



MINUTES

Standards Board

June 13, 2017

Hyatt Regency San Francisco

Members Present:

George F. Flanagan, SB Chair & RARCC Chair, Oak Ridge National Laboratory

*Steven L. Stamm, SB Vice Chair, Individual

John Fabian, Secretary Pro Tem, American Nuclear Society

*Patricia (Pat) A. Schroeder, Secretary, American Nuclear Society

Amir Afzali, Observer, Southern Company

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

*Russell Bell, NEI Liaison, Nuclear Energy Institute

Michaele Brady Raap, Observer, Individual

Robert J. Budnitz, JCNRM Co-Chair, Lawrence Berkeley National Laboratory

Gene Carpenter, LLWRCC Chair, U.S. Department of Energy

Donald R. Eggett, FWDCC Chair, Individual

*Dennis Henneke, Observer, General Electric Company

N. Prasad Kadambi, RP3C Chair & ISO & ANSI Liaison, Individual

*Mark A. Linn, Observer, Oak Ridge National Laboratory

John Nakoski, Member at Large, U.S. Nuclear Regulatory Commission

James O'Brien, NRNFCC Chair, U.S. Department of Energy

*R. David Sachs, Member at Large, Individual

*William Reuland, Observer, Individual

Andrew Smetana, SRACC Chair, Savannah River National Laboratory

Andrew Sowder, Member at Large, Electric Power Research Institute

William M. Turkowski, Member at Large, Westinghouse

Edward Wallace, Member at Large, Individual

Larry Wetzel, BWX Technologies, Inc.

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

Guests:

Robert Coward, ANS Vice President/President Elect, MPR

Voting Member Absent:

Charles (Chuck) H. Moseley, Member at Large, Individual

Carl A. Mazzola, ESCC Chair, CB & I Federal Services

1. Welcome and Introductions

ANS Standards Board (SB) Chair George Flanagan welcomed all to the meeting; introductions were made and a quorum was established.

2. Approval of Agenda

Members reviewed the agenda. Amir Afzali requested that he be provided an opportunity to update members on the Licensing Modernization Project under other business. The agenda was approved with the correction of Agenda Item 3.E to recognize Priority Task Group (TG), not Policy TG.



3. SB Chair Report

SB Chair George Flanagan reported on new business within ANS from the Standing Committee Chair meeting held the previous day. ANS journals are now being produced by an outside company by the name of Taylor & Francis. Access to ANS journals will be available to all members as a member benefit. ANS has changed its incorporation from New York to Illinois. Society challenges include declining utility membership and involvement and declining revenue. The Society has been operating on a deficit for several years and has been using investments to cover operating expenses. New ways to increase contributions and membership are being explored. As ANS President Elect, Robert Coward will be working to get the Society looking forward. Part of this will be evaluating the need for so many Standing Committees. A State of the Society presentation was released last night. Flanagan will provide the presentation to Pat Schroeder for distribution.

ACTION ITEM 6/2017-01: George Flanagan to provide Pat Schroeder the State of the Society presentation for distribution to SB members.

DUE DATE: June 20, 2017

A. SB Leadership Change

Flanagan informed members that Michael Brady Raap will be assuming the SB Chair position following the close of the annual meeting. Donald Eggett will simultaneously be assuming the SB Vice Chair position. John Nakoski was recently appointed to the Standards Board to represent the U.S. Nuclear Regulatory Commission. Both James August and David Sachs completed two terms on the SB. Their positions will be filled by Amir Afzali and Mark Linn. Additionally, Russel Bell has replaced Jim Riley as the Nuclear Energy Institute (NEI) liaison.

B. Report to the Board of Directors (BOD)

Flanagan quickly reviewed his BOD Report. A copy is available as Attachment 1.

C. Standards Committee Assessment Form (Attachment 2)

The assessment form for the Standards Committee was provided to the Planning Committee as requested along with the Standards Committee Strategic Plan on April 21, 2017. Flanagan reported that other ANS Standing Committees have yet to complete the assessment form. The assessment form is to be updated before each national meeting and will be reviewed by the BOD during their quarterly calls.

Steven Stamm explained that a subgroup of SB members developed the Standards Committee Strategic Plan and SMART Matrix. The SMART matrix was prepared at the recommendation of several members when the strategic plan was prepared. The SMART Matrix was reviewed by the SB before issuance and is now continually updated. Stamm explained that the color coding within the matrix refers to due dates (timing) not priority.

D. U. S. Nuclear Regulatory Commission (NRC) Standards Forum and Future Interaction

The NRC Standards Forum replaced the Nuclear Energy Standards Coordination Collaborative. Flanagan reminded members that he made a presentation on advanced reactors at the first NRC Standards Forum last September. A request was made at the meeting for standards development organizations (SDOs) to champion or support specific projects. On behalf of ANS, Flanagan agreed to champion or support the following projects:

- Design standards for high temperature gas reactors
- Design standards for liquid metal reactors (including sodium fluoride reactors)
- Methodology for risk-informed strategies
- Reactor coolant radiological source terms for normal operation
- Emergency planning zone (EPZ) size evaluation



ANS offered points of contact to Shivani Mehta of the NRC to support the projects. ANS will need to report on the status/interactions on these projects at the next NRC Standards Forum meeting scheduled for September 26, 2017. Members agreed that ANS could champion other projects and should take the lead on advanced reactor standards. ANS representatives should come prepared with a list of additional standards to champion with dates and timeframes. Support of the NRC Standards Forum should be recognized within the Standards Committee Strategic Plan.

ACTION ITEM 6/2017-02: Individuals noted below are to prepare short presentations in their areas of responsibility for use at the September NRC Standards Forum:

- Gene Carpenter: reactor coolant radiological source terms for normal operation & EPZ size evaluation.
- George Flanagan: design standards for liquid metal reactors (including sodium fluoride reactors)
- Prasad Kadambi: methodology for risk-informed strategies
- Ed Wallace: design standards for high temperature gas reactors

DUE DATE: July 31, 2017

Flanagan explained that the U.S. Department of Energy (DOE) project to evaluate standards needed for advanced reactors has identified a number of standards that are in need of a revision or need to be developed in a timely manner. These findings will be reported at the upcoming NRC Standards Forum. John Nakoski explained that the NRC needs a driver to consider supporting development of a standard. Flanagan believes that the drivers will come from the findings of the DOE project.

Flanagan suggested that new SB Chair Michael Brady Raap create a subgroup to evaluate how ANS can support the NRC Standards Forum. The following motion was made.

MOTION:

The incoming SB Chair to form a subgroup to evaluate how ANS can support the NRC Standards Forum, determine additional standards ANS can champion, and to incorporate these findings in the Standards Committee Strategic Plan.

The motion passed unanimously.

Action Item 6/2017-03: Michael Brady Raap to form a subgroup to evaluate how ANS can support the NRC Standards Forum, determine additional standards ANS can champion, and to incorporate these findings in the Standards Committee Strategic Plan.

DUE DATE: July 1, 2017

E. TG Changes and Chairs

NOTE: TG scopes and member lists can be found as Attachment 3.

The open positions of the Priority TG and External Communications TG chairs were recognized. Both positions have been open since Donald Spellman's retirement the end of last year. Members outside the SB could support these positions as long as they report to the SB. Ed Wallace suggested that the External Communications TG Chair should be able to travel to or local to the Washington D.C. area in order to outreach for ANS in D.C. Members suggested that ANS Washington Representative Craig Piercy may be able to help establish contacts in the area. Amir Afzali offered his help since he often travels to D.C. He will be added to the External Communications TG as a member.

Members discussed the need for the Priority TG. With the use of the survey methods, members agreed that a Priority TG was not needed. The following motion was made:



MOTION:

To dissolve the Priority TG.

The motion was approved unanimously.

Incoming SB Chair Michael Brady Raap to seek a chair for the External Communications TG and to add Afzali to the TG as a member.

ACTION ITEM 6/2017-04: Incoming SB Chair Michael Brady Raap to review the chair and members for all of the TGs and solicit/adjust as appropriate. Specific actions discussed include the following:

- Solicitation of new External Communications TG Chair
- Add Amir Afzali as a member of the External Communications TG
- Solicitation of new Sales TG Chair

DUE DATE: July 31, 2017

4. ANS President/Incoming President Address

George Flanagan introduced incoming ANS President Robert Coward. Coward recognized the significance of the ANS standards program and expressed appreciation to SB members for all their work. He commended members on the recently developed Standards Committee Strategic Plan. Robert Budnitz expressed his sentiment that standards are not necessarily a revenue generator. They do generate revenue as a whole, but many as an individual product do not. Coward explained that looking at the finances of the Society, the bulk of revenue comes from two national meetings, utility conference, paper products, and advertising. The world is moving away from paper products and organizations have cut travel budgets. Both are examples of current industry issues having a negative effect on ANS revenue. Coward suggested that the SB should focus on developing excellent and timely standards for use by the industry. Members recognized the ability of NEI to develop guidance much quicker than ANS can develop a standard due to utility engagement and the need for ANS to determine what's necessary to expedite standards development. Coward feels that it is imperative for ANS to adapt to the changing environment, work with other organizations including NEI, and emerge as the leader.

Prasad Kadambi informed Coward of his suggestion that ANS should consider developing a conformity assessment program. He has been directed by the SB to prepare a business plan to move forward. Kadambi explained that he would need a driver and sponsor to proceed. Coward is familiar with the ASME Conformity Assessment Program because his company, MPR, is certified to use the ASME stamp. However, he was not sure how to apply this type of program to ANS standards. Coward asked that the SB consider how ANS can provide benefits not just for its members but for other organizations as well.

5. ANS Standards Committee Strategic Plan

Steven Stamm asked members to refer to Attachment 4 for the responses he drafted to the ANS Executive Committee comments on the Standards Committee Strategic Plan. The draft responses were reviewed and several suggestions were made.

Members agreed with proposed responses for comments #1 – #5.



A statement will be added to the response to comment #6 that risk-informed and/or performance-based (RIPB) standards will be developed on a case-by-case basis as appropriate. The action item assigned during the Risk-informed, Performance-based Principles and Policy Committee (RP3C) meeting was for all standards and projects to be evaluated and a recommendation be made to incorporate RIPB insights, if applicable.

SB oversight to ensure that RIPB methods are incorporated into ANS standards was discussed. The role of the SB is to provide policy direction. Procedures dictate that consensus committees provide the technical approval of all standards. This would include the direction on the use of RIPB methods. The SB has an opportunity to review prepared Project Initiation Notification System (PINS) forms when a revision or new standard is initiated. The PINS form indicates whether the proposed standard will include RIPB methods. SB members should review the PINS form for this information and comment appropriately.

Members agreed to leave the words “a leadership role” in comment response #6 since there were other organizations that developed RIPB standards for the industry.

Responses to comments #7 and #8 were reviewed and accepted as drafted.

Members discussed Executive Committee comment #9 to be more proactive in seeking grants for standards development. Two obstacles were recognized: 1) the acceptance of grant proposals are restricted to open bids that have specific scopes and 2) the limited budget of federal agencies that exist. A suggestion was made to follow bills in Congress to get an idea for what grant bids may be announced. Members thought that Craig Piercy would be able to keep the SB advised of any possibilities and that this should be added to the comment response.

ACTION ITEM 6/2017-05: Michael Brady Raap to request that Craig Piercy let the SB know of bills in Congress that may result in grant opportunities for standards.
DUE DATE: August 1, 2017

Responses to comments #10 - #12 were accepted as drafted.

Comment #13 was discussed in regards to improving member value and market share. Members feel that the response should provide the sentiment of the SB that ANS members are being engaged citing the Standards Priority Survey issued to all members as an example. Additionally, the response should note that the SB will review the State of the Society presentation and address appropriately.

ACTION ITEM 6/2017-06: Steven Stamm to revise the responses to the Executive Committee comments on the Standards Committee Strategic Plan as follows:

Comment Response #6:

Add a statement that risk-informed and/or performance-based (RIBP) standards will be developed on a case-by-case basis as appropriate and recognize the action item assigned during the RP3C meeting for all standards and projects be evaluated and a recommendation made to incorporate RIPB insights, as applicable.

Comment Response #9:

Include a statement that the SB will work proactively to determine potential funding opportunities that may result in standards grants.



Comment Response #13:

Include the sentiment of the SB that ANS members are being engaged citing the Standards Priority Survey as an example.

DUE DATE: June 30, 2017

6. SB Vice Chair Report

A. 2017 Standards Committee Training Program Status

Steven Stamm reported the following stats from the training presentations last year and this year for both live sessions and use of recorded sessions via YouTube:

- 2016: 112 Participants on Live Webinars; 5 Participants via YouTube
- 2017: 18 Participants on Live Webinars; 22 Participants via YouTube
- Total Participants = 157 (695 current Standards Committee members)

With poor response to the live presentations this year, members agreed that it was not worth the instructor's time to support the program. Members felt that it would be more beneficial for consensus committee chairs to emphasize the importance of viewing the presentations by working group members, particularly newly formed working groups.

ACTION ITEMS 6/2017-07: Consensus committee chairs to emphasize the importance of reviewing the training presentations by working groups.

DUE DATE: September 1, 2017

B. Standards Service Award Selection Committee Report

The selection committee was chaired by Steven Stamm and included Carl Mazzola and Andrew Smetana. Steven Stamm reported that four very qualified candidates all with excellent nominations and supporting letters were considered. The selection committee recommended Dr. Abraham Weitzberg for the 2017 award. He was chosen in recognition of 47 years of outstanding contributions in the development of reactor physics standards many of which he supported in leadership roles.

The following motion was made:

MOTION:

The SB concurs with the nomination of Abraham Weitzberg as the recipient of the 2017 Standards Service Award.

ACTION ITEM 6/2017-08: Incoming SB Chair Michael Brady Raap to contact Dr. Abraham Weitzberg to inform him that he has been selected as the 2017 recipient of the Standards Service Award.

DUE DATE: July 1, 2017

7. Secretary/Staff Report

Pat Schroeder summarized key points of her staff report available as Attachment 5. A copy of the sales report is available as Attachment 6.

A request was made to give SB members access to all workspaces and ANS standards. Additional items of interest include PINS forms, project plans, and draft standards in development. Schroeder explained that the configuration of Workspace provides full access to workspaces for those on the



group's roster. Steven Stamm added that including SB members on all rosters would mean that they would get email notices from all groups. While working groups are strongly encouraged to use Workspace, only a few utilize the site. Most working group workspaces have only a file to two posted. Schroeder suggested that SB members be added to an existing workspace that provides access to ANS standards for consensus committee and subcommittee chairs. PINS forms and project plans could be posted to this site as well.

ACTION ITEM 6/2017-09: Pat Schroeder to 1) repurpose the existing site for consensus committee and subcommittee chairs to include all SB members allowing access to ANS standards, 2) add all open PINS forms and project plans to this workspace, and 3) notify SB members when completed and provide links to access.

DUE DATE: June 20, 2017

8. Overview of NRC Management Directive 6.5

John Nakoski provided members an overview of the new NRC Management Directive 6.5. He reviewed the presentation available as Attachment 7. Nakoski recognized Shivani Mehta as the SDO Coordinator for NRC. She is responsible for initiating NRC involvement with ANS. Nakoski clarified that Mehta will act as a facilitator and will go to specific NRC representatives who are the subject matter experts and relay their positions to SDOs. Nakoski recognized that the NRC had limited travel budgets and stated that the absence of a NRC representative at a meeting did not indicate lack of interest. Division directors will be the ones that determine policy for the NRC and therefore should be the ones to contact to influence policy. While NRC endorsement is desired, members agreed that standards should be written to include best practices without consideration of NRC endorsement.

9. SC Strategic Plan Report

A. Consensus Committee Performance Metrics

A high-level summary of the consensus committee performance metrics evaluation (Attachment 8 – summary and potential changes) was provided by Steven Stamm. Members discussed potential changes to the metrics. The possibility of changing the metric for meeting and ballot participation was discussed in depth. A majority of members agreed that the metrics should remain unchanged until another year of data is available. Stamm asked that each consensus committee establish action items with a schedule to implement improvements. Consensus committee chairs were asked to address these items during their chair's report later in the meeting.

B. Progress of Goals & Objectives

Progress of initiatives identified on the SMART Matrix were reviewed. Several of the actions under Goal 1 remain open due the lack of a chair. Several RP3C actions remain open as well. Work continued on enhancing the Professional Division Liaison Program as part of Goal 2. Several additional project plans were needed to meet the goal for development of six project plans (3.A). Robert Budnitz stated that the JCNRM uses a milestone schedule for all of their standards as their project plan and would send to Stamm.

ACTION ITEM 6/2017-10: Robert Budnitz to provide Steven Stamm a copy of the JCNRM Milestone Schedule as their project plan.

DUE DATE: June 20, 2017



American Nuclear Society

Goal 3 would also need to be revised due to the disbandment of the Priority TG and to be more proactive in identification of potential upcoming grant opportunities.

No progress was made on several actions under Goal 4 without an External Communications TG Chair and would need the completion dates to be changed.

Members briefly discussed the use of NEI guidance documents as the subject for potential ANS documents. This idea was not pursued as past discussions did not end positively.

In response to Goal 5, Stamm reported that he contacted working group chairs for information about their success in staffing working groups. About half of the working group chairs responded. A format for consensus committees to track their staffing needs was reviewed. A suggestion was made that this report be included in future consensus committee chair reports. The staffing survey results and the proposed format for future reporting are provided as Attachment 9.

ACTION ITEM 6/2017-11: Pat: Schroeder to add the staffing tracking report to each consensus committee report.

DUE DATE: ANS 2017 winter meeting.

ACTION ITEM 6/2017-12: Steven Stamm to update the SMART Metric as discussed. This includes the following:

- Completion dates should be revised.
- Actions for the Priority TG should revised/reassigned.
- The status of Goal 1.C should be corrected to recognize the External Communications TG Chair.
- Goal 3.E should be revised to be more proactive in anticipating potential upcoming grant opportunities.
- The year for Goal 4.B should be changed to 2018.

DUE DATE: July 1, 2017

Several successes were recognized. Reaffirmations increased significantly reducing delinquent standards. The general information standards presentation titled “Unraveling the Mystery of Consensus Standards” was developed and offered as a member benefit in January. About a hundred members registered for the presentation.

The updated SMART Matrix is available following the list of action items after the minutes reflecting changes as discussed.

C. Possible Future Grant Opportunities

Based on earlier discussions, Stamm questioned whether members felt that proposals should be drafted at this time. Grant opportunities were not expected in the near future, and there is no way to know what the grant opportunity will be. Members agreed that the best option at this time was to stay informed of upcoming possibilities.

10. Certification of Balance of Interest Reports (Attachment 10)

Pat Schroeder confirmed that all committees comply with the requirement that no one interest category constitutes more than one third of the committee. The following motion was made:



MOTION:

To approve the BOI reports for each CC as presented.

The motion was approved unanimously.

Robert Budnitz explained that the JCNRM is becoming heavy in participation from members in the “Individual” category. He did not feel that the classification for individuals that operate their own consulting firm should be “Individual.” Members agreed that this could be a problem for other consensus committees in the near future as many members were at or reaching retirement age and often remain engaged. Members discussed changing the definition for “Consultants” to include individuals that are independent contractors, but this might just shift the heaviness to a different category. Pat Schroeder was asked to consider options to redefine balance of interest definitions to reduce classification of members as “Individuals” and present to the SB Chair for consideration. Schroeder added that she’ll need to work with her counterpart at ASME since the JCNRM must meet ASME and ANS balance of interest requirements. Any change to the balance of interest category definitions requires SB approval. Since the balance of interest definitions are included with our accredited procedures, ANSI approval is required as well.

ACTION ITEM 6/2017-13: Pat Schroeder to provide the SB Chair options to redefine the balance of interest categories to reduce classification of members in the “Individual” category to the SB Chair for consideration.
DUE DATE: September 1, 2017

11. Professional Division (PD)/Consensus Committee Interface (Attachments 11 & 12)

William Turkowski provided members an update of the PD Liaison Program. His report is provided in his presentation available as Attachment 11. Members recognized that some PDs did not directly relate to one consensus committee but may overlap two. Steven Stamm suggested that consensus committee chairs review the list of PD liaisons (Attachment 12) to help identify the relevant consensus committee(s). It may be beneficial to appoint a couple of individuals as the liaison.

ACTION ITEM 6/2017-14: Consensus Committee Chairs to review the list of liaisons to ANS PDs and suggest the relevant consensus committee(s).
NOTE: The list is Attachment 12 to these minutes.
DUE DATE: August 30, 2017

Larry Wetzel recognized the strong support that the Nuclear Criticality Safety Consensus Committee receives from the Nuclear Criticality Safety Division. The Nuclear Criticality Safety Division holds a standards forum at each national meeting to discuss standards. The standards forum is also a resource for soliciting volunteers for the program.

12. Student Section/Associate Membership Report (Attachment 13)

George Flanagan directed members to Attachment 13 providing the list of associate members. Members discussed their experience with associate member participation. Several members found that associate members did not remain engaged for long. This could be because of career changes and could also be because of boredom due to the slow development process. SB members feel strongly that all young professionals that express interest in standards should be found a place on a working group. Any problems placing a young professional should be brought to the attention of the SB. Associate member requests should be coordinated through Pat



Schroeder so that placement is tracked. Schroeder was asked to include a total of active individuals in the Associate Member Program from one meeting to the next.

ACTION ITEM 6/2017-15: Pat Schroeder to add totals to track associate members on the associate member log.

DUE DATE: October 2017 for the winter meeting report

13. Review of Open Action Item Report

The review of open action items were skipped due to time. The list of action items with a status report (as included in the meeting materials) follows these minutes.

14. RP3C Report

RP3C Chair Prasad Kadambi provided members a brief presentation as a report from the RP3C meeting held the previous day. A copy is provided as Attachment 14. A RP3C RIPB Operating Plan has been drafted. RP3C reviewed the operating plan and made recommendations for inclusion and set a completion date by September 2017. The RP3C recommended the following additions to the draft plan:

- Section on RIPB guidance
- Section on indoctrination of working groups on RIPB
- Section on review and support of ANS standards
- Section on interfaces with SDOs, industry, regulators
- Section on self-assessment for effectiveness

The operating plan outline will have dates and names to achieve the objectives under each element. An integral part of the operating plan will be completing the RP3C action item to categorize all ANS standards and projects (i.e., current, withdrawn, active, inactive) into one of three categories -- RIPB, PB, or not applicable. Development of the content will include implementation of RIPB principles in ANS-3.14, "Process for Aging Management and Life Extension of Nonreactor Nuclear Facilities," and ANS-58.14, "Safety and Pressure Integrity Classification Criteria for Light Water Reactors." James O'Brien had previously suggested using NRNFCC standards as examples. RP3C chose ANS-3.14 from NRNFCC and ANS-58.14 from LLWRCC. ANS-58.14 Working Group Chair Mark Linn suggested that ANS-58.14 could be used as a second example. Gene Carpenter confirmed that he found the use of ANS-58.14 acceptable as an example from the LLWRCC. The operating plan will also incorporate SB decisions on ANS Executive Committee inputs and the statement proposed by past NCSCC Chair Robert Busch on standards development once addressed by the SB. Kadambi explained that more information is needed before the RP3C can recommend a proposal on Busch's statement to the Policy TG for consideration.

ACTION ITEM 6/2017-16: RP3C to issue their operating plan with inclusion of the following:

- RP3C action item to categorize all ANS standards and projects (i.e., current, withdrawn, active, inactive) into one of three categories -- RIPB, PB, or not applicable.
- Implementation of RIPB principles in ANS-3.14, "Process for Aging Management and Life Extension of Nonreactor Nuclear Facilities," and ANS-58.14, "Safety and Pressure Integrity Classification Criteria for Light Water Reactors."
- SB decisions on ANS Executive Committee inputs, and
- The statement proposed by past NCSCC Chair Robert Busch on standards development once addressed.

DUE DATE: September 1, 2017



ACTION ITEM 6/2017-17: Larry Wetzel to check with Robert Busch on the purpose and background of his proposed statement.
DUE DATE: July 1, 2017

A decision was made to reassign the action of addressing Robert Busch's statement on standards develop (Action Item 11/2016-29) to the SB Policy TG. The following action item was created to replace/close Action Item 11/2016-29.

ACTION ITEM 6/2017-18: The Policy TG to determine how the statement on standards development drafted by Robert Busch is addressed.
DUE DATE: August 1, 2017

15. Consensus Committee Chair Reports

Consensus committee chairs were requested to address the following items in their report:

- Consensus committee performance improvement activities
 - Plan for any standards that are over five years old
 - Status of High Priority standards efforts
 - Top Ten Standards Progress (Attachment 15)
 - 11-20 Standards Evaluation (Attachment 16)
 - Personnel needs/actions taken
 - Identification and progress of new standards, including status of Project Plans
 - Plan for Inquiries over 2 months old
- A. Environmental and Siting Consensus Committee (ESCC) (Attachment 17)
The written report is available as Attachment X. James O'Brien is a member of the committee and confirmed that Mazzola was addressing the committee's performance. He added that Mazzola does a really good job staying on top of ESCC projects.
- B. Fuel, Waste, and Decommissioning Consensus Committee (FWDCC) (Attachment 18)
In addition to the written report, Donald Eggett reported that ANS-57.3, "Design Requirements for New Fuel Storage Facilities at Light Water Reactor Plants," will be issued for a recirculation ballot shortly. ANS-57.2, "Design Requirements for Light Water Reactor Spent Fuel Storage Facilities at Nuclear Power Plants," will be initiated once ANS-57.3 is approved. Eggett recognize that two of the committee's standards were administratively withdrawn due to inability to perform maintenance. The committee will be working to reinvigorate both and will consider expanding application to decommissioning. In addition, the FWDCC is looking to prioritize work on a few significant decommissioning opportunities to develop standards. Mitch Sanders, Westinghouse, has committed to be the new subcommittee chair for the New and Used Fuel (Design Only) Subcommittee. David Hillyer will be taking over as FWDCC Chair at the close of the annual meeting. Eggett confirmed that the FWDCC reviewed the consensus committee metrics evaluation and participation issues and actions moving forward were addressed.
- C. Joint Committee on Nuclear Risk Management (JCNRM) (Attachment 19)
Robert Budnitz summarized his written report which acknowledged several standards issued for trial use. He explained that pilots were being conducted during the trial use period. Comments from the pilots will be incorporated into the standards, and they will be rebaloted before seeking ANSI approval. The main effort of the JCNRM for the last few years has been revising the flagship standard ASME/ANS RA-S, "Standard for Level 1/Large Early Release



Frequency Probabilistic Risk Assessment for Nuclear Power Plant Applications.” Part 5 of RA-S is being issued in advance as a Case. The Case was not approved unanimously, but consensus was achieved. The negatives are based on a few changes that were not able to be incorporated into the Case. These changes will be incorporated into the revision of the standard expected to be issued next year. Resolutions were provided but not documented in ASME’s electronic balloting system. The resolutions should be formalized in the next week. He will provide the resolutions to SB members to address negatives on the letter ballot to certify the Case.

ACTION ITEM 6/2017-19: Robert Budnitz to provide the SB a copy of the comment resolutions on the Part 5 Case.
DUE DATE: June 23, 2017

Budnitz estimates that well over a hundred volunteers support JCNRM standards, and the committee is struggling to accept all that are interested. There have been no conflicts between the two societies.

Budnitz explained that the JCNRM is currently carrying four representatives from Jensen Hughes on the roster due to the merger with ERIN Engineering. Initially a request was made to Jensen Hughes to reduce their voting members. This was before ASME decided to change their policy which would allow up to four votes from one organization for committees with more than 30 members. Nonetheless, Budnitz believes that the JCNRM will look to reduce Jensen Hughes votes in the future.

- D. Large Light Water Reactor Consensus Committee (LLWRCC) (Attachment 20)
Gene Carpenter highlighted several activities recognized on his chair report available as Attachment 20. He acknowledged challenges in resolving comments on the ballot of ANS-3.5, “Nuclear Power Plant Simulators for Use in Operator Training and Examination.” Several open positions were recognized. Carpenter will be personally contacting members that have poor ballot or meeting participation.
- E. Nonreactor Nuclear Facilities Consensus Committee (NRNFCC) (Attachment 21)
A written report is available as Attachment 21. James O’Brien updated members on the status of the two active projects within NRNFCC. He acknowledged that the projects are moving slowly. Proposed new standard ANS-57.11, “Integrated Safety Assessments for Nonreactor Nuclear Facilities,” was proposed by the NRC but has little support from industry. George Flanagan suggested that ANS-57.11 could be used by molten salt reactors. O’Brien liked the idea of broadening the scope and stated that he’d discuss with the chair.

ACTION ITEM 6/2017-20: James O’Brien to discuss broadening the scope of ANS-57.11 to include molten salt reactors with the project’s chair.
DUE DATE: August 1, 2017

Larry Wetzel stated that it was his understanding that the NCSCC would be provided the draft of ANS-57.11 for review in parallel to the NRNFCC ballot.

- F. Nuclear Criticality Safety Consensus Committee (NCSCC) (Attachment 22)
Larry Wetzel reported that the revision of ANSI/ANS-8.3-1997 (R2012), “Criticality Accident Alarm System,” is moving in the right direction thanks to ANS-8 Subcommittee Chair Doug Bowen. Bowen has stepped in by facilitating weekly calls and made very good progress. One NCSCC member that had poor ballot participation has stepped down to the observer role.



Wetzel added that the last NCSCC ballot had 100% participation. More detail can be found in Attachment 22.

- G. Research and Advanced Reactors Consensus Committee (RARCC) (Attachment 23)
Flanagan recapped his chair report for the RARCC. He informed members that the draft of ANS-54.1, "Nuclear Safety Criteria and Design Process for Liquid-Sodium-Cooled-Reactor Nuclear Power Plants," should be ready next week to start the approval process. Participation issues have been addressed and improvements have been seen. Additional information can be found in Attachment 23.
- H. Safety and Radiological Analyses Consensus Committee (SRACC) (Attachment 24)
In addition to activities recognized on the SRACC Chair Report (Attachment 24), Andrew Smetana reported that the SRACC unanimously approved the administrative withdrawal of ANSI/ANS-10.2-2000 (R2009), "Portability of Scientific and Engineering Software." The standard was written in the time when FORTRAN was used. The standard still has value. A revision will be initiated when the time is right. Smetana confirmed that members with poor participation were contacted.

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

- A. SB TG Reports (TG List with scopes & membership— Attachment 3)
In addition to the need for a new External Communications TG Chair, the position of Sales TG Chair will be open with the change in SB membership after the annual meeting. Action Item 6/2017-04 was assigned earlier for incoming SB Chair Michael Brady Raap to review the chair and members for all of the TGs and solicit/adjust as appropriate.
- B. Liaison Reports (Liaison List – Attachment 25)
Russell Bell was not able to participate in the SB meeting in the afternoon and provided his NEI Liaison Report via email. A copy of the report is available as Attachment 26.

17. Other business

Amir Afzali provided members an update on the Licensing Modernization Program. They are trying to create a systematic process for RIPB licensing. The group meets with the NRC to discuss progress every six weeks. Once complete, reports will be incorporated into NEI guidance for NRC endorsement. Several members expressed concern that NRC does not have the staff and budget to support this plan as currently funded. Afzali feels that a cooperative effort between the government and industry is imperative.

ACTION ITEM 6/2017-21: Pat Schroeder to distribute Amir Afzali's presentation on the Licensing Modernization Program to SB members.
DUE DATE: June 20, 2017

George Flanagan asked Afzali for his thoughts on where the standards development process can be expedited. Afzali believes that a standard can be developed within three years—set the goal and keep to the schedule. He added that it may be necessary to deconstruct the program to reinvent it to be more productive. Several members expressed the sentiment that the length of the time to develop a standard is the result of the entire program being supported by experts that volunteer their time and you can't force volunteers. In addition, the length of time to develop and obtain approval of a new standard is typically driven by the users' needs, e.g., utility participation, and their engagement in driving the standard to completion. There was a bit of debate on the possibility of paying an individual or a few individuals to quickly write a standard to be entered into the



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consensus approval process. Balance of interest is required only at the consensus committee level, the committee that formally approves the standard. ANS can accept funding and pay experts to draft a standard.

When questioned, Afzali suggested that the Licensing Modernization Program be used to provide direction to develop and review existing standards.

18. Review of action items from this meeting

Action items assigned during the meeting were reviewed. Action items assigned during the meeting can be found on the list of action items following these minutes.

19. Future Meetings

- ANS Winter Meeting, October 29-November 2, 2017, Marriott Wardman Park, Washington, DC
- ANS Annual Meeting, June 17-21, 2018, Marriott Philadelphia Downtown, Philadelphia, PA

20. Adjournment

The meeting was adjourned.

Standards Board Action Item Report from 6/13/2017 Meeting

Due to limited time at the meeting, open action items were not reviewed. This list of action items includes those assigned at the 6/13/17 meeting and those that either remain open or have not formally been closed from previous meetings.

Action Item	Description	Responsibility	Status/Comments /Reassignments
06/2017-01	George Flanagan to provide Pat Schroeder the State of the Society presentation for distribution to SB members. DUE DATE: June 20, 2017	George Flanagan	OPEN
06/2017-02	Individuals noted below are to prepare short presentations in their areas of responsibility for use at the September NRC Standards Forum: <ul style="list-style-type: none"> • Gene Carpenter: reactor coolant radiological source terms for normal operation & EPZ size evaluation. • George Flanagan: design standards for liquid metal reactors (including sodium fluoride reactors) • Prasad Kadambi: methodology for risk-informed strategies • Ed Wallace: design standards for high temperature gas reactors DUE DATE: July 31, 2017	Gene Carpenter, George Flanagan, Prasad Kadambi, Ed Wallace	OPEN
06/2017-03	Michaele Brady Raap to form a subgroup to evaluate how ANS can support the NRC Standards Forum, determined additional standards ANS can champion, and to incorporate these findings in the Standards Committee Strategic Plan. DUE DATE: July 1, 2017	Michaele Brady Raap	OPEN
06/2017-04	Incoming SB Chair Michaele Brady Raap to review the chair and members for all of the TGs and solicit/adjust as appropriate (scopes/member lists – Attachment 3 of 6/13/17 minutes). Specific actions discussed include the following: <ul style="list-style-type: none"> • Solicitation of new External Communications TG Chair • Add Amir Afzali as a member of the External Communications TG • Solicitation of new Sales TG Chair DUE DATE: July 31, 2017	Michaele Brady Raap	OPEN
06/2017-05	Michaele Brady Raap to request that Craig Piercy let the SB know of bills in Congress that may result in grant opportunities for standards. DUE DATE: August 1, 2017	Michaele Brady Raap	OPEN
06/2017-06	Steven Stamm to revise the responses to the Executive Committee comments on the Standards Committee Strategic Plan as follows: <p>Comment Response #6: Add a statement that risk-informed and/or performance-based (RIBP) standards will be developed on a case-by-case basis as appropriate and recognize the action item assigned during the RP3C meeting for all standards and projects be evaluated and a recommendation made to incorporate RIPB insights, as applicable.</p> <p>Comment Response #9: Include a statement that the SB will work proactively to determine potential funding opportunities that may result in standards grants.</p> <p>Comment Response #13: Include the sentiment of the SB that ANS members are being engaged citing the Standards Priority Survey as an example.</p> DUE DATE: June 30, 2017	Steven Stamm	OPEN

Standards Board Action Item Report from 6/13/2017 Meeting

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Action Item	Description	Responsibility	Status/Comments /Reassignments
06/2017-07	Consensus Committee Chairs to emphasize the importance of reviewing the training presentations by working groups. DUE DATE: September 1, 2017	Consensus Committee Chairs	OPEN
06/2017-08	Incoming SB Chair Michael Brady Raap to contact Dr. Abraham Weitzberg to inform him that he has been selected as the 2017 recipient of the Standards Service Award. DUE DATE: July 1, 2017	Michael Brady Raap	OPEN
06/2017-09	Pat Schroeder to 1) repurpose the existing site for consensus committee and subcommittee chairs to include all SB members allowing access to ANS standards, 2) add all open PINS forms and project plans to this workspace, and 3) notify SB members when completed and provide links to access. DUE DATE: June 20, 2017	Pat Schroeder	OPEN
06/2017-10	Robert Budnitz to provide Steven Stamm a copy of the JCNRM Milestone Schedule as their project plan. DUE DATE: June 20, 2017	Robert Budnitz	OPEN
06/2017-11	Pat: Schroeder to add the staffing tracking report to each consensus committee report. DUE DATE: ANS 2017 winter meeting.	Pat Schroeder	OPEN
06/2017-12	Steven Stamm to update the SMART Metric as discussed. This includes the following: <ul style="list-style-type: none"> Completion dates should be revised. Actions for the Priority TG should be revised/reassigned. The status of Goal 1.C should be corrected to recognize the External Communications TG Chair. Goal 3.E should be revised to be more proactive in anticipating potential upcoming grant opportunities. The year for Goal 4.B should be changed to 2018. DUE DATE: July 1, 2017	Steven Stamm	OPEN
06/2017-13	Pat Schroeder to provide the SB Chair options to redefine the balance of interest categories to reduce classification of members in the "Individual" category to the SB Chair for consideration. DUE DATE: September 1, 2017	Pat Schroeder	OPEN
06/2017-14	Consensus Committee Chairs to review the list of liaisons to ANS PDs and suggest the relevant consensus committee(s). DUE DATE: August 30, 2017	Consensus Committee Chairs	OPEN
06/2017-15	Pat Schroeder to add totals to track associate members on the associate member log. DUE DATE: October 2017 for the winter meeting report	Pat Schroeder	OPEN

Standards Board Action Item Report from 6/13/2017 Meeting

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Action Item	Description	Responsibility	Status/Comments /Reassignments
06/2017-16	<p>RP3C to issue their operating plan with inclusion of the following:</p> <ul style="list-style-type: none"> RP3C action item to categorize all ANS standards and projects (i.e., current, withdrawn, active, inactive) into one of three categories -- RIPB, PB, or not applicable. Implementation of RIPB principles in ANS-3.14, "Process for Aging Management and Life Extension of Nonreactor Nuclear Facilities," and ANS-58.14, "Safety and Pressure Integrity Classification Criteria for Light Water Reactors." SB decisions on ANS Executive Committee inputs, and The statement proposed by past NCSCC Chair Robert Busch on standards development once addressed. <p>DUE DATE: September 1, 2017</p>	<p>RP3C</p> <p>Prasad Kadambi, Ed Wallace</p>	OPEN
06/2017-17	<p>Larry Wetzel to check with Robert Busch on the purpose and background of his proposed statement.</p> <p>DUE DATE: July 1, 2017</p>	Larry Wetzel	OPEN
06/2017-18	<p>The Policy TG to determine how the statement on standards development drafted by Robert Busch is addressed.</p> <p>DUE DATE: August 1, 2017</p>	Policy TG	OPEN
06/2017-19	<p>Robert Budnitz to provide the SB a copy of the comment resolutions on the Part 5 Case.</p> <p>DUE DATE: June 23, 2017</p>	Robert Budnitz	OPEN
06/2017-20	<p>James O'Brien to discuss broadening the scope of ANS-57.11 to include molten salt reactors with the project's chair.</p> <p>DUE DATE: August 1, 2017</p>	James O'Brien	OPEN
06/2017-21	<p>Pat Schroeder to distribute Amir Afzali's presentation on the Licensing Modernization Program to SB members.</p> <p>DUE DATE: June 20, 2017</p>	Pat Schroeder	OPEN
1/2017-01	<p>Ed Wallace to provide George Flanagan a copy of NEI 15-02, "Industry Guidance for the Development of Tier 1 and ITAAC Under 10 CFR Part 52," as it may be relevant to Action Item 11/2016-07 for the development of an ITAAC standard for advanced reactors.</p>	Ed Wallace	<p>Completed</p> <p>Provided 1/25/17</p>
1/2017-02	<p>Pat Schroeder to schedule a teleconference to discuss Ed Wallace's comments on the Documentation Requirements proposal along with Steven Stamm.</p>	Pat Schroeder	<p>Completed</p> <p>Call held 2/6/17.</p>
1/2017-03	<p>George Flanagan to check with David Pointer about Carl Mazzola's offer to present the non Standards Committee member presentation to the Membership Committee at their next meeting.</p>	George Flanagan	<p>Completed</p> <p>Mazzola provided PPT at March/April meeting.</p>
1/2017-04	<p>James O'Brien to provide Steven Stamm the current draft of the RIPB Plan.</p>	James O'Brien	<p>Completed</p> <p>Draft provided 1/25/17</p>

Standards Board Action Item Report from 6/13/2017 Meeting

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Action Item	Description	Responsibility	Status/Comments /Reassignments
1/2017-05	Pat Schroeder to add an agenda item for the June 2017 Standards Board meeting to discuss possible future grant opportunities and the status of the prioritization effect. (relates to Goal #3E of the SMART Matrix).	Pat Schroeder	Completed Item added under SC Strategic Plan Report. NOTE: Action questioned in light of notice that no grants w/b issued in near future.
1/2017-06	Pat Schroeder to send the ESCC Metric Evaluation to Ed Wallace for reference.	Pat Schroeder	Completed Sent 1/25/17
1/2017-07	Steven Stamm to check with William Turkowski to confirm whether a “plan” or guidance was provided to PD liaisons (relates to Goal #3F3 of the SMART Matrix). DUE DATE: September 1, 2017	Steven Stamm	OPEN Plan has been completed. Has it been sent to all CCs and PDs? 5/1/2017).
1/2017-08	Pat Schroeder to send a copy of the industry newsletter prepared for James Riley’s use to Steven Stamm and Ed Wallace to see if it could be provided to other companies for inclusion in their newsletters. (relates to Goal #4H of the SMART Matrix)	Pat Schroeder	Completed Sent 1/25/17
11/2016-02	George Flanagan, as the RARCC Chair, should direct that inputs from the Licensing Modernization Project be considered in prioritization of ANS non-LWR advanced reactors. DUE DATE: September 1, 2017	George Flanagan	OPEN
11/2016-03	George Flanagan to provide the SB the gap analysis developed by ORNL once completed. DUE DATE: October/November 2017	George Flanagan	OPEN
11/2016-04	Pat Schroeder to add an agenda item for the November 2017 meeting to discuss an advanced reactor proposal for development of a roadmap/priority list. DUE DATE: November 1, 2017	Pat Schroeder	OPEN
11/2016-07	George Flanagan to work with RARCC to consider a new standard on ITAAC for advanced reactors. DUE DATE: September 1, 2017	George Flanagan	OPEN Remains open; trying to find the right people.
11/2016-08	Prasad Kadambi to work with Steven Arndt on preparing a conformity assessment business case. DUE DATE: September 1, 2017	Prasad Kadambi	OPEN
11/2016-17	Consensus Committee Chairs to follow up with their Professional Division Liaison (Attachment 14 of the Nov. 2016 SB meeting minutes) to facilitate participation. DUE DATE: September 1, 2017	Consensus Committee Chairs	OPEN Flanagan, Mazzola, and Budnitz confirmed that they have completed this action item.
11/2016-18	Carl Mazzola to let the Professional Division Chair know of poor response from Professional Division Liaisons. DUE DATE: September 1, 2017	Carl Mazzola	OPEN

Standards Board Action Item Report from 6/13/2017 Meeting

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Action Item	Description	Responsibility	Status/Comments /Reassignments
11/2016-19	William Turkowski to add Paul Hulse as the Mathematics & Computations Professional Division Liaison.	William Turkowski	Completed Turkowski confirmed 1/30/17 that P. Hulse was added.
11/2016-20	Gene Carpenter to work with James Riley to create a process to provide information to utilities. DUE DATE: September 1, 2017	Gene Carpenter, James Riley	OPEN
11/2016-21	Consensus Committee Chairs to speak with their subcommittee chairs to make sure they are aware of the toolkit and the standards development process. DUE DATE: August 31, 2017	Consensus Committee Chairs	OPEN For NCSCC, FWDCC, SRACC, LLWRCC, NRFCC Completed by Flanagan & Mazzola on 12/13/16; Carpenter requested 5/15/17 on teleconference; N/A Budnitz. NNFCC & FWDCC have no SubC chairs; CC chairs to speak directly with WGCs.
11/2016-22	RP3C to provide the SB their risk-informed, performance-based educational piece (or toolkit) for working groups once completed for review. DUE DATE: August 31, 2017	Prasad Kadambi, Ed Wallace	OPEN Draft issued for RP3C comment. Comments being resolved by RP3C.
11/2016-24	James O'Brien and Prasad Kadambi to develop a path forward to complete the RIPB Plan consistent with the current RP3C Bylaws.	James O'Brien, Prasad Kadambi	CLOSED This action item was replaced by 6/2017-16.
11/2016-29	RP3C to consider the statement on standards development and SB comments to propose an appropriate statement on standards development.	Prasad Kadambi, Ed Wallace	CLOSED A decision was made at the 6/13/17 meeting that the SB Policy TG should address. New action item 6/2017-18 was opened to replace 11/2016-29.
11/2016-30	Policy Task Group to review RP3C's proposed statement on standards development for endorsement. DUE DATE: April 1, 2017	Policy TG	CLOSED New Action Item 6/2017-18 was opened for the Policy TG to address this statement.
11/2016-31	James August and James Riley to determine who will chair the Priority TG. DUE DATE: February 1, 2017	SB Chair	CLOSED The SB determined at the 6/13/17 meeting that the Priority TG is no longer necessary.

Standards Board Action Item Report from 6/13/2017 Meeting

Due to limited time at the meeting, open action items were not reviewed. This list of action items includes those assigned at the 6/13/17 meeting and those that either remain open or have not formally been closed from previous meetings.

Action Item	Description	Responsibility	Status/Comments /Reassignments
11/2016-32	Stanley Levinson and Ed Wallace to determine who will chair the External Communications TG.	SB Chair	CLOSED Action Item 06/2017-04 was opened for M. Brady Raap to solicit a chair for this TG.
11/2016-35	George Flanagan Donald Eggett to solicit a liaison from IEEE/Nuclear Power Engineering Committee. DUE DATE: September 1, 2017	Donald Eggett George Flanagan	OPEN This action was discussed on the SB leadership transition call. D. Eggett agreed per email 4/6/17 to take responsibility for this action. With new IEEE committee structure, NPEC no longer exists. Alternate liaison relationship needed.
6/2016-03 #0123	James Riley Russell Bell to help coordinate ANS work on advanced reactor standards with other SDOs and industry. Due Date: On-going	NEI Liaison	On-going To be transferred to R. Bell due to 7/31/17 retirement of J. Riley.
6/2016-09 #0112	Steven Stamm to chair the 2017 SSA Nomination Committee with two other appointed members and report SSA recommendations to the SB Chair.	Steven Stamm	CLOSED Selection announced and approved by the SB at the 6/13/17 meeting.
6/2016-14 #0130 & #0131	External Communications Task Group to evaluate and improve the process of notifying the public and NEI/utilities of standards development activities. Due Date: September 1, 2017	ECTG	OPEN At 11/2016 meeting, Riley clarified that he will be facilitating information w/the Engineering VPs and the other SDOs. The information needs to be narrowed to the audience. A follow up action item was assigned for Carpenter to work with Riley to create a process on providing information to utilities. (See Action Item 11/2016-15)
6/2016-18 #0146 & #0147	Gene Carpenter Consensus Committee Chair to discuss the needed action on standards ranked 11-20 on the standards priority survey with their consensus committee and provide input at the SB meeting in November. Due Date: September 1, 2017	Gene Carpenter	OPEN With responses from all CCs but LLWRCC, the action item was amended to reflect Gene Carpenter responsible.




Standards Board Action Item Report from 6/13/2017 Meeting

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Action Item	Description	Responsibility	Status/Comments /Reassignments
02/2016-07 #0119	John Nakoski Gene Carpenter to check with the NRC to see if they have reviewed ANSI/ANS-5.1-2014 and are considering replacing the reference of the ANS-5.1 1971 draft in 10CFR50, Appendix K. DUE DATE: September 1, 2017	John Nakoski	OPEN Carpenter reported that as of the end of August 2016 when he left NRC, the review was still in process. This action item was amended to make new NRC rep -- Nakoski -- responsible.
11/2015-21	The LLWRCC to approve a PINS for a cybersecurity standard and forward to the standards manager. DUE DATE: September 1, 2017	Gene Carpenter	OPEN PINS in development
11/2015-45 #0078	Donald Eggett to submit response to inquiry on ANS-55.1-55.6.	Donald Eggett	CLOSED Response approved and issued.
11/2014-07	Pat Schroeder to send a broadcast to student section members on getting involved in standards every other year – next time to be September 2018. DUE DATE: September 15, 2018	Pat Schroeder	On-going Broadcast issued 9/15/16 (link to broadcast) Next broadcast to be 9/15/2018
11/2014-08	Pat Schroeder to create a similar solicitation broadcast to the YMG and NA-YGN. DUE DATE: September 15, 2017	Pat Schroeder	On-going (Next broadcast 9/15/2017) NOTE: YMG held panel session on ANS standards at ANS Meeting 2016

SMART Matrix for ANS SC Strategic Plan – Updated 6/16/17

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 Measurable Success Outcome	Status/ Comments	Scheduled Completion Date	Actual Completion Date
Completed  Near Term  Overdue 					
Goal #1 Align Standards Development Priorities 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 Policy TG Chair, there has been no action	2/1/2017	
D. Incorporate risk-informed and performance-based methods in ANS standards, where appropriate, by: 1. Develop the Risk-Informed Performance-Based Principles and Policy Committee Operating Plan 2. Develop a Risk-Informed Performance-Based Principles training package for training of ANS Standards Committee members. 3. Conduct training of consensus committees and working groups. 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	RP3C Chair	Provide draft of Risk-Informed Performance-Based Principles and Policy Committee Operating Plan for SB approval.		9/30/2017	
	RP3C Chair	Resolution of SB comments and issue plan CC ballot		12/1/2017	
	RP3C Chair	Develop priority list of standards and schedule for incorporation of RP3C principles		9/30/2017	
	RP3C Chair	Nuclear News Article drafted, approved by SB Chair and forwarded to NN editor.		11/1/2017	
	RP3C Chair	Develop Risk Informed and Performance Based Training Package for SC members and provide to SB for review.		12/1/2017	

SMART Matrix for ANS SC Strategic Plan – Updated 6/16/17

Initiative	Assigned Responsibility (Functional Title)	Specific Measurable Success Outcome	Status/ Comments	Scheduled Completion Date	Actual Completion Date
the standards development with the objective of avoiding duplication. 5. Publishing a Nuclear News Article to inform other members of the Society of the benefits of this risk-informed and performance-based effort 6. Developing presentation materials that can be used to inform other industry groups as to the benefits and use of the ANS Standards Committee risk-informed and performance based standards activities	RP3C Chair	Develop presentation package for use with other industry groups and submit to SB for approval.		3/1/2018	
	RP3C Chair	Contact appropriate organizations to make presentations at NRC RIC, ANS UWC and Owner's groups		7/1/2018	
	RP3C Chair	Make presentations at a minimum of 2 groups		10/1/2018	
Goal #2: Develop and Maintain High Quality Standards					
A. Enhance the relationships with the ANS Professional Divisions and Technical Groups to assist in populating WGs with expert individuals. (also supports Goal 5)	Internal Communications 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.		Ongoing	
	Internal Communications TG Manager	Tabulate the summary of the requests made and the results and present to Standards Board.	This item has been replaced by having the CC Chair report the results in their SB reports	NA	
B. 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

SMART Matrix for ANS SC Strategic Plan – Updated 6/16/17

Initiative	Assigned Responsibility (Functional Title)	Specific Measurable Success Outcome	Status/ Comments	Scheduled Completion Date	Actual Completion Date
	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	Action Item 11/2016-21 was created at Stamm's suggestion for CC Chairs to speak/meet with their subcommittee chairs to ensure they are aware of toolkit/process.	5/1/17	
	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		5/1/17	
	CC Chair	In cases, where additional assistance is required beyond the SubC Chair, CC should request mentor from SB VChair.		Ongoing	
Goal #3: Improve Standards Development Production and Efficiency					
A. Expedite development of high-priority standards by improving Standards Board and consensus committee oversight using achievable project plans and definitive schedules with assigned milestones	SB VChair	Draft Project Plan development policy		10/1/2016	Approved by SB 9/6/16.
	SB VChair	Project Plan development Policy approved by SB		12/1/2016	Project plan w/b added to

SMART Matrix for ANS SC Strategic Plan – Updated 6/16/17

Initiative	Assigned Responsibility (Functional Title)	Specific Measurable Success Outcome	Status/ Comments	Scheduled Completion Date	Actual Completion Date
throughout the standards development cycle.					CC procedures as Appendix K.
	CC Chairs	Develop Project Plans for 6 total standards from all CCs and submit to consensus committees	1/25/17: Stamm clarified that this action is for a total of 6 project plans to be prepared by all CCs; not 6 by each CC. 3 plans have been developed to fdate.	6/1/2017	
B. Complete the Standards Volunteer Database to facilitate recruiting personnel for Standards Committee activities (also supports Goal #5)	ANS IT Dept.	ANS IT complete ANS SC Volunteer Data Base in accordance with the SB specification		11/1/2017	
	ANS IT Dept.	SB Approves data base submitted by ANS IT department		2/1/2018	
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 here.
D. Maximize use of the ANS Standards Workspace and other communications vehicles to eliminate the need for travel and face-to-face meetings to the maximum extent possible	CC Chairs	Encourage WGs and SubCs to use workspace and other online and electronic tools to eliminate face-to-face meetings	Procedure issued to require use of Workspace for storage and activities.	Ongoing	April 2017
	CC Chairs	CC chairs to submit a report regarding the reduction in face to face WG and SubC meetings.	1/25/17: Stamm clarified that the report need only be a sentence or two.	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 Identifies high priority standards planned for near future. Priorities should be based on expected government need.	1/25/17: Members recognized that the Priority TG Chair position was open and no action	Ongoing	

SMART Matrix for ANS SC Strategic Plan – Updated 6/16/17

Initiative	Assigned Responsibility (Functional Title)	Specific Measurable Success Outcome	Status/ Comments	Scheduled Completion Date	Actual Completion Date
			has been taken.		
	SB VChair	Work with CCs to assess each effort, select most appropriate standards, prepared and submit proposals. .Submit 1 st proposal.	Nov 2017- Agreed to proactively coordinate with NRC and DOE for early identification of potential opportunities..	6/1/2017 Ongoing	
<p>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. This can be accomplished through the following mechanisms:</p> <ol style="list-style-type: none"> 1. Automatically sending out a Reaffirmation Form to the WG chair with copies to subcommittee chair and consensus committee chair 2. Automate subcommittee and consensus committee approvals of reaffirmation, withdrawal, and revision recommendations 3. Establishing an ANS Professional Division and Technical Group sponsorship program to aid in review of associated delinquent standards with and without active working groups 	Standards Mgr	Submit Reaffirmation forms to WG/SubC chairs for all standards approaching the 4 year mark.		Ongoing Starting 4/1/2016	Ongoing
	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
	Standards Mgr	Action items for reaffirmation set up in Workspace with automatic reminders		11/1/2016	The report was sent 9/15/16 and will be updated and resent 12/15/16
	Internal Communications Group Manager	Send list of delinquent standards to PDs		12/1/2016	Completed
	Internal Communications	Issue plan and approach to each Professional Division and Technical Group as applicable and obtain	In process	5/1/2017	

SMART Matrix for ANS SC Strategic Plan – Updated 6/16/17

Initiative	Assigned Responsibility (Functional Title)	Specific Measurable Success Outcome	Status/ Comments	Scheduled Completion Date	Actual Completion Date
	Group Manager	indication of acceptance.			
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!
	CC Chairs	Each CC fill in annual tabulated metric performance	/25/17: Schroeder has completed the ESCC evaluation and will be starting on the evaluations for the balance of the CCs.	5/1/2017	4/1/2017
	Policy TG Chair	Evaluate metric results		3/1/2018	
	CC Chair & Policy TG Chair	Provide recommendations for changes to improve performance		6/1/2018	
Goal #4: Expand ANS Awareness and External Outreach					
A. 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.	1/25/17: Members recognized that the EC TG Chair position was open and no action has been taken.	10/1/2016	

SMART Matrix for ANS SC Strategic Plan – Updated 6/16/17

Initiative	Assigned Responsibility (Functional Title)	Specific Measurable Success Outcome	Status/ Comments	Scheduled Completion Date	Actual Completion Date
B. Establish periodic leadership meetings with regulatory agencies, owner's groups and industry executives to align needs, and build support for development and greater use	Chair External Communications TG	Discuss communications approach with each of the applicable organizations (industry, federal and state agencies)		Ongoing	
	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.	1/25/17: A new action item was assigned for Stamm to confirm that a "Plan" was provided to liaisons.	10/1/2016	
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	
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 Communications TG	Complete plan implementation		6/1/2018	
F. Identify key international organizations that can	Chair External	Develop listing of key international organization, key		6/1/2017	

SMART Matrix for ANS SC Strategic Plan – Updated 6/16/17

Initiative	Assigned Responsibility (Functional Title)	Specific Measurable Success Outcome	Status/ Comments	Scheduled Completion Date	Actual Completion Date
contribute to specific ANS standards development projects, including work group participation, review of draft standards, and providing input into standards prioritization.	Communications TG	contacts and the desired interfaces we would like to develop.			
	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: 1. what consensus standards are, and are not; 2. benefit of consensus standards to the industry; 3. advantages to companies, federal and state agencies, and individuals of supporting standards development	Chair External Communications TG	Develop presentation package		6/1/2016	6/1/2016
	Chair External Communications TG	Develop invitation list for indoctrination sessions		8/1/2016	All ANS members
	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 1 st 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	11/1/2016	

SMART Matrix for ANS SC Strategic Plan – Updated 6/16/17

Initiative	Assigned Responsibility (Functional Title)	Specific Measurable Success Outcome	Status/ Comments	Scheduled Completion Date	Actual Completion Date
			been taken.		
	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 been taken.	11/1/2016	
	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 standards.	SB VChair	Prepare draft evaluation plan		8/1/2016	7/26/2106
	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 – Recommended ANS-2.8 & ANS-3.5 once approved.

SMART Matrix for ANS SC Strategic Plan – Updated 6/16/17

Initiative	Assigned Responsibility (Functional Title)	Specific Measurable Success Outcome	Status/ Comments	Scheduled Completion Date	Actual Completion Date
Goal #5: Improve Industry Representation and Sustainability of Working Groups, Subcommittees, and Consensus Committees					
A. Approach owners' groups and industry organizations soliciting member participation in ANS standards	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 here .	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, announced in Sept. 2016 N&D and distributed through ANS Collaborate to PDs.	Ongoing	
A. Send notices to ANS Student Section members, Young Member Group, Professional Division members, and North American-Young Generation Nuclear members to provide opportunities to participate in ANS standards					
	Standards Mgr	Send notices biannually	Broadcast sent to ANS Student Section 9/15/16.	Ongoing Biannually	
B. Enhance the relationships with the ANS Professional Divisions and Technical Groups to assist in populating WGs with expert individuals.(See Goal #1)		.(See Goal #1)			
C. Advertise upcoming standards efforts with requests for support using <i>Nuclear News</i> , Nuclear Café, and ANS Linked-In Group	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	
D. ANS IT Department to complete the Standards Volunteer Database, and make it available to subcommittee and consensus committee chairs (See Goal #3)		(See Goal #3)			
E. Monitor consensus committee and working group success in staffing and recruitment and share best practices across all consensus committees	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

SMART Matrix for ANS SC Strategic Plan – Updated 6/16/17

Initiative	Assigned Responsibility (Functional Title)	Specific Measurable Success Outcome	Status/ Comments	Scheduled Completion Date	Actual Completion Date
	CC Chairs	Submit semi-annual report using format provided		10/1/2016+ To be implemented in 11/17 meeting	Ongoing
	SB VChair	Evaluate results of CC reports at SB meeting		6/30/2017+ Ongoing	

June 2017 Standards Committee Informative Report to the ANS Board of Directors

from Standards Board Chair George F. Flanagan

Standards Board Strategic Plan Update and ANS Committee Strategic Planning & Assessment Form

The Standards Board formally approved the ANS Standards Committee Strategic Plan in June of 2016. The plan sets goals and objectives through 2020 and includes a SMART Matrix. An update of the Plan and SMART Matrix was approved on February 28, 2017. Changes made to the Plan and SMART Matrix reflect the draft Risk-Informed Performance-Based Plan. The Plan and SMART Matrix are considered living documents and will be updated as needed. The ANS Committee Strategic Planning and Assessment Form was completed using goals and objectives set in the Standards Committee Strategic Plan. The assessment form was submitted to the Planning Committee on April 21, 2017.

Evaluation of ANS Consensus Committees Performance

The ANS Standards Board developed metrics to measure the performance of consensus committees. Tracked metrics include meeting and ballot attendance, the number of new standards initiated, the number of standards over eight years old, the average resolution time of ballot comments, and the average response time to inquiries on standards. Consensus committee chairs have been directed to address areas in need of improvement. Evaluations will be discussed at the upcoming Standards Board meeting.

Professional Division Liaison Program

The Standards Board has initiated a liaison program with the support of ANS Professional Divisions Chair Hans Gougar. The program will aid in review of associated delinquent standards and enhance consensus committee relationships with ANS Professional Divisions and technical groups to assist in recommending new standards and populating working groups with expert individuals.

Standards Informational Presentation Offered to ANS Members

The Standards Board offered a free presentation called “Unraveling the Mystery of Consensus Standards” to ANS members on January 31, 2017. The presentation addressed what a consensus standard is, why they are needed, what benefits they offer, how they get endorsed by regulators, and what these standards means to the industry. Close to a hundred members registered for the presentation. Member feedback was very positive.

ANS Standards Committee Policies, Rules, and Procedures Updated

All Standards Committee policies, procedures, and rules were recently been updated. Changes were made to update procedures to reflect current practice and to reduce redundancy. The definitions of interest categories in the ANS Standards Committee Rules and Procedures were revised to clarify the classification of Management and Operating Contractors. The change received approval of the American National Standards Institute (ANSI) on March 29, 2017. The Policy Manual for the ANS Standards Committee was reorganized and each policy was assigned an alpha numeric designation for easier referencing. The policy pertaining to liaison personnel was completely revised, and a new policy on the use of the ANS Standards Workspace was developed. Several policies directly related to consensus committees and their subgroups were transferred to the Standards Committee Procedures Manual for Consensus Committees. A new appendix providing guidance on developing a Project Implementation Plan and one providing documentation requirements for all committees on the ANS Standards Workspace were added to the Standards Committee Procedures Manual for Consensus Committees.

Election of Consensus Committee Leadership

Elections were held by consensus committees whose chairs and vice chairs reached the end of their three-year terms. Several chairs were re-elected. Consensus committee leadership includes the following:

Environmental and Siting Consensus Committee

Carl A. Mazzola, Chair

Yan Gao, Vice Chair

Fuel, Waste, and Decommissioning Consensus Committee

Donald R. Eggett, Chair

David W. Hillyer, Vice Chair

Joint Committee on Nuclear Risk Management (ANS/ASME)

Robert J. Budnitz, Chair

Dennis W. Henneke, Vice Chair

Large Light Water Reactor Consensus Committee (ANS/ASME)

C. E. (Gene) Carpenter, Chair

William B. Reuland, Vice Chair

Nonreactor Nuclear Facilities Consensus Committee

James O'Brien, Chair

Jeffrey R. Brault, Vice Chair

Nuclear Criticality Safety Consensus Committee

Larry L. Wetzel, Chair

William R. Shackleford, Vice Chair

Research and Advanced Reactors Consensus Committee

George F. Flanagan, Chair

Bruce B. Bevard, Vice Chair

Thomas H. Newton, Vice Chair

Safety and Radiological Analyses Consensus Committee

Andrew O. Smetana, Chair

Julie M. Jarvis, Vice Chair

Standards Board Membership Changes

With the close of the annual meeting, the Standards Board will see several membership changes including leadership in compliance with the ANS Bylaws and Rules. George F. Flanagan will be replaced by Michael C. Brady Raap after completing a three-year term as Standards Board Chair. Standards Board Vice Chair Steven L. Stamm will be replaced by Donald R. Eggett after serving multiple terms. Both Flanagan and Stamm will remain members of the Standards Board. Flanagan continues as an ex officio member due to his role as a consensus committee chair. Stamm will complete his appointment as an at-large member. James K. August and Robert D. Sachs were not reappointed as both completed two, three-year terms on the Standards Board. Amir Afzali and Mark A. Linn have been appointed and will begin a three-year term.

Maintenance of Standards

An effort was initiated in 2016 to reduce the number of delinquent standards with the development of a generic reaffirmation form as a trial. The generic reaffirmation form includes criteria to provide reviewers guidance in determining if a standard is appropriate for reaffirmation. The new form resulted in a significant increase of reaffirmations (re-approvals) in 2016 and will continue to be utilized. A Delinquent Standards Report has been developed and is issued to responsible parties on a quarterly basis to further aid in the timely maintenance of current standards.

Fee-Based Training Program

With the help of the Membership and Marketing Department, the Standards Board is creating a fee-based, e-learning program for members as well as nonmembers. Two standards that would likely draw a good level of interest have been selected as a pilot. Both standards are nearing completion. Materials for the e-learning program will be developed once the standards have been published.

Certification of Consensus Committee Balance of Interests

Balance of interests reports have been prepared confirming that each consensus committee meets the requirement of no more than one-third of its membership from anyone interest category. As dictated by policy, the Standards Board will review each report at the upcoming June meeting for certification that all consensus committees are in compliance.

Training Program

A significant effort of the ANS Standards Board in 2016 was the initiation of a training program for Standards Committee members. The training program includes five power point presentations addressing topical areas including 1) an overview of nuclear related standards, 2) ANS Standards Committee staffing and organizational structure, 3) the voluntary consensus standards development progress, 4) governing documents: ANS Standards Committee rules, procedures, and policies; and 5) governing documents: consensus committee procedures and the toolkit. The presentations were updated to reflect changes in rules and procedures and a second series of presentations were offered to ANS Standards Committee members in April and May of 2017. Additionally, web trainings on the features of the ANS Standards Workspace have been scheduled throughout 2017 and are available upon request. The intent of the training program is to increase Standards Committee members' knowledge resulting in improved quality and consistency of ANS standards as well as expedite the development of ANS standards through a reduction of corrections and the use of technology.

2017 Standards Activities

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

- ANS-3.2-2012 (R201x), "Managerial, Administrative, and Quality Assurance Controls for the Operational Phase of Nuclear Power Plants" (reaffirmation of ANSI/ANS-3.2-2012)
- ANS-8.24-2007 (R201x), "Validation of Neutron Transport Methods for Nuclear Criticality Safety Calculations" [reaffirmation of ANSI/ANS-8.24-2007 (R2012)]
- ANS-19.3.4-2008 (R201x), "The Determination of Thermal Energy Deposition Rates in Nuclear Reactors" [reaffirmation of ANSI/ANS-19.3.4-2002 (R2008)]
- ANS-19.4-201x, "A Guide for Acquisition and Documentation of Reference Power Reactor Physics Measurements for Nuclear Analysis Verification" [supersedes ANSI/ANS-19.4-1976 (R2000)]
- ANS-57.8-1995 (R201x), "Fuel Assembly Identification" [reaffirmation of ANSI/ANS-57.8-1995 (R2011)]

The following standards were approved:

- ANSI/ANS-3.2-2012 (R2017), "Managerial, Administrative, and Quality Assurance Controls for the Operational Phase of Nuclear Power Plants" (reaffirmation of ANSI/ANS-3.2-2012)
- ANSI/ANS-19.3-2011 (R2017), "Steady-State Neutronics Methods for Power Reactor Analysis" (reaffirmation of ANSI/ANS-19.3-2011)
- ANSI/ANS-19.3.4-2002 (R2017), "The Determination of Thermal Energy Deposition Rates in Nuclear Reactors" (reaffirmation of ANSI/ANS-19.3.4-2002)
- ANSI/ANS-19.11-2017, "Calculation and Measurement of the Moderator Temperature Coefficient of Reactivity for Pressurized Water Reactors" [revision of ANSI/ANS-19.11-1997 (R2011)]
- ANSI/ANS-57.8-1995 (R2017), "Fuel Assembly Identification" [reaffirmation of ANSI/ANS-57.8-1995 (R2011)]
- ASME/ANS RA-1.3-2017, "Standard for Radiological Accident Offsite Consequence Analysis (Level 3 PRA) to Support Nuclear Installation Applications" (new standard)

The following standards were published:

- ANSI/ANS-18.1-2016, "Radioactive Source Term for Normal Operation of Light Water Reactors" (supersedes ANSI/ANS-18.1-1999)
- ANSI/ANS-19.11-2017, "Calculation and Measurement of the Moderator Temperature Coefficient of Reactivity for Pressurized Water Reactors" [revision of ANSI/ANS-19.11-1997 (R2011)]
- ASME/ANS RA-1.3-2017, "Standard for Radiological Accident Offsite Consequence Analysis (Level 3 PRA) to Support Nuclear Installation Applications" (new standard)

Responses to inquiries were issued on the following standards:

- ANSI/ANS-5.1-2014, "Decay Heat Power in Light Water Reactor"
- ANSI/ANS-55.1-1992 (R2009), "Gaseous Radioactive Waste Processing System for Light-Water-Cooled Reactor Plants," and ANSI/ANS-55.6-1993 (R2007), "Containment System Leakage Testing Requirements"

ANS COMMITTEE STRATEGIC PLANNING & ASSESSMENT



STANDARDS BOARD

CHAIR: George F. Flanagan, Ph.D. VICE CHAIR: Steven L. Stamm

MISSION

ANS Committee Mission Statement (Excerpt from R7.1.4 9(n)):

The Standards Board (SB) provides policy and procedural direction for the standards activities of the Society. The SB shall be composed of no more than twenty (20) Members including the chairs of the consensus committees and no fewer than six (6) and no more than ten (10) appointed members which shall be Fellows, Members, Emeritus, or Honorary Life Members with substantial interest and experience in the development and use of standards for the application of nuclear science and engineering.

The Standards Board oversees the activities of the Standards Committee which is composed of all persons engaged in standards development for the Society (i.e., the Standards Board, its consensus committees, special committees, subcommittees, and working groups). The chair and vice chair of the SB shall be the sole officers of the Standards Committee. Consensus committees are established within the Standards Committee under the SB to develop and ensure consensus as a basis for approval of proposed or revised standards, to manage the development of proposed standards and revisions to existing standards, and to represent the SB in activities with other organizations engaged in similar work. The chairs of each of the consensus committees shall serve as ex-officio voting members of the SB, whose terms are concurrent with those of the offices from which they serve.

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

From time to time, special committees of the SB are established to support long-term needs of the Standards Committee.

The guidance and approval of the ANS Board of Directors shall be obtained on all matters of policy that may affect overall Society endeavors, and on the advisability of initiating work in new areas. The SB shall confirm annually to the Board of Directors that the membership of each consensus committee has an appropriate balance of interest in accordance with the accredited Rules and Procedures established by the ANS Standards Board.

COMMITTEE STATISTICS

NUMBER OF COMMITTEE MEMBERS: 17
(17th member appointed 2/7/17)

ANS COMMITTEE STRATEGIC PLANNING & ASSESSMENT



	National/Annual Meetings	Other Meetings
NUMBER OF MTGS HELD IN LAST FY:	The Standards Board met at both the annual and winter meetings in 2016.	The Standards board held two teleconferences in 2016 – February and July. Additionally a teleconference was held in January of 2017. Teleconferences are used to follow up on action items between meetings.
NUMBER OF ATTENDEES AT LAST MEETING:	15 of the 16 current members (93.7%) participated in the meeting held during the last ANS National Meeting	
DATE OF LAST MEETING W/ A QUORUM:	11/8/16	

PLANNING AND ASSESSING

This assessment provides a high level overview of progress. Please refer to the attached Strategic Plan and Matrix for a more detailed initiative progress.

GOALS (Consistent with Standards Committee Strategic Plan Goals)	ACTIONS (Consistent with Standards Committee Strategic Plan Initiatives)	RESULTS
1. Align Standards Development Priorities with Current and Emerging Industry Needs	A series of initiatives were developed to establish an approach and supporting systems to periodically collect industry priority input and integrate it into the standards priorities and delivery targets.	An initial industry survey was performed and the recommendations evaluated and incorporated into our standards priorities as appropriate. The ongoing survey and Reliability and Performance Based program activities still need to be completed.
2. Develop and Maintain High Quality Standards	A series of initiatives to ensure effective training and knowledge transfer is embedded in the standards development process and augment participant capabilities to develop and maintain high-quality standards.	A standards training program was developed and offered to Standards Committee (SC) members in 2016 and is being offered again this year. An interface approach between the Professional Divisions (PD) and the consensus committees (CC) has been developed and rolled out and is in the process of being implemented to utilize the PD personnel to augment standards committee staffing when needed.
3. Improve Standards Development Production and Efficiency	A series of initiatives have been developed to improve efficiencies with respect to development and maintenance of ANS standards.	A requirement for a project plan was rolled out for use on new/revised standards. Guidance was also issued to

ANS COMMITTEE STRATEGIC PLANNING & ASSESSMENT



		<p>improve staffing, reaffirmation, PD interface, and use of the ANS Standards Workspace.</p> <p>Reaffirmations have improved by ~300%. A program for evaluation of CC performance has been initiated and the results are under evaluation by the CC chairs. An ongoing system for designation of high-priority standards still needs work.</p>
4. Expand ANS Awareness and External Outreach	<p>A series of initiatives have been developed to increase industry participation through awareness of existing standards and standards development activities to ensure continuing relevance.</p>	<p>A survey was issued in 2015 and the results incorporated into standards planning. Acceptable progress has been made in the following areas:</p> <ul style="list-style-type: none"> • Establishment of an NRC Standards Forum • Establishment of an interface with plant engineering managers via NEI • Identification of industry and SDO liaisons • Formation of an ANS Professional Division/ SC interface program • Development of an Introductory standards training program for non-SC members <p>A task group has been established to improve external communication. Due to the lack of a chair, some of the remaining initiatives have been delayed.</p>
5. Improve Industry Representation and Sustainability of Working Groups, Subcommittees, and Consensus Committees	<p>A series of initiatives have been developed to increase participation in ANS standards development to: (1) ensure continued technical capability of SC members; (2) enhance knowledge capture and transfer; and, (3) increase participation of</p>	<p>The SC has initiated the following actions to increase standards participation and solicit new members:</p> <ul style="list-style-type: none"> • Advertisement through ANS publications and LinkedIn • Improved interface with PDs • Solicitation of YGN, NAYGN,

ANS COMMITTEE STRATEGIC PLANNING & ASSESSMENT



young nuclear professionals.

and student members.

One item that has been requested for years but not developed is for ANS IT Department to complete the Standards Volunteer Database to facilitate staffing.

COMMENTARY/SUMMARY

The objectives and actions listed above are excerpts from the Standards Committee Strategic Plan. A copy of the Standards Committee Strategic Plan and accompanying SMART Matrix is attached.

ANS Standards Board Task Groups (Revised 11-16-16)**

NOTE: This list will need updating after the June 2017 meeting.

Policy Task Group

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

George Flanagan, Chair*
Prasad Kadambi
Chuck Moseley
Steve Stamm
Patricia Schroeder

NOTE: Current SB Chair = Policy TG Chair

Priority Task Group

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

OPEN, Chair*
Jim August (Southern Company)
Jim Riley (NEI)

External Communications Task Group

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

OPEN, Chair*
Ed Wallace (SB)
Stanley Levinson (JCNRM/SCoRA)

Internal Communications Task Group

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

Bill Turkowski , Chair (SB)*
Jeff Brault (AGS)

Sales Task Group

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

David Sachs, Chair (SB)*
Steve Stamm (SB)

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

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

Standards Board Responses to ANS Executive Committee's comments dated May 18, 2017 Standards Committee Strategic Plan

ANS Executive Committee Comment	Response
1) Overall this appears to be a well thought out and appropriate strategic plan!	Agreed, thank you
2) The Vision Statement should be revised to reflect that the ANS Standards Committee is "the leader" not "a leader" in developing standards for nuclear science and technology.	Requested change will be made
3) The Mission Statement should be revised to state "to develop and maintain highquality, consensus standards that continuously anticipate and meet the needs of the ..."	Requested change will be made
4) The Mission Statement should be expanded to include "and to promote their broad acceptance, endorsement and use."	Requested change will be made
5) Goal #1, Initiatives A, B and C (evaluate the results from the initial industry standards priority survey and implement these priorities) need to be expanded to include DOE, regulator and other stakeholder priorities. It is good that the Standards Board is polling the industry, but they are not the drivers for all areas.	The survey included participant from all aspects of the nuclear industry including NRC and DOE. The term "industry" as used here was meant to include all stakeholders. We do get additional feedback from NRC and DOE representatives.
6) In Goal #1, Initiative D (incorporate risk-informed and performance-based methods), there is too much emphasis on performance-based methods and not enough emphasis on risk-informed methods. The industry is moving very quickly to implement a number of risk-informed initiatives (TSTF 505, 50.59, etc.) and this is a real opportunity for ANS to be a leader in providing standards for both the industry and the regulator. We need to focus on this and be proactive.	The focus equally included both Risk and performance based. Work needs to be done in both of these areas to incorporate them into ANS Standards. The goal for ANS Standards to take a leadership role in these areas will be added to the plan.
Don Eggett: Comment 6, Goal 1, Initiative D: "The goal for ANS Standards to take a leadership role in these areas will be added to the plan" I would recommend should be changed to "The goal for ANS Standards to take the leadership role in these areas will be added to the plan".	
7) Also related to Goal #1, ANS Position Statement #46 strongly encourages the implementation of Risk-Informed, Performance-Based regulation. The Executive Committee would like to see Initiative D be implemented as quickly as possible.	Agreed
8) Goal #3, "Improved Standard Development Production and Efficiency", contains a good set of initiatives. However, they should also proactively focus on timely development of new standards to meet identified needs. A number of the initiatives have this focus (A, F and G), but this should be stressed even more. If we can be timelier, we can distinguish ourselves from other SDO's and gain market share.	The wording of the Initiative will be revised to also include "proactively focus on timely development of new standards to meet identified needs" An initiative to this effect will also be added.
9) Goal #3 appears to only marginally encourage obtaining funds/grants to expedite high-priority standards. The decision-making process for selecting high-priority standards and for preparing grants to expedite their development is not clear. Perhaps outside the strategic plan, the Standards Board could work with ANS staff to develop a process for prioritizing the projects for which we should be seeking grants.	This was expanded a bit in the SMART Matrix. However, making further progress in this area is difficult. The suggested offline discussion would be worthwhile.
10) Goals #4 and #5 appear to be very close in content. To address this issue, we believe the fundamental objectives behind each of these goals should be better articulated or the two goals should be combined.	We will clarify/expand these goals and objectives so that the difference is clear.

ANS Executive Committee Comment	Response
<p>11) The SMART matrix is well done and appears to provide an excellent tool for tracking progress. Please be sure the “Specific Measurable Success Outcomes” are truly outcome oriented. There is a tendency when using SMART to make the outcomes more about making a presentation or updating a process, rather than seeing an actual improvement or other tangible result (more standards, better standards, more use of the standards, more revenue, etc.). We noticed this to some extent in the column in the matrix.</p>	<p>The title of the third column: “Specific Measurable Success Outcome” is not consistent with the contents of this column which are the specific action items needed to accomplish the “Initiative”. In many cases a series of process steps are required in order to manage and demonstrate progress on reaching the initiative.</p>
<p>The Executive Committee’s comments on how the Standards Committee Strategic Plan relates to the ANS Strategic Plan and the State of the Society presentation are as follows.</p>	
<p>12) There should be linkage to the ANS Strategic Plan in some way and greater consistency between the Standards Committee Strategic Plan and the standards section of the ANS Strategic Plan. In the ANS Strategic Plan, Mission Component 2, Goal 3 that discusses producing and maintaining ANS consensus standards, the goals and strategies are not at all consistent with the Standards Committee Strategic Plan. Although, in most cases, we think that the Standards Committee Strategic Plan goals and strategies are better, if we are going to manage to either of these plans, we need them to be consistent. All of the Standards Committee’s goals can be linked to ANS Strategic Plan, Mission Component 2, Goal 3, but some of them could also be linked to ANS Mission Component 1, Goal 1 and Mission Component 4, Goal 2.</p>	<p>It is important that the standards board as well as other standing committees review the ANS Strategic Plan and evaluate their organizations with respect to its implementation. The ANS Standards Committee Strategic Plan does implement many of the facets of the ANS Strategic Plan including many that are not specific to ANS Standards. The best approach to this would be to do so in a separate document that included the above mentioned evaluation. We suggest that the ANS Executive Committee request all of the standing committees be requested to do this. The ANS Strategic Plan is five years old and should be evaluated and probably updated. It may be best to perform this evaluation on the updated plan.</p>
<p>13) With respect to the State of the Society presentation, the Standards Committee already does a good job engaging the membership and creating value. However, if the Committee can focus on improving our member value and market share compared to other SDO’s (see comment 5 above) that would go a long way to being even more effective.</p>	<p>Please provide specific recommendations as to what else should we be doing.</p>
<p>Don Eggett: Comment 13: “ ... if the Committee can focus on improving our member value and market share compared to other SDO’s (see comment 5 above) that would go a long way to being even more effective.” I think the audience is key to the standards becoming more effective because it is they who will be the users and they the organizations who will/should drive the needed standards. There needs to be “face-to-face” interaction when the timing is right.</p>	

Secretary/Staff Report

June 2017

Updates to Rules, Procedures, and Policies

All rules, procedures, and policies were recently updated. The Policy Manual for the ANS Standards Committee was reorganized and a number of policies were transferred or incorporated into other documents. Remaining policies were assigned an alpha-numeric designation for easier identifying. The revised policies and procedures were updated to reflect the use of the ANS Standards Workspace and current staff titles. The ANS Standards Committee Rules and Procedures were revised to clarify the classification of Management and Operating contractors. The title of each document and the current revision date is provided below:

- [ANS Standards Committee Rules and Procedures](#) (approved by ANSI on 3/29/17)
- [Policy Manual for the ANS Standards Committee](#) (approved by the Standards Board 11/5/16)
- [ANS Standards Committee Procedures Manual for Consensus Committees](#) (approved by the Standards Board 1/24/17)

ANS Style Manual in Development

ANS standards committees have been referring to the ANSI Style Manual since its publication in 1991. ANSI has since moved away from a style manual and now uses a style guide sheet. With much good information left off the style guide sheet, an ANS Style Manual is being prepared to incorporate general information on the contents of a standard as well as format and guidance for publication of an ANS standard. The ANS Style Guide is expected to be available by the end of the year.

ANS Standards Committee Celebrates 60 Years

The ANS Standards Committee was approved in 1956 and became active in 1957, now 60 years ago. The anniversary was commemorated with an article in *Nuclear Standards News*, *ANS News*, *Notes & Deadlines*, and a flyer included in the meeting packet for the annual meeting.

Kavi Corporation Acquired by Higher Logic

The Kavi Corporation, the developer of Workspace, was acquired by Higher Logic in February of this year. A few service interrupts have been experienced with the move of Workspace over to the Higher Logic platform. Higher Logic will continue to offer Workspace as either a stand-alone program or integrated into a customer's Association Management System and Customer Relationship Management.

Workspace Webinar Trainings Continue to be Offered

ANS staff continues to offer several webtrainings on the ANS Standards Workspace. The trainings are provided to familiarize members how to navigate, ballot, and comment in Workspace. A separate training is offered to show working group chairs how to manage their workspace. Participation in the trainings has slowed. Those able to participate in the trainings, particularly working group chairs, have positive feedback.

Scientific Publications and Standards Department Changes

ANS partnered with the Taylor & Francis Group to publish its three technical journals starting in January 2017. The move places ANS journals with one of the world's leading publishers of scholarly journals, books, ebooks, and reference works. The partnership offers a larger distribution network and a reduced publication time. This change reduces in-house editorial and production work on the journals. These hours will be utilized by supporting editorial work on standards-related products and special projects.

Progress on Reducing Delinquent Standards

A greater emphasis was placed on reducing the number of delinquent standards in 2016. A trial reaffirmation form with criteria was developed providing reviewers guidance in determining if a standard is appropriate for reaffirmation. The form resulted in a significant increase of reaffirmations in 2016. In addition to the form, a Delinquent Standards Report was developed and continues to be issued to responsible chairs on a quarterly basis. Twenty standards were reaffirmed in 2016 representing a 400% increase over past years. ANS staff will continue to send reminders and encourage more reaffirmations in 2017 and track the progress. Statistics for the last three years are provided below. It should be recognized that several of the standards reported as delinquent are actively developing a revision, have completed a draft currently in the approval process, or in the reaffirmation process. For 2016, eleven standards fall into this category leaving only eight standards truly delinquent.

Year	# of Current Standards at Close of Year	# of Standards Reaffirmed	# of Delinquent Standards	% of Delinquent Standards
2014	78	2	33	42.3%
2015	80	6	25	31.3%
2016	81	20	19	23.4%

Workspace Usage Stats

The ANS Standards Workspace ("Workspace") was launched in 2014. Workspace currently includes 174 active groups, 715 active user accounts, and 2975 documents posted. The site has been used to send 2563 email messages, post 181 events and 417 action items, and issue 491 ballots. In an effort to increase working group use of Workspace, subcommittee, consensus committee, and Standard Board comments are provided to working groups through their individual workspace.

Standards Committee Annual Report of Activities

The 2016 Standards Committee Report of Activities was published in May of 2017 presenting the Standards Committee's achievements for the calendar year 2016. At the end of the year, there were a total of 81 current standards approved by ANSI as American National Standards. The report recognizes the initiation of 8 standards projects, the approval of 20 reaffirmations, and the approval of 5 revised or new standards. The report provides a status report of active ANS standards projects and recognizes its numerous volunteer members who participate in the development of ANS-sponsored nuclear standards. A copy of the report is available at <http://cdn.ans.org/standards/resources/downloads/docs/sc-report-activities.pdf>.

ANS Standards Committee Celebrates 60 Years

Approved by the ANS Board of Directors in 1956, the Standards Committee was formed with activities initiated in 1957. By 1959, the ANS Standards Committee had grown to 75 members and included 10 subcommittees. Standards Committee milestones include the following:

- 1964** ANS developed the first nuclear standard jointly with the American Society of Mechanical Engineers—N6.1-1964, “Safety Standard for Operation with Fissionable Materials Outside Reactors.”
- 1965** ANS became a member of American Standards Association.
[predecessor of the American National Standards Institute (ANSI)]
- 1967** The first ANS standard was completed—ANS-1, “A Code of Good Practices for the Performance of Critical Experiments.”
- 1970** The first issue of Nuclear Standards News was published.
- 1978** The Nuclear Power Plant Standards Committee was formed as an ANSI-accredited consensus committee.
- 1985** ANS was accredited by ANSI as a standards development organization.

Fast forwarding to 2017, ANS has published well over 450 standards, and Standards Committee activities presently include more than 800 volunteers. When its formation was approved in 1956, the term “Standards Committee” referred to the top-level committee responsible for launching the program. Today, “Standards Committee” refers to a collection of standards committees including working groups (120), subcommittees (23), consensus committees (8), and the top committee—the ANS Standards Board—responsible for policy and procedural direction.

Contact standards@ans.org for information about getting involved.



American Nuclear Society
Standards Committee

ANS Standards Committee

Then and Now

Standards Committee 1957

The following individuals were appointed by ANS President C. Roger McCullough (1956-1957) as the first ANS Standards Committee:

M. Leverett, Chair
R. D. Maxson, Vice Chair

M. K. Bartz
R. G. Chalker
W. C. Gumprich
S. McLain
J. R. Menke
T. H. Smith

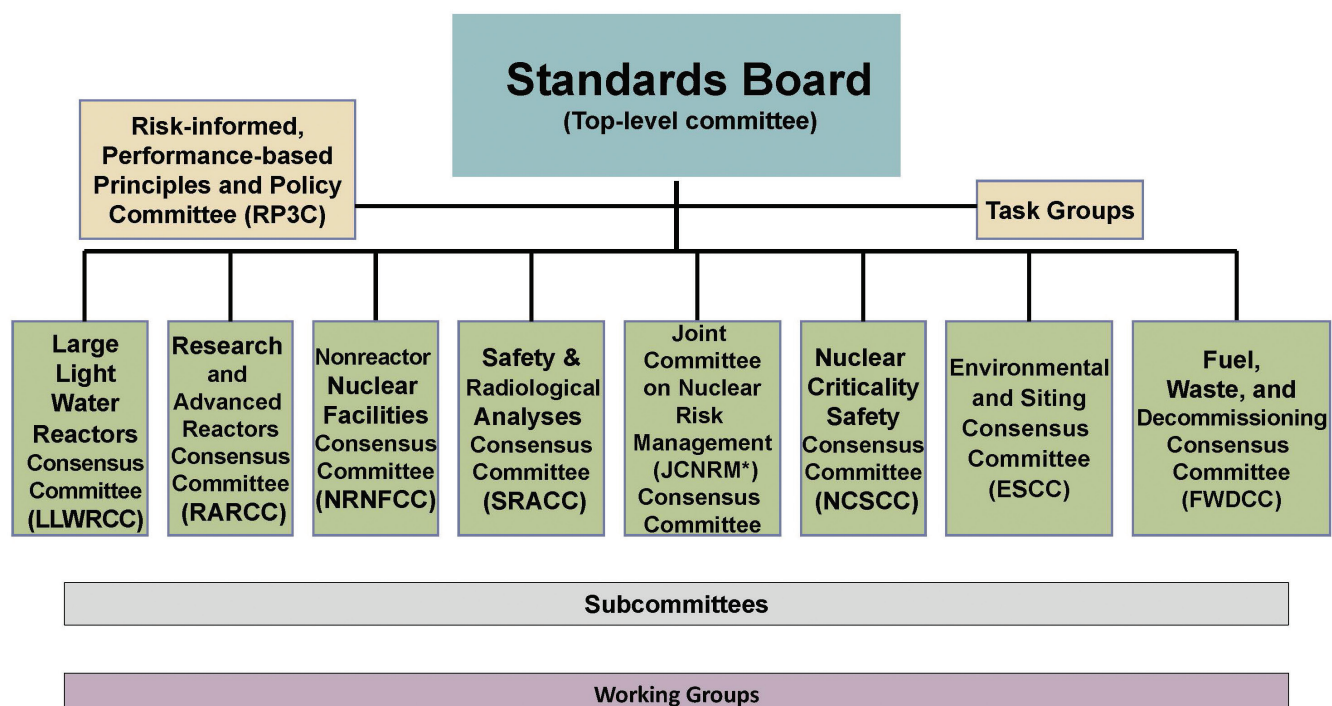
Standards Board 2017

The following members were appointed by the ANS President within the last three years or serve ex officio positions as consensus committee chairs:

G. F. Flanagan, Chair
S. L. Stamm, Vice Chair

J. K. August	J. O'Brien
R. J. Budnitz	A. O. Smetana
C. E. Carpenter	R. D. Sachs
D. R. Eggett	A. G. Sowder
N. P. Kadambi	W. M. Turkowski
C. A. Mazzola	E. G. Wallace
C. H. Moseley, Jr.	L. L. Wetzel
J. A. Nakoski	

The ANS Standards Committee



*The JCNRM is a joint ANS and ASME committee.

Standards Sales Report		
October 16, 2016 - May 15, 2017		
Designation & Title of Standard	# Sold	Total
ANS/ASME-58.22-2014: Requirements for Low Power and Shutdown Probabilistic Risk Assessment	3	\$1,160.00
ANS-6.4.3-1991, W2001: Gamma-Ray Attenuation Coefficients And Buildup Factors for Engineering Materials	2	\$489.00
ANSI/ANS-10.4-2008; R2016: Verification and Validation of Non-Safety-Related Scientific and Engineering Computer Programs for the Nuclear Industry	3	\$416.00
ANSI/ANS-15.11-2016: Radiation Protection at Research Reactor Facilities	7	\$1,086.60
ANSI/ANS-15.1-2007; R2013: The Development of Technical Specifications for Research Reactors	2	\$210.00
ANSI/ANS-15.16-2015: Emergency Planning for Research Reactors	7	\$516.40
ANSI/ANS-15.17-1981; R1987; R2000; W2010: Fire Protection Program Criteria for Research Reactors	1	\$47.00
ANSI/ANS-15.21-2012: Format and Content for Safety Analysis Reports for Research Reactors	3	\$384.00
ANSI/ANS-15.2-1999; R2009; R2016: Quality Control for Plate-Type Uranium-Aluminum Fuel Elements	1	\$63.00
ANSI/ANS-15.4-2016: Selection and Training of Personnel for Research Reactors	9	\$871.70
ANSI/ANS-15.8-1995; R2005; R2013: Quality Assurance Program Requirements for Research Reactors	4	\$266.00
ANSI/ANS-16.1-2003; R2008; R2017: Measurement of the Leachability of Solidified Low-Level Radioactive Wastes by a Short-Term Test Procedure	6	\$880.00
ANSI/ANS-18.1-1999; W2009: Radioactive Source Term for Normal Operation of Light Water Reactors	2	\$190.00
ANSI/ANS-18.1-2016: Radioactive Source Term for Normal Operation of Light Water Reactors	6	\$618.20
ANSI/ANS-19.1-1983; R1989; W1999: Nuclear Data Sets for Reactor Design Calculations	1	\$70.00
ANSI/ANS-19.3.4-2002; R2008; R2017: The Determination of Thermal Energy Deposition Rates in Nuclear Reactors	1	\$62.00
ANSI/ANS-19.6.1-2011; R2016: Reload Startup Physics Tests for Pressurized Water Reactors	1	\$133.00
ANSI/ANS-2.15-2013: Criteria for Modeling and Calculating Atmospheric Dispersion of Routine Radiological Releases from Nuclear Facilities	1	\$188.00
ANSI/ANS-2.17-2010; R2016: Evaluation of Subsurface Radionuclide Transport at Commercial Nuclear Power Plants	1	\$138.00
ANSI/ANS-2.21-2012; R2016: Criteria for Assessing Atmospheric Effects on the Ultimate Heat Sink	1	\$61.00
ANSI/ANS-2.2-2016, Earthquake Instrumentation Criteria for Nuclear Power Plants	5	\$732.60
ANSI/ANS-2.23-2002; R2009; W2016: Nuclear Plant Response to an Earthquake	1	\$127.80
ANSI/ANS-2.23-2016: Nuclear Power Plant Response to an Earthquake	4	\$688.00
ANSI/ANS-2.26-2004; R2010: Categorization of Nuclear Facility Structures, Systems, and Components for Seismic Design	2	\$250.00
ANSI/ANS-2.27-2008; R2016: Criteria for Investigations of Nuclear Facility Sites for Seismic Hazard Assessments	3	\$653.00

Standards Sales Report		
October 16, 2016 - May 15, 2017		
Designation & Title of Standard	# Sold	Total
ANSI/ANS-2.29-2008; R2016: Probabilistic Seismic Hazard Analysis	6	\$884.00
ANSI/ANS-2.30-2015: Criteria for Assessing Tectonic Surface Fault Rupture and Deformation at Nuclear Facilities	3	\$750.00
ANSI/ANS-2.3-2011; R2016: Estimating Tornado, Hurricane, and Extreme Straight Line Wind Characteristics at Nuclear Facility Sites	3	\$217.00
ANSI/ANS-3.11-2015: Determining Meteorological Information at Nuclear Facilities	3	\$704.00
ANSI/ANS-3.1-2014, Selection, Qualification, and Training of Personnel for Nuclear Power Plants	15	\$2,060.80
ANSI/ANS-3.2-2012; R2017: Managerial, Administrative, and Quality Assurance Controls for the Operational Phase of Nuclear Power Plants	4	\$500.50
ANSI/ANS-3.4-1996;R2002;W2012: Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants	3	\$366.00
ANSI/ANS-3.5-2009: Nuclear Power Plant Simulators for Use in Operator Training and Examination	5	\$628.90
ANSI/ANS-4.5-1980;R1986;W1996: Criteria for Accident Monitoring Functions in Light-Water-Cooled Reactors	1	\$70.00
ANSI/ANS-40.37-2009; R2016: Mobile Low-Level Radioactive Waste Processing Systems	3	\$483.00
ANSI/ANS-41.5-2012: Verification and Validation of Radiological Data for Use in Waste Management and Environmental Remediation	2	\$322.00
ANSI/ANS-5.1-2014: Decay Heat Power in Light Water Reactors	4	\$683.90
ANSI/ANS-5.4-2011: Method for Calculating the Fractional Release of Volatile Fission Products from Oxide Fuel	2	\$172.00
ANSI/ANS-51.1-1983;R1988;W1998: Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants	3	\$672.00
ANSI/ANS-52.1-1983;R1988;W1998: Nuclear Safety Criteria for the Design of Stationary Boiling Water Reactor Plants	1	\$229.00
ANSI/ANS-55.6-1993;R1999;R2007;W2017: Liquid Radioactive Waste Processing System for Light Water Reactor Plants	1	\$145.00
ANSI/ANS-56.11-1988;W1998: Design Criteria for Protection Against the Effects of Compartment Flooding in LWR Plants	1	\$70.00
ANSI/ANS-56.8-2002;R2016: Containment System Leakage Testing Requirements	1	\$149.00
ANSI/ANS-57.10-1996;R2016: Design Criteria for Consolidation of LWR Spent Fuel	1	\$149.00
ANSI/ANS-57.1-1992;R1998;R2005;R2015 (R=Reaffirmed): Design Requirements for Light Water Reactor Fuel Handling Systems	1	\$70.00
ANSI/ANS-57.8-1995;R2005;R2011;R2017 (R=Reaffirmed): Fuel Assembly Identification	1	\$52.00
ANSI/ANS-57.9-1992;R2000;W2010 (R=Reaffirmed, W=Withdrawn): Design Criteria for an Independent Spent Fuel Storage Installation (Dry Type)	1	\$193.00
ANSI/ANS-58.14-2011; R2017: Safety and Pressure Integrity Classification Criteria for Light Water Reactors	2	\$407.00
ANSI/ANS-58.2-1988;W1998 (W=Withdrawn): Design Basis for Protection of Light Water Nuclear Power Plants Against the Effects of Postulated Pipe Rupture	1	\$210.00

Standards Sales Report		
October 16, 2016 - May 15, 2017		
Designation & Title of Standard	# Sold	Total
ANSI/ANS-58.3-1992;R1998;R2008: Physical Protection for Nuclear Safety-Related Systems and Components	1	\$152.00
ANSI/ANS-58.6-1996;R2001;W2011: Criteria for Remote Shutdown for Light Water Reactors	1	\$62.00
ANSI/ANS-58.8-1984;W1994: Time Response Design Criteria for Nuclear Safety Related Operator Actions	1	\$77.00
ANSI/ANS-59.51-1997;R2015: Fuel Oil Systems for Safety-Related Emergency Diesel Generators	1	\$78.00
ANSI/ANS-6.1.2-2013: Group-Averaged Neutron and Gamma-Ray Cross Sections for Radiation Protection and Shielding Calculations for Nuclear Power Plants	2	\$115.90
ANSI/ANS-6.6.1-2015: Calculation and Measurement of Direct and Scattered Gamma Radiation from LWR Nuclear Power Plants	1	\$129.60
ANSI/ANS-8.10-2015, Criteria for Nuclear Criticality Safety Controls in Operations with Shielding and Confinement	4	\$231.90
ANSI/ANS-8.1-2014, Nuclear Criticality Safety in Operations with Fissionable Material Outside Reactors	54	\$3,260.00
ANSI/ANS-8.15-2014, Nuclear Criticality Safety Control of Selected Actinide Nuclides	2	\$231.00
ANSI/ANS-8.17-2004;R2009;R2014: Criticality Safety Criteria for the Handling, Storage, and Transportation of LWR Fuel Outside Reactors	1	\$52.00
ANSI/ANS-8.19-2014: Administrative Practices for Nuclear Criticality Safety	53	\$1,687.40
ANSI/ANS-8.23-2007;R2012: Nuclear Criticality Accident Emergency Planning and Response	2	\$262.00
ANSI/ANS-8.24-2007;R2012: Validation of Neutron Transport Methods for Nuclear Criticality Safety Calculations	1	\$110.00
ANSI/ANS-8.27-2015: Burnup Credit for LWR Fuel	1	\$92.70
ANSI/ANS-8.3-1997;R2003;R2012: Criticality Accident Alarm System	2	\$224.00
ANSI/ANS-8.5-1996;R2002;R2007;R2012: Use of Borosilicate-Glass Raschig Rings as a Neutron Absorber in Solutions of Fissile Material	1	\$70.00
ANSI/ANS-8.7-1998;R2007;R2012: Nuclear Criticality Safety in the Storage of Fissile Materials	1	\$87.00
ASME/ANS RA-S-1.2-2014: Severe Accident Progression and Radiological Release (Level 2) PRA Standard for Nuclear Power Plant Applications for Light Water Reactors (LWRs)	1	\$195.00
ASME/ANS RA-S-1.4-2013: Probabilistic Risk Assessment Standard for Advanced Non-LWR Nuclear Power Plants	5	\$2,450.00
Total Sales		\$30,056.90

NRC Standards Activities: Management Directive 6.5

John A. Nakoski, Chief
Performance and Reliability Branch
Office of Nuclear Regulatory Research
U.S. Nuclear Regulatory Commission
Presentation to ANS Standards Board
June 2017

MD 6.5, NRC Participation in the Development and Use of Consensus Standards

Recent revision (10/2016) strengthened internal oversight of NRC Codes and Standards activities

- Historically, each NRC office individually determined participation with informal coordination across offices
- MD 6.5 increased coordination by the NRC Standards Executive (Brian Thomas) and program staff (RGGIB)

MD 6.5 created new NRC roles:

- SDO Coordinator
- Technical Forum (formalized function)
- Standards Steering Committee

Emphasis on NRC participation in those SDO Committee standards development activities that are most important to the NRC mission

SDO Coordinators

Facilitates NRC interactions with a specific SDO:

- Gathers and organizes information from the NRC Representatives
- Coordinates pre- and post-SDO committee meeting discussions
- Arranges meetings with the NRC Standards Executive, Steering Committee, Technical Forum, and SDO, as needed
- Shares guidance with the NRC Representatives from the NRC Standards Executive, Steering Committee, Technical Forum, or Program Manager
- Recommends priorities for NRC participation in standards activities
- Works with NRC Representatives to develop and coordinate formal NRC positions
- Encourages NRC Participants to help develop Agency positions and to express these positions during SDO activities
- Prepares information to be presented to the NRC's Standards Steering Committee regarding NRC activities with SDOs

Standards Steering Committee

- Member are NRC Division Directors from NRC Offices with a significant interest in the regulatory use of consensus Codes and Standards
- Prioritizes NRC Standards-related activities and decides on NRC participation in Standards development
- Discusses the availability of resources to support staff involvement
- Approves the NRC's development of new, Government-unique Standards

Desktop Guidance

Guidance for NRC Staff Participation on Standards Development Committees

- Additional instructions on implementing MD 6.5
 - ✓ SDO Participation Approval Process
 - ✓ Periodic Reaffirmation of NRC Participation
 - ✓ SDO Meeting Process
 - ✓ Prioritization Process of SDO Committee Activities
 - ✓ NRC Endorsement of Standards
 - ✓ Training

NRC SDO Participation Approval

Types of NRC Participants

- NRC Representative (may be NRC SDO coordinator)
- NRC Alternate Representative
- Observer
- Technical Support

Nominating NRC Representative or Alternate requires:

- NRC nomination letter to SDO
- NRC Form 652 for internal controls
- Recommendation and concurrence from SDO Coordinator
- Supervisor and Division Director authorization for SDO participation
- Approval of NRC Standards Executive

SDO Coordinators work with NRC SDO Program Manager to maintain NRC participant organization charts for SDO Committees

Reaffirmation Process

Periodic review by the Standards Executive and program office management to confirm participation of NRC staff is appropriate and prioritized for NRC mission

- Initiated by the Program Manager typically on an annual basis

SDO Coordinator

- Maintains awareness of significant activities
- May recommend changes to SDO committee participation

SDO Committee Meeting Process

- NRC will coordinate positions on standards (pre-meeting) so that internally vetted agency positions are presented during Committee meetings
- NRC Representatives are primarily responsible for coordination and documenting NRC positions and significant issues
- The Desktop Guide provides guidance on documenting pre-meeting internal discussions, Committee meeting discussions, and post-meeting internal discussions for enhanced consistency in record keeping
- The SDO Coordinator should ensure that appropriate pre- and post-meeting discussions on significant issues are conducted, and that information is shared with appropriate NRC staff.
- Differing views may be addressed by convening the Technical Forum

Prioritization for NRC Participation

NRC Steering Committee prioritizes and decides considering:

- Standards activities to be continued over the next 18 to 24 months
- New Standards activities that will start within the next 18 to 24 months
- Importance of issues covered by Standards activities to NRC's mission success
- Availability of agency resources

Key questions to be answered:

- What is the purpose and scope of the new or revised Standard?
- Why is issuance or revision of the standard important to NRC?
- When will the SDO the new or revised standard be published?
- When will the new or revised standard first be used in a regulatory application and how many applications are expected over next 5 years?

NRC Endorsement of Standards

NRC Representatives to SDO initiate NRC endorsement

- Discussions with SDO Committee should occur on plans for NRC endorsement during Standards development
- NRC endorsement activities should be coordinated with SDO publication schedule and NRC Program Office needs
- NRC conditions and exceptions to the published Standard should be communicated to the SDO Committee during Standards development

The SDO Coordinator facilitates endorsement

- Monitors when standards will be available to be endorsed
- Coordinates with NRC Representatives on the method for NRC endorsement (e.g., Rule, Regulatory Guide, etc.)
- Provides coordination and guidance for challenges that may require conditions or exceptions being placed on the standard

Training

Program Manager provides training

The SDO Coordinator support the training function by:

- Identifying NRC participants for training
- Reinforcing the execution of activities that the SDO Coordinator and the NRC participants are trained to preform
- Providing feedback on lessons learned on the performance of the NRC Standards Program

2016 All CC Performance Metrics Summary

Strategic Plan Activity 3.G

Performance Metric	Good (Green)	Fair (Yellow)	Poor (Red)	ESCC	FWDCC	LLWRCC	NCSCC	NRNFCC	RARCC	SRACC
CC Meeting Attendance (Calendar year)	>80%	50% to 79%	<50%	70.5%	70.2%	66.1% (3 meetings held 11/6/16)	53.3% (1 meeting held 11/7/16)	60.0% (1 teleconference held 9/29/16)	58.8% (1 meeting held 11/7/16)	62.5% (1 meeting held 11/6/16)
Number of new active standards initiated (% increase in assigned standards)	>5%	2% to 5%	<2%	8% PINS submitted for ANS-2.6	0% No new PINS submitted	0% (1 of 20) PINS are in development for several new projects	0% No new PINS submitted	0% No new PINS submitted	20% PINS submitted for ANS-20.2 & ANS-30.2 in 2016.	5% (1 of 20) PINS submitted for historical rev of ANS-19.4
Number of standards greater than 8 years since last issuance	0%	0.1% to 5%	>5%	0%	28.6%	23.1 % (3 of 13) ANS-51.1, ANS-58.3, ANS-58.8	0%	0%	0%	5% (1 of 20) (1 standard – ANS-19.3.4-2002;R2008)
Average CC member ballot participation	>90%	80% to 90%	<80%	74.9%	75.1%	79.9%	79.2%	74.0%	81.3%	74.3%
Average time to staff WGs and draft new standards	<24 months	24 to 36 months	> 36 months	N/A No NEW standards issued for ballot	N/A No NEW standards issued for ballot	N/A No NEW standards issued for ballot	N/A No NEW standards issued for ballot	N/A No NEW standards issued for ballot	N/A No NEW standards issued for ballot	N/A No NEW standards issued for ballot
Average ballot comment resolution time <50 pgs/ <50 cmts (L1) 50 to 100 pgs/ <100 cmts (L2) >100 pgs/ >100 cmts (L3)	< 4 wks <6 wks <8wks	4 to 6 wks 6 to 8 wks 8 to 12 wks	>6 wks >8 wks > 12 wks	ANS-2.2 = 2 days (L1) ANS-2.23 = 5 weeks (L2) ANS-2.8 = NA as it is still resolving comments	ANS-57.3 = +10 weeks at close of year (L1)	Average ballot comment resolution time ~13 months	N/A No ballots of draft standards issued in 2016	N/A No ballots of draft standards issued in 2016	ANS-15.4 = 0 days (L1) ANS-15.44 = 3 weeks (L1)	N/A Only reaffirmation ballots issued in 2016
Average time to respond to an inquiry	< 4 months	4 to 8 months	>8 months	ANS-3.11-2015 response issued in 5 months	+23 months for ANS-55.1/55.6	Response to inquiry on ANS-3.4 issued 3/11/16 in ~5 months	N/A No inquiries received	N/A No inquiries received	N/A No inquiries received	N/A No inquiries received

Notes:

- The above metrics were selected as the most important by the Policy Task Group. Changes from the SB meeting of 11/8/16 have been included.
- 2016 will be used as a trial year.
- Use of these metrics should be used as a baseline for improvement. Very good performance should lead to some type of meaningful recognition by the SB. The goal of the performance metrics is to improve the response times and performance of the SC to the needs of the industry. Each December, the Standards Manager will complete those sections assigned to that position and send to the CC chairs which will complete the matrix, clarify areas where data is not representative, and identify steps to be taken to improve performance in identified fair and poor areas. If a specific metric was not applicable to a CC they would not be evaluated for that item.

CC Performance Metrics Evaluation and Recommendations

Strategic Plan Activity 3.G

Performance Metric	Good (Green)	Fair (Yellow)	Poor (Red)	2016 Evaluation Results	Recommendations
CC Meeting Attendance (Calendar year)	>80%	50% to 79%	<50%	CC evaluations ranged from 53.3% to 70.5%. All were in the FAIR range.	Change to: GOOD>75%; FAIR 55 to 75% POOR <55%
Number of new active standards initiated (% increase in assigned standards)	>5%	2% to 5%	<2%	Evaluations ranged from 0% to 20% with Four CCs at Zero; two as GOOD and one as FAIR.	None
Number of standards greater than 8 years since last issuance	0%	0.1% to 5%	>5%	Evaluations ranged from 0% to 28.6% with: 4 @ 0% GOOD 1 FAIR 2 POOR	None
Average CC member ballot participation	>90%	80% to 90%	<80%	Evaluations ranged from 74.3% to 79.9% with: 0 GOOD 1 FAIR 6 POOR	Change to: GOOD > 83% FAIR 73 to 83% POOR <73%
Average time to staff WGs and draft new standards	<24 months	24 to 36 months	> 36 months	There was no data on this metric this year: 7 NA	Re-evaluate next year (January 2018)
Average ballot comment resolution time <50 pgs/ <50 cmts (L1) 50 to 100 pgs/ <100 cmts (L2) >100 pgs/ >100 cmts (L3)	< 4 wks <6 wks <8wks	4 to 6 wks 6 to 8 wks 8 to 12 wks	>6 wks >8 wks > 12 wks	Evaluations ranged from 0 days to 13 months with: 2 GOOD 0 FAIR 2 POOR 3 NA	None
Average time to respond to an inquiry	< 4 months	4 to 8 months	>8 months	Evaluations ranged from 5 to 23 months with 0 GOOD 2 FAIR 1 POOR 4 NA	None We need to improve our performance in this area.

ANS Standards Staffing – Survey Results

Background

One of the action items in the Strategic Plan is to monitor consensus committee and working group success in staffing and recruitment and share best practices across all consensus committees.

Results

Each Working Group and Subcommittee Chair was requested to complete the survey. Responses were collected on June 6th and summarized.

Number of requests sent:	176
Number of responses:	73
Number that had staffed efforts in last 2 years:	33

SUMMARY of RESPONSES
<p>The sources of staffing tried:</p> <ul style="list-style-type: none"> • 22 Groups contacted the Standards Manager (Pat Schroeder) • 23 Groups queried subcommittee members • 5 Groups used Nuclear News • 3 Groups used ANS LinkedIn Group • 4 Groups contacted speakers and authors on the topic from ANS conferences • 1 Group used general internet search
<p>Staffing success paths in order of results from chairs:</p> <ol style="list-style-type: none"> a. Other (See Note1) b. Recommendations /referrals from subcommittee members c. Referral by Standards Manager (Pat Schroeder) d. Responses to Nuclear News e. Speakers on the topic from previous ANS conferences f. ANS LinkedIn Group g. General internet search
<p>Best staffing practices/recommendations:</p> <ol style="list-style-type: none"> 1. Select WG chairs with good contacts 2. Contact relevant industry groups 3. Network 4. Bring in young members 5. Conduct ANS meeting session on topic <p>A large number of chairs are using the standards manager, their own contacts, and subcommittee assistance. More Chairs need to use the available resources from ANS and other industry conferences, the ANS directory and .</p>

Note 1: “Other” included contacting previous WG members, conducting ANS National Meeting sessions, contacting ANS Technical Divisions, WG chair contacts, contacting other industry groups such as TRTR and requesting help from other Standards Committee members.

_____ CC Staffing Summary

Staffing Need (Member, chair etc)/ # of positions	Standard # or Committee Name	Date Need Identified	Priority (H or M) ⁽²⁾	Date Need Filled	Source ⁽¹⁾	Date-Actions Taken to Fill Need
Examples:						
WG Member/2	56.1	4/1/16	M		Fill in after appointment	4/30/17-LinkedIn Ad 5/30/17-request to LLWRCC 6/10/2017 –Action item created 9/1/17-Request to OPD
WG Member/3	56.2	10/1/16	H	3/1/17	a/e/f	11/1/16 – LinkedIn post

(1) a. Personal contact, b. Standards Manager, c. ANS SC referral, d. ANS publication, e. LinkedIn, f. Conference speakers and paper authors, g. Internet search, h. other

(2) High (H) or Medium(M) based on priority of standard or Reaffirmation time limit

American Nuclear Society

Environmental & Siting Consensus Committee

Balance of Interest (June 2017)

Architect-Engineer (2 Votes)

Ng, Kit	Bechtel Power Corporation
*Vigeant, Stephen	Chicago Bridge & Iron Federal Services
*(Mazzola, Carl (ESCC Chair); CB&I Federal Services)	

Consultant (2 Votes)

Call, Jennifer (Subcommittee Chair)	Oasys, Inc.
Simpkins, Ali	Dade Moeller, an NV5 Company

Government Agency (3 Votes)

Li, Yong	Defense Nuclear Facilities Safety Board
O'Brien, James	U.S. Department of Energy
*Xu, James (Subcommittee Vice Chair)	U.S. Nuclear Regulatory Commission
*(Parks, Leah (Subcommittee Chair); U.S. Nuclear Regulatory Commission)	
*(Doub, Peyton (Subcommittee Chair); U.S. Nuclear Regulatory Commission)	

Individual (2 Votes)

Bryson, Kevin (Subcommittee Vice Chair)	Individual
Savy, Jean	Individual

National Laboratory/Government Facilities (4 Votes)

*Bellinger, Thomas	Consolidated Nuclear Security, Ilc
*(Hunt, R. Joe; Consolidated Nuclear Security, Ilc)	
Bruggeman, David	Los Alamos National Laboratory
Hossain, Quazi (Subcommittee Chair)	Lawrence Livermore National Laboratory
Krieg, Rebekah (Subcommittee Chair)	Pacific Northwest National Laboratory

Owner/Operator (1 Vote)

Snead, Paul	Duke Energy
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Vendor (1 Vote)

Gao, Yan (ESCC VC & Subcommittee Chair)	Westinghouse Electric Company, LLC
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*Shares one vote with others from the same company

Vote Summary

Architect-Engineer (2 Votes)	13%
Consultant (2 Votes)	13%
Government Agency (3 Votes)	20%
Individual (2 Votes)	13%
National Laboratory/Government Facilities (4 Votes)	27%
Owner/Operator (1 Vote)	7%
Vendor (1 Vote)	7%
TOTAL VOTES (15)	100%

5/17/2017

American Nuclear Society

Fuel, Waste, and Decommissioning Consensus Committee

Balance of Interest (June 2017)

Architect-Engineer (2 Votes)

Hillyer, David	Energy Solutions
Lewis, D. Wayne	WECTEC

Government Agency (1 Vote)

Felsher, Harry	U.S. Nuclear Regulatory Commission
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Individual (3 Votes)

Brault, Jeffery	Individual
Eggett, Donald	Individual
Jansen Vehec, Jodine	Individual

National Laboratory/Government Facilities (1 Votes)

Lucchini, Jean Francois	Los Alamos National Laboratory
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Owner (2 Votes)

Miller, Coleman	Pacific Gas & Electric Company
Stasko, Maryanne	Duke Energy

Vendor (3 Votes)

Bader, Steven	AREVA Federal Services, LLC
Sanders, Mitchell	Westinghouse Electric Company, LLC
Schilthelm, Steven	BWXT, Inc.

Vote Summary

Architect-Engineer (2 Votes)	17%
Government Agency (1 Vote)	8%
Individual (3 Votes)	25%
National Laboratory/Government Facilities (1 Votes)	8%
Owner (2 Votes)	17%
Vendor (3 Votes)	25%
TOTAL VOTES (12 Votes)	100%

5/18/2017

American Nuclear Society

ASME/ANS Joint Committee on Nuclear Risk Management

Balance of Interest (June 2017)

Consultant (6 V otes)

Amico, Paul J.	Jensen Hughes (AU)
Hughes, Eugene A.	ETRANCO (AU)
Parry, Gareth W.	Jensen Hughes (AU)
Sloane, Barry D.	Jensen Hughes (AU)
True, Douglas E.	Jensen Hughes (AU)
Wakefield, Donald J.	ABS Consulting (AU)

Government Agency (3 Votes)

Drouin, Mary	U.S. Nuclear Regulatory Commission (AT)
O'Brien, James	U.S. Department of Energy (AT)
Spitzer, Cornelia	International Atomic Energy Agency (AT)

Individual (9 Votes)

Apostolakis, George	Individual (AF)
Bernsen, Sidney A.	Individual (AF)
Chapman, James	Individual (AF)
Fleming, Karl A.	Individual (AF)
Grantom, C. Rick	Individual (AF)
Kojima, Shigeo	Individual (AF)
Levinson, Stanley H.	Individual (AF)
Ravindra, Mayasandra K.	Individual (AF)
Wall, Ian B.	Individual (AF)

National Laboratory/Government Facilities (4 Votes)

Bari, Robert A	Brookhaven National Laboratory (AI)
Budnitz, Robert J.	Lawrence Berkeley National Laboratory (AI)
Sattison, Martin	Idaho National Laboratory (AI)
Wheeler, Timothy	Sandia National Laboratories (AI)

Owner/Operator (5 Votes)

Anderson, Victoria	Nuclear Energy Institute (AO)
Fine, K. Raymond	FirstEnergy Nuclear Operating Company (AO)
Hackerott, H. Alan	Omaha Public Power District (AO)
Kindred, Gerry	Tennessee Valley Authority (AO)
Stone, Jeff	Exelon Corporation (AO)

Universities (1 Vote)

Nelson, Pamela F.	National Autonomous University of Mexico (AI)
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Vendor (4 Votes)

Henneke, Dennis W.	General Electric (AK)
Maioli, Andrea	Westinghouse Electric Co. LLC (AK)
Schneider, Raymond E.	Westinghouse Electric Co., LLC (AK)
Young, James W.	GE Hitachi (AK)

Voting Summary

Consultant (6 V otes)	19%
Government Agency (3 Votes)	9%
Individual (9 Votes)	28%
National Laboratory/Government Facilities (4 Votes)	13%
Owner/Operator (5 Votes)	16%
Universities (1 Vote)	3%
Vendor (4 Votes)	13%
TOTAL VOTES (32)	100%

American Nuclear Society

Large Light Water Reactor Consensus Committee

Balance of Interest (June 2017)

Architect-Engineer (2 Votes)

French, Michelle	WECTEC
*Routh, Stephen	Bechtel Power Corporation
*(Christensen, Lowell; Bechtel Power)	
*(Saldarini, James; Bechtel Power Corporation)	

Consultant (5 Votes)

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

Government Agency (1 Votes)

*Carpenter, Gene	U.S. Department of Energy
*Guha, Pranab	U.S. Department of Energy

Individual (2 Votes)

Reuland, William (LLWRCC Chair)	Individual
Stamm, Steven	Individual

National Laboratory/Government Facilities (1 Vote)

Linn, Mark	Oak Ridge National Laboratory
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Owner/Operator (3 Votes)

Brown, Charles	Southern Company
Florence, James	Nebraska Public Power District
Johnson-Turnipseed, Earnestine	Entergy Corporation

Society (1 Vote)

Moseley, Jr., Charles	ASME NQA Liaison (Individual)
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Vendor (4 Votes)

Colby, Mark	Global Nuclear Fuels
Copora, Gary	Westinghouse Electric Company, LLC
Gardner, Darrell	Enercon Services, Inc.
Meneely, Timothy	Westinghouse Electric Company, LLC

**shares one vote*

Voting Summary

Architect-Engineer (2 Votes)	11%
Consultant (5 Votes)	26%
Government Agency (1 Votes)	5%
Individual (2 Votes)	11%
National Laboratory/Government Facilities (1 Vote)	5%
Owner/Operator (3 Votes)	16%
Society (1 Vote)	5%
Vendor (4 Votes)	21%
TOTAL VOTES (19)	100%

5/18/2017

American Nuclear Society

Nonreactor Nuclear Facilities Consensus Committee

Balance of Interest (June 2017)

Architect-Engineer (3 Votes)

Anselmi, Todd	Enercon Services
Eble, Robert	AREVA Inc.
Mazzola, Carl	Chicago Bridge & Iron Federal Services

Consultant (1 Vote)

Gupta, Mukesh	AECOM-Professional Solutions
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Government Agency (3 Votes)

Kazban, Roman	Defense Nuclear Facilities Safety Board
O'Brien, James (NRNFCC Chair)	U.S. Department of Energy
Smith, Brian	U.S. Nuclear Regulatory Commission

Individual (3 Vote)

Brault, Jeffery (NRNFCC Vice Chair)	Individual
Hicks, Jerry	Individual
Massie, Herbert	Individual

National Laboratory (1 Vote)

Bari, Robert	Brookhaven National Laboratory
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University (1 Vote)

Modarres, Mohammad	University of Maryland
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Vendor (2 Votes)

Miller, James	SABIA, Inc.
Wheeler, Jennifer	Nuclear Fuel Services, Inc.

Voting Summary

Architect-Engineer (3 Votes)	21%
Consultant (1 Vote)	7%
Government Agency (3 Votes)	21%
Individual (3 Vote)	21%
National Laboratory (1 Vote)	7%
University (1 Vote)	7%
Vendor (2 Votes)	14%
TOTAL VOTES (14)	100%

5/18/2017

American Nuclear Society

Nuclear Criticality Safety Consensus Committee

Balance of Interest (June 2017)

Consultant (1 Vote)

*Taylor, Richard	C.S. Engineering, Inc.
*Bartholomay, Roger	C.S. Engineering, Inc.

Government Agency (3 Votes)

Berg, Lawrence	U.S. Department of Energy
Marenchin, Thomas	U.S. Nuclear Regulatory Commission
Wilson, Robert	U.S. Department of Energy

Individual (1 vote)

Hopper, Calvin	Individual
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National Laboratory/Government Facilities (2 Votes)

Bowen, Douglas (subcommittee chair)	Oak Ridge National Laboratory
Miller, John	Sandia National Laboratories

Society (3 Votes)

Eby, Robert	AIChE Rep. (Navarro Research & Engineering)
Knief, Ronald	INMM Rep. (Employed by Sandia Nat'l Laboratories)
Murray, Scott	HPS Rep. (Employed by General Electric)

University (1 Vote)

Busch, Robert	University of New Mexico
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Vendor (3 Votes)

Doane, William	AREVA Inc.
Shackelford, William (NCSCC Vice Chair)	Nuclear Fuel Services, Inc.
Wetzel, Larry (NCSCC Chair)	BWX Technologies, Inc.

**shares one vote*

Voting Summary

Consultant (1 Vote)	7%
Government Agency (3 Votes)	21%
Individual (1 vote)	7%
National Laboratory/Government Facilities (2 Votes)	14%
Society (3 Votes)	21%
University (1 Vote)	7%
Vendor (3 Votes)	21%
TOTAL VOTES (15)	100%

5/18/2017

American Nuclear Society

Research and Advanced Reactors Consensus Committee

Balance of Interest (June 2017)

Architect-Engineer (1 Vote)

Peres, Mark	Fluor Enterprises Inc.
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Government Agency (3 Votes)

*Adams Jr., Alexander	U.S. Nuclear Regulatory Commission
*Mazza, Jan; U.S. Nuclear Regulatory Commission	
Lawson, David	U.S. Department of Energy
Thomas, Newton (RARCC VC & SubC Chair)	National Institute of Standards Technology

Individual (3 Votes)

Carter, Robert	Individual
Grimes, Brian	Individual
Turk, Richard	Individual

National Laboratory/Government Facilities (2 Votes)

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

Owner (2 Votes)

*August, James	Southern Company
*Afzali, Amir; Southern Company	
Grenci, Tony	Salt River Project

University (4 Votes)

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

Vendor (1 Vote)

Veca, Anthony	General Atomics
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**Shares vote with member(s) from same company.*

Voting Summary

Architect-Engineer (1 Vote)	6%
Government Agency (3 Votes)	19%
Individual (3 Votes)	19%
National Laboratory/Government Facilities (2 Votes)	13%
Owner (2 Votes)	13%
University (4 Votes)	25%
Vendor (1 Vote)	6%
TOTAL VOTES (16)	100%

American Nuclear Society

Safety and Radiological Analyses Consensus Committee

Balance of Interest (June 2017)

Architect-Engineer (2 Votes)

Hulse, Paul (Subcommittee Chair)	Sellafield Ltd.
Jarvic, Julie (SRACC Vice Chair)	Bechtel Corporation

Consultant (2 Votes)

Gupta, Mukesh	AECOM- Professional Solutions
Rombough, Charles	CTR Technical Services, Inc.

Government Agency (1 Vote)

Palmrose, Donald	U.S. Nuclear Regulatory Commission
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Individual (3 Votes)

Amato, Richard	Individual
Brady Raap, Michael	Individual
Weitzberg, Abraham (SRACC Vice Chair)	Individual

National Laboratory/Government Facilities (3 Votes)

Cokinos, Dimitrios (Subcommittee Chair)	Brookhaven National Laboratory
Dudziak, Donald	Los Alamos National Laboratory
Smetana, Andrew (SRACC Chair)	Savannah River National Laboratory

Society (1 Vote)

Graham, Christopher	HPS Rep. (Employed by Ameren)
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University (2 Votes)

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

Vendor (1 Vote)

Alpan, F. Arzu	Westinghouse Electric Company, LLC
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Voting Summary


Architect-Engineer (2 Votes)	13%
Consultant (2 Votes)	13%
Government Agency (1 Vote)	7%
Individual (3 Votes)	20%
National Laboratory/Government Facilities (3 Votes)	20%
Society (1 Vote)	7%
University (2 Votes)	13%
Vendor (1 Vote)	7%
TOTAL VOTES (15)	100%



American Nuclear Society

American Nuclear Society Professional Divisions(PD)/Standards Committee (SC) Liaisons Interface Plan

American Nuclear Society
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American Nuclear Society

Agenda

- Goals
- Objectives
- Definitions PD and SC Liaisons
- List of Liaisons
- Expectations
- Proposed Interface Improvements

2




American Nuclear Society

Professional Division (PD)/ Standards Committee Liaisons

- Goals
 - To reestablish and improve the interaction between the ANS standards committees and the Professional Divisions by reinforcing this topic in each meeting, by having a standing topic on each other's agenda and by trying to support each other more effectively with our limited resources
- Objectives
 - To establish synergy between ANS members through PD liaisons to Standards Consensus Committees and vice versa
 - PDs interact and its members benefit by keeping current on standards and standards projects within its discipline
 - Standards Consensus committees benefit by improved access to PD Subject Matter Expert's (SME's)
 - ANS members benefit by improved professional experience and networking in the standards development process
 - Provide feed back to the standards committee on possible new standards and revisions to existing standards.
 - Also consider any delinquent standards that should be updated

3



American Nuclear Society

Professional Division (PD)/ Standards Committee Liaisons

- Definitions of PD and SC Liaisons
 - PD Liaison – The person who interfaces to the Standard Committees each meeting and reviews minutes of Consensus Committee meetings within its discipline and shares what the PD is doing in that technical area
 - SC Liaison – The person who interfaces to the PD and shares standards and standards projects with the PD executive committee
- **Offer PD liaison/ SC Liaison personnel the option of applying to becoming full time members of the respective Consensus/PD executive committees**

4




American Nuclear Society

Professional Division (PD)/ Standards Committee Liaisons - Listing

ANS Professional Division	Name of PD Proposed Liaison	Email of PD Liaison	Name of ANS Standards Committee Proposed Liaison and Subcommittee	Email of ANS Standards Comm. Liaison or Interface
Accelerator Applications	James Stubbins	jstubbs@bnsl.gov	Jeffery R. Brault	jbrault@yaho.com
Aerospace Nuclear Science & Technology	John Bess	john.bess@nsl.gov	Jeffery R. Brault	jbrault@yaho.com
Biology & Medicine	Bryan Bednarz	bbednarz@nsl.gov	Carl Mazzola	carl.mazzola@nsl.gov
Decommissioning & Environmental Sciences	Jay Peters	jaypeters@nsl.gov	Carl Mazzola	carl.mazzola@nsl.gov
Education, Training, & Workspace Development	Marsha Bala	Marsha.bala@nsl.gov	Bob Busch	bob@busch.edu
Fuel Cycle & Waste Management	Jeffery R. Brault	jbrault@yaho.com	Jeffrey R. Brault	jbrault@yaho.com
Fusion Energy	Susana Reyes	susana@nsl.gov	George Flannagan	flannagan@nsl.gov
Human Factors, Instrumentation & Controls	Sean Smith	sean.smith@nsl.gov	Pranab K. Guha	pranab.guha@nsl.gov
Isotopes & Radiation	Lei Cao	lei.cao@nsl.gov	Charlotta Sanders	sanders@nsl.gov
Materials Science & Technology	Micah Hackett	mhackett@nsl.gov		
Mathematics & Computation	Paul Hulse	paul.hulse@nsl.gov		
Nuclear Criticality Safety	Sedat Guluoglu	sedat.guluoglu@nsl.gov	Larry L. Wetzel	larry@wetzel.com
Nuclear Installations Safety	Susan Pickering	susan@nsl.gov	Don Eggett	don@eggett.com
Nuclear Nonproliferation Policy			NA	
Operations & Power	Thomas Remick	thomas.remick@nsl.gov	Charles K. Brown	charles@brown.com
Radiation Protection & Shielding	Michele Sutton Ferenc	michele@nsl.gov	Charlotta Sanders	sanders@nsl.gov
Reactor Physics	Pavel Tsvetkov	pavel@nsl.gov	Dimitrios Kokinos	dimitrios@nsl.gov
Robotics & Remote Systems	Chris Eason	chris@nsl.gov	Jeffery R. Brault	jbrault@yaho.com
Thermal Hydraulics	DulWayne Schubring	dschubring@nsl.gov	Charles "Chip" Martin	chip@nsl.gov

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American Nuclear Society

Professional Division (PD)/ Standards Committee Liaisons

- Expectations during each meeting
 - PD Liaison - Review minutes of Consensus Committee meetings within its discipline and share what the PD is doing in that technical area. This can be done in person at the standards Consensus Committee meeting, by phone, by email or through the SC liaison. This should be done at or before the applicable Consensus Committee meeting.
 - SC Liaison - Share standards and standards projects with the PD executive committee and provide a list of personnel and review needs. This can be done in person at the PD meeting, by phone, by email or through the PD liaison. This should be done at or before the applicable PD meeting.
 - Offer PD liaison/ SC liaison personnel the options of applying to becoming full time members of the respective Consensus/PD executive committees (subject to meeting the applicable appointment requirements).
 - Each PD and SC
 - Review the personnel needs and identify PD/SC personnel to fulfill these needs
 - Review delinquent standards that are in need of updating and replacement and identify PD/SC volunteers to support these efforts

6



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Professional Division (PD) Liaison (Cont.)

- **Proposed Interface Improvements at all future meetings, this can apply to both the PDs and the SCs**
 - Standards Committee to provide the PDs with Project Initiation Notification System (PINs) forms issued since the last meeting for new standards in their areas of interest for dissemination to its members (completed, but provide again)
 - PDs feedback as applicable, including persons interested in participating or being kept informed of progress, at each meeting to reinforce
 - Standards Committee to provide a call for volunteers to the applicable PD for distribution to its members each meeting
 - PDs provide volunteer name and contact information to applicable standards committee, always with changes
 - PDs to indicate topics for which it sees a need for new, revised or historical standards
 - Include specific agenda items on standards committee/PD interface on respective meeting agenda's
 - SC - Set up webinar on an overview of standards to PD executive committee members

7

Liaisons to ANS Professional Divisions

ANS Professional Division	Name of PD Proposed Liaison	Email of PD Liaison	Associated Consensus Committee (see below)*	Name of ANS Standards Committee Proposed Liaison and Subcommittee	Email of ANS Standards Comm. Liaison or interface
Accelerator Applications	James Stubbins	jstubbin@illinois.edu	NRNFCC RARCC	Jeffery R. Brault	jeff_brault@yahoo.com
Aerospace Nuclear Science & Technology	John Bess	John.bess@inl.gov	**RARCC	Jeffery R. Brault	jeff_brault@yahoo.com
Biology & Medicine	Bryan Bednarz	bbednarz2@wisc.edu	ESCCRARCC/ANS-3.4	Carl Mazzola	carl.mazzola@CBIFederalServices.com
Decommissioning & Environmental Sciences	Jay Peters	JPeters@haleyaldrich.com	FWDCC/ESC CNRNFCC	Carl Mazzola	carl.mazzola@CBIFederalServices.com
Education, Training, & Workspace Development	Marsha Bala	Marsha.bala@inl.gov	LLWRCCNG SCC	Bob Busch	busch@unm.edu
Fuel Cycle & Waste Management	Jeffery R. Brault	jeff_brault@yahoo.com	FWDCC	Jeffery R. Brault	jeff_brault@yahoo.com
Fusion Energy	Susana Reyes	reyes20@inl.gov	RARCC	George Flannagan	flannagngf@ornl.gov
Human Factors, Instrumentation & Controls	Sean Smith	sean.smith.eng@gmail.com	LLWRCC	Pranab K. Guha	pranab.guha@hq.doe.gov
Isotopes & Radiation	Lei Cao	cao.152@osu.edu	SRACCNGS CC	Charlotta Sanders	sander59@unlv.nevada.edu
Materials Science & Technology	Micah Hackett	mhackett@terrapower.com	**FWDCC		
Mathematics & Computation	Paul Hulse	paul.hulse@sellafieldsites.com	SRACC		
Nuclear Criticality Safety	Sedat Goluoglu	goluoglu@mse.ufl.edu	NCSCC	Larry L. Wetzel	llwetzel@bwxl.com
Nuclear Installations Safety	Susan Pickering	sypicke@sandia.gov	RARCC/NRN RCCESCC	Don Eggett	donald.eggett@amecfw.com
Nuclear Nonproliferation Policy	Margaret Harding	margaret@4factorconsulting.com	LLWRCCAN S-60.1	NA	
Operations & Power	Thomas Remick	thomas.remick@aps.com	LLWRCC	Charles K. Brown	ckbrown@southernco.com
Radiation Protection & Shielding	Michele Sutton Ferenci	mferenci@hmc.psu.edu	SRACC	Charlotta Sanders	sander59@unlv.nevada.edu
Reactor Physics	Pavel Tsvetkov	tsvetkov@tamu.edu	SRACC	Dimitrios Cokinos	cokinos@bnl.gov
Robotics & Remote Systems	Chris Eason	CEason@souriau.com	RARCCNRN FCC/FWDCC	Jeffery R. Brault	jeff_brault@yahoo.com
Thermal Hydraulics	DuWayne Schubring	dlschubring@ufl.edu	SRACC/LLWRCC	Charles "Chip" Martin	MartinCR@nv.doe.gov

** Contingent Liaison: which would be activated if and when needed

Comment [SLS1]: Accelerator standards, if any, would come under the NRNFCC. All of the standards under this CC issued to date and under development would apply to accelerators.

Comment [SLS2]: We do not have any standards that currently need this interface. This PD is still evaluating the need for standards in this area.

Comment [SLS3]: Many of the siting and environmental standards are based upon potential biological impacts.

Comment [SLS4]: ANS-3.4 which covers medical qualifications of operating personnel is the only standard with direct medical interface.

Comment [SLS6]: I think that we need an LLWRCC member.

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Comment [SLS5]: LLWRCC includes ANS-3.1 which covers training, education and qualification requirements and ANS-3.5 Simulator training considerations. I do not see the link to criticality outside of reactors?

Comment [SLS7]: There is a strong link between Radiation and the calculation method in SRACC standards. I don't believe that the isotopes topics covered by this division are subject to criticality concerns.

Comment [SLS8]: Materials issues relate to a small portion of a large number of our standards. However, there interfaces needed would emerge on a case by case basis and would most likely be of interest in looking at high temperature applications under RARCC.

Comment [SLS10]: Don is not a member of either of the interfacing CCs.

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Comment [SLS9]: The primary role of this division is related to safety in the design, construction and operation of nuclear installation facilities. This would be most applicable to LLWRCC and NRNFCC

Comment [SLS11]: The only standards interface that I can think of is on the proposed new standard 60.1 on export control. Margaret Harding is the Chair and also in the division.

Comment [SLS12]: There is a need for a good interface with NRNF and FWD.

Comment [SLS13]: Many of the calculation methods covered by SRACC standards apply thermodynamic methods.

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

Associate Member Log (Updated 4/26/17)

	Name	Email	Solicitation or Random	Date VF Rec'd	PLACEMENT	COMMENTS
1	Chelsea Sutton (Maiden Name: Weaver)	clynne21@gmail.com ; clynne21@lanl.gov	Not sure but on 8.3 since 2014	NO	8.3	4/25/17: Resigned from 8.3 as no longer in NCS. Currently works in weapon systems surveillance and requirements. Confirmed w/S. Stamm that we do not have any standards in this area to reassign. Moved to inactive. Placed/recruited by WGC; VF/resume requested.
2	Chelsea Collins	chelseacollins@ufl.edu	Student Section Solicitation 2014	8/13/2014	8.3	
3	Joseph (Joe) Kopacz	jkopacz@iastate.edu	Student Section Solicitation 2014	8/12/2014	3.13	NO LONGER ACTIVE; email no longer good; no response from multiple attempts to reach using alternate email -DEACTIVATES
4	Margaret Kurtts	mkurtts@vols.utk.edu	Student Section Solicitation 2014	8/12/2014	JCNRM SC/SM	11/22/16: A. Afzali accepted Kurtts & Kurtts notified. 11/21/16: Sent request to ANS-30.2 WGC to consider as assoc. member after response from Kurtts expressing interest in ANS-30.2 & other ANS-29 standards; also some interest in ANS-19.4 & ANS-19.5. 11/11/16: Sent followup email offering reassignment now or anytime in the future. 9/2016: learned that she is no longer active on SC-SM; stop participating because job change not relevant to committee. Offered to facilitate placement on different committee. NOT IN WORKSPACE; USES C&S CONNECT
5	Cailyn Ludwig	ludwig7@purdue.edu	Student Section Solicitation 2014	8/12/2014	3.14	
6	Benjamin (Ben) Prewitt	bjp2n4@mst.edu	Student Section Solicitation 2014	8/12/2014	20.1	
7	Dylan Robideaux	drobi825@gmail.com	Student Section Solicitation 2014	7/24/2014	8.7	
8	Dong (Allen) Wang	wangdong@sdnrc.com	random	7/1/2014	3.5	
9	Manit Shah	manitshahd@gmail.com	Student Section Solicitation 2014	8/12/2014	6.4.3, 57.2 & 57.3	Responded to survey that he remains interested but that the 6.4.3 WG had not been active. His interested changed slightly and was added to 57.2/57.3 on 9/9/15.
10	Manish Sharma	mksrkf@mst.edu	Student Section Solicitation 2014	8/12/2014	6.4.3	
11	Gregory Suehr	gregory.suehr@gmail.com	Student Section Solicitation 2014	8/12/2014	57.2/52.73	
12	Stanley (Stan) Tackett	stackett@insight.rr.com	Student Section Solicitation 2014	8/12/2014	6.4.2	
13	Mara Watson	marawtsn@gmail.com	Student Section Solicitation 2014	8/12/2014	ESCC	Never completed WG user account, absolutely no response to anything since added to ESCC; removed from ESCC & sent offer to facilitate more appropriate placement 5/3/16.
14	Tim Stout	timothy.stout@exeloncorp.com	Random	8/27/2014	ANS-58.9	
15	Mihai Diaconeasa	diacon@ucla.edu	Random	5/7/2014	ANS-30.2	
16	Matthew Hertel	hertelm@onid.oregonstate.edu	Random	3/31/2015	ANS-59.3	
17	Theresa Cutler	tcutler@lanl.gov	Recruited by ANS-8.23 WGC/Baker	10/24/2015	ANS-8.23	
18	Christopher Courtenay	Christopher.Courtenay@duke-energy.com	YMG Solicitation 2015	11/2015	ANS-2.25	Accepted invite to ANS-2.25, although not his area of expertise; should be considered on siting standard when initiated
19	Shilp Vasavada	shilp_v@yahoo.com	NAYGM 2015 solicitation	11/18/2015	ANS-3.13	Rec'd invite to 3.13 & accepted same day.
20	Nima Fathi	nfathi@unm.edu	YMG Solicitation 2015	11/3/2015	ANS-10.4	5/13/17: moved to 10.4 WG; initially placed on ans-10 subc as placeholder; Invitation letter issued 1/6/16 & accepted
21	Paul Romano	paul.k.romano@gmail.com	YMG Solicitation 2015	11/11/2015	ANS-10.4	5/13/17: moved from ans-10 to 10.4; initially placed on subc as placeholder; Invitation letter issued 11/13/16
22	Jeremy Gustafson	jgustafson@bwxt.com	YMG Solicitation 2015	11/1/2015	ANS-56.8	Letter issued and accepted 1/25/16
23	Kaushik Banerjee	banerjeek@ornl.gov	YMG Solicitation 2015	11/20/2015	ANS-19.6.1	Letter issued and accepted 1/26/16
24	Philip Jensen	phj123@gmail.com	YMG Solicitation 2015	11/2/2015	ANS-3.14	Letter issued 1/28/16 & accepted
25	Enerel Munkhzul	Enerel.Munkhzul@nexteraenergy.com	YMG Solicitation 2015	1/15/2016	ANS-30.2	Letter issued 1/28/16 & accepted
26	Tracy Stover	tracy.stover@srs.gov	Random	11/3/2015	ANS-8.12	Letter issued 2/26/16

Associate Member Log (Updated 4/26/17)

27	Siddharth Suman	siddharthhuman@gmail.com	YMG Solicitation 2015	11/11/2015	ANS-8.20	Letter issued 3/6/16 & accepted
28	Evan Beese	ebeese@foreignpolicyi.org	YMG Solicitation 2015	Nov-15	ANS-15.1	Letter issued 3/8/16 & accepted
29	Matthew Lynch	matt-lynch@live.com	YMG Solicitation 2015	15-Nov	ANS-8.12	Letter issued 3/15/16
30	Scott Finfrock	Scott.Finfrock@srs.gov	Invited by L. Wetzel to join 8.24 as Associate member; June 2015.			
31	Brandon O'Donnell	odonnell.brandon@gmail.com	Invited by J. Baker	Oct-15	ANS-8.23	Solicited by J. Baker for 8.23 & added 10/2015
32	Blaine Rice	barice@nuclearfuelservices.com	Invited by J. Baker	Oct-15	ANS-8.24	Solicited by J. Baker for 8.23 & added 10/2016
33	Bristol Hartlage	bhartlage@curtisswright.com	YMG Solicitation 2015	Nov-15	ANS-3.15	Letter issued 3/23/16 & accepted
34	Ning Zhang	ning.zhang@lanl.gov	random	2014	ANS-8.1	Added to 8.1 as assoc member 6/28/16; initially added to 8.15 in 2014 as Assoc Member - now full member
35	Steven Thompson	steven.a.thompson@dom.com	random	6/20/16	ANS-19.10	e-letter w/placement on 19.10 sent 7-14-16
36	Amir Bahadori	bahadori@ksