

N17 Committee Minutes
November 14, 2007
Omni Shoreham Washington DC • Parlor # 300

Members in Attendance: Tawfik Raby (N17 Chair), *National Institute of Standards and Technology*; David Anderson, *Electric Boat Corporation*; Robert E. Carter, *Individual*; Dimitrios Cokinos, *Brookhaven National Laboratory*; Nolan Hertel, *Georgia Institute of Technology*; Charles Rombough, *CTR Technical Services, Inc.*; Patricia Schroeder, *American Nuclear Society*; Stephen Shepherd, *Southern California Edison*; Andrew Smetana, *Savannah River Site*; Thomas Myers, *National Institute of Standards and Technology*

1. Call to Order

N17 Chair Tawfik Raby called the meeting to order and introductions were made.

2. Introduction of New Members

Tawfik Raby explained that eight new members were recently added to the committee. Raby stated that the new members were a welcomed addition and provided balance to the committee. New members included David Anderson, *Electric Boat Corporation*; Michael Coradini, *NCRP Rep*; Edward Ehrlich, *General Electric Nuclear Energy*; Chris Heysel, *McMasters University*; Andrew Kadak, *Massachusetts Institute of Technology*; Ronald Pevey, *University of Tennessee—Knoxville*; Charles Rombough, *CTR Technical Services, Inc.*; and Stephen Shepherd, *Southern California Edison Co.* Raby explained that when looking to add new members he tried to have at least two specialists in each area in addition to general members. The N17 Committee was now well within the ANSI requirement of no more than 1/3 members in any one category.

3. Chair Report — See Attachment A

Raby reported that he attended the Standards Board meeting the previous day. Much of the discussion at the Standards Board was related to Probabilistic Risk Assessment (PRA) and PRA standards. Raby explained that the RISC Committee was involved in a joint project with ASME International to combine the ANS PRA standards with the ASME PRA standard. Raby noted that he was involved in creating the RISC Committee and appointing national experts. Initially ASME had the responsibility to develop a PRA standard on internal events, while ANS had the responsibility to develop a PRA standard on external events and subsequently PRA standards on fire and low power shut down. The current joint effort would combine all of these standards. Raby explained that he did not feel it was a good idea to keep the ANS individual standards on the street as current once the Combined Standard was published but that he was the lone negative at the Standards Board meeting.

Raby reported that the Standards Board discussed whether to add a new category of “associate member” as proposed by the ANS Young Member Group (YMG). Raby stated that he felt N17 had already taken advantage of the YMG in the capacity of full members. While the Standards Board approved the associate member status, responsibilities were being defined. Raby stated that he would find a position for each regardless of the title. Steve Shepherd added that they were exploring funding options to encourage involvement of the YMG.

With a few new members in attendance, Raby explained that N17 had six subcommittees; ANS-1, ANS-6, ANS-10, ANS-14, ANS-15, and ANS-19. ANS-1 was the first standard developed by ANS under the lead of Dixon Callihan. Raby explained that consensus committees were the final arbitrators of technical issues and that the Standards Board certified the administrative process.

Raby reported that new balance of interest categories were discussed at the Standards Board meeting. The new categories would include a separate category for national labs. No objections to the new balance of interest definitions were voiced. The definitions were to be reviewed by the Standards Board Chair before a formal approval by the Standards Board. As the balance of interest categories were part of ANS accredited procedures, they would need to be submitted to ANSI for recertification.

Action Item 11/07-01: Tawfik Raby to send new balance of interest categories to N17 members for their information.

Raby added that he would be drafting a proposed policy on dual representation as an amendment to the policy. He explained that he originally proposed a dual representation policy several years ago and although the current Standards Board Chair was interested, it was too late. The proposed policy would only apply to consensus committees.

Raby informed the committee that a meeting of Standards Developing Organizations (SDOs) was held November 15, 2007. For quite a few years NIST, DOE, and the NRC took turns hosting SDO meetings. The previous meeting had been several years ago. NIST revived the SDO meetings. Quite a few organizations attended. The purpose of the SDO meeting was to exchange information, ideas, plans, and to get updates on government initiatives. The next meeting was planned for March 10, 2008, and was expected to be larger. The Homeland Security Department of Defense would be included. Attendees were from high management levels and main standards representatives.

See N17 Progress Report, Attachment A, for more details.

4. Standards Development/Subcommittee Reports

A. ANS-1(Conduct of Critical Experiments) / ANS-14 (Fast Pulse Reactors)

Tawfik Raby reported for Subcommittees ANS-1 and ANS-14. He noted that each had only one standard but that both were current. ANS-1 and ANS-14 were chaired by Theodore Schmidt.

