

# MINUTES

# **Standards Board (SB)**

# November 19, 2019 Marriott Wardman Park • Washington, D.C.

# **Members Present:**

Steven Arndt (Chair), U.S. Nuclear Regulatory Commission Patricia Schroeder (Secretary), American Nuclear Society Amir Afzali, Southern Company Robert Bari, Brookhaven National Laboratory \*Robert Budnitz, Lawrence Berkeley National Laboratory Gene Carpenter, U.S. Department of Energy George Flanagan, Oak Ridge National Laboratory David Hillyer, Energy Solutions N. Prasad Kadambi, Individual Mark Linn, Oak Ridge National Laboratory Carl Mazzola, Project Enhancement Corporation John Nakoski, U.S. Nuclear Regulatory Commission James O'Brien, U.S. Department of Energy Robert Roche-Rivera (Observer), U.S. Nuclear Regulatory Commission Andrew Smetana, Savannah River National Laboratory Andrew Sowder, Electric Power Research Institute \*Steven Stamm, Individual William Turkowski, Westinghouse Electric Company, LLC Larry Wetzel, BWX Technologies, Inc.

\*Participated by teleconference for at least part of the time

### **Guests:**

Todd Anselmi, Enercon Services Greg Downing, Biology & Medicine/Isotopes & Radiation Professional Divisions Liaison Robert Hayes, North Carolina State University Michael Muhlheim, Oak Ridge National Laboratory Garrett Smith, U.S. Department of Energy Robert Youngblood, Idaho National Laboratory

# Members Absent:

Donald Eggett (Vice Chair), Individual

# 1. Welcome and Introductions

Standards Board (SB) Chair Steven Arndt welcomed members and guests. Introductions were made. The meeting was called to order with a quorum established.

# 2. Approval of Agenda

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



# 3. SB Chair Report

- A. Report to the Board of Directors See Attachment 1 for the informative report submitted by Steven Arndt to the ANS Board of Directors (BOD) on behalf of the Standards Committee.
- B. Report from ANS President's Special Session

Arndt provided members a summary of the ANS President's Special Session held on Sunday. He reported that the primary focus was the ANS 2020 Change Plan. Several at the meeting asked that the Change Plan a mechanism for feedback be developed. Many made it clear that they are not happy with portions of the Change Plan. For these reasons, approval of several items in the Change Plan has been delayed allowing time for additional input and revisions. Arndt stated that although he still has reservations on some of the goals and objectives, he believes that the Change Plan overall will be good for the Society.

C. Report on President's Special Committee on Advanced Reactors The Special Committee on Advanced Reactors (SCARP) was formed about a year ago by John Kelly when he was ANS President. The committee includes members from the policy and technical side to develop recommended actions to support advanced reactors. The first product is a report on how to deal with advanced reactor standards. The report and its recommendations were issued November 21<sup>st</sup>. In spite of the advanced reactor community concerns, standards are needed and will help, particularly if they are written performance based. The report recognizes the need for communication and support for national and international standards development. The next action for the special committee is to address policy. Arndt will provide SB members a copy of the SCARP report once issued.

ACTION ITEM 11/2019-01: Steven Arndt to provide SB members a copy of the SCARP report on advanced reactors standards when issued. DUE DATE: November 22, 2019

D. ANS 2020 Change Plan Update (Link to high-level information on the Change Plan) Arndt explained that the Change Plan includes how ANS meetings are held, the ANS committee structure, publications, staff and volunteer interaction-essentially everything the Society does is included in the Change Plan. The main driver for the Change Plan is financial; however, there are a number of others drivers including the need for efficiencies and enhanced communication. The Change Plan was approved in principle by the BOD at the 2019 Annual Meeting. Staff and volunteers were tasked with drafting the details of the Change Plan for approval at the BOD 2019 Winter Meeting. Input on the Change Plan was sought from several members of the SB. One item of concern with the SB directly is the restructuring of this committee. The original proposal for the SB was that it would become a subcommittee under a new standing committee. Arndt stated that he and SB Vice Chair Donald Eggett reviewed the Change Plan and wrote letters back that the structure was not well thought out. Arndt believes that he made the BOD aware of the special purpose of the SB and requirements to comply with the American National Standards Institute (ANSI). The new proposal is more rational and keeps the SB a standing committee reporting directly to the BOD. Arndt also believes that there could be big changes with the structure of the annual meeting in that it will not include governance meetings sometime in the future. There may also be other secondary impacts. One possibility is that a BOD member may be assigned to each



standing committee. Other major issues may be changes to local sections and divisions with a few divisions and committees likely to merge and virtual sections may be created.

Arndt said that he had a fairly long chat yesterday with Mary Lou Dunzik-Gougar, the incoming ANS President, and feels that Gougar is supportive of standards. He added that Craig Piercy took over as the new ANS Executive Director/Chief Executive Officer. As part of the Change Plan, Piercy will review all staff functions. Arndt expects that portions of the Change Plan will be easily approved while some will require more work before being re-presented to the BOD for approval.

Arndt will be available to the BOD all day on Thursday in case there are any questions.

E. Consensus Committee Leadership Succession Plans

Arndt recommended that current consensus committee chairs and vice chairs begin preparing leadership succession plans. The majority of consensus committee chair and vice chair terms expire in February 2020 (See Attachment 2). If we are missing support in a particular area, we can send a letter of request.

Arndt recently sent an introductory letter to the new NRC Standards Executive, Louise Lund, to gain her support.

#### 4. SB Vice Chair Report

A written report was provided in advance of the meeting by SB Vice Chair Donald Eggett. At his request, Pat Schroeder summarized the report for members. The full report is available as Attachment 3.

- A. Status of Recent Appeals
  - ANSI/ANS-3.5-2018, "Nuclear Power Plant Simulators for Use in Operator Training and Examination"

The appeal was completed and the standard was approved October 10, 2019, and published in early November.

 ANS-54.1-201x, "Nuclear Safety Criteria and Design Process for Sodium Fast Reactor Nuclear Power Plants"

The appeals committee has completed its evaluation. A couple of changes to the draft standard are being recommended. Feedback has been sought from the working group before finalizing the evaluation for Steven Arndt's consideration.

George Flanagan expressed concern that the appeal is taking too long to complete. A delay was in the formation of the appeals committee due to the restriction of the membership makeup and availability and willingness of individuals who were asked to participate in the appeals process. We need to look at the policy to make it more flexible on a case-by-case basis. Because ANS-54.1-201x has not been issued, the standard could not be referenced by the Versatile Test Reactor project at Idaho National Laboratory. Flanagan feels that the current appeals policy is impeding progress. Robert Budnitz suggested that Steven Arndt appoint a small group to streamline the policy. Steven Stamm suggested that an overarching policy could be written to cover exceptions and prescribe a way to approve an exception on a case-by-case basis. Arndt cautioned that a revision to the policy must ensure independence of the appeals committee from the working group. Robert Budnitz, George Flanagan, and



Carl Mazzola offered to work on revising the appeals policy which was accepted. Members suggested that Gene Carpenter (not in attendance at the time) should also participate since he has recently been involved in an appeal on ANSI/ANS-3.5-2018, "Nuclear Power Plant Simulators for Use in Operator Training and Examination."

ACTION ITEM 11/2019-02: Robert Budnitz, George Flanagan, Carl Mazzola, and Gene Carpenter (or alternate) to draft a revision to the appeals policy for the Standards Board to review at the June 2020 meeting.

DUE DATE: May 1, 2020

ACTION ITEM 11/2019-03: Pat Schroeder to facilitate a teleconference for Robert Budnitz, George Flanagan, Carl Mazzola, and Gene Carpenter (or alternate) to draft a revision to the appeals policy. DUE DATE: January 1, 2020

- B. Standards Service Award Selection Committee Report
  - Concurrence of 2019 Nominee James B. Florence and Ian B. Wall were approved as the 2019 recipients of the Standards Service Award at the June 2019 Standards Board meeting. Both recipients were in attendance at the plenary yesterday morning and received their plaques in person.
  - Appointment of 2020 Selection Committee
     Action Item 6/2019-03 was assigned at the June meeting for Donald Eggett to lead the
     Standards Service Award Selection Committee with support from Robert Budnitz, Gene
     Carpenter, Steven Stamm, and Larry Wetzel. Nominations for the 2020 award will be
     accepted until March 1, 2020.
- C. ANS Glossary Update April 2019 Eggett's report recognized that the glossary was updated in April of this year and reminds members to use the glossary as necessary.
- D. Vice Chair General Comments

Eggett's report also provides the status of his action items related to 1) industry priorities (6/2018-02) and 2) Standards Board actions on advanced reactors (6/2018-01). Additionally, his report expressed concern with the 2020 Change Plan and potential impact on ANS standards' lack of visibility and lack of Nuclear Energy Institute's (NEI) engagement on the Standards Board since Russ Bell's retirement.

# 5. Secretary/Sales Reports

Pat Schroeder summarized her secretary/sales report provided with the meeting materials – see Attachment 4. Included in the report is an update on the migration of the ANS Standards Workspace into ANS Collaborate, the Standards Volunteer Database, third-party royalties, the young member/associate member webpage, and other staff projects. The following action items were assigned during the discussion:

ACTION ITEM 11/2019-04: Pat Schroeder to check on the database being developed by the Diversity and Inclusion Group and determine if it might be useful for standards. NOTE: Steven Arndt to approve correspondence first. DUE DATE: January 1, 2020



ACTION ITEM 11/2019-05: Pat Schroeder to notify Marilyn Kray, Mary Lou Dunzik-Gougar, and Craig Piercy when the young member/associate member webpage is launched. DUE DATE: Immediately upon creation of the webpage

- 6. ANS President (Leadership) Address No report provided.
- 7. Standards Committee Strategic Plan Report/SMART Matrix Progress on Goals & Objectives—SMART Matrix

Steven Stamm directed members to the updated SMART Matrix (See Attachment 5). Steven Arndt confirmed that the position of an External Task Group Chair remains open. Pat Schroeder recognized problems with members receiving notices through ANS Collaborate since the migration in February 2019. Without receiving notifications, a few members did not know ballots were open and did not receive meeting information. This will be considered when reviewing participation reports for 2019.

The status of the standards volunteer database was discussed. Schroeder reported that the ANS IT Department was still working on the ANS website redesign. The current completion date is the first quarter of 2020. Until completed, the IT Department will not have the resources to work on the database. The IT Department takes direction from the BOD, and she does not know if they have other projects that could be proposed. Schroeder thought that BOD support of the standards volunteer database would help to give the project priority. Arndt stated that he'd discuss the database with Mary Lou Dunzik-Gougar.

ACTION ITEM 11/2019-06: Steven Arndt to discuss the standards volunteer database with Mary Lou Dunzik-Gougar to gain her support. DUE DATE: February 1, 2020

Andrew Sowder thought that NEI appointed a new point of contact for ANS standards. He believes that the individual is Tom Basso and will provide Arndt and Schroeder his contact information.

ACTION ITEM 11/2019-07: Andrew Sowder to provided Steven Arndt and Pat Schroeder the contact information of Tom Basso (potential new NEI point of contact for ANS standards). DUE DATE: December 1, 2019

When discussing an action for the Risk-informed, Performance-based Principles and Policy Committee (RP3C) to draft an article for *Nuclear News*, a suggestion was made to use the report on advanced reactor standards from the SCARP report as the basis for a *Nuclear News* article. Schroeder was asked to check with the magazine's publisher and editor.

ACTION ITEM 11/2019-08: Pat Schroeder to check with Rick Michal and Mike McQueen on using the SCARP report on advanced reactor standards as the basis for a *Nuclear News* article. DUE DATE: December 1, 2019



# 8. Current Issues

A. Change of Policy on Guidance Standards to Guidance Documents (Access Ballot HERE) (12/18 Approved = 66.7%)

The ballot for a proposed change to the policy on guidance standards closed in May 2019. Comments and objections were discussed at the June 2019 SB meeting without resolution resulting in an action item for Steven Arndt and Robert Budnitz to tweak the policy so that it would be satisfactory to all. Discussions between Arndt and Budnitz between the meetings met with challenges in finding a compromise that would satisfy all SB members and serve the need of the JCNRM. Arndt recognized the need for more flexibility in our guidance standard policy and proposed a revision for consideration – see Attachment 6. He believes that the SB charter is sufficiently broad enough to publish documents in support of potential future standards. Arndt added that the intent is not for ANS to do NEI's or INPO's work. The scope of the revised policy covers guidance standards that support an existing standard and guidance documents that may support a future standard. John Nakoski sees the new option provided in the revised policy to develop guidance documents as a platform to move new approaches, methods, and technologies forward with a framework for a developmental document. He sees this as critical.

Members discussed the logistics of developing a guidance document including the need to prepare a Project Initiation Notification System (PINS) form, whether the document would be sold, recognizing whether the document was for internal or external use, assigning a traceable document number, and the restriction of including requirements.

The following motion was made and seconded:

### **MOTION:**

To adopt the revised policy (Attachment 6) as amended with removal of the word "accredited" in Sec. 2, Policy, 1<sup>st</sup> paragraph.

The motion was approved with two members opposed.

ACTION ITEM 11/2019-09: Pat Schroeder to update the Policy Manual with the revised policy on guidance standards and documents as approved by motion. DUE DATE: December 15, 2019

B. Other Current Issues No other current issues were discussed.

### 9. Professional Division (PD)/Standards Committee (SC) Liaisons Program

A. PD/SC Liaisons Program Status Update

Steven Arndt reminded members that he made a presentation to the Professional Division Committee (PDC) last June and continues to remind individuals when he sees them. The updated liaison list (Attachment 7) was provided in the meeting packet. Pat Schroeder stated that the majority of divisions confirmed their liaison with encouragement from PDC Chair Thomas Remick. Liaisons are invited to consensus committee meetings and provided time on the agenda to provide feedback to the committee. Schroeder has setup ANS Collaborate sites for PD liaisons to each consensus committee so that they have access to minutes and PINS



forms. These sites are also used for collaboration to inform PD liaisons of meetings. It's an ongoing process to inform new liaisons about the program. Only a few liaisons have participated in consensus committee meetings. William Turkowski suggested that he reach out to the PCD Chair before each national meeting with a request for him/her to remind their members of the PD/SC Liaison Program.

ACTION ITEM 11/2019-10: William Turkowski to reach out to the PCD Chair before each ANS national meeting with a request for him/her to remind their members of the PD/SC Liaison Program.

DUE DATE: June 1 and November 1, 2020 (ongoing)

B. CC/PD Interface Activity (all interface including current meeting) Members recognized that participation is slowly building.

# 10. Associate Member Report

- A. Updated Associate Member Report The associate member report is available as Attachment 8. Since tracking was started in 2015, 72 associate members have been placed on a working group. The program currently includes 42 current associate members; 12 have earned full members.
- B. Upgrading Associate Members Steven Arndt asked that chairs be proactive in upgrading associate members that are actively participating.
- C. Consensus Committee Chair Feedback on Program The benefits and success of the program were acknowledged.

# 11. Addressing NCSCC, RP3C, and JCNRM Comments on ANS-57.11

Larry Wetzel stated that the NCSCC submitted numerous comments on draft standard ANS-57.11, "Integrated Safety Assessments for Nonreactor Nuclear Facilities," on a secondary consensus committee review. He would like to address how comments and objections from committees other than the responsible consensus committee are resolved and when we should move forward with ANSI approval. Our procedures provide direction on how to address comments and objections from two groups – 1) the responsible consensus committee (official ballot) and 2) public review. Comments and objections outside the responsible consensus committee cannot be counted in the official ballot tally which leaves only the direction of responding to public comments has complicated the process of comment resolution. He questioned whether this is what we wanted when the procedure was changed to give all consensus committees an opportunity to review each other's drafts. Wetzel agrees that something is wrong, and we need to fix it. Wetzel and O'Brien agreed to work on a process to handle comments outside the responsible consensus committee to help.

ACTION ITEM 11/2019-11: Larry Wetzel (lead) with James O'Brien and Steve Stamm to work on a process to handle comments and objections from Standards Committee members that are not members of the formal balloting committee and present to the SB for consideration at the next meeting. DUE DATE: May 1, 2020



# 12. Review of Open Action Item Report

A. Report on Open Action Items Open action items were reviewed. A complete status report of open action items is provided at the end of these minutes. The following new action item was assigned during the discussion:

ACTION ITEM 11/2019-12: Pat Schroeder to add Robert Budnitz and George Flanagan to the ANS-3.15 Working Group roster in ANS Collaborate as observers. DUE DATE: November 20, 2019

B. Concurrence to Close Report of Completed Action Items
 Members were asked to take a few minutes to review the report of completed action items provided as Attachment 9. The following motion was then made:

### MOTION:

To close the list of completed action items.

The motion was unanimously approved.

### 13. RP3C Report

RP3C Chair Prasad Kadambi prepared a brief presentation as a report to the SB – See Attachment 10. Steven Stamm asked Prasad Kadambi to provide updated completion dates for the SMART Matrix, Goal 1, D.1, for RP3C actions. Since James O'Brien and Ed Wallace have the lead on these tasks, Kadambi asked that he have an opportunity to chonsult with both before setting completion dates.

ACTION ITEM 11/2019-13: Prasad Kadambi to consult with James O'Brien and Ed Wallace on updated completion dates for Goal 1, D.1 of the SMART Matrix and then to inform Steven Stamm. DUE DATE: December 31, 2019

Kadambi explained that he is structuring the RP3C meetings into three categories 1) address SB objectives, 2) expand RIPB methods, and 3) support working group application of risk-informed, performance-based (RIPB) methods. The RP3C is collaborating with a new American Society of Mechanical Engineers (ASME) consensus committee called the Plant Systems Design (PSD) Committee. Kadambi stated that we need to operate as a team. RP3C needs to work on improving their communication and guidance. While RP3C does not have any authority to influence what the working group does, they can offer suggestions.

A. Guidance Document Subsequent Actions

The RIPB training package is in draft form and will be sent to RP3C members for review. There are two parts – 1) guidance document and 2) the License Modernization Project (LMP), NEI 18-04, and the framework. Kadambi feels that these materials will put consensus committees in a better position to broaden work on RIPB in more standards. As part of the training package, a questionnaire will be prepared and sent to each active working group once a reasonable draft has been developed and a process will be developed to incorporate comments and feedback to finalize the guidance document.

B. CCs in Collaboration with RP3C (Action Item 11/2018-14) See Attachments 11 and 12 for working groups in collaboration with RP3C.



Kadambi acknowledged positive feedback from consensus committee chairs to RP3C comments and suggestions. He noted that it really helps to get early involvement with working groups. Kadambi would like to see consensus committee chairs and subcommittees more involved. O'Brien suggested that a test run of the training presentations with the consensus committee chairs could be done for feedback. Per Action Item 11/2019-13, Kadambi will work with O'Brien and Wallace to set a due date for the completion of the training presentations.

C. RP3C Coordination with New ASME Consensus Committee Standards Committee on Plant System Design (PSD)

Chair: Ralph Hill; RP3C Point of Contact: James O'Brien

Through interaction with JCNRM's Subcommittee on Risk Application (SCoRA), Kadambi became aware of an effort in ASME to develop a whole new standard on plant systems design (PSD) for generalized application, not nuclear specific. Ralph Hill, the chair of ASME's PSD Committee prepared a taxonomy flowchart and provided to RP3C's for review. Stamm feels that the LLWRCC should be involved with the taxonomy and terminology since they have several system standards. Robert Budnitz confirmed that JCNRM will be available to support ASME's PSD standard as it will be relying on PRA standards developed by the JCNRM.

# 14. Consensus Committee Chair Reports

Each report shall address the following areas:

- CC performance improvement activities
- Plan for any standards that are over 5 years old
- Status of high priority standards efforts
- Top 10 standards progress & 11-20 standards evaluation (Attachment 13)
- Personnel needs/actions taken
- Identification and progress of new standards, including status of project plans
- Plan for inquiries over 2 months old

ACTION ITEM 11/2019-14: Pat Schroeder to add the above bullets under each consensus committee chair report on future agendas. DUE DATE: June 1, 2020

- A. Environmental and Siting Consensus Committee (ESCC) The written report was acknowledged in absence of ESCC Chair Carl Mazzola at this time – See Attachment 14.
- B. Fuel, Waste, and Decommissioning Consensus Committee (FWDCC) FWDCC Chair David Hillyer recognized the report of activities provided for his committee – See Attachment 15. Hillyer has found challenges in recruiting working group members, particularly those willing to chair a project. He has had some interest expressed from individuals outside of the U.S. and will be sending these individuals invitations.
- C. Joint Committee on Nuclear Risk Management (JCNRM) JCNRM Chair Robert Budnitz summarized his written report available as Attachment 16. The JCNRM met for four days last September in Bethesda, Maryland. The next meeting is scheduled February 2020 and will be held in Albuquerque, New Mexico. The JCNRM has been working on a revision of the flagship standard for years and is hoping to have the draft ready for ballot the beginning of 2020. The trial use standard for advanced non-LWRs had nine different



trials with half of them being overseas. At the request of the NRC, steps have been taken to expedite the issuance of the advanced non-LWR standard for ANSI approval. A new standard on multi-unit PRA was initiated last summer, and the working group has been fully formed. Sadly, in the last two months, two JCNRM Executive Committee members died—Mary Drouin and Barry Sloane. Budnitz reported that the current grant to cover meeting- and travel-related expenses for PRA standards expires February 2020, and a new grant has been submitted. John Nakoski confirmed that the grant proposal is in the approval process at NRC. Lastly, Budnitz acknowledged excellent support received from John Fabian for JCNRM.

D. Large Light Water Reactor Consensus Committee (LLWRCC)

The written report for the LLWRCC is provided as Attachment 17. LLWRCC Chair Gene Carpenter agreed with others that recruiting working group chairs and members has proved to be a challenge. Seventeen of the 29 LLWRCC projects/standards are presently active. The ANS-3.15 Working Group on cybersecurity held a meeting on Sunday and is close to finalizing a PINS. Work on proposed new standard ANS-60.1 on export control is still in the formation process.

- E. Nonreactor Nuclear Facilities Consensus Committee (NRNFCC) NRNFCC Chair James O'Brien reported that all three committee projects are active. Two are new standards that were recently issued for ballot. The one current standard, ANSI/ANS-58.16-2014, "Safety Categorization and Design Criteria for Nonreactor Nuclear Facilities," is being processed for reaffirmation. O'Brien stated that usage of ANSI/ANS-58.16-2014 is minimal, but it could be useful as a more consistent method for the future. O'Brien added that Chip Martin, a NRNFCC member, is holding a round table discussion during this ANS meeting on the need for nonreactor nuclear facility standards. See Attachment 18 for full details of NRNFCC activities.
- F. Nuclear Criticality Safety Consensus Committee (NCSCC) NCSCC Chair Larry Wetzel provided a brief report. He stated that the committee has three PINS in development and that ballot comments on ANS-8.21-202x, "Use of Fixed Neutron Absorbers in Nuclear Facilities Outside Reactors," are close to being resolved. The NCSCC recently lost its NRC rep due to a job change, but otherwise, is not in need of additional support and has great associate member participation. The full NCSCC report is available as Attachment 19.
- G. Research and Advanced Reactors Consensus Committee (RARCC)

A copy of the RARCC Chair report is available as Attachment 20. RARCC Chair George Flanagan explained that the committee has two fairly defined subcommittees with little overlap, but this may change. Flanagan would like to have seen NEI 18-04 developed as an ANS standard since it is very similar to ANSI/ANS-53.1-2011 (R2016), "Nuclear Safety Design Process for Modular Helium-Cooled Reactor Plants," but understands that the standards development process is not responsive enough. NEI developed the guidance document in about a year and a half. Prasad Kadambi feels differently in that NEI18-04 would not make a good standard but is trying to encourage ANS-30.2 Working Group Chair Amir Afzali to re-initiate work on this standard now that NEI 18-04 is essentially completed. Flanagan acknowledged that the ANS-20.2 Working Group (molten salt reactor standard) is struggling with agreement on definitions.

Flanagan reported that he made RARCC's chair of the research reactor subcommittee aware that NEI is recommending research/test reactor standards be used for micro reactors. It's possible that regulators may not agree and instead request that research/test reactor standards



be revised as soon as possible. Steven Arndt asked that Flanagan draft a letter on his behalf to the NRC Standards Executive on the position for the use of ANS research reactor standards for micro reactors.

ACTION ITEM 11/2019-15: George Flanagan to draft a letter for Steven Arndt to the NRC Standards Executive with a position on using research reactor standards for micro reactors. DUE DATE: January 1, 2020

H. Safety and Radiological Analyses Consensus Committee (SRACC) SRACC Chair Andrew Smetana highlighted a few items from his chair report (see Attachment 21). He acknowledged that ANSI/ANS-5.4-2011, "Method for Calculating the Fractional Release of Volatile Fission Products from Oxide Fuel," was delinquent due to non-response of the working group chair. On a more positive note, Smetana is cautiously optimistic that he has identified a few individuals that might support proposed standard ANS-58.15, "Criteria for Severe Accident Evaluation." ANS-58.15 ranked #1 on the standards priority survey. The first step will be to define a scope statement.

