

## Standards Board (SB)

November 14, 2023

Washington Hilton, Washington D.C.

Attended	Voting Member Name	Role	Company
x	Todd Anselmi	Vice Chair (2023) At-Large (2026)	Idaho National Laboratory
x*	Robert Becse	At-Large (2025)	Westinghouse Electric Company LLC
	Robert Budnitz	At-Large (2026)	Lawrence Berkeley National Laboratory (retired)
x*	Jennifer Call	At-Large (2024)	Tennessee Valley Authority
x	Brandon Chisholm	At-Large (2026)	Southern Company
X*	Michelle French	Ex-Officio	WECTEC
x	Gale Hauck	Ex-Officio	Oak Ridge National Laboratory
x*	Dennis Henneke	Ex-Officio	GE Hitachi
x	Mark Joseph	Ex-Officio	Navarro Research & Engineering
x*	Robert Kalantari	At-Large (2025)	Engineering Planning & Management, Inc.
x	Jean-Francois "Jef" Lucchini	Ex-Officio	Los Alamos National Laboratory
x*	Carl Mazzola	Ex-Officio	Los Alamos National Laboratory
x	Frances Pimentel	At-Large (2026)	Nuclear Energy Institute
x	Mehdi Reisi-Fard	At-Large (2025)	U.S. Nuclear Regulatory Commission
x	Andrew Smetana	Ex-Officio	Individual
x	Andrew Sowder	Chair (2023) At-Large (2026)	Electric Power Research Institute
x*	Kent Welter	At-Large (2026)	NuScale Power
x*	Larry Wetzel	Ex-Officio	Individual
17	17/18 Votes = 94.44% Participation		
Attended	Nonvoting Member Name	Role	Company
x	Temi Adeyeye	Guest	NuScale Power
x	Kelsey Amundson	Board Liaison	Los Alamos National Laboratory
x	Jason Andrus	Guest	Idaho National Laboratory
x*	Calvin Hopper	Observer	Individual
x	Greg Hudson	Guest	Metcalfe PLLC
x*	Don Eggett	Observer	Eggett Consulting, LLC
x*	George Flanagan	Observer	Individual
x	N. Prasad Kadambi	RP3C Chair/ANSI Liaison	Kadambi Engineering Consultants
x*	Mark Linn	Observer	Individual
x*	Donald Spellman	Observer/ISO-NTAG Liaison	Individual

\*participated remotely

### 1. Welcome and Roll Call

SB Chair Andrew Sowder initiated the meeting. He welcomed all. Roll call was taken, and a quorum was achieved. Sowder welcomed new Nonreactor Nuclear Facilities Consensus Committee (NRNFCC) Chair Mark Joseph.

### 2. Approval of Agenda

*(with flexibility to move discussion items as needed to accommodate schedules)*

The agenda was approved with the request from Dennis Henneke to discuss ANS-GS-30.1, *Integrating Risk and Performance Objectives into New Reactor Nuclear Safety Designs*, during “Other business.”

### 3. SB Chair Report

#### A. Highlights of Report to the Board of Directors



3A\_SB  
Chair\_2023\_WINTER

Andrew Sowder presented his embedded report that was submitted to the ANS Board of Directors on behalf of the SB. See the [embedded report](#) for full details.

An estimated nearly 1000 volunteers contribute to the ANS Standards Committee program. Time was spent discussing the demographics of Standards Committee volunteers (i.e., years of experience, segment of the industry, capability categories). With the exception of the year a member entered the workforce, the information is captured in a member’s profile in ANS Collaborate.

**ACTION ITEM 11/2023-01: Pat Schroeder to check if/how the profile section on ANS Collaborate can capture the year a volunteer entered the workforce.**

**DUE DATE: January 1, 2024**

#### B. SB Leadership Meeting with U.S. Nuclear Regulatory Commission (NRC) Staff

Sowder and Todd Anselmi meet with the new standards executive, Michelle Sampson, and her staff on September 14, 2023, the day after the NRC Standards Forum. They discussed what is new in ANS standards. Prasad Kadambi joined the meeting. Much of the discussion focused on modernizing ANS standards with risk-informed and performance-based (RIPB) methods. Going forward, Sowder will try to have quarterly meetings with NRC as the opportunity arises.

#### C. Policy Refresher on Leadership Appointments

Sowder reviewed leadership appointments and terms as noted below:

- Working group chairs appointed by subcommittee chairs; no term limit.
- Subcommittee chairs/vice chairs appointed by consensus committee (CC) chairs with CC concurrence; unlimited 3-year term.
- CC chairs/vice chairs selected by SB for new CC; subsequently CC chairs elected; unlimited 3-year term.
- Risk-Informed, Performance-Based Principles and Policy Committee (RP3C) chair appointed by SB; unlimited 2-year term.
- SB chair/vice chair appointed by incoming ANS president; 1-year term renewable for 2 additional years (3-year max).

A request was made by a member to review chair terms and appointments. The RP3C Chair position has been considered by past SB leadership with a decision from the leadership to remain static.

Challenges have been experienced to find individuals interested in chair roles. An example is the NRNFCC chair role that was open for several months even though ample notice of the chair position was announced.