B. ANS-6 (Radiation Protection and Shielding) – Attachment B

ANS-6 Subcommittee Chair William Hopkins was unable to attend but provided a written report (see Attachment B.) ANS-6.1.1 Working Group Chair Nolan Hertel provided an update on ANS-6.1.1, "Neutron and Gamma-Ray Fluence-To-Dose Factors." He reported that an inquiry was received on ANSI/ANS-6.1.1-1991. Hertel explained that upon review of the inquiry, it was determined that there was a typographical error in one of the tables. A clarification would be prepared and an erratum would be issued. Raby suggested that Hertel review the entire standard for errors and begin a revision.

C. ANS-10 (Mathematics and Computation)

ANS-10 Subcommittee Chair Andy Smetana reported that the ANS-10.4 Working Group was refocusing the project's scope. A revised PINS form for ANS-10.4, "Verification and Validation of Non-Safety Related Scientific and Engineering Computer Programs for the Nuclear Industry," and a PINS form for new standard ANS-10.7, "Non-Real Time, High Integrity Software for the Nuclear Industry," was approved. Smetana was expecting that ANS-10.4 would be balloted by the ANS-10 Subcommittee in December 2007 and ready for N17 ballot the beginning of 2008. Smetana explained that ANS-10.4 needed to be approved soon as it was reaching its 10th anniversary and would be administratively withdrawn. He stated that ANS-10.7 had an organizational meeting earlier that day and agreed to have a two or three day technical meeting at Oak Ridge National Laboratory around mid February 2008. Significant amount of material already was prepared as part of ANS-10.4. Smetana informed the committee that Ted Quinn agreed to serve as chair of ANS-10.3, "Documentation of Computer Software," to resurrect the historic standard.

Charles Rombough questioned how you would define safety-related software. Raby stated that he would have an opportunity to review the scope and draft within a few months when it was issued for ballot.

D. ANS-15

Tawfik Raby reported for ANS-15 Subcommittee Chair Wade Richards who was unable to attend. Raby explained that research reactors were defined by their function regardless of power — contrary to the way NRC defined nuclear power plants. Raby stated that so far 21 standards had been developed under ANS-15 although a few had been combined. Any issues that dealt with research reactors were within the scope of ANS-15.

ANS-15.2 Working Group Chair Tom Myers mentioned that the ANS-15 Subcommittee met September 2007 in Oregon. He stated that the subcommittee debated whether the ANS-15.2 standard was still needed. Raby noted that ANS-15.2 was used by a few research reactors outside the United States and suggested maintaining it. Myers informed the committee that the ANS-15.20 standards project was making slow progress because of several working group chair changes. Myers stated that he believed he was appointed new chair of ANS-15.20 but needed to confirm with Richards.

E. ANS-19

ANS-19 Subcommittee Chair Dimitrios Cokinos provided an overview of ANS-19 projects. Cokinos stated that the subcommittee had the responsibility for 12 standards. Eight standards were well in use while an additional four were being initiated. Current standards, ANS-5.1, "Decay Heat Power in Light Water Reactors," ANS-19.1, "Nuclear Data Sets for Reactor Design Calculations," ANS-19.6.1, "Reload Startup Physics Tests for Pressurized Water Reactors," and ANS-19.11, "Calculation and Measurement of the Moderator Temperature Coefficient of Reactivity for Pressurized Water Reactors," were in revision. New standards projects included ANS-19.8, "Fission Product Yields for 235U, 238U, and 239P," ANS-19.9, "Delayed Neutron Parameters for Light Water Reactors," ANS-19.10, "Methods for Determining Neutron Fluence in BWR and PWR Pressure Vessel and Reactor Internals," and ANS-19.12, "Nuclear Data for Isotope Production Calculations for Medical and Other Applications." The ANS-19.10 draft had recently been approved by ANS-19 and would be to N17 soon. Additionally, Cokinos noted that he was looking for chairs to ANS-19.3.4, "The Determination of Thermal Energy Deposition

Rates in Nuclear Reactors,” ANS-19.4, “A Guide for Acquisition and Documentation of Reference Power Reactor Physics Measurements for Nuclear Analysis Verification,” and ANS-19.8, “Fission Product Yields for 235U, 238U, and 239P.”

Cokinos stated that ANS-5.1, was accepted as an international standard. Unfortunately, the deadline to complete the draft was missed. The New Work Item Proposal (NWIP) would be resubmitted for approval. Cokinos noted that the ANS-5.1 designation was out of sequence as it was originally under another subcommittee.

5. Standards Board Activities

Standards Board activities were discussed under the N17 Chair Report.