### 15. Other Committee Reports (from members who have information to report)

- A. Standards Board Task Groups See Attachment 22 for the list of task groups, members, and scopes.
  - Policy Task Group (Chair: Arndt) No report provided.
  - External Communications Task Group (Chair: Open) No report provided.
  - Internal Communications Task Group (Chair: Turkowski)
     William Turkowski acknowledged two projects under the Internal Communications Task Group—the PD/SC Liaison Program and the training presentations for Standards
     Committee members. The training presentations are posted to the Standards Committee Members site on ANS Collaborate. New members receive links to the presentations.
- B. Liaison reports (~10 minutes each) (Full Liaison List Attachment 23) External Liaisons to the Standards Board
  - ANSI & International Organization of Standardization (ISO)/Technical Committee 85/Subcommittee (SC) 6: Prasad Kadambi Prasad Kadambi reported that he attended the ANSI Policy Committee meeting the previous week. ANSI has developed an accreditation program for organizations and individuals. Kadambi would like to see ANS explore a conformity assessment program. Kadambi's report for ISO informed members noted that Donald Spellman recently took on the role of SC 6 Overall Advisor.
  - ASCE: Carl Mazzola No report provided.
  - EPRI: Andrew Sowder No report provided.



- IEEE/NPEC: Donald Spellman (SB liaison to NPEC)/Richard Wood (NPEC liaison to SB) Steven Arndt stated that he believes that the communication between IEEE and ANS has been nearly nonexistence. Per Action 6/2019-18, Arndt will follow up with Spellman and Wood.
- INPO: Open

Arndt acknowledged that he and Donald Eggett have reached out without success in finding an INPO liaison. David Hillyer previously worked at INPO and thought a formal letter of invite should be sent. Action Item 6/2018-19 was previously assigned for Hillyer to provide Arndt the name of an INPO contact.

ACTION ITEM 11/2019-16: Pat Schroeder to draft a letter of invite on behalf of Steven Arndt to send to INPO once contact information provided by David Hillyer. NOTE: Action Item 6/2018-19 was assigned for David Hillyer to provide an INPO contact. DUE DATE: This action will be completed ~two weeks after contact information provided by David Hillyer (per Action Item 6/2018-19).

 JCNRM/SCoRA: Stanley Levinson Members agreed that a liaison role was not needed for SCoRA since SCoRA activities are reported by the JCNRM Chair.

ACTION ITEM 11/2019-17: Pat Schroeder to remove the SCoRA liaison role from the external liaison list. DUE DATE: December 1, 2019

- NCRP: Open
- NEI: Open
- NFPA: Open

### 16. Other Business

Members discussed how NEI 18-04, "Risk-Informed Performance-Based Technology Guidance for Non-Light Water Reactors," should be used in ANS standards. Amir Afzali stated that he will be using one of the white papers on structures, systems, and components in support of NEI 18-04 and incorporating into the proposed standard ANS-30.2, "Structures, Systems, and Component Classification for Nuclear Power Plants." Steven Stamm suggested that a white paper be prepared with a recommendation on a path forward for how ANS working groups should consider NEI 18-04 in their work. Afzali, George Flanagan, and Prasad Kadambi agreed to develop a paper on how and where NEI 18-04 should be used in ANS standards.

ACTION ITEM 11/2019-18: Amir Afzali, George Flanagan, and Prasad Kadambi to prepare a white paper on how and where NEI 18-04 should be used in ANS standards. DUE DATE: March 1, 2020

Afzali questioned NRC standards needs to support Part 53. It would help to know what is going on in order to be proactive and support. Attending NRC stakeholders meetings on Part 53 would be beneficial. Robert Roche-Rivera (NRC) will check NRC's schedule and inform the Standards Board of stakeholder meetings.



ACTION ITEM 11/2019-19: Robert Roche-Rivera to check with NRC and let the Standards Board know when a stakeholders meeting is being held on Part 53. DUE DATE: January 15, 2020

### 17. Review of Action Items from This Meeting

New action items assigned at the meeting were reviewed and confirmed.

#### **18. Future Meetings**

ANS national meetings scheduled in 2020 are as follows:

- ANS Annual Meeting at Arizona Grand Resort from June 7-11, 2020
- ANS Winter Meeting at Chicago Marriott Downtown from November 15-19, 2020

The next SB meeting will be scheduled on Tuesday, June 9, 2020, from 8:30am – 5:00pm during the ANS Annual Meeting at the Arizona Grand Resort.

#### 19. Adjournment

With no further business, the meeting was adjourned.

Standards Board Action Item Status Report from 11/19/19 Meeting (See Attachment 9 of the minutes for a list of action items completed before the meeting and closed by motion.)										
Action Item	Description	Responsibility	Status/Comments /Reassignments							
11/2019-01	Steven Arndt to provide SB members a copy of the SCARP report on advanced reactors standards when issued. DUE DATE: November 22, 2019	Arndt	OPEN							
11/2019-02	Robert Budnitz, George Flanagan, Carl Mazzola, and Gene Carpenter (or alternate) to draft a revision to the appeals policy for the Standards Board to review at the June 2020 meeting. DUE DATE: May 1, 2020	Budnitz, Flanagan, Mazzola, Carpenter	OPEN							
11/2019-03	Pat Schroeder to facilitate a teleconference for Robert Budnitz, George Flanagan, Carl Mazzola, and Gene Carpenter (or alternate) to draft a revision to the appeals policy. DUE DATE: January 1, 2020	Schroeder	OPEN							
11/2019-04	Pat Schroeder to check on the database being developed by the Diversity and Inclusion Group and determine if it might be useful for standards. NOTE: Steven Arndt to approve correspondence first. DUE DATE: January 1, 2020	Schroeder	OPEN							
11/2019-05	Pat Schroeder to notify Marilyn Kray, Mary Lou Dunzik-Gougar, and Craig Piercy when the young member/associate member webpage is launched. DUE DATE: Materials have been provided to the ANS editor and will then be provided to the IT department to create the webpage. The notification will be issued immediately upon completion of the webpage.	Schroeder	OPEN							
11/2019-06	Steven Arndt to discuss the standards volunteer database with Mary Lou Dunzik-Gougar to gain her support. DUE DATE: February 1, 2020	Arndt	OPEN							
11/2019-07	Andrew Sowder to provided Steven Arndt and Pat Schroeder the contact information of Tom Basso (potential new NEI point of contact for ANS standards). DUE DATE: December 1, 2019	Sowder	OPEN							
11/2019-08	Pat Schroeder to check with Rick Michal and Mike McQueen on using the SCARP report on advanced reactor standards as the basis for a Nuclear News article. DUE DATE: December 1, 2019	Schroeder	OPEN							
11/2019-09	Pat Schroeder to update the Policy Manual with the revised policy on guidance standards and documents as approved by motion. DUE DATE: December 15, 2019	Schroeder	OPEN							
11/2019-10	William Turkowski to reach out to the PCD Chair before each ANS national meeting with a request for him/her to remind their members of the PD/SC Liaison Program. DUE DATE: June 1 and November 1, 2020 (ongoing)	Turkowski	OPEN							

(See At	Standards Board Action Item Status Rep tachment 9 of the minutes for a list of action items complete	ort from 11/2 ed before the mee	19/19 Meeting eting and closed by motion.)				
Action Item	Description	Responsibility	Status/Comments /Reassignments				
11/2019-11	Larry Wetzel (lead) with James O'Brien and Steve Stamm to work on a process to handle comments and objections from Standards Committee members that are not members of the formal balloting committee and present to the SB for consideration at the next meeting. DUE DATE: May 1, 2020	Wetzel, O'Brien, Stamm	OPEN				
11/2019-12	Pat Schroeder to add Robert Budnitz and George Flanagan to the ANS-3.15 Working Group roster in ANS Collaborate as observers. DUE DATE: November 20, 2019	Schroeder	OPEN				
11/2019-13	Prasad Kadambi to consult with James O'Brien and Ed Wallace on updated completion dates for Goal 1, D.1 of the SMART Matrix and then to inform Steven Stamm. DUE DATE: December 31, 2019	Kadambi	OPEN				
11/2019-14	Pat Schroeder to add the bullets preceding the CC chair reports under each CC report on future agendas. DUE DATE: June 1, 2020	Schroeder	OPEN				
11/2019-15	George Flanagan to draft a letter for Steven Arndt to the NRC Standards Executive with a position on using research reactor standards for micro reactors. DUE DATE: January 1, 2020	Flanagan	OPEN				
11/2019-16	Pat Schroeder to draft a letter of invite on behalf of Steven Arndt to send to INPO once contact information provided by David Hillyer. NOTE: Action Item 6/2018-19 was assigned for David Hillyer to provide an INPO contact. DUE DATE: This action will be completed ~two weeks after contact information provided by David Hillyer (per Action Item 6/2018-19).	Schroeder	OPEN				
11/2019-17	Pat Schroeder to remove the SCoRA liaison role from the external liaison list. DUE DATE: December 1, 2019	Schroeder	OPEN				
11/2019-18	Amir Afzali, George Flanagan, and Prasad Kadambi to prepare a white paper on how and where NEI 18-04 should be used in ANS standards. DUE DATE: March 1, 2020	Afzali, Flanagan, Kadambi	OPEN				
11/2019-19	Robert Roche-Rivera to check with NRC and let the Standards Board know when a stakeholders meeting is being held on Part 53. DUE DATE: January 15, 2020	Roche-Rivera	OPEN				

(See At	Standards Board Action Item Status Rep tachment 9 of the minutes for a list of action items complete	ort from 11/1 ed before the mee	19/19 Meeting eting and closed by motion.)
Action Item	Description	Responsibility	Status/Comments /Reassignments
6/2019-03	Donald Eggett to lead the 2020 Standards Service Award Selection committee with support from Robert Budnitz, Gene Carpenter, Steven Stamm, and Larry Wetzel. DUE DATE: May 1, 2020	Eggett, Budnitz, Carpenter, Stamm, Wetzel	OPEN
6/2019-04	Steven Arndt to contact Mike Tschiltz at NEI to inquire about a new liaison as well as on the availability of their standards priority survey feedback. DUE DATE: February 28, 2020	Arndt	OPEN A. Sowder believes that the new NEI contact may be Tom Basso.
6/2019-07	Donald Eggett (lead), George Flanagan, Prasad Kadambi, and Mark Linn to evaluate the current balance of interest definitions (Annex A) and propose a revision of the "Individual" category. DUE DATE: June 1, 2020	Eggett, Flanagan, Kadambi, Linn	OPEN
6/2019-10	Standards Board members to send Steven Stamm updates to the SMART Matrix.	Standards Board members	CLOSED
6/2019-12	Steven Arndt to revise the guidance standard policy to be presented to the Standards Board for approval	Arndt	CLOSED Revised policy approved by motion at 11/19/19 meeting.
6/2019-17	David Hillyer to contact Andrew Smetana for a recommendation of a radiological safety expert to join the FWDCC.	Hillyer	CLOSED Request made.
6/2019-18	Steven Arndt to reach out to Donald Spellman and Richard Wood to stimulate better communication between ANS and IEEE/NPEC.	Arndt	CLOSED Conversation had. Areas to collaborate need to be defined.
6/2019-19	George Flanagan and Gene Carpenter to discuss the implications of the INPRO Report and determine if there is a need for ANS standards action on micro and/or movable reactors. DUE DATE: June 1, 2020	Flanagan, Carpenter	OPEN
11/2018-04	Consensus committee chairs to complete Goal 3 (G) to provide recommendations for changes to improve consensus committee performance to the Policy Task Group Chair (i.e., the Standards Board Chair).	CC Chairs	CLOSED
11/2018-13	Pat Schroeder to explore the possibility and logistics of preparing an associate member video and work with consensus committee chairs to identify 2-3 associate members to participate (if possible).	Schroeder	CLOSED Attempts at findings associate members willing to be the subject of a video failed. Plan B to create a young/associate member webpage with photos has been successful. We currently have 8 participants. Materials are with the ANS editor and will then be sent to the ANS IT department to create the new webpage.

(See At	Standards Board Action Item Status Report from 11/19/19 Meeting (See Attachment 9 of the minutes for a list of action items completed before the meeting and closed by motion.)											
Action Item	Description	Responsibility	Status/Comments /Reassignments									
11/2018-14	Gene Carpenter, George Flanagan, Dave Hillyer, Carl Mazzola, and James O'Brien, to respond to the RP3C proposed approach as provided in the RP3C presentation report (slides 5-10) at the November 13, 2018, Standards Board meeting. DUE DATE: June 1, 2020	Carpenter, Flanagan, Hillyer, Mazzola, O'Brien	OPEN A request was made to extend the due date to allow use of the guidance document/training before responding.									
11/2018-15	Prasad Kadambi (lead), Robert Budnitz, Mark Linn, George Flanagan, Ed Wallace, and Robert Youngblood (at invitation of Kadambi) to evaluate need for a new guidance document or standard on the integrated, risk-informed decision making process and prepare a white paper for Standards Board consideration.	Kadambi, Budnitz, Linn, Flanagan, Wallace	CLOSED R. Budnitz stated that he/JCNRM needs an initiative to decide if this guidance doc is needed. M. Linn clarified that the suggestion came from D. Spellman after a review of ANS- 30.1. E. Wallace added that decision making is a broad topic in NEI 18-04. A new action item was created for A. Afzali, G. Flanagan, P. Kadambi to prepare a white paper on how/where NEI 18-04 should be used in ANS standards (See new Action Item 11/2019-18).									
11/2018-16	James O'Brien to ask Garrett Smith, DOE's Standards Executive, to nominate a representative for ANS-3.16, "Meteorological Aspects of Wildland Fire Response." DUE DATE: March 1, 2020	O'Brien	OPEN G. Carpenter sent reminder directly to G. Smith 6/11/19 during the SB meeting and Smith confirmed receipt.									
11/2018-19	Steven Arndt and Robert Budnitz to discuss lessons learned from the use of trial use standards. DUE DATE: March 1, 2020	Arndt, Budnitz	OPEN S. Arndt will call R. Budnitz to discuss.									
11/2018-20	Gene Carpenter to setup a teleconference with NRC to proactively discuss changes and answer any questions (within the appropriate restrictions) on ANS- 3.5, "Nuclear Power Plant Simulators for Use in Operator Training and Examination" (revision of ANSI/ANS-3.5-2009). DUE DATE: March 1, 2020	Carpenter	OPEN ANSI/ANS-3.5-2018 was approved by ANSI 10/10/19. A letter to request NRC endorsement is in works. Carpenter will approach NRC once the letter is issued. (NOTE: The WG asked that the year "2018" be used in the designation to reflect the year the draft was completed.									
11/2018-21	Gene Carpenter to work with John Nakoski on the appointment of a NRC representative to the LLWRCC. DUE DATE: June 1, 2020	Carpenter, Nakoski	OPEN NRC is aware of the need and working on this action.									
11/2018-26	Andrew Smetana to contact Prasad Kadambi for RP3C guidance on including performance-based methods in ANS-19 standards. DUE DATE: March 1, 2020	Smetana, Kadambi	OPEN P. Kadambi will reach out to A. Smetana.									

(See At	Standards Board Action Item Status Report from 11/19/19 Meeting (See Attachment 9 of the minutes for a list of action items completed before the meeting and closed by motion.)										
Action Item	Description	Responsibility	Status/Comments /Reassignments								
6/2018-01	Donald Eggett, Prasad Kadambi, Andrew Sowder, and William Turkowki to develop a strategy for how the ANS Standards Committee plans to be proactive and ready to take the lead in development of advanced reactor standards. DUE DATE: TBD	Eggett, Kadambi, Sowder, Turkowki	ON HOLD S. Arndt advised that this action should be put on hold until recommendations are made by John Kelly's special committee. The recommendation is expected to be issued in November 21, 2019.								
6/2018-02	Donald Eggett to contact Standards Board members on possible changes to industry priorities for standards development. DUE DATE: TBD	Eggett	ON HOLD On hold pending findings of NEI's priority survey. D. Eggett would like 1 or 2 others to assist him in moving NEI forward when findings issued.								
6/2018-16	Gene Carpenter to keep Steven Arndt, Don Eggett, Robert Budnitz, and Gerry Kindred informed of progress on ANS-3.15 (cybersecurity standard) on a quarterly basis. DUE DATE: On-going	Carpenter	ON-GOING The WG held a meeting on 11/17/19. G. Flanagan & R. Budnitz have been added to the WG as observers.								
6/2018-19	David Hillyer to make some inquiries and provide the name(s) of a potential INPO liaison to Steven Arndt. DUE DATE: February 1, 2020	Hillyer	OPEN P. Schroeder sent D. Hillyer the liaison policy for reference. A new action item was assigned for P. Schroeder to draft a letter for S. Arndt to send to INPO w/invite once name is provided. (See Action Item 11/2019-16)								
10/2017-25	Gene Carpenter to contact DOE staff member to follow up on the review of ANS-3.8.7, "Criteria for Planning, Development, Conduct and Evaluation of Drills and Exercises for Emergency Preparedness." DUE DATE: February 1, 2020	Carpenter	OPEN G. Carpenter confirmed outreach made multiple times, but he is not getting a response. There's recently been management changes at DOE, and he'll reach out again.								
10/2017-28	Steven Arndt to set up a meeting with senior NEI leaders. DUE DATE: February 1, 2020	Arndt	OPEN R. Bell retired. S. Arndt has been in contact with Mike Tschiltz/NEI and requested a meeting w/Tschiltz and others to discuss ANS standards.								

Standards Board Action Item Status Report from 11/19/19 Meeting (See Attachment 9 of the minutes for a list of action items completed before the meeting and closed by motion.)									
Action Item	Description	Responsibility	Status/Comments /Reassignments						
06/2017-18	The Policy TG to determine how the statement on standards development drafted by Robert Busch is addressed. DUE DATE: March 1, 2020	Arndt/ Policy TG	OPEN The statement and SB comments on the statement are accessible <u>here</u> . The statement was discussed at the 11/13/18 meeting. Members agreed that a statement would be beneficial but feel that the 1st part on economics should be crafted carefully. The Policy TG will draft a statement and determine a location of where the statement is to be placed for SB approval.						
6/2016-03	??? (NEI contact) to help coordinate ANS work on advanced reactor standards with other SDOs and industry. DUE DATE: On Hold	?/NEI Liaison	ON HOLD New NEI liaison needed.						
6/2016-18	Gene Carpenter to discuss the needed action on standards ranked 11-20 on the standards priority survey with the LLWRCC and provide input at the SB at the next call/meeting. Due Date: On-going	Carpenter	ON-GOING G. Carpenter confirmed that the LLWRCC has reviewed the standards ranked 11-20 and will continue to review their progress.						
11/2015-21	The LLWRCC to approve a PINS for a cybersecurity standard and forward to the standards manager. DUE DATE: January 1, 2020	Carpenter	OPEN A new chair was appointed and the PINS is expected to be submitted shortly.						

# November 2019 Standards Board Informative Report to the ANS Board of Directors

from Standards Board Chair Steven A. Arndt

# Appeals Filed on Two Standards

Appeals were filed this year on two draft standards – ANS-3.5, "Nuclear Power Plant Simulators for Use in Operator Training and Examination," and ANS-54.1, "Nuclear Safety Criteria and Design Process for Sodium Fast Reactor Nuclear Power Plants." The last standards appeal was filed in 2003. The appeal on ANS-3.5 was both technical and procedural. Additional procedural steps were taken to insure that the objector felt that his comments were afforded due process. Technical issues were given serious consideration. The appeal was closed with a formal letter issued to the objector on August 29, 2019, stating that there would be no technical changes made to the standard. ANSI/ANS-3.5-2018 was approved by the American National Standards Institute (ANSI) on October 10, 2019. The year in the designation of the standard reflects the year the draft was completed.

The technical appeal on ANS-54.1, "Nuclear Safety Criteria and Design Process for Sodium Fast Reactor Nuclear Power Plants," is currently in process. The technical appeals committee has held two teleconferences and is finalizing their recommendations. Should any changes to the draft be recommended as a result of the appeal, the changes will need to follow the procedures for consensus approval before seeking ANSI approval.

# ANS Standards Used in University of Pittsburg Class

Three ANS standards were used as course materials for a graduate class at the University of Pittsburg. The course, titled "Case Studies in Nuclear Codes and Standards," is part of the school's Nuclear Engineering Program. Seventeen standards are a part of the curriculum. In addition to ANS, standards from the American Society of Mechanical Engineers, ASTM International, and the Institute of Electrical and Electronics Engineers were applied.

# NRC Grant Proposal Submitted to Support Development of Probabilistic Risk Assessment Standards

A grant proposal was submitted October 2019 in response to a Funding Opportunity Announcement (FOA) from the U.S. Nuclear Regulatory Commission (NRC). The FOA is specific to development of voluntary consensus standards that establish safety and risk criteria and methods for probabilistic analysis, risk analysis, risk assessment, and risk management. The grant will continue coverage of an existing grant that ends February 2020. We believe that it is NRC's intent to issue the grant award in early 2020. Grant funds support travel reimbursement of eligible members without company support, meeting related expenses, and administrative support.

# SMART Matrix Used to Track Standards Committee Strategic Plan Goals and Objectives

The Standards Board developed a SMART Matrix as a companion to the Standards Committee Strategic Plan to track progress on goals and objectives. The SMART Matrix is updated routinely with the latest revision updated on October 16, 2019. The Standards Board will review and assess progress on SMART Matrix actions when they meet during the 2019 ANS Winter Meeting.

# Progress Update on the Risk-informed, Performance-based Principles and Policy Committee Activities

The Standards Board formed the Risk-informed, Performance-based Principles and Policy Committee (RP3C) in 2013 to establish the approaches, priorities, responsibilities and schedules for implementation of risk-informed and performance-based (RIPB) principles in ANS standards. A RIPB Guidance Document was prepared to identify roles and responsibilities and the process for using RIPB approaches. The guidance document titled "<u>Incorporating Risk-Informed and Performance-Based Approaches/Attributes in ANS Standards</u>" was released for trial use and comment after the 2019 ANS Annual Meeting.

# ANS Standards Workspace Migration with ANS Collaborate and Potential Use as Volunteer Database

The migration of the ANS Standards Workspace into ANS Collaborate was initiated in February 2019. Initial issues due to syncing difficulties between ANS's association management system and ANS Collaborate have been corrected. Identified roster errors have also been corrected. Files and records from all 150+ sites from the ANS Standards Workspace were successfully added to ANS Collaborate, retaining each group's stored documents and ballot records. The merger provides ANS members that participate in ANS standards a single sign-on for all of their ANS activities. Collaborate's networking features offer a database of potential volunteers that may be interested in supporting ANS standards activities. The Standards Board has asked the ANS Information Technology Department to enhance these features for utilization as a standards volunteer database but understands that work on the redesign of the ANS website takes precedence.

# Professional Division Liaison Program

The Standards Board initiated a liaison program with the support of the ANS Professional Divisions Committee in 2016. Standards Board Chair Steven Arndt addressed the Professional Divisions Committee at the 2019 ANS Annual Meeting to review the program benefits and liaison roles to insure that new liaisons are familiar with the program. Since division leadership changes annually, division chairs were contacted after the annual meeting to confirm their appointed liaisons. The process of confirming and educating new liaisons is on-going.

# Standards Committee Engagement of Young Professionals via Associate Membership

The Associate Member Program was created in 2007 by the Standards Board at the suggestion of the ANS Young Member Group to allow young professionals the opportunity to participate in standards development without any experience. While standards development requires support of industry experts with years of experience, emerging professionals bring a fresh perspective and revitalization to insure industry standards needs continue to be met. The Associate Member

Program helps to sustain the standards program while providing young professionals and their organizations valuable experience.

The Associate Member Program includes university students and those that have only a few years of professional, industry experience. Associate members obtain voting privileges through active participation and increased technical and standards development knowledge. The goal is for the associate member to become a full voting member within two years, but the actual length of time to become a full member can vary greatly depending on the experience of the individual and their active participation.

In an effort to encourage greater participation of young professionals, creating video testimonials was explored but limited support was found. Work is currently underway to create a young member/associate member webpage with photos of standards participants with their experience in our standards program.

# Revised Standards Committee Glossary of Definitions & Terminology Issued

A task group under the ANS Standards Board completed another update of the Standards Committee Glossary of Definitions and Terminology. First issued in draft form in 1976, the glossary is an edited compilation of the definitions provided in standards issued by the ANS Standards Committee. The glossary provides a consistent set of definitions, to minimize the time-consuming task of developing unique definitions for each standard and to avoid unnecessary duplication. It is intended to be a living document subject to continual revision every few years. The updated <u>Standards Committee Glossary of Definitions and Terminology</u> is available on the ANS website as one of the guidance documents for working groups in the <u>Toolkit for ANS Standards Development and Maintenance</u>.