**ACTION ITEM 11/2023-02: Andrew Sowder and Todd Anselmi to consider the appropriateness of chair role limits, in particular the RP3C chair role term limit, and possibly announcement of the opportunity to fulfill this role.**

**DUE DATE: March 1, 2024**

- D. SB Response to National Institute of Standards and Technology (NIST) Federal Register Notice (Response letter [embedded here.](#))



3D\_2023\_ANS\_SB\_Response\_to\_NIST\_RF

Sowder made it a priority to respond to the NIST request for information. The response letter is embedded for reference. Advanced reactor technologies are included in the list of critical and emerging technologies. Donald Spellman reported that the U.S. Nuclear Technology Advisory Group also responded to the NIST request. Temi Adeyeye added that Gen III has a critical time period. He feels that some codes and standards need to be prioritized from the perspective of Gen III and IV. Sowder agreed and stated that this is the purpose of the Advanced Reactor Codes and Standards Collaborative (ARCSC). Adeyeye suggested that ANS consider coordinating with the American Society of Mechanical Engineer (ASME) on meetings.

- E. Brief Update on the Advanced Reactor Codes & Standards Collaborative (ARCSC)  
Sowder took time to make sure members are aware of the upcoming ARCSC workshop scheduled on November 30, 2023, at Electric Power Research Institute (EPRI) offices in D.C. He explained that the ARCSC is a fall out from the Nuclear Energy Institute/EPRI North American Advanced Reactor Roadmap (NAARR). The ARCSC has support from NEI and EPRI. Donald Eggett is the Collaborative's representative to the NAARR Implementation Board. The NAARR Implementation Board had a meeting in September 2023. Eggett was out of the country, but Frances Pimentel stepped in for Eggett and took notes.

**ACTION ITEM 11/2023-03: Donald Eggett to provide Pat Schroeder the notes from the September 2023 NAARR Implementation Board meeting to distribute to the SB.**

**DUE DATE: December 1, 2023**

The point of the roadmap is a communication tool. Sowder added that ANS has a leadership role alongside ASME and the CSA Group in the Collaborative. All entities are welcomed and encouraged to participate in the ARCSC and their workshops.

- F. Update on International Atomic Energy Agency (IAEA) Harmonization Project  
Sowder stated that through the ARCSC we have an IAEA representative to stay plugged in. We also have Cordell Group/World Nuclear Association as an observer on ARCSC. Henneke reported that IAEA will have a working meeting the second week of December to develop a set of tables to show where the codes match up and where the gaps are. The tables should be maintained in an online database by the IAEA. The next phase will be determining what is next.
- G. Additional Remarks  
No additional remarks were made.

#### 4. SB Vice Chair Report

##### A. Recap of Strategic Committee Strategic Plan from SB Pre-Meeting



4A\_ Strategic Plan  
Presentation to SB N

Todd Anselmi recapped the discussion at the SB pre-meeting held November 2, 2024, on the status of the Standards Committee Strategic Plan ([see brief embedded presentation](#)). The intent is to simplify the Strategic Plan to be at a higher level with actionable initiatives to be incorporated on the SMART Matrix for tracking. Anselmi and Andrew Sowder will meet with the ANS Executive Committee to discuss the objectives of the Strategic Plan. Prasad Kadambi suggested that the revised Strategic Plan be sent to the Policy Task Group for review before sending it to the SB for approval.

**ACTION ITEM 11/2023-04:** Policy Task Group to review the revised Standards Committee Strategic Plan before sending to the SB for approval ballot.  
**DUE DATE:** March 1, 2024

##### B. Brief SMART Matrix Goals & Objectives

The intent of the SMART Matrix is to communicate the action items. The SMART Matrix reflects initiatives in the Standards Committee Strategic Plan.

##### C. Additional Remarks

No additional remarks were made.

#### 5. Secretary Reports



5\_Sec-Staff\_Report.  
docx

Pat Schroeder summarized her secretary/staff report. The report is [embedded](#) for reference.

#### 6. Liaison Reports

(External Liaisons to the SB)

- U.S. Nuclear Regulatory Commission (NRC) – Mehdi Reisi-Fard  
Reisi-Fard stated that he missed the NRC meeting with SB leadership because he was out of town but has been caught up on discussions. He reported the following for NRC:
  - NRC is working on adopting RIPB initiatives as part of their general strategy.
  - NRC provided a high-level response to ANS's request to review and endorse ANSI/ANS-30.3-2022, *Light Water Reactor Risk-Informed, Performance-Based Design*; contacts from NRC and a project manager has been identified.
  - He will follow up on feedback from Michelle Sampson, or whoever was assigned, to review the Risk-informed, Performance-based Principles and Policy Committee (RP3C)'s RIPB Guidance Document provided to NRC by Prasad Kadambi.
  - NRC issued a priority letter to the JCNRM about two months ago.
  - NRC is monitoring ARCSC activities.

**ACTION ITEM 11/2023-05:** Mehdi Reisi-Fard to follow up on feedback from Michelle Sampson, or whoever was assigned, on NRC's review of RP3C's RIPB Guidance Document provided by Prasad Kadambi.  
**DUE DATE:** March 1, 2024

- U.S. Department of Energy (DOE): Garrett Smith  
No report was provided.
- Nuclear Energy Institute (NEI): Frances Pimentel



6\_NEI Report to ANS  
Standards Board for

Frances Pimentel presented the [embedded report](#). Kadambi added that he believes Part 50.69 can be improved with a new standard using performance-based methods and risk-informed categorization. He has requested Svetlana Lawrence to discuss with the Large Light Water Reactor Consensus Committee (LLWRCC). Reisi-Fard has heard that Institute of Electronic Engineers (IEEE) has looked at categorization. Dennis Henneke asked that Kadambi provide the ANS/ASME Joint Committee on Nuclear Risk Management (JCNRM) specifics on how to incorporate performance-based methods in a standard to address Part 50.69. Kadambi added that his intent is to communicate RP3C activities to both the LLWRCC and the JCNRM.