6. TC85 Committee Activities

Tawfik Raby provided an update on work through the International Organization of Standardization (ISO) Technical Committee (TC) 85 on Nuclear Energy. Raby explained that TC85 Subcommittee 6 on Reactor Technology was the only group chaired by the United States but that it was essentially on life support. Raby noted that he and Dimitrios Cokinois were convenors for different groups. An ISO NWIP served the same purpose as the American National Standards Institute Project Initiation Notification System form. To initiate a project, an NWIP had to be approved by member countries with at least five countries willing to participate. The last TC85 meeting was in Ottawa, Canada, in June 2006. The next TC85 meeting would be sponsored by the United States in Orlando, Florida, in June 2008. Raby suggested for all to attend if possible.

Action Item 11/07-02: Pat Schroeder to distribute information about the June 2008 ISO TC 85 meeting to N17.

Raby explained that the Nuclear Technical Advisory Group (NTAG) to TC85 was administered by ASTM. NTAG was created with the support of NIST. TC85 Subcommittee 6 was formed at that time but has not been very active due to difficult getting participation from other countries. Raby noted that NTAG was sponsoring and helping to fund the June 2008 TC85 meeting in Orlando.

7. Open Discussion

Tawfik Raby stated that he usually scheduled an N17 meeting every two years in Washington DC during the ANS meeting. He explained that Washington DC was a convenient site for many of the members.

8. Adjournment

The meeting was adjourned.

N17 Progress Report November 2007

Attachment - A

Published

ANSI/ANS-15.1-2007, "The Development of Technical Specifications for Research Reactors," (revision of ANSI/ANS-15.1-1990; R1999)

Approved by ANSI

ANSI/ANS-1-2000; R2007, "Conduct of Critical Experiments," (reaffirmation of ANSI/ANS-1-2000)

ANSI/ANS-15.4-2007, "Selection and Training of Personnel for Research Reactors" (revision of ANSI/ANS-15.4-1988; R1999)

N17 Action Completed

ANSI/ANS-1-2000; R2007, "Conduct of Critical Experiments," (reaffirmation of ANSI/ANS-1-2000)

In N17 Ballot/Vote (or resolving comments)

ANS-15.11, "Radiation Protection at Research Reactors," (revision of ANSI/ANS-15.11-1993; R2004)

ANS-15.19, "Shipment and Receipt of Special Nuclear Material (SNM) by Research Reactors," (historical revision of ANSI/ANS-15.19-1991; W2001)

PINS Approved

ANS-19.12, "Nuclear Data for Isotope Production Calculations for Medical and Other Applications," (new standard)

N17 Membership Changes

The following members were added to N17 to bring the committee into compliance:

Edward Ehrlich, GE (Owner/operator)

Stephen Shepherd, Southern CA Edison (Owner/operator)

Charles Rombough, CTR Technical Services, Inc. (Provider)

Chris Heysel, McMaster University (University/research organization)

Andrew Kadak, Massachusetts Institute of Technology (University/research organization)

Ronald Pevey, University of Tennessee, Knoxville (University/research organization)

David Anderson, Electric Boat (Vendor)

ANS 6 STANDARDS REPORT -- (BILL HOPKINS, CHAIR)

Based on feedback from the RPSD newsletter poll on resurrecting ANS-6.4.3, "Gamma-Ray Attenuation Coefficients & Buildup Factors for Engineering" as an official ANSI standard, Jeff Ryman has agreed to chair a new working group for this. Dick Faw has also agreed to join Jeff in this project. A new PINS form is in the works.

Dick Faw and his working group completed revisions of the following standards which were approved by ANSI in September:

- ANSI/ANS-6.4-2006, "Nuclear Analysis & Design of Concrete Radiation Shielding for Nuclear Power Plants" (revision of ANSI/ANS-6.4-1997; R2004)
- ANSI/ANS-6.4.2-2006, "Specification for Radiation Shielding Materials" (revision of ANSI/ANS- 6.4.2-1985; R1997; R2004)

John Wagner and his working group received ANSI approval in March of the reaffirmation of ANSI/ANS-6.6.1-1987; R1998; R2007, "Calculation and Measurement of Direct and Scattered Gamma Radiation from LWR Nuclear Power Plants."

Jennifer Tanner and her working group received ANSI approval in April of the reaffirmation of ANSI/ANS-6.3.1-1987; R1998; R2007, "Program for Testing Radiation Shields in Light Water Reactors."

F. Arzu Alpan has reconstituted the working group for ANS-6.1.2, "Neutron and Gamma-Ray Cross Sections for Nuclear Radiation Protection Calculations for Nuclear Power Plants" (revision of ANSI/ANS-6.1.2-1999). The project has had its PINS forms approved and a new draft standard is in development.

Nolan Hertel and his working group are reviewing a new revision of ANS-6.1.1-200X, "Dose Conversion Coefficients."