# ANS Standards Style Manual Issued for Trial Use

The first ANS Standards Style Manual was completed and issued for trial use by standards working group members in January 2019. The style manual incorporates guidance from the 1991 "Style Manual for Preparation of Proposed American National Standards" issued by the American National Standards Institute that remains valid and format and style criteria specific for ANS standards. The purpose of this style manual is to provide the necessary information to prepare American National Standards that are to be published by ANS. It provides detailed specifications regarding content, format, and style as well as detailed descriptions of ANS policies relating to ANS standards and their publication. The style manual includes an appendix which provides sample standard elements that illustrate the written specifications. The <u>ANS</u> <u>Standards Style Manual</u> is publically available in the <u>Toolkit for ANS Standards Development and Maintenance</u> on the ANS website.

# Proposed Change to Policy on Guidance Standards

A revision of the Standards Committee Policy on the Development of Guidance Standards was proposed to accommodate development of a risk-informed-security guidance document by the ANS/ASME Joint Committee on Nuclear Risk Management (JCNRM). A few technical meetings have been held by a JCNRM subgroup to explore the need and possible avenues to provide risk-analysis methods to physical and cyber security for nuclear power plants. The sentiments of this group are that the subject matter is not sufficiently mature enough to develop a standard and that the appropriate vehicle is a guidance document, opposed to a guidance standard. Concern over this policy change was expressed by a few Standards Board members at the Standards Board meeting during the 2019 ANS Annual Meeting. The subject will be revisited when the Standards Board meets at the 2019 ANS Winter Meeting.

# Certification of Consensus Committee Balance of Interests

The Standards Board reviewed balance of interest reports for eight consensus committees at their June 2019 meeting and certified that all consensus committees are in compliance with requirements as specified in the ANS Standards Committee Rules and Procedures. The Standards Board approved by motion subsequent approvals of balance of interest reports to be achieved via electronic ballot.

# Comparison of Standards Board Goals and Objectives with New ANS Strategic Plan

The Standards Board approved Revision 2 of the Standards Committee Strategic Plan in December 2017, just before the new ANS Strategic Plan was approved. A task group under the Standards Board performed an evaluation and comparison of the goals and objectives of both strategic plans. The task group concluded that the Standards Committee Strategic Plan fully addresses each applicable item of the new ANS Strategic Plan.

# 2019 Standards Action Activities

The following standards projects were initiated:

- ANS-2.26-202x, "Categorization of Nuclear Facility Structures, Systems and Components for Seismic Design" (revision of ANSI/ANS-2.26-2004; R2017)
- ANS-2.21-202x, "Criteria for Assessing Atmospheric Effects on the Ultimate Heat Sink" (revision of ANSI/ANS-2.21-2012; R2016)
- ANS-2.35-202x, "Guidelines for Estimating Present & Projecting Future Socioeconomic Impacts from the Construction, Operations, and Decommissioning of Nuclear Sites" (new standard)
- ANS-3.5.1-202x, "Nuclear Power Plant Simulators for Use in Simulation-Assisted Engineering and Non-Operator Training" (new standard)
- ANS-56.2-202x, "Containment Isolation Provisions for Fluid Systems After a LOCA" (revision of historical standard ANS-56.2-1989; W1999)
- ANS-57.8-202x, "Fuel Assembly Identification" (revision of ANSI/ANS-57.8-1995; R2017)
- ANS-59.3-202x, "Nuclear Safety Criteria for Control Air Systems" (new standard)

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

- ANS-1-2000 (R201x), "Conduct of Critical Experiments" (reaffirmation of ANSI/ANS-1-2000; R2012)
- ANS-2.8-201x, "Probabilistic Evaluation of External Flood Hazards for Nuclear Facilities" (new standard, supersedes ANS-2.8-1992)

- ANS-3.14-202x, "Process for Infrastructure Aging Management and Life Extension of Nonreactor Nuclear Facilities" (new standard)
- ANS-5.10-1998 (R201x), "Airborne Release Fractions at Non-Reactor Nuclear Facilities" (reaffirmation of ANSI/ANS-5.10-1998; R2013)
- ANS-8.15-2014 (R201x), "Nuclear Criticality Control of Selected Actinide Nuclides" (reaffirmation of ANSI/ANS-8.15-2014)
- ANS-8.17-2004 (R201x), "Criticality Safety Criteria for the Handling, Storage and Transportation of LWR Fuel Outside Reactors" (reaffirmation of ANSI/ANS-8.17-2004; R2014)
- ANS-8.19-1995 (R201x), "Use of Fixed Neutron Absorbers in Nuclear Facilities Outside Reactors" (reaffirmation of ANSI/ANS-8.19-1995; R2011)
- ANS-8.23-201x, "Nuclear Criticality Accident Emergency Planning and Response" (revision of ANSI/ANS-8.23-2007; R2012)
- ANS-14.1-2004 (R201x), "Operation of Fast Pulse Reactors" (reaffirmation of ANSI/ANS-14.1-2004; R2009)
- ANS-15.16-2015 (R202x), "Emergency Planning for Research Reactor" (reaffirmation of ANSI/ANS-15.16-2015)
- ANS-54.1-202x, "Nuclear Safety Criteria and Design Process for Liquid-Sodium-Cooled-Reactor Nuclear Power Plants" (reaffirmation of ANSI/ANS-14.1-2004; R2009)
- ANS-57.1-1992 (R201x), "Design Requirements for Light Water Reactor Fuel Handling Systems" (reaffirmation of ANSI/ANS-57.1-1992; R2015)
- ANS-57.11-202x, "Integrated Safety Assessments for Nonreactor Nuclear Facilities" (new standard)
- ANS-58.8-201x, "Time Response Criteria for Manual Actions at Nuclear Power Plants" (revision of ANSI/ANS-58.8-1994; R2017)

The following standards were approved:

- ANSI/ANS-1-2000 (R2019), "Conduct of Critical Experiments" (reaffirmation of ANSI/ANS-1-2000; R2012)
- ANSI/ANS-3.5-2018, "Nuclear Power Plant Simulators for Use in Operator Training and Examination" (new standard, supersedes ANSI/ANS-3.5-2009)
- ANSI/ANS-5.1-2014 (R2019), "Decay Heat Power in Light Water Reactors" (reaffirmation of ANSI/ANS-5.1-2014)
- ANSI/ANS-5.10-1998 (R2019), "Airborne Release Fractions at Non-Reactor Nuclear Facilities" (reaffirmation of ANSI/ANS-5.10-1998; R2013)
- ANSI/ANS-8.15-2014 (R2019), "Nuclear Criticality Control of Selected Actinide Nuclides (reaffirmation of ANSI/ANS-8.15-2014)
- ANSI/ANS-8.17-2004 (R2019), "Criticality Safety Criteria for the Handling, Storage and Transportation of LWR Fuel Outside Reactors" (reaffirmation of ANSI/ANS-8.17-2004; R2014)
- ANSI/ANS-8.19-2014 (R2019), "Administrative Practices for Nuclear Criticality Safety" (reaffirmation of ANSI/ANS-8.19-2014)

- ANSI/ANS-8.21-1995 (R2019), "Use of Fixed Neutron Absorbers in Nuclear Facilities Outside Reactors" (reaffirmation of ANSI/ANS-8.21-1995; R2011)
- ANSI/ANS-8.23-2019, "Nuclear Criticality Accident Emergency Planning and Response" (revision of ANSI/ANS-8.23-2007; R2012)
- ANSI/ANS-14.1-2004 (R2019), "Operation of Fast Pulse Reactors" (reaffirmation of ANSI/ANS-14.1-2004; R2014)
- ANSI/ANS-16.1-2019, "Measurement of the Leachability of Solidified Low-Level Radioactive Wastes by a Short-Term Test Procedure" (revision of ANSI/ANS-16.1-2003; R2017)
- ANSI/ANS-19.1-2019, "Nuclear Data Sets for Reactor Design Calculations" (revision of ANSI/ANS-19.1-2002; R2011)
- ANSI/ANS-58.8-2019, "Time Response Criteria for Manual Actions at Nuclear Power Plants" (revision of ANSI/ANS-58.8-1994; R2017)

The following standards were published:

- ANSI/ANS-3.5-2018, "Nuclear Power Plant Simulators for Use in Operator Training and
- Examination" (new standard, supersedes ANSI/ANS-3.5-2009)
- ANSI/ANS-8.23-2019, "Nuclear Criticality Accident Emergency Planning and Response" (revision of ANSI/ANS-8.23-2007; R2012)
- ANSI/ANS-16.1-2019, "Measurement of the Leachability of Solidified Low-Level Radioactive Wastes by a Short-Term Test Procedure" (revision of ANSI/ANS-16.1-2003; R2017)
- ANSI/ANS-19.1-2019, "Nuclear Data Sets for Reactor Design Calculations" (revision of ANSI/ANS-19.1-2002; R2011)
- ANSI/ANS-58.8-2019, "Time Response Criteria for Manual Actions at Nuclear Power Plants" (revision of ANSI/ANS-58.8-1994; R2017)

# Consensus Committee Chair and Vice Chair Terms

Consensus Comm	Name	Position	Effective Date
ESCC ESCC	Carl Mazzola Jen Call	ESCC Chair ESCC Vice Chair	2/7/2017 11/14/2017
JCNRM	Robert Budnitz	JCNRM Chair	7/1/2017
FWDCC	David Hillyer	FWDCC Chair	6/16/2017
FWDCC	Jef Luchinni	FWDCC Vice Chair	11/29/2017
LLWRCC	Gene Carpenter	LLWRCC Chair	7/29/2018
LLWRCC	William Reuland	LLWRCC Vice Chair	7/29/2018
NCSCC	Larry Wetzel	NCSCC Chair	2/7/2017
NCSCC	W. Randy Shackelford	NCSCC Vice Chair	2/7/2017
NRNFCC	James O'Brien	NRNFCC Chair	2/7/2017
NRNFCC	Jeffery Brault	NRNFCC Vice Chair	2/7/2017
RARCC	George Flanagan	RARCC Chair	2/7/2017
RARCC	Bruce Bevard	RARCC Vice Co-Chair	2/7/2017
RARCC	Thomas Newton	RARCC Vice Co-Chair	10/18/2018
SRACC	Andrew Smetana	RARCC Chair	2/7/2017
SRACC	Julie Jarvis	RACC Vice Chair	2/7/2017

ANS Standards Board Meeting

ANS Winter Meeting, Washington DC

November 19, 2019

Vice Chairman's Report

#### Possible Changes in Industry Priorities for Standards Development (Eggett Action Item 6/2018-02)

As a result from the September 2018 Standards Forum, an action item came out assigned to NEI to send out to its NEI members to identify and prioritize areas of standards' needs. It is the Standard Board's understanding that Steve Vaughn at NEI was assigned this responsibility. (<u>sjv@nei.org</u>). To my knowledge, no response from NEI was received on setting priorities for standards based on their "survey." If there was a survey, it was not shared with ANS. This action item needs to be elevated with engagement from NEI on board.

#### ACTION:

Eggett will remain as point of contact but would like 1 or 2 other volunteers to assist him in moving NEI forward.

#### ANS to Lead in Advanced Reactor (AR) Standards Development

#### HISTORY:

A team of Eggett, Turkowski, Kadambi, and Sowder held a teleconference in August 2018 to discuss plans for addressing the action received (6/2018-01). The assigned action was to develop a strategy to determine how the ANS Standards Committee could be proactive and ready to take the lead in development of advanced reactor standards. This action was put on hold until there was a better understanding of what John Kelly's AR team was doing and what results would be provided moving forward.

#### ACTION:

The question was posed at the June 2019 Standards Board meeting "Should the Board close this action item as a result of other industry initiatives being done?" As a reference, a meeting of the Kelly's AR committee was scheduled to meet with the NRC in mid-October 2018 to discuss the subject of grants for standards and other items requiring decisions related to the ARs.

Information received prior to the Nov 2019 Standards Board meeting was that a report from the President's Special Committee on Advanced Reactors was being finalized and would be shared at this meeting. Assuming that some of the details could be shared, the update was added as the third bullet of the SB Chair Report (#3) and would be discussed by Steven Arndt.

Currently, this Action Item 6/2018-01 remains open pending further decision.

#### **Status of Recent Appeals**

ANSI/ANS-3.5-2018, "Nuclear Power Plant Simulators for Use in Operator Training and Examination"

The appeal on ANS-3.5 was technical and procedural. Further steps were taken to ensure the objector felt his comments were given due process along with remaining technical issues given serious consideration. The appeal was closed with a formal letter issued to the objector on August 29, 2019 stating there would be no technical changes made to the standard. ANSI/ANS-3.5-2018 was approved by the American National Standards Institute (ANSI) on October 10, 2019.

ANS-54.1-201x, "Nuclear Safety Criteria and Design Process for Sodium Fast Reactor Nuclear Power Plants"

The technical appeal on ANS-54.1, "Nuclear Safety Criteria and Design Process for Sodium Fast Reactor Nuclear Power Plants," is nearing completion. The technical appeals committee has held two teleconferences and has provided their final recommendations. Should any changes to these final draft recommendations be needed as a result of the appeal, the changes will need to follow the procedures for consensus approval before seeking ANSI approval.

#### **Standards Service Award Selection**

2019 Standards Service Award

Mr. James Florence (refer to Citation) Dr. Ian B. Wall (refer to Citation)

Appointment of 2020 Selection Committee

#### Vice Chair General Comments

Thoughts on Change Plan 2020 and its potential impact on ANS standards' lack of visibility

NEI's lack of recent engagement in standards (since Russ Bell's retirement) and industry standards need for prioritization

Reminder to use ANS Glossary Update as necessary. Recent rev, April 2019

# Secretary/Staff Report 2019 ANS Winter Meeting

#### ANS Standards Workspace Merger into ANS Collaborate/Training Offered

The migration of the ANS Standards Workspace into ANS Collaborate was completed on February 23, 2019, but a number of errors took several months to identify and correct. Files and records from all 150+ sites from the ANS Standards Workspace were successfully migrated into ANS Collaborate, retaining each group's stored documents and ballot records. The merger provides ANS members that participate in ANS standards a single sign-on for all of their ANS activities. ANS Collaborate works and looks very similar to ANS Standards Workspace for the common user once navigated to the Workspace tab. A tour and high-level overview of ANS Collaborate was offered via webinar to Standards Committee members on October 16, 2019.

#### Standards Volunteer Database Update

An initial request was made in 2004 for the ANS Information Technology (IT) Department to create an online volunteer database that Standards Committee chairs could use to search for potential candidates to fill committee staffing needs. Many challenges have prevented its completion. The merger of the ANS Standards Workspace into ANS Collaborate now affords a number of opportunities to use ANS Collaborate to search for candidates to fill committee staffing needs. The ANS IT Department has been asked to build on existing capabilities; however, they are currently engaged in a redesign of the ANS website at the direction of the ANS Board of Directors. The redesign should be finished by the end of the year. The conversation about the enhancement of ANS Collaborate will be reinitiated once the website redesign has been completed.

### ANS Collaborate Usage Stats for the Standards Board and Consensus Committees

The Standards Committee Members site now recognizes 743 Standards Committee members. The number is down from the June report due to corrections of migration roster errors. Consensus committee ballot usage for the Standards Board and consensus committees is provided below:

Committee	2015 Ballots Issued	2016 Ballots Issued	2017 Ballots Issued	2018 Ballots Issued	2019 Ballots Issued (through 11/4/19)
Standards Board	25	64	53	31	34
ESCC	11	25	25	12	16
FWDCC	3	17	15	2	4
LLWRCC	13	17	17	19	12
NCSCC	6	10	17	7	13
NRNFCC	5	4	2	4	10
RARCC	6	14	5	5	6
SRACC	5	14	10	7	5

### Standards Committee Engagement of Young Professionals

The Associate Member Program was created in 2007 by the Standards Board at the suggestion of the ANS Young Member Group to allow emerging professionals the opportunity to participate in standards development with little to no experience. The Associate Member Program includes university students, young professionals, and may include those that have changed career direction. The goal for an associate member is to become a full voting member within two years, but the actual associate member term can vary greatly depending on the experience of the individual and their active participation.

The Associate Member Program continues to grow. Working group chairs have placed 72 young professionals of which 12 are now active as full members. Currently, the Standards Committee has 42 associate members with 18 associate members having resigned or were dropped for lack of response.

Two solicitation efforts were made in 2019 to increase young member participation. Larry Wetzel made a standards presentation at the ANS Student Conference in April, and an invitation to get involved in the ANS standards program was included in the Young Member Group newsletter in October. Consideration was given to creating associate member video testimonials but support was not sufficient. The concept has been redirected to creating a webpage to recognize young professionals involved in the ANS standards program similar to the Professional Engineering Examination Committee's site, <u>What Motivated Me</u>, to encourage engineers to take the Professional Engineering Nuclear Exam. Eight current and past associate members have provided feedback which has been used to prepare a write up about their experience as a Standards Committee Member. The webpage is expected to be online before the end of the year.

# Next ANSI Audit Scheduled

The American National Standards Institute (ANSI) has scheduled our next audit for August of 2020. ANSI audits accredited standards development organizations every five years. The last audit was completed in August of 2015 and was conducted remotely. ANSI will select five or six standards that were approved since the last audit to review. The review is all inclusive for the selected standards. Typically ANSI tries to select standards from different consensus committees with one being a reaffirmation. Standards that have maintained negatives are often selected. It is likely that ANSI/ANS-3.5-2018 will be audited because an appeal was filed. We should be provided the list of standards to be audited about a month in advance.

# Status of Compilation of ANS Standards for Sale to ANS Members

Based on the feedback from Standards Board members, production of a compilation of ANS standards for sale to ANS members at a discounted rate is on hold. The directors of the Publications and Standards Department and the Membership and Marketing Department will consider this project in the near future.

### Report of Standards Sales

The bulk of revenue from standards sales continues to come from the Information Handling Services (IHS) for electronic subscriptions to the collection of our standards. Subscriptions are typically to large organizations, national laboratories, and government agencies with multiple users. Access and restrictions are controlled by IHS based on the subscription contract.

Individual standards sales in the ANS Store slowed in the last few years possibly because users were able to share one electronic file instead of purchasing multiple hard copies. The cost to protect ANS standards through digital rights management (DRM) software and labor to apply and support the product prohibited ANS from adding DRM on its own. This is the primary reason ANS contracted with Techstreet in 2018 to host a partnered standards store. Techstreet applies DRM software to all ANS standards to control file sharing, provides all customers service, and absorbs credit card fees and printing/postage costs. ANSI also sells our standards but in electronic form only with DRM. ANS continues to print large quantity orders directly and sells older historical standards that are no longer available in the store.

	1:	st Quarter	2r	nd Quarter	3	rd Quarter	4th Quarter	YTD
I.H.S.	\$	71,139.65	\$	56,871.73	\$	31,622.61		\$ 159,633.99
Tech St.	\$	5,282.47	\$	4,452.28	\$	8,281.86		\$ 18,016.61
ANSI	\$	1,194.70	\$	2,255.50	\$	2,231.45		\$ 5,681.65
ANS Direct Sales	\$	-	\$	2,417.25	\$	4,956.00		\$ 7,373.25
Total	\$	77,616.82	\$	63,579.51	\$	42,135.92	\$-	\$ 183,332.25

### Total standards royalty/revenue for 2019 is reported below:

A more detailed sales report of individual standards sales through our partnered store and direct sales is provided following this report.

ANS Direct and AN	S Techstreet Store	Sales Report2019 2nd	& 3rd Quarter
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			Vendor		Total	Disc	Gross Revenue				Royalty	Fullfillment	
Doc No	Title	Qty	Price	Gross Revenue	Discount %	Amount	After Discount	Source	Format	% Due	Amount	Method	MultiUser
1-2000 (R2019)	Conduct of Critical Experiments	1	\$57.00	\$57.00	0.00%	\$0.00	\$57.00	Web	PLUS	80.00%	\$45.60	PDLC	Single
	V&V of Non-Safety-Related Scientific and Engineering Computer												
10.4-2008 (R2016)	Programs for the Nuclear Industry	1	\$128.70	\$128.70	0.00%	\$0.00	\$128.70	Web	PDF	80.00%	\$102.96	PODL	Single
	V&V of Non-Safety-Related Scientific and Engineering Computer												
10.4-2008 (R2016)		1	\$128.70	\$128.70	0.00%	\$0.00	\$128.70	Web	Printed Edition	/5.00%	\$96.53	PDLC	Single
10 4 2000 (5201/)	V&V of Non-Safety-Related Scientific and Engineering Computer	-	¢1.40.00	¢1.40.00	0.000/	<b>*</b> 0.00	¢1.40.00	M. I.	Delate d E dillar	75.000/	¢107.05		Charle
10.4-2008 (R2016)	Accommodating Licer Needs in Computer Drogram Development	1	\$143.00	\$143.00	0.00%	\$0.00	\$143.00	Web	Printed Edition	75.00%	\$107.25		Single
10.5-2006 (R2016)	Accommodating oser Needs in Computer Program Development	1	\$55.80	\$55.80	0.00%	\$0.00	\$55.80	devv	Printed Edition	75.00%	\$41.85		Single
10 7 2012 (02010)	Non-Real-Time, High-Integrity Sonware for the Nuclear Industry -	1	\$100.00	¢109.00	0.00%	\$0.00	\$109.00	Woh	Drinted Edition	75 00%	¢01 40		Single
10.7-2013 (R2018)	Non Deal Time, Ligh Integrity Software for the Nuclear Inductory, Light	1	\$108.90	\$108.90	0.00%	\$0.00	\$108.90	vveb	Philled Edition	75.00%	\$61.06	PDLC	Single
10.9.2015	Requirements	1	¢110.70	\$110.70	0.00%	\$0.00	\$110.70	Wob	Printed Edition	75.00%	\$90.79	וחסק	Singlo
15 11 2016	Radiation Protection at Research Reactor Facilities	1	\$119.70	\$119.70	0.00%	\$0.00	\$119.70	Web		90.00%	\$07.70		Singlo
15.1-2010	The Development of Technical Specifications for RRs	1	\$213.00	\$215.00	0.00%	\$0.00	\$215.00	Web	PDF	80.00%	\$170.40		Single
15.1-2007 (R2018)	The Development of Technical Specifications for RRs	3	\$136.50	\$136.50	0.00%	\$0.00	\$136.50	Web	PDF	80.00%	\$109.20	PODL	Multil Iser
15.1-2007 (R2018)	The Development of Technical Specifications for RRs	J 1	\$105.00	\$105.00	0.00%	\$0.00	\$105.00	Web	PDF	80.00%	\$84.00	PODL	Single
15 21-2012 (R2018)	Format and Content for Safety Analysis Reports for RRs	1	\$136.00	\$136.00	0.00%	\$0.00	\$136.00	Web	PDF	80.00%	\$108.80	PODI	Single
15.4-2016	Selection and Training of Personnel for Research Reactors	3	\$133.00	\$133.90	0.00%	\$0.00	\$133.90	Weh	Redline and Base PDFs	80.00%	\$107.12	PODI	MultiLiser
15 4-2016	Selection and Training of Personnel for Research Reactors	1	\$103.00	\$103.00	0.00%	\$0.00	\$103.00	Web	Printed Edition	75.00%	\$77.25	PDLC	Single
15 4-2016	Selection and Training of Personnel for Research Reactors	1	\$134.00	\$134.00	0.00%	\$0.00	\$134.00	Web	PLUS	80.00%	\$107.20	PDLC	Single
15.8-1995 (R2018)	QA Program Requirements for Research Reactors	1	\$70.00	\$70.00	0.00%	\$0.00	\$70.00	Web	PDF	80.00%	\$56.00	PODI	Single
15.8-1995 (R2018)	QA Program Requirements for Research Reactors	1	\$70.00	\$70.00	0.00%	\$0.00	\$70.00	Web	PDF	80.00%	\$56.00	PODI	Single
15.8-1995 (R2018)	QA Program Requirements for Research Reactors	1	\$91.00	\$91.00	0.00%	\$0.00	\$91.00	Web	PLUS	80.00%	\$72.80	PDLC	Single
	Measurement of the Leachability of Solidified Low-Level Radioactive												
16.1-2019	Wastes by a Short-Term Test Procedure	1	\$126.00	\$126.00	0.00%	\$0.00	\$126.00	Phone	Printed Edition	75.00%	\$94.50	PDLC	Single
	Measurement of the Leachability of Solidified Low-Level Radioactive												
16.1-2019	Wastes by a Short-Term Test Procedure	1	\$140.00	\$140.00	0.00%	\$0.00	\$140.00	Web	Printed Edition	75.00%	\$105.00	PDLC	Single
	Measurement of the Leachability of Solidified Low-Level Radioactive												
16.1-2009	Wastes by a Short-Term Test Procedure	1	\$126.00	\$126.00	NA	NA	NA	ANS Direct	Printed Edition	NA	\$126.00	ANS	Single
18.1-2016	Radioactive Source Term for Normal Operation of LWRs	1	\$112.00	\$112.00	0.00%	\$0.00	\$112.00	Web	PDF	80.00%	\$89.60	PODL	Single
19.1-2019	Nuclear Data Sets for Reactor Design Calculations	1	\$104.00	\$104.00	0.00%	\$0.00	\$104.00	Web	PDF	80.00%	\$83.20	PODL	Single
19.1-2019	Nuclear Data Sets for Reactor Design Calculations	1	\$104.00	\$104.00	0.00%	\$0.00	\$104.00	Web	Printed Edition	75.00%	\$78.00	PDLC	Single
19.6.1-2011 (R2016)	Reload Startup Physics Tests for PWRs	1	\$119.70	\$119.70	0.00%	\$0.00	\$119.70	Phone	Printed Edition	75.00%	\$89.78	PDLC	Single
19.6.1-2011 (R2016)	Reload Startup Physics Tests for PWRs	1	\$133.00	\$133.00	0.00%	\$0.00	\$133.00	Phone	PDF	80.00%	\$106.40	PODL	Single
	Criteria for Retrieval, Processing, Handling, and Storage of Records												
2.10-2017	from Nuclear Facility Seismic Instrumentation	1	\$121.00	\$121.00	0.00%	\$0.00	\$121.00	Web	Printed Edition	75.00%	\$90.75	PDLC	Single
	Criteria for Retrieval, Processing, Handling, and Storage of Records												
2.10-2017	from Nuclear Facility Seismic Instrumentation	1	\$121.00	\$121.00	0.00%	\$0.00	\$121.00	Web	PDF	80.00%	\$96.80	PODL	Single
	Criteria for Modeling and Calculating Atmospheric Dispersion of Routine												
2.15-2013 (R2017)	Radiological Releases from Nuclear Facilities	1	\$188.00	\$188.00	0.00%	\$0.00	\$188.00	Web	PDF	80.00%	\$150.40	PODL	Single
2.23-2016	Nuclear Plant Response to an Earthquake	1	\$162.00	\$162.00	0.00%	\$0.00	\$162.00	Web	PDF	80.00%	\$129.60	PODL	Single
2.26-2004 (R2017)	Categorization of Nuclear Facility SSCs for Seismic Design	1	\$131.00	\$131.00	0.00%	\$0.00	\$131.00	Web	PDF	80.00%	\$104.80	PODL	Single
	Estimating Tornado, Hurricane, and Extreme Straight Line Wind												
2.3-2011 (R2016)	Characteristics at Nuclear Facility Sites	1	\$100.00	\$100.00	0.00%	\$0.00	\$100.00	Web	PLUS	80.00%	\$80.00	PDLC	Single
3.11-2000	Determining Meteorological Information at Nuclear Facilities	1	\$129.00	\$129.00	0.00%	\$0.00	\$129.00	Web	PDF	80.00%	\$103.20	PODL	Single
3.11-2015	Determining Meteorological Information at Nuclear Facilities	1	\$242.00	\$242.00	0.00%	\$0.00	\$242.00	Web	Redline and Base PDFs	80.00%	\$193.60	PDLC	Single
3.1-2014	Selection, Qualification and Training of Personnel for NPPs	1	\$141.00	\$141.00	0.00%	\$0.00	\$141.00	Web	PDF	80.00%	\$112.80	PODL	Single
3.1-2014	Selection, Qualification and Training of Personnel for NPPs	3	\$183.30	\$183.30	0.00%	\$0.00	\$183.30	Web	PDF	80.00%	\$146.64	PODL	MultiUser
3.5-2009	INPP Simulators for Use in Operator Training and Examination	1	\$133.00	\$133.00	0.00%	\$0.00	\$133.00	Phone	Printed Edition	/5.00%	\$99.75	PDLC	Single

#### ANS Direct and ANS Techstreet Store Sales Report

Doc No	Title	Qty	Vendor Price	Gross Revenue	Total Discount %	Disc Amount	Gross Revenue After Discount	Source	Format	% Due	Royalty Amount	Fullfillment Method	MultiUser
4.5-1980 (R1986)	Criteria for Accident Monitoring Functions in LWRs	1	\$100.00	\$100.00	0.00%	\$0.00	\$100.00	Web	PLUS	80.00%	\$80.00	PDLC	Single
	V&V of Radiological Data for Use in Waste Management and												
41.5-2012 (R2018)	Environmental Remediation	1	\$230.00	\$230.00	0.00%	\$0.00	\$230.00	Web	PLUS	80.00%	\$184.00	PDLC	Single
5.1-2014 (R2019)	Decay Heat Power in Light Water Reactors	1	\$184.00	\$184.00	0.00%	\$0.00	\$184.00	Web	PDF	80.00%	\$147.20	PODL	Single
5.1-2014 (R2019)	Decay Heat Power in Light Water Reactors	1	\$184.00	\$184.00	0.00%	\$0.00	\$184.00	Phone	Printed Edition	75.00%	\$138.00	PDLC	Single
	Method for Calculating the Fractional Release of Volatile Fission												
5.4-2011	Products from Oxide Fuel	1	\$86.00	\$86.00	0.00%	\$0.00	\$86.00	Web	PDF	80.00%	\$68.80	PODL	Single
54.8-1988	Liquid Metal Fire Protection in LMR Plants	1	\$86.00	\$86.00	0.00%	\$0.00	\$86.00	Web	PDF	80.00%	\$68.80	PODL	Single
57.1-1992 (R2015)	Design Requirements for LWR Fuel Handling Systems	1	\$77.00	\$77.00	0.00%	\$0.00	\$77.00	Web	PDF	80.00%	\$61.60	PODL	Single
	Design Requirements for LWR Spent Fuel Storage Facilities at Nuclear												
57.2-1983	Power Plants	1	\$138.00	\$138.00	0.00%	\$0.00	\$138.00	Web	PDF	80.00%	\$110.40	PODL	Single
57.3-2018	Design Requirements for New Fuel Storage Facilities at LWRs	1	\$86.00	\$86.00	0.00%	\$0.00	\$86.00	Web	PDF	80.00%	\$68.80	PODL	Single
	Design Criteria for an Independent Spent Fuel Storage Installation (Dry												
57.9-1992 (R2000)	Туре)	1	\$193.00	\$193.00	0.00%	\$0.00	\$193.00	Web	Printed Edition	75.00%	\$144.75	PDLC	Single
58.8-1994 (R2017)	Time Response Design Criteria for Safety Related Operator Actions	3	\$124.80	\$124.80	0.00%	\$0.00	\$124.80	Web	PDF	80.00%	\$99.84	PODL	MultiUser
58.8-1994 (R2017)	Time Response Design Criteria for Safety Related Operator Actions	1	\$96.00	\$96.00	0.00%	\$0.00	\$96.00	Phone	Printed Edition	75.00%	\$72.00	PDLC	Single
58.8-2019	Time Response Criteria for Manual Actions at NPPs	1	\$95.00	\$95.00	0.00%	\$0.00	\$95.00	Web	Printed Edition	75.00%	\$71.25	PDLC	Single
6.1.1-1991	Neutron and Gamma-Ray Fluence-to-Dose Factors	1	\$146.00	\$146.00	0.00%	\$0.00	\$146.00	Web	PLUS	80.00%	\$116.80	PDLC	Single
8.1-2014 (R2018)	NCS in Operations with Fissionable Materials Outside Reactors	50	\$63.00	\$3,150.00	NA	NA	NA	ANS Direct	Printed Edition	NA	\$3,150.00	ANS	Single
8.1-2014 (R2018)	NCS in Operations with Fissionable Materials Outside Reactors	20	\$78.75	\$1,575.00	NA	NA	NA	ANS Direct	Printed Edition	NA	\$1,575.00	ANS	Single
8.1-2014 (R2018)	NCS in Operations with Fissionable Materials Outside Reactors	1	\$105.00	\$105.00	0.00%	\$0.00	\$105.00	Web	Printed Edition	75.00%	\$78.75	PDLC	Single
8.1-2014 (R2018)	NCS in Operations with Fissionable Materials Outside Reactors	1	\$94.50	\$94.50	0.00%	\$0.00	\$94.50	Web	PDF	80.00%	\$75.60	PODL	Single
8.15-2014 (R2019)	NCS Control of Selected Actinide Nuclides	1	\$121.00	\$121.00	0.00%	\$0.00	\$121.00	Web	Printed Edition	75.00%	\$90.75	PDLC	Single
8.17-2004 (R2019)	Criticality Safety Criteria for the Handling, Storage, and Transportation of LWR Fuel Outside Reactors	1	\$52.00	\$52.00	0.00%	\$0.00	\$52.00	Web	PDF	80.00%	\$41.60	PODL	Single
8.19-2014 (R2019)	Administrative Practice for Nuclear Criticality Safety	50	\$33.60	\$1,680.00	NA	NA	NA	ANS Direct	Printed Edition	NA	\$1,680.00	ANS	Single
8.19-2014 (R2019)	Administrative Practice for Nuclear Criticality Safety	8	\$42.00	\$336.00	NA	NA	NA	ANS Direct	Printed Edition	NA	\$336.00	ANS	Single
8.19-2014 (R2019)	Administrative Practice for Nuclear Criticality Safety	1	\$56.00	\$56.00	0.00%	\$0.00	\$56.00	Web	PDF	80.00%	\$44.80	PODL	Single
8.19-2014 (R2019)	Administrative Practice for Nuclear Criticality Safety	3	\$72.80	\$72.80	0.00%	\$0.00	\$72.80	Web	PDF	80.00%	\$58.24	PODL	MultiUser
8.20-1991 (R2015)	Nuclear Criticality Safety Training	3	\$67.60	\$67.60	0.00%	\$0.00	\$67.60	Web	PDF	80.00%	\$54.08	PODL	MultiUser
8.24-2016	Validation of Neutron Transport Methods for NCS	5	\$101.25	\$506.25	NA	NA	NA	ANS Direct	Printed Edition	NA	\$506.25	ANS	Single
8.24-2017	Validation of Neutron Transport Methods for NCS	1	\$135.00	\$135.00	0.00%	\$0.00	\$135.00	Phone	Printed Edition	75.00%	\$101.25	PDLC	Single
8.24-2017	Validation of Neutron Transport Methods for NCS	1	\$121.50	\$121.50	0.00%	\$0.00	\$121.50	Phone	Printed Edition	75.00%	\$91.13	PDLC	Single
8.3-1997 (R2017)	Criticality Accident Alarm System	1	\$112.00	\$112.00	0.00%	\$0.00	\$112.00	Web	PDF	80.00%	\$89.60	PODL	Single
RA-S-1.2-2014	Severe Accident Progression and Radiological Release (Level 2) PRA Standard for Nuclear Power Plant Applications for LWRs	1	\$220.00	\$220.00	0.00%	\$0.00	\$220.00	Web	PDF	80.00%	\$176.00	PODL	Single
RA-S-1.3-2017	Standard for Radiological Accident Offsite Consequence Analysis (Level 3 PRA) to Support Nuclear Installation Applications	1	\$220.00	\$220.00	0.00%	\$0.00	\$220.00	Web	PDF	80.00%	\$176.00	PODL	Single
	Shielding Standards Bundle	1	\$418.50	\$418.50	0.00%	\$0.00	\$418.50	Web	Printed Edition	75.00%	\$313.88	PDLC	Single
	Research Reactor Standards Bundle	1	\$555.30	\$555.30	0.00%	\$0.00	\$555.30	Web	Printed Edition	75.00%	\$416.48	PDLC	Single
	Reactor Physics Standards Bundle	1	\$607.50	\$607.50	0.00%	\$0.00	\$607.50	Web	Printed Edition	75.00%	\$455.63	PDLC	Single
L		210	)	\$16,629.95	1	\$0.00	\$9,256.70	1	1	Subtotal	\$ 14,576.88	1	
									6		* = 000.00		

Subscriptions	: \$	5,829.00
Q3 5% Bonus	: \$	(344.10)
Total	: \$	20,061.78

A SMART strategic plan consists of goals that are **S**trategic, **M**easurable, **A**ttainable, **R**ealistic and **T**ime-related. This matrix takes each of the Initiatives in the ANS SB Strategic Plan and defines the specific activities that need to be done for each Goal and Objective along with its proposed schedule and responsibility. This is a living document. Updates and comments from Standards Board Members will be solicited and the plan adjusted.

Initiative	Assigned Responsibility (Functional Title)	Specific Action Items Needed to Accomplish the Initiative	Status/ Comments	Scheduled Completion Date	Actual Completion Date
Completed Near Term	Ove	rdue			
Goal #1 Align Standards Development Prio	ries with Current	and Emerging Needs			
A. Evaluate the results of the initial industry priority survey	Standards Mgr	Executive summary issued.		1/2016	1/2016
B. Assign responsibilities to the appropriate consensus committees to address the top ten survey identified high priority standards	Standards Mgr	Issue list of high priority standards with assigned responsibilities. List discussed during 2/12/2016 conference call and published in minutes.		2/29/2016	2/29/2016
C. Develop and implement an approach to collect industry priority needs on an ongoing basis and integrate them into standards committee priorities.	Chair External Communications TG	ANS SC Policy drafted to specify this approach and approved by SB.	1/25/17: With no External TG Chair, there has been no action	2/1/2017	
<ul> <li>D. Incorporate risk-informed and performance-based methods in ANS standards, where appropriate, by:</li> </ul>					
1. Develop the Risk-Informed Performance- Based Principles and Policy Committee Standards Plan	RP3C Chair	Provide draft of Risk-Informed Performance-Based Principles and Policy Committee Operating Plan for SB approval.	A draft plan was provided for SB ballot. Although not approved the information that was developed during the review process provided valuable input into this matrix. A separate Operating Plan is no longer required.		8/31/2018
	RP3C Chair	Provide draft ANS Risk Informed and Performance Based Standards Plan (which will provide the approaches and procedures to be used by ANS SC consensus committees, subcommittees and working groups to implement risk informed and performance based principles in a consistent manner) for review & comment prior to use in pilot applications	Jim O'Brien to lead effort; underway, should be complete by Dec 31, 2018. Balloted issued in April 2019. for proposed issue as draft for trial use	<del>9/30/2017</del> <del>9/30/2018</del> <del>12/31/2018</del> 6/1/2019	6/1/2019

	Initiative	Assigned Responsibility (Functional Title)	Specific Action Items Needed to Accomplish the Initiative	Status/ Comments	Scheduled Completion Date	Actual Completion Date
		RP3C Chair	Manage the resolution of comments and send resulting Draft Plan to Standards Manager for issuance for use on two pilot standards.	Jim O'Brien to lead effort	<del>12/1/2017</del> 12/31/2018	6/2019
		RP3C Chair	Pilot Plan on two standards	Jim O'Brien to lead effort	3/31/2019	
		RP3C Chair	Incorporate lessons learned from pilots and send to Standards Board for ballot as a new policy or procedure.	Jim O'Brien to lead effort	5/10/2019	
		RP3C Chair	Manage the resolution of comments and send resulting document to Standards Manager for issuance as a policy or procedure.	Jim O'Brien to lead effort	6/30/2019	
2.	Develop a Risk-Informed Performance-Based Principles training package for training of ANS Standards Committee members.	RP3C Chair	Develop Risk-Informed and Performance-Based Training Package for SC members and provide to SB for review.	Ed Wallace to lead. To be developed in parallel with procedure finalization	<del>12/1/2017</del> 1/31/2019	
3.	Conduct training of consensus committees and working groups.	CC Chairs	Schedule training for CC/WGs as needed, supported by RP3C training resources. CCs and RP3C to coordinate.	Ed Wallace to lead.	3/31/2019	
		RP3C Chair	Conduct Training for all applicable CCs.	??? to lead	6/30/2019	
4.	The RP3C will work with each consensus committee to develop a prioritized list and schedule for incorporating risk-informed and performance-based principles into its standards. Collaboratively, they will Identify and define any new standards that are related to risk-informed and performance-based principles. Some of such work may already have been assigned to other standards working groups, and so it is important to work with the SB and CCs to identify an appropriate WG lead (and CC) for the standards development with the objective of avoiding duplication.	RP3C Chair CC Chairs	Review ANS standards and narrow the list to 23 potential RP3C standards "Initial Priority List" and send to applicable. CCs review the list and provide their inputs on applicability and schedule for each of the 23 standards.	Completed. Link to spreadsheet with CC evaluations and schedules— <u>ACCESS</u> <u>HERE</u>	9/30/2017	8/20/2018
		CC Chairs	Requested CCs review and confirmation of actions on Phase 1 list of potential RIPB standards and RP3C feedback on insights	<u>CC Response status:</u> ESCC – 3/22/18 FWDCC – Input provided pending	9/30/2018	11/20/2018

Initiative	Assigned Responsibility (Functional Title)	Specific Action Items Needed to Accomplish the Initiative	Status/ Comments	Scheduled Completion Date	Actual Completion Date
			LLWRCC – partial information provided 1/22/18; full details remain pending NCSCC – responded N/A 1/30/18 as no NCSCC standards are on the short list. NRNFCC – N/A standards part of RP3C pilot program RARCC – 7/9/18 SRACC – confirmed N/A 1/30/18 as no SRACC standards are on the short list.		
	RP3C Chair	Manage joint discussions of the actions and schedule for the Initial Priority List of approaches and schedule and provide the results to the Standards Board for discussion at a Standards Board meeting. Mange any required interfaces with CCs and WGs. WGs and CC Management are to give this effort priority.	Agreed approaches and schedules with CC chairs to be incorporated into spreadsheet ( <u>ACCESS</u> <u>HERE</u> ).	4/30/2019	
<ol> <li>Publishing a Nuclear News Article to inform other members of the Society of the benefits of this risk-informed and performance-based effort</li> </ol>	RP3C Chair	<i>Nuclear News (NN)</i> article drafted, approved by SB Chair, and forwarded to <i>NN</i> editor. Via Standards Manager	The article has been completed. Postponed until next issue due to staff transition at NN.	11/1/2017 12/31/2018 Article submitted, publication pending	5/1/2019
<ol> <li>Developing presentation materials that can be used to inform other industry groups as to the benefits and use of the ANS Standards</li> </ol>	RP3C Chair	Develop presentation package for use with other industry groups and submit to SB for approval.	To be developed in parallel with plan finalization	3/1/2019	
Committee risk-informed and performance based standards activities	RP3C Chair	Contact appropriate organizations to make presentations at NRC RIC, ANS UWC, and owners' groups.		<del>7/1/2018</del> 4/30/2019	
	RP3C Chair	Make presentations at a minimum of 2 groups.		5/31/2019	

	Initiative	Assigned Responsibility (Functional Title)	Specific Action Items Needed to Accomplish the Initiative	Status/ Comments	Scheduled Completion Date	Actual Completion Date
Go	al #2: Develop and Maintain High Quality	/ Standards				
А.	Enhance the relationships with the ANS Professional Divisions and Technical Groups to assist in populating WGs with expert individuals. (also supports Goal 5)	Internal Communicatio ns TG Manager	Issue interface liaisons table between applicable divisions and group and the standards consensus committees.		8/1/2016	6/1/2016
		CC Chairs	Send requests for staffing assistance to ANS Professional Divisions and Technical Groups as needed.	11/2017: ESCC – Done FWDCC - Done LLWRCC - Done NCSCC - Done NRNFCC - Done RARCC - None identified SRACC - Done	Initial requests sent prior to Oct. 2017 meeting. Ongoing	11/1/2017
		Internal Communications TG Manager	Tabulate the summary of the requests made and the results and present to SB.	This item has been replaced by having the CC Chair report the results in their SB reports	NA	
В.	Develop and Implement a standards training program for all Standards Committee members to ensure that standards development is consistent with current policies and procedures, thus, producing consistently better quality products in a timelier manner.	Internal Communications TG Manager	Develop initial presentations and post on Workspace.		3/1/2016	3/1/2016
		SB VChair	Assign training instructors.		3/1/2016	3/1/2016
		SB VChair	Prepare training plan.		2/1/2016	2/1/2016
		Standards Mgr	Send out training notices.		3/15/2016	3/15/2016
		Standards Mgr	Complete the initial rounds of training presentations.		6/2/2016	6/2/2016
		SB VChair	Select videos for use in future training presentations.		6/2/2016	6/2/2016
C.	Assign a mentor to each new standards working group that is experienced in the use of ANS standard's procedures, policies, glossary and tool kit	CC Chair	Evaluate SubC Chairs for familiarity with toolkit/standards development.	11/2017: ESCC – Done FWDCC - Done LLWRCC - Done	5/1/17	5/31/2018
	Initiative	Assigned Responsibility (Functional Title)	Specific Action Items Needed to Accomplish the Initiative	Status/ Comments	Scheduled Completion Date	Actual Completion Date
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				NCSCC - Done NRNFCC - Done RARCC- Done SRACC - Done		
		CC Chair	Select SubC Chairs and other CC members with respect to their being well versed in toolkit contents and capable of being mentors. Provide mentor list to SB VChair.	11/2017: ESCC – Done FWDCC - Done LLWRCC - Done NCSCC - Done NRNFCC - Done RARCC - Done SRACC - Done	5/1/17	6/12/2018
		CC Chair	In cases where additional assistance is required beyond the SubC Chair, CC should request mentor from SB VChair.	None identified yet	Chairs have been advised.	11/1/2017
Go	al #3: Improve Standards Development F	Production and Ef	ficiency	L		
A. Expedite development of high-priority stand by improving Standards Board and consens committee oversight using achievable proje plans and definitive schedules with assigned milestones throughout the standards development cycle.		SB VChair	Draft project plan development policy.		10/1/2016	Approved by SB 9/6/16. Project plan w/b added to CC procedures as Appendix K.
		SB VChair	Draft project plan development policy.		10/1/2016	Approved by SB 9/6/16. Project plan w/b added to CC procedures as Appendix K.
		CC Chairs	Develop project plans for 6 total standards from all CCs and submit to consensus committees. This is the total goal for all CCs not 6 by each CC.	6 plans completed: 2.22,2.27, 54.1, 2.25, 2.29, 3.13 and the	6/12/2018	Approved by SB 9/6/16. Project plan

Initiative		Assigned Responsibility (Functional Title)	Specific Action Items Needed to Accomplish the Initiative	Status/ Comments	Scheduled Completion Date	Actual Completion Date
				JCNRM milestone schedule		w/b added to CC procedures as Appendix K.
B.	omplete the Standards Volunteer Database to icilitate recruiting personnel for Standards ommittee activities (also supports Goal #5ANS IT Dept.ANS IT complete ANS SC Volunteer Database in accordance with the SB specification.		It will now not be able to start any work on the volunteer database until the redesign is completed which is planned for 12/2019.	11/1/2017 11/17/2018 6/20/2019 6/5/2020 ???		
		SB/ ANS IT Dept.	SB approves database submitted by ANS IT department.		2/1/2018 2/1/2019 9/20/2019 9/30/2020	
C.	Assist the consensus committees in obtaining required human resources using outreach initiatives	Standards Mgr	Develop staffing approach guideline and post to website toolkit.		12/1/2016	Completed by S. Stamm and posted to the toolkit on 8/22/16 <u>here</u> .
D.	Maximize use of the ANS Standards Workspace and other communications vehicles to eliminate the need for travel and face-to-face meetings to	CC Chairs	Encourage WGs and SubCs to use Workspace and other online and electronic tools to eliminate face- to-face meetings	Procedure issued. CCs have discussed with SubC /Chairs	Done	April 2017
	the maximum extent possible	CC Chairs	CC chairs to submit a confirmation email that this has been discussed with SubCs and WGs.	11/2017: ESCC – Done FWDCC – Done LL\WRCC – Done NCSCC – Done NRNFCC – Done RARCC – Done SRACC –- Done	5/1/2017	
E.	Acquire funding (e.g., grants) to support the development of high-priority standards on an expedited basis.	CC Chairs/ Priority TG Chair	High priority standards list submitted by all CCs which identify high priority standards planned for near future. Priorities should be based on expected	11/2017: ESCC – ANS-2.8; ANS 2.26 (12/31/17)	Ongoing Cyber Security	

Initiative	Assigned Responsibility (Functional Title)	Specific Action Items Needed to Accomplish the Initiative	Status/ Comments	Scheduled Completion Date	Actual Completion Date
		government and industry need.	FWDCC ?? LWRCC ?? NCSCC None NRNFCC - None RARCC - ANS, 20.2, 30.1 and 30.2 SRACC - None JCNRM - Done		
	SB VChair	Work with CCs to assess each effort, select most appropriate standards, prepare and submit proposals. Submit 1st proposal.	Nov 2017- Agreed to proactively coordinate with NRC and DOE for early identification of potential opportunities.	6/1/2017 Ongoing	
F. Streamline the reaffirmation process to reduce the number of delinquent standards by establishing a systematic review of delinquent standards to start no later than the 4-year mark.	Standards Mgr	Submit Reaffirmation Forms to WG/SubC Chairs for all standards approaching the 4-year mark.		Ongoing Starting 4/1/2016	Ongoing
<ol> <li>I his can be accomplished through the following mechanisms:</li> <li>Automatically sending out a Reaffirmation Form to the WG chair with copies to subcommittee chair and consensus committee</li> </ol>	Standards Mgr	Issue list of all standards over 4 year since issuance showing the issuance of Reaffirmation Forms to the WG chairs.		11/1/2016	Ongoing
<ul> <li>2. Automate subcommittee and consensus committee approvals of reaffirmation, withdrawal, and revision recommendations</li> <li>3. Establishing an ANS Professional Division and Technical Croup sponsorship program to aid in</li> </ul>	Standards Mgr	Action items for reaffirmation setup in Workspace with automatic reminders.		11/1/2016	The report was sent 9/15/16 and will be updated and resent 12/15/16
review of associated delinquent standards with and without active working groups	Internal Communications Group Manager	Send list of delinquent standards to PDs.		12/1/2016	Completed
	Internal Communications Group Manager	Issue plan and approach to each Professional Division and Technical Group as applicable and obtain indication of acceptance.	COMPLETE	5/1/2017	11/2017
G. Develop subcommittee/consensus committee metrics to identify opportunities for improvements	Policy TG Chair	Identify CC metrics, review with CC Chairs.		10/1/2016	Changed to done!

