all current A2LA accredited organizations' methods for calibrating surface plate flatness shall be treated as non-standard methods that require validation in accordance with ISO/IEC 17025:2005, Section 5.4.5. In addition, the organization must provide evidence that the method calibrates flatness in a manner that meets the requirements described in this document. If and when an acceptable standard method for surface plate flatness calibration becomes available, it will be considered acceptable without validation by the A2LA accredited organization [See Attachment 8]. T. Doiron disagreed with the outcome of the working group and felt that the Moody Method is an accepted and widely used standard for surface plate flatness.

MOTION 17: D. Cowles proposed a motion for assessors to view the Moody Method for flatness with the Union Jack as a standard method. - **Motion Passed**

ACTION ITEM 3: Rob Knake to draft an article for the A2LA Newsletter with the findings that illustrate the Moody Method would be considered a standard method for calibrating surface plate flatness and to provide the information to the laboratories. Due by September Newsletter publication.

Previous Action Item – D. Leaman to review the use of the term generate on page 9 item 1a of the R218 by May 31, 2008.

Pam Wright was assigned this item for D. Leaman. She reported to the MAC that the R218 - Applications for Calibration Scopes of Accreditation requirements document was reviewed and implemented including the requested change for the term generate. P. Wright asked to have this action item closed.

MOTION 18: D. Cowles proposed a motion to close the Action Item. – **Action Item Closed.**

Previous Action Item – Pam Wright to send the applications document to the MAC by May 31, 2008 and seek a 2 week comment period.

Pam Wright sent out the applications document as requested and received comments on it. She requested the action item be closed.

MOTION 19: D. Cowles proposed a motion to close the Action Item. – **Action Item Closed.**

Previous Action Item - Dana Leaman to get a consensus via further discussion through email of the members regarding how uncertainty versus manufacturer's specifications should be applied. Item tabled for now. Due Date: 2009 MAC Meeting.

Pam Wright took over this action item for D. Leaman. The item was not addressed and the issue at hand was how uncertainty versus manufacturer's specifications should be applied. It was requested that this item be tabled until after K. Jaeger's presentation later in the meeting.

Previous Action Item – Pamela Wright to send out proposed draft handbook document for comment by May 31, 2008.

Pam Wright presented the issue and explained that, based on committee feedback, the handbook had been withdrawn. She noted that, due to an A2LA BOD Action Item, we currently have Vincent Pugh and Isao Fujita developing a Calibration Handbook for Developing Minimum Contributors. As such, the Action Item has been tabled until the guide has been completed.

ACTION ITEM 4: P. Wright to follow up with the status of the handbook at the 2010 Conclave.

Previous Action Item from 2/27/09 teleconference – Pamela Wright to draft proposed language for *R205: Specific Requirements: Calibration Laboratory Accreditation Program* indicating all parameters from a laboratory's scope must be observed within a four-year period for renewal assessments. Those parameters not observed within the four-year period will be removed from the scope of accreditation unless the laboratory provides written justification via an exception request that is approved by A2LA. Note: equipment out for repair or calibration will not be considered an acceptable justification.

P. Wright presented the new wording to the MAC [see attachment 9] and there was discussion that the wording in Section 2.1.4a should be altered.

MOTION 20: P. Wright proposed a motion to change the wording in Section 2.1.4a of the R205 from 'the' to 'every' in the first sentence. – **Motion Accepted**

The discussion then centered on ensuring that every parameter is observed over a four year period. There was a request made to put in an implementation period for labs and assessors to adjust to the change. It was further suggested that a need for a change in wording to the AIM was needed to ensure that one assessor would not be able to simply review IPE for one hundred percent of the assessment leaving the next assessor to observe one hundred percent of the parameters. The document was approved with the changes noted.

ACTION ITEM 5: P. Wright to present the revisions to R205 at the May Criteria Council meeting for implementation.

ACTION ITEM 6: P. Wright to amend the AIM to reflect that at least fifty percent of calibration parameters must be observed during any given renewal assessment.

Previous Action Item from 2/27/09 teleconference – Bill Sorrells to work with A2LA Staff to create a working group tasked with the creation of a requirements document for establishing traceability for Vector Network Analyzers.

MOTION 21: D. Cowles proposed to add this item to the agenda for New Business. – Motion Passed.

