

Standards Board (SB)

November 19, 2024

Renaissance Orlando at SeaWorld

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
x*	Robert Budnitz	At-Large (2026)	Consultant
x*	Jennifer Call	At-Large (2027)	Tennessee Valley Authority
x	Brandon Chisholm	At-Large (2026)	Southern Company
x*	Michelle French	Ex-Officio	Westinghouse Government Services
x	Gale Hauck	Ex-Officio	Oak Ridge National Laboratory
x*	Dennis Henneke	Ex-Officio	Individual
	Mark Joseph	Ex-Officio	Navarro Research & Engineering
	Robert Kalantari	At-Large (2025)	Engineering Planning & Management, Inc.
x	Jean-Francois "Jef" Lucchini	Ex-Officio	Los Alamos National Laboratory
x	Leah Parks for Carl Mazzola	Ex-Officio	Los Alamos National Laboratory
x	Benjamin Parks	At-Large (2027)	U.S. Nuclear Regulatory Commission
x*	Frances "Frankie" Pimentel	At-Large (2026)	Nuclear Energy Institute
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
16	16/18 Votes = 88.89% Participation		

Attended	Nonvoting Observers, Liaisons, and Guests Name	Role	Company
x	Ahmad Al Rashdan	Guest	Idaho National Laboratory
x	Jason Andrus	Guest	Idaho National Laboratory
x*	Christian Araguas	Guest/NRC Standards Executive	U.S. Nuclear Regulatory Commission
x	Jarvis Caffrey	HPS Liaison	NASA
x*	Donald Eggett	Observer	Eggett Consulting, LLC
x*	George Flanagan	Observer	Individual
x*	Greg Hudson	Guest	Metcalfe PLLC
x	N. Prasad Kadambi	ANSI Liaison	Kadambi Engineering Consultants
x	Steven Krahn	Observer/RP3C Chair	Vanderbilt University

x	Garrett Smith	Guest/NRC Standards Executive	U.S. Department of Energy
x*	Donald Spellman	Observer	Individual
x	Rebecca Steinman	IEEE/NPEC Liaison	Constellation Generation

**Participated remotely.*

1. Welcome and Roll Call

Standards Board Chair Andrew Sowder welcomed members and guests participating both in-person and virtually. Roll call was taken, and a quorum was established.

2. Approval of Agenda

The agenda was approved with the flexibility to move discussion items as needed to accommodate schedules.

3. SB Chair Report

A. Highlights of Report to the Board of Directors



3A_SB
Chair_2024_WINTER.

Andrew Sowder provided highlights of his [embedded](#) chair report to the ANS Board of Directors. He informed members that Todd Anselmi made a presentation on behalf of ANS at a Defense Nuclear Facilities Safety Board (DNFSB) public meeting on aging management. This was partly as a result of Joyce Connery, with the DNFSB, attending the June 2024 SB meeting. Sowder continued with his report acknowledging that Prasad Kadambi received a well-deserved Presidential Citation earlier today for his leadership and foundation of the Risk-informed, Performance-based Principles and Policy Committee (RP3C). Sowder and Anselmi have a meeting set up with the new NRC Standards Executive Christian Araguas and some of his staff next month. The Young Member Group (YMG) panel “Everyone has a seat at the table—balancing interests with consensus standards development” is scheduled tomorrow. Sowder encouraged those at the conference to attend the panel. The panel was arranged by Leah Parks and Gale Hauck. Members agreed that more standards-related panels are needed. Parks suggested that these panels be organized through the YMG. Both Anselmi and Parks have spread the message about standards with university students.

B. Additional Remarks

No additional remarks were made.

4. Secretary Reports

Pat Schroeder summarized the [embedded](#) secretary/staff report.



4_Sec-Staff_Report.
docx

5. Advanced Reactor Codes & Standards Collaborative (ARCSC) Report

- Progress and completed activities

- Current activities
- December 4, 2024, public workshop



ARCSC

Announcement Final.p

ARCSC Co-chair Don Eggett encouraged participating in the December 4, 2024, ARCSC Public Workshop. Discussions at the Workshop will include the assessments from the 2023 ARCSC Gap Assessment Survey. Each standards development organization (SDO) involved in the survey reviewed the results and came up with a priority ranking. A second survey was issued to advanced reactor developers in October of this year to validate SDO priority ranking and themes from the 2023 survey. Advanced reactor feedback from the validation survey will be discussed at the Workshop. Prasad Kadambi will make a presentation on behalf of ANS to provide a risk-informed, performance-based case on ANS standards. There will be a discussion on ARCSC actions from the North American Advanced Reactor Roadmap (NAARR) to seek industry feedback on how to address the actions. Sowder noted that high-priority standards as a result of the ARCSC survey and other feedback are on today's agenda as Item #10, High Priority Standards Needing to be Expedited. Membership on the ARCSC remains open. Eggett estimated that the ARCSC roster has 20 different organizations and SDOs. Greg Hudson suggested that the American Welding Society (AWS) be included in ARCSC activities. Pat Schroeder confirmed that the AWS was invited to the ARCSC Workshop.

6. Standards Committee Strategic Plan and SMART Matrix



6_SC_StrategicPlan_
(Rev.After.Ballot).do

The revised Standards Committee Strategic Plan as presented to the SB is [embedded](#) for your reference.

Todd Anselmi presented the revised Standards Committee Strategic Plan. The revised Strategic Plan was issued for formal ballot to the SB. The ballot closed with unanimous approval but did receive a few comments. Most were editorial, but one comment requires a substantive change and, therefore, requires approval of the SB. The commenter, Robert Budnitz, suggested adding the following as Goal 4, Initiative C:

Establish a Standards Board mechanism to reach out of industry organizations that are capable of providing financial support to ANS standards-development activities, so as to encourage them to provide that support when they can.

For example, Budnitz explained that the initiative he suggested could support members' travel to attend meetings that may be retired and not able to cover their own travel. Andrew Sowder agrees that the initiative would be beneficial to support a working group chair's time.

Ben Parks agreed that the initiative would be beneficial but thought that the U.S. Nuclear Regulatory Commission (NRC) could have conflicts depending on how the funds were used on working groups. Prasad Kadambi, the past NRC representative, doesn't see a conflict. The NRC representative's role is to bring forth comments which shouldn't interfere. The following motion was made:

MOTION:

To add the "Establish a Standards Board mechanism to reach out of industry organizations that are capable of providing financial support to ANS standards-

development activities, so as to encourage them to provide that support when they can” as Goal 4, Initiative C, to the Standards Committee Strategic Plan.

The motion passed with one abstention from NRC.

ACTION ITEM 11/2024-01: Pat Schroeder to post and announce the revised Standards Committee Strategic Plan to the Standards Committee.
DUE DATE: December 1, 2024

ACTION 11/2024-02: Andrew Sowder to discuss NRC independence and improvements to facilitate endorsement of ANS standards at the meeting with NRC on December 10, 2024.
DUE DATE: December 10, 2024



SMART Matrix
Talking Points Novem

With the revision of the Strategic Plan approved, the next action is to update the SMART Matrix to align with the revised Strategic Plan. Anselmi provided the [embedded](#) presentation on changes to the SMART Matrix. He explained that no actions have been deleted from the SMART Matrix, but an attempt is being made to simplify the format. A meeting is proposed in January 2025 to review the SMART Matrix and assign actions as needed to fulfill the Strategic Plan.

ACTION 11/2024-03: Pat Schroeder to facilitate a SB meeting in January to review the SMART Matrix.
DUE DATE: January 1, 2025

7. **Formation of Joint Environmental and Siting Consensus Committee (ESCC)/Research and Advanced Reactor Consensus Committee (RARCC) Task Group to Explore Siting Needs for Microreactors**

Leah Parks explained that both the ESCC and RARCC discussed siting needs for microreactors at their meetings last June. Leadership of both the ESCC and the RARCC met last August to discuss a direction. Parks added that the NRC is taking a lot of internal regulatory action in this area. This is something that stakeholders have identified as an important topic. Given the importance of this topic within ANS and industry, NRC wants to remain aware of what ANS plans to do in this area. Parks stated that she heard at plenaries that there are a lot of individuals interested in NRC’s work in this area. This would need a unique approach to guidance in this area. A standard for environmental review may be useful. Gale Hauck stated that the next step is to see if there is an appetite from RARCC and ESCC members to support this work. Prasad Kadambi suggested a standard on categorical exclusions. Parks thought this would need to be under NRC’s rulemaking. Parks sees a siting standard for microreactors being developed jointly between the ESCC and RARCC but that formal balloting would likely need to be the responsibility of one consensus committee. Parks has had discussions with the NRC representative on ARCSC, Sam Sham, and this subject may be relevant to ARCSC. The subject was mentioned by Kate Hyam, ARCSC co-chair, at an NRC meeting earlier in the year.

8. **Liaison Reports** (External Liaisons to the Standards Board)

- A. American Concrete Institute (ACI): Open
No report provided. Andrew Sowder believes he has a liaison from ACI for the SB.

ACTION ITEM 11/2024-04: Andrew Sowder to follow up with ACI about a liaison to the SB.
DUE DATE: June 1, 2025

- B. American National Standards Institute (ANSI): Prasad Kadambi
Prasad Kadambi attends ANSI National Policy Advisory Group (NPAG) meetings as a representative of ANS. It's a group that advises ANSI on the key issues facing consensus standards. The whole issue of incorporated by reference (IBR) remains a big deal. There are some very persistent individuals that want to degrade the intellectual property of consensus standards. They keep pushing for consensus standards that are IBR to be publicly available without charge. Kadambi suggested for ANS to become involved in this effort to protect ANS standards. The issue is part of a legislative action ANSI is undertaking. Kadambi offered to take any message from the SB back to the NPAG. He added that the use of RIPB methods is really catching on with other SDOs. RIPB has taken on higher visibility within ARCSC and the advanced reactor community to complete an NAARR's Action Item CS-02 to develop a RIPB pilot project due for completion by December 2025.
- C. American Society of Civil Engineers (ASCE): Andrew Whittaker/Brian McDonald
No report provided.
- D. American Society of Mechanical Engineers (ASME): Todd Anselmi
- Nuclear Quality Assurance (NQA)
 - Strategic Committee on Nuclear Facilities (Two-way liaison)
 - Other

Anselmi reported for several ASME committees. He is an observer or member on a number of ASME committees. He attended ASME's code committee two weeks ago. They had a high temperature materials workshop that was well attended. Individuals from Sec. III of the Boiler Pressure Vessel Code presented. Anselmi and Don Eggett will be attending the NQA meeting on the 5th and 6th of December which will include a meeting on advanced reactors and quality assurance. One of the challenges the advanced reactor folks have is with the current design of safety-related structures.

