American Nuclear Society

MINUTES

Standards Board (SB) Meeting

June 9, 2015
Grand Hyatt, San Antonio, Texas

Members Present:

George Flanagan, Standards Board Chair & RARCC Chair, *Oak Ridge National Laboratory*
*Steven L. Stamm, Standards Board Vice Chair, *Individual*
*Robert J. Budnitz, JCNRM Co-Chair**,** *Lawrence Berkeley National Laboratory*
Robert D. Busch, NCSCC Chair, *University of New Mexico*
Donald R. Eggett, FWDCC Chair, *AMEC Foster Wheeler, Inc.*
Herbert W. Massie, Member at Large, *Defense Nuclear Facilities Safety Board*
Carl A. Mazzola, ESCC Chair, *CB & I Federal Services*
N. Prasad Kadambi, RP3C Chair & ISO & ANSI Liaison, *Individual*
James O'Brien, NRNFCC Chair, *U.S. Department of Energy*
*Charles (Chuck) H. Moseley, Member at Large, Individual
*Mathew M. Panicker, Member at Large, *U.S. Nuclear Regulatory Commission*
William Reuland, LLWRCC Chair, *Individual*
*R. David Sachs, Member at Large, *Individual*
Andrew Smetana, SRACC Chair, *Savannah River National Laboratory*
Patricia (Pat) A. Schroeder, Standards Board Secretary, *American Nuclear Society*
*Donald J. Spellman, IEEE/NPEC Liaison, *Individual*
William M. Turkowski, Member at Large, *Westinghouse*
*Edward Wallace, Member at Large, *Individual*

**Participated by teleconference for at least a portion of the meeting.*

Voting Members Absent:

James K. August, Member at Large, *Southern Nuclear Operating Company*

Guests:

Michaele Brady Raap, ANS President, *Pacific Northwest National Laboratory*
Gene Carpenter, *U.S. Nuclear Regulatory Commission*
John Fabian, *American Nuclear Society*
Eugene S. Grecheck, ANS President-Elect, *Individual*
Mark Linn, *Oak Ridge National Laboratory*

Next meeting: November 10, 2015, during the ANS winter meeting at the Marriott Wardman Park, Washington, D.C.

1. Welcome and introductions

Standards Board Chair George Flanagan called the meeting to order and introductions were made.

2. Approval of agenda

The agenda was approved as presented allowing the chair the flexibility to move agenda items around as necessary.

3. SB Chair Report
Chairman George Flanagan expressed concern that several standards committees were having trouble finding members and that meeting participation was down. Members acknowledged that many organizations' travel budgets were reduced and didn't permit travel to attend committee meetings. Donald Eggett added that the ANS Operation and Power Division's membership dropped 7% in the last year. Members recognized multiple issues adding to the challenge of volunteer participation.

A. Priority Standards
Pat Schroeder explained that the priority survey that members recently received for review and comment was prepared to gain broad input to help finalize the priority list and set direction for our program of work. The priority survey used the priority list prepared by Donald Spellman with input from the SB. The survey would be issued to all ANS members, available on the ANS home page, and posted to the ANS LinkedIn Group. The survey software being using provided great flexibility to sort responses from specific segments of the industry, membership divisions, etc. Schroeder added that the ANS Executive Committee was interested in the results of this survey.

Action Item 6/2015-01: Pat Schroeder to prepare a summary of responses to the priority survey and provide to the SB and the ANS Executive Committee. Due Date: August 31, 2015

B. R71.4.1(n) Rule Change by the Bylaws and Rules Committee (BRC)
Flanagan reported that the BRC was concerned with consensus committee chairs having a vote on the SB because they were not appointed by the ANS president. Flanagan added that the BRC conceded on consensus committee chair voting privileges but provided a suggested change to Rule 7.1.4(n) that addressed the SB membership. Flanagan provided members a copy of the changes proposed by the BRC (see Attachment 1). Steven Stamm provided members some background on the BRC review of the rule that addressed SB membership. He explained that the BRC review of the rule was initiated by a request from the SB to approve changes to Rule 7.1.4(n). He stated that the significant change was proposed by Donald Spellman when he was the SB chair to give voting privileges to special committee chairs. Additional editorial changes were also proposed and submitted to the BRC. The BRC denied voting privileges of special committee chairs and questioned consensus committee chair voting privileges. The changes on Attachment 1 included those proposed by Spellman and those proposed by the BRC. It was recognized that it was difficult to decipher who made the changes. Several members were not in agreement with the proposed changes made by the BRC. Pat Schroeder was requested to issue a ballot to approve the BRC changes. Pat Schroeder's offered to provide members a version of the rule showing only the proposed changes from the BRC when issued for ballot.

Action Item 6/2015-02: Pat Schroeder to issue a ballot for approval of the BRC changes to Rule 7.1.4(n) on the SB membership. Due Date: July 1, 2015

C. ANS Strategic Plan
Flanagan provided members a copy of the ANS Strategic Plan that addressed standards. He reported that the SB was asked to respond to the ANS Strategic Plan (Attachment 2) by identifying how current and/or future standards activities support the ANS Strategic Plan. Members were informed that the ANS Executive Committee asked that the SB develop its own strategic plan to direct its work. The SB was asked to provide the strategic plan to the Board of Directors prior to the ANS winter meeting. Schroeder added that the results of the survey may help to guide the direction for the plan.

Action Item 6/2015-03: George Flanagan (Policy Task Group) to develop the ANS Standards Committee Strategic Plan and provide to the ANS Executive Committee. Due Date: October 1, 2015

4. Secretary Report

A. Staff Report/Sales Report (Attachment 3)
Pat Schroeder summarized the written report (Attachment 3). Several items were highlighted. Schroeder reported that seven standards had been published in the last six months of which one of the standards was 300 pages and another over a 100 pages. She added that ANS averaged publication of four to five standards a year; publication of seven in the last six months represented a significant increase. Schroeder recognized a substantial increase in revenue from the ANS online store over the previous report in part due to the number of standards recently published.

B. ANS Workspace Update
Schroeder reported that additional members continued to be added to the ANS Workspace. Over 500 user accounts had been created; another 100 were anticipated to be added. Schroeder stated that there was a bit of a challenge to acquire current working group rosters and to get working group members to activate their account. Additional details on the progress of the ANS Workspace can be found in Attachment 3.

C. New Standards Product (Redlines)
Schroeder explained that ANS was considering offering redlines (tracked changes from one version of a standard to the next) for revised standards as a new product available for purchase. She stated that she had received a couple of inquiries regarding the availability of redlines or a document with a list of changes made to a standard. While it was easy to run a comparison of two documents to create a redline, she was concerned that the comparison would track more changes than necessary and may need a review by a technical expert to decipher. Schroeder suggested that she prepare a redline of changes made to ANSI/ANS-5.1-2014, "Decay Heat Power in Light Water Reactors," from the 2005 version as a trial. Robert Busch, Andrew Smetana, and William Turkowski offered to evaluate the redline.

Action Item 6-2014-04: Pat Schroeder to prepare a redline comparison of ANSI/ANS-5.1-2005 to ANSI/ANS-5.1-2014. Due Date: July 1, 2015

Action Item 6/2014-05: Robert Busch, Andrew Smetana, and William Turkowski to review and evaluate the redline of ANSI/ANS-5.1-2014. Due Date: July 31, 2015

5. New Standards Committee and Staff Positions

A. Standards Coordinator (from Task Group Charter & Assignment List) (Attachment 4)
Steven Stamm explained the purpose of the standards coordinator position was to review Project Initiation Notification Systems (PINS) forms before issuing to the SB to ensure that committee duplication of effort does not occur and that the proposed standard does not conflict with those from other standards development organizations (SDOs). This position was added to theB TGs. Stamm stated that he recently became aware of this position, had not been fulfilling this role, and questioned whether he had sufficient knowledge to make this judgement. Spellman explained that he added this position to make sure someone with knowledge reviewed PINS for potential overlap. James O'Brien expressed concern with working groups knowing all of the related standards and miscellaneous documents to insure consistency when writing a standard. He questioned who should be providing working groups this direction. Flanagan explained this position as a technical coordinator. Flanagan

proposed that we adopt Stamm's suggestion to remove the "standards coordinator" position and ask consensus committee chairs to review PINS for the potential need for coordination with another committee. The following motion was made.

> **MOTION:** to drop the position of standards coordinator and admonish those that review the standard to review and ensure that relevant standards are cited.

After discussion, the motion was amended as follows:

> **AMENDED MOTION:** To drop the position of standards coordinator from the Standards Board task group list and require that the consensus committee chairs review the current list of active and in progress standards against new PINS forms to ensure that impacted standards are cited.

The motion was approved with one abstention.

Action Item 6/2014-06: Pat Schroeder to provide instruction to consensus committee chairs emphasizing the importance of identifying related standards and other industry efforts on the PINS forms. Due Date: July 31, 2015

B. Standards Manager vs. Standards Administrator Position Responsibilities
Schroeder explained the division of responsibilities between the new standards manager position and the standard administrator position. Although a team approach would be employed, the manager would be responsible for policy and procedural issues, facilitating of standards editing and publication, public inquiries and requests, grant-related activities, and preparation of articles for *Nuclear Standards News*. The administrator would be responsible for support of Subcommittee 6 of the International Organization of Standardization (ISO) Technical Committee 85 and special projects. Over time, the administrator would take over the role of secretary to several consensus committees. The manager would remain the point of contact for the ANS/American Society of Mechanical Engineers (ASME) Joint Committee on Nuclear Risk Management (JCNRM) and the Nuclear Risk Management Coordinating Committee (NRMCC).

6. Standards Service Award

A. SB Concurrence of 2015 Standards Service Award Recipient
Donald Spellman announced Jerry Hicks and Donald Wakefield as the nominated recipients for the 2015 Standards Service Award. A brief summary of each candidate's contributions was provided. The following motion was made.

> **MOTION:** for the Standards Board to concur with the recommendation of Jerry Hicks and Donald Wakefield as the 2015 recipients of the Standards Service Award.

The motion was approved unanimously.

B. Appointment of 2016 Standards Service Award Selection Committee
A decision was made to postpone the appointment of Standards Service Award Selection Committee members to the November meeting to be consistent with the Policy on Process for Nominating, Evaluating, Selecting and Presenting the ANS Standards Service Award.

7. Consensus Committee Balance of Interest Certification (Attachment 5)
The consensus committee balance of interest reports were review. The following motion was made:

> **MOTION:** to approve the balance of interest reports as presented with a request to confirm Donald Eggett's category.

The motion was approved unanimously.

Action Item 6/2015-07: Pat Schroeder to confirm with Donald Eggett if the recent merger of his company changes his balance of interest classification from "consultant" to "architect-engineer." Due Date: June 30, 2015

Robert Budnitz explained that ASME's policy on balance of interest differed from the ANS policy. ASME's policy allowed multiple members from the same company to each have a vote while ANS policy required individuals from the same company to share a vote unless a justification was provided and approved by the SB. Budnitz further explained that a recent merger of two participating organizations left the JCNRM with four members from Jensen Hughes. He also recognized that the JCNRM had three members from Westinghouse. Budnitz confirmed that the JCNRM remained in compliance with American National Standards Institute and ASME requirements, but public perception was a consideration that would be addressed by the JCNRM at their next meeting.

Action Item 6/2015-08: Robert Budnitz to report back to the SB the decision made by JCNRM on multiple representation. Due Date: September 30, 2015

8. Cybersecurity Impact to ANS Standards
Steven Stamm explained that a question was raised whether ANS should develop a standard on cybersecurity. While he recognized that this was typically an area that Institute of Electrical and Electronics Engineers (IEEE) addressed, ANS typically addressed the high-level, safety criteria in its design criteria even if the detailed criteria were in the purview of another SDO. For example, we identify what systems/components are required to meet certain ASME, IEEE, and ASTM International standards. We should do the same with cybersecurity. Spellman was aware that IEEE was developing a standard on cybersecurity under their Nuclear Power Engineering Committee (NPEC). Gene Carpenter confirmed that the U.S. Nuclear Regulatory Commission (NRC) had work in progress on cybersecurity. Regulation 10 CFR 73.54 was identified as the NRC requirement on cybersecurity. Carpenter added that we would be seeing more from the NRC in this area in the years to come. Sentiments on this topic were mixed due to overlap with other societies and security issues. Spellman was asked to check with IEEE NPEC about the possibility of developing a joint standard on cybersecurity. The LLWRCC and RARCC chairs were asked to consider citing regulation 10 CFR 73.54 as an approach to include high-level cybersecurity requirements in its safety criteria standards.

Action Item 6/2014-09: Donald Spellman to check with IEEE/NPEC about the possibility of developing a joint standard on cybersecurity. Due Date: September 1, 2015

Action Item 6/2014-10: The LLWRCC and RARCC chairs to consider citing regulation 10 CFR 73.54 as an approach to include high-level cybersecurity requirements in its safety criteria standards. Due Date: September 1, 2015

9. Plan/ Progress of High Priority New Standards

A. ANS-30.2, Proposed Standard on Structures, Systems, and Components (SSC) Classification [Related to Action Item 6/2014-14] (Attachment 6)
Donald Spellman stated that he needed direction from the SB on the scope of a SSC classification standard to make sure he had the right people on the working group. He reviewed existing documents that included SSC classification. The proposed new standard would be risk informed and performance based. Spellman asked for the SB to provide him a list of how many boxes he should have and what they were. He also asked for each consensus committee chair to provide him the name of a potential working group member. Spellman was directed to review the introduction to the new NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," (Part 0) as a guide which recommends a four-box evaluation process. It was recognized that NUREG-0800 applied only to power reactors. Members discussed how classification was handled internationally. Spellman was directed to focus on power reactors to move forward as a basis for new reactor designs.

Action Item 6/2015-11: Donald Spellman to review the introduction to the new NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," (Part 0) as a guide which recommends a four-box categorization process as a possible option for ANS-30.2--proposed standard on SSC classification. Due Date: August 1, 2015

Action Item 6/2015-12: Consensus committee chairs to provide Donald Spellman the name of a potential working group member for the ANS-30.2 Working Group. Due Date: August 1, 2015

Gene Carpenter informed members of a special session on new reactor concepts and licensing being held in parallel to the SB meeting. The session included presentations from NRC staff members that he suggested would be of interest to members. Pat Schroeder was asked to locate the presentations and provided to SB members.

Action Item 6/2015-13: Pat Schroeder to request presentations of the special session on new reactor concepts and licensing and provide to SB members. Due Date: June 30, 2015

B. ANS-30.1, Risk-Informed and Performance-Based Nuclear Safety Design for Nuclear Power Plants
Mark Linn explained the reason for a change to the ANS-30.1 PINS form (Attachment 7) was a suggestion from a new working group member from NuScale who had concerns with the word "process" in the initial PINS. He confirmed that classification was included on the PINS. Linn stated that they were making progress on the draft. Members discussed the possibility of a title change to clarify who the standard was for. Linn indicated that none of the comments received were problematic and committed to addressing all comments from the SB review of the revised PINS form as soon as possible.

10. ANS Value to the Industry as a SDO
Members felt that this topic was adequate addressed in other agenda items such 3 A, 3 C, and 9. Further discussion was deemed unnecessary.

11. Action Item Reports

A. Conformity Assessment Business Case [Action Item 6/2012-17] (Attachment 8)
Prasad Kadambi stated that he prepared a list of observations and a draft white paper on establishing a conformity assessment program. He recognized that the white paper was not a business case. He believed that a conformity assessment program addressed the ANS Strategic Plan to support the industry. He acknowledged challenges to creating a conformity assessment program, but he believed that strategically it made sense. He suggested that ANS could use the standardization model from the aerospace industry as a template. Kadambi asked for a recommendation from the SB to move forward with a conformity assessment plan; minimally he would like for a TG of the SB to be appointed. Gene Carpenter thought that it would be difficult to harmonize a conformity assessment program because there were numerous regulating bodies and countries setting regulations. Kadambi felt that harmonization in this area was underway though the ISO Working Group 4, Management Systems and Conformity Assessment, that he was a member of. William Reuland posed several questions that he would want answered before he supported initiation of a conformity assessment program. Others expressed the sentiment that a convincing argument had not been made to support the need for a conformity assessment program and felt the action item should be closed.

The following motion was made:

MOTION: To close Action Item 6/2012-17 since a business case had not been provided.

The motion passed unanimously.

B. ANS Professional Division Representative Program [Action Item 6/2014-24 for Internal Communications TG]
William Turkowski explained that he was tasked with re-establishing a professional division representative program that was created under the now dissolved Nuclear Facilities Standards Committee. In this effort, he was working with Hans Gougar, Chair of the ANS Professional Divisions Committee (PDC). Carl Mazzola reported that he spoke to Gouger at the PDC meeting and that Gouger would be contacting Turkowski to help with appointing liaisons. Donald Eggett reported that he mentioned this program to the Operations and Power Division and that interest was expressed. This action item remained open.

C. Status of Standards Training Program [Action Item 6/2014-22 Creating of Presentations]; [Action Item 11/2014-13 Training Assignments] (Attachment 9); and [Action Item 11/2014-14 Appointment of Training Instructors]
William Turkowski reported that three presentations had been completed. George Flanagan stated that he had previously used the presentations that had been completed and felt they were very good. He expected to use again. Turkowski vowed to work with Steven Stamm to finalize the remaining presentations.

Stamm provided his perspective on the goals of the training program. Robert Busch gave his opinion as an instructor that online, self-run training modules needed to be brief; he suggested 10-minute bites. Stamm indicated that this was too short and therefore we would have to go to instructor-led webcast sessions. Stamm asked members for their thoughts on whether the training matrix approach should be used to designate required Standards Committee members to participate in specific training modules. SB members agreed that an attempt should be made to require participation.

Action Item 6/2015-14: Consensus committee chairs to complete the Standards Training Package Application Matrix and provide back to Steven Stamm and Pat Schroeder.
Due Date: September 1, 2015

Action Item 6/2015-15: Pat Schroeder to establish a schedule of Workspace live demos with one a month.
Due Date: July 15, 2015

D. Guidance for What Goes Into a Standard [Action Item 6/2014-15]
Steven Stamm reminded members that the guidance document of what goes into a standard was issued to the SB for comment a number of months ago. Only minor comments were received. The last few comments needed to be incorporated and then the guidance would be issued. The action item remained open.

E. Defense-in-Depth (DID) White Paper [Next step to Action Item 6/2014-08]
James O'Brien informed members that an effort was underway by the NRC on DID that could be useful in developing a DID white paper. The action item remained open to allow incorporation of information from the NRC in the ANS white paper on DID.

Action Item 6/2015-16: Steven Stamm and Gene Carpenter to review the NRC white paper on DID to be issued in August 2015 and formulate a plan for the ANS approach (Action Item 6/2014-08).
Due Date: October 1, 2015

F. Appointment of Maintenance Coordinators [Action Item 6/2014-03] OPEN for FWDCC, NRNFCC, RARCC
Donald Eggett stated that an action item was assigned for a member of the Fuel, Waste, and Decommissioning Consensus Committee (FWDCC) to be appointed maintenance coordinator for the FWDCC. George Flanagan stated that the Research and Advanced Reactors Consensus Committee (RARCC) would be appointing two members as maintenance coordinators – one for research reactors and one for advanced reactors. Maintenance coordinators had already been appointed for the Environmental and Siting Consensus Committee (ESCC), JCNRM, Large Light Water Reactor Consensus Committee (LLWRCC), Nuclear Criticality Safety Consensus Committee (NCSCC), and Safety and Radiological Analyses Consensus Committee (SRACC). The action item remained open for the FWDCC, NRNFCC, and RARCC.

G. Consideration of Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Standard within the LLWRCC (Attachment 10) [Action Item 11/2014-01]
Members reviewed the response provided by William Reuland via email to address the action item to consider an ITAAC standard within LLWRCC. Reuland response concluded that the subject of ITAAC was too great to address in one standard by the LLWRCC. (NRC ITAAC information is available on their website.) Members discussed recent events that may warrant a standard in this area and existing industry documents. Members agreed that a standard in this area would require working with the Nuclear Energy Institute (NEI). A few members agreed that an area that may be of value was a writing template. Stamm indicated that we needed to specify that any ITAAC standard would be written for new designs so that we don't cause industry concerns that our efforts might impact designs that have or are currently going through the licensing process. Turkowski offered to get Westinghouse's input on this subject as well as industry through NEI. This action item remained open.

Action Item 6/2015-17: William Turkowski to check with the Westinghouse licensing department for their input on whether there is value in a standard for new designs that would provide an ITAAC writing template or where in the ITAAC process would benefit from standardization. Additionally, input to be sought from NEI.
Due Date: September 1, 2015

H. Decay Heat Standard/ANS-5.1 [Action Item 11/2014-15 NRC Endorsement] (Attachment 11); [Action Item 11/2014-16 Comparison]; and [Action Item 11/2014-17 Article]
Andrew Smetana reported that he hadn't heard back from Donald Palmrose with the NRC on endorsement of the current decay heat standard – ANSI/ANS-5.1-2014, "Decay Heat Power in Light Water Reactors." Smetana stated that he hadn't had an opportunity to talk to ANS-5.1 Working Group Chair Ian Gauld about preparing an article on ANSI/ANS-5.1-2014. All action items remained open.

Herbert Massie suggested that NEI should be informed of the release of the 2014 version reducing the conservatism.

Action Item 6/2015-18: George Flanagan to inform NEI/Jim Riley that the conservatism in ANSI/ANS-5.1-2014, "Decay Heat Power in Light Water Reactors," was reduced.
Due Date: August 1, 2015

I. Glossary Update [Action Item 11/2014-12]
Steven Stamm reported that he needed additional time to complete the glossary update. The action item remained open.

J. Risk-Informed, Performance-Based Principles and Policy Committee (RP3C) Task Group Report on Creating a beyond design basis event (BDBE) Standard [Action Item 11/2014-11] (Attachment 12)
Prasad Kadambi reported that the action item on creating a BDBE standard was assigned at yesterday's RP3C meeting. RP3C members tasked with this action included Kadambi, Gerry Kindred, and Robert Youngblood. This action item remained open.

K. Young Member Group (YMG) and North American Young Generation in Nuclear (NA-YGN) Solicitation [Action Item 11/2014-7&8]
Pat Schroeder requested an extension until August to complete this action item. This action item remained open.

L. Professional Division Support with Delinquent ANS Standards [Action Item 11/2014-05]
George Flanagan reported that we had reduced the number of delinquent standards but that the PDC was ready to help if needed. Members agreed to close this action item.

M. Concurrence of Completed Action Item List (Attachment 13)
Members were asked to review the action item list (Attachment 13) and specifically those in green font to concur that they were closed. Members agreed that these action items had been completed and should be closed.

12. Student Section Associate Membership Report (Attachment 14)
Pat Schroeder explained that Steven Stamm requested an agenda item be included in all SB bi-annual meeting agendas to track the progress/activities of associate members. Stamm would like for consensus committee chairs to report on associate member activities at SB meetings. Stamm stated that he would suggest a solicitation every two years and would like a form prepared to solicit feedback from associate members. (Action Item 11/2014-07 remained open for a solicitation to students every other year.)