7. New Business:

- a. Electrical Budgets based on manufacturer specifications and resolution only, recommendation against this practice – Klaus Jaeger

Klaus Jaeger provided a slide show presentation discussing minimum contributors for Electrical and Microwave/MRF Budgets. The objective is to establish a baseline for Type A and Type B uncertainties to determine which factors are considered significant when creating the budgets. Klaus explained the need for the laboratories to, at a minimum, investigate the factors. If they are insignificant then the values will drop off of the calculations but it is important for the labs to be able to demonstrate that they took the factors into account. There was discussion about allowing certain measurements to bypass repeatability through observation. An agreement was reached by the MAC that the contributors must be investigated and if they are insignificant they will fall off the budget. The Minimum Type A Contributor to be taken into account is repeatability and the minimum Type B contributors to be taken into account are reference values from traceable certificates, absolute specifications for the calibration interval, resolution of standards used, resolution of the Unit Under Test (UUT) and environmental effects [See Attachment 10].

MOTION 22: T. Smith proposed a motion that assessors agree that the minimum contributors for electrical and microwave/RF calibrations are those outlined in Klaus' presentation. – Motion Passed

ACTION ITEM 7: P. Wright to oversee the publication of the information in the A2LA Newsletter for dissemination to calibration laboratories.

- b. R218 and use of quantity symbol – Liz Smith

Liz Smith is requesting the formation of a working group to discuss the requirement for no longer using parts in 10^6 , etc. on scopes. Staff has experienced difficulty in locating certain quantity symbols and L. Smith requested an investigation into the use of scientific notation instead. Some of the lab representatives argued that scientific notation would be confusing to the labs and bad for the end user. P. Wright added that she would like to appeal the decision of the CC not to allow parts in 10^6 due to the hardship it has created.

MOTION 23: L. Smith proposed forming a working group to develop and document arguments for appealing the CC decision and to formulate a revised method for presenting the information on Scopes. – Motion Passed.

ACTION ITEM 8: Revisit R218 and the concept of quantity symbols in lieu of parts in 10^6 for a more practical application: Bob Brown, Keith Kokal, and Klaus Jaeger with Liz Smith as staff contact. By June 30, 2009.

- c. Uncertainty of the simple pitch diameter of a thread plug – Pam Wright

Pam Wright presented an issue that had arisen with a lab regarding the uncertainty of single pitch diameter with thread plug [see attachments 11a-c]. The laboratory's

budget was based on a guidance document by Thom Adams. A deficiency was cited against the budget and the lab disagreed. The issue was presented to the MAC previously in 2008. The outcome was decided in support of the assessor. T. Doiron discussed this based on experience and a paper he had written on the issue. The argument was that, per an EA document, there is a distinction between pitch diameter and simple pitch diameter of around 80 micro inches.

MOTION 24: A motion was proposed by K. Kokal for assessors to agree to adopt T. Doiron's paper for defining the uncertainty of a simple pitch diameter. – **Motion Passed**

ACTION ITEM 9: P. Wright to provide feedback to the lab regarding their budgets for single pitch diameter. By May 31, 2009.

d. February 2009 Calibration Assessor Memo – Pam Wright

Pam Wright highlighted the consensus agreements from the 2008 MAC Meeting and ensured there were no questions or issues [see attachment 12].

e. New Agenda Item: Bill Sorrels – Establishing Traceability for Vector Network Analyzers using a verification kit and a calibration kit.

Bill Sorrells presented a slide show [see attachment 13] expressing his opinion that, by using a calibration kit and verification kit, traceability could be achieved for Vector Network Analyzers. He found a Euromet Document which calls for the use of these traceability kits to establish traceability. We need to decide whether A2LA should adopt this document, what A2LA would define as a traceability kit and the viability of its making Vector Network Analyzers traceable.

MOTION 25: D. Cowles Proposed the creation of a working group to address whether A2LA should adopt this document, what A2LA would define as a traceability kit and the viability of its making Vector Network Analyzers Traceable. – **Motion Passed**

ACTION ITEM 10: W. Schaefer, B. Sorrells, J. Wheeler, S. Dizer, V. Pugh and T. Osborne to form a working group to discuss Vector Network Analyzers with Vincent Pugh as the staff contact. By June 30, 2009.

f. P. Wright proposed to add Action Item 5 from the February 2009 MAC Teleconference to the new business on the agenda. P. Wright is seeking volunteers willing to join the working group formed to develop a proposed policy for laboratories who want to claim a frequency lower than 1 Hz on their scope of accreditation. Karl Haynes is an additional volunteer for the working group consisting of J. Poore, M. Suraci, J. Gust and M. Lombardi.

g. **MOTION 26:** D. Cowles proposed a motion to form a nomination committee in September 2009 MAC Teleconference. – **Motion Passed**

ACTION ITEM 11: Form a nomination committee for the MAC. Due Date is the September 2009 MAC Teleconference.

8. Next Meeting

P. Wright will send an e-mail to MAC Members to determine the best date for the September 2009 MAC Teleconference.

Minutes Prepared by Jason Poore, A2LA Accreditation Officer.

Attendees:

Last Name	First Name	Email
Ball	John	john@jbc-alabama.com
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