- E. Electric Power Research Institute (EPRI): Andrew Sowder
Andrew Sowder provided highlights on the [embedded](#) EPRI report.



8E_2024 Nov 19 -
EPRI liaison report to

- F. Health Physics Society (HPS): Jarvis Caffrey



8F_HPS-N13 Liaison
Rpt_to_ANS_Nov2024.

Caffrey introduced himself. He works for NASA. Caffrey replaced Ali Simpkins as the HPS liaison. He joined HPS at the same time when taking on the role of the HPS liaison to the SB. Caffrey summarized the [embedded](#) HPS report.

The difference between standards IBR into the code of regulations vs. endorsed through a regulatory guide was discussed. Rebecca Steinman sees the difference clear cut between standards IBR vs. standards endorsed in a Regulatory Guide. Garrett Smith recognized DOE's use of the ANS-8 nuclear criticality standards in DOE orders. DOE does not endorse standards like NRC but invokes standards which is different than endorsement.

- G. Institute of Electrical and Electronics Engineers (IEEE)/Nuclear Power Engineering Committee (NPEC): Rebecca Steinman

Steinman stated that she became the ANS liaison for IEEE/NPEC because she is always at ANS meetings. She reported on NPEC's scope, structure, and standards-related activities. See Steinman's [embedded](#) report for her full report. When questioned, Steinman confirmed that there is some consideration within NPEC to consider performance-based methods, but it is not being universally considered by all NPEC working groups.



8H_NPEC Liaison to
ANS Nov24 Report.p

- H. Institute of Nuclear Power Operations (INPO): Scottman Ammons
No report was provided.
- I. International Organization of Standardization (ISO)/Technical Committee (TC) 85/Subcommittee (SC)-6/U.S. Nuclear Technical Advisory Group (NTAG): Open
Don Spellman resigned as NTAG Vice Chair. No report was provided.
- J. National Council on Radiation Protection and Measurements (NCRP): Open
No report provided. An NCRP liaison is being recruited.
- K. Nuclear Energy Institute (NEI): Frances Pimentel
Frankie Pimentel provided the [embedded](#) update.



8K_NEI Report to
ANS Standards Board

- L. U.S. Department of Energy (DOE): Garrett Smith
Garrett Smith reported on the following activities as the DOE Standards Executive:
- DOE is addressing quality assurance for any DOE building.
 - DOE will be issuing a revision of DOE Order 414.1E, Quality Assurance.
 - DOE is working on filter testing.
 - DOE will be using ASME AG-1 (air & gas).
 - DOE uses 10 CFR 30 as their safety rule.
 - DOE will be issuing DOE Order 420.1C, Facility Safety.
 - DOE fulfilled the requirements of the implementation plan on aging management.
 - DOE has a representative on the Interagency Nuclear Safety Review Board with NASA.
 - Smith hired new staff in his group.
 - DOE remains very interested in two ANS draft standards in development: ANS-57.11 (ISA) and 2.36 (aircraft crashes).

Kadambi questioned Smith on DOE's interest in 10 CFR Part 53. Smith was not personally familiar with Part 53 but is aware that folks at Idaho National Laboratory (INL) are engaged. Kadambi explained that Part 53 is a RIPB rule that covers everything currently in Parts 50 and 52. He added that his interest in DOE's thoughts on Part 53 is as the Advanced Reactor Working Group (ARWG) chair. The ARWG is trying to bring together comments from all ANS members that are interested.

- M. U.S. Nuclear Regulatory Commission (NRC): Benjamin Parks



M_NRC
Report_2_SB.pdf

Ben Parks reported for NRC. He recognized that NRC is considering endorsement of three ANS standards: ANSI/ANS-8.21-2024 (fixed neutron absorbers), ANSI/ANS-20.2-2023 (molten salt reactors), and ANSI/ANS-30.3-2022 (LWR RIPB design). Endorsement of ANS standards will be one of the topics to be discussed at the upcoming meeting with ANS and NRC. See Parks' full report [embedded](#) above for full details.

Robert Budnitz recognized the excellent support of NRC on the ASME/ANS Joint Committee on Nuclear Risk Management (JCNRM). He added the benefit of the NRC grant to support JCNRM members travel-related expenses for those without company support and for editorial work.

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



9_ANS Winter 2024 -
RP3C brief for SB.pptb

Steve Krahn stated that the RP3C agenda used for the committee's meeting yesterday used a slightly different format. Brandon Chisholm provided an update on the major topics and near-term priorities discussed at the RP3C meeting. See the [embedded](#) report for the full RP3C report.