Initiative	Assigned Responsibility (Functional Title)	Specific Action Items Needed to Accomplish the Initiative	Status/ Comments	Scheduled Completion Date	Actual Completion Date
	CC Chairs	Each CC fill in annual tabulated metric performance.	COMPLETE	5/1/2017	4/1/2017
	Policy TG Chair	Evaluate metric results.		3/1/2018	2/26/1/2018
	CC Chair & Policy TG Chair	Provide recommendations for changes to improve performance.	11/2017: ESCC - None FWDCC - ?? LL\WRCC - ?? NCSCC - ?? NRNFCC - ?? RARCC - ?? SRACC - ??	6/1/2018	

Initiative		Assigned Responsibility (Functional Title)	Specific Action Items Needed to Accomplish the Initiative	Status/ Comments	Scheduled Completion Date	Actual Completion Date
	Goal #4: Expand ANS Awareness and Ext	ernal Outreach				
А.	Use periodic survey methods to gain feedback from industry, federal and state agencies; provide feedback to survey responders	SB VChair	Submit draft of survey comment responses to SB Chair for approval.		8/1/2016	7/26/16
		SB Chair	Send responses to commenters.		10/1/2016	Done
		SB Chair	Determine survey frequency for future ANS and industry surveys. (Work with NEI on developing recommendations)	1/25/17: Members recognized that the EC TG Chair position was open and no action has been taken.	10/1/2016	
В.	Establish periodic leadership meetings with regulatory agencies, owner's groups and industry executives to align needs, and build support for	Chair External Communications TG	Discuss communications approach with each of the applicable organizations (industry, federal, and state agencies). Setup regular schedule for discussions.		11/1/2018	
	development and greater use	Chair External Communications TG	Develop and issue master SC external communications plan.		5/1/2017	
C.	Establish an ANS Professional Division sponsorship program to broaden input in setting standards priority	Chair Internal Communications TG	Issue plan and approach to each Professional Division and Technical Group as applicable and obtain indication of acceptance.	"Plan" was provided to liaisons. Confirmation pending	10/1/2016	6/2017
D.	Seek liaison arrangements with relevant SDOs, where needed, to improve efficiency, effectiveness and consistency of standards across the industry where overlapping or interlocutory standards arise	Chair External Communications TG	Prepare a liaison list identifying each desired liaison interface, the liaison approach, and the implementation status.	1/25/17: Members recognized that the EC TG Chair position was open and no action has been taken.	10/1/2016	3/1/2017
		Chair External Communications TG	Implement all liaisons on the Liaison Interface List.	1/25/17: Members recognized that the EC TG Chair position was open and no action has been taken	10/1/2016	11/2017
E.	Establish an approach to keep industry and trade groups advised of approved standards and in- progress standards in their areas of interest	Chair External Communications TG	Issue an Industry and Trade Group Interface Plan.	1/25/17: Members recognized that the EC TG Chair position was open and no action has been taken.	10/1/2016	
		Chair External	Complete interface plan implementation.		6/1/2018	

Initiative	Assigned Responsibility (Functional Title)	Specific Action Items Needed to Accomplish the Initiative	Status/ Comments	Scheduled Completion Date	Actual Completion Date
	Communications TG				
F. Identify key international organizations that can contribute to specific ANS standards development projects, including work group	Chair External Communications TG	Develop listing of key international organization, key contacts, and the desired interfaces we would like to develop.		6/1/2017	
participation, review of draft standards, and providing input into standards prioritization.	Chair External Communications TG	Send invitation letter to each of the interface contacts. Follow-up as needed		10/1/2017	
	Chair External Communications TG	Provide completion report to SB.		10/1/2018	
G. Establish a standards educational program for non-Standards Committee members to increase their knowledge of:	Chair External Communications TG	Develop presentation package.		6/1/2016	6/1/2016
<ol> <li>what consensus standards are, and are not;</li> <li>benefit of consensus standards to the industry;</li> <li>advantages to companies, federal and state</li> </ol>	Chair External Communications TG	Develop invitation list for indoctrination sessions.		8/1/2016	All ANS members
agencies, and individuals of supporting standards development	Chair External Communications TG	Send indoctrination session invitations.		10/1/2016	sent via Jan 2017 N&D, member blast, and ANS home page.
	Chair External Communications TG	Conduct 1st indoctrination session.		2/1/2017	1/31/2017
	Chair External Communications TG	Complete sessions.		11/1/2017	
H. Contact leading nuclear companies to determine if they issue regular newsletters and offer to provide standards updates for inclusion.	Chair External Communications TG	Develop list of companies and contacts.	1/25/17: Members recognized that the EC TG Chair position was open and no action has been taken.	11/1/2016	
	Chair External Communications TG	Develop short form newsletter.	1/25/17: Members recognized that the EC TG Chair position was open and no action has	11/1/2016	

Initiative	Assigned Responsibility (Functional Title)	Specific Action Items Needed to Accomplish the Initiative	Status/ Comments	Scheduled Completion Date	Actual Completion Date
			been taken.		
	Chair External Communications TG	Make contact with 30% and report to SB.	1/25/17: Members recognized that the EC TG Chair position was open and no action has been taken.	4/1/2017	
	Chair External Communications TG	Make contact with 100% and report to SB.		11/1/2017	
I. Evaluate the cost effectiveness of a fee based training program for newly issued/ revised	SB VChair	Prepare draft evaluation plan.		8/1/2016	7/26/2106
standards.	SB VChair	Meet with ANS Membership & Marketing Director and revise plan as appropriate.		8/3/2016	Several calls held; last one on 10/5/16.
	SB VChair	Complete evaluation and send report to SB Chair for discussion with BOD.		3/1/2017	Completed Jan 2017 – Recommende d ANS-2.8 & ANS-3.5 once approved.
	Standards Mgr	Send owners' groups semi-annual updates on applicable standards activities	Industry newsletter created and provided to Jim Riley as POC for utilities on 10/18/16. Industry newsletter posted <u>here</u> .	Ongoing	
Goal #5: Improve Industry Representation	n and Sustainabili	ty of Working Groups, Subcommittees, and	Consensus Commit	ees	
<ul> <li>A. Approach owners' groups and industry organizations soliciting member participation in ANS standards</li> </ul>	Standards Mgr	Send owners' groups semi-annual updates on applicable standards activities	Industry newsletter created and provided to Jim Riley as POC for utilities on 10/18/16. Industry newsletter posted <u>here</u> .	Ongoing	
	Standards Mgr	Request staffing assistance for select standards.	An updated list of volunteer needs was prepared and posted to the ANS website 8-11/16,	Ongoing	

Initiative		Assigned Responsibility (Functional Title)	Specific Action Items Needed to Accomplish the Initiative	Status/ Comments	Scheduled Completion Date	Actual Completion Date
				announced in Sept. 2016 N&D and distributed through ANS Collaborate to PDs.		
В.	Send notices to ANS Student Section members, Young Member Group, Professional Division	Standards Mgr	Send notices biannually.	Broadcast sent to ANS Student Section 9/15/16.	Ongoing Biannually	
	members, and North American-Young Generation Nuclear members to provide opportunities to participate in ANS standards		(See Goal #1)			
C.	Enhance the relationships with the ANS Professional Divisions and Technical Groups to assist in populating WGs with expert individuals.(See Goal #1)	Standards Mgr	Advertise upcoming standards efforts with requests for support using <i>Nuclear News</i> , Nuclear Café, and ANS Linked-In Group.	Volunteer needs section added to <i>Nuclear News</i> . List of volunteer needs updated and posted to web and announced in N&D.	Ongoing	Standards Mgr
D.	Advertise upcoming standards efforts with requests for support using Nuclear News, Nuclear Café, and ANS Linked-In Group		See goal # 3			
E.	ANS IT Department to complete the Standards Volunteer Database, and make it available to subcommittee and consensus committee chairs (See Goal #3)	SB VChair	Develop standard report and provide to CC Chairs.	1/25/17: Stamm confirmed that this action will be completed shortly.	6/11/17	6/11/17
F.	Monitor consensus committee and working group success in staffing and recruitment and share best practices across all consensus committees	CC Chairs	Changed to annual report based on performance data provided to the CC Chairs.		6/30/2018+ Ongoing	
		SB VChair	Evaluate results of CC reports at SB meeting		6/30/2018+ Ongoing	

#### C5 POLICY ON THE DEVELOPMENT OF GUIDANCE STANDARDS IN SUPPORT OF EXISTING STANDARDS AND OTHER GUIDANCE IN SUPPRT OF OR POTENTIAL FUTURE STANDARDS

#### 1 BACKGROUND

The accredited rules and procedures of the ANS Standards Committee specify that standards developed by the committee are intended to become American National Standards. Standards developed by the ANS Standards Committee are criteria-based, containing specific requirements to be implemented by the user. (MHowever, many of these standards also contain guidance in the text or in appendices.)

The scope of this section covers the development of guidance standards that either support an existing ANS standard or provide part of the technical basis and guidance documents that support for a potential future ANS standard.

#### 2 POLICY

The ANS Standards Committee may develop guidance standards that do not contain requirements but provide valuable information <u>that-either supports an existing ANS standard or provides part of the technical basis for a standard. The ANS Standard Committee may also develop guidance documents that support a potential future ANS standard. for the implementation of criteria contained in American National Standards. These <u>G</u>guidance standards and guidance documents shall be developed using the accredited rules and procedures of the ANS Standards Committee, including those related to due process and consensus.</u>

Guidance standards <u>and guidance documents</u> shall be developed only with the agreement (that is, formal vote for approval) of the responsible consensus committee and the Standards Board. In addition, a Project Initiation Notification System form, or equivalent, shall be prepared for review and comment by the consensus committee and by the Standards Board.

Guidance standards and guidance documents shall not be submitted to the American National Standards Institute for accreditation as American National Standards but shall be certified by the Standards Board as having followed due process and consensus procedures. Guidance standards and guidance documents shall be issued as copyrighted ANS standards.

This policy may be applied by any ANS consensus committee.

Because this policy establishes a process for the development and issuance of ANS guidance standards<u>and guidance documents</u>, it is not addressed in the accredited rules and procedures.

JFM, 9/22/04 (JFM revised, 12/16/04) (JFM revised, 8/17/05) (SAA revised, 4/25/19) (SAA revision 11/12/19)

#### ATTACHMENT 7

#### Liaisons to ANS Professional Divisions— PD Liaisons Updated 10/31/19 (yellow highlight = confirmed PD liaisons)

ANS Professional Division	Name of PD Liaison	Email of PD Liaison	Name of PD Chair	Email of PD Chair	Associated Consensus Committee (see acronym key below)	Name of ANS Standards Committee Liaison	Email of ANS Standards Comm. Liaison or interface
Accelerator Applications	Charles T. Kelsey	<u>ckelsey@lanl.gov_</u>	William Horak	<u>horak@bnl.gov</u>	NRNFCC	James O'Brien	James.OBrien@hq.doe.gov_
Aerospace Nuclear Science & Technology	Andy Prichard	Andrew.Prichard@pnnl.gov	Jeffrey King	kingjc@mines.edu	*		
Pielogy & Modicino	Stonbon LaMont	lamont@lanl.gov	Samuel Clover	alovor 14@ocu odu	ESCC	Carl Mazzola	cmazzola@projectenhancement.com
biology & Medicine		lanont@lan.gov	Samuel Glovel	<u>giover.14@0su.edu</u>	ANS-3.4 (under LLWRCC)	William Reuland	wreuland@aol.com
Decommissioning &	Dustin Miller	dmiller@chaseenv.com	Dustin Miller	dmiller@chaseenv.com	FWDCC	David Hillyer	dwhillyer@hotmail.com
Environmental Sciences	Dustin Miller	uniner@enascenv.com	Dustin Miller	umilici e chase chi.com	ESCC	Carl Mazzola	cmazzola@projectenhancement.com
Education, Training, &	Drew Thomas	drew thomas@inl.gov	Drew Thomas	drew thomas@inl.gov	LLWRCC	Gene Carpenter	Gene.Carpenter@hq.doe.gov
Workspace Development		drew.mondoc.m.gov	brew monus	drem.monitdserningev	NCSCC	John Miller	<u>millerj@sandia.gov_</u>
Fuel Cycle & Waste Management	Jeffery R. Brault	jeff_brault@yahoo.com_	Jared Johnson	johnsonja@ornl.gov_	FWDCC	Jeffery Brault	jeff_brault@yahoo.com_
Fusion Energy	Leigh Winfrey	<u>lzw290@psu.edu</u>	Paul Wilson	paul.wilson@wisc.edu	RARCC	George Flanagan	flanagangf@ornl.gov_
Human Factors, Instrumentation & Controls	Sacit Cetiner	<u>cetinerms@ornl.gov_</u>	Brent Shumaker	brent@ams-corp.com	LLWRCC	Pranab K. Guha	pranab.guha@hq.doe.gov_
Isotopes & Radiation	Stephen LaMont (PD chair to serve as temp liaison)	lamont@lanl.gov	Stephen LaMont	lamont@lanl.gov	SRACC	Charlotta Sanders	sander59@unlv.nevada.edu_
Materials Science & Technology	Troy Munro	troy.munro@byu.edu	Kallie Metzger	metzgeke@westinghouse.com	*		
Mathematics & Computation	Paul Hulse	paul.hulse@sellafieldsites.com_	David Griesheimer	dgrieshe@outlook.com_	SRACC	Paul Hulse	paul.hulse@sellafieldsites.com_
Nuclear Criticality Safety**	Catherine Percher	percher1@linl.gov_	Catherine Percher	percher1@lini.gov_	NCSCC	Doug Bowen	bowendg@ornl.gov
	Eric Harvey	<u>eharvey@epri.com</u>			RARCC	George Flanagan	flanagangf@ornl.gov
Nuclear Installations Safety	Kevin O'Kula	<u>kevin.okula@aecom.com</u>	Eric Harvey	<u>eharvey@epri.com</u>	NRNFCC	James O'Brien	James.OBrien@hq.doe.gov
	Matthew Denman	denman@kairospower.com			JCNRM	Robert Budnitz	budnitz@pacbell.net_
Nuclear Nonproliferation Policy	Kelsey Amundson	kamundson5@gmail.com	Alicia Swift	swiftie12@gmail.com_	ANS-60.1 (under LLWRCC)	Margaret Harding	margaret@4factorconsulting.com
Operations & Power	Scott Ackerman	scott2ackerman@gmail.com	Chad Boyer	chadboyer64@gmail.com	LLWRCC	Gene Carpenter	Gene.Carpenter@hq.doe.gov
Radiation Protection & Shielding	Irina Popova (PD chair to serve as temp liaison)	popovai@ornl.gov_	Irina Popova	popovai@ornl.gov_	SRACC	Charlotta Sanders	sander59@unlv.nevada.edu_
Reactor Physics	Dimitrios Cokinos	<u>cokinos@bnl.gov</u>	Florent Heidet	fheidet@anl.gov	SRACC	Dimitrios Cokinos	cokinos@bnl.gov
Thermal Hydraulics	Wade Marcum	wade.marcum@oregonstate.edu	Chul-Hwa Song	chsong@kaeri.re.kr	SRACC	Andy Smetana (temp)	andy.smetana@srnl.doe.gov'

\* Contingent liaison; which would be activated if and when needed

\*\*NOTE: PD chair = PD liaison

PDC Chair	Thomas Remick	thomas.remick@aps.com
PDC Co-Vice Chair	Hans Gougar	hans.gougar@gmail.com
PDC Co-Vice Chair	Deborah Hill	deborah.a.hill@nnl.co.uk
PD Liaison Prgm Coordinato	William Turkowski	turkowwm@westinghouse.com

Consensus Committee Acronym Key			
Environmental and Siting Consensus Committee (ESCC)	Nuclear Criticality Safety Consensus Committee (NCSCC)		
Fuel, Waste, and Decommissioning Consensus Committee (FWDCC)	Nonreactor Nuclear Facilities Consensus Committee (NRNFCC)		
Joint Committee on Nuclear Risk Management (JCNRM)	Research and Advanced Reactors Consensus Committee (RARCC)		
Large Light Water Reactor Consensus Committee (LLWRCC)	Safety and Radiological Analyses Consensus Committee (SRACC)		



### Current Associate Member List (10/31/19)

			Date VF			
	Name	Solicitation or Random	Rec'd	PLACEMENT	сс	Status
1	Margaret Kurtts	Student Section	8/12/2014	30.2	RARCC	2/27/19: Sent direct email to Kurtts to apprise that work on
	5	Solicitation 2014				30.2 is expected to be restarted in summer: also provided
						opportunity for reassignment. Reassignment not requested.
2	Dong (Allen) Wang	random	7/1/2014	3.5.1	LLWRCC	2/26/19: Reassigned to ANS-3.5.1.
						12/12/2018: ANS-3.5 WGC Florence stated that he was not
						active on 3.5 and was removed.
3	Matthew Hertel	Random	3/31/2015	59.3	LLWRCC	2/28/19: Hertel was contacted and stated that he is very
				58.9-No WGC		busy right now and he is okay with 59.3 being slow and
						remaining on 58.9 until chair found. He will let me know if he
						wants reassignment.
4	Theresa Cutler	Recruited by ANS-8.23	10/24/2015	8.1	NCSCC	***UPGRADED TO FULL MEMBER ON 8.3, 8.20, 8.26, 8.23.
		WGC/Baker				STILL AsM on ANS-8.10.***
						5/8/19: 8.10 WGC A. Pichard stated that the WG has not
						been active so there has been no way to contribute.
						Standard is now 5 years old and due for maintenance. A
						reaffirmation will be sought before a revision is started.
5	Nima Fathi	YMG Solicitation 2015	5/13/17	10.4	SRACC	5/6/19: Contact was made with Fathi to confirm interest:
-			placed on WG			interest was confirmed and suggestions provided on how to
			p			narticinate 4/18/19: 10.4 WGC B lones said that he has not
						been active but does not want removed.
						(NOTE: Placed 11/3/2015 on subcommittee as hold until ANS-
						10.4 active.)
6	Paul Romano	YMG Solicitation 2015	5/13/17	10.4	SRACC	4/18/19: 10.4 WGC R. Jones confirmed that Romano is
			placed on WG			participating but not sufficient for full membership.
	Enorol Munkhaul	VMC Solicitation 2015	1/15/2016	20.2	DADCC	2/27/10. Sont direct amail to Munkhaul to inform that work
		TIVIG SUICILATION 2015	1/15/2016	30.2	RARCC	2/2//19. Sent direct email to Multikizul to inform that work
						on 30.2 W/start in summer; also provided opportunity for
						reassignment.
8	Blaine Rice	Invited by J. Baker	10/1/2015	8.23	NCSCC	2/8/19: 8.23 WGC J. Baker stated that he had hoped for
						better participation from him. Currently not a candidate for
						full membership.
9	Ning Zhang	random	2014	8.1	NCSCC	***FULL MEMBER ON 8.15***
						5/8/19: 8.1 WGC. N Brown stated that Zhang was active
						initiatally but has not been active lately. Not elibility for full
						membership.
10	Steven Thompson	random	6/20/16	19.10	SRACC	5/29/19: Haghighat said that Thompson has not been active.
						Haghighat w/contact Thompson for continued interest.
11	Amir Dahadari	random	F/27/2016	2.22	5500	C/20/10: Accorted to 2.22 or AcM
11	Amir Banadori	random	5/2//2016	2.22	ESCC	6/20/19: Accepted to 2.22 as ASM.
				0.4.2	SRACC	5/28/19. Banadon responded that he is still interested in
						6.4.2 & would also be open to additional opportunities in
						radiation shielding. Currently working on additional
						placement. $\Gamma/27/10$ , SubC Chair suggested to contact with offer of
						5/27/19. Sube chair suggested to contact with oner of
						reassignment.
						response BARCC & SubC shairs contacted for direction
12	Matthew Chapa	random	10/11/2016	8.19	NCSCC	4/18/19: 8.19 WGC J. Miller responded that group has not
						been active since standard last approved in 2014. A revision
						will be initiated once the reaffirmation (in process) has been
						approved.
13	Chelsea Gunter	Feb 2017 NSN Brief	2/16/2017	57.11	NRNFCC	***FULL MEMBERSHIP PENDING***
						5/8/19 & 5/21/19 (reminder): 57.11 WGC R. Eble confirmed
						that Gunter has been active; he stated that he will contact
1						her and see if she is interested in full membership.
1						

# Current Associate Member List (10/31/19)

			Date VF			
	Name	Solicitation or Random	Rec'd	PLACEMENT	CC	Status
14	Charles Cohen	NN	6/21/2019	19.6.1	SRACC	6/21/19: Accepted to 19.6.1 as AsM. Cohen responded with request for reassignment to computational project. SRACC org chart sent for consideration Removed from 2.18. 5/27/19:With no response from 2.18 WGC K. Ng and no known activity, ESCC Chair suggested that Cohen be contacted with an offer of reassignment.
15	R. Patrick White	responded to N&D call out for volunteers for 30.3	7/21/2017	30.3	LLWRCC	2/26/19: 30.3 WGC K. Welter confirmed that White is engaging but has not been able to make much of a contribution as he is just getting started.
16	Kelsey Amundson	random	6/30/2017	8.20 8.19	NCSCC	<ul> <li>***UPGRADED TO FULL MEMBER ON 8.26***</li> <li>4/18/19: 8.20 WGC D. Hill recognized good participation but would like to hold off on upgrading membership possibly for a year.</li> <li>4/18/19: 8.19 WGC J. Miller stated that group has not been active since standard last issued in 2014. A reaffirmation is in process; revision to be initiated once reaffirmation approved.</li> </ul>
17	Timothy Crook	random	6/8/2017	20.2	RARCC	6/18/19: 20.2 WGC D. Holcomb stated not active enough for full membership.
18	Vaibhav Yadav	YMG Solicitation 2017	10/4/2017	LPSD WG	JCNRM	5/8/19: LPSD WGC J. Li confirmed that Yadav has participated by commenting but has not participated in meetings. Additionally, Li stated that his interest in project was recently reconfirmed.
19	Arielle Miller	submitted new VF after attending NCS Std Forum @ 2017 Winter Meeting	11/2/2017	8.12 '8.1	NCSCC	*** FULL MEMBER ON 8.12 &57.11*** 5/28/19: 8.12 WGC C. Tripp confirmed active participation; Miller will be contaced w/offer of full membership. 5/7/19: 8.1 WGC N. Brown responded that he'd like to see more participation on 8.1 before upgarding to full membership.
20	Travis Wilson	random	9/26/17 & resubmitted 12/20/2017 by M. Crouse	8.22 '8.7	NCSCC	2/27/19:Neither project has been active but revisions are being initiated now. There has been no opportunity for Wilson to contribute. Wilson was informed that projects will be intiated, and he confirmed that he remains interested.
21	Quentin Newell	random	1/23/2017	8.1 '8.12	NCSCC	<ul> <li>5/29/19: 8.12 WGC C. Tripp recognized some participation from Newell. Better participation needed before consideration as full member.</li> <li>5/7/19: 8.1 WGC N. Brown would like to see more participation on 8.1 before upgarding to full membership.</li> </ul>
22	Konner Casanova	random	9/21/2017	8.23	NCSCC	***UPGRADED TO FULL MEMBER ON 8.3*** 2/8/19: 8.23 WGC J. Baker stated that he had hoped for better participation from him. Not a candidate for full membership on 8.23.
23	Jennifer Lyons	random	5/1/2018	8.19	NCSCC	4/18/19: 8.19 WGC J. Miller responded that the group has not been active since standard last approved in 2014. A revision will be initiated once the reaffirmation (in process) has been approved.
24	Brandon Chisholm	Random	8/20/2018	20.2	RARCC	6/18/19: 20.2 WGC D. Holcomb responded that Chisholm has not been very active and is not a candidate for upgrading. 5/7/19 & 5/27/19 (reminder): Contacted 20.2 WGC D. Holcomb for feedback on participation.
25	Hannah Morbach	Random	9/7/2018	8.3	NCSCC	5/7/19: 8.3 WGC J. Hicks confirmed Morbach's participation but too soon to consider eligibility.
26	Joshua Kane Halsted	2018 Student Broadcast	9/28/2018	15.22	RARCC	5/8/19: 15.22 WGC D. Cronin said group has not been very active so he has not had chance to contribute; should have chance soon. Message sent to Halsted to let him know.

# Current Associate Member List (10/31/19)

			Date VF			
	Name	Solicitation or Random	Rec'd	PLACEMENT	сс	Status
27	Jason M. Crye, PhD	Suggestion from D. Bowen	9/5/2018	8.10	NCSCC	5/8/19: 8.10 WGC A. Prichard stated that group hasn't really be active. He plans to process a reaffirmation and then initiate the next revision. Group should be active very soon.
28	Kristina Spencer, PhD	Suggested during course at UofNM	9/21/2018	8.17	NCSCC	5/29/19: 8.17 WGC E. Saylor stated WG has not been active so no way to participate; RF to be processed.
29	Shawn Henderson	со	11/19/2018	8.24	NCSCC	11/19/18: Accepted to 8.24 by Wetzel; Wetzel talked to Henderson and Henderson was made aware that project not currently active as revision just approved (2017).
30	Erik Slobe	random	1/4/2019	60.1	LLWRCC	1/22/19: Placed on 60.1 WG.
31	William ("Will")John Zywiec	random	1/24/2019	8.3	NCSCC	5/7/19: 8.3 WGC J. Hicks confirmed participation but too soon to consider upgrading.
32	Showq Ali Y Sama	Saw on our website	5/2/2019	57.9	FWDCC	5/4/19: Placed on 57.9
33	Gary Ly	J. Miller/SNL recommended	3/28/2019	8.19	NCSCC	5/16/19: Ly has years of experience but new to NCS. 8.19 WGC J. Miller talked to Ly. Decision made to add as AsM on expedited schedule for full membership.
34	Izabela Gutowska, PhD	saw notice in NN	5/20/2019	53.1	RARCC	5/24/19: Placed on 53.1.
35	Andrew Arend	random	6/17/2019	8.1	NCSCC	6/27/19: Accepted to 8.1 by N. Brown.
36	Austin McGee	random	11/15/2017	8.17	NCSCC	7/24/19: Re-instated as 8.17 WGM (no contact participation 11/2017- 6/2019)
37	Giulio Malinerno	random	7/13/2019	1/10/1900	SRACC	7/24/19: Accepted to 10.4 WG as AsM.
38	Michelle Evans	Responsd to NE local sec. chair email	7/17/2019	1/2/1900	ESCC	7/24/19: Accepted to 2.3 as AsM.
39	Joshua Butler	from co-worker, Tracy Stover.	8/12/2019	ANS-8.14	NCSCC	8/20/19: Accepted to 8.14 as AsM.
40	William T. Gerding	WGC and then submitted VF	9/4/2019	ANS-8.7	NCSCC	9/4/19: Accepted to 8.7as AsM.
41	Michael Fendler	random	9/24/2019	ANS-8 22	NCSCC	10/2/19 Accented to 8 22 as AsM
42		random	5/24/2019	7.113-0.22		
	Vikram (Vik) Singh	referred by associate	10/16/2019	ANS-20.2	RARCC	10/18/19: Accepted to 20.2 as AsM

		Solicitation or				
	Name	Random	Date VF Rec'd	PLACEMENT	сс	Upgrade Date/Notes
1	Mihai Diaconeasa	Random	5/7/2014	30.1	RARCC	3/19/2019: upgraded on both WGs
				2.34	ESCC	
2	Shilp Vasavada	NAYGM 2015	11/18/2015	3.13	LLWRCC	3/21/2019: w/new job @ NRC; resigned from
		solicitation		2.26	ESCC	3.13.
						1/22/19: Accepted to ANS-2.26 as full member.
3	Kaushik Banerjee	YMG Solicitation 2015	11/20/2015	19.6.1	SRACC	5/11/2019
4	Tracy Stover	Random	11/3/2015	8.12	NCSCC	6/15/2017
5	Evan Beese	YMG Solicitation 2015	11/1/2015	15.1	RARCC	5/12/2019
6	Scott Finfrock	Invited by L. Wetzel to			NCSCC	8/9/2018
		join 8.24 as assoc				
		member; 6-2015.				
7	Brandon O'Donnell	Invited by J. Baker	10/1/2015	8.23	NCSCC	6/15/2017
8	Cheri Paugh	random	11/2/2017	58.2	LLWRCC	7/24/2018
9	Joshua Marshall	random	6/29/2016	8.1	NCSCC	5/7/2019
10	Katherine McCurry	random	12/20/2017	8.12	NCSCC	5/31/2019
	(Steddenbenz)					
11	Kurt Harris	Random	7/20/2018	ANS-20.2	RARCC	6/18/2019
						9/26/19; informed by WGC at physical
12	Jeremy Gustafson	YMG 2015 Solicitation	11/1/2015	ANS-56.8	LLWRCC	meeting

#### Resigned/Lost Associate Member List (Updated 10/31/19)

	Name	Solicitation or Bandom	Date VF Rec'd		00	Tracking
1	Chelsea Sutton (Maiden Name: Weaver)	Not sure but on 8.3 since 2014	1/2014	8.3	NCSCC	RESIGNED 4/25/17: Resigned from as no longer in NCS. Currently works in weapon systems surveillance.
2	Chelsea Collins	Student Section Solicitation 2014	8/13/2014	8.3	NCSCC	RESIGNED 3/26/16: Resigned; no longer interested.
3	Joseph (Joe) Kopacz	Student Section Solicitation 2014	8/12/2014	3.13	LLWRCC	DROPPED 4/5/16: Dropped due to no participation and no response to numerous emails.
4	Cailyn Ludwig	Student Section Solicitation 2014	8/12/2014	3.14	NRNFCC	DROPPED 2/26/19: Dropped due to no participation and no response; email bounced.
5	Benjamin (Ben) Prewitt	Student Section Solicitation 2014	8/12/2014	20.1	RARCC	DROPPED 2/26/19: Project terminated indefinitely. Did not respond to multiple emails with offer of reassignment.
6	Manit Shah	Student Section Solicitation 2014	8/12/2014	6.4.3, ( past AsM of 57.2 & 57.3)	SRACC	RESIGNED 3/1/19: Very busy with new new job. May reach out for placement in future.
7	Manish Sharma	Student Section Solicitation 2014	8/12/2014	6.4.3	SRACC	DROPPED 5/1/19: Dropped due to no response to multiple emails.
8	Gregory Suehr	Student Section Solicitation 2014	8/12/2014	57.2/52.73	FWDCC	DROPPED 3/20/2018:Dropped due to no participation and no response to numerous emails.
9	Mara Watson	Student Section Solicitation 2014	8/12/2014	ESCC (holding spot until new siting project started)	ESCC	DROPPED 5/3/16: Never completed WS user account, no response to multple emails
10	Tim Stout	Random	8/27/2014	ANS-58.9	LLWRCC	DROPPED 4/18/19: Dropped due to no response; email bounced.
11	Christopher Courtenay	YMG Solicitation 2015	11/2015	ANS-2.25	ESCC	DROPPED 3/28/19: Resigned: lost interest
12	Philip Jensen	YMG Solicitation 2015	11/2/2015	ANS-3.14	NRNFCC	DROPPED 3/19/19: No participation on WG; contacted w/request to reassign if interested and provided list of possible projectsno response.
13	Siddharth Suman	YMG Solicitation 2015	11/11/2015	ANS-8.20	NCSCC	RESIGNED 4/18/19: WGC feedback stated no participation. When contacted Suman confirmed lack of participation. Felt it difficult to engage as PhD student in Switzerland; may request placement in future.
14	Matthew Lynch	YMG Solicitation 2015	11/1/2015	8.1	NCSCC	RESIGNED 6/1/2017: No longer interested/active.
15	Bristol Hartlage	YMG Solicitation 2015	11/1/2015	3.15	LLWRCC	RESIGNED 2/27/19: Employment changed. No longer in nuclear & no time.
16	Umer Shahid	saw notice in NN	6/12/2018	57.8	FWDCC	RESIGNED '5/27/19: Shahid stated that his new job keeps him too busy. He'll kept us in mind for the future. '5/8/19: WGC confirmed no participation.
17	Stanley Tackett	Student Section Solicitation 2014	8/12/2014	6.4.2	SRACC	DROPPED 6/20/19: Sent several email w/last one bouncing; also tried to contact via Linkedin w/no response.
18	Dylan Robideaus	Random	2/5/2014	8.7	NCSCC	RESIGNED 9/17/19 : Resigned stating that he does not have the availability to participate.

	Standards Board COMPLETED Action Ite	m Report for	Concurrence
Action Item	Description	Responsibility	Status/Comments /Reassignments
6/2019-01	Steven Arndt to provide the Standards Board more information about the proposal for realigning ANS's business structure when approved by the BOD	Arndt	Completed Info sent 7/23/19
6/2019-02	Steven Arndt to notify Standards Service Award recipients by phone (if possible) followed by formal letter.	Arndt	Completed
6/2019-05	Steven Stamm to draft a write up to solicit support from local section members and work with Pat Schroeder on its distribution.	Stamm, Schroeder	Completed Write up sent to local section chairs; several issued.
6/2019-06	Pat Schroeder to distribute the proposed schedule for the RP3C and consensus committee upcoming meetings to the chairs for their concurrence.	Schroeder	Completed Issued with no objections
6/2019-08	David Hillyer to provide FWDCC members the <u>RIPB</u> article in the June 2019 issue of <i>Nuclear News</i> for reference.	Hillyer	Completed Sent June 2019
6/2019-09	Pat Schroeder to send working group chairs the <u>RIPB</u> article in the June 2019 issue of <i>Nuclear News</i> for their reference.	Schroeder	Completed Sent June 2019
6/2019-11	Robert Budnitz to prepare an objective statement for the background on the revision of the guidance standard policy and send to Steven Arndt for consideration	Budnitz	Completed Objective statement prepared by R. Budnitz and provided to S. Arndt
6/2019-13	Pat Schroeder to disseminate <u>ANS Position Statement</u> <u>44, Nuclear Energy's Role in Climate Change Policy</u> , to working groups for their reference as applicable in developing ANS standards.	Schroeder	Completed
6/2019-14	Pat Schroeder to provide David Hillyer <u>Policy A3</u> , <u>Responsibilities of ANS Standards Committee Liaison</u> <u>Personnel (page 9)</u> , for reference to aid in finding a potential INPO liaison for the Standards Board (see ACTION ITEM 6/2018-09).	Schroeder	Completed
6/2019-15	Pat Schroeder to issue the <u>RIPB Guidance Document</u> for trial use.	Schroeder	Completed
6/2019-16	Andrew Smetana to reach out to the ANS-10.2 Working Group Chair to ask the working group to consider development of a revision focusing on processes.	Smetana	Completed WGC Response: Current code portability is focused on language and algorithms. If to focus on the process, then a can of worms is opened that should not be opened. An email enumerating on the issues was distributed 10/30/19.
11/2018-01	Gene Carpenter to follow up with Sacit Cetiner to confirm if the ANS-3.15 Working Group has a representative from the Nuclear Information Technology Strategic Leadership (NITSL).	Carpenter	Completed S. Cetiner does not believe that ANS-3.15 has a NITSL rep, but would welcome suggestions.
11/2018-25	Pat Schroeder to work with Garrett Smith for a DOE staffing recommendation to support maintenance on ANSI/ANS-5.10-1998 (R2013), "Airborne Release Fractions at Non-Reactor Nuclear Facilities."	Schroeder	Completed ANSI/ANS-5.10-1998 (R2019) was reaffirmed by ANSI on 10/3/19.



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# **RP3C Report to Standards Board**

Washington, DC November 19, 2019

11/13/18

ANS November 2018

# Significant Themes Covered of Interest to the Standards Board



Address Standards Board Objectives

- SMART Matrix Items
- Consensus Committees' involvement in RIPB methods implementation
   <u>Expand RIPB Methods</u>
- Collaborate with ASME
- Identify, clarify, document improvements in methods as RP3C reviews are completed
- Move methods into systems engineering framework

Support WG Application of RIPB Methods

- Solicited and received CC Chairs' feedback on socialization and implementation of guidance
- RP3C members shared experience o working with WGs
- Potential improvements identified in realizing benefits of RP3C feedback

# Significant Themes Covered of Interest to the Standards Board



- Standards Board (SB) SMART Matrix – RP3C responsibilities under Goal #1(D)
- RP3C's Progress Report on Guidance and Training

   Jim O'Brien and Ed Wallace are leading this effort
   Expect to begin execution of training in February 2020
- RP3C Interaction with Consensus Committees (CCs)
   SB Action Item 11/2018-14

# **Expanding RIPB Methods**



# Collaborating with ASME

- Plant Systems Design Standard does not seem to have recognized performance-based opportunities
- Actions identified on terminology and taxonomy

# Improvements from recent RP3C reviews

- Discussion of reviews of ANS-30.3, ANS-30.1, and ANS-3.14
- Feedback to be standardized to correspond to Guidance document objectives
- Improvements in use of Workspace balloting feature to clarify expected outcomes from RP3C reviews
- Moving toward a systems engineering perspective

# Support for WG Application of RIPB Methods



- Feedback from CC Chairs
  - CC reports contain section on RIPB implementation
  - Several ESCC examples show path to success
  - Emphasis on early consideration of RIPB methods
- CC Chairs involvement in improving effectiveness of training
  - Need to go beyond previously identified 23 standards
  - CC sub-committees also have a role in standards that cross CC bondaries

Schedule of ANS Standards in Development using	RIPB Pro	operties (Nov 2	2019)		ATTACH	MENT 11	1
·		· ·	,				
		+4 months	+6 months	+4 months	+2 weeks	+2 Weeks	~4 months
	Durft	SubC or	1st CC	2nd CC	ANS		
	Draft	Preliminary	Ballot/Comment	Ballot/Comment	Standards		
	App'd by	Review/Comment	Resolutions	Resolutions	Board	ANSI	
Standards Project	WG	Resolutions	(concurrent PR)	(concurrent PR)	Certification	Approval	Publication
ANS-2.8 (Y. Gao) / *ESCC (C. Mazzola) Determine External Flood Hazards for Nuclear Facilities	Δ	regirculation ballot was	Apr - Oct 2019	Nov - Dec 2019	Jan 2020	Jan 2020	May 2020
JCNRM Rep: V. Anderson, R. Schneider	~			e changes. The drait was	provided to Krock	2 SCURA UII 4/ 1	0/19.
ANS-2.22 (T. Jannik)/*ESSC (C. Mazzola)	Sept 2020	Oct-Jan 2021	Feb-Jul 2021	Aug-Nov 2021	Dec 2021	Dec 2021	Apr 2022
Environmental Radiological Monitoring at Operating Nuclear Facilities							
ANS-2.21 (M. Kinley)/*ESCC (C. Mazzola) Criteria for Assessing Atmospheric Effects on the Ultimate Heat Sink JCNRM Rep:	Dec 2019	Jan-Apr 2020	May-Oct 2020	Nov-Feb 2020	Mar 2020	Mar 2020	Jul 2020
ANS-2.26 (D.Clark) /*ESCC (C. Mazzola)			PINS submitted to ANSI	10/1/19. Schedule to be c	determined.		
Categorization of Nuclear Facility SSCs for Seismic Design JCNRM Rep:							
ANS-2.27 (K. Hanson)/*ESCC (C. Mazzola) Criteria for Investigations of Nuclear Facility Sites for Seismic Hazard Assessments	Jul 2019	Aug - Oct 2019	Nov-Apr 2020	May-Aug 2020	Sept 2020	Sept 2020	Jan 2021
JCNRM Rep:		Dr	aft issued to SCORA & RP3	C on 8/20/19 in parallel w	vith SubC ballot.		
ANS-2.29 (E. Gibson)/*ESCC (C. Mazzola) Probabilistic Seismic Hazard Analysis	May 2019	Jun-Sept 2019	Nov-Apr 2020	May-Aug 2020	Sept 2020	Sept 2020	Jan 2021
JCNRM Rep: A. Kammerer		Dr	aft issued to SCoRA & RP3	C on 6/27/19 in parallel w	vith SubC ballot.		
ANS-2.34 (S. McDuffie)/*ESCC (C. Mazzola Characterization and Probabilistic Analysis of Volcanic Hazards RP3C Rep: N. Chokshi / JCNRM Rep:	Sept 2020	Oct-Jan 2021	Feb-Jul 2021	Aug-Nov 2021	Dec 2021	Dec 2021	Apr 2022
ANS-3.13 (J. August) / *LLWRCC (G. Carpenter) Nuclear Facility Reliability Assurance Program (RAP) Development J <mark>CNRM Rep:</mark>			Project plan in develop	ment to re-establish path	h forward.		
ANS-3.14 (T. Anselmi & C. McMullin)/*NRNFCC (J. O'Brien) Process for Aging Management and Life Extension of NRNF	June 2019	NA	Jul - Dec 2019	Jan-Apr 2020	May 2020	May 2020	Sept 2020
JCNRM Rep: J. O'Brien			Draft issued t	o SCoRA & RP3C 7/19/19			
ANS-15.22 (D. Cronin/*RARCC (G. Flanagan) Classification of Structures, Systems and Components for Research Reactors JCNRM Rep:	Dec 2020	Jan - Apr 2021	May - Oct 2021	Nov - Feb 2022	Mar 2022	Mar 2022	Jul 2022
ANS-20.2 (D. Holcomb / *RARCC (G. Flanagan) Nuclear Safety Design Criteria and Functional Performance Requirements for Liquid-Fuel Molten Salt-Reactor Nuclear Power Plants	Dec 2020	Jan - Apr 2021	May - Oct 2021	Nov - Feb 2022	Mar 2022	Mar 2022	Jul 2022

#### Schedule of ANS Standards in Development using RIPB Properties (Nov 2019) +4 months +6 months +4 months +2 weeks +2 Weeks ~4 months 2nd CC SubC or 1st CC ANS Draft Ballot/Comment Preliminary Ballot/Comment Standards App'd by Review/Comment Resolutions Resolutions Board ANSI **Standards Project** WG Resolutions (concurrent PR) (concurrent PR) Certification Approval Publication Mar 2020 Apr - Jul 2020 Aug - Jan 2021 Feb - May 2021 Jun 2021 Jun 2021 Oct 2021 ANS-30.1 (M. Linn) / \*RARCC (G. Flanagan) Risk-Informed & Performance-Based NPP Design Process ICNRM Rep: D. Johnson/K. Fleming/A. Maioli Draft issued to WG for ballot. Comments require more work. ANS-30.2 (A. Afzali) / \*RARCC (G. Flanagan) Project on hold awaiting determination of path forward with evaluation on the Licensing Modernization Project. Categorization Classification of SSCs for New Nuclear Power Plants ICNRM Rep: R. Grantom ANS-30.3 (K. Welter)/\*LLWRCC (G. Carpenter) Jul 2019 Feb 2021 Aug - Nov 2019 Dec - May 2020 Jun - Sept 2020 Oct 2020 Oct 2020 Advanced LWR Risk-Informed Performance-Based Design Criteria and Methods ICNRM Rep: Draft issued to SCoRA, RP3C, RARCC 8/15/19. Closed 8/5/17 Closed 4/9/18 Appeal in process ANS-54.1 (G. Flanagan) / \*RARCC (G. Flanagan) Closed 4/20/19 Nuclear Safety Criteria & Design Process for Liquid-Sodium-Cooled NPPs Draft provided to SCoRA & RP3C 2/20/18 ICNRM Rep: R. Budnitz Draft approved by the RARCC, but member with maintained objection requested a technical appeal. ANS-56.2 (E. Johnson)/\*LLWRCC (G. Carpenter) PINS submitted to ANSI 6/27/19. Schedule TBD. Containment Isolation Provisions for Fluid Systems After a LOCA ICNRM Rep: ANS-57.2 (R. Browder) / \*FWDCC (D. Hillyer) Mar 2020 Apr - Jul 2020 Aug - Jan 2021 Feb - May 2021 Jun 2021 Jun 2021 Oct 2021 Design Requirements for LWR Spent Fuel Storage Facilities at NPPs ICNRM Rep: Feb 2021 ANS-57.8 (J. Scaglione)/\*FWDCC (D. Hillyer) Nov 2019 Dec-Mar 2020 Apr-Sept 2020 Oct-Jan 2021 Feb 2021 Jun 2021 Fuel Assembly Identification ICNRM Rep: Draft provied to SCoRA & RP3C on 11/3/19 with comment due date of 12/1/19. ANS-57.11 (B. Eble) / \*NRNFCC (J. O'Brien) Mar 2019 N/A April - Feb 2019 Mar-Jun-2020 Jul-20 Jul 2020 Nov 2020 ISAs for Nonreactor Nuclear Facilities Closed 6/2/19 with significant comments; resolutions require additional time Draft provided to RP3C, SCoRA, and NCSCC on 4/3/19. A number of negatives and significant comments have been received. It is likely that JCNRM Rep: comment resolution will take longer than scheduled period. ANS-59.3 (R. Burg) / \*LLWRCC (G. Carpenter) PINS submitted to ANSI 1/10/19. Project not currently active. Schedule TBD. Nuclear Safety Criteria for Control Air Systems The working group questions whether RIPB methods can be incorporate but will consider as the standard is developed. ICNRM Rep: ANS Contacts: Prasad Kadambi, RP3C Chair: Phone: 301-236-4162 -- Email: praskadambi@verizon.net \*= ANS responsible consensus committee ESCC = Environmental & Siting Consensus Committee FWDCC = Fuel, Waste, & Decommissioning Consensus Committee LLWRCC = Large Light Water Reactor Consensus Committee NRNFCC = Nonreactor Nuclear Facilities Consensus Committee RARCC = Research and Advanced Reactors Consensus Committee

#### Tracking of RP3C Recommendations to Incorporate RIPB Methods (Updated 10/15/19) RP3C Response to SB Action Item 11/2018-14

					To be considered	In development		
CC Owner (WGC)	DESIGNATION		ЛС	Estimated Schedule for Drafts in Development Using RIPB Methods	Estimated Consideration Date to Incorporate RIPB Methods	RP3C Proposed Approach	CC Response to Proposed Approach	
ESCC (WGC: Y. Gao/R. Schneider)	ANS-	2	8		Recirculation ballot for limited substantive changes scheduled to close 11/7/2019.		P. Kadambi submitted comments from B. Youngblood & N. Chokshi on behalf of the RP3C.	WG addressed comments and provided comment responses. Responses were satisfactory.
ESCC (WGCs: D. Clark)	ANS-	2	26		PINS submitted to ANSI 10/1/19 and project initiated.		Approach addressed in 11-2018 RP3C Meeting	Revision will build on RIPB methods already in standard.
ESCC (WGC: K. Hanson)	ANS-	2	27		Draft issued for subcommittee, RP3C, and SCoRA review.		Needs coordination with ANS-2.26. RP3C comments provided to WG for consideration.	ESCC recognized need for coordination with ANS-2.26 during 3/20/19 call.
FWDCC (WGC: OPEN)	ANS-	57	1			Maintenance to be considered by 6/16/2024	LMP LBE approach may be applicable	TBD
FWDCC (WGC: R. Browder)	ANS-	57	3			Maintenance to be considered by 2/27/2023	LMP guidance document may be applicable	TBD
LLWRCC (WGC: J. Sickle)	ANS-	3	1			Believed to be NA for RIPB Maintenance to be considered by 11/20/2019	RP3C recommends PB approach with fitness-for-service considerations	LLWRCC is waiting until guidance document training.
LLWRCC (WGC: M. Smith)	ANS-	3	2			Maintenance to be considered by 4/4/2022	RP3C considers this a high priority standard for RIPB	LLWRCC is waiting until guidance document training.
LLWRCC (WGC. J. August)	ANS-	3	13		Project being re-evaluated; WG being reformed		RP3C considers this a high priority for advanced non-LWRs	LLWRCC is waiting until guidance document training.
LLWRCC (WGC: K. Geelhood)	ANS-	18	1			Maintenance to be considered by 11/1/2021	LMP work in context of DG-1353 should be considered	LLWRCC is waiting until guidance document training.
LLWRCC (WGC. E. Johnson- Turnipseed)	ANS-	51	10			Revision currently in final stage was initiated before RP3C. RIPB methods to be incorporated in next revision.	RP3C has reported interactions with WG	LLWRCC is waiting until guidance document training.
LLWRCC (WGC: J. Glover)	ANS-	56	1			Inactive project in consideration.	Work done with LMP on H2 control is relevant	LLWRCC is waiting until guidance document is issued to address.
LLWRCC (WGC: J. Glover)	ANS-	56	8			NA - a revision of this standard has been in development for some time; prior to formation of RP3C and is expected to be issued for ballot in 2019 with ANSI approval the following year. The next maintenance consideration in ~2024.	Part 50 App J is PB	LLWRCC is waiting until guidance document is issued to address.
LLWRCC (WGC: H. Liao)	ANS-	58	8		RP	3C comments addressed	d and standard approved 8	/8/2019.
LLWRCC (WGC:OPEN)	ANS-	58	9			Decision and schedule pending new chair/formation of WG.	SFC may be one of the high priority standards for LMP guidance application	LLWRCC is waiting until guidance document training.
LLWRCC (WGC: M. Linn)	ANS-	58	14			Maintenance to be considered by 1/17/2022	LMP guidance definitely applicable	LLWRCC is waiting until guidance document training.

#### Tracking of RP3C Recommendations to Incorporate RIPB Methods (Updated 10/15/19) RP3C Response to SB Action Item 11/2018-14

					To be considered	In development		
CC Owner (WGC)	CC Owner (WGC) DESIGNATION		NC	Estimated Schedule for Drafts in Development Using RIPB Methods	Estimated Consideration Date to Incorporate RIPB Methods	RP3C Proposed Approach	CC Response to Proposed Approach	
LLWRCC (WGC: M. Dooley)	ANS-	59	51			PINS in development; WG being formed.	High likelihood of PB guidance being applicable	LLWRCC is waiting until guidance document training.
LLWRCC (WGC: M. Dooley)	ANS-	59	52			PINS in development; WG being formed.	High likelihood of PB guidance being applicable	LLWRCC is waiting until guidance document training.
NRNFCC (WGCs: T. Anselmi & C. McMullin)	ANS-	3	14		Draft issued for CC, RP3C, and SCoRA review.		RP3C working with CC Chair	Recognized during 5/21/19 call. WG response to RP3C review comments pending.
FWDCC (WGC: R. Eble)	ANS-	57	11		Draft issued for CC, RP3C, and SCoRA review.		RP3C is ready to help	Recognized during 5/21/19 call. WG response to RP3C review comments pending.
NRNFCC (WGC: P. Rogerson)	ANS-	58	16			Maintenance in consideration.	High likelihood of LMP guidance being applicable	Recognized during 5/21/19 call.
RARCC (WGC: J. August)	ANS-	53	1			PINS in development; will work with RP3C.	RP3C working with WG Chair	Agreement
RARCC (WGC: G. Flanagan)	ANS-	54	1		Recirculation ballot closed 4/20/19 with 1 objection; appeal in process.		RP3C's input provided to WG.	RP3C input addressed via comment responses.
RARCC (WGC: OPEN)	ANS-	54	6			NA - no plans to ressurect this inactive project	Needs more consideration	NA

# Standards Prioritization Survey (Updated 10/31/19)

	TOP 10		
Rank	Title or Topical Area (No.)	Assigned CC	Status
1	Criteria for Severe Accident Evaluation (ANS-58.15)	SRACC	In consideration
2	Design Criteria for Safe Shutdown Following Selected Design Basis Events in Light Water Reactors (ANS-58.11)	LLWRCC	In consideration
3	Risk-Informed and Performance-Based Nuclear Power Plant Design Process (ANS-30.1)	RARCC	In development
4	Post-Accident Monitoring (ANS-TBD)	LLWRCC	In consideration
5	Standard for Level 1/Large Early Release Frequency Probabilistic Risk Assessment for Nuclear Power Plant Applications (ASME/ANS RA-S)	JCNRM	Pending industry input
6	Design Requirements for Light Water Reactor Spent Fuel Facilities at Nuclear Power Plants (ANS-57.2)	FWDCC	In development
7	Containment Hydrogen Control (ANS-56.1)	LLWRCC	Scope being considered
8	Properties of Planning, Development, Conduct, and Evaluation of Drills and Exercises for Emergency Preparedness at Nuclear Facilities (ANS-3.8.7)	LLWRCC	On hold due to lack of support
9	Properties of Radiological Emergency Response Plans and Implementing Procedures and Maintaining Emergency Response Capability for Nuclear Facilities (ANS-3.8.3)	LLWRCC	On hold due to lack of support
10	Determining Design Basis Flooding at Power Reactor Sites (ANS-2.8)	ESCC	In aproval pending public review.
	NEXT 10 (Middle)		
11	Probabilistic Seismic Hazard Analysis (ANS-2.29)	ESCC	Revision issued for ballot
12	Categorization of Nuclear Facility Structures, Systems, and Components for Seismic Design (ANS-2.26)	ESCC	PINS approved for revision
13	Criteria for Onsite Protective Actions During a Radiological Emergency (ANS-3.8.8)	LLWRCC	On hold due to lack of support
14	Design Requirements for New Fuel Storage Facilities at LWR Plants (ANS-57.3)	FWDCC	Published March 2018
15	Radioactive Source Term for Normal Operation of Light Water Reactors (ANS-18.1)	LLWRCC	Published November 2016
16	Criteria for Investigations of Nuclear Facilities Sites for Seismic Hazard Assessments (ANS-2.27)	ESCC	Revision issued for ballot
17	Nuclear Plant Reliability Assurance Program (RAP) (ANS- 3.13)	LLWRCC	Working group regrouping
18	Requirements for Preoperational and Startup Testing (ANS- 3.6)	LLWRCC	In consideration
19	Integrated Safety Assessments for Fuel Cycle Facilities (ANS- 57.11)	NRNFCC	Significant comments being addressed
20	Nuclear Power Plant Decommissioning Process (ANS- TBD)	FWDCC	In consideration

# ESCC Chairman's Report to the ANS Standards Board

Tuesday, November 19, 2019 • Marriott Wardman Park, Washington, D.C.

#### PINS in Development (2)

- ANS-2.18, "Standards for Evaluating Radionuclide Transport in Surface Water for Power Sites" (new standard)
- ANS-3.16, "Meteorological Aspects of Wildland Fire Response" (new standard)

#### PINS in Approval/Resolving Comments (1)

• ANS-2.32, "Guidance on the Selection and Evaluation of Remediation Methods for Subsurface Contamination" (new standard)

#### Standards in Development – Approved PINS (8)

- ANS-2.9, "Evaluation of Ground Water Supply for Nuclear Facilities" (reinvigoration of historical standard ANS-2.9-1980; R1989; W1999)
- ANS-2.16, "Criteria for Modeling Design-Basis Accidental Releases from Nuclear Facilities" (new standard)
- ANS-2.21, "Criteria for Assessing Atmospheric Effects on the Ultimate Heat Sink" (revision of ANSI/ANS-2.21-2012; R2016)
- ANS-2.22, "Environmental Radiological Monitoring at Nuclear Facilities" (new standard)
- ANS-2.26, "Categorization of Nuclear Facility Structures, Systems, and Components for Seismic Design" (revision of ANSI/ANS-2.26-2004; R2017)
- ANS-2.34, "Characterization and Probabilistic Analysis of Volcanic Hazards" (new standard)
- ANS-2.35, "Estimating the Socioeconomic Impacts of Construction, Operations, and Decommissioning a Nuclear Facility" (new standard)
- ANS-3.8.10, "Criteria for Modeling Real-time Accidental Release Consequences at Nuclear Facilities" (new standard)

#### Standards at Ballot/Resolving Comments (3)

- ANS-2.8, "Probabilistic Evaluation of External Flood Hazards for Nuclear Facilities" (reinvigoration of historical standard ANS-2.8-1992; W2002) (subsumed ANS-2.31)
- ANS-2.27, "Criteria for Investigations of Nuclear Facility Sites for Seismic Hazard Assessments" (revision of ANSI/ANS-2.27-2008; R2016)
- ANS-2.29, "Probabilistic Seismic Hazard Analysis" (revision of ANSI/ANS-2.29-2008; R2016)

#### Standard Approved in 2019 (1)

 ANSI/ANS-16.1-2019, "Measurement of the Leachability of Solidified Low-Level Radioactive Wastes by a Short-Term Test Procedure" (revision of ANSI/ANS-16.1-2003; R2017)

#### Standard Published in 2019 (1)

 ANSI/ANS-16.1-2019, "Measurement of the Leachability of Solidified Low-Level Radioactive Wastes by a Short-Term Test Procedure" (revision of ANSI/ANS-16.1-2003; R2017)

#### Delinguent Standards (5+ years since ANSI approval) (0)

No delinquent standards.

#### Responses to Inquiries and Clarifications (0)

No open inquiries or clarifications.

#### Membership Changes (2)

- Ali Simpkins is now with Oak Ridge Associated University but still classified as a consultant. No effect on ESCC BOI.
- Yan Gao took a position with Dominion Energy and has been moved from the "Individual" category to the "Owner/Operator" category. The ESCC remains in balance.

#### Volunteer Staffing Needs

Staffing Need (member, chair, etc.) # of positions	Standard #	Date Need Identified (Estimated)	Priority (H or M)*	Date Need Filled	Source**	Date-Actions Taken to Fill Need (Estimated)
Chair	ANS-2.9	2017	L		a, d, e	2017 - current
Members	ANS-2.18	pre-dates ESCC	М		a, d, e	various 2015- current
Chair	ANS-3.8.10	Sept 2018	Н		а	10/2018 - current
SubC Vice Chairs (2)	<ul> <li>Atmospheric</li> <li>General/ Monitoring</li> </ul>	2014	L		d, e	2014 - current
SubC Vice Chairs (2)	<ul> <li>Hydrogeological</li> <li>Environmental Impact</li> </ul>	2018	L		d, e	2018 various
* High (H) or mee	dium (M) priority bas	ed on priority of sta	andard or reaff	rmation time lim	nit.	

\*\*a. Personal contact, b. standards manager (ANS staff), c. ANS SC referral, d. ANS publication, e. ANS website, f. Linked in post, g. conference speakers and paper authors, h. internet search, i. other

#### Tracking of RP3C Recommendations to Incorporate RIPB Methods

					To be considered	In development		
CC Owner (WGC)	wner C) DESIGNATION		ON	Estimated Schedule for Drafts in Development Using RIPB Methods	Estimated Consideration Date to Incorporate RIPB Methods	RP3C Proposed Approach	CC Response to Proposed Approach	
ESCC (WGC: Y. Gao/R. Schneider)	ANS-	2	8		Recirculation ballot for limited substantive changes scheduled to close 11/7/2019.		P. Kadambi submitted comments from B. Youngblood & N. Chokshi on behalf of the RP3C.	WG addressed comments and provided comment responses. Responses were satisfactory.
ESCC (WGCs: D. Clark)	ANS-	2	26		PINS submitted to ANSI 10/1/19 and project initiated.		Approach addressed in 11-2018 RP3C Meeting	Revision will build on RIPB methods already in standard.
ESCC (WGC: K. Hanson)	ANS-	2	27		Draft issued for subcommittee, RP3C, and SCoRA review.		Needs coordination with ANS-2.26. RP3C comments provided to WG for consideration.	ESCC recognized need for coordination with ANS-2.26 during 3/20/19 call.

# FWDCC Chairman's Report to the ANS Standards Board

Tuesday, November 19, 2019 • Marriott Wardman Park, Washington, D.C.

#### PINS in Development (1)

 ANS-57.1 "Design Requirements for Light Water Reactor Fuel Handling Systems" (revision of ANSI/ANS-57.1-1992; R2015)

#### PINS in Approval/Comment Resolution (1)

 ANS-57.9, "Design Criteria for an Independent Spent Fuel Storage Installation (Dry Type)" (reinvigoration of historical standard ANS-57.9-1992; R2000) (SB comments require resolution)

#### Standards in Development – Approved PINS (2)

- ANS-57.2, "Design Requirements for Light Water Reactor Spent Fuel Facilities at Nuclear Power Plants" (reinvigoration of historical standard ANSI/ANS-57.2-1983)
- ANS-57.8, "Fuel Assembly Identification" (revision of ANSI/ANS-57.8-1995; R2017)

#### **Standards Recently Approved (1)**

 ANSI/ANS-57.1-1992; R2019, "Design Requirements for Light Water Reactor Fuel Handling Systems," (reaffirmation of ANSI/ANS-57.1-1992; R2015—approval pending close of public review)

#### Standards Published in 2019 (0)

No standards were published.

#### Delinquent Standards (5+ years since ANSI approval) (0)

The FWDCC has no delinquent standards.

#### **Responses to Inquiries Issued (0)**

The FWDCC has no open inquiries.

#### Membership Changes

There have been no recent membership changes.

#### Volunteer Staffing Needs

Staffing Need (Member, chair, etc.)# of positions	Standard #	Date Need Identified (Estimated)	Priority (H or M)*	Date Need Filled	Source**	Date-Actions Taken to Fill Need (Estimated)
Chair/Members	ANS-40.21	pre-dates FWDCC	М		d, e	various 2014 - current
Members	ANS-40.35	pre-dates FWDCC	М		d, e	various 2014 - current
Members	ANS-55.1	pre-dates FWDCC	М		d, e, f	various 2014 - current
Members	ANS-55.4	pre-dates FWDCC	М		d, e, f	various 2014 - current
Members	ANS-55.6	pre-dates FWDCC	М		d, e, f	various 2014 - current
Chair/Members	ANS-57.1	pre-dates FWDCC	М		d, e	various 2014 - current
Members	ANS-57.5	pre-dates FWDCC	М		d, e	various 2014 - current
Chair/Members	ANS-57.10	pre-dates FWDCC	М		е	various 2014 - current
Chair/Vice Chair	Decommissioning (Commercial & Research Facilities) SubC	2014	М		d, e	various 2014 - current
Chair/Vice Chair	High Level, GTCC, Low Level, & Mixed Waste Subcommittee	2014	М		d, e	various 2014 - current
Vice Chair	New and Used Fuel (Design Only) SubC	2014	М		d, e	various 2014 - current

\* High (H) or medium (M) priority based on priority of standard or reaffirmation time limit.

\*\*a. Personal contact, b. standards manager (ANS staff), c. ANS SC referral, d. ANS publication, e. ANS website, f. Linkedin post, g. conference speakers and paper authors, h. internet search, i. other

					To be considered	In development		
CC Owner (WGC)	DESIGNATION		NC	Estimated Schedule for Drafts in Development Using RIPB Methods	Estimated Consideration Date to Incorporate RIPB Methods	RP3C Proposed Approach	CC Response to Proposed Approach	
FWDCC (WGC: OPEN)	ANS-	57	1			Maintenance to be considered by 6/16/2024	LMP LBE approach may be applicable	TBD
FWDCC (WGC: R. Browder)	ANS-	57	3			Maintenance to be considered by 2/27/2023	LMP guidance document may be applicable	TBD

# JCNRM Chairman's Report to the ANS Standards Board

Tuesday, November 19, 2019 • Marriott Wardman Park, Washington, D.C.

#### JCNRM Leadership

The JCNRM is managed by a chair and vice chair representing each society. Robert Budnitz and Rick Grantom serve as co-chairs for ANS and ASME respectively. Dennis Henneke and Pamela Nelson serve as co-vice chairs for ANS and ASME respectively.

#### **JCNRM Meeting**

The JCNRM held a series of meetings on Monday, September 23, through Thursday 26, 2019, in Bethesda, Maryland. Numerous working group and subcommittee meetings were held on Monday through Wednesday, involving about 120 participants. The JCNRM Executive Committee met on Tuesday and Wednesday afternoons, and the 4-day-long meeting culminated on Thursday with a full-day meeting of the main committee (i.e., the JCNRM consensus committee). The main committee meeting addressed administrative issues such as membership, awards, open ballots, and proposals for future work, and it also had technical discussions on several important topics related to the standards-development work that it oversees. Consideration is being given to initiating a guidance document for risk-informed cybersecurity and physical security methods.

The next set of JCNRM meetings is anticipated to be held February 24, through February 27, 2020, with the site to be determined by the ASME Meetings Department.

Updates were provided on all projects in development (see the reports below).

#### ASME/ANS RA-S

The "next edition": Work on the revision of the JCNRM's main flagship PRA standard, ASME/ANS RA-S-2008, has been under way since the release of Addenda B in 2013. A reaffirmation of the standard was processed to keep the standard current while the revision is completed. This next version will be called a "new edition." This new edition is expected to contain many substantive changes based on feedback from recent users of the standard, along with extensive re-formatting and the like. Most work has been completed; however, a few important and difficult technical issues remain. Finalization awaits the incorporation of input from a series of PWROG/NRC workshops on the topic of what constitutes a "PRA upgrade" as distinct from a "PRA maintenance activity." The issue is important because different levels of peer review are required by the standard for these two categories of changes to an existing PRA. The working groups discussed the PWROG comments and are currently working on incorporating the agreed-upon changes. All parts are expected to be completed by the end of November. A ballot is expected in the December/January timeframe. The Next Edition will be redesignated RA-S-1.1.

<u>Seismic PRA Case</u>: The PRA user community requested the JCNRM to produce an expedited version of the next edition's section dealing with seismic PRA. The relevant JCNRM working group worked diligently for over a year, and produced a new section with updated requirements on seismic PRA that was approved by the JCNRM in March 2018, and issued in April. This "case" is already being used by several US nuclear-power-plant PRA groups that are developing new seismic PRAs, and it was also endorsed by the NRC for certain applications. This is a success story vis-à-vis the responsiveness of the JCNRM to a pressing industry need. A typographical error was recently identified in the Case, and a correction was issued in June 2019.

#### New Standards in Development

There are 6 new PRA methodology standards in various stages of development. Note that the JCNRM has decided that each of its new standards should be released initially for Trial Use and Pilot Application – not for approval as an American National Standard by the American National Standards Institute (ANSI). In the descriptions below, the trial-use status of each standard now under development is described.

ANS-58.22-2014, "Standard for Low Power and Shutdown Methodology for PRA Applications"

• The writing group is currently led by Jonathan Li.

- Because of technical difficulties and insufficient industry experience, it took a very long time to complete the trial-use standard; the WG began its work in 1999.
- ANS/ASME-58.22-2014 was published on <u>March 25, 2015</u>, for a 36-month trial use period.
- Five pilot applications at operating nuclear power plants were completed.
- Findings from the trial-use period are currently being incorporated into a revision of this standard, based in part on the five pilot applications.
- The final version of this revision is being worked on now, but will be held up until the completion of the "next edition" of our flagship at-power PRA standard, so that this standard can be fully coordinated with that at-power standard.
- A decision will be made by the JCNRM soon whether to incorporate the upcoming revised version into a future revision of ASME/ANS RA-S (the combined Level 1 standard) or to issue it as a stand-alone standard.

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

- The writing group is currently led by Ray Schneider, and this effort has been underway since 2005.
- ASME/ANS RA-S-1.2-2014 was published on January 5, 2015, for a 24-month trial use period. A one-year extension of the trial use period was subsequently approved.
- The trial-use period for the Level 2 PRA Standard closed January 2018. The document is still available for use during the current period as revisions are being incorporated.
- Findings from the trial-use period are being incorporated into a revision of the standard; the revised standard will be issued for ballot with the intent of seeking ANSI approval.
- The final version of this revision is being readied for a ballot in the November/December 2019 timeframe.

ASME/ANS RA-S-1.3-2017, "Standard for Radiological Accident Offsite Consequence Analysis (Level 3 PRA) to Support Nuclear Installation Applications" (previously ANS/ASME-58.25)

- The writing group is now led by Grant Teagarden, who took over in mid-2018 from Keith Woodard, who had chaired this effort since its inception in 2005.
- The standard was published on July 13, 2017, for a 24-month trial-use period; a one-year extension was subsequently approved extending the trial use period to July 13, 2020.
- The writing group is now beginning the work to revise the standard based on insights from the trial uses.
- It is expected that this work will continue into 2020, at which time a new version will be available for JCNRM ballot, with the intent of seeking ANSI approval.

#### ASME/ANS RA-S-1.4-2013, "Advanced Non LWR PRA Standard"

- The writing group is led by Karl Fleming, underway since 2007.
- A JCNRM ballot was held in spring 2013, and the standard was <u>published on December 9</u>, <u>2013</u>, for trial use and pilot application for a 36-month period.
- Nine pilots of this standard have been completed.
- Findings from the trial-use period are being incorporated into a revision of the standard; the revised standard will be issued for ballot with the intent of seeking ANSI approval.
- At the JCNRM meeting in late September, it was decided to complete this standard on an expedited schedule. It is now expected that this standard will be ready for ballot in March 2020, and ready for publication and unofficial use in December 2020, although the final editing and the ANSI-approval process will extend a few months into 2021.
- At the JCNRM meeting in September, an NRC staff member told the committee that the staff
  was contemplating endorsing the old 2013 (trial-use) version of this standard in a new
  Regulatory Guide. The JCNRM decided that this was inappropriate, and unanimously passed a
  motion to send a letter to the NRC staff explaining why, and explaining that a better course is to
  wait until the new (late 2020-early 2021) version is out before contemplating endorsing it. That
  letter is under development now by the two JCNRM co-chairs. The message has been

transmitted informally already to the NRC staff, and some staff members have informally signaled that they will likely defer to the JCNRM's judgment on this matter.

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

- The project was initiated in 2007. Sarah Bristol is currently the writing group chair.
- The JCNRM calls this the "ALWR PRA Standard."
- A JCNRM ballot was held in spring 2013. Additional changes were made to the draft, in part to accommodate applicability to small modular reactors that use light-water coolant.
- The writing group has incorporated additional comments from the NRC into the draft related to the NRC's ALWR Interim Staff Guidance.
- The ALWR team has reached consensus on the definition of Large Release Frequency. A ballot was issued to the JCNRM to approve the definition prior to the draft of the full standard being issued for ballot. Comment resolutions are in process.
- The ALWR Standard will be issued initially as a stand-alone standard. It will be issued initially for trial use. The intent is that it will later be incorporated into a revision of RA-S as a chapter or an appendix.
- The plan is to move ahead with the revision of the existing ALWR draft to align with the "Next Edition."

#### ASME/ANS RA-S-1.7-201x, "Trial Use Standard for Multi-Unit PRA"

- The writing group is led by Ricky Summit with Karl Fleming as vice chair, formally underway since early 2019.
- The JCNRM calls this the "MUPRA Standard."
- The PINS for the MUPRA Standard was approved by the ANS Standards Board in May 2019.
- The first working group meeting was held September 24, 2019, during the recent set of JCNRM meetings.
- The MUPRA Standard will be issued as a stand-alone standard. It will be issued initially for trial use. The schedule will be determined. The intent is that it will later be incorporated into a revision of RA-S as an appendix.

# ANS RISC merger with ASME CNRM to form a new "Joint Committee on Nuclear Risk Management": "Organizational" aspects merged in 2012, "business" aspects in 2016

The JCNRM's activities take place under the oversight of the ANS Standards Board and the ASME Board on Nuclear Codes and Standards. Both Boards must approve all important JCNRM standards actions and administrative changes. Both Boards consider the JCNRM to be a "consensus committee" reporting through the usual channels. The merger to create the JCNRM has two aspects, an "organizational" aspect and a "business" aspect. The "organizational" aspect, which was completed in early 2012 after over two years of administrative and liaison work, involved developing a "Rules and Operating Procedure" and a new structure for the joint committee. The structure consists of 3 subcommittees and a series of about 10 writing groups and working groups, and a half-dozen shortterm project teams. This structure has worked well and there have not been any conflicts between the two societies on anything of substance.

The JCNRM "business" aspect was finalized with the signing of a licensing agreement and a copyright agreement by the managements of both societies on June 23, 2016. The arrangement consists of ANS assumption of the administrative work of editing and publishing all new JCNRM standards and the related expenses; and ASME assumption of the work of arranging meetings, serving as JCNRM Secretary, managing the ballot process, and submitting ANSI documents as needed as well as a few other administrative tasks, and the related expenses. The JCNRM is obligated to follow the "Procedures for ASME Codes and Standards Development Committees." Supplemental procedures to address specifics unique to the JCNRM were developed. The ANS Standards Board has approved the procedures.

#### **Standards Inquiries and Delinquent Standards**

A reaffirmation was processed to keep ASME/ANS RA-S-2008/Sb-2013 ("Standard for Level 1/Large Early Release Frequency Probabilistic Risk Assessment for Nuclear Power Plant Applications") current while the revision is being completed. The JCNRM does not have any delinquent standards in need of maintenance.

A response to an inquiry on ASME/ANS RA-S-2008/Sb-2013 was approved and issued in October 2019. The JCNRM has no other active inquiries at this time.

#### Future Plans

The JCNRM's Executive Committee has been meeting more-or-less bi-weekly by conference call. The principal focus has always been to serve as the "planning committee" and "coordinating committee" to oversee governance of the large and complex set of JCNRM activities, with an eye on planning for up to about two years out. The most important JCNRM effort now is to develop the next version of the main PRA Standard ASME/ANS RA-S (see discussion above.) This next version, which we will call a "new edition" instead of an "addendum," is expected to have substantial changes to the format as well as to the content, based largely on feedback received in the past 3-5 years as this standard has been used by the commercial nuclear-power operating fleet and by the NRC. During this period of use, many areas have been identified where inconsistencies exist between different parts of the large PRA standard, mostly due to variable interpretations, and a few other problems have also been identified, each of which is being worked on by one of several *ad hoc* project teams within the larger JCNRM. Some of these issues have policy implications for how the standard is to be used, but mostly these are issues with technical substance.

The other major JCNRM task in the next year is to issue the ALWR PRA standard and the Non-LWR PRA standard under development as discussed in the opening section of this report. This is a major effort.

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

Finally, the JCNRM has been working with groups in several foreign countries about forming what we are calling "JCNRM International Working Groups" (IWGs). The Chinese and the Japanese have each already formed an IWG that the JCNRM has approved, and another new IWG is under active discussion in Korea. The Canadians have also inquired about the possibility, although their inquiry is currently dormant. Each IWG consists of several PRA and risk-management experts in the respective country who have agreed to perform reviews of JCNRM draft standards, to perform trial applications of our standards as appropriate, to propose changes to our standards or other new JCNRM initiatives, and generally to act as an "arm" of the JCNRM in the respective country. The Chinese IWG and the Japanese IWG each consist of a couple of dozen engineers. Each of these IWGs holds physical meetings in the foreign country, and its proceedings take place mostly in the foreign language. Each IWG has a chair designated by them but approved by the JCNRM, and each IWG chair will likely be appointed as a voting member of the JCNRM itself, although that decision will be taken on a case-bycase basis. (We have insisted that the English language skills of each IWG chair be acceptably competent. This has not been a problem at all so far.) The JCNRM sees the formation of IWGs as a way to involve foreign experts in an organized activity that can assist the JCNRM in its technical work. The benefit to our foreign colleagues is early access to our work products and an opportunity to influence them technically at a relatively early stage.

#### Financial Support

A series of grants to the ANS from the U. S. Nuclear Regulatory Commission (NRC) have provided financial support for the work of the standards committee, mainly to cover travel costs of participants who have no other financial support, but also to cover a few other selected administrative and meeting expenses. The latest of these was formally awarded in February 2015 and allows funds to be used

through February 2020. A grant proposal was submitted October 2019 in response to a new Funding Opportunity Announcement from the NRC specific to PRA voluntary consensus standards. We are hopeful that a new grant will be awarded before the February 2020 meeting.

# LLWRCC Chairman's Report to the ANS Standards Board

Tuesday, November 19, 2019 • Marriott Wardman Park, Washington, D.C.

#### PINS in Development (4)

- ANS-3.1, "Selection, Qualification and Training of Personnel for Nuclear Power Plants" (revision of ANSI/ANS-3.1-2014)
- ANS-3.15, "Cybersecurity for Nuclear Facilities" (proposed new standard—title TBD)
- ANS-58.2, "Design Basis for Protection of Light Water Nuclear Power Plants Against the Effects of Postulated Pipe Rupture" (reinvigoration of historical standard)
- ANS-60.1, "Export Control Standard" (proposed new standard—title TBD)

#### PINS in Approval (0)

No PINS are currently in approval.

#### Standards in Development – Approved PINS (6)

- ANS-3.5.1 "Nuclear Power Plant Simulators for Use in Simulation-Assisted Engineering and Non-Operator Training" (proposed new standard)
- ANS-3.8.7, "Properties of Planning, Development Conduct, and Evaluation of Drills and Exercises for Emergency Preparedness at Nuclear Facilities" (revision of historical standard ANSI/ANS-3.8.7-1998)
   \*\*\*LLWRCC members proposed a redirection of the emergency preparedness standards to new nonLWR plants. This includes ANS-3.8.1, ANS-3.8.2, ANS-3.8.3, and ANS-3.8.6.\*\*\*
- ANS-3.13 "Nuclear Plant Reliability Assurance Program (RAP) Development Guidance for Design, Construction, and Operation" (new standard)
- ANS-30.3, "Advanced Light-Water Reactor Risk-Informed Performance-Based Design Criteria and Methods" (new standard)
- ANS-56.2, "Containment Isolation Provisions for Fluid Systems After a LOCA" (historical revision of ANSI/ANS-56.2-1984; W1999)
- ANS-56.8, "Containment Leakage Testing Requirements" (revision of ANSI/ANS-56.8-2002; R2016) ANS-59.3, "Nuclear Safety Criteria for Control Air Systems" (reinvigoration of historical standard)

#### Standards at Ballot/Resolving Comments (1)

 ANS-51.10-201x, "Auxiliary Feedwater System for Pressurized Water Reactors" (revision of ANSI/ANS-51.10-1991; R2018)

#### Standards Approved & Published in 2019 (2)

- ANSI/ANS-3.5-2018, "Nuclear Power Plant Simulators for Use in Operator Training and Examination" (revision of ANSI/ANS-3.5-2009)
- ANSI/ANS-58.8-2019, "Time Response Design Criteria for Safety-Related Operator Actions" (revision of ANSI/ANS-58.8-1994; R2017)

#### Delinguent Standards (5+ years since ANSI approval) (1)

• ANSI/ANS-3.1-2014, "Selection, Qualification, and Training of Personnel for Nuclear Power Plants"

#### Responses to Inquiries in Development/Approval (0)

 An inquiry was received 4/10/19 on ANSI/ANS-18.1-2016, "Radioactive Source Term for Normal Operation of Light Water Reactors." A response was issued for LLWRCC approval. Comments on the ballot led to the determination that the erratum would constitute a substantive change and can only be issued via a revision.

#### Membership Changes

No changes in 2019.
#### **Volunteer Staffing Needs**

Staffing Need (Member, chair, etc.)# of positions	Standard #	Date Need Identified (Estimated)	Priority H or M)*	Date Need Filled	Source**	Date-Actions Taken to Fill Need (Estimated)
Members	ANS-3.13	2014	M		d, e	various 2014-current
Members	ANS-51.10	2014	М		d, e, f	various 2014-current
Members	ANS-56.2	April 2018	М	E. Johnson- Turnipseed (temp. chair)	d, e	May 2018-current
Chair/Members	ANS-58.6	2014	М		d, e	various 2014-current
Chair/Members	ANS-58.9	April 2017	М		d, e	various 2017-current
Chair/Members	ANS-58.11	pre-dates LLWRCC	М		d, e	various 2014-current
Members	ANS-59.51	pre-dates LLWRCC	м	Chair committed 3/2/2017	d. e. f	various 2014-current
Members	ANS-59.52	pre-dates LLWRCC	M	Chair committed 3/2/2017	d, e, f	various 2014-current
Members	ANS-60.1	2016	М		d, e	various 2016-current
Vice Chair	LWR & Reactor Auxiliary Systems Designs SubC	February 2018	М		d, e	April 2018-current
Chair	Power Generation & Plant Support Systems SubC	2017	н		d, e	2017-current

\* High (H) or medium (M) priority based on priority of standard or reaffirmation time limit.

\*\*a. Personal contact, b. standards manager (ANS staff), c. ANS SC referral, d. ANS publication, e. ANS website, f. Linkedin post, g. conference speakers and paper authors, h. internet search, i. other

Report continued on the next page

#### Tracking of RP3C Recommendations to Incorporate RIPB Methods

					To be considered	In development		
CC Owner (WGC)	DESIGNATION		NC	Estimated Schedule for Drafts in Development Using RIPB Methods	Estimated Consideration Date to Incorporate RIPB Methods	RP3C Proposed Approach	CC Response to Proposed Approach	
LLWRCC (WGC: J. Sickle)	ANS-	3	1			Believed to be NA for RIPB Maintenance to be considered by 11/20/2019 Maintenance to be considered	RP3C recommends PB approach with fitness-for-service considerations RP3C considers this a high priority.	LLWRCC is waiting until guidance document training.
(WGC: M. Smith)						by 4/4/2022	standard for RIPB	document training.
LLWRCC (WGC. J. August)	ANS-	3	13		Project being re-evaluated; WG being reformed		RP3C considers this a high priority for advanced non-LWRs	LLWRCC is waiting until guidance document training.
LLWRCC (WGC: K. Geelhood)	ANS-	18	1			Maintenance to be considered by 11/1/2021	LMP work in context of DG-1353 should be considered	LLWRCC is waiting until guidance document training.
LLWRCC (WGC. E. Johnson- Turnipseed)	ANS-	51	10			Revision currently in final stage was initiated before RP3C. RIPB methods to be incorporated in next revision.	RP3C has reported interactions with WG	LLWRCC is waiting until guidance document training.
LLWRCC (WGC: J. Glover)	ANS-	56	1			Inactive project in consideration.	Work done with LMP on H2 control is relevant	LLWRCC is waiting until guidance document is issued to address.
LLWRCC (WGC: J. Glover)	ANS-	56	8			NA - a revision of this standard has been in development for some time; prior to formation of RP3C and is expected to be issued for ballot in 2019 with ANSI approval the following year. The next maintenance consideration in ~2024.	Part 50 App J is PB	LLWRCC is waiting until guidance document is issued to address.
LLWRCC (WGC: H. Liao)	ANS-	58	8		RP3	C comments addressed	d and standard approved 8	3/8/2019.
LLWRCC (WGC:OPEN)	ANS-	58	9			Decision and schedule pending new chair/formation of WG.	SFC may be one of the high priority standards for LMP guidance application	LLWRCC is waiting until guidance document training.
LLWRCC (WGC: M. Linn)	ANS-	58	14			Maintenance to be considered by 1/17/2022	LMP guidance definitely applicable	LLWRCC is waiting until guidance document training.
LLWRCC (WGC: M. Dooley)	ANS-	59	51			PINS in development; WG being formed.	High likelihood of PB guidance being applicable	LLWRCC is waiting until guidance document training.
LLWRCC (WGC: M. Dooley)	ANS-	59	52			PINS in development; WG being formed.	High likelihood of PB guidance being applicable	LLWRCC is waiting until guidance document training.

# **NRNFCC** Chairman's Report to the ANS Standards Board

Tuesday, November 19, 2019 • Marriott Wardman Park, Washington, D.C.

#### PINS in Development/Approval (0)

No PINS are in development or approval.

#### Standards at Ballot/Resolving Comments (2)

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

#### Delinquent Standards (5+ years since ANSI approval) (1)

• ANSI/ANS-58.16-2014, "Safety Categorization and Design Criteria for Nonreactor Nuclear Facilities"

#### **Responses to Inquiries (0)**

No open inquiries.

#### Standards Approved/Published (0)

No standards were published.

#### Membership Changes (1)

Hash Hashemian, AMS Corporation, was approved as a member of the NRNFCC in the vendor category. Adam Deatherage will serve as his permanent alternate.

#### Volunteer Staffing Needs (0)

The NRNFCC currently has no staffing needs. If a decision is made that a revision of ANSI/ANS-58.16-2014 should be initiated, working group members will be recruited.

#### Tracking of RP3C Recommendations to Incorporate RIPB Methods

				To be considered	In development		
NRNFCC	ANS-	3	14	Draft issued for CC, RP3C,		RP3C working with CC Chair	Recognized during 5/21/19 call.
(WGCs: T.				and SCoRA review.			
Anselmi & C.							WG response to RP3C review
McMullin)							comments pending.
FWDCC	ANS-	57	11	Draft issued for CC, RP3C,		RP3C is ready to help	Recognized during 5/21/19 call.
(WGC: R.				and SCoRA review.			
Eble)							WG response to RP3C review
							comments pending.
NRNFCC	ANS-	58	16		Maintenance in consideration.	High likelihood of LMP guidance	Recognized during 5/21/19 call.
(WGC: P.						being applicable	
Rogerson)							

# NCSCC Chairman's Report to the ANS Standards Board

Tuesday, November 19, 2019 • Marriott Wardman Park, Washington, D.C.

#### PINS in Development (3)

- ANS-8.10, "Criteria for Nuclear Criticality Safety Controls in Operations With Shielding and Confinement" (revision of ANSI/ANS-8.10-2015)
- ANS-8.17, "Criticality Safety Criteria for the Handling, Storage, and Transportation of LWR Fuel Outside Reactors" (revision of ANSI/ANS-8.17-2004; R2014)
- ANS-8.19, "Administrative Practice for Nuclear Criticality Safety" (revision of ANSI/ANS-8.19-2014)

#### PINS in Approval (0)

No PINS are currently in approval.

#### Standards in Development – Approved PINS (8)

- ANS-8.1, "Nuclear Criticality Safety in Operations with Fissionable Materials Outside Reactors" (revision of ANSI/ANS-8.1-2014)
- ANS-8.3, "Criticality Accident Alarm System" (revision of ANSI/ANS-8.3-1997; R2017)
- ANS-8.7, "Nuclear Criticality Safety in the Storage of Fissile Materials" (revision of ANSI/ANS-8.7-1998; R2017)
- ANS-8.12, "Nuclear Criticality Control and Safety of Plutonium-Uranium Fuel Mixtures Outside Reactors" (revision of ANSI/ANS-8.12-1987; R2016)
- ANS-8.20, "Nuclear Criticality Safety Training" (revision of ANSI/ANS-8.20-1991; R2015)
- ANS-8.22, "Nuclear Criticality Safety Based on Limiting and Controlling Moderators" (revision of ANSI/ANS-8.22-1997; R2016)
- ANS-8.26, "Criticality Safety Engineer Training and Qualification Program" (revision of ANSI/ANS-8.26-2007; R2016)
- ANS-8.28, "Administrative Practices for the Use of Non-Destructive Assay Measurements for Nuclear Criticality Safety" (new standard)

#### Standards @ Ballot/Resolving Comments (1)

 ANS-8.21, "Use of Fixed Neutron Absorbers in Nuclear Facilities Outside Reactors" (reaffirmation of ANSI/ANS-8.21-1995; R2019)

#### Standards Approved in 2019 (5)

- ANSI/ANS-8.15-2014 (R2019), "Nuclear Criticality Control of Selected Actinide Nuclides (reaffirmation of ANSI/ANS-8.15-2014)
- ANSI/ANS-8.17-2004 (R2019), "Criticality Safety Criteria for the Handling, Storage and Transportation of LWR Fuel Outside Reactors" (reaffirmation of ANSI/ANS-8.17-2004; R2014)
- ANSI/ANS-8.19-2014 (R2019), "Administrative Practices for Nuclear Criticality Safety" (reaffirmation of ANSI/ANS-8.19-2014)
- ANSI/ANS-8.21-1995 (R2019), "Use of Fixed Neutron Absorbers in Nuclear Facilities Outside Reactors" (reaffirmation of ANSI/ANS-8.21-1995; R2011)
- ANSI/ANS-8.23-2019, "Nuclear Criticality Accident Emergency Planning and Response" (revision of ANSI/ANS-8.23-2007; R2012)

#### Standards Published (1)

 ANSI/ANS-8.23-2019, "Nuclear Criticality Accident Emergency Planning and Response" (revision of ANSI/ANS-8.23-2007; R2012)

#### Delinquent Standards – 5+ Years Since ANSI Approval (0)

The NCSCC has no delinquent standards.

#### Responses to Inquiries in Development (1)

An inquiry was received 6/26/2019 on ANSI/ANS-8.3-1997 (R2017), "Criticality Accident Alarm System." The response was approved by the NCSCC and certified by the Standards Board. Issuance is pending.

<u>Membership Changes</u> Thomas Marenchin resigned concurrent with changing company affiliations from NRC to DOE.

#### Volunteer Staffing Needs

The NCSCC has no staffing needs.

#### Tracking of RP3C Recommendations to Incorporate RIPB Methods

NA – No standards identified.

## **RARCC Chairman's Report to the ANS Standards Board**

Tuesday, November 19, 2019 • Marriott Wardman Park, Washington, D.C.

#### PINS in Development (1)

• ANS-53.1, "Nuclear Safety Design Process for Modular Helium-Cooled Reactor Plants" (revision of ANS-53.1-2011; R2016)

#### PINS in Approval (0)

No PINS are currently in approval.

#### Standards in Development – Approved PINS (6)

- ANS-1, "Conduct of Critical Experiments" (revision of ANSI/ANS-1-2000; R2012)
- ANS-15.8, "Quality Assurance Program Requirements for Research Reactors" (revision of ANSI/ANS-15.8-1995; R2018)
- ANS-15.22, "Classification of Structures, Systems and Components for Research Reactors" (new standard)
- ANS-20.2, "Nuclear Safety Design Criteria and Functional Performance Requirements for Liquid-Fuel Molten Salt Reactor Nuclear Power Plants" (new standard)
- ANS-30.1, "Integrating Risk and Performance Objectives into New Reactor Nuclear Safety Designs" (new standard)
- ANS-30.2, "Structures, Systems, and Component Classification for Nuclear Power Plants" (new standard)

#### Standards at Ballot/Resolving Comments (1)

ANS-15.16-2015 (R201x), "Emergency Planning for Research Reactors" (reaffirmation of ANSI/ANS-15.16-2015)

#### Proposed Standard Pending Appeal (1)

 ANS-54.1, "Nuclear Safety Criteria and Design Process for Liquid-Sodium-Cooled Reactor Nuclear Power Plants" (revision of historical standard ANSI/ANS-54.1-1989)

#### Standards Approved in 2019 (2)

- ANSI/ANS-1-2002 (R2012), "Conduct of Critical Experiments" (reaffirmation in process; revision in development)
- ANSI/ANS-14.1-2004 (R2019), "Operation of Fast Pulse Reactors" (reaffirmation of ANSI/ANS-14.1-2004; R2014)

#### Delinguent Standards (5+ years since ANSI approval) (0)

No delinquent standards.

#### **Responses to Inquiries (0)**

The RARCC has no open inquiries.

#### Staffing Needs

Staffing (Membe chair, et positior	Need r, tc.)# of is	Standard #	Date Need Identified (Estimated)	Priority (H or M)*	Date Need Filled	Source**	Date-Actions Taken to Fill Need (Estimated)
Member	s	ANS-53.1	11/2018	М		d, e	various 2014-current

\* High (H) or medium (M) priority based on priority of standard or reaffirmation time limit.

\*\*a. Personal contact, b. standards manager (ANS staff), c. ANS SC referral, d. ANS publication, e. ANS website, f. Linkedin post, g. conference speakers and paper authors, h. internet search, i. other

#### Membership Changes

 Mark Peres changed company affiliations from Fluor to Kairos Power. Since the RARCC already has representation from Kairos Power, the two members with Kairos Power now share one vote.

					To be considered	In dev elopment		
CC Owner (WGC)	DE	SIGNA	TIO	N	Estimated Schedule for Drafts in Development Using RIPB Methods	Estimated Consideration Date to Incorporate RIPB Methods	RP3C Proposed Approach	CC Response to Proposed Approach
RARCC (WGC: J. August)	ANS-	53	1			PINS in development; will work with RP3C.	RP3C working with WG Chair	Agreement
RARCC (WGC: G. Flanagan)	ANS-	54	1		Recirculation ballot closed 4/20/19 with 1 objection; appeal in process.		RP3C's input provided to WG.	RP3C input addressed via comment responses.
RARCC (WGC: OPEN)	ANS-	54	6			NA - no plans to ressurect this inactive project	Needs more consideration	NA

#### Tracking of RP3C Recommendations to Incorporate RIPB Methods

# SRACC Chairman's Report to the ANS Standards Board

Tuesday, November 19, 2019 • Marriott Wardman Park, Washington, D.C.

#### PINS in Development (1)

• ANS-19.8, "Fission Product Yields for 235U, 238U, and 239P" (proposed new standard)

#### Standards in Development – Approved PINS (10)

- ANS-6.1.1, "Neutron and Photon Fluence-to-Dose Conversion Coefficients" (reinvigoration of historical standard ANSI/ANS-6.1.1-1991)
- ANS-6.4.2, "Specification for Radiation Shielding Materials" (revision of ANSI/ANS-6.4.2-2006)
- ANS-6.4.3, "Gamma-Ray Attenuation Coefficients & Buildup Factors for Engineering Materials" (reinvigoration of historical standard ANSI/ANS-6.4.3-1991)
- ANS-10.4, "Verification and Validation of Non-Safety-Related Scientific and Engineering Computer Programs for the Nuclear Industry" (revision of ANSI/ANS-10.4-2008; R2016)
- ANS-19.3, "Steady-State Neutronics Methods for Power Reactor Analysis" (revision of ANSI/ANS-19.3-2011; R2017)
- ANS-19.3.4, "Determination of Thermal Energy Deposition Rates in Nuclear Reactors" (revision of ANS-19.3.4-2002; R2017)
- ANS-19.5, "Requirements for Reference Reactor Physics Measurements" (historical revision of ANSI/ANS-19.5-1995—new standard)
- ANS-19.6.1, "Reload Startup Physics Tests for Pressurized Water Reactors" (revision of ANSI/ANS-19.6.1-2016)
- ANS-19.9, "Delayed Neutron Parameters for Light Water Reactors" (new standard)
- ANS-19.12, "Nuclear Data for the Production of Radioisotope" (new standard)

#### Standards at Ballot/Resolving Comments (1)

 ANS-19.6.1-201x, "Reload Startup Physics Tests for Pressurized Water Reactors" (revision of ANSI/ANS-19.6.1-2011; R2016)

#### Standards Approved/Published in 2019 (3)

- ANSI/ANS-5.1-2014 (R2019), "Decay Heat Power in Light Water Reactors," (reaffirmation of ANSI/ANS-5.1-2014)
- ANSI/ANS-5.10-1998 (R2013), "Airborne Release Fractions at Non-Reactor Nuclear Facilities" (maintenance requested)
- ANSI/ANS-19.1-2019, "Nuclear Data Sets for Reactor Design Calculations" (revision of ANSI/ANS-2002; R2011)

#### Delinguent Standards (5+ years since ANSI approval) (1)

• ANSI/ANS-5.4-2011, "Method for Calculating the Fractional Release of Volatile Fission Products from Oxide Fuel (maintenance requested)

#### **Responses to Inquiries in Development (0)**

The SRACC has no open inquiries.

#### Membership Changes (0)

There have been no recent membership changes.

#### Volunteer Staffing Needs

Staffing Need (Member, chair, etc.)# of positions	Standard #	Date Need Identified (Estimated)	Priority (H or M)*	Date Need Filled	Source**	Date-Actions Taken to Fill Need (Estimated)
Chair/Members	ANS-6.3.1	2015	М		d,e	various 2015-current
Members	ANS-19.8	pre-dates SRACC	М		a, d, e	various 2014-current
Chair/Members	ANS-19.9	pre-dates	М		a, d, e	various 2014-current

		SRACC			
Chair/Members	ANS-19.12	pre-dates SRACC	М	d, e	various 2014-current

\* High (H) or medium (M) priority based on priority of standard or reaffirmation time limit.

\*\*a. Personal contact, b. standards manager (ANS staff), c. ANS SC referral, d. ANS publication, e. ANS website, f. Linkedin post, g. conference speakers and paper authors, h. internet search, i. other

### Tracking of RP3C Recommendations to Incorporate RIPB Methods

NA - No standards identified.

## ANS Standards Board Task Groups (Updated 10/2019)

#### **Policy Task Group**

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

Steven Arndt, Chair\* George Flanagan Prasad Kadambi Patricia Schroeder

NOTE: Current SB Chair = Policy TG Chair

#### **External Communications Task Group**

<u>Scope:</u> Improve the links between ANS and users (utilities, designers, architect engineers, universities, national labs, and fuel fabricators), national regulators, other U.S. SDOs, and international SDOs. One member should be actively involved with the NRC Standards Forum.

OPEN, Chair\* Amir Afzali Stanley Levinson (JCNRM/SCoRA)

#### **Internal Communications Task Group**

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

Bill Turkowski , Chair (SB)\*

\* Chair (may be changed at the discretion of the task group)

\*\* No CC chairs on the task groups other than by personal preference

Links Between the ANS Standards Committee and Other SDOs and Other Related									
Organizations (5/29/19)									
NOTE: List	t will need updating/verification by ne	w External Comm	unications TG Chair						
Name of SDO/and Other	Standards Committee Liaison	Link Adequate	Next Actions						
		?	++						
		:							
AISC		r r							
AGS	Jeffery Brault (NRNFCC)	Y							
AIChE		?							
ANSI & ISO TC 85 SC 6	Prasad Kadambi (SB)	Y							
ASCE	Carl Mazzola (SB)	Y							
ASME NQA	Chuck Moseley (LLWRCC)	Y							
ASTM-C26		?							
EPRI	Andrew Sowder (SB)	Y							
	Donald Spellman (SB liaison to NPEC)		1						
	Dendu Spennan (SD haison to Nr Ee)	V							
		ř							
INMM	Ronald Knief (NCSCC)	Ŷ							
INPO		2							
HPS	Christopher Gramham (SRACC)	Y							
JCNRM/SCoRA	Stanley Levinson (SB)	Y							
NCRP		?							
NEI		Ν	Needs assignment						
NFPA	ļ	?							
Acronyms									
ACI: American Concrete Inst	itute								
AGS: American Glovebox Ass	sociation								
AIChE: American Institute of	Chemical Engineers								
AISC: American Institute of S	teel Construction								
ANSI: AMERICAN National Sta									
ASCE. American Society of C	Vil Elignicers	Cucle							
FPRI: Flectric Power Researc	h Institute	cycie							
HPS: Health Physics Society									
IEEE/NPEC: Institute of Elect	rical and Electronics Engineers/Nuclear Power	r Enginnering Commi	ttee						
INMM: Institute of Nuclear N	Materials Management								
INPO: Institute of Nuclear Pl	ant Operations								
ISO: International Organization for Standardization									
JCNRM/SCoRA: Joint Commi	ttee on Nuclear Risk Management/SubComm	ittee on Risk Applicat	ion						
NCRP: National Council on R	adiation Protection								
NEI: Nuclear Energy Institute	2								
NFPA: National Fire Protection Association									