**ACTION ITEM 11/2023-06:** Prasad Kadambi to communicate the recommendation for a standard to improve Part 50.69 with performance-based methods to LLWRCC and JCNRM.  
**DUE DATE:** March 1, 2024

- Institute of Nuclear Power Operations (INPO): Raymond George



6\_INPO Liason  
Report.pptx

Raymond George provided the [embedded report](#) in his absence.

- American Concrete Institute (ACI): Open  
No report provided.
- American National Standards Institute (ANSI): Prasad Kadambi  
Kadambi has been a member of the ANSI National Policy Advisory Group for the last 10 or so years but hasn't been getting any emails of late. His renomination packet was submitted to ANSI, but no response was received.

**ACTION ITEM 11/2023-07:** Pat Schroeder to follow up with ANSI to confirm Prasad Kadambi's membership on the ANSI National Policy Advisory Group.  
**DUE DATE:** November 21, 2023

- American Society of Civil Engineers (ASCE): Andrew Whittaker, ASCE Chair  
No report provided.
- Electric Power Research Institute (EPRI): Andrew Sowder



6\_2023 Nov 14 - EPRI  
liaison report.pptx

See the [embedded report](#) for Sowder's presentation. Sowder clarified that EPRI has regular communication with NRC on their activities.

- Health Physics Society (HPS): Open  
No report provided.
- Institute of Electronic Engineers (IEEE)/Nuclear Power Engineering Committee (NPEC): Open  
No report provided.
- International Organization of Standardization (ISO)/Technical Committee (TC) 85/Subcommittee 6 (SC)-6/U.S. Nuclear Technical Advisory Group (NTAG): Donald Spellman



6\_Brief\_Liaison  
Report for the ANS Liaison

Spellman provided the [embedded report](#) in advance.

- National Council on Radiation Protection and Measurements (NCRP): Open  
No report provided.
- ASME NQA-1: Open  
Currently the SB does not have a liaison from the ASME NQA-1 Committee. Todd Anselmi attended the ASME NQA-1 meeting because it was hosted by the Idaho National Laboratory. He provided a report on behalf of ANS. Both ASME and ANS are looking at changes to their standards program to be in a better position to support advanced reactors.

## 7. Risk-informed, Performance-based Principles and Policy Committee (RP3C) Report



7\_RP3C Report to  
Standards Board\_11-1

- A. RP3C 11/13/23 Meeting Report Out  
RP3C had a well-attended meeting yesterday with 39 participants including in-person and remote participants. Prasad Kadambi sees this as a reflection of interest in RIPB methods. When questioning attendees, they say that the meeting was interesting, but they can't articulate what they learned. Kadambi needs more participation from consensus committees and working groups, so they know how the guidance document is being used. RP3C is not getting requests or questions from working groups. RP3C's main activity is training working groups, but they cannot access the usefulness of the training without feedback. Kadambi would like for consensus committees to work with working groups to find out their challenges and to make better use of available resources. Kadambi sees this as an action for consensus committee chairs.

Andrew Sowder questioned the status of the Research and Advanced Reactor Consensus Committee (RARCC) and LLWRCC pilots. Kadambi has discussed initiating the pilots with RARCC and LLWRCC leadership. Jason Andrus thinks the question to be answered is ... when is the right time to interact with working groups? Greg Hudson was wondering if the wrong questions are being asked as there is no one-size-fits-all for RIPB. Working groups should be asked to provide a one-paragraph write-up on how RIPB will be applied in the standard. Sowder added that it is the expectation from the SB that ANS standards use RIPB methods when applicable. He'd like to see an RP3C pilot to interject on a project from the beginning. Kadambi has undertaken a role to

answer any questions on ANS-GS-30.1 as this project has been a pilot from the beginning. He asked Andrus to check with his working groups to see if any would benefit from RP3C's support. Sowder suggested going to another consensus committee for a pilot, possibly the Safety and Radiological Analyses Consensus Committee (SRACC). Andrew Smetana sees the greatest benefit of RP3C's help with a new standard, possibly ANS-19.13, *Initial Fuel Loading and Startup Tests for FOAK Advanced Reactors*.

Kadambi suggested that the management framework of ANSI/ANS-30.3-2022, *Light-Water Reactor, Risk-Informed, Performance-Based Design*, be used as part of the training activity. Andrew Whittaker is interested in communicating this framework as an educator. Kadambi has asked for help from the Young Member Group to edit training videos. Kelsey Amundson suggested contacting current associate members for help with the video trimming but suggested that the ask to be framed so that the process will help them become more engaged and aware of RIPB principles. Someone would need to identify specific parts of the training videos or community of practices (CoPs) that should be captured for an associate member to help with the trimming.

ACTION ITEM 11/2023-08: Brandon Chisholm to work with Prasad Kadambi to frame the ask for help from associate members to create a video from training material and CoP presentations; Kathy Murdoch to create a site on ANS Collaborate for associate members to use for collaboration.  
DUE DATE: January 1, 2024

ANS is now giving professional development credit to P.E.s for participating or presenting a CoP. Additionally, a collection of RP3C CoPs will be added to ANS's new online platform [Nuclear Science and Technology Open Research \(NSTOR\)](#). Each presentation will have a digital object identifier (doi) for permanent referencing.

Other matters discussed and more details can be found in the RP3C report [embedded](#) above.

#### B. RP3C Feedback on Bylaws

Kadambi reported that RP3C had an extensive discussion on updating the Bylaws. A few RP3C members questioned the need for Bylaws. Pat Schroeder felt that some type of process document is needed for RP3C but that it could likely be simplified to a one-page document. Without a process document, there would be no guidance on how RP3C operates. The RP3C is an advisory group. They need the support of the SB and consensus committees to encourage use of RIPB methods and to provide feedback to RP3C.

ACTION ITEM 11/2023-09: Pat Schroeder to add a discussion on RP3C's Bylaws to the SB post meeting agenda.  
DUE DATE: December 1, 2023

## 8. Consensus Committee Chair Reports

(All Consensus Committee Chair reports have been combined and embedded here.)



7-CCC\_CombinedRe  
ports.pdf

- A. Environmental and Siting Consensus Committee (ESCC)—Carl Mazzola  
Carl Mazzola was not available at the time of the consensus committee reports. Members were referred to the ESCC chair report in the [embedded](#), combined consensus committee chair report for the status of ESCC report.
- B. Fuel, Waste, and Decommissioning Consensus Committee (FWDCC)—Jef Lucchini



Jef Lucchini summarized the FWDC chair report. He added that the FWDC is actively pursuing new members. Andrew Sowder reported on a Fuel Cycle & Waste Management Division (FCWMD) panel session held yesterday to discuss FWDC standards. The session was attended well. The topic of discussion was whether FWDC standards can be used by advanced reactors or if revisions are needed. The FCWMD is expected to hold similar sessions in the future. The FWDC has two standards in development using RIPB methods. Lucchini thinks that the two standards may be in too early of a stage to engage with RP3C. Kadambi stressed that it is never too early to engage with RP3C. Lucchini will pass on the information at tomorrow's FWDC meeting.

ACTION ITEM 11/2023-10: Jef Lucchini to recommend that the ANS-57.2 and ANS-57.9 working groups contact RP3C for support and report back to Prasad Kadambi.  
DUE DATE: December 1, 2023

- C. Joint Committee on Nuclear Risk Management (JCNRM)—Dennis Henneke  
Dennis Henneke confirmed receipt of the NRC priority letter and confirmed that NRC's priorities are in line with JCNRM's priority. The JCNRM has about 220 volunteers. The Level 1 PRA Standard is being reissued for a few minor corrections and clarifications. Approval is expected in early 2024 followed by approval of the Level 2 PRA Standard. The JCNRM is heavy in the owner/operator balance of interest category and is working to improve its balance of interest with adding a few new members in other categories. Additional details on all JCNRM projects can be found in the [embedded](#), combined consensus committee chair report.
- D. Large Light Water Reactor Consensus Committee (LLWRCC)—Michelle French  
The LLWRCC meeting was held last week. Michelle French reported that the committee is finalizing a response to an inquiry on ANSI/ANS-3.4-2014 (R2021), *Selection, Qualification, and Training of Personnel for Nuclear Power Plants*. The LLWRCC previously approved combining the Light Water Reactor & Reactor Auxiliary Systems Designs Subcommittee and the Power Generation & Plant Support Systems Subcommittee but did not choose a name for the merged subcommittee. The LLWRCC approved the name of the new subcommittee as the "Reactor and Plant Systems and Support Subcommittee" at their meeting last week. Mark Linn's term as LLWRCC vice chair ended October 15, 2023. A new vice chair is being sought. French confirmed that the importance of working with RP3C was conveyed to LLWRCC members. Prasad Kadambi suggested that French work through Svetlana Lawrence for RP3C. Several of the standards in development using RIPB methods have an RP3C representative on the working group. Pat Schroeder was asked to make sure Kadambi was invited to quarterly consensus committee chair meetings. More details on the status of LLWRCC projects and standards are available in the [embedded](#), combined report for consensus committee chairs.

ACTION ITEM 11/2023-11: Pat Schroeder to include RP3C Chair Prasad Kadambi in the consensus committee chair quarterly meetings.  
DUE DATE: January 1, 2024

- E. Nonreactor Nuclear Facilities Consensus Committee (NRNFCC)—M. Joseph  
Mark Joseph reviewed his NRNFCC chair report available in the [embedded](#), combined report for consensus committee chairs. He explained a challenge to find a data source for one portion of new standard ANS-2.36, *Accident Analysis for Aircraft Crash into Hazardous Facilities*. The ANS-2.36 Working Group has five subgroups. Funding is being received from the U.S. Department of Energy to support data analysis. The funding is going directly to the IT provider. The NRNFCC will be meeting tomorrow and will have several presentations from ANS-2.36 subgroups. Kadambi and Joseph will discuss using RIPB methods in ANS-2.36 offline.



ACTION ITEM 11/2023-12: Prasad Kadambi and Mark Joseph to discuss using RIPB methods in ANS-2.36, *Accident Analysis for Aircraft Crash into Hazardous Facilities*, offline.  
DUE DATE: March 1, 2024 (ongoing)

- F. Nuclear Criticality Safety Consensus Committee (NCSCC)—Larry Wetzel  
Larry Wetzel provided a brief summary of the NCSCC chair report. ANS-8.5, *Use of Borosilicate-Glass Raschig Rings as a Neutron Absorber in Solutions of Fissile Material*, was consumed by ANS-8.21, *Use of Fixed Neutron Absorbers in Nuclear Facilities Outside Reactors*. New standard ANS-8.28, *Administrative Practices for the Use of Non-Destructive Assay Measurements for Nuclear Criticality Safety*, has been in development for some time and has recently made good progress and likely will be issued next year. Wetzel will be getting back to Kadambi on using RIPB in nuclear criticality safety standards. Lastly, the NCSCC will be reviewing definitions used in ANS-8 standards for consistency. Working groups will be directed to use a preferred definition and will need approval to vary. Wetzel will provide NCSCC's feedback on preferred terms to the Glossary Review Team. For more details, see the NCSCC chair report in the [embedded](#), combined report for consensus committee chairs.

ACTION ITEM 11/2023-13: Larry Wetzel to provide the Glossary Review Team NCSCC's feedback on preferred ANS-8 terms.  
DUE DATE: June 1, 2024

- G. Research and Advanced Reactors Consensus Committee (RARCC)—Gale Hauck  
Gale Hauck was not available at the time of the consensus committee reports. Members were referred to the RARCC chair report in the [embedded](#), combined consensus committee chair report for the status of RARCC report.
- H. Safety and Radiological Analyses Consensus Committee (SRACC)—Andrew Smetana  
Andrew Smetana reported for SRACC. No PINS are being prepared but several projects are in development. All have been asked to consider use of RIPB methods when performing maintenance. Smetana is working on soliciting new members. Subcommittee chairs have been asked to review the list of staffing needs and confirm. ANS-19.13, *Initial Fuel Loading and Startup Tests for FOAK Advanced Reactors*, is a new standard in development using RIPB methods. Kurt Harris, an RP3C member, is a member of the ANS-19.13 Working Group. Additionally, Pat Schroeder recalled an action item from the last meeting for RP3C Vice Chair Robert Youngblood to connect with Sam Bays, one of the ANS-19.13 co-chairs as both are at Idaho National Laboratory. See the SRACC chair report in the [embedded](#), combined report for consensus committee chairs for more details.

## 9. Task Group Reports

(~15 minutes total)



9\_TG\_ScopesMembers\_10-6-23.pdf

### A. SB Task Group (TG) Reports

- Policy Task Group Report  
There has been no recent activity of the Policy Task Group.

ACTION ITEM 11/2023-14: Pat Schroeder to schedule a Policy Task Group meeting.  
DUE DATE: February 1, 2024

- External Communications Task Group Report

Once the SMART Matrix is updated, a priority will be to re-form the External Communications Task Group.

- Internal Communications Task Group Report  
No report provided.
- Priority Task Group Report  
This task group would be a good landing point for any input from the ARCSC. Don Eggett offered to take an interim role as the Priority Task Group Chair and see how it pans out.
- Sales Task Group Report  
The Sales Task Group provided recommendations in 2022. A decision was made at that time to revisit sales in three years.

## 10. Current and Emergent Issues

### A. Executive Advisory Committee (EAC)



10A\_EAC\_Charter\_A  
PP'D.pdf

The approved charter for the EAC is [embedded](#) for reference. A bullet summary of the charter is provided below for convenience. Andrew Sowder expressed concerns that we do not have the bandwidth to stand up the EAC at the same time as the ARCSC is getting off the ground. The two committees have a similar focus although the ARCSC is limited to advanced reactors where the EAC covers the current fleet as well. Sowder recognized that the ARCSC is not a substitute for the EAC; it's just a matter of prioritizing resources. Members understood the challenge with resources. Sowder clarified that the point is not to follow through with formation of the EAC, but to hold off on forming the EAC until resources are available to support the committee. The need for the EAC remains and should be revisited in a year. The EAC will be part of the discussion with the ANS Executive Committee when discussing the update of the Standards Committee Strategic Plan. A summary of the EAC's intent from the charter is provided below:

- Increase involvement of senior nuclear industry executives
- Comprised of ~12 senior executives from across industry
- Obtain feedback from designers/standards users on need for new/revised standards
- Provide users with opportunity to become involved in standards development
- Obtain management support for members to participate from their organization
- Provide path to suggest new/revised standards to benefit their organization
- Provide opportunity to review draft standards
- Increase industry participation in standards development
- No expected travel; periodic virtual meetings as needed to reduce time commitment and expense
- Focus on limited areas of interest to reduce materials sent to members
- SB chair to manage process and coordination

ACTION ITEM 11/2023-15: Andrew Sowder and Todd Anselmi to discuss the formation of the EAC with the ANS Executive Committee when discussing the Standards Committee Strategic Plan and report back to the SB.

DUE DATE: March 1, 2024

ACTION ITEM 11/2023-16: The SB to revisit the formation of the EAC in a year.

DUE DATE: November 1, 2024

B. Inclusion of requirement tables in ANS standards

- How to implement (style manual, template)
- How to preserve best practices

Greg Hudson explained that the risk-informed, emergency preparedness working group had concerns that requirements were buried within text of ANS standards and could be missed and result in a compliance issue. Only one ANS standard, ANSI/ANS-53.1-2011 (R2021), *Nuclear Safety Design Process for Modular Helium-Cooled Reactor Plants*, has requirements tables. The JCNRM uses tables and the ASME Plant Systems Design standard in development will use tables. There are several different ways of explicating requirements. His thoughts are that the different working groups could determine what is best suited for their particular standard either within each section or in the last section. The tables would not replace the narrative text in standards; the tables would enhance the narrative. Andrew Smetana cautioned that the duplication could result in a conflict. Hudson suggested that there be a disclaimer that the requirements in table format supersede the requirements in the text. Hudson would suggest not to backfit standards. A reaffirmation would not permit the addition of any changes including requirements tables. In addition to increasing the likelihood of errors, adding requirements tables would significantly increase the size of ANS standards. Hudson suggested that ANSI/ANS-53.1-2011 (R2021) could be used as a format example. Larry Wetzel struggled with how ANS-8 standards could be put into requirements table and expressed concern that users may ignore recommendations and permissions in the text. Prasad Kadambi, as a member of the ANS-60.1 Working Group, has advocated for the standard to have a tabulation of requirements at the end of each section. He added that it would be beneficial to tabulate the recommendations as well. Dennis Henneke agreed with the concept but doesn't feel it needs to be as strict as the JCNRM with numbering high-level and supporting requirements. IAEA also has a tabular format that is numbered and bolded.

ACTION ITEM 11/2023-17: Pat Schroeder to work with Greg Hudson and Dennis Henneke to develop a recommended format on tabulation/identification of requirements in ANS Standards

DUE DATE: June 1, 2023

C. Other Current and Emergent Issues

Henneke explained that originally ANS-30.1, *Integrating Risk and Performance Objectives into New Reactor Nuclear Safety Designs*, was developed with JCNRM support. However, objections were not addressed and converting the document to a guidance standard (GS) does not address JCNRM's concerns. The JCNRM balloted a letter to the SB requesting that work on ANS-GS-30.1 be discontinued. The GS does not follow industry practice. The letter from JCNRM will be issued as soon as it is signed by the co-vice chairs.

Jason Andrus stated that we are at a position where both sides are dug in. The challenge is a fundamental disagreement in terminology. He doesn't believe that ANS is required to match NRC terminology. The question is whether it is preferable to not have a GS than to issue what is presented in ANS-GS-30.1. The working group has conveyed multiple times that the GS meets the intent. Henneke added that the terminology used in the GS is not found elsewhere. It creates a third approach that the industry does not need. Additionally, one of the three pillars in the GS is not risk informed which he considers a fatal flaw. Robert Kalantari questioned the prudence of pursuing ANS-GS-30.1 if the designers are not going to use it and if NRC doesn't want. Mark Linn explained that the GS is not for designers. It is for preparers of design standards. The idea of new terminology is incorrect. The idea that it is a design standard for reactors is not correct. It is intended for use by preparers of standards. The four pillars are not risk-informed themselves. It allows the preparer to use the technology they want

whether that is probabilistic risk assessment or deterministic or a combination thereof. The decision is up to the preparer of the design standard. They need to have some sort of principle design criteria—not necessarily risk-informed or deterministic. Any other statement is incorrect. Linn will address the letter when received. Presently the working group is addressing comments from RP3C and the JCNRM's Subcommittee on Risk Application from the non-developing consensus committee review process. Henneke added that the fact that this GS is to be used to develop other standards doesn't help; it makes it worse.

## 11. Review of Open Action Items Report

### A. Report on Open Action Items

Open action items were reviewed. See the Status Report of Action Items following these minutes for the report.

### B. Concurrence to Close Report of Completed Action Items

Members were provided a few minutes to review the report of completed action items after which the following motion was made:

#### **MOTION:**

To close the list of completed action items.

The motion was approved unanimously. Action items approved as closed are provided below in the [embedded report](#).



11B\_SB\_CLOSED\_Action Item Report.doc

## 12. Other/New Business

### A. ANS Leadership Address

No leadership address.

### B. Harmonization of SSCs

Don Spellman was not able to make the presentation on harmonization of SSCs. The presentation will be rescheduled, possibly for the post-meeting.

### C. Other

- ANS Publications Director John Fabian explained the [Nuclear Science and Technology Open Research \(NSTOR\)](#) which is a new publication venue of ANS. NSTOR is a digital fully open access publishing platform—a publicly available, open research site. Members of the public just need to create an account to access. NStore is not connected to ANS member records so the account is separate. The platform has the capability to host non-peer reviewed documents. Fabian suggested to Prasad Kadambi that NStore could be used as a platform to host the collection of RP3C CoP presentations as a way to bring recognition of the program and credit to presenters. A gateway for standards-related files could be included. Documents placed on the platform would get a stable digital object identifier (doi) which would link you to the YouTube presentation. Materials in NStore can be downloaded, shared, etc. Permission would be needed from each presenter to post their presentation. Fabian is looking for new ideas for collections. He will be encouraging students to use the platform to publish articles. He also encouraged ideas from SB members for additional collections. In response, Andrew Smetana suggested that the site could host benchmark problems from old ANS committees. Documents

on NStore will eventually be indexed on Google Scholar. Comments will be moderated by ANS staff. Fabian will be working with Kadambi to create a collection for RP3C CoPs. Lastly Fabian reminded members that they have access to all ANS publications, proceedings, webinars, through their ANS member account. More information about NStore is available at <https://nstopenresearch.org/articles/1-18>.

- A volunteer form was recently received from an individual, but his resume looked strange. Kathy Murdoch was not able to match some of their details after doing some digging. It was questionable whether the individual's experience and affiliations were factitious. Shortly after receiving the volunteer form, this individual's LinkedIn account erroneously stated that they were a chief researcher for ANS. Jef Lucchini suggested that everyone be careful with volunteer forms they receive.

### **13. Member Feedback [Meeting Plus (Positive) /Deltas (Negatives)]**

New members expressed appreciation for the SB's open platform and receptiveness to express opinions freely. Members also complimented the audio quality of the meeting owls used for audio and video connection for remote participants. A request was made to check with the ANS Meetings Department staff to see if SB breaks could be better aligned with ANS complimentary coffee breaks.

ACTION ITEM 11/2023-18: Pat Schroeder to check with the ANS Meetings Department to see if there is a set time for provided coffee breaks to align the agenda.  
DUE DATE: December 1, 2023

### **14. Review of Action Items from This Meeting**

Action items were reviewed and confirmed.

### **15. Future Meetings**

- SB post meeting via Zoom on December 4, 2023, 11:00am – 1:00pm EASTERN
- The SB is expected to meet on Tuesday of the following two ANS meetings:
  - 2024 ANS Annual Meeting in Las Vegas, NV, at the Mirage from June 9-12, 2024
  - 2024 ANS Winter Meeting in Orlando, FL, at the Renaissance at SeaWorld, November 17-21, 2024

### **16. Adjournment**


The meeting was adjourned.



## Standards Board Action Item Status Report – from 11/14/23 Meeting

Action Item	Description	Responsibility	Status/Comments
11/2023-01	Pat Schroeder to check if/how the profile section on ANS Collaborate can capture the year a volunteer entered the workforce. DUE DATE: January 1, 2024	Schroeder	OPEN
11/2023-02	Andrew Sowder and Todd Anselmi to consider the appropriateness of chair role limits, in particular the RP3C chair role term limit, and possibly announcement of the opportunity to fulfill this role. DUE DATE: March 1, 2024	Sowder, Anselmi	OPEN
11/2023-03	Donald Eggett to provide Pat Schroeder the notes from the September 2023 NAARR Implementation Board meeting to distribute to the SB. DUE DATE: December 1, 2023	Eggett	OPEN
11/2023-04	Policy Task Group to review the revised Standards Committee Strategic Plan before sending to the SB for approval ballot. DUE DATE: March 1, 2024	Policy Task Grop	OPEN
11/2023-05	Mehdi Reisi-Fard to follow up on feedback from Michelle Sampson, or whoever was assigned, on NRC's review of RP3C's RIPB Guidance Document provided by Prasad Kadambi. DUE DATE: March 1, 2024	Reisi-Fard	OPEN
11/2023-06	Prasad Kadambi to communicate the recommendation for a standard to improve Part 50.69 with performance-based methods to LLWRCC and JCNRM. DUE DATE: March 1, 2024	Kadambi	OPEN
11/2023-07	Pat Schroeder to follow up with ANSI to confirm Prasad Kadambi's membership on the ANSI National Policy Advisory Group. DUE DATE: November 21, 2023	Schroeder	OPEN
11/2023-08	Brandon Chisholm to work with Prasad Kadambi to frame the ask for help from associate members to create a video from training material and CoP presentations; Kathy Murdoch to create a site on ANS Collaborate for associate members to use for collaboration. DUE DATE: January 1, 2024	Chisholm, Kadambi	OPEN
11/2023-09	Pat Schroeder to add a discussion on RP3C's Bylaws to the SB post meeting agenda. DUE DATE: December 1, 2023	Schroeder	OPEN
11/2023-10	Jef Lucchini to recommend that the ANS-57.2 and ANS-57.9 working groups contact RP3C for support and report back to Prasad Kadambi. DUE DATE: March , 2023	Lucchini	OPEN
11/2023-11	Pat Schroeder to include RP3C Chair Prasad Kadambi in the consensus committee chair quarterly meetings. DUE DATE: January 1, 2024	Schroeder	OPEN
11/2023-12	Prasad Kadambi and Mark Joseph to discuss using RIPB methods in ANS-2.36, Accident Analysis for Aircraft Crash into Hazardous Facilities, offline. DUE DATE: March 1, 2024 (ongoing)	Kadambi, Joseph	OPEN
11/2023-13	Larry Wetzel to provide the Glossary Review Team NCSCE's feedback on preferred ANS-8 terms. DUE DATE: June 1, 2024	Wetzel	OPEN



11/2023-14	Pat Schroeder to schedule a Policy Task Group meeting. DUE DATE: February 1, 2024	Schroeder	OPEN
11/2023-15	Andrew Sowder and Todd Anselmi to discuss the formation of the EAC with the ANS Executive Committee when discussing the Standards Committee Strategic Plan and report back to the SB. DUE DATE: March 1, 2024	Sowder, Anselmi	OPEN
11/2023-16	The SB to revisit the formation of the EAC in a year. DUE DATE: November 1, 2024	Standards Board	OPEN
11/2023-17	Pat Schroeder to work with Greg Hudson and Dennis Henneke to develop a recommended format on tabulation/identification of requirements in ANS Standards DUE DATE: June 1, 2024	Hudson, Henneke, Schroeder	OPEN
11/2023-18	Pat Schroeder to check with the ANS Meetings Department to see if there is a set time for provided coffee breaks to align the agenda. DUE DATE: December 1, 2023	Schroeder	OPEN
11/2023(P M)-01	Pat Schroeder to add 1) protocol for representing/participating ANS (either working groups or committees, but particularly committees) in meetings, 2) process for selection of and length of time for serving as a committee's chairperson, and 3) protocol for compliance with ANS's position statements when developing and issuing standards to the November 14, 2023, Standards Board agenda. DUE DATE: December 1, 2023	Schroeder	OPEN Item #2 has been added to the 11/14/23 agenda. Items #1 and #3 will be added to the post-meeting agenda so that Afzali can participate.
11/2023(P M)-04	Todd Anselmi to revise the Standards Committee Strategic Plan and provide to the SB prior to the SB June 2024 meeting. DUE DATE: June 1, 2024	Anselmi	OPEN Will discuss with the Policy Task Group by next meeting. Action amended to June 2024 meeting.
6/2023-02	Todd Anselmi with support from Pat Schroeder to update SMART Matrix actions to recognize those that have been completed. DUE DATE: On hold until SC Plan is approved	Anselmi, Schroeder	On Hold The SMART Matrix will be reconfigured to reflect the revision to the SC Strategic Plan once completed.
6/2023-03	Todd Anselmi to lead the 2024 Standards Service Award Selection Committee along with Larry Wetzel, Jef Lucchini, Gale Hauck, and Dennis Henneke. DUE DATE: May 1, 2024	Anselmi, Hauck, Henneke, Lucchini, Wetzel	OPEN A notice will be issued early January 2024 to announce the opening of nominations through 3/1/24.
6/2023-04	Pat Schroeder to explore the establishment of a formal program with universities for limited access to ANS standards including the possibility of "hosting" or having a reseller "host" a platform with e-access to students with ANS Publications Director, John Fabian. DUE DATE: November 1, 2024	Schroeder	OPEN IT support is needed to establish/build a platform. Fabian (ANS Pubs Director) is working with ANS IT.
6/2023-05	Mark Linn (lead), Brandon Chisholm, Medhi Resi-Fard, Donald Spellman, and Robert Kalantari, to form an ad hoc committee to evaluate how to improve the Standards Committee Glossary of Terms and Definitions which should include consideration of a new glossary with one standardize term/definition. Jim August and Garrett Smith to be invited as guests. DUE DATE: March 1, 2024	Linn, Chisholm, Kalantari Resi-Fard, Spellman  (Guests: August & Smith)	OPEN Bi-weekly meetings have been held for the last few months. Trying to figure out a simple criteria that highlights concerns with the Glossary meeting its intended purpose. Linn will engage L. Wetzel.
6/2023-06	Prasad Kadambi and Michelle French to discuss what help is needed from RP3C for LLWRCC.	Kadambi, French	OPEN

	DUE DATE: March 1, 2024		
6/2023-07	Pat Schroeder to facilitate a group discussion on incorporating RIPB methods in ANS-19.13, <i>Initial Fuel Loading and Startup Tests for FOAK Advanced Reactors</i> , if offline discussion between Robert Youngblood and ANS-19.13 Working Group Chair Sam Bays needs additional discussion. Individuals to be included in the group meeting if needed are Andrew Smetana, Robert Budnitz, and Chip Martin. DUE DATE: June 1, 2024	Schroeder	OPEN No request was made. It is presumed that discussions between Youngblood and Bays were sufficient.  Schroeder to confirm status with Youngblood.
6/2023-10	Don Eggett to follow up on the need for the ANS Bylaws and Rules Committee to approve rules, policies, and procedures developed by the SB for standards committees and then let Prasad Kadambi know what the simplest path is for the revision of the RP3C Bylaws.	Eggett	CLOSED Schroeder provided excerpts from ANS Bylaws & Rules to Eggett for reference. The Bylaws & Rules Committee does not approve policy and procedures for other Standing Committees.
6/2023-13	Donald Spellman to reach out to IEEE about how they handle BOI classification of consultants. DUE DATE: June 1, 2024	Spellman	OPEN  Schroeder to check with Spellman on the status of this action.
6/2023-14	Pat Schroeder to provide Andrew Sowder with all background information about ANSI's 2022 balance of interest category change. DUE DATE: December 1, 2023	Schroeder	OPEN Sent 6/14/23  ANSI Essential Requirements & Mis  Schroeder to resend Sowder the background information.
6/2023-15	Don Eggett to follow up on organization's copyright infringing on ANS documentation. (Note: This is a follow up action to ACTION ITEM 6/2021-17.) DUE DATE: March 1, 2024	Eggett	OPEN Schroeder has asked Fabian to check with the ANS attorney.
6/2023-16	Andrew Sowder to recruit liaisons from the Institute of Electrical and Electronics Engineers, Health Physics Society, and National Council on Radiation Protection and Measurements liaison for the SB. (NOTE: ACTION ITEM 11/2022-08 to recruit an IEEE liaison was incorporated.) DUE DATE: June 1, 2024	Sowder	OPEN Sowder is working on an HPS liaison; could use help on recruiting IEEE liaison related to I&C issues. Eggett suggested for Sowder to contact S. Arndt and/or R. Steinman for help identifying an IEEE liaison.
6/2023-17	Prasad Kadambi to follow up with Garrett Smith for details on DOE's use of ANSI/ANS-2.26-2004 (R2021), Categorization of Nuclear Facility Structures, Systems, and Components for Seismic Design. DUE DATE: June 1, 2024	Kadambi	OPEN
11/2022-03	Prasad Kadambi and future appointed ad hoc committee members to evaluate the need for a revision of the RP3C Bylaws to reflect current practice. DUE DATE: No deadline set.	Kadambi	CLOSED Robert Youngblood has been assigned this task as RP3C VC.
11/2022-10	Larry Wetzel to keep Don Eggett informed of progress on standardizing ANS-8 terminology.	Wetzel	CLOSED NOTE: Will need to amend action to current SB chair.

9/2022-05	Robert Becse and Raymond George to work with John Mahoney on standards input to the new nuclear professional certification program.	Becse, George, Mahoney	<p>CLOSED Robert Becse is engaged in these discussions. A vendor has been selected to create the Professional Certification Program. Topics are being scoped. Next step w/be to recruit SMEs to develop training and materials.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">   10182022_ANS Prof  Cert Progm_Decisior </div> <div style="text-align: center;">   ANS  Committee.docx </div> </div>
6/2021-04	Policy Task Group to contact Standards Board members on possible changes to priorities for ANS standards development. NOTE: This action is a reassignment from Action Item 6/2018-02.	Policy Task Group	<p>CLOSED Put on agenda for upcoming Policy Task Group meeting. .</p>