10. High Priority Standards Needing to be Expedited

Andrew Sowder explained that the below list of high-priority standards are a combined list of standards from the ARCSC 2023 Gap Assessment Survey and other ANS interests:

- ANS-2.26-202x, *Categorization of Nuclear Facility Structures, Systems, and Components for Seismic Design* [revision of ANSI/ANS-2.26-2004 (R2021)]
The need for a revision of this standard was recognized on the ARCSC Gap Assessment Survey. Members questioned whether the standard is only applicable to nuclear facilities other than commercial power reactors. Prasad Kadabmi feels that it would be wrong to say that ANS-2.26 does apply to commercial facilities. The standard is currently in revision. It was recognized that it is not the SB's role to specify the applicability of a standard. The point of this agenda item is to ensure that this standard, as a high priority, will be monitored by the SB.
- ANS-6.4-202x, *Specification for Radiation Shielding Materials* [revision of ANSI/ANS-6.4-2006 (R2021)]
A PINS has been developed for a revision to incorporate gaps identified via the 2023 ARCSC survey.
- ANS-15.8-202x, *The Quality Assurance Program Requirements for Research Reactors* [revision of ANSI/ANS-15.8-1995 (R2023)]
The ARCSC Gap Assessment survey recognized a revision of ANS-15.8 as a priority. A revision is already in development.
- ANS-30.2-202x, *Classification and Categorization of Structures, Systems, and Components for New Nuclear Reactors* (proposed new standard)
Gale Hauck questioned the priority of this standard. Sowder stated that the driver for this standard as a priority is to complete the ANS-30.x series. Hauck hasn't heard anything to convince her that ANS-30.2 is a high priority. She would very much like to identify an organization that is in need of this standard before including it on the list of high priorities. Hauck asked that ANS-30.2 be taken off the high priority list.

ACTION ITEM 11/2024-05: Pat Schroeder to take ANS-30.2 off of the high priority list until an organization comes forward with a need for this standard.

- ANS-53.1-202x, *Nuclear Safety Design Process for Modular Helium-Cooled Reactor Plants* [revision of ANSI/ANS-53.1-2011 (R2021)]
The need for a revision of ANS-53.1 was identified in the ARCSC Gap Assessment Survey. A revision is already in development.
- ANS-54.8, *Liquid Metal Fire Protection* [proposed new standard/supersedes ANS-54.8-1988 (W1998)]
This standard was recognized as a high priority in the ARCSC Gap Assessment Survey and is currently in development under the RARCC.
- ANS-58.2, *Design Basis for Protection of Light Water Nuclear Power Plants Against the Effects of Postulated Pipe Rupture* [proposed new standard/supersedes ANS-58.2-1988 (W1998)]
This standard has been withdrawn. There is an equation in the standard that needs to be verified. The source of the equation is an EPRI report that was never published. A thorough search for the EPRI report was performed, but it was not found. A proposal has been requested of a subject matter expert to provide an estimate of cost and time to verify the equation.
- ANS-X, generic standard on risk-informed, performance-based design process proposed new standard)
A proposed standard for a generic RIPB design process standard came out of the ARCSC Gap Assessment Survey. Dennis Henneke, being a retired designer, feels that this suggestion didn't come from a designer. He doesn't feel that a RIPB design standard is needed. Greg Hudson stated that ASME has a large effort underway in the Plant Systems Design (PSD) Standard chaired by Ralph Hill. Sowder recognized the PSD Standard as a very useful high-level framework. Eggett added that a RIPB standard is Action 2 from the NAARR from the Roadmap Implementation Board.

ACTION ITEM 11/2024-06: Pat Schroeder to

- 1) retain the discussion on "High Priority Standards Needing to be Expedited" on the June 2025 agenda,
- 2) include more details on the reason for the priority,
- 3) separate the list of priority standards to those from the ARCSC survey and those deemed high priority internally by the SB, and
- 4) add a brief report out on the status of high-priority standards from the consensus committee chairs responsible.

DUE DATE: June 1, 2025

11. Modified Reorganization Proposal



12_Revised RARCC 12_Revised LLWRCC
Structure_102124_D.Structure_102124 DJ

This item was not discussed.

12. Consensus Committee Chair Reports

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



12_Combined_CCC_Reports.pdf

A. Safety and Radiological Analyses Consensus Committee (SRACC)

Andrew Smetana provided a high-level summary of his chair report. He specifically highlighted the success story of ANSI/ANS-19.13-2024, *Initial Fuel Loading and Startup Tests for First-of-a-Kind Advanced Reactors*, being developed from start to finish in under 2 years due to strong management and INL support of two co-chairs. See the combined consensus committee chair reports [embedded](#) above for details of consensus committee standards and membership activities.

B. Research and Advanced Reactors Consensus Committee (RARCC)

Gale Hauck reported that RARCC is branching out to standards in new areas including space. The committee's biggest priority is to get ANS-54.8, *Liquid Metal Fire Protection*, reinstated as a current American National Standard with a minimal update of the withdrawn standard. Hauck has been going through RARCC members' voting records and monitoring participation to make sure that members are actively participating. See the combined consensus committee chair reports [embedded](#) above for details of consensus committee standards and membership activities.

C. Nuclear Criticality Safety Consensus Committee (NCSCC)

Larry Wetzel recognized that new standard, ANSI/ANS-8.28-2024, *Administrative Practices for the Use of Nondestructive Assay Measurements for Nuclear Criticality Safety*, was issued. This is the first new nuclear criticality safety standard in 10 years. The standard is being referenced in an Institute of Nuclear Materials Management standard currently being revised. NCSCC is considering the possibility of allowing a couple of standards to be sunset for lack of industry use. See the combined consensus committee chair reports [embedded](#) above for details of consensus committee standards and membership activities.

D. Nonreactor Nuclear Facilities Consensus Committee (NRNFCC)

Todd Anselmi provided the report for NRNFCC on behalf of Mark Joseph. He recognized that NRNFCC has only 12 voting members and needs to recruit additional members to the committee. See the combined consensus committee chair reports [embedded](#) above for details of consensus committee standards and membership activities.

ACTION ITEM 11/2024-07: Pat Schroeder to include the number of voting members for each consensus committee on the agenda for the monthly meetings with the SB chair and vice chair to discuss open items.

DUE DATE December 6, 2024

ACTION ITEM 11/2024-08: Andrew Sowder to reach out to Ross Radel to invite him or be an appointee to join the NRNFCC.

DUE DATE: January 1, 2025

E. Large Light Water Reactor Consensus Committee (LLWRCC)

Michelle French reviewed her consensus committee chair report. She recognized that last week's LLWRCC meeting is being rescheduled due to a lack of members joining the meeting. The LLWRCC has discussed allowing ANSI/ANS-51.10-2020, *Auxiliary Feedwater Systems for Pressurized Water Reactors*, to be administratively withdrawn due to lack of use. See the combined consensus committee chair reports [embedded](#) above for details of consensus committee standards and membership activities.

F. ASME/ANS Joint Committee on Nuclear Risk Management (JCNRM)

Dennis Henneke stated that the JCNRM continues to have a number of standards in progress for many, many years due to their large size. The Level 3 PRA Standard is expected to be approved by ANSI and issued early next year. A brief update was provided on each standard. JCNRM's International Working Groups from China and Japan were recognized. See the

combined consensus committee chair reports [embedded](#) above for details of consensus committee standards and membership activities.

- G. Fuel, Waste, and Decommissioning Consensus Committee (FWDC) Jef Lucchini reported on FWDC standards activities. He is pleased that two subcommittee chair roles were recently filled. See the combined consensus committee chair reports [embedded](#) above for details of consensus committee standards and membership activities.
- H. Environmental and Siting Consensus Committee (ESCC) Members were directed to Carl Mazzola's [embedded](#) chair report in his absence.

13. Task Group and Ad Hoc Committee Reports

A. Need for Additional Priority Task Group Members



13_TG_ScopesMembers_11-13-24.pdf

Andrew Sowder reminded members that the Priority Task Group (PriTG) is in need of additional support. The PriTG is chaired by Don Eggett and has one other member—Carl Mazzola. Sowder thanked Jason Andrus and Ben Parks for offering to join the PriTG and for Brandon Chisholm for his offer to check with the Nuclear Energy Institute for a representative to join the PriTG.

ACTION ITEM 11/2024-09: Pat Schroeder to add Jason Andrus and Ben Parks to the PriTG roster. DUE DATE: December 1, 2024
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ACTION ITEM 11/2024-10: Brandon Chisholm to check with NEI for an individual to join the PriTG. DUE DATE: January 1, 2025
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- B. Policy Task Group (PTG) Report
The PTG has been very involved and active this year. The PTG was used as a sounding board for a few of the items discussed today, such as the Standards Committee Strategic Plan. Sowder stated that the PTG is working well.
- C. External Communications Task Group (ECTG) Report
It was recognized that the ECTG hasn't been a high priority due to the work with ARCSC. ARCSC is not expected to be a permanent industry committee. At some point, the ECTG will become a priority.
- D. Internal Communications Task Group (ICTG) Report
The Professional Divisions Committee (PDC) standards newsletter continues to be produced bi-annually and presented to the PDC at ANS annual and winter conferences to keep ANS constituents apprised of standards activities.
- E. Priority Task Group (PriTG) Report
No report provided.
- F. Sales Task Group (STG) Report
No report provided.
- G. Artificial Intelligence (AI) Ad Hoc Committee Report
Ahmad Al Rashdan introduced himself. Within his roles at INL, he has been looking at the uses of AI. An ad hoc committee was formed under the LLWRCC to explore ANS developing AI standards

for nuclear application. As part of this effort, a survey was issued in 2023 to gather feedback. The feedback was very positive for ANS to initiate AI standards. The survey included an invitation to all Standards Committee members to help with AI standards. Nearly 80 Standards Committee members expressed interest. A second survey was issued to pinpoint specific standards. A white paper is currently in development. Specific standards are to be decided, but all will be looked at. The white paper will be discussed by the LLWRCC before being elevated to the SB. Sowder stated that this is an activity of interest to ARCSC.

14. Current and Emergent Issues

A. Practice of Giving Away Copyright to the International Organization of Standardization (ISO) to use ANS Standards

Pat Schroeder provided history on the practice to allow ISO to use ANS standards as a basis, but some ANS standards have been copied nearly verbatim. ANS does not receive any royalty from ISO for the use of ANS standards. This practice has been supported by the ANS Board of Directors in years past. It is not ISO coming to ANS to request use of ANS standards. It is ANS members that participate in ISO standards making the request. Recently a member requested that the revision of ANSI/ANS-19.10-2009 (R2016), *Methods for Determining Neutron Fluence in BWR and PWR Pressure Vessel and Reactor Internals* (expected to be issued next year), ANSI/ANS-19.13-2024, *Initial Fuel Loading and Startup Physics Tests for First-of-a-Kind Advanced Reactors*, be considered for conversion as ISO standards.

Schroeder asked members for their thoughts. In general, members expressed concern that ANS was not compensated for allowing use of ANS copyrighted property. Concern was also expressed with the possibility of two standards on the same topic with different requirements causing unnecessary confusion. On a similar subject, Andrew Smetana provided an example that the Japanese have stated that they will not share a table in one of their standards for use in an ANS standard. Schroeder was asked to look into the possibility of developing joint logo standards with ISO.

ACTION ITEM 11/2024-11: Pat Schroeder to explore the possibility of developing joint logo standards with ISO (i.e., what is the business model, process, etc.) and report back to the SB.
DUE DATE: June 1, 2025

B. Practice of Submitting all ANS Standards to NRC/DOE for endorsement/adoption

The practice of sending all ANS standards to NRC and DOE with a request for endorsement and/or adoption was discussed. The practice was started about 15 years ago by Prasad Kadambi when he was Standards Board chair. Kadambi feels that endorsement adds a value proposition to ANS standards. He recalls hearing that an organization would not use ANS-58.14-1993 (withdrawn), *Safety and Pressure Integrity Classification Criteria for Light Water Reactors*, because the standard was not endorsed. Kadambi also stated that ANS did not submit ANS-51.1-1983 (R1988) (withdrawn), *Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants*, or ANS-52.1-1983 (R1988), *Nuclear Safety Criteria for the Design of Stationary Boiling Water Reactor Plants*, to NRC for endorsement and every nuclear power plant cites these standards in their licenses. He feels that ANS has lost out on a lot of recognition over the years.

Brandon Chisholm spoke from the perspective of industry as an employee of Southern Company. He recognized that NRC staff is limited in resources and can't review everything. He sees the first step as laying out the lifecycle where NRC and DOE should be engaged when the standard is initiated. Ben Parks added, for NRC, that they need to understand the request's priority and impact when a standard is provided to them for endorsement.

Garrett Smith spoke for DOE. He learned today that NRC endorsing a standard indicates that the standard is one acceptable method. DOE also incorporates standards by reference; however, invoking a standard in their orders means it is the only method to use for an exemption. Also, an appendix in DOE Order 420 includes a non-exhausted list of standards considered acceptable methods, but DOE spends zero time reviewing these standards. It is the contractor's responsibility to check. ANSI/ANS-2.26-2004 (R2021), *Categorization of Nuclear Facility Structures, Systems, and Components for Seismic Design*, is not invoked because of one conflicting requirement.

Kent Welter provided his perspective as the ANS-30.3 Working Group Chair and from being involved in two design reviews with NRC. He suggested that working groups be asked for a list of standards that would benefit from endorsement to establish a priority. The concept of endorsing a standard by a regulatory agency is not specific to nuclear. Ben Parks stated that, for NRC purposes, staff endorsement of a standard means that the staff finds the matter addressed in the standard acceptable and encourages, but doesn't require, parties to use the standard. Larry Wetzel added that ANS-8 nuclear criticality safety standards may include requirements that they do not expect the NRC to endorse, but they include requirements deemed to be best practice. Sowder recognized that standards users are not just domestic, but international even though our name is American Nuclear Society. Kadambi said that for ANS to be a leader, ANS needs to take a position on what is the right thing to do. He feels that's why ANS-8 standards are so widely used. Kadambi feels that the difference between the prescriptive and performance-based approach is why ANS is in the lead in this area. We do not need to define requirements to the level of detail that NRC requests as there are better ways to do things than current practice. Sowder agrees with Kadambi and stated that is why ANS requested endorsement of ANSI/ANS-30.3-2022. Members were in agreement that we need to provide NRC sufficient details (contextual information) including benefits to the industry when request their endorsement. Sowder closed the discussion stating that he didn't intend for a decision to be made today. The point was to discuss the practice with members. The discussion will be taken to the Policy Task Group.

ACTION ITEM 11/2024-12: Policy Task Group to discuss the practice of sending all ANS standards to NRC and DOE for endorsement and/or adoption.
DUE DATE: January 1, 2025

15. 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. The following new action items were assigned when reviewing open action items from previous meetings:

ACTION ITEM 11/2024-13: Robert Becse to ask Rebecca Steinman and Dan Goldberg if they have any feedback on the certification program and/or when feedback will be available.
DUE DATE: June 1, 2025

ACTION ITEM 11/2024-14: Pat Schroeder to provide Gale Hauck the Standards Service Award Policy to revise to include diversity.
DUE DATE: June 1, 2025

ACTION ITEM 11/2024-15: Pat Schroeder to work with Gale Hauck to determine how to solicit new members to serve on the Standards Service Award Selection Committee to include more diversity.
DUE DATE: February 1, 2025

B. Concurrence to Close Report of Completed Action Items

15B_SB COMPLETED
Action Item Report.c

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 above in the [embedded](#) report.

16. Other/New Business**A. ANS Leadership Address**

A leadership address was not provided.

B. Other Business

No other business was discussed.

17. Member Feedback

Members' feedback from the meeting was very positive. The following feedback was shared:

- The audio and screensharing for remote participants worked well.
- It was helpful to have both Kathy Murdoch and Pat Schroeder on site for the meeting.
- The meeting had great participation from those in person and online.
- The meeting start time of 9:00am eastern (instead of 8:00am eastern) was appreciated by those joining remote on the west coast.

18. Review of Action Items from This Meeting

Action items were reviewed and confirmed.

19. Future Meetings

The SB is expected to meet on Tuesday of the following two ANS meetings:

- 2025 ANS Annual Conference in Chicago, IL, at the Chicago Marriott Downtown, June 15–18, 2025
- 2025 ANS Winter Conference and Expo in Washington, D.C., at the Washington Hilton, November 9–12, 2025

20. Adjournment

The meeting was adjourned.

Standards Board OPEN Action Item Report – 11/19/24 Meeting

Action Item	Description	Responsibility	Status/Comments
11/2024-01	Pat Schroeder to post and announce the revised Standards Committee Strategic Plan to the Standards Committee. DUE DATE: December 1, 2024	Schroeder	OPEN
11/2024-02	Andrew Sowder to discuss NRC independence and improvements to facilitate endorsement of ANS standards at the meeting with NRC on December 10, 2024. DUE DATE: December 10, 2024	Sowder	OPEN
11/2024-03	Pat Schroeder to facilitate a SB meeting in January to review the SMART Matrix. DUE DATE: January 1, 2025	Schroeder	OPEN
11/2024-04	Andrew Sowder to follow up with ACI about a liaison to the SB. DUE DATE: June 1, 2025	Sowder	OPEN
11/2024-05	Pat Schroeder to take ANS-30.2 off of the high priority list until an organization comes forward with a need for this standard. DUE DATE: June 1, 2025	Schroeder	OPEN
11/2024-06	Pat Schroeder to 1) retain the discussion on “High Priority Standards Needing to be Expedited” on the June 2025 agenda, 2) include more details on the reason for the priority, 3) separate the list of priority standards to those from the ARCSC survey and those deemed high priority internally by the SB, and 4) add a brief report out on the status of high-priority standards from the consensus committee chairs responsible. DUE DATE: June 1, 2025	Schroeder	OPEN
11/2024-07	Pat Schroeder to include the number of voting members for each consensus committee on the agenda for the monthly meetings with the SB chair and vice chair to discuss open items. DUE DATE December 6, 2024	Schroeder	OPEN
11/2024-08	Andrew Sowder to reach out to Ross Radel to invite him or an appointee to join the NRNFCC. DUE DATE: January 1, 2025	Sowder	OPEN
11/2024-09	Pat Schroeder to add Jason Andrus and Ben Parks to the PriTG roster. DUE DATE: December 1, 2024	Schroeder	OPEN
11/2024-10	Brandon Chisholm to check with NEI for an individual to join the PriTG. DUE DATE: January 1, 2025	Chisholm	OPEN
11/2024-11	Pat Schroeder to explore the possibility of developing joint logo standards with ISO (i.e., what is the business model, process, etc.) and report back to the SB. DUE DATE: June 1, 2025	Schroeder	OPEN
11/2024-12	Policy Task Group to discuss the practice of sending all ANS standards to NRC and DOE for endorsement and/or adoption. DUE DATE: January 1, 2025	Policy Task Group	OPEN
11/2024-13	Robert Becse to ask Rebecca Steinman and Dan Goldberg if they have any feedback on the	Robert Becse	OPEN

	certification program and/or when feedback will be available. DUE DATE: June 1, 2025		
11/2024-14	Pat Schroeder to provide Gale Hauck the Standards Service Award Policy to revise to include diversity. DUE DATE: June 1, 2025	Schroeder Hauck	OPEN
11/2024-15	Pat Schroeder to work with Gale Hauck to determine how to solicit new members to serve on the Standards Service Award Selection Committee to include more diversity. DUE DATE: February 1, 2025	Schroeder Hauck	OPEN
6/2024-01	Standards Board to consider a certification program on standards development after the ANS certification program has been launched. DUE DATE: June 1, 2025	SB Members	OPEN SB members agreed to hold off until feedback from the certification program is available. ACTION ITEM 11/2024-13 was assigned for Robert Becse to ask Rebecca Steinman and Dan Goldberg if they have any feedback on the certification program and/or when feedback will be available.
6/2024-04	Todd Anselmi (lead), Larry Wetzel, Jef Lucchini, and Steven Krahn to serve as the 2025 Standards Service Award Selection Committee. DUE DATE: May 1, 2025	Anselmi Wetzel Lucchini Krahn	OPEN Gale Hauck encouraged the SB to reach out to a broader population to include more diversity on the selection committee. ACTION ITEMS 11/2024-14 and 15 were assigned respectively for the following two actions: •Schroeder to provide Hauck the SSA Policy to revise to include diversity. •Schroeder to connect with Hauck to determine how to solicit new members to serve on the selection committee.
6/2024-05	Andrew Sowder to follow up with the fusion professional division to convey work in C&S for fusion technology. DUE DATE: June 1, 2025	Sowder	OPEN
6/2024-09	Sales Task Group to regroup in 2025 to discuss additional improvements to increase standards sales. (NOTE: Last report at June 2022 meeting; next report should be June 2025.) DUE DATE: June 1, 2025	Sales Task Group	OPEN
6/2024-12	Standards Board members to review the Glossary Ad Hoc Committee Report.	Members	CLOSED Report was sent to SB members and is available at https://collaborate.ans.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=b46fd58-653c-42c1-bf40-2afb8c7703cc
5/2024-01	Andrew Sowder to reach out to NNSA for their international perspective on nonproliferation standards/guidance. Based on the information from	Sowder	OPEN

	the NNSA, Sowder will decide if further investigation is needed with INMM and IAEA documents that may be available and whether research is need on European Union, Japan, and Canada efforts and the "International Convention on the Suppression of Acts of Nuclear Terrorism." DUE DATE: June 1, 2025		
5/2024-02	Andrew Sowder to let the Nuclear Nonproliferation Policy Division Vice Chair [Shikha Prasad] know of the Standards Board discussion on nuclear nonproliferation standards and get their input. DUE DATE: June 1, 2025	Sowder	OPEN
12/2023-01	Amir Afzali to work with Dennis Henneke and Robert Budnitz to develop a straw-man proposal on speaking for an ANS committee and a "disclaimer" be shared with the Policy Task Group. DUE DATE: June 1, 2025	Afzali, Henneke, Budnitz	OPEN Pat Schroeder will reached out to Afzali to see if he still wants to work on a straw-man proposal on speaking for ANS Committees.
12/2023-04	Andrew Sowder to check with Dr. Pekka Pyy about ANS having a liaison role with NHSI's WG 2. DUE DATE: June 1, 2025	Sowder	OPEN Email sent during June 2024 meeting.
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.	Kadambi	CLOSED Dennis Henneke feels that a method needs to be created first before trying to standardize. Kadambi thinks it could be useful for developers that do not want to use a PRA. He feels that we as a technical committee can propose an alternative approach. It was agreed that it would be helpful to have a champion in the industry to support this recommendation.
11/2023-08	Brandon Chisholm to work with Prasad Kadambi to 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.	Chisholm, Kadambi	CLOSED Discussed at RP3C meeting. RP3C will be looking at updating the Guidance Document. B. Chisholm and D. Moneghan will curate the CoPs. Updating the training will follow. Creating a video with clips could be considered derivative work and would need permission from the presenters. Members felt that the objective of this action item has been met with the work of the RP3C noted above.
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 Steve Krahn (was Prasad Kadambi).	Lucchini	CLOSED Lucchini contacted the WGs before the 2023 winter meeting. They did not make enough progress on the revision of the standards at that time to report to RP3C which was communicated to Kadambi. This action has been updated to recognize Krahn. This is the process for all RIPB standards.
11/2023-12	Prasad Kadambi and Steve Krahn to discuss using RIPB methods in ANS-2.36, <i>Accident Analysis for Aircraft Crash into Hazardous Facilities</i> , offline.	Kadambi, Krahn, Joseph	CLOSED The concern is that the WG did not contact RP3C, and the draft is 90% complete. This action has

			been updated to reflect Krahn as RP3C chair.
11/2023-13	Larry Wetzel to provide the Glossary Review Team NCSCC's feedback on preferred ANS-8 terms. DUE DATE: June 1, 2025	Wetzel	OPEN Work continues on the NCSCC glossary.
11/2023-16	The SB to revisit the formation of the EAC in a year. DUE DATE: November 1, 2025	Standards Board	On Hold A hold was put on this action due to work with ARCSC. ARCSC actions are through next year. Sowder suggested to extend for a year.
6/2023-02	Todd Anselmi with support from Pat Schroeder to update SMART Matrix actions to recognize those that have been completed. DUE DATE: June 1, 2025	Anselmi, Schroeder	OPEN The SMART Matrix will be reconfigured to reflect the revision to the SC Strategic Plan. A meeting will be scheduled in January 2025 for the SB to work on the SMART Matrix.
6/2023-04	Pat Schroeder to work with John Fabian 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, 2025	Schroeder	OPEN IT support is needed to establish/build a platform. Fabian (ANS Pubs Director) is working with ANS IT. His thought is to build out ANS's digital platform. They are looking at Q2 next year to update our digital platform and can then work on incorporating a subscription-based platform for universities. This is a long-term goal.
6/2023-06	Steven Krahn, Brandon Chisholm, and Michelle French to discuss what help is needed from RP3C for LLWRCC.	Krahn, Chisholm, Krahn	CLOSED This action was updated to task Krahn and Chisholm. <ul style="list-style-type: none"> •This is an RP3C action item. •French will remind LLWRCC WGs to seek help from RP3C on incorporating RIPB methods.
6/2023-15	Don Eggett to follow up on organization's copyright infringing on ANS documentation. John Fabian, ANS Publications Director, will discuss with the ANS attorney. (Note: This is a follow up action to ACTION ITEM 6/2021-17.) DUE DATE: June 1, 2025	Eggett, Fabian	OPEN Fabian has added this item to the list to be discussed with the ANS attorney. Preliminary thought from Fabian is that the copyright statement in ANS standards could be enhanced. He would want consistency with other ANS publications. Work is ongoing with the attorney to harmonize copyright statements.
6/2023-16	Andrew Sowder to recruit a liaison from the National Council on Radiation Protection and Measurements for the SB. DUE DATE: June 1, 2025	Sowder	OPEN IEEE/NPEC & HPS liaisons have been appointed. This action was amended to include only NCRP.
6/2023-17	Prasad Kadambi to follow up with Garrett Smith for details on DOE's use of ANSI/ANS-2.26-2004 (R2021), <i>Categorization of Nuclear Facility Structures, Systems, and Components for Seismic Design</i> .	Kadambi	CLOSED Discussed during the 11/19/24 SB meeting.