Action Item 6/2015-19: Pat Schroeder and Steven Stamm to create a form to solicit feedback from associate members.
Due Date: September 1, 2015

13. RP3C Report

A. Request for Name Change
Prasad Kadambi asked that the RP3C name be formally be changed from the Risk-informed and Performance-based Principles Policy Committee to the Risk-informed, Performance-based Principles and Policy Committee. Members had no problem with this request.

B. RP3C Pilot Program Update [Action Item 11/2014-20]
Kadambi reported on the RP3C meeting held the previous day. He explained that ANS-30.1 Working Group Chair Mark Linn asked for support to address specific questions. An RP3C TG was established to address Linn's questions.

Kadabmi asked that members think of the Risk-Informed and Performance-Based (RIPB) Plan to be a virtual three-ring binder that would exist as an electronic document in Workspace. Kadambi reviewed the RIPB Plan (Attachment 15) and explained the virtual binder. He suggested that this be considered the draft of the RIPB Plan directed by the RP3C Bylaws. Steven Stamm stated that this would not replace the PIPB Plan; but, the virtual binder approach should be done on a pilot basis and then the plan could be developed based on the pilot results.

Action Item 6/2015-20: RP3C to address ANS-30.1 WGC Mark Linn's questions.
Due Date: November 1, 2015

Action Item 6/2015-21: RP3C to pilot the Standards Application Platform with ANS-30.1, "Risk-Informed and Performance-Based Nuclear Power Plant Design Process."
Due Date: November 1, 2015

14. Consensus Committee Chair Reports

A. Environmental and Siting Consensus Committee (ESCC) (Attachment 16)
ESCC Chair Carl Mazzola updated the SB on committee activities. He reported that PINS forms were in development for two projects, seven standards projects were in development, one standard was at ballot, and one standard had just been approved. He reported that a recommendation was made to incorporate proposed standard ANS-2.31, "Standard for Estimating Extreme Precipitation at Nuclear Facility Sites," into ANS-2.8, "Determine External Flood Hazards for Nuclear Facilities." Mazzola recognized five standards that fell in the delinquent category but noted that efforts were underway to perform maintenance on all. Budnitz added that the JCNRM standards leaned heavily on ANSI/ANS-2.29-2008, "Probabilistic Seismic Hazard Analysis." See full details of committee activities in Attachment 16.

B. Fuel, Waste, and Decommissioning Consensus Committee (FWDCC) (Attachment 17)
FWDCC Chair Donald Eggett reported that the FWDCC held a very productive meeting the previous day. Many action items were assigned to address maintenance on delinquent standards. Action items were also assigned to prepare responses to inquiries. He expected that responses would be drafted within 45 days. Eggett added that a total of 23 action items had been assigned. Carl Mazzola suggested Ben Cross as a possible working group chair of ANS-57.9, "Design Criteria for an

Independent Spent Fuel Storage Installation (Dry Type)." Eggett asked Mazzola to provide him Cross's contact information. See full details of committee activities in Attachment 17.

Action Item 6/2015-22: Carl Mazzola to provide Donald Eggett contact information for Ben Cross as a possible candidate to lead ANS-57.9, "Design Criteria for an Independent Spent Fuel Storage Installation (Dry Type)."
Due Date: June 30, 2015

C. Joint Committee on Nuclear Risk Management (JCNRM) (Attachment 18)
JCNRM Co-Chair Robert Budnitz reported that ASME/ANS RA-S-1.2-2014, "Severe Accident Progression and Radiological Release (Level 2) PRA Standard for Nuclear Power Plant Applications for Light Water Reactors (LWRs)," and ANS/ASME-58.22-2014, "Requirements for Low Power and Shutdown Probabilistic Risk Assessment," had been issued for trial use and pilot application. Several pilots were in works and feedback would be provided to the JCNRM. The standard in development for advanced light water reactors was expected to be issued soon. The next edition of the Level 1 combined standard was underway and expected to be issued by the end of 2016. Budnitz added that a grant was awarded for use by members that did not have other support. Budnitz also reported that there had been an infusion of young professionals that had made an enormous positive impact. Members were informed that the JCNRM was establishing several international working groups. Schroeder reported that the licensing agreement and business agreement for the joint committee was in final format and ready for the ANS executive director to sign. It was her understanding that ASME management had no other concerns with it. See full details of committee activities in Attachment 18.

D. Large Light Water Reactor Consensus Committee (LLWRCC) (Attachment 19)
LLWRCC Chair William Reuland provided members a report of activities. He stated that four projects were in considerations and would be initiated if a working group chair was found. The emergency preparedness (EP) standards did not have support from NEI. Schroeder added that Evan Lloyd just sent an email the previous day resigning from the EP subcommittee chair position but offered a suggestion for a replacement. Budnitz stated that he had recently talked to James August regarding ANS-3.13, "Nuclear Facility Reliability Assurance Program (RAP) Development," and August had committed to completing another draft in the next few months. The ANS-18.1 Working Group had be reinvigorated and was holding a kick-off meeting the following day and would be setting a path forward for a revision of ANSI/ANS-18.1-1999, "Radioactive Source Term for Normal Operation of Light Water Reactors." Reuland added that the Electrical Power Research Institute (EPRI) was close to finishing a report and would be presenting their data which was thought to be sufficient to update the standard. Several additional standards were in development. See full details of committee activities in Attachment 19.

Prasad Kadambi and Eggett were asked to identify standards in development of interest to utilities and bring this to the attention of the Special Committee on Utility Engagement to encourage their participation.

Action Item 6/2015-23: Prasad Kadambi and Donald Eggett to identify standards in development that show value added to utilities and inform the Special Committee on Utility Engagement to encourage their participation.
Due Date: September 1, 2015

Chuck Moseley added that the ANS-3.2 Working Group would be reforming to review ANSI/ANS-3.2-2012, "Managerial, Administrative, and Quality Assurance Controls for the Operational Phase of Nuclear Power Plants." He anticipated that a revision would be considered.

E. Nonreactor Nuclear Facilities Consensus Committee (NRNFCC) (Attachment 20)
James O'Brien provided a brief report. He stated that ANS-3.14, "Process for Aging Management and Life Extension of Nonreactor Nuclear Facilities," was making good progress. ANS-57.11 "Integrated Safety Assessments for Fuel Cycle Facilities," remained a high priority of the NRC. O'Brien reported that a draft of ANS-57.11 had been completed and reviewed by the working group. He believed that the draft would be issued for a preliminary review to the NRNFCC soon. O'Brien added that the NRC was holding off on updating their regulatory guide until the standard was done. Lastly, he stated that he would be meeting with NRNFCC Vice Chair Jeffery Brault to discuss future projects. See full details of committee activities in Attachment 20.

F. Nuclear Criticality Safety Consensus Committee (NCSCC) (Attachment 21)
Robert Busch reported that the revision of ANS-8.20, "Nuclear Criticality Safety Training for Fissionable Materials Operations Outside Reactors," was delayed so a reaffirmation was issued. Other items of significance reported was a revision of ANSI/ANS-8.27-2008, "Burnup Credit for LWR Fuel," that was currently at ballot and the resignation of Lon Paulson as ANS-8 Subcommittee Chair; Brian Kidd was approved as his replacement. See full details of committee activities in Attachment 21.

G. Research and Advanced Reactors Consensus Committee (RARCC) (Attachment 22)
RARCC Chair George Flanagan reported that five standards were in development. Drafts had been completed of ANS-20.1, "Nuclear Safety Criteria and Design Criteria for Fluoride Salt-Cooled High-Temperature Reactor Nuclear Power Plants," and ANS-54.1, "Nuclear Safety Criteria and Design Process for Liquid-Metal-Cooled Nuclear Power Plants." The draft of ANS-54.1 had been issued to the working group for approval and would then be issued to the RARCC for ballot. All standards in the delinquent category were in revision. A response to an inquiry was issued in March of this year. See full details of committee activities in Attachment 22.

H. Safety and Radiological Analyses Consensus Committee (SRACC) (Attachment 23)
See the SRACC written report available as Attachment 23.

15. Other Committee Reports

A. Standards Board Task Group (TG)

Policy TG Report
George Flanagan reported that the Policy TG had not met since the last meeting. Stamm confirmed that the Policy TG would be tasked with preparing the strategic plan. An action item had been assigned earlier for this task. See Action Item 6/2015-03.

Priority TG Report
As noted earlier, Donald Spellman had prepared a priority list of standards with input from SB members. The list was used to develop a survey to solicit input from members and nonmembers through social media. The survey would be issued shortly and was hoped to provide guidance on setting priorities for the program of work for the Standards Committee.

External Communications TG Report
Herbert Massie stated that the liaison list had not been updated recently. He received a report from the National Fire Protection Association liaison which he shared (see Attachment 24). With Massie's term on the SB coming to an end, he would need to be replaced as the External Communications TG Chair. Ed Wallace was recommended to take over.

Action Item 6/2015-24: George Flanagan to ask Ed Wallace to take over for Herbert Massie as External TG Chair.
Due Date: August 1, 2015

Sales TG Report
Steve Stamm and David Sachs had nothing to report on behalf of the Sales TG.

Internal TG Report
Activities and progress of the Internal Communication TG were discussed in 11 B & C under action item reports.

B. Liaison reports
Liaison reports from those members who have information to report on activities from other committees, organizations.

Nuclear Energy Standards Coordination Collaborative (NESCC) Report
Prasad Kadabmi provided a brief report from the NESCC meeting. He stated that the NRC suggested that NEI documents part of regulatory references should be made into consensus standards.

NRMCC Report
As for the NRMCC, Kadambi reported that they were trying to update the strategic plan; the current version was issued in 2009.

ISO Report
Kadambi informed members that ISO Technical Committee 85/SC 6 held a very successful meeting prior to the ANS meeting. Several ANS proposals were received favorable. Additional proposals were in development from Germany, France, and the Republic of Korea. Kadambi added that much progress had been made in recent years under the chairmanship of George Flanagan. Flanagan confirmed that SC 6 had been close to be taken away from the U.S. or possibly being dissolved a few years ago but had been reinvigorated. Lastly Flanagan informed members that he was coming to the end of his six-year term and was stepping down. Kadambi asked William Turkowski to see if Westinghouse would be interested in taking over as SC 6 Chair.

Action Item 6/2015-25: William Turkowski to check with Westinghouse to see if they might be able to appoint an individual to replace George Flanagan as ISO/TC 85/SC 6 Chair.
Due Date: September 1, 2015

Western European Nuclear Regulators Association (WENRA) Report
Robert Budnitz stated that there was nothing to report on behalf of WENRA.

16. Other business
Incoming ANS President Gene Grecheck addressed the SB. He thanked members for their support. He stated that like much of ANS, the ANS standards program needed to make sure they remain relevant. Grecheck reported on a recent meeting with the NRC. Much discussion was about technology. He stated that the NRC acknowledged they had a limited budget to offer financial support to SDOs as well as limited staff resources to support standards activities. Grecheck stated that collectively we need to find ways to add value. The NRC used their interaction with ASME as an example of how ANS could interact better. NRC suggested that ANS be more proactive in meeting with NRC to discuss standards matters. Current ANS President Mikey Brady Raap stated that we need to coordinate with NRC, know what's on their agenda, and use it to direct work. William Reuland expressed his opinion that some of the challenge in being relevant was due to the competition with NEI guidance documents. Brady Raap acknowledged positive feedback from the NRC on the joint effort with ASME on PRA standards. Carl

Mazzola explained that a Memorandum of Understanding (MOU) was prepared to establish a business relationship with NEI. Mazzola asked that Grecheck attempt to re-engage NEI to enter into an MOU with ANS related to standards.

Action Item 6/2015-26: Pat Schroeder to provide Carl Mazzola, George Flanagan, and Steve Stamm a copy of the draft ANS/NEI MOU to review before providing to Gene Grecheck.
Due Date: June 30, 2015

Brady Raap explained that they were working with the planning committee. All committees had been asked to prepare a mission statement. Since the Standards Committee has a number of projects and initiatives, a request was made to prepare a strategic plan to include details and strategies to achieve high-level goals to include what would be done within the next 12 months to achieve these goals. The plan should include a matrix for accountability. The planning committee would be providing all committees a template. Brady Raap suggested not feeling bound by the ANS Strategic Plan if not appropriate.

Grecheck explained that back in December 2013 an effort was initiated to reach out to the utilities with a substantial benefit package in exchange for a significant contribution. The effort did not succeed. Grecheck stated that they received feedback that ANS does not offer what they need. At this point, he recommended not basing planning on utilities. Hearing that ANS was not meeting the needs of utilities, the Utility Engagement Committee was looking to other avenues. Stamm suggested that Grecheck take a second look at the letter from the SB offering benefits to utilities as there may be items of interest to them. Grecheck suggested that the SB do the same and possibly update the proposed offerings. Members recognized the financial constraints that utilities faced.

Action Item 6/2015-27: Pat Schroeder to send Steven Stamm and George Flanagan a copy of the letter sent to Gene Grecheck with standards-related offerings for utilities to review and updated if necessary before providing back to Gene Grecheck.
Due Date: June 30, 2015

Action Item 6/2015-28: Steven Stamm and George Flanagan to review the letter sent to Gene Grecheck and review the standards-related offerings for utilities and update if necessary before providing back to Gene Grecheck.
Due Date: July 20, 2015

In discussion of the negative feedback from Grecheck and Brady Raap regarding the relevance of ANS standard when meeting with NRC, the following action items were assigned to gather additional information.

Action Item 6/2015-29: Pat Schroeder to forward members a link to the NESCC Database of Standards Referenced in Regulatory Documents.
Due Date: July 2015

Action Item 6/2015-30: George Flanagan to request feedback from ANS leadership on the usefulness of white papers provided to them in advance of the NRC meeting, to confirm that they were sufficient, and if not, to determine how the white papers should be revised to be beneficial.
Due Date: August 2015

17. Review of action items from this meeting
Pat Schroeder reviewed action items from the meeting and stated that they would be distributed in advance of the meeting minutes in draft format for review.

Action Item 6/2015-31: Pat Schroeder to distribute the action items in draft format as soon as possible. Due Date: June 20, 2015

18. Adjournment
The next meeting was confirmed for Tuesday, November 10, in Washington, D.C. at the Marriott Wardman Park.

There being no further business, the meeting was adjourned.

Report of Action Items

Action Item	Description	Responsibility	Status/Comments /Reassignments
6/2015-01	Pat Schroeder to prepare a summary of responses to the priority survey and provide to the SB and the ANS Executive Committee. Due Date: August 31, 2015	Pat Schroeder	OPEN
6/2015-02	Pat Schroeder to issue a ballot for approval of the BRC changes to Rule 7.1.4(n) on the SB membership. Due Date: July 1, 2015	Pat Schroeder	OPEN
6/2015-03	Action Item 6/2015-03: George Flanagan (Policy Task Group) to develop the ANS Standards Committee Strategic Plan and provide to the ANS Executive Committee. Due Date: October 1, 2015	Policy Task Group	OPEN
6/2015-04	Pat Schroeder to prepare a redline comparison of ANSI/ANS-5.1-2005 to ANSI/ANS-5.1-2014. Due Date: July 1, 2015	Pat Schroeder	OPEN
6/2015-05	Robert Busch, Andrew Smetana, and William Turkowski to review and evaluate the redline of ANSI/ANS-5.1-2014. Due Date: July 31, 2015	Robert Busch, Andrew Smetana, and William Turkowski	OPEN
6/2015-06	Pat Schroeder to provide instruction to consensus committee chairs emphasizing the importance of identifying related standards and other industry efforts on the PINS forms. Due Date: July 31, 2015	Pat Schroeder	OPEN
6/2015-07	Pat Schroeder to confirm with Donald Eggett if the recent merger of his company changes his balance of interest classification from “consultant” to “architect-engineer.” Due Date: June 30, 2015	Pat Schroeder	OPEN
6/2015-08	Robert Budnitz to report back to the SB the decision made by JCNRM on multiple representation. Due Date: September 30, 2015	Robert Budnitz	OPEN
6/2015-09	Donald Spellman to check with IEEE/NPEC about the possibility of developing a joint standard on cybersecurity. Due Date: September 1, 2015	Donald Spellman	OPEN

Action Item	Description	Responsibility	Status/Comments /Reassignments
6/2015-10	The LLWRCC and RARCC chairs to consider citing regulation 10 CFR 73.54 as an approach to include high-level cybersecurity requirements in its safety criteria standards. Due Date: September 1, 2015	LLWRCC Chair and RARCC Chair	OPEN
6/2015-11	Donald Spellman to review the introduction to the new NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," (Part 0) as a guide which recommends a four-box categorization process as a possible option for ANS-30.2--proposed standard on SSC classification. Due Date: August 1, 2015	Donald Spellman	OPEN
6/2015-12	Consensus committee chairs to provide Donald Spellman the name of a potential working group member for the ANS-30.2 Working Group. Due Date: August 1, 2015	Consensus Committee Chairs	OPEN
6/2015-13	Pat Schroeder to request presentations of the special session on new reactor concepts and licensing and provide to SB members. Due Date: June 30, 2015	Pat Schroeder	OPEN
6/2015-14	Consensus committee chairs to complete the Standards Training Package Application Matrix and provide back to Steven Stamm and Pat Schroeder. Due Date: September 1, 2015	Consensus Committee Chairs	OPEN
6/2015-15	Pat Schroeder to establish a schedule of Workspace live demos with one a month. Due Date: July 15, 2015	Pat Schroeder	OPEN
6/2015-16	Steven Stamm and Gene Carpenter to review the NRC white paper on DID to be issued in August 2015 and formulate a plan for the ANS approach (Action Item 6/2014-08). Due Date: October 1, 2015	Steven Stamm and Gene Carpenter	OPEN
6/2015-17	William Turkowski to check with the Westinghouse licensing department for their input on whether there is value in a standard for new designs that would provide an ITAAC writing template or where in the ITAAC process would benefit from standardization. Additionally, input to be sought from NEI. Due Date: September 1, 2015	William Turkowski	OPEN

Action Item	Description	Responsibility	Status/Comments /Reassignments
6/2015-18	George Flanagan to inform NEI/Jim Riley that the conservatism in ANSI/ANS-5.1-2014, "Decay Heat Power in Light Water Reactors," was reduced. Due Date: August 1, 2015	George Flanagan	OPEN
6/2015-19	Pat Schroeder and Steven Stamm to create a form to solicit feedback from associate members. Due Date: September 1, 2015	Pat Schroeder and Steven Stamm	OPEN
6/2015-20	RP3C to address ANS-30.1 WGC Mark Linn's questions. Due Date: November 1, 2015	Prasad Kadambi/ RP3C	OPEN
6/2015-21	RP3C to pilot the Standards Application Platform with ANS-30.1, "Risk-Informed and Performance-Based Nuclear Power Plant Design Process." Due Date: November 1, 2015	Prasad Kadambi/ RP3C	OPEN
6/2015-22	Carl Mazzola to provide Donald Eggett contact information for Ben Cross as a possible candidate to lead ANS-57.9, "Design Criteria for an Independent Spent Fuel Storage Installation (Dry Type)." Due Date: June 30, 2015	Carl Mazzola	OPEN
6/2015-23	Prasad Kadambi and Donald Eggett to identify standards in development that show value added to utilities and inform the Special Committee on Utility Engagement to encourage their participation. Due Date: September 1, 2015	Prasad Kadambi and Donald Eggett	OPEN
6/2015-24	George Flanagan to ask Ed Wallace to take over for Herbert Massie as External TG Chair. Due Date: August 1, 2015	George Flanagan	OPEN
6/2015-25	William Turkowski to check with Westinghouse to see if they might be able to appoint an individual to replace George Flanagan as ISO/TC 85/SC 6 Chair. Due Date: September 1, 2015	William Turkowski	OPEN
6/2015-26	Pat Schroeder to provide Carl Mazzola, George Flanagan, and Steve Stamm a copy of the draft ANS/NEI MOU to review before providing to Gene Grecheck. Due Date: June 30, 2015	Pat Schroeder	OPEN

Action Item	Description	Responsibility	Status/Comments /Reassignments
6/2015-27	Pat Schroeder to send Steven Stamm and George Flanagan a copy of the letter sent to Gene Grecheck with standards-related offerings for utilities to review and updated if necessary before providing back to Gene Grecheck. Due Date: June 30, 2015	Pat Schroeder	OPEN
6/2015-28	Steven Stamm and George Flanagan to review the letter sent to Gene Grecheck and review the standards-related offerings for utilities and update if necessary before providing back to Gene Grecheck. Due Date: July 20, 2015	Steven Stamm and George Flanagan	OPEN
6/2015-29	Pat Schroeder to forward members a link to the NESCC Database of Standards Referenced in Regulatory Documents. Due Date: July 1, 2015	Pat Schroeder	OPEN
6/2015-30	George Flanagan to request feedback from ANS leadership on the usefulness of white papers provided to them in advance of the NRC meeting, to confirm that they were sufficient, and if not, to determine how the white papers should be revised to be beneficial. Due Date: August 2015	George Flanagan	OPEN
6/2015-31	Pat Schroeder to distribute the action items in draft format as soon as possible. Due Date: June 20, 2015	Pat Schroeder	OPEN
11/2014-01	William Reuland to consider developing a new standard on ITAAC within the LLWRCC. (Reassignment of Action Item 6/2014-11). Due Date: November 2015	William Reuland	OPEN
11/2014-02	Pat Schroeder to add cumulative number of e-standards/print copies sold to the sales reports in the future. Due Date: June 1, 2015 (for next report provided before the June 2015 meeting)	Pat Schroeder	CLOSED
11/2014-03	Pat Schroeder to issue the revised reference policy and disclosure form for approval ballot to the SB after proofing. Due Date: December 31, 2014	Pat Schroeder	CLOSED
11/2014-04	Consensus committee chairs to issue letters of recognition to subcommittee chairs and their managers as appropriate. Due Date: As needed	Consensus committee chairs	On-going

Action Item	Description	Responsibility	Status/Comments /Reassignments
11/2014-05	George Flanagan to confirm details with Professional Divisions Chair Hans Gougar to implement professional divisions reviews of delinquent standards to determine appropriate maintenance action. (Flanagan to keep Glen Grecheck informed of this process.)	George Flanagan	CLOSED
11/2014-06	Donald Spellman to serve as the 2015 Standards Service Award Ad Hoc Committee Chair and to select two additional members to help with the selection.	Donald Spellman	CLOSED
11/2014-07	Pat Schroeder to send a broadcast to student section members on getting involved in standards every other year – next time to be July 2016. Due Date: July 31, 2016	Pat Schroeder	OPEN
11/2014-08	Pat Schroeder to create a similar solicitation broadcast to the YMG and NA-YGN. Due Date: August 31, 2015	Pat Schroeder	OPEN
11/2014-09	Herbert Massie to distribute the presentation he made at the Fuel Cycle Information Exchange Meeting to the SB.	Herbert Massie	CLOSED
11/2014-10	George Flanagan to provide Pat Schroeder the framework license document for distribution to the SB.	George Flanagan	CLOSED
11/2014-11	Prasad Kadambi and Ed Wallace to create a task group within the RP3C to address the issue of creating a BDBE standard and report back to the SB. The task group should use Steven Stamm's draft white paper (Attachment 6 of 11/2014 Minutes) as reference. This action item replaces Action Item 6/2014-13. Due Date: November 1, 2015	Prasad Kadambi, Ed Wallace	OPEN
11/2014-12	Steven Stamm and Donald Spellman to complete the identification of preferred terms and update the foreword in the glossary so that it could be issued for working group use. Due Date: November 1, 2015	Steven Stamm, Donald Spellman	OPEN
11/2014-13	Steven Stamm and Pat Schroeder to issue a request to consensus committee chairs to identify which webtraining sessions each of the volunteers under that consensus committee should be invited to attend. Due Date: June 30, 2015	Steven Stamm, Pat Schroeder	OPEN

Action Item	Description	Responsibility	Status/Comments /Reassignments
11/2014-14	Standards Board members let Steven Stamm and Pat Schroeder know if they can serve as primary instructor or backup instructor for webtraining sessions. Due Date: September 1, 2015	Standards Board members	OPEN
11/2014-15	Andrew Smetana to work with Gene Carpenter to determine the appropriate contact at NRC to discuss the possibility of updating the endorsement of the 1971 decay heat standard (ANS-5.1) in 10CFR50, Appendix K, to the recently approved version – ANSI/ANS-5.1-2014. [Follow up action item to 6/2014-01] Due Date: November 1, 2015	Andrew Smetena	OPEN
11/2014-16	Andrew Smetana to provide a comparison between the ANS-5.1 1971 draft and ANSI/ANS-5.1-2014 to the SB. Due Date: November 1, 2015	Andrew Smetana	OPEN
11/2014-17	Andrew Smetana to ask ANS-5.1 Working Group Chair Ian Gauld to prepare an article about the new version of ANSI/ANS-5.1-2014 for *Nuclear News* or other suitable ANS publication (Notes & Deadlines, *ANS News, Nuclear Standards News*) Due Date: November 1, 2015	Andrew Smetana	OPEN
11/2014-18	Consensus committee chairs to work with subcommittee chairs to prepare a short article about any standard in need of subject matter experts to be maintained or initiated. The article should include details of why the standard needs to be maintained (revision/reaffirmation) or initiated and include its importance and benefit to the industry, expertise needed, etc. Articles to be provided to Pat Schroeder. Due Date: as needed	Consensus committee chairs	On-going
11/2014-19	Pat Schroeder to work with the ANS Publication Information Department, Nuclear News staff, and ANS News staff to disseminate articles on ANS standards needing volunteer support from subcommittee chairs in appropriate ANS media/publications. Due Date: as needed	Pat Schroeder	On-going

Action Item	Description	Responsibility	Status/Comments /Reassignments
11/2014-20	RP3C to engage in a pilot program with one of the consensus committees to reach the objectives of the RIPB Plan.	RP3C	CLOSED (two new related action items opened to address ANS-30.1 questions and to pilot the RIPB Plan using the
11/2014-21	Pat Schroeder to add the RP3C Bylaw to the SB and RP3C workspaces.	Pat Schroeder	CLOSED
11/2014-22	Standards Board members to let George Flanagan and Pat Schroeder know if they are aware of any potential candidates (local or planning to attend) that could provide a presentation on standards at the ANS 2015 Student Conference at Texas A&M in April. An alternate may be to see if the ANS president was attending and could include information on standards or minimally provide a handout. Due Date: March 1, 2015	Standards Board members	CLOSED
11/2014-23	Donald Spellman to provide ANS leadership the ANS standards priority list in time for the RIC.	Donald Spellman	CLOSED
11/2014-24	Pat Schroeder to post the list of action items assigned during the meeting on the SB Workspace.	Donald Spellman	CLOSED
6/2014-01	Andrew Smetana to start a dialog with the NRC to effect the rulemaking process to replace the reference to the 1971 decay heat standard (ANS-5.1) in 10CFR50, Appendix K, with a reference to the most current standard. *(Note: This should include the discussion of whether the NRC prefers to use the 2005 version or the pending revision.)* DUE DATE: November 1, 2015	Andrew Smetana	OPEN
6/2014-03	Each consensus committee (CC) chair to appoint a maintenance coordinator to be responsible for tracking maintenance needs of each CC. DUE DATE: November 1, 2015	CC Chairs	OPEN for FWDCC, NRNFCC, RARCC NCSCC = Larry Wetzel JCNRM = Paul Amico ESCC = Leah Parks LLWRCC = Tim Meneely SRA = Keith Morrell
6/2014-08	Steven Stamm (with Gene Carpenter's support) to review SB comments on Donald Eggett's DID white paper and revise accordingly. DUE DATE: November 1, 2015	Steven Stamm	OPEN

Action Item	Description	Responsibility	Status/Comments /Reassignments
6/2014-14	Donald Spellman to form a working group with representation from multiple SDOs to develop a coordination of related standards activities on component classification. DUE DATE: November 1, 2015	Donald Spellman	OPEN
6/2014-15	Steven Stamm to prepare guidance on what goes into a standard and what goes into an appendix. Guidance may consider the 6 points discussed at the 6/17/14 SB meeting. Due Date: September 1, 2015	Steven Stamm	OPEN
6/2014-22	Internal Communications TG to prepare 5 training presentations and provide for member comments. Presentations include 1) overview of nuclear related standards, plus additional slides that address international aspects, and 2) ANS standards organization and staffing, 3) the standards development process, 4) Standards Committee policies and procedures, and 5) CC policies and procedures DUE DATE: November 1, 2015	Internal Communications TG	OPEN Three presentations completed.
6/2014-24	Internal Communications TG to review the old NFSC division liaisons list and reinstitute the ANS professional division representative program. (Old NFSC professional division liaison list to be provided to ICTG by Pat Schroeder.) DUE DATE: November 1, 2015	International Communications TG	OPEN
11/2013-18	All CC chairs to provide Donald Spellman a list of priority standards to be revised and or developed within their CC.	ANS CC Chairs	CLOSED
11/2012-04	Donald Spellman to begin development of one or more grants for ANS support. Projects to be considered for a grant proposal include ANS-2.8 (Flood Hazards), ANS-3.13 (Reliability Assurance Program), ANS-57.11 (Fuel Cycle Facilities), and advanced reactors.	Donald Spellman	On Hold (grant proposals not currently being accepted)
11/2012-17	Prasad Kadambi to prepare a business case for initiating an ANS conformity assessment program.	Prasad Kadambi	CLOSED (See 11A for details)

George Flanagan

ANS Standards Board Proposed Revision to ANS Rule B7.1.4 (n) related to the ANS Standards Board

ANS Rules
B7 - STANDING AND SPECIAL COMMITTEES
B7.1 - Standing Committees
B7.1.4 - Scope and Composition
B7.1.4 (n) ANS Standards Board
Page R19

(n) [66]ANS Standards Board — The ANS Standards Committee is composed of all persons engaged in standards development for the Society (i.e., the Standards Board, its consensus committees, special committees, subcommittees, and working groups). The chair and vice chair of the SB shall be the sole officers of the Standards Committee.

The Standards Board (SB)[66] is an ANS Standing Committee that provides policy and procedural direction for the standards activities of the Society and the ANS Standards Committee. Membership on t~~T~~he SB[66] shall be composed of[60]

- not fewer than six (6) nor more than ~~twelve~~ ten (~~12~~10) appointed members that are recommended by the chair of the SB and approved by the President of ANS. These appointed~~Fellows,Members, Student, Emeritus, or Honorary Life Members.~~[6160]members[60] shall have substantial interest and experience in the ~~d~~development and use of standards for the application of nuclear science and engineering;~~.~~
- ~~the chair of each of the consensus committees; and~~
- ~~any temporary voting member assigned by the chair of the SB and approved by the SB for a specific purpose and period of time.~~

Total voting membership of the SB should not exceed twenty (20).

shall include appointed members and the chair of each consensus committee, and

~~These~~ Aappointed members shall serve a three (3) year term, with the terms of approximately one third (1/3) of the members expiring at the close of each ANS Annual Meeting. No SB[66] member shall be a member of the ANS Board of Directors nor an ANS officer while serving on the SB[66], consistent with ANSI policy, which specifies that the SB[66] be kept separate from society governance.

The SB[66] is ~~also~~ expected to establish liaison relationships with other standards-developing and nuclear organizations for the purpose of communication and coordination of activities of mutual interest; these liaison personnel from outside ANS may serve on the SB[66] as non-voting members.[61]

A non-voting, Administrative Secretary of the SB[66], appointed by the

Executive Director, shall be responsible for the administration of the standards activities of the Society and the Standards Committee.

~~Under the supervision and control of the SB[66], a standards committee conducts all aspects of standards activities and interests within the Society and represents the SB[66] in activities with other organizations engaged in similar work. The standards committee is composed of all persons engaged in standards development for the Society. The chair and vice-chair of the SB[66] shall be the officers of the standards committee.~~

C~~There are also c~~onsensus committees are established within the s~~S~~tandards C~~c~~ommittee under the SB[66] to develop and ensure consensus as a basis for approval of proposed or revised standards, ~~and~~ to manage the development of proposed standards and revisions to existing standards, and to represent the SB in activities with other organizations engaged in similar work. ~~standards.~~ The chairs of each of the consensus committees shall serve as ex-officio voting members of the SB[66], whose terms are concurrent with those of the offices from which they serve.

From time to time, special committees of the SB are established to support long-term needs of the Standards Committee. ~~The chair of the SB may designate, subject to the concurrence of the members of the SB, the chair of any special committee as a voting member of the SB during the term of the special committee.~~

~~The standards committee and the consensus committees are not standing committees under these by-laws and rules.~~ The guidance and approval of the ANS Board of Directors shall be obtained on all matters of policy that may affect overall Society endeavors, and on the advisability of initiating work in new areas. The SB[66] shall confirm annually to the Board of Directors that members of the s~~S~~tandards c~~C~~ommittee are adequately qualified for their respective positions and that the membership of each consensus committee has an appropriate balance of ~~representation~~ interest in accordance with the accredited Rules and Procedures established by the ANS Standards[66] Board[67].

Mission Component 2 - Sharing Information and Advancements in Technology

Goals and Strategies

1. ANS and its members will be a leading source of nuclear science and technology information within the international science and technology community.

   The Society will pursue the following strategies regarding this goal:

   A. Support member interaction with the international science and technology community in order to establish the ANS as a credible and trustworthy source of information.
   B. Establish means for the exchange of technical information between ANS members and professional societies and other stakeholder organizations world-wide.
   C. Provide ANS members with forums to discuss topics important to the advancement and application of nuclear science and technology.

2. ANS will provide technical information in support of all applications of nuclear science and technology.

   The Society will pursue the following strategies regarding this goal:

   A. Undertake initiatives for the exchange of technical information among ANS members on applications of nuclear science and technology.
   B. Undertake initiatives for the exchange of technical information with professional societies and other stakeholder organizations world-wide.
   C. Provide technical information in support of educational and professional needs for countries planning nuclear science and technology programs.

3. Produce and maintain ANS consensus standards and promote their adoption as standards of choice by the nuclear science and technology community.

   The Society will pursue the following strategies regarding this goal:

   a. Promote ANS standards to the nuclear science and technology community and other relevant stakeholder groups.
   b. Identify and establish relationships with other appropriate organizations for standards development.
   c. Identify, evaluate and select standards for revision or development.
   d. Increase participation in the ANS standards development.

ANS Standards Staff/Secretary Report
June 2015

Standards Staff Addition

John Fabian has been added to ANS standards staff as the new Standards Administrator. John has worked at ANS for seven years most recently as Project Manager/Editorial Assistant for two ANS journals -- Nuclear Technology and Fusion Science and Technology. One of John's primary responsibilities will be support of our ISO subcommittee, TC 85/SC 6, on Reactor Technology. John will also work on standards-related projects and will provide assistance to our domestic standards program as time permits. With the additional staff member, ANS staff dedicated to standards activities now includes two full-time staff members and one part-time staff member.

Future Initiatives of Standards Staff

Staff efforts to be initiated include the development of a keyword grid to direct potential customers to standards of interest in the online ANS store. Working group and subcommittee chairs will be contacted directly with a request for keywords. Staff will begin a review of all policies, rules, and procedures to ensure consistency and update to recognize the use of the ANS Workspace for committee work. Staff will explore the use of digital object identifiers in ANS standards and the creation of redlines versions of revised standards. Software for maintaining volunteer records has just been updated. New features are being explored that can be utilized to aid in searching records to find potential subject matter experts for new projects.

Changes/Addition to Standards Products

A new look consistent with the ANS Branding Guide was unveiled for standards and Nuclear Standards News (NSN) in January of this year. A new e-product was initiated called NSN Brief. NSN Brief is an electronic broadcast providing subscribing members information about standards actions every other month.

ANS Standards Committee Workspace

The web-based Kavi Workspace initiated in 2014 for Standards Committee use has been fully implemented and includes 150 individual work sites for all committee levels and active accounts for more than 500 users (ANS Standards Committee members); 1100 documents have been posted and 125 ballots have been issued since Workspace was launched. Kavi will be rolling out real-time document collaboration to all its members by the end of 2015. The new feature will allow multiple authors to edit anywhere in a document with their contributions displaying for all users as they type. Real-time document collaboration will aid working group efforts in the development of draft standards.

Grant Awarded for PRA Standards

A grant proposal submitted to the U.S. Nuclear Regulatory Commission in 2014 to support volunteer travel and meeting-related expenses for the development of PRA standards was awarded on February 4, 2015. The grant was awarded in time to support volunteer travel to the JCNRM/NRMCC meetings held February 9-12, 2015, in Phoenix, Arizona.

ANSI Audit Scheduled for week of August 2015

The next ANSI audit has been scheduled for the week of August 3, 2015, and will be conducted remotely through electronic means. Preparation for the audit has already begun with the completion of a lengthy questionnaire to document how ANS addresses ANSI requirements. A pre-audit teleconference is scheduled for July 20, 2015. It is anticipated that five ANS standards approved in the last five years will be audited.

Standards Actions Facilitated Since the ANS Winter Meeting November 2014

The following standards project was initiated in 2015:

- ANS-15.11-201x, "Radiation Protection at Research Reactors" (revision of ANSI/ANS 15.11-2009)

The following standards and/or draft standards were issued for ballot and public review:

- ANS-3.11-201x, "Determining Meteorological Data for Nuclear Facilities" (revision of ANSI/ANS-3.11-2005; R2010)
- ANS-6.6.1-201x, "Calculation and Measurement of Direct and Scattered Radiation from LWR Nuclear Power Plants" (revision of ANSI/ANS-6.6.1-1987; R2007)
- ANS-10.8-201x, "Non-Real-Time, High-Integrity Software for the Nuclear Industry—User Requirements" (new standard)
- ANSI/ANS-57.1-1992 (R201x), "Design Requirements for Light Water Reactor Fuel Handling Systems" (reaffirmation of ANSI/ANS-57.1-1992; R2005)
- ANSI/ANS-59.51- 1997 (R201x), "Fuel Oil Systems for Safety-Related Emergency Diesel Generators" (reaffirmation of ANSI/ANS-59.51-1997; R2007)
- ANSI/ANS-59.52-1998 (R201x), "Lubricating Oil Systems for Safety-Related Emergency Diesel Generators" (reaffirmation of ANSI/ANS-59.52-1998; R2007)

Standards approved:

- ANSI/ANS-2.30-2015, "Criteria for Assessing Tectonic Surface Fault Rupture and Deformation at Nuclear Facilities" (new standard)
- ANSI/ANS-14.1-2004 (R2014), "Operation of Fast Pulse Reactors" (reaffirmation of ANSI/ANS-14.1-2004; R2009)
- ANSI/ANS-58.9-2002 (R2015), "Single Failure Criteria for Light Water Reactor Safety-Related Fluid Systems" (reaffirmation of ANSI/ANS-58.9-2002; R2009)

Standards published:

- ANSI/ANS-3.1-2014, "Selection, Qualification, and Training of Personnel for Nuclear Power Plants" (supersedes ANSI/ANS-3.1-1993; R1999)
- ANSI/ANS-5.1-2014, "Decay Heat Power in Light Water Reactors" (revision of ANSI/ANS-5.1-2005)
- ANSI/ANS-8.10-2015, "Criteria for Nuclear Criticality Safety Controls in Operations with Shielding and Confinement" (revision of ANSI/ANS-8.10-1983; R2012)
- ANSI/ANS-8.15-2014, Nuclear Criticality Control of Special Actinide Elements (revision of ANSI/ANS-8.15-1981; R2005)
- ANSI/ANS-8.19-2014, "Administrative Practices for Nuclear Criticality Safety" (revision of ANSI/ANS-8.19-2005)
- ANSI/ANS-15.16-2015, "Emergency Planning for Research Reactors" (revision of ANSI/ANS-15.16-2008)
- ANS/ASME-58.22-2014, "Requirements for Low Power and Shutdown Probabilistic Risk Assessment" (new trial use standard)
- ASME/ANS RA-S-1.2-2014, "Severe Accident Progression and Radiological Release (Level 2) PRA Standard for Nuclear Power Plant Applications for Light Water Reactors (LWRs)" (new trial use standard)

ISO/TC 85/SC 6 Progress Report

ISO TC 85/SC 6 on Reactor Technology will be meeting before the ANS Annual Meeting at the Grand Hyatt San Antonio from June 4-6, 2015.Delegates from Canada, France, Germany, Japan, Republic of Korea, Russian Federation, and the United States will be in attendance. Eight proposed international standards projects have been registered as active since ANS took over the secretary role of SC 6 in January of 2013. All are listed below with the relevant ANS standard indicated in parenthesis following the title:

- ISO/NP 18075, "Steady-State Neutronics Methods for Power-Reactor Analysis" (ANS-19.3)
- ISO/NP 18077, "Reload Startup Physics Tests for Pressurized Water Reactors" (ANS-19.6.1)
- ISO/NP 18156, "Technical Specification Guide for Decay Heat Computational Codes in Nuclear Reactors" (ANS-5.1)
- ISO/NP 18195, "Method for Justification of Nuclear Safety Fire Partitioning Efficiency in Water Cooled Nuclear Power Plants" (no comparable ANS standard)
- ISO/NP 18229, "Essential Technical Requirements for GEN IV Nuclear Reactors" (no comparable ANS standard)
- ISO/NP 18583, "Mobile Equipments for Emergency Intervention on Nuclear Installation" (no comparable ANS standard)
- ISO/NP 19226, "Determination of Neutron Fluence and Displacements per Atom (dpa) in Reactor Vessel and Internals" (ANS-19.10)
- ISO/NP 19492, "Technical Specifications for Research Reactors" (ANS-15.1)

Standards Sales Report

October 16, 2014 - May 15, 2015

Designation & Title of Standard	# Sold Paper	# Sold Electronic	Total Sales $
ANS-1-2000;R2007;R2012, Conduct of Critical Experiments	1	0	36.00
ANS-2.3-2011, Estimating Tornado, Hurricane, and Extreme Straight Line Wind Characteristics at Nuclear Power Plants	1	4	336.00
ANS-2.15-2013, Criteria for Modeling and Calculating Atmospheric Dispersion of Routine Radiological Releases from Nuclear Facilities	0	3	453.15
ANS-2.26-2004;R2010, Categorization of Nuclear Facility SSCs For Seismic Design	2	3	595.00
ANS-2.27-2008, Criteria for Investigations of Nuclear Facility Sites for Seismic Hazard Assessments	2	1	338.80
ANS-2.29-2008; Probabilistic Seismic Hazard Analysis	2	1	386.40
ANS-3.1-1993;R1999;W2009, Selection, Qualification Training of Personnel for Nuclear Power Plants	0	4	348.00
ANS-3.1-2014, Selection, Qualification, and Training of Personnel for Nuclear Power Plants	35	14	4,556.80
ANS-3.2-2012, Managerial, Administrative, and Quality Assurance Controls for the Operational Phase of Nuclear Power Plants	0	2	250.00
ANS-3.4-2013, Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants	1	1	276.00
ANS-3.5-2009, Nuclear Power Plant Simulators for Use in Operator Training and Examination	2	2	484.00
ANS-3.8.4-1995;W2005, Maintaining Radiological Emergency Response Capability	1	0	47.00
ANS-3.11-2005;R2010, Determining Meteorological Information at Nuclear Facilities	0	1	135.00
ANS-5.1-2005;W2014, Decay Heat Power in LWRs	0	1	136.80
ANS-5.1-2014, Decay Heat Power in LWRs	1	0	167.00
ANS-6.1.1-1991;W2001, Neutron and Gamma-Ray Fluence-To-Dose Factors	0	2	204.00
ANS-6.3.1-1987;R1998;R2007, Program for Testing Radiation Shields in Light Water Reactors	0	1	78.00
ANS-6.4-2006, Nuclear Analysis and Design of Concrete Radiation Shielding for Nuclear Power Plants	3	2	998.40
ANS-6.4.2-2006, Specifications for Radiation Shielding Materials	1	0	70.20
ANS-6.4.3-1991;W2001, Gamma-Ray Attenuation Coefficients and Buildup Factors for Engineering Materials	1	1	466.00
ANS-6.6.1-1987;R1998;R2007, Calculation and Measurement of Direct and Scattered Gamma Radiation from LWR Nuclear Power Plants	0	1	142.00
ANS/HPSSC-6.8.1-1981;W1992, Location and Design Criteria for Area Radiation Monitoring Systems for Light Water Nuclear Reactors	1	0	63.00
ANS-8.1-2014, Nuclear Criticality Safety in Operations with Fissionable Materials Outside Reactors	18	9	2,508.00
ANS-8.3-1997;R2003, R2012, Criticality Accident Alarm Systems	0	2	193.80
ANS-8.5-1996;R2002;R2007;R2012, Use of Borosilicate-Glass Raschig Rings as a Neutron Absorber in Solutions of Fissile Material	0	1	64.00
ANS-8.6-1983;R1988;R1995;R2001;R2010, Safety in Conducting Subcritical Neutron-Multiplication	0	1	28.80
ANS-8.7-1998, R2007;R2012, Guide for Nuclear Criticality Safety in the Storage of Fissile Materials	1	2	243.60
ANS-8.9-1987;R1995;W2000, Nuclear Criticality Safety Guide for Pipe Intersections Containing Aqueous Solutions of Enriched Uranyl Nitrate	0	1	50.40
ANS-8.10-1983;R1988;R1999;R2005;W2015, Criteria for Nuclear Criticality Safety Controls	1	2	131.60
ANS-8.10-2015, Criteria for Nuclear Criticality Safety Controls in Operations with Shielding and Confinement	0	5	209.00
ANS-8.12-1987;R1993;R2002;R2011, Nuclear Criticality Control and Safety of Plutonium-Uranium Fuel Mixtures Outside Reactors	0	1	85.00
ANS-8.14-2004;R2011, Use of Soluble Neutron Absorbers in Nuclear Facilities Outside Reactors	1	2	131.60
ANS-8.15-2014, Nuclear Criticality Control of Selected Actinide Nuclides	1	7	825.00

Designation & Title of Standard	# Sold Paper	# Sold Electronic	Total Sales $
ANS-8.17-2004;R2009;R2014, Criticality Safety Criteria for the Handling, Storage, and Transportation of LWR Fuel Outside Reactors	0	5	225.60
ANS-8.19-2005;W2014, Administrative Practices for Nuclear Criticality Safety	1	0	40.00
ANS-8.19-2014, Administrative Practices for Nuclear Criticality Safety	21	13	1,703.40
ANS-8.20-1991;R1999;R2005, Nuclear Criticality Training	0	1	47.00
ANS-8.21-1995;R2001;R2011, Use of Fixed Neutron Absorbers in Nuclear Facilities Outside Reactors	1	1	84.60
ANS-8.22-1997;R2006;R2011, Nuclear Criticality Safety Based on Limiting & Controlling Moderators	0	4	218.40
ANS-8.23-2007;R2012, Nuclear Criticality Accident Emergency Planning and Response	0	1	119.00
ANS-8.24-2007;R2012, Validation of Neutron Transport Methods for Nuclear Criticality Safety Calculations	1	2	319.00
ANS-8.26-2007;R2012, Criticality Safety Engineer Training and Qualification Program	1	2	112.00
ANS-8.27-2008, Burnup Credit for LWR Fuel	2	4	272.60
ANS-10.2-2000;R2009, Portability of Scientific and Engineering Software	0	1	47.00
ANS-10.4-1987;R1998;W2008, Guidelines for the Verification and Calidation of Scientific and Engineering Computer Programs for the Nuclear Industry	0	1	138.00
ANS-10.4-2008, Verification and Validation of Non-Safety Related Scientific and Engineering Computer Programs for the Nuclear Industry	4	1	598.00
ANS-10.5-2006;R2011, Accommodating User Needs in Scientific and Engineering Computer Software Development	2	0	100.80
ANS-10.7-2013, Non-Real-Time, High-Integrity Software for the Nuclear Industry—Developer Requirements	1	1	209.00
ANS-14.1-2004;R2009;R2014, Operation of Fast Pulse Reactors	0	1	47.00
ANS-15.1-2007,R2013, The Development of Technical Specifications for Research Reactors	1	2	275.50
ANS-15.2-1999;R2009, Quyality Control for Plate-Type Uranium-Aluminum Fuel Elements	0	1	64.00
ANS-15.4-1988;R1999;W2007, Selection and Training of Personnel for Research Reactors	0	1	70.00
ANS-15.4-2007, Selection and Training of Personnel for Research Reactors	0	1	70.00
ANS-15.7-1977,R1986,W1996, Research Reactor Site Evaluation	0	1	64.00
ANS-15.8-1995;R2005,R2013, Quality Assurance Program Requirements for Research Reactors	0	2	128.00
ANS-15.15-1978;R1986;W1996, Criteria for the Reactor Safety Systems of Research Reactors	1	0	64.00
ANS-15.16-2008;W2015, Emergency Planning for Research Reactors	1	0	57.60
ANS-15.16-2015, Emergency Planning for Research Reactors		3	199.00
ANS-15.17-1981;R1987;R2000;W2010, Fire Protection Program Criteria for Research Reactors	0	1	42.30
ANS-15.21-1996;R2006, Format and Content for Safety Analysis Reports for Research Reactors	0	1	124.00
ANS-16.1-2003;R2008, Measurement of the Leachability of Solidified Low-Level Radioactive Wastes by a Short-Term Test Procedure	0	6	769.50
ANS-18.1-1999;W2009, Radioactive Source Term for Normal Operation of LWRs	4	1	437.00
ANS-19.1-2002;R2011, Nuclear Data Sets for Reactor Design Calculations	0	1	63.00
ANS-19.3-2011, Steady-State Neutronics Methods for Power Reactor Analysis	0	2	243.20
ANS-19.6.1-2001, Reload Startup Physics Tests for PWRs	0	1	121.00
ANS-19.11-1997;R2002,R2011, Calculation and Measurement of the Moderator Temperature Coefficient of Reactivity for Water Moderated Power Reactors	0	1	85.50
ANS-40.35-191;W2001, Volume Reduction of Low-Level Radioactive Waste or Mixed Waste	1	0	99.00
ANS-40.37-2009, Mobile Low Level Radioactive Waste Processing Systems	4	1	671.60
ANS-41.5-2012, Verification and Validation of Radiological Data for Use in Waste Management and Environmental Remediation	1	0	161.00
ANS-51.1-1983;R1988;W2000, Nuclear Safety Criteria for the Design of Stationary PWRs	0	1	210.00

Designation & Title of Standard	# Sold Paper	# Sold Electronic	Total Sales $
ANS-53.1-2011, Nuclear Safety Design Process for Modular Helium-Cooled Reactor Plants	0	1	209.70
ANS-55.1-1992;R2009, Solid Radiactive Waste Processing System for Light-Water-Cooled Reactor Plants	0	2	283.10
ANS-55.4-1993;R199;R2007, Gaseous Radioactive Wate Processing Systems for LWR Plants	0	1	116.10
ANS-55.6-1993;R1999;R2007, Liquid Radioactive Waste Processing Systems for Light Water Reactor Plants	0	1	132.00
ANS-56.3-1977;R1987;W1997, Overpressure Protection of Low Pressure Systems	0	1	56.00
ANS-56.8-2002;R2011, Containment System Leakage Testing Requirements	1	1	256.50
ANS-57.1-1992;R2005, Design Requirements for Light Water Reactor Fuel Handling Systems	0	3	203.00
ANS-57.2-1983,W1999; Design Requirements for LWR Spent Fuel Facilities at NPPs	0	2	237.50
ANS-57.3-1983;W1993, Design Requirements for New Fuel Storage Facilities at Light Water Reactor Plants	0	1	57.60
ANS-57.8-1995;R2005;R2011, Fuel Assembly Identification	0	1	42.30
ANS-57.9-1992;R2000;W2010, Design Criteria for an Independent Spent Fuel Storage Installation (Dry Type)	1	1	332.50
ANS-58.2-1988;W1998, Design Basis for Protection of Light Water Nuclear Power Plants Against the Effects of Postulated Pipe Rupture	0	1	191.00
ANS-58.3-1992;R1998;R2008, Physical Protection for Nuclear Safety-Related Systems and Components	1	0	124.20
ANS-58.6-1996;R2001;W2011, Criteria for Remote Shutdown for LWRs		1	56.00
ANS-58.14-2011, Safety and Pressure Integrity Classification Criteria for LWRs	0	5	752.50
ANS-58.16-2014, Safety Categorization and Design Criteria for Nonreactor Nuclear Facilities	1	3	600.60
ANS-59.2-1985;W1995, Safety Criteria for HVAC Systems Located Outside Primary Containment	1	0	108.90
ANS-59.51-1997;R2007, Fuel Oil Systems for Safety-Related Emergency Diesel Generators	1	1	140.40
ANS-59.52-1998;R2007, Lubricating Oil Systems for Safety-Related Emergency Diesel Generators	1	0	63.00
ASME/ANS RA-S-1.4-2013, PRA Standard for Advanced Non-LWR NPPs	N/A	1	500.00
ASME/ANS RA-S-1.2-2014, Severe Accident Progression and Radiological Release (level 2) PRA Standard for Nuclear Power Plant Applications for LWRs	N/A	4	760.50
ANS/ASME-58.22-2014, Requirements for Low Power and Shutdown Probabilistic Risk Assessment	N/A	1	400.00
Misc Standards: Historical standards, drafts, bulk sales	N/A	N/A	370.10
GRAND TOTAL	130	174	**$ 29,332.45**

ANS Standards Board Task Groups
(Revision 15 January 2015)**

Policy Task Group

Scope: *Function as an advisory group to the chair of the Standards Board (SB) on administrative or procedural issues referred to it from the SB. Interface with the ANS Board of Directors and Standing Committees on policy issues that affect the ANS strategic plan. Review external requests from other SDOs, government organizations, and the public for relevance to the activities of the standards committee and make recommendations on these requests to the SB chair. This does not include clarifications and inquiries on specific standards that are handled under the Standards Committee rules and procedures. Resolve questions referred to the task group from the SB relative to questions or clarifications of Standards Committee policies, rules, and procedures. Membership includes the current and past chairs of the ANS SB, the current SB vice chair, and the standards administrator.*

George Flanagan*
Don Spellman
Prasad Kadambi
Chuck Moseley
Steve Stamm
Patricia Schroeder

Priority Task Group

Scope: *Re-sort ANS standards data to show a priority list of ANS standards that need the most immediate attention including current, in progress, withdrawn/historical standards. Provide a short commentary on why immediate attention is needed. Communicate that list to ANS SB, consensus committees, and to the NESCC as appropriate.*

Don Spellman* (ORNL-retired)
Jim August (Southern Nuclear Co.)
Jim Riley (NEI)
Mathew Panicker (NRC)

External Communications Task Group

Scope: *Improve the links between ANS and users (utilities, designers, architect engineers, universities, national labs, and fuel fabricators), national regulators, other U.S. SDOs, and international SDOs. One member should be actively involved with the NESCC.*

Herb Massie (DNFSB)*
Tina Taylor (EPRI)
Ed Wallace (SB)
Stanley Levinson (JCNRM/SCoRA)

Internal Communications Task Group

Scope: *Establish closer relationships with ANS governance and technical divisions. Attempt to get more direct representation from technical divisions on standards committees. Revise a training module prepared by Steve Stamm into several modules for different audiences and set up regular presentations at the ANS biannual meetings. Develop an active/inactive Standards Committee members grouping system and methods to encourage non-involved volunteers to become active working group members.*

Bill Turkowski (SB)*
Jeff Brault (AGS)

Sales Task Group

Scope: *Double or triple our standards sales in the next 2 years*

David Sachs (SB) *
Steve Stamm (SB)

Standards Coordinator: Single point reviewer of all PINS forms prior to SB approval to ensure that committee duplication of effort does not occur nor does the proposed standard conflict with those from other SDOs. Work with External Communications Task Group for conflicts with other SDOs.

Steve Stamm

---

* Interim chair (may be changed at the discretion of the task group)
** No CC chairs on the task groups other than by personal preference

American Nuclear Society
Environmental & Siting Consensus Committee
Balance of Interest (June 2015)

Architect-Engineer (1 Vote)

Vigeant, Stephen	Chicago Bridge & Iron Federal Services
*(Mazzola, Carl (ESCC Chair); CB&I Federal Services)	

Consultant (1 Vote)

Call, Jennifer	Oasys, Inc.

Government Agency (3 Votes)

Bellinger, Thomas	Y-12 National Security Complex
*(Hunt, R. Joe; Y-12 National Security Complex)	
Carpenter, Robert	U.S. Nuclear Regulatory Commission
*(Parks, Leah (Subcommittee Chair); U.S. Nuclear Regulatory Commission)	
*(Xu, James (Subcommittee Vice Chair); U.S. Nuclear Regulatory Commission)	
O'Brien, James	U.S. Department of Energy

Individual (2 Votes)

Bryson, Kevin (Subcomittee Chair)	Individual
Savy, Jean	Individual

National Laboratory (1 Vote)

Hossain, Quazi (Subcommittee Chair)	Lawrence Livermore National Laboratory

University (1 Vote)

Rasmussen, Todd	University of Georgia

Vendor (1 Vote)

Gao, Yan (ESCC VC & Subcommittee Chair)	Westinghouse Electric Company, LLC

*Shares one vote with others from the same company

Vote Summary

Architect-Engineer (1 Vote)	10%
Consultant (1 Vote)	10%
Government Agency (3 Votes)	30%
Individual (2 Votes)	20%
National Laboratory (1 Vote)	10%
University (1 Vote)	10%
Vendor (1 Vote)	10%
TOTAL VOTES (10)	100%

5/7/2015

Amended as directed at 6/9/15 Standards Board Meeting.

American Nuclear Society

Fuel, Waste, and Decommissioning Consensus Committee

Balance of Interest (June 9, 2015)

Architect-Engineer (4 Votes)	
Eggett, Donald	Amec Foster Wheeler
Hillyer, David	Energy Solutions
Lewis, Wayne	Chicago Bridge & Iron
Schilthelm, Steven	B&W mPower, Inc.

Government Agency (1 Vote)	
Felsher, Harry	U.S. Nuclear Regulatory Commission

Individual (1 Vote)	
Spellman, Donald	Individual

National Laboratory (2 Votes)	
Brault, Jeffery	Argonne National Laboratory
Lott, Sheila	Los Alamos National Laboratory

Owner (2 Votes)	
Miller, Coleman	Pacific Gas & Electric Company
Stasko, Maryanne	Duke Energy

Vendor (3 Votes)	
Ake, Timothy	AREVA Federal Services, LLC
*(Bader, Steven; AREVA Federal Services, LLC)	
Kota, Anoop	NAC International
Sanders, Mitchell	Westinghouse Electric Company, LLC

*Shares vote with member from same company.

Vote Summary	
Architect-Engineer (4 Votes)	31%
Government (1 Vote)	8%
Individual (1 Vote)	8%
National Laboratory (2 Votes)	15%
Owner (2 Votes)	15%
Vendor (3 Votes)	23%
TOTAL VOTES (13)	100%

6/9/2015

American Nuclear Society

Joint Committee on Nuclear Risk Management

Balance of Interest (June 2015)

Consultant (ASME = AU) (7 Votes)

Amico, Paul J. (Subcommittee Chair)	Jensen Hughes
Chapman, James R.	Scientech
Hughes, Eugene A.	ETRANCO
Parry, Gareth	Jensen Hughes
Sloane , Barry D. (Subcommittee Chair)	Jensen Hughes
True, Douglas E.	Jensen Hughes
Wakefield, Donald J.	ABS Consulting

Government Agency (ASME = AT) (2 Votes)

Drouin, Mary	U.S. Nuclear Regulatory Commission
Lagdon, Richard H. ("Chip")	U.S. Department of Energy

Individual (ASME = AF) (6 Votes)

Bernsen, Sidney A.	Individual
Fleming, Karl N.	Individual
Grantom, C. Rick (JCNRM Co-chair)	Individual
Kojima, Shigeo	Individual
Ravindra, Mayasandra K.	Individual
Wall, Ian B.	Individual

National Laboratory (ASME = AI) (4 Vote)

Bari, Robert A.	Brookhaven National Laboratory
Budnitz, Robert J. (JCNRM Co-chair)	Lawrence Berkeley National Laboratory
Sattison, Martin B.	Idaho National Laboratory
Wheeler, Timothy A.	Sandia National Laboratories

Owner/Operator (ASME = AO/AI) (5 Votes)

Anderson, Victoria K.	Nuclear Energy Institute
Fine, K. Raymond	FirstEnergy Nuclear Operating Company
Hackerott, H. Alan	Omaha Public Power District
Krueger, Gregory A.	Exelon Nuclear
Lewis, Stuart R.	Electric Power Research Institute

University (ASME = AI) (1 Vote)

Nelson, Pamela F. (JCNRM Co-vice chair)	National Autonomous University of Mexico

Vendor (ASME = UK) (6 Votes)

Dennis W. Henneke (JCNRM Co-vice chair)	General Electric
Kiper, Kenneth L.	Westinghouse Electric Company
Levinson, Stanley H.	AREVA Inc.
Maioli, Andrea	Westinghouse Electric Co., LLC
Schneider, Raymond E.	Westinghouse Electric Co., LLC
Young, James W.	GE Hitachi

Voting Summary

Consultant (ASME = AU) (7 Votes)	23%
Government Agency (ASME = AT) (2 Votes)	6%
Individual (ASME = AF) (6 Votes)	19%
National Laboratory (ASME = AI) (4 Vote)	13%
Owner/Operator (ASME = AO/AI) (5 Votes)	16%
University (ASME = AI) (1 Vote)	3%
Vendor (ASME = UK) (6 Votes)	19%
TOTAL VOTES (31)	100%

5/13/2015

American Nuclear Society

Large Light Water Reactor Consensus Committee

Balance of Interest (June 2015)

Architect-Engineer (1 Vote)

Routh, Stephen	Bechtel Power Corporation

(Saldarini, James; Bechtel Power Corporation = non voting member)

Consultant (5 Votes)

Gebers, Steven	Quantum Nuclear Services
Glover, James	Graftel, Inc.
Kreider, Leroy "Rocky" (Subcommittee Chair)	Engineering Planning & Management, Inc.
Lloyd, Evan (Subcommittee Chair)	Exitech Corporation
Markovich, Ronald	Contingency Management Consulting

Government Agency (2 Votes)

Carpenter, Gene	U.S. Nuclear Regulatory Commission
Guha, Pranab	U.S. Department of Energy

Individual (3 Votes)

Reuland, William (LLWR Chair)	Individual
Spellman, Donald	Individual
Stamm, Steven	Individual

National Laboratory (1 Vote)

Linn, Mark	Oak Ridge National Laboratory

Owner/Operator (4 Votes)

Bell, William	South Carolina Electric & Gas Co.
Brown, Charles	Southern Nuclear Operating Company
Florence, James	Nebraska Public Power District
Johnson-Turnipseed, Earnestine	Entergy Corporation

Society (1 Vote)

Moseley, Jr., Charles	ASME NQA Liaison (Individual)

Vendor (4 Votes)

Gardner, Darrell	Generation mPower, LLC
Kanuch, David (Subcommittee Chair)	Siempelkamp Nuclear
McFetridge, Robert	Westinghouse Electric Company, LLC
Meneely, Timothy	Westinghouse Electric Company, LLC

Voting Summary

Architect-Engineer (1 Vote)	5%
Consultant (5 Votes)	24%
Government Agency (2 Votes)	10%
Individual (3 Votes)	14%
National Laboratory (1 Vote)	5%
Owner/Operator (4 Votes)	19%
Society (1 Vote)	5%
Vendor (4 Votes)	19%
TOTAL VOTES (21)	100%

5/7/2015

American Nuclear Society

Nuclear Criticality Safety Consensus Committee

Balance of Interest (June 2015)

Consultant (2 Votes)	
Bartholomay, Roger	URS Professional Solutions LLC (an AECOM Company)
Taylor, Richard	INM Nuclear Safety Services

Government Agency (3 Votes)	
Berg, Lawrence	U.S. Department of Energy
Marenchin, Thomas	U.S. Nuclear Regulatory Commission
Wilson, Robert	U.S. Department of Energy

Individual (2 Votes)	
Hopper, Calvin	Individual
Westfall, Robert "Michael"	Individual

Society (3 Votes)	
Eby, Robert	AIChE Rep. (Employed by USEC, Inc.)
Knief, Ronald	INMM Rep. (Employed by Sandia Nat'l Laboratories)
Murray, Scott	HPS Rep. (Employed by General Electric)

University (1 Vote)	
Busch, Robert (NCSCC Chair)	University of New Mexico

Vendor (3 Votes)	
Doane, William	AREVA Inc.
Shackelford, William	Nuclear Fuel Services, Inc.
Wetzel, Larry (NCSCC Vice Chair)	Babcock & Wilcox Nuclear Operations Group

*(Kidd, Brian (Subcommittee Chair); Babcock & Wilcox Nuclear Operations Group)

*Shares vote with member from the same company.

Voting Summary	
Consultant (2 Votes)	14%
Government Agency (3 Votes)	21%
Individual (2 Votes)	14%
Society (3 Votes)	21%
University (1 Vote)	7%
Vendor (3 Votes)	21%
TOTAL VOTES (14)	100%

5/7/2015

American Nuclear Society

Non-Reactor Nuclear Facilities Consensus Committee

Balance of Interest (June 2015)

Architect-Engineer (3 Votes)	
Eble, Robert	AREVA Inc.
Gupta, Mukesh	AECOM-Professional Solutions
Mazzola, Carl	Chicago Bridge & Iron Federal Services

Government Agency (4 Votes)	
Hicks, Jerry	U.S. Department of Energy/National Nuclear Security Administation*
Massie, Jr., Herbert	Defense Nuclear Facilities Safety Board
O'Brien, James (NRNFCC Chair)	U.S. Department of Energy
Smith, Brian	U.S. Nuclear Regulatory Commission

Individual (1 Vote)	
Spellman, Donald	Individual

National Laboratory (2 Votes)	
Bari, Robert	Brookhaven National Laboratory
Brault, Jeffery (NRNFCC Vice Chair)	Oak Ridge National Laboratory

University (1 Vote)	
Modarres, Mohammad	University of Maryland

Vendor (2 Votes)	
Miller, James	SABIA, Inc.
Wheeler, Jennifer	Nuclear Fuel Services, Inc.

*The National Nuclear Security Adminstration is a semi-autonomous agency under DOE.

Voting Summary

Architect-Engineer (3 Votes)	23%
Government Agency (4 Votes)	31%
Individual (1 Vote)	8%
National Laboratory (2 Votes)	15%
University (1 Vote)	8%
Vendor (2 Votes)	15%
TOTAL VOTES (13)	100%

5/7/2015

American Nuclear Society

Research and Advanced Reactors Consensus Committee

Balance of Interest (June 2015)

Architect-Engineer (2 Votes)

Grenci, Tony	Chicago Bridge & Iron
Peres, Mark	Fluor Enterprises Inc.

Government Agency (3 Votes)

Adams Jr., Alexander	U.S. Nuclear Regulatory Commission
*(Kevern, Thomas; U.S. Nuclear Regulatory Commission)	
Lawson, David	U.S. Department of Energy
Myers, Thomas	National Institute of Standards & Technology

Individual (3 Votes)

Carter, Robert	Individual
Schmidt, Theodore	Individual
Turk, Richard	Individual

National Laboratory (2 Votes)

Flanagan, George (RARCC Chair)	Oak Ridge National Laboratory
*(Bevard, Bruce (RARCC VC & Subcommittee Chair; Oak Ridge National Laboratory)	
Morrison, Marya	Idaho National Laboratory
*(O'Kelly, Sean (RARCC VC & Subcommittee Chair); Idaho National Laboratory)	

Owner (2 Votes)

Adkins, Gary	Tennessee Valley Authority
August, James	Southern Nuclear Operating Company

University (4 Votes)

Blandford, Edward	University of New Mexico
Foyto, Leslie	University of Missouri
Memmott, Matthew	Brigham Young University
Reese, Steven	Oregon State University

Vendor (1 Vote)

Veca, Anthony	General Atomics

*Shares vote with member from same company.

Voting Summary

Architect-Engineer (2 Votes)	12%
Government Agency (3 Votes)	18%
Individual (3 Votes)	18%
National Laboratory (2 Votes)	12%
Owner (2 Votes)	12%
University (4 Votes)	24%
Vendor (1 Vote)	6%
TOTAL VOTES (17)	100%

5/7/2015

American Nuclear Society

Safety and Radiological Analyses Consensus Committee

Balance of Interest (June 2015)

Architect-Engineer (2 Votes)

Hulse, Paul	Sellafield Ltd.
Morrell, Keith (Subcommittee Chair)	Savannah River Nuclear Solution

Consultant (3 Votes)

Amato, Richard	Bechtel Marine Propulsion Corporation
Gupta, Mukesh	AECOM- Professional Solutions
Rombough, Charles	CTR Technical Services, Inc.

Government Agency (1 Vote)

Palmrose, Donald	U.S. Nuclear Regulatory Commission

Individual (2 Votes)

Carter, Robert	Individual
Weitzberg, Abraham (SRACC Vice Chair)	Individual

National Laboratory (4 Votes)

Brady Raap, Michaele	Pacific Northwest National Laboratory
Cokinos, Dimitrios (Subcommittee Chair)	Brookhaven National Laboratory
Dudziak, Donald	Los Alamos National Laboratory
Smetana, Andrew (SRACC Chair)	Savannah River National Laboratory

Society (2 Votes)

Brey, Richard	HPS Rep. (Employed by Idaho State Univ.)
Corradini, Michael	NCRP Rep. (Employed by Univ. of Wisc.-Madison)

University (2 Votes)

Hertel, Nolan	Georgia Institute of Technology
Sanders, Charlotta (Subcommitte Chair)	University of Las Vegas - Nevada

Vendor (1 Vote)

Alpan, F. Arzu	Westinghouse Electric Company, LLC

Voting Summary

Architect-Engineer (2 Votes)	12%
Consultant (3 Votes)	18%
Government Agency (1 Vote)	6%
Individual (2 Votes)	12%
National Laboratory (4 Votes)	24%
Society (2 Votes)	12%
University (2 Votes)	12%
Vendor (1 Vote)	6%
TOTAL VOTES (17)	100%

5/7/2015

SSC Classification Standard

Where do we start?

A project requires definable objectives

- The key to making an impact is choosing the right problems to solve. Let's decide what problems exist that would be solved by an ANS SSC classification standard.
- Let's start as though no other guidance were available. Our overall objective would then be to produce a standard that solves the problems we have chosen.
- At this point we can decide what problems existing guidance solve and which ones it doesn't solve or perhaps makes classification more difficult.
- For example there is existing guidance on safety classification in the regulations and regulatory history to consider. Also, Industry organizations are concerned with how the future of safety classification will affect safety and the costs of licensing, construction and operations.

Here's what ANS 58.14 Says

- Pertinent requirements of 10 CFR 50, Appendix B apply to activities affecting the safety-related functions of SSCs that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. Identification of these SSCs is required by 10 CFR 50, Appendix B, Criterion II. NRC regulations 10 CFR 50.49 (b)(1) and 10 CFR 100, Appendix A, VI (a)(1), together define SSCs that will be environmentally and seismically qualified. A basic component to which a quality assurance program is to be applied is similarly defined in 10 CFR 21.3 (1) (i). These regulations establish the following three basic safety related functions for which identification of safety-related SSCs relied upon during DBE is required:

Current Issues to Address

- What do we use as the primary source(s) for the standard? (GDCs or TLDC)
- Can we agree that certain existing standards will be revised once the new standard exists?
- Need some credible input from AE's to define needs and constraints
- Who would constitute the "ideal" WG?
- How would the new NRC FR notice on risk informing regulations affect the standard?

Conclusion

- If we find that an ANS standard can be produced that meets a distinct part of the overall objective, the standard has merit.
- However, we have to decide if we can produce the ANS standard considering people, time, funding and the status and needs of planned and future nuclear facilities.

Date:	May 6, 2015

PINS: PROJECT INITIATION NOTIFICATION SYSTEM FORM *(Rev. 2012)*

*NOTE: Adoptions of international standards require compliance with ANSI's Sales & Exploitation Policy.

1. Designation of Proposed Standard:	ANS-30.1	
2. Title of Standard:	Integration of Risk-Informed, Performance-Based Principles and Methods into Nuclear Safety Design for Nuclear Power Plants	
3. Project Intent: (Check the applicable box below)	Supersedes or Affects: (Specify designation of approved ANSI standard(s) or international standard(s)* affected or superseded.)	
Create new standard	X	
*Adopt identical international standard (see Expedited Procedures, Section 1.2.9.2, Annex H: IDT and Annex I)		
*Adopt modified international standard (see Requirements Associated, Section 1.2.9.1, Annex H: MOD and Annex I)		
*AND this adoption revises this current ANS		
Revise current standard		
Revise and Re-designate current standard		
Revise, Re-designate and Consolidate current standard		
Revise and Partition current standard		
Reaffirm current standard		
Reaffirm and Re-designate current standard		
Supplement to a current standard		
Withdraw current standard		
4. This standard contains excerpted text from an international standard, but is not an ISO or IEC adoption.		Check here if this standard includes excerpted text from an ISO or IEC standards but is not an identical or modified adoption of an international standard.
5. Provide an explanation of the need for the project: (If revision, note need for revision due to new reports, tests, data, etc.)	The nuclear industry is actively investigating non-light-water (NLW) reactor technologies to supplement existing electric power supplies based on traditional light water (LWR) reactor technologies. However, ANS design standards for these NLW technologies are generally not available or are outdated. Also, the application of traditional LWR design standards to smaller modular and passive designs has also not been clearly articulated. Further, existing design standards are primarily deterministic-based due to the historical lack of risk-informed, performance-based (RIPB) techniques. RIPB techniques are now available and can provide a more flexible and less prescriptive process for reactor structures, systems, and components commensurate with their importance to safety. It is proposed that a new standard ANS-30.1 be prepared that is technology-neutral and specifies an acceptable methodology for the consistent use of RIPB techniques in augmenting criteria and functional design requirements for nuclear safety of new nuclear plant designs.	
6. Identify the stakeholders (e.g., telecom, consumer, medical, environmental, etc.) likely to be directly impacted by the standard:	Nuclear plant systems designers, architect-engineers, utilities, regulators, and standards organizations.	
7. Scope Summary: (Provide a one paragraph description, not to exceed 650 characters including spaces. Should be written as it will appear in the published standard (present tense verb). If necessary, scope in standard may be longer provided that it is editorially the same.	This standard is process-based, technology-neutral, and applicable to new reactor designs. It specifies acceptable methods for augmenting nuclear safety design criteria and practices using risk-informed and performance-based (RIPB) techniques. It provides guidance on licensing basis event selection, plant safety functional analysis, system and equipment classification, and defense-in-depth adequacy evaluations in order to ensure such RIPB-augmented nuclear safety criteria and practices are appropriately translated into functional requirements. The application of this standard to existing reactors is beyond the scope of this standard.	
8. Consumer Product or Service:		Check here if standard covers Consumer or Service Product
9. Units of Measurement Used: (check one)		Metric ☐ US ☐ Both X NA
10. Accredited Standards Developer Acronym:	*ANS*	
11. Submitter	*Patricia Schroeder, ANS Standards Administrator* *American Nuclear Society* *555 North Kensington Avenue* *La Grange Park, IL 60526* *Phone: 708-579-8269 Fax: 708-579-8248* *Email: pschroeder@ans.org*	

The information on this page is not an official part of the ANSI PINS form. It was designed for ANS Standards Committee purposes to provide more background information about the standard. It is not required that this section be approved, and therefore, shall not be the basis for a not approved vote. Only the ANSI PINS form on page 1 requires approval.

Project #: ANS-30.1

1. Purpose:
This standard establishes a high-level, risk-informed/performance-based, technology-neutral process for developing nuclear safety design and functional requirements. The risk-informed and performance-based aspects of design basis event and beyond design basis event selection, assurance of defense-in-depth, safety margin characterization, and equipment safety classification are discussed. The collection of safety issues covered by this standard includes any that could impact on-site or off-site radiological consequences while also influencing the success criteria, capacity or layout within the facility of plant structures, systems, and components (SSCs). This scope includes not only traditional design basis and beyond design basis events, but portions of programs such as physical security, emergency planning and radiation protection that can affect SSC design. Its objective is to provide consistency in the application of risk-informed, performance-based methods in new nuclear power plants designs. Application of this standard to existing reactors is beyond scope of this standard.

2. Benefit to Users:
This standard (ANS-30.1) will provide a technology-neutral process demonstrating the use of risk-informed, performance-based methods in the design of technology-specific reactors that will maintain current regulations, maintain sufficient safety margins, and be consistent with reactor design issues that are commensurate with their impact on health and safety. The use of RIPB practices is essential to contextualize design safety; understand margins for public safety; better understand uncertainties and vulnerabilities and demonstrate defense-in-depth capabilities. Without this approach, the historical prescriptive and highly deterministic design and licensing process may result in unnecessary features or capabilities or insufficient capabilities for unique event sequences and accidents.

3. Will this standard use risk-informed insights, performance-based requirements, and/or a graded approach:
The application of risk-informed, performance-based methods to nuclear safety design will be a principal objective of ANS-30.1. Specifically, this standard will use risk-informed insights to supplement the deterministic basis of a reactor systems design to ensure that risks are commensurate with their impact on health and safety. Performance-based methods will be incorporated to ensure acceptable risks are maintained. The methods used will be consistent with current requirements and engineering practices.

4. Consensus Body:
Research and Advanced Reactors Consensus Committee (RARCC)

5. Subcommittee under which it is assigned:
Advanced Initiatives (ANS-29)

6. Working Group Chair (s):
Mark Linn, Oak Ridge National Laboratory
David Johnson, ABS Consulting, Inc. (Vice-Chair)

7. Working Group Members (including organizations**):**
David Blanchard – Applied Reliability Engineering, Inc.; Milton Capiotis – WorleyParsons; Gary Corpora, Westinghouse; William McTigue – URS Energy and Construction, Inc.; Paul Sicard – Entergy Operations, Inc.; Kent Welter – NuScale, LLC; Russell Williston – Individual

8. Interests Represented in Development of Standard (in addition to members' organizations, other affiliations that may be represented important to the development of this standard)**:**
National Laboratories, Nuclear Power Reactor Designers, Nuclear Power Utilities, Nuclear Power Consultants

9. Coordination and Interfaces (Liaison):
Jim August – Southern Nuclear Co. (ANS-53.1 Chair and ANS-3.13 Chair)
George Flanagan – Oak Ridge National Laboratory (SB Chair and ANS 54.1 Chair)
Bill Reckley, U.S. Nuclear Regulatory Commission (Attending Liaison)
Bob Budnitz – Lawrence Berkley National Laboratory (ANS-54.1 Vice Chair and JCNRM Liaison)
Prasad Kadambi – Individual (RP3C Chair and Liaison)

10 Related Standards or References, or Both:
- ANS/ANSI-3.13-201X "Nuclear Facility Reliability Assurance Program (RAP) Development"
- ANSI/ANS-51.1-1983; R1988; W1998 "Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants"
- ANSI/ANS-52.1-1983; R1988; W1998 "Nuclear Safety Criteria for the Design of Stationary Boiling Water Reactor Plants"
- ANS/ANSI-53.1-2011, "Nuclear Safety Design Process for Modular Helium-Cooled Reactor Plants"
- ANS/ANSI-54.1-201x, "Nuclear Safety Criteria and Design Process for Liquid-Sodium-Cooled-Reactor Nuclear Power Plant" (Under Development)
- ANSI/ANS-58.14-2011, "Safety and Pressure Integrity Classification Criteria for Light Water Reactors"

11. Project Initiation Date:
May 2015

Response to SB Action Item: 11/12-17

Action Item 11/12-17	Prasad Kadambi to prepare a business case for initiating an ANS conformity assessment program. Due: 6/1/2015	Prasad Kadambi	OPEN

It is proposed that the following observations and the enclosed document be the subject of discussion on this action item.

General Observations:

- The activity on this action item began several years ago after NFSC held a discussion regarding how application of standardization principles are different relative to ANS standards as compared with other SDOs and other technologies. The premise for this activity is that significant improvements need to be made on behalf of ANS standards if the standardization function is to fulfill its potential within the technical society. Feedback from a variety of stakeholders indicates that standards are not as relevant to advancing the role of ANS within nuclear technology applications as used to be the case 40-50 years ago.

- The NESCC also looked into this question of why the benefits of standardization seem to be eluding nuclear technology to the extent that other industries, in particular aerospace, seem to have benefitted. Over this period, it was clear that globalization trends were becoming ever stronger and issues such as the cable problems in South Korea brought international standardization into sharper focus. Also, among a variety of Task Group efforts sponsored by the NESCC was included a Welding Task Group that produced a report that shortage of qualified welders was creating bottlenecks in nuclear construction activities. NESCC also became interested in the revision of OMB-A119 with NIST participation noting that the conformity assessment aspect of standardization was being given a much more prominent position at the highest policy levels. International trade in standardized technologies work quite well when private sector conformity assessment activities are included to overcome barriers to trade that frequently get imposed by countries attempting to favor domestic industry participants.

- The bottom line observation is that the existing standardization systems in nuclear technology are not working to promote the cause of making this technology more efficient and cost effective. Some pockets within it are working well but the standardization of what works well is not happening on its own as might be expected. These observations are supported by the evidence presented in the WNA-CORDEL Report, “Aviation Licensing and Lifetime Management – What Can Nuclear Learn?” Additionally, reference is made to the paper entitled “Improving Environmental Safety Through Third Party Inspection”. It shows there is also evidence that third-party inspections which take the form of a voluntary contractual relationship between a firm and a duly qualified party auditing the facility rather than relying solely on the regulatory agency as enforcer can work. Part of efforts to improve matters should be to fill in known gaps, and one such appears to be absence of a conformity assessment program within ANS.

- Until about a year ago, NESCC had Cassy Robinson from NIST as one of the co-Chairs who saw merit in getting the SDOs in NESCC make recommendations collectively regarding conformity assessment. The enclosed document is the first draft of a Cassy Robinson-Prasad Kadambi effort to put a White Paper together on this subject. Unfortunately, Cassy’s participation was terminated before more progress was possible.

First Draft of White Paper: Recommendation for Expanded Implementation of Conformity Assessment in the Nuclear Energy Industry

The nuclear energy industry could benefit in the areas of safety, quality, efficiency, and cost-effectiveness by expanded implementation of conformity assessment systems, particularly certification, which is defined as third-party attestation related to products, processes, systems or persons. (ISO/IEC 17000:2004).

There are several options for conformity assessment, and the most appropriate option depends on technical and policy choices by the concerned SDOs. On one hand, the main consideration may be the magnitude of adverse consequence that can be tolerated. If the adverse consequence (AC) of nonconformance is low, a supplier's declaration of conformity may be sufficient and will have lower cost. If the AC is high, such as a dramatic increase in the likelihood of release of radioactivity, more rigorous confirmation of conformity may be sought, such as third party certification or even specific approval from a regulatory authority. The associated cost consideration is that third-party certification may involve greater costs, or with regulatory approvals, essentially indeterminate costs and schedules. See Figure 1 for a graphic representation.

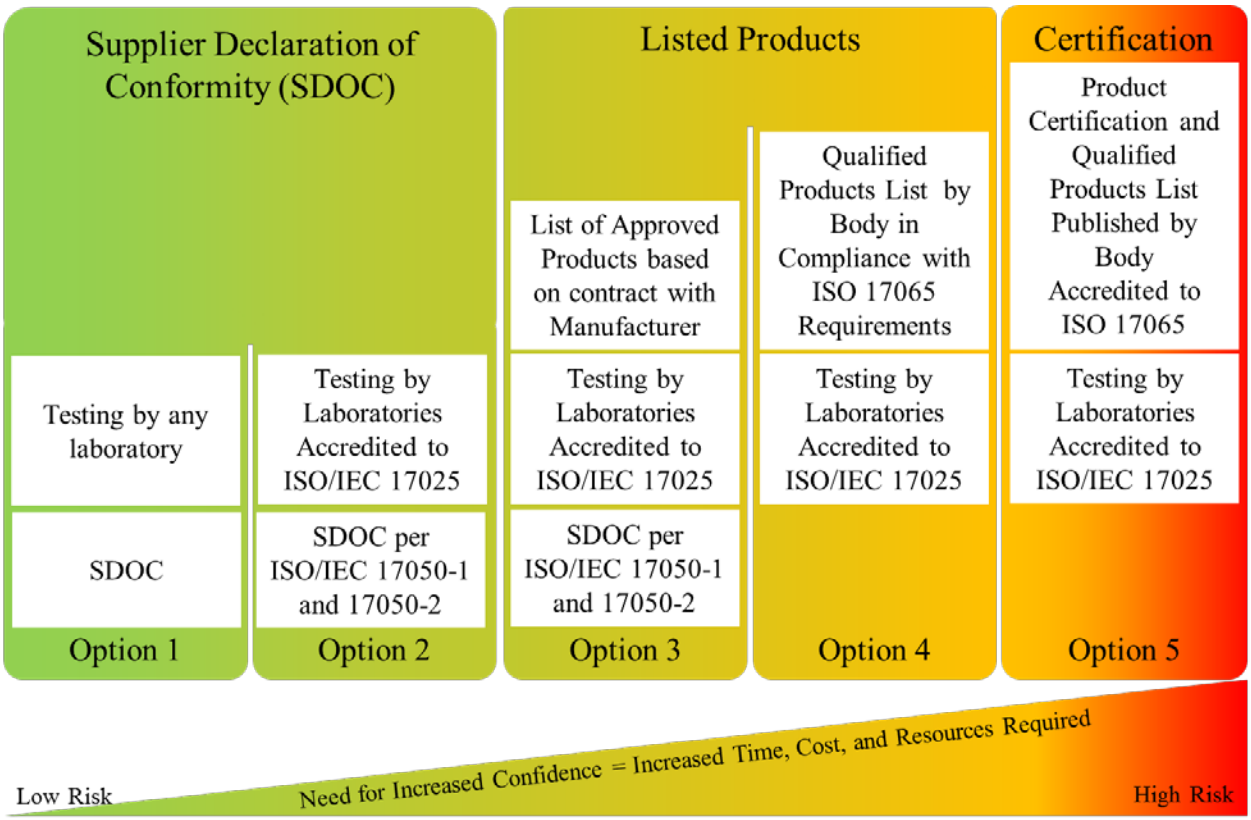

Figure 1. Conformity Assessment Options

A different technical or policy consideration may be demonstrable safety margins. Implementation of nuclear technology is frequently associated with high levels of margin created by application of extremely conservative principles in design and/or analysis. When high levels of safety margins exist, there can be more flexibility relative to conformity assessment systems. In the US, almost the entire domain of conformity assessment for nuclear facilities has been the responsibility of the Nuclear Regulatory Commission even though many areas of low AC and high safety margins exist. Significant opportunities for increased efficiencies may be found by nuclear SDOs expanding their vision of areas for standardization. ASME is one SDO that has benefitted considerably by venturing into conformity assessment systems.

The ASME NQA-1 Certification program provides a means for an organization supplying items or services which provide a safety function for nuclear facilities to have its Quality Assurance Program recognized by ASME as having had its Quality Assurance Program audited and verified to be in conformance with the requirements of the ASME NQA-1 Standard. The ASME Certification program applies to organizations whose Quality Assurance Program is based upon the ASME NQA-1-2008 Standard and subsequent editions/addenda of the Standard.
The ASME Nuclear Component Certification program covers the following equipment and activities covered by Section III of the ASME Boiler and Pressure Vessel Code:

- N- Nuclear vessels, pumps, valves, piping systems, storage tanks, core support structures, concrete containments, and transport packaging
- NA - Field installation and shop assembly
- NPT - Fabrication, with or without design responsibility, for nuclear appurtenances and supports
- NS - Nuclear supports
- NV - Pressure relief valves
- N3 - Containment for spent fuel and radioactive waste

Although the above program has a positive impact on the industry, more could be done in terms of product and personnel certifications.

An example of where product certification could be beneficial is in electrical cabling, and recommended aspects of the system are listed below:

1. Conformity assessment scheme owner (for example, USNRC) develops program requirements for accredited test laboratories, accredited certification bodies, and manufacturers/suppliers and specifies standards, pass/fail criteria, and test report/documentation.
2. Manufacturer submits request for certification to an accredited certification body.
3. Certification body has testing by an accredited test laboratory performed on manufacturer-supplied samples.
4. Test laboratory performs testing in accordance with the standard(s) and conformity assessment requirements and provides certification body with test report/documentation.
5. Certification body makes determination of compliance.
6. If product meets requirements, the certification body issues a certificate of conformance and gives the manufacturer permission to use their mark of conformity on the product.

Because this type of conformity assessment system involves multiple levels of oversight, there is little room for falsification of test results. Such a system could have prevented the current situation with nuclear plant cables in Korea. See Figure 2.

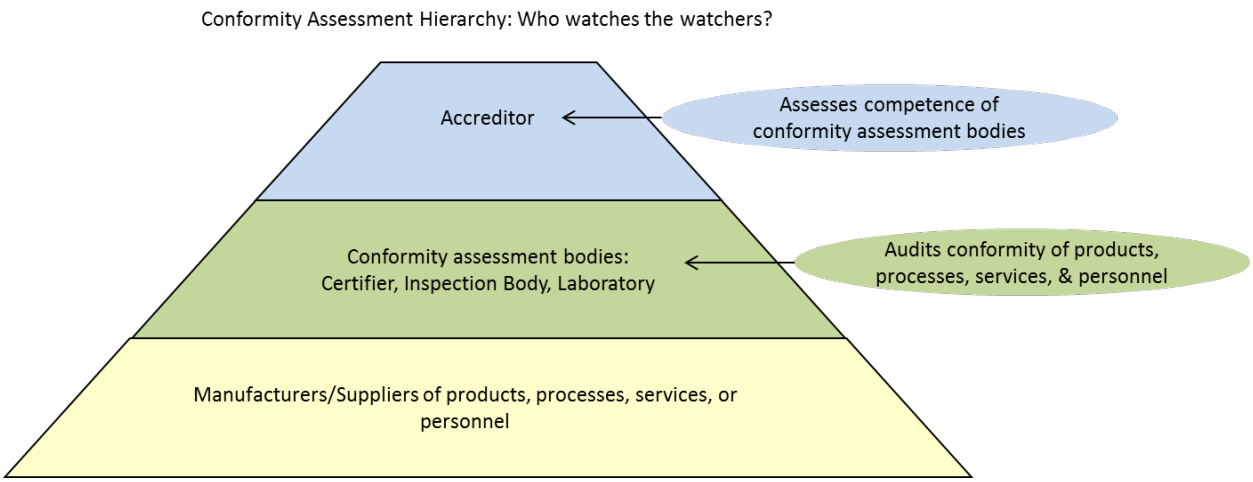

Figure 2. Conformity Assessment Hierarchy

An example where personnel certification is needed is in welding engineers and supervisors/coordinators. NESCC 13-098 (November 2013) documents key issues that are currently affecting economics of welding operations that support nuclear power plants. The following are excerpted from the Task Group report:

Need for personnel certification of Welding Engineers.
There is a drive toward better documentation of the certification and training of personnel (such as what has happened within International Organization for Standardization (ISO) requirements), yet serious gaps remain within the United States (U.S.) system. In fact, the Professional Engineering (PE) registration in welding was discontinued in the past few years due to low participation by the states. Should this registration be reinstated? Does AWS's Certified Welding Engineer (CWEng) program meet this need, or should it be modified? If a PE in a discipline other than welding signs off on an entire structure during the design phase, how can those with welding expertise who advise the lead PE be identified, and what certification is necessary to demonstrate their competence?

Need for qualification of Welding Supervisors or Welding Coordinators.
Many individuals whose companies have given them the title of Welding Supervisor or Welding Coordinator do not have a welding background and would have difficulty in achieving PE or CWEng registration. Yet, they need a training and certification route that would allow them to establish and then prove their competence. During the late 1980s and 1990s, the industry experienced a reduction in the number of people entering construction in general and welding in particular. As a result, there exists a shortage of craftspeople in the 35 to 55 age range. Selection of those to be moved into welding supervisory positions should be tied to achieving some qualification level and recognition of this qualification by the welding codes.

Need to make repair decisions based on fitness-for-service assessments.
Currently, many repair decisions are made on workmanship standards, where accept/reject decisions are based on appearance by visual testing and nondestructive examination (NDE) results, primarily radiographic testing (RT) but sometimes UT. However, unnecessary repairs often introduce additional damage that can be the source for later failures during service. Switching to repair decisions based on quantitative engineering calculations (such as fracture mechanics), as well as use of probabilistic methods, rather than workmanship standards alone (based on appearance), would result in only necessary repairs being made and provide a quantitative measure of expected performance, rather than just accept/reject. Such an approach could have a significant positive effect on safety.

Examples of existing conformity assessment systems:

Type	Subject Area	Conformity Assessment Body	Recognition by NRC
Accreditation	Operator and Technical Training Program	INPO's National Academy of Nuclear Training	
Accreditation	Calibration Laboratory	ILAC	The NRC approved the NVLAP/A2LA third-party accreditation of calibration laboratories, in lieu of a commercial-grade survey or in-process surveillance for Arizona Public Service Company in a letter dated September 28, 2005. The alternative method for qualifying the calibration supplier and accepting its calibration services would be applied only to domestic commercial-grade calibration services, as defined by Title 10, Part 21, of the *Code of Federal Regulations* (10 CFR Part 21), "Reporting of Defects and Noncompliance."
Certification	Quality System Program (Subsection NCA-3800)	ASME NQA-1	NRC Regulatory Guide 1.28, Revision 4, establishes the acceptance of Part I and Part II requirements included in NQA-1-2008 and the NQA-1a-2009 Addenda, "Quality Assurance Requirements for Nuclear Facility Applications," for the implementation of a QA program during design and construction phases of nuclear power plants and fuel reprocessing plants. The NRC has determined that NQA-1-2008 and the NQA-1a-2009 Addenda provide an adequate basis for complying with the requirements of Appendix B to 10 CFR Part 50, subject to the additions and modifications of NQA-1-2008 and the NQA-1a-2009 Addenda identified in RG 1.28, Revision 4
Certification	Own Certification – Nuclear Plant Owner (Subsection NCA-3200)	ASME, based on Section III of the Boiler and Pressure Vessel Code	

Type	Subject Area	Conformity Assessment Body	Recognition by NRC
Certification	Component	ASME, based on Section III of the Boiler and Pressure Vessel Code	
	• N certificate - Nuclear vessels, pumps, valves, piping systems, storage tanks, core support structures, concrete containments, and transport packaging (Subsection NCA-4134)		
	• NA Certificate - Field installation and shop assembly (Subsection NCA-4134)		
	• NPT Certificate - Fabrication, with or without design responsibility, for nuclear appurtenances and supports (Subsection NCA-4134)		
	• NS Certificate - Nuclear supports (Subsections NCA-3680 and NCA-4110(b))		
	• NV Certificate - Pressure relief valves (Subsection NCA-4134)		
	• N3 Certificate - Containment for spent fuel and radioactive waste (Subsection NCA-4134)		
Licensing	Nuclear operators	NRC, per 10 CFR Part 55	
Credentialing	Radiation Protection Technologist	National Registry of Radiation Protection Technologists (HPS)	INPO, DOE, NRC

Type	Subject Area	Conformity Assessment Body	Recognition by NRC
Certification (Audit)	• Evaluation of suppliers furnishing safety-related components and services and commercial-grade items to nuclear utilities	Nuclear Procurement Issues Committee (Subsection NUPIC)	
Certification (Audit)	• Auditing services at the highest industry performance standards	Nuclear Industry Assessment Committee (Subsection NIAC)	

Subject Training Matrix

To Standards Board, Consensus Committee and Subcommittee Chairs

Attached are the following documents:

1. Guidance of Determination of Required ANS Standards Training
2. ANS Standards Training Record

Please complete this ANS Standards Training Record Form for all of the members of your committees in accordance with the guidance provided in the attached guidance document.

If you have meetings scheduled for June, it is suggested that you fill out the Training Record Forms for your committees during your committee meetings. If not the forms should be filled out ***prior to August 30th and returned to the ANS Standards Administrator***.

The goals of this training is to

1. Reduce the time that it takes personnel to develop, revise and reaffirm standards
2. Improve the functioning or our boards and committees by providing members with an understanding of the overall standards organization and processes.

Please contact Steve Stamm if you have any questions.

Steve Stamm
ssn617@comcast.net
617 513 5785

May 20, 2015

Guidance of Determination of Required ANS Standards Training

Purpose
To provide guidance to the Standards Board chair, consensus committee chairs and subcommittee chairs for completion of the Training Matrix for their committees.

Responsibilities
The subcommittee chairs are responsible for completing the Training Record Form for all of the subcommittee and working group members under their subcommittee. The Standards Board chair and the consensus committee chairs are responsible for completing the Training Record Form for all of their committee members.

The ANS Standards Administrator shall be responsible for scheduling personnel for the training sessions and updating completion status.

Guidance
Training shall be assigned by the applicable chair on an as-needed basis taking into consideration an individual's current knowledge and standards responsibilities. The below Training Applicability Matrix may be used as a guide in determining such training. However, if an individual is new to ANS Standards additional training should be considered. If an individual has recently had such training or is considered knowledgeable in the area, they should not be burdened with the requirement to undergo the related training. Non-voting committee members may be considered for the training courses at their option. The chairs shall reevaluate their training matrix at least annually and when new members join their organizations.

ANS STDS TRAINING PACKAGE APPLICABILITY MATRIX

	SB Members	**CC Chair/ VChair**	**CC Members**	**SC Chair/ VChair**	**SC Members**	**WG Chair/ VChair**	**WG Members**
Overview of Nuclear Related Standards			X	X	X	X	
ANS Standards Organization and Staffing			X	X	X	X	X
The Standards Process		X	X	X	X	X	X
Standards Committee Policies and Procedures	X	X	X	X		X	
Workspace System	X	X	X	X	X	X	X

Table Notes:
SB = ANS Standards Board
CC= consensus committee
SC= subcommittee
WG= working group
VChair= Vice Chair

Date:_____

ANS Standards Training Record

Consensus Committee/ Sub Committee Name: _____

Subcommittee/ Working Group	List Individuals by Name	Email Address	Standards Overview	Organization & Staffing	Voluntary Consensus Standards Process	Standards Committee Governing Documents	Workspace System	Comments

Instructions:

1. Insert an ‘X’ if the Individual should take this training
2. Upon completion of the training replace the ‘X’ with the completion date

Subcommittee/ Working Group	List Individuals by Name	Email Address	Standards Overview	Organization & Staffing	Voluntary Consensus Standards Process	Standards Committee Governing Documents	Workspace System	Comments

Instructions:

1. Insert an ‘X’ if the Individual should take this training
2. Upon completion of the training replace the ‘X’ with the completion date

Subcommittee/ Working Group	List Individuals by Name	Email Address	Standards Overview	Organization & Staffing	Voluntary Consensus Standards Process	Standards Committee Governing Documents	Workspace System	Comments

Instructions:

1. Insert an ‘X’ if the Individual should take this training
2. Upon completion of the training replace the ‘X’ with the completion date

Patricia Schroeder

From: Patricia Schroeder
Sent: Tuesday, November 25, 2014 12:56 PM
To: Andy Smetana (andy.smetana@srnl.doe.gov); August, James K.; Bernie Till (william.till@srs.gov); Bill Reuland (wreuland@aol.com); Calvin M. Hopper (hoppercm@ornl.gov); Carl Mazzola (carl.mazzola@cbifederalservices.com); Chuck Moseley (longgray65@nc.rr.com); David Sachs (david_sachs_d409@msn.com); Donald R. Eggett (donald.eggett@amec.com); Donald Spellman (cso592@att.net); Ed Wallace (ewallace@nuscalepower.com); George Flanagan (flanagangf@ornl.gov); Herbert Massie (HerbertM@dnfsb.gov); James O'Brien (James.O'Brien@hq.doe.gov); Jeffery Brault (jeff_brault@yahoo.com); Jim RILEY (jhr@nei.org); Mathew Panicker (mathew.panicker@nrc.gov); Mike Ruby (rmichaelruby@gmail.com); Prasad Kadambi (praskadambi@verizon.net); Robert D. Busch (busch@unm.edu); Robert J. Budnitz (budnitz@pacbell.net); Stanley H. Levinson (Stanley.Levinson@areva.com); Steven Stamm (ssn617@comcast.net); Tina Taylor (TTaylor2@epri.com); William M. Turkowski (turkowwm@westinghouse.com)
Subject: FW: ITAAC action item
Attachments: NEI_80-01_4.pdf; RegGuide_1.215_Rev_1.pdf

Dear Standards Board Members,

Please find the below message (and attachments) in completion of the following action item assigned at our recent Standards Board meeting:

William Reuland to consider developing a new standard on ITAAC within the LLWR. [Reassignment of Action Item 6/2014-11]

From: wreuland@aol.com [mailto:wreuland@aol.com]
Sent: Thursday, November 20, 2014 5:18 PM
To: Patricia Schroeder; flanagangf@ornl.gov; meneeltk@westinghouse.com
Subject: ITAAC action item

Pat

Please disseminate the this email among the SB members as the response to action item 6/2004-11

I have read each of the attached documents, which are lengthy guidance on ITAAC, NEI 08-01 Rev 4 and the corresponding RegGuide 1.215. These documents sum up all facets of ITAAC,
(Inspections, Tests, Analysis,and Acceptance Criteria) for Part 52 licensed plants. Because every component will have different acceptance criteria and test requirements, I am unable to suggest that we could construct a set of standard requirements that would cover this broad spectrum. Interestingly, I didn't run across any mention of the use of ANS standards to provide acceptance criteria.

The following is a quote from NEI 08-01:

"NRC regulations implement the AEA's provisions. In particular, the Commission findings that must be made in connection with the issuance of a COL are set forth in 10 CFR 52.97. The Commission will identify within the COL the inspections, tests and analyses that the licensee shall perform, and the acceptance criteria that, if met, "are necessary and sufficient to provide reasonable assurance that the facility has been constructed and will be operated in conformity with" the license, the AEA, and NRC regulations. See 10 CFR 52.97(b). The licensee verifies that the plant has been built according to the COL, the Atomic Energy Act and the Commission's regulations by performing ITAAC that are part of the COL.

The acceptance criteria of the ITAAC are carefully selected during the design certification and licensing process to ensure

that their completion by the licensee will provide reasonable assurance that the plant will operate safely as designed. ITAAC, in turn, verify that specific acceptance criteria are met prior to fuel load. Additional, non-ITAAC NRC inspection activities will be performed to verify that operational programs, start-up testing, training, quality assurance, corrective action, and other important aspects of plant construction and operation are in accordance with licensee commitments, license conditions, and applicable regulations for plant construction and operation.

This document provides guidance on the major aspects of the ITAAC closure process, including:

- Summary of the Part 52 ITAAC process
- Schedule considerations for ITAAC-related activities
- Licensee process for review and preparation of ITAAC closure letters
- Guidance for ITAAC closure letter content
- Guidance for the 225-day notifications regarding uncompleted ITAAC
- Special Topics, including post-completion maintenance of ITAAC conclusions and thresholds for submittal of Supplemental ITAAC Closure Letters"

The role of ITAAC in the new-plant licensing process is established by the Atomic Energy Act of 1954, as amended (AEA). AEA Section 185.b., 42 U.S. C. § 2235, provides that:
After holding a public hearing under Section 189a.(1)(A), the Commission shall issue to the applicant a combined construction and operating license (COL) if the application contains sufficient information to support the issuance of a combined license and the Commission determines that there is reasonable assurance that the facility will be constructed and will operate in conformity with the license, the provisions of this Act, and the Commission's rules and regulations. The Commission shall identify within the combined license the inspections, tests, and analyses, including those applicable to emergency planning, that the licensee shall perform, and the acceptance criteria that, if met, are necessary and sufficient to provide reasonable assurance that the facility has been constructed and will be operated in conformity with the license, the provisions of this Act, and the Commission's rules and regulations. Following issuance of the combined license, the Commission shall ensure that the prescribed inspections, tests, and analyses are performed and, prior to operation of the facility, shall find that the prescribed acceptance criteria are met. Any finding made under this subsection shall not require a hearing except as provided in section 189a.(1)(B). and NOTE

Regards,

Pat

Patricia Schroeder
Standards Administrator
American Nuclear Society
555 N. Kensington Avenue
La Grange Park, IL 60561

Phone: 708/579-8269
Fax: 708/579-8248
Email: pschroeder@ans.org

Patricia Schroeder

From: andy.smetana@srnl.doe.gov
Sent: Tuesday, April 14, 2015 4:31 PM
To: Patricia Schroeder
Cc: George Flanagan (flanagangf@ornl.gov); Panicker, Mathew; Steven Stamm (ssn617 @comcast.net); Carol Moyer (Carol.Moyer@nrc.gov); Palmrose, Donald; Gauld, Ian C.
Subject: RE: ANS Request to Review ANS Standards

Pat,

The following text is from an email from Ian Gauld sent me last year and provides some background information:
"You may already be aware that industry made a formal request to the NRC some years ago (circa 2002 - I'm guessing here) to adopt the newer standard for LOCA analysis (Appendix K). It was written up in "Platts - Inside NRC" publication at the time. It failed, but on a split vote. It was acknowledged that the 1971 draft standard was very conservative (+20%) and current standard is much more accurate and technically justified, but they felt this conservatism was needed to cover OTHER areas of uncertainty in LOCA analyses; if the newer data were adopted then more rigorous uncertainty analyses in other areas would be necessary. So there were no technical challenges to the improved accuracy of the newer standard.
Note that the revision now in review [adopted as the 2014 version] does not change the main decay heat values from the 1994 or 2005 standards. However, there are improvements to how other components are handled (actinides, etc.) and implemented."

I talked last week with Donald Palmrose who is the NRC rep on SRACC. ANS-5.1 was one of the topics discussed. Donald indicated he was going to talk with people in the NRC to see if they feel the conservatism of the 1971 version is still necessary. Once he had a chance to gather information, he is going to get back in touch with me.

Andy Smetana
SRACC Chair
Building 773-A, Room A-0290
Savannah River National Laboratory
Aiken, SC 29808-0001
803-725-4192
andy.smetana@srnl.doe.gov

From: Patricia Schroeder <pschroeder@ans.org>
To: "Panicker, Mathew" <Mathew.Panicker@nrc.gov>,
Cc: "Carol Moyer (Carol.Moyer@nrc.gov)" <Carol.Moyer@nrc.gov>, "Steven Stamm (ssn617@comcast.net)" <ssn617@comcast.net>, "George Flanagan (flanagangf@ornl.gov)" <flanagangf@ornl.gov>, "Andy Smetana (andy.smetana@srnl.doe.gov)" <andy.smetana@srnl.doe.gov>
Date: 04/14/2015 03:46 PM
Subject: RE: ANS Request to Review ANS Standards

Mathew,

We have been sending NRC essentially the same request when we have a group of new standards for the last five years. We provide the names of the NRC staff members that write/review the standards and include them on copy as they are the technical experts and will likely be contacted to help assist in the requested review. We do this to help NRC disseminate the request. Since the Standards Board does not review drafts during their approval, you have not had a chance to review any of the drafts. As such you have not been included on copy to this request in the past, but we can if you are involved in this process. Just let me know.

I believe that Andy Smetana is working with Ian Gauld on preparing a paper on ANS-5.1 related to your request and the assignment of the action item. I'm not sure where it stand. I was not looking to fulfill this action item for Andy with the letter. I was merely following through with our practice any time we publish a new or revised standard. I've included Andy on copy so that he can update us on his action items related to ANS-5.1

Regards,
Pat

From: Panicker, Mathew [mailto:Mathew.Panicker@nrc.gov]
Sent: Tuesday, April 14, 2015 2:17 PM
To: Patricia Schroeder
Subject: FW: ANS Request to Review ANS Standards

Pat:

I have an email from Carol Moyer regarding the letter to NRC Executive and stating that it was not copied to me, SB member from NRC. One of the endorsements, ANSI/ANS – 5.1-2014 was my recommendation and Action item created during a meeting of the SB.

Thanks

Mathew

From: Moyer, Carol
Sent: Tuesday, April 14, 2015 12:01 PM
To: Panicker, Mathew
Subject: FW: ANS Request to Review ANS Standards

Mathew,

This letter from the ANS Standards Board was addressed to the NRC Standards Exec., and copied to the NRC representatives on the consensus committees. I'm sure it was an oversight that it was not sent to the NRC representative on the SB.

-Carol

Carol Moyer
Sr. Prog. Mgr.
RES/DE/RGGIB
carol.moyer@nrc.gov
301-251-7641

From: Patricia Schroeder [mailto:pschroeder@ans.org]
Sent: Tuesday, April 14, 2015 11:28 AM
To: Thomas, Brian
Cc: George Flanagan (flanagangf@ornl.gov); Steven Stamm (ssn617@comcast.net); Moyer, Carol; Robert D. Busch (busch@unm.edu); Bill Reuland (wreuland@aol.com); Andy Smetana (andy.smetana@srnl.doe.gov); Adams, Alexander; Carpenter, Gene; Marenchin, Thomas; Palmrose, Donald; Smith, Brian
Subject: ANS Request to Review ANS Standards

Dear Mr. Thomas,

Please find attached a letter from the American Nuclear Society (ANS) Standards Board Chair George Flanagan providing you several recently approved/published standards with a request to review for possible endorsement in regulatory documents. Copies of these new and revised standards are provided in the attached zip file. The standards are provided electronically so that you can easily forward to appropriate NRC staff members for review.

Please do not hesitate to let me know if you have any questions or need anything else to facilitate the reviews.

Regards,

Pat

Patricia Schroeder
Standards Manager
American Nuclear Society
555 N. Kensington Avenue
La Grange Park, IL 60561

Phone: 708/579-8269
Fax: 708/579-8248
Email: pschroeder@ans.org

American Nuclear Society

[attachment "4-14-15_Email to Thomas w-Standards for Review.pdf" deleted by Andy Smetana/SRNL/Srs]

Response to SB Action Item: 11/2014-11

11/2014-11	Prasad Kadambi and Ed Wallace to create a task group within the RP3C to address the issue of creating a BDBE standard and report back to the SB. The task group should use Steven Stamm's draft white paper (Attachment 6 of 11/2014 Minutes) as reference. This action item replaces Action Item 6/2014-13. (Due Date: 5/1/2015)	Prasad Kadambi, Ed Wallace	OPEN

Reference Attachment 6 of 11/2014 Minutes:

Addressing Beyond Design Basis Events in ANS Standards

1. Background:

The question was raised at the June 2014 Standards Board meeting: "Should ANS Standards address beyond design basis events (BDBEs)?" The following actions items were assigned:

ACTION ITEM 6/2014-12: Andrew Smetana to consider if and how BDBE should be addressed in standards developed by SRA. (DUE DATE: 10/1/2014)

ACTION ITEM 6/2014-13: George Flanagan (current SB Chair) to develop a white paper on how to address BDBE in ANS standards. (Note: Steven Stamm will develop a draft for Flanagan that indicates RP3C should be included this in its plan.) (DUE DATE: 9/1/2014)

2. Do ANS Standards Currently Address BDBEs:

Yes a number of ANS standards already address BDBEs although this may not be highlighted as such in the standards. In reality BDBE was derived to allow a lesser set of regulatory requirements to be used for very low probability events that have the potential of significant consequences.

- PRA Standards - By their nature, PRA standards address the total universe of events including BDBEs. However, PRA methodology standards do not classify events into design basis and BDBEs.
- Any standards on topics which are regulated under regulations that address BSBEs must address BDBEs to be consistent with the governing regulations.
- General design criteria standards – General design criteria standards, such as ANS-53.1, specifically address BDBEs.
- Calculations standards need to address how to determine BDBE impacts on plant Systems Structure and Components and how the consequences are determined

3. Guidance for Addressing BDBEs in Future Standards to be Developed by RP3C:

A consistent approach needs to be developed for addressing BDBE in standards in the future. The development of this approach needed to consider risk and performance and thus is assigned to RP3C to include in its plan. The goal is to address the spectrum of potential transients and events from a common, overall perspective. In reality, we already design for BDBEs and as such the term BDBEs is really a misnomer.

Our approach needs to recognize that the design for systems and equipment whose sole purpose is to protect the public from very low probability events do not have to meet the same design criteria as those that mitigate more probable events in order to assure a high level of safety.

RP3C Response:

This Action Item is one of the agenda items for RP3C on June 8, 2015. The results of the discussion will be reported to the Standards Board.

Report of SB Action Items

Red = on agenda discussed separately

Green = For concurrence of completed action items (Agenda Item 11. M)

Black = on-going or on hold

Action Item	Description	Responsibility	Status/Comments /Reassignments
11/2014-01	William Reuland to consider developing a new standard on ITAAC within the LLWRCC. (Reassignment of Action Item 6/2014-11). Due Date: 2/1/2015	William Reuland	Completed? Write up distributed 11/25/14
11/2014-02	**Pat Schroeder to add cumulative number of e-standards/print copies sold to the sales reports in the future. Due Date: 6/1/2015 (for next report provided before the June 2015 meeting)**	**Pat Schroeder**	**Completed** **See sales report in June 9, 2015, meeting materials packet**
11/2014-03	**Pat Schroeder to issue the revised reference policy and disclosure form for approval ballot to the SB after proofing. Due Date: 12/31/2014**	**Pat Schroeder**	**Completed** **Ballot closed 1/16/15** **Link to ballot** **Incorporated into policy manual** **Link to policy manual**
11/2014-04	Consensus committee chairs to issue letters of recognition to subcommittee chairs and their managers as appropriate. Due Date: As needed	Consensus committee chairs	On-going
11/2014-05	George Flanagan to confirm details with Professional Divisions Chair Hans Gougar to implement professional divisions reviews of delinquent standards to determine appropriate maintenance action. (Flanagan to keep Gene Grecheck informed of this process.) Due Date: 4/1/2015	George Flanagan	OPEN
11/2014-06	Donald Spellman to serve as the 2015 Standards Service Award Ad Hoc Committee Chair and to select two additional members to help with the selection. Due Date: 3/1/2015	Donald Spellman	Completed
11/2014-07	Pat Schroeder to send a broadcast to student section members on getting involved in standards every other year – next time to be July 2016.	Pat Schroeder	On-going
11/2014-08	Pat Schroeder to create a similar solicitation broadcast to the YMG and NAYGN. Due Date: 2/28/2015	Pat Schroeder	OPEN
11/2014-09	**Herbert Massie to distribute the presentation he made at the Fuel Cycle Information Exchange Meeting to the SB. Due Date: 11/30/2014**	**Herbert Massie**	**Completed** **Provided via email on 11/18/14 and posted.** **Link to presentation**

Action Item	Description	Responsibility	Status/Comments /Reassignments
11/2014-10	**George Flanagan to provide Pat Schroeder the framework license document for distribution to the SB. Due Date: 11/30/2014**	**George Flanagan**	**Completed** **Provided and posted 11/14/14** **Link to report** **Revision provided 1/6/15 and posted** **Link to revised report**
11/2014-11	Prasad Kadambi and Ed Wallace to create a task group within the RP3C to address the issue of creating a BDBE standard and report back to the SB. The task group should use Steven Stamm's draft white paper (Attachment 6 of 11/2014 Minutes) as reference. This action item replaces Action Item 6/2014-13. Due Date: 5/1/2015	Prasad Kadambi, Ed Wallace	OPEN
11/2014-12	Steven Stamm and Donald Spellman to complete the identification of preferred terms and update the foreword in the glossary so that it could be issued for working group use. Due Date: 2/28/2015	Steven Stamm, Donald Spellman	OPEN
11/2014-13	Steven Stamm and Pat Schroeder to issue a request to consensus committee chairs to identify which webtraining sessions each of the volunteers under that consensus committee should be invited to attend. Due Date: 3/1/2015	Steven Stamm, Pat Schroeder	OPEN
11/2014-14	Standards Board members let Steven Stamm and Pat Schroeder know if they can serve as primary instructor or backup instructor for webtraining sessions. Due Date: 4/1/2015	Standards Board members	OPEN
11/2014-15	Andrew Smetana to work with Gene Carpenter to determine the appropriate contact at NRC to discuss the possibility of updating the endorsement of the 1971 decay heat standard (ANS-5.1) in 10CFR50, Appendix K, to the recently approved version – ANSI/ANS-5.1-2014. [Follow up action item to 6/2014-01] Due Date: 4/1/2015	Andrew Smetana	OPEN Andrew Smetana working with NRC rep on SRACC, Donald Palmrose, on this issue.
11/2014-16	Andrew Smetana to provide a comparison between the ANS-5.1 -1971 draft and ANSI/ANS-5.1-2014 to the SB. Due Date: 5/1/2015	Andrew Smetana	Completed Provided via email 4/14/15
11/2014-17	Andrew Smetana to ask ANS-5.1 Working Group Chair Ian Gauld to prepare an article about the new version of ANSI/ANS-5.1-2014 for *Nuclear News* or other suitable ANS publication (Notes & Deadlines, *ANS News, Nuclear Standards News*) Due Date: 4/1/2015	Andrew Smetana	OPEN

Action Item	Description	Responsibility	Status/Comments /Reassignments
11/2014-18	Consensus committee chairs to work with subcommittee chairs to prepare a short article about any standard in need of subject matter experts to be maintained or initiated. The article should include details of why the standard needs to be maintained (revision/reaffirmation) or initiated and include its importance and benefit to the industry, expertise needed, etc. Articles to be provided to Pat Schroeder. Due Date: 3/1/2015	Consensus committee chairs	On-going
11/2014-19	Pat Schroeder to work with the ANS Publication Information Department, Nuclear News staff, and ANS News staff to disseminate articles on ANS standards needing volunteer support from subcommittee chairs in appropriate ANS media/publications. Due Date: 6/1/2015	Pat Schroeder	On-going
11/2014-20	RP3C to engage in a pilot program with one of the consensus committees to reach the objectives of the RIPB Plan. Due Date: 6/1/2015	RP3C	OPEN
11/2014-21	**Pat Schroeder to add the RP3C Bylaw to the SB and RP3C workspaces. Due Date: 11/30/2014**	**Pat Schroeder**	**OPEN Posted 11/14/14 Link to RP3C Bylaws**
11/2014-22	**Standards Board members to let George Flanagan and Pat Schroeder know if they are aware of any potential candidates (local or planning to attend) that could provide a presentation on standards at the ANS 2015 Student Conference at Texas A&M in April. An alternate may be to see if the ANS president was attending and could include information on standards or minimally provide a handout. Due Date: 3/1/2015**	**Standards Board members**	**Completed None/found**
11/2014-23	**Donald Spellman to provide ANS leadership the ANS standards priority list in time for the RIC. Due Date: 2/1/2015**	**Donald Spellman**	**Completed Provided and posted Link to list (see tab "List for Mikey")**
11/2014-24	**Pat Schroeder to post the list of action items assigned during the meeting on the SB Workspace. Due Date: 11/30/2014**	**Pat Schroeder**	**Completed Posted 11/14/14 Link to list**

Action Item	Description	Responsibility	Status/Comments /Reassignments
6/2014-03	Each consensus committee (CC) chair to appoint a maintenance coordinator to be responsible for tracking maintenance needs of each CC. DUE DATE: 6/1/2015	CC Chairs	OPEN for FWDCC, NRNFCC, RARCC NCSCC = Larry Wetzel JCNRM = Paul Amico ESCC = Leah Parks LLWRCC = Tim Meneely SRA = Keith Morrell
6/2014-08	Steven Stamm (with Gene Carpenter's support) to review SB comments on Donald Eggett's DID white paper and revise accordingly. DUE DATE: 2/1/2015	Steven Stamm	OPEN
6/2014-14	Donald Spellman to form a working group with representation from multiple SDOs to develop a coordination of related standards activities on component classification. DUE DATE: 2/1/2015	Donald Spellman	OPEN
6/2014-15	Steven Stamm to prepare guidance on what goes into a standard and what goes into an appendix. Guidance may consider the 6 points discussed at the 6/17/14 SB meeting. Due Date: 3/31/15	Steven Stamm	OPEN
6/2014-22	Internal Communications TG to prepare 5 training presentations and provide for member comments. Presentations include 1) overview of nuclear related standards, plus additional slides that address international aspects, and 2) ANS standards organization and staffing, 3) the standards development process, 4) Standards Committee policies and procedures, and 5) CC policies and procedures DUE DATE: 5/1/2015	Internal Communications TG	OPEN Link to #1 Overview PPT (posted for use) Link to comments on #2 Organization & Staffing PPT Link to comments on #3 Development Process PPT Link to PPT #4&5
6/2014-24	Internal Communications TG to review the old NFSC division liaisons list and reinstitute the ANS professional division representative program. (Old NFSC professional division liaison list provided 7/9/14 to ICTG by Pat Schroeder.) DUE DATE: 5/1/2015	International Communications TG	OPEN
11/13-18	**All CC chairs to provide Donald Spellman a list of priority standards to be revised and or developed within their CC. DUE: 12/31/2014**	**ANS CC Chairs**	**Completed**
11/12-04	Donald Spellman to begin development of one or more grants for ANS support. Projects to be considered for a grant proposal include ANS-2.8 (Flood Hazards), ANS-3.13 (Reliability Assurance Program), ANS-57.11 (Fuel Cycle Facilities), and advanced reactors.	Donald Spellman	On Hold (grant proposals not currently being accepted)
11/12-17	Prasad Kadambi to prepare a business case for initiating an ANS conformity assessment program. Due: 6/1/2015	Prasad Kadambi	OPEN

Student Members Solicitation - Placement Log (Updated 10-23-14)

	Student Name		Student email	Phone # if Provided	Volunteer Form / Resume Received	PLACEMENT
1	Collins	Chelsea Collins	chelseatcollins@ufl.edu	386-365-8472	YES	8.3
2	Kopacz	Joseph (Joe) Kopacz	jkopacz@iastate.edu	563-940-7887	YES	3.13
3	Kurtts	Margaret Kurtts	mkurtts@vols.utk.edu	210-807-0041 (cell)	YES	JCNRM SC/SM
4	Ludwig	Cailyn Ludwig	ludwig7@purdue.edu	402-516-4910	YES	3.14
5	Prewitt	Benjamin (Ben) Prewitt	bjp2n4@mst.edu	636-226-8210	YES	20.1
6	Robideaux	Dylan Robideaux	drobi825@gmail.com	337-257-2443	VF ONLY	8.7
7	Shah	Manit Shah	manitshahd@gmail.com	979-587-3427	YES	6.4.3
8	Sharma	Manish Sharma	mksrkf@mst.edu	573-647-0488	YES	6.4.3
9	Suehr	Gregory Suehr	gregory.suehr@gmail.com	412-302-1189	YES	57.2/5.73
10	Tackett	Stanley (Stan) Tackett	stackett@insight.rr.com	614-854-8786 (work) 914-937-0423 (home)	YES	6.4.2
11	Watson	Mara Watson	marawtsn@gmail.com	269-290-8264	YES	ESCC

RP3C's RIPB Plan

Description:

RP3C's RIPB Plan is a compendium of individual standards project action plans within the structure of Standards Application Platforms with supporting technical reference documents. Conceptually, it is envisioned as a collection of four main folders, each with sub-folders.

FOLDER 1: Authorities and Directions

- Sub-Folder 1 would contain the RP3C Bylaws and resolutions of the SB that provide direction to RP3C.
- Sub-Folder 2 would contain direction setting documents from the ANS technical society level.
- Sub-Folder 3 would contain policy-type direction available at the national level; includes Public Law 104-113 and OMB Circular A-119.

FOLDER 2: Standards Application Platforms (SAP)

- Each ANS Consensus Committee will be assigned one or more Standards Application Platforms
- Each SAP will have at least two sub-folders: (1) ANS Voluntary Consensus Standards; and (2) Non-ANS VCSs.
- All the VCSs will conform to the required characteristics identified in OMB Circular A-119 as meeting the criteria for consideration in lieu of government issued standards or regulations. Generally, this means American National Standards (based on ANSI criteria) or ISO standards or equivalent.[1] The following bullets extracted from OMB Circular A-119 explain the significance of VCSs:
  - "Voluntary consensus standards bodies" are domestic or international organizations which plan, develop, establish, or coordinate voluntary consensus standards using agreed-upon procedures. For purposes of this Circular, "voluntary, private sector, consensus standards bodies," as cited in the National Technology Transfer and Advancement Act of 1995 (Pub. L. 104–113; known as the NTTAA), is an equivalent term. The PL-104-113 and the Circular encourage the participation of federal representatives in these bodies to increase the likelihood that the standards they develop will meet both public and private sector needs. A voluntary consensus standards body is defined by the following attributes:
    (i) Openness.

    (ii) Balance of interest.

    (iii) Due process.

[1] The Standards Application Platforms do not contain regulations, regulatory guides, NEI documents, EPRI documents, etc. They also do not include in-process or draft standards. Trial Use and Pilot Application (TUPA) standards may be included.

(vi) An appeals process.

(v) Consensus, which is defined as general agreement, but not necessarily unanimity, and includes a process for attempting to resolve objections by interested parties, as long as all comments have been fairly considered, each objector is advised of the disposition of his or her objection(s) and the reasons why, and the consensus body members are given an opportunity to change their votes after reviewing the comments.

- **When must an agency use voluntary consensus standards?** An agency must use[2] voluntary consensus standards, both domestic and international, in its regulatory and procurement activities in lieu of government-unique standards, unless use of such standards would be inconsistent with applicable law or otherwise impractical[3]. In all cases, the agency has the discretion to decline to use existing voluntary consensus standards if the agency determines that such standards are inconsistent with applicable law or otherwise impractical.

FOLDER 3: Standards Project Action Plans (SPAP)

- This folder contains all the standards directed by the ANS SB to be those that RP3C provides assistance relative to RIPB issues, each as a sub-folder.
- The SPAP under each sub-folder will contain the following categories of information:
  - Information from the approved PINS form.
  - Information provided by Working Group regarding personnel points of contact and contact information.
  - Description of RIPB issues or factors on which the Working Group would want RP3C assistance.
  - In consultation with RP3C, specific points of reference to contents of technical reference documents.
  - Schedule of milestones and hold-points.
  - A statement from the Working Group describing the successful outcome for the standard relative to RIPB application.
  - RP3C point of contact with contact information.

FOLDER 4: Technical Reference Documents

- This folder will contain sub-folders that include:
  - The draft “Policy and Technical Plan for RP3C”.
  - Regulatory documents or weblinks
  - NEI, EPRI or other published material or documents

[2] "Use" means incorporation of a standard in whole, in part, or by reference for procurement purposes, and the inclusion of a standard in whole, in part, or by reference in regulation(s).
[3] "Impractical" includes circumstances in which such use would fail to serve the agency's program needs; would be infeasible; would be inadequate, ineffectual, inefficient, or inconsistent with agency mission; or would impose more burdens, or would be less useful, than the use of another standard.

Environmental & Siting Consensus Committee (ESCC)
Chairman's Report to the Standards Board
June 9, 2015, Meeting ● San Antonio, Texas

Projects in Consideration for Development/Volunteer Support Needed (13)

- ANS-2.6, "Guidelines for Estimating Present and Forecasting Future Population Distributions Surrounding Nuclear Facility Sites" (new chair just committed)
- ANS-2.11[1], "Guidelines for Evaluating Site-Related Geotechnical Parameters at Nuclear Power Sites" (reinvigoration of historic standard ANSI/ANS-2.11-1978 (R1989))
- ANS-2.13, "Evaluation of Surface-Water Supplies for Nuclear Power Sites" (reinvigoration of historical standard ANSI/ANS-2.13-1979 (R1989))
- ANS-2.19, "Guidelines for Establishing Site-Related Parameters for Site Selection and Design of an Independent Spent Fuel Storage Installation (Water Pool Type)" (reinvigoration of historical standard ANSI/ANS-2.19-1981 (R1990))
- ANS-2.22, "Environmental Radiological Monitoring at Nuclear Facilities," (new standard)
- ANS-2.25, "Surveys of Ecology Needed to License Nuclear Facilities" (reinvigoration of historical standard ANSI/ANS-18.5-1982/redesignated ANS-2.25) (Approved PINS but no membership)
- ANS-2.32, "Guidance on the Selection and Evaluation of Remediation Methods for Subsurface Contamination" (new standard – project lost chair before PINS comments resolved/no current activity)
- ANS-18.2.1, "Methods for Inferring Environmental Doses" (new standard)
- ANS-18.3.1, "Entrainment: Guide to Steam Electric Power Plant Cooling System Siting, Design and Operation for Controlling Damage to Aquatic Organisms" (new standard)
- ANS-18.3.2, "Cold Shock: Guide to Steam Electric Power Plant Cooling System Siting, Design and Operation for Controlling Damage to Aquatic Organisms" (new standard)
- ANS-18.3.3, "Entrapment/Impingement: Guide to Steam Electric Power Plant Cooling System Siting, Design and Operation for Controlling Damage to Aquatic Organisms at Water Intake Structures" (new standard)
- ANS-18.4, "Aquatic Ecological Surveys Required for Siting, Design, and Operation of Thermal Power Plants" (new standard)
- ANS-18.6, "Discharge of Thermal Effluents into Surface Waters" (new standard)

PINS in Development/Approval (2)

- ANS-2.10, "Criteria for the Handling and Initial Evaluation of Records from Nuclear Power Plant Seismic Instrumentation" (reinvigoration of historical standard ANSI/ANS-2.10-2003))
- ANS-2.18, "Standards for Evaluating Radionuclide Transport in Surface Water for Nuclear Power Sites," (new standard)

Standards in Development – Approved PINS (7)

- ANS-2.2, "Earthquake Instrumentation Criteria for Nuclear Power Plants" (reinvigoration of historical standard ANSI/ANS-2.2-2002)
- ANS-2.8, "Determine External Flood Hazards for Nuclear Facilities" (reinvigoration of historical standard ANSI/ANS-2.8-1992)
- ANS-2.9, "Evaluation of Ground Water Supply for Nuclear Facilities" (reinvigoration of historical standard ANSI/ANS-2.9-1980 (R1989))
- ANS-2.16, "Criteria for Modeling Design-Basis Accidental Releases from Nuclear Facilities" (new standard)
- ANS-2.23, "Nuclear Plant Response to an Earthquake" (revision of ANSI/ANS-2.23-2002 (R2009))
- ANS-2.31, "Estimating Extreme Precipitation at Nuclear Facility Sites" (new standard)
- ANS-3.8.10, "Criteria for Modeling Real-time Accidental Release Consequences at Nuclear Facilities" (new standard)

[1] ANS-2.27 & ASCE 43-05 supersede ANS-2.11.

Standards at Ballot/Resolving Comments (1)

- ANS-3.11, "Determining Meteorological Information at Nuclear Facilities" (revision of ANSI/ANS-3.11-2005 (R2010))

Standards Recently Approved (1)

- ANSI/ANS-2.30-2015, "Criteria for Assessing Tectonic Surface Fault Rupture and Deformation at Nuclear Facilities" (new standard)

Delinquent Standards (5+ years since ANSI approval) (5)

- ANSI/ANS-2.23-2002 (R2009), "Nuclear Plant Response to an Earthquake" (revision in development)
- ANSI/ANS-2.26-2004 (R2010), "Categorization of Nuclear Facility Structures, Systems, and Components for Seismic Design" (revision being considered)
- ANSI/ANS-2.27-2008, "Criteria for Investigations of Nuclear Facility Sites for Seismic Hazard Assessments" (revision being considered)
- ANSI/ANS-2.29-2008, "Probabilistic Seismic Hazard Analysis" (revision being considered)
- ANSI/ANS-16.1-2003 (R2008), "Measurement of the Leachability of Solidified Low-Level Radioactive Wastes by a Short-Term Test Procedure" (new chair just committed)

Responses to Inquiries (0)

The ESCC has not recently received any inquiries on standards.

Membership Changes

Added: Jim Xu (Siting: Seismic Subcommittee Vice-Chair), U.S. Nuclear Regulatory Commission
Removed: John Downing (Siting: Ecology Subcommittee Vice-Chair), Chicago Bridge & Iron

Fuel, Waste & Decommissioning Consensus Committee (FWDCC)
Chairman's Report to the Standards Board
June 9, 2015, Meeting ● San Antonio, Texas

PINS in Development (3) (No PINS currently in approval)

- ANS-55.1, "Solid Radioactive Waste Processing Systems for Light Water Reactor Plants" (revision of ANSI/ANS-55.1-1992 (R2009))
- ANS-55.4, "Gaseous Radioactive Waste Processing Systems for Light Water Reactor Plants" (revision of ANSI/ANS-55.4-1992 (R2007))
- ANS-55.6, " Liquid Radioactive Waste Processing System for Light Water Reactor Plants" (revision of ANSI/ANS-55.6-1992 (R2007))

Standards in Development – Approved PINS (2)

- ANS-57.2, "Design Requirements for Light Water Reactor Spent Fuel Facilities at Nuclear Power Plants" (reinvigoration of historical standard ANSI/ANS-57.2-1983)
- ANS-57.3, "Design Requirements for New Fuel Storage Facilities at LWR Plants" (reinvigoration of historical withdrawn standard)

Standards at Ballot/Resolving Comments

- ANSI/ANS-57.1-1992 (R201x), "Design Requirements for Light Water Reactor" (reaffirmation of ANSI/ANS-57.1-1992 (R2005))

Delinquent Standards (5+ years since ANSI approval) (8)

- ANSI/ANS-40.37-2009, "Mobile Low Level Radioactive Waste Processing Systems"
- ANSI/ANS-55.1-1992 (R2009), "Solid Radioactive Waste Processing Systems for Light Water Reactor Plants" (revision to be initiated—needs members)
- ANSI/ANS-55.4-1992 (R2007), "Gaseous Radioactive Waste Processing Systems for Light Water Reactor Plants" (revision to be initiated—needs members)
- ANSI/ANS-55.6-1993 (R2007), "Liquid Radioactive Waste Processing System for Light Water Reactor Plants" (revision to be initiated—needs members)
- ANSI/ANS-57.5-1996 (R2006), "Light Water Reactors Fuel Assembly Mechanical Design and Evaluation" (chair/members needed)
- ANSI/ANS-57.8-1995 (R2006), "Fuel Assembly Identification" (chair/members needed)
- ANSI/ANS-57.10-1996 (R2006), "Design Criteria for Consolidation of LWR Spent Fuel (chair/members needed)

Responses to Inquiries in Development (2)

- An inquiry was received 8/10/14 on ANSI/ANS-57.1-1992 (R2005), "Design Requirements for Light Water Reactor." A response is in development.
- A inquiry was received 1/12/15 on ANSI/ANS-55.1-1992 (R2009), "Solid Radioactive Waste Processing System for LWR Reactor Plants," and ANSI/ANS-55.6-1993 (R2007), "Liquid Radioactive Waste Processing System for LWR Plants." A response is in development.

Membership Changes

Added: Harry Felsher, U.S. Nuclear Regulatory Commission
Added: David W. Hillyer, Energy Solutions

JCNRM Chairman's Report to the ANS Standards Board
June 9, 2015 • Grand Hyatt • San Antonio, Texas

ASME/ANS RA-b-2013

A new addendum to the JCNRM's main "flagship" PRA methodology standard for LWR PRA was approved and published at the end of 2013. This "addendum" is known colloquially as "Addendum B" and is formally designated as ASME/ANS RA-b-2013. It contains changes that are mostly of a clarifying or consistency-across-the-standard nature, and it also brought many citations and other aspects up to date. Work on the next revision, which the JCNRM will call a "new edition", is already under way. This new version is expected to contain many substantive changes based on feedback from recent users of the standard, along with extensive re-formatting and the like. The next version is expected to be complete by late 2016. The next version of the requirements for seismic PRA at power will be issued earlier, perhaps by early 2016, in response to requests by the user community that this aspect of the revised standard be available earlier.

New Standards in Development

NOTE: The JCNRM has decided that each of these new standards will be released initially for Trial Use and Pilot Application – not for approval as an American National Standard by the American National Standards Institute.

ANS-58.22-2014, "Standard for Level 1/Large Early Release Frequency Probabilistic Risk Assessment for Nuclear Power Plant Applications"

- The Writing Group is led by Don Wakefield, and took a very long time to complete: the W.G. began its work in 1999.
- ANS/ASME-58.22-2014 was published on March 25, 2015, for a 36-month trial use period.
- Findings from the trial-use period will be incorporated into a future revision of ASME/ANS RA-S (the combined Level 1 standard).

ASME/ANS RA-S-1.2-2014, "Severe Accident Progression and Radiological Release (Level 2) PRA Methodology to Support Nuclear Installation Applications" (previously ANS/ASME-58.24)

- The Writing Group is led by Ed Burns, and this effort has been underway since 2005. Burns took over as chair from Mark Leonard in early 2013. Leonard had led the WG since its inception.
- ASME/ANS RA-S-1.2-2014 was published on January 5, 2015, for a 24-month trial use period.
- Findings from the trial-use period will be incorporated into a revision of the standard; the revised standard will be issued for ballot with the intent of seeking ANSI approval.

ASME/ANS RA-S-1.3-201x, "Standard for Radiological Accident Offsite Consequence Analysis (Level 3 PRA) to Support Nuclear Installation Applications" (previously ANS/ASME-58.25)

- The Writing Group is led by Keith Woodard, and this effort has been underway since 2005.
- After two earlier ballots and comment resolutions, the WG is very close to completing its work. A working group meeting was held April 14 – 15, 2015 to address additional comments provided by the NRC in August 2014. A "final" version is being given a JCNRM "readiness review" in spring 2015. The final JCNRM ballot is planned for later in 2015.
- The JCNRM plans to issue this standard for Trial Use and Pilot Application. The TUPA period will likely be for 24 or 36 months. After that, the findings from the trial-use period will be incorporated into a revision of the standard; the revised standard will be issued for ballot with the intent of seeking ANSI approval.

ASME/ANS RA-S-1.4, "Advanced Non LWR PRA Standard"

- The Working Group is led by Karl Fleming, underway since 2007.
- A final JCNRM ballot was held in spring 2013, and the ballot was successful. This standard was published on December 9, 2013, for trial use and pilot application for a 36-month period.
- Four different pilot applications are now under way.

- Findings from the trial-use period will be incorporated into a revision of the standard; the revised standard will be issued for ballot with the intent of seeking ANSI approval.
-

ASME/ANS RA-S-1.5, "Advanced Light Water Reactor PRA Standard"

- The Writing Group is led by James Chapman, underway since 2007. The JCNRM calls this the "ALWR PRA Standard."
- A final JCNRM ballot was held in spring 2013, and it was approved by the JCNRM. Additional changes were made to the draft, in part to accommodate applicability to SMRs (small modular reactors) that use light-water coolant. The working group is currently considering additional comments from the NRC related to the NRC's ALWR Interim Staff Guidance document, and possible changes to the draft before issuing the standard for a reballot.
- The working group is working on a markup of the NRC proposal and expects to finalize a draft for JCNRM ballot by the end of 2015. The ALWR appendix will be issued initially for trial use and later be incorporated into a revision of RA-S.

ANS RISC merger with ASME CNRM to form a new "Joint Committee on Nuclear Risk Management"

The merger has two aspects, an "organizational" aspect and a "business" aspect.

The "organizational" aspect, which was completed in early 2012 after over two years of administrative and liaison work, involved developing a "Rules and Operating Procedure" and a new structure for the joint committee. The structure consists of 3 subcommittees and a series of about ten writing groups and working groups, and a half-dozen short-term project teams. The two societies' Boards approved the "Rules and Operating Procedure" in final form in late 2011, and the new structure was put in place then. The new JCNRM is now formally in existence and has been operating as such since spring 2012, after having operated informally as a single joint entity for over a year prior to that. With this series of steps in place, the former ANS RISC Committee and the former ASME Committee on Nuclear Risk Management have effectively ceased to exist.

The JCNRM "business" aspect is not yet in place. Negotiations have been advancing recently after a long period of slower movement. The outlines of the final business arrangement are now in place, although nothing has been "approved" in final form yet. The tentative arrangement consists of ANS assumption of the administrative work of editing and publishing all new JCNRM standards; and ASME assumption of the work of arranging meetings, managing the finances, managing the ballot process, and a few other administrative tasks.

It is a pleasure to report that there seems to be almost no "friction" between the two societies in terms of how this merger has worked so far or will work in the future. The two co-chairs and the staffs of the two societies are working well together and rather little in the way of a legacy of the two societies' former roles remains as an impediment.

Standards Inquiries and Delinquent Standards

No inquiries have been received recently. The JCNRM does not have any delinquent standards in need of maintenance.

Future Plans

The JCNRM's Executive Committee has been meeting more-or-less bi-weekly by conference call. The principal focus has always been to serve as the "planning committee" and "coordinating committee" to oversee governance of the large and complex set of JCNRM activities, with an eye on planning for up to about two years out. The main JCNRM effort now is to develop the next version of the main PRA Combined Standard, which is planned now for late 2016. This next version, which we will call a "new edition" instead of an "addendum," is expected to have substantial changes to the format as well as to the content, based largely on feedback received in the past 2-3 years as this standard has been used by the commercial nuclear-power operating fleet and by the NRC. During this period of use, many areas have been identified where inconsistencies exist between different parts of the large PRA standard, mostly due to variable interpretations, and a few other problems have also been discovered during use. A number of what the JCNRM has called "cross cutting issues" have also been

identified, each of which is being worked on by one of several *ad hoc* project teams within the larger JCNRM. Some of these issues have policy implications for how the standard is to be used, but mostly these are issues with technical substance.

The other major JCNRM task in the next year is to ballot and issue the new Level 3 PRA and ALWR PRA standards under development that are discussed in the opening section of this report. This is a major effort, involving several dozen volunteers.

A third important task, although it does not require a lot of JCNRM effort now, is following the progress of the several "trial use applications" of our new standards, to assure that the way they approach their work provides as much useful feedback information as feasible to the JCNRM.

In mid-2103, the JCNRM established a separate new subcommittee, the Subcommittee on Risk Applications, with the charter to be the JCNRM interface with ANS and ASME (and other SDOs in the future) so as to provide assistance to other standards-development projects whenever such a project desires to develop a new standard (or modify an existing standard) to provide risk-informed or performance-based requirements. This new JCNRM Subcommittee is the JCNRM interface with the ANS Standards Board's Risk-informed and Performance-based Principles Policy Committee (RP3C).

In September 2014, the JCNRM dissolved one of its subcommittees, the Subcommittee on Planning, Interface, and Implementation, because the JCNRM leadership concluded that it would be more efficient to disperse this Subcommittee's several responsibilities among the other three JCNRM subcommittees.

In early 2013, the JCNRM appointed two task groups, one to recommend whether it should begin the development of a new standard for PRA to evaluate the risk from spent fuel pools, and another to evaluate the need and efficacy of a possible new standard covering PRA for small modular reactors of various designs. At its February 2014 meeting in Palm Beach, FL, the JCNRM decided not to embark on a new standard for spent-fuel-pool PRA at this time because significant work is now underway to develop an improved PRA methodology for that work. The JCNRM decided to await the completion of that work. The issue of whether to develop a new PRA standard for SMRs has been resolved by folding that aspect into the ALWR standard. (See above.) There is also some early discussion about whether the JCNRM should start working on standards for non-reactor nuclear facilities, which standards are of great interest to the U.S. Department of Energy.

Financial Support

For several years until it ended in 2013, a grant to the ANS from the U. S. Nuclear Regulatory Commission provided financial support for the work of the standards committee, mainly to cover travel costs of participants who had no other financial support, but also to cover a few other selected expenses. In spring 2014, a new grant application was submitted by the ANS in response to an NRC formal solicitation. This grant was formally awarded on February 4, 2015. This new grant is much more restrictive concerning who is eligible for reimbursement, and requires clearance for use of grant funds prior to each meeting. Also, significantly more detailed financial reporting is required.

Large Light Water Reactor Consensus Committee (LLWRCC)
Chairman's Report to the Standards Board
June 9, 2015 ● San Antonio, Texas

Projects in need of support (chair/members) to be initiated (4)

- ANS-56.1, "Containment Hydrogen Control" (reinvigoration of withdrawn project)
- ANS-58.2, "Design Basis for Protection of Light Water Nuclear Power Plants Against the Effects of Postulated Pipe Rupture" (reinvigoration of historical standard ANSI/ANS-58.2-1988)
- ANS-58.11, "Design Criteria for Safe Shutdown Following Selected Design Basis Events in Light Water Reactors" (reinvigoration of historical standard ANSI/ANS-58.11-1995 (R2002))
- ANS-59.3, "Nuclear Safety Criteria for Control Air" (reinvigoration of historical standard ANSI/ANS-59.3-1992 (R2002))

Standards in Development – Approved PINS (6)

- ANS-3.8.7, "Properties of Planning, Development Conduct, and Evaluation of Drills and Exercises for Emergency Preparedness at Nuclear Facilities" (revision of historical standard ANSI/ANS-3.8.7-1998) ****Once ANS-3.8.7 is completed, a path forward for completing the remaining emergency preparedness standards will be determined. This includes ANS-3.8.1, ANS-3.8.2, ANS-3.8.3, and ANS-3.8.6.****
- ANS-3.13 "Nuclear Plant Reliability Assurance Program (RAP) Development Guidance for Design, Construction, and Operation" (new standard)
- ANS-18.1, "Radioactive Source Term for Normal Operation of Light Water Reactors" (revision of historical standard ANSI/ANS-18.1-1999)
- ANS-51.10, "Auxiliary Feedwater System for Pressurized Water Reactors" (revision of ANSI/ANS-51.10-1991 (R2008))
- ANS-56.8, "Containment Leakage Testing Requirements" (revision of ANSI/ANS-56.8-2002 (R2011))
- ANS-58.8, "Time Response Design Criteria for Safety-Related Operator Actions" (revision of ANSI/ANS-58.8-1994 (R2008))

Standards at Ballot/Resolving Comments (1)

- ANS-3.5, "Nuclear Power Plant Simulators for Use in Operator Training and Examination" (revision of ANSI/ANS-3.5-2009)

Standards Recently Approved (3)

- ANSI/ANS-3.1-2014, "Selection, Qualification, and Training of Personnel for Nuclear Power Plants" (revision of ANSI/ANS-3.1-1993 (R1999))
- ANSI/ANS-59.51-1997 (R2015), "Fuel Oil Systems for Safety-Related Emergency Diesel Generators" (reaffirmation of ANSI/ANS-59.51-1997 (R2007))
- ANSI/ANS-59.52-1998 (R2015), "Lubricating Oil Systems for Safety-Related Emergency Diesel Generators" (reaffirmation of ANSI/ANS-59.52-1998 (R2007))

Delinquent Standards (5+ years since ANSI approval) (4)

- ANSI/ANS-3.5-2009, "Nuclear Power Plant Simulators for Use in Operator Training and Examination" (revision @ ballot)
- ANSI/ANS-51.10-1991 (R2008) "Auxiliary Feedwater System for Pressurized Water Reactors" (revision initiated)
- ANSI/ANS-58.3-1992 (R2008), "Physical Protection for Nuclear Safety-Related Systems and Components" (inactive)

- ANSI/ANS-58.8-1994 (R2008), “Time Response Design Criteria for Safety-Related Operator Actions” (revision initiated)

Responses to Inquiries in Development/Approval (1)

- An inquiry was received 3/17/15 on ANSI/ANS-56.8-1994, “Containment System Leakage Testing Requirements.” A response was drafted and issued to the LLWRCC for ballot; comments are currently being resolved.

Membership Changes

Added: Steven Routh, Bechtel
Added: David Kanuch (LWR & Rx Auxiliary System Designs Subcommittee Chair), Siemplekamp Nuclear Services, Inc.
Resigned: Eric Loewen, General Electric
Position change: Timothy Meneely to member at-large

Nonreactor Nuclear Facilities Consensus Committee (NRNFCC)
Chairman's Report to the Standards Board
June 9, 2015, Meeting ● San Antonio, Texas

Standards in Development – Approved PINS (2)

- ANS-3.14, "Process for Aging Management and Life Extension of Nonreactor Nuclear Facilities" (new standard)
- ANS-57.11, "Integrated Safety Assessments for Nonreactor Nuclear Facilities" (new standard)

Responses to Inquiries in Development/Delinquent Standards (5+ years since ANSI approval)(0)

The committee has not received any inquiries on standards and does not have any delinquent standards.

Membership Changes

No recent additions or deletions to committee membership

Nuclear Criticality Safety Consensus Committee (NCSCC)
Chairman's Report to the Standards Board
June 9, 2015, Meeting ● San Antonio, Texas

PINS in Development (1)

- ANS-8.22, "Nuclear Criticality Safety Based on Limiting and Controlling Moderators" (revision of ANSI/ANS-8.22-1997 (R2011))

PINS in Approval Process/Resolving Comments (1)

- ANS-8.29, "Nuclear Criticality Safety in Fuel Reprocessing Facilities" (new standard)

Standards in Development – Approved PINS (8)

- ANS-8.3, "Criticality Accident Alarm System" (revision of ANSI/ANS-8.3-1997 (R2012))
- ANS-8.12, "Nuclear Criticality Control and Safety of Plutonium-Uranium Fuel Mixtures Outside Reactors" (revision of ANSI/ANS-8.12-1987 (R2011))
- ANS-8.20, "Nuclear Criticality Safety Training" (revision of ANSI/ANS-8.20-1991 (R2005))
- ANS-8.21, "Use of Fixed Neutron Absorbers in Nuclear Facilities Outside Reactors" (revision of ANSI/ANS-8.21-1995 (R2011))
- ANS-8.24, "Validation of Neutron Transport Methods for Nuclear Criticality Safety Calculations" (revision of ANSI/ANS-8.24-2007 (R2012))
- ANS-8.26, "Criticality Safety Engineer Training and Qualification Program"(revision of ANSI/ANS-8.26-2007 (R2012))
- ANS-8.27, "Burnup Credit for LWR Fuel" (revision of ANSI/ANS-8.27-2007)
- ANS-8.28, "Administrative Practices for the Use of Non-Destructive Assay Measurements for Nuclear Criticality Safety" (new standard)

Standard Recently Approved (1)

- ANSI/ANS-8.10-2015, "Criteria for Nuclear Criticality Safety Controls in Operations with Shielding and Confinement" (revision of ANSI/ANS-8.10-1983 (R2005))

Responses to Inquiries in Development (1)

- An inquiry was received 3/11/2015 on ANSI/ANS-8.3-1997 (R2012), "Criticality Accident Alarm System." A response is in development.

Delinquent Standards – 5+ Years Since ANSI Approval (2)

- ANSI/ANS-8.20-1991 (R2005), "Nuclear Criticality Safety Training" (revision balloted by ANS-8; comments being resolved)
- ANSI/ANS-8.27-2008, "Burnup Credit for LWR Fuel" (revision balloted by ANS-8; comments being resolved)

Membership Changes

Replacement: Roger Bartholomay, URS Professional Solutions LLC (an AECOM Company), replaced Raymond Reed, retired
Replacement: Brian Kidd, Babcock & Wilcox Nuclear Operations Group, replaced Lon Paulson, General Electric, as ANS-8 Subcommittee Chair

Research & Advanced Reactors Consensus Committee (RARCC)
Chairman's Report to the Standards Board
June 9, 2015 Meeting ● San Antonio, Texas

PINS in Development/Approval (3)

- ANS-15.15, "Criteria for the Reactor Safety Systems of Research Reactors" (revision of historical standard ANSI/ANS-15.15-1978 (R1986))
- ANS-30.1, "Integration of Risk-Informed, Performance-Based Principles and Methods into Nuclear Safety Design for Nuclear Power Plants" (new standard)
- ANS-30.2, "Standard on SSC Classification" (title TBD – new standard)

Standards in Development – Approved PINS (5)

- ANS-15.2, "Quality Control for Plate-type Uranium-Aluminum Fuel Elements" (revision of ANSI/ANS-15.2-1999 (R2009))
- ANS-15.4, "Selection and Training of Personnel for Research Reactors" (revision of ANSI/ANS-15.4-2007)
- ANS-15.11, "Radiation Protection at Research Reactor Facilities" (revision of ANSI/ANS-15.11-2009)
- ANS-20.1, "Nuclear Safety Criteria and Design Process for Fluoride Salt-Cooled High-Temperature Reactor Nuclear Power Plants" (new standard)
- ANS-54.1, "Nuclear Safety Criteria and Design Process for Liquid-Sodium-Cooled Reactor Nuclear Power Plants" (revision of historical standard ANSI/ANS-54.1-1989)

Standards Recently Approved

- ANSI/ANS-14.1-2004 (R2014), "Operation of Fast Pulse Reactors" (reaffirmation of ANSI/ANS-14.1-2004 (R2009))
- ANSI/ANS-15.16-2015, "Emergency Planning for Research Reactors" (revision of ANSI/ANS-15.16-2008)

Delinquent Standards (5+ years since ANSI approval) (5)

- ANSI/ANS-15.2-1999 (R2009), "Quality Control for Plate-type Uranium-Aluminum Fuel Elements" (revision initiated)
- ANSI/ANS-15.4-2007, "Selection and Training of Personnel for Research Reactors" (revision initiated)
- ANSI/ANS-15.11-2009, "Radiation Protection at Research Reactor Facilities" (revision initiated)

Responses to Inquiries (1)

An inquiry was received 12/18/13 on ANSI/ANS-15.4-2007, "Selection and Training of Personnel for Research Reactors. The response was approved 3/17/2015 and subsequently released.

Membership Changes

No recent additions or deletions to committee membership.

Safety & Radiological Analyses Consensus Committee (SRACC)
Chairman's Report to the Standards Board
June 9, 2015 Meeting ● San Antonio, Texas

PINS in Development (2)

- ANS-6.1.1, "Neutron and Gamma-Ray Fluence-To-Dose Factors" (reinvigoration of historical standard ANSI/ANS-6.1.1-1991)
- ANS-19.4**,** "A Guide for Acquisition and Documentation of Reference Power Reactor Physics Measurements for Nuclear Analysis Verification" (historical revision of ANSI/ANS-19.4-1976; R1983; R1989; R2000 – proposed new standard)

Standards in Development – Approved PINS (7)

- ANS-6.4.2, "Specification for Radiation Shielding Materials" (revision of ANSI/ANS-6.4.2-2006)
- ANS-6.4.3, "Gamma-Ray Attenuation Coefficients & Buildup Factors for Engineering Materials" (reinvigoration of historical standard ANSI/ANS-6.4.3-1991)
- ANS-19.1, "Nuclear Data Sets for Reactor Design Calculations" (revision of ANSI/ANS-19.1-2002 (R2011))
- ANS-19.5, "Requirements for Reference Reactor Physics Measurements" (historical revision of ANSI/ANS-19.5-1995)
- ANS-19.9, "Delayed Neutron Parameters for Light Water Reactors" (new standard)
- ANS-19.11, "Calculation and Measurement of the Moderator Temperature Coefficient of Reactivity for Pressurized Water Reactors" (revision of ANSI/ANS-19.11-1997 (R2011))
- ANS-19.12, "Nuclear Data for the Production of Radioisotope" (new standard)

Standards at Ballot/Resolving Comments (2)

- ANS-6.6.1, "Calculation and Measurement of Direct and Scattered Gamma Radiation from LWR Nuclear Power Plants" (revision of ANSI/ANS-6.6.1-1987 (R2007))
- ANS-10.8," Non-Real Time, High-Integrity Software for the Nuclear Industry—User Requirements" (new standard)

Standards Recently Approved (1)

- ANSI/ANS-5.1-2014, "Decay Heat Power in Light Water Reactors" (revision of ANSI/ANS-5.1-2005)

Delinquent Standards (5+ years since ANSI approval) (8)

- ANSI/ANS-6.3.1-1997 (R2007), "Program for Testing Radiation Shields in Light Water Reactor (LWR)" (chair needed)
- ANSI/ANS-6.4-2006, "Nuclear Analysis and Design of Concrete Radiation Shielding for Nuclear Power Plants" (chair needed)
- ANSI/ANS-6.4.2-2006, "Specification for Radiation Shielding Materials" (revision initiated)
- ANSI/ANS-6.6.1-1987 (R2007), "Calculation and Measurement of Direct and Scattered Gamma Radiation from LWR Nuclear Power Plants" (revision @ ballot)
- ANSI/ANS-10.2-2000 (R2009), "Portability of Scientific and Engineering Software" (being considered for withdrawal)
- ANSI/ANS-10.4-2008, " Verification and Validation of Non-Safety-Related Scientific and Engineering Computer Programs for the Nuclear Industry" (being considered for revision)
- ANSI/ANS-19.3.4-2002 (R2008) "The Determination of Thermal Energy Deposition Rates in Nuclear Reactors" (chair needed)
- ANSI/ANS-19.10-2009, "Methods for Determining Neutron Fluence in BWR and PWR Pressure Vessel and Reactor Internals" (new chair committed recently)

Responses to Inquiries in Development (0)

The committee has not received any recent inquiries on standards.

Membership Changes

Added: Paul Hulse, Sellafield Ltd.
Added: Donald Palmrose, U.S. Nuclear Regulatory Commission

NFPA Technical Committee on Fire Protection for Nuclear Facilities Activities

Scope: Technical Committee is responsible for four standards currently.

- **NFPA 801, Standard for Fire Protection for Facilities Handling Radioactive Materials**
  - This standard protects the safety of the public, facility personnel, and the environment from the effects of fire or explosions on radiological and other hazardous materials at all facilities handling radioactive materials, except nuclear reactors
- **NFPA 804 Standard for Fire Protection for Fire Protection for Advanced Light Water Reactor Electric Generating Plants**
  - This standard applies only to advanced light water reactor electric generating plants and provides fire protection requirements to ensure safe shutdown of the reactor, minimize the release of radioactive materials to the environment, provide safety to life of on-site personnel, limit property damage, and protect continuity of plant operation
- **NFPA 805 Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants**
  - This standard specifies the minimum fire protection requirements for existing light water nuclear power plants during all phases of plant operation, including shutdown, degraded conditions, and decommissioning in order to protect the safety of the public, the environment, and plant personnel from a plant fire and its potential effect on safe reactor operations.
- **NFPA 806 Performance-Based Standard for Fire Protection for Advanced Nuclear Reactor Electric Generating Plants Change Process.**
  - This standard provides minimum requirements for a risk-informed, performance-based change process for the fire protection program for advanced nuclear reactor electric generating plants, including their construction and all phases of operation, including shutdown, degraded conditions, and decommissioning in order to protect the safety of the public, the environment, on-site personnel, and the physical integrity of plant components

Status:

	NFPA 801	NFPA 804	NFPA 805	NFPA 806
Current Revision	2014	2010	2010	2010
Next Revision	2019	2015	2015	2015
Activity	Revision during Fall 2018*	NITMAM** Closing Date 10/17/14	NITMAM** Closing Date 10/17/14	NITMAM** Closing Date 10/17/14

*Public comment periods are identified on the NFPA website

**Notice of Intent To Make A Motion (NITMAM) describes the process where the public can have proposals brought before the NFPA membership at the Annual Business meeting. If none are received, the document is published as approved by the technical committee.

Possible Future Activity

Consideration of a project to develop a new standard for Small Modular Reactors (SMR) has been discussed by the committee. No action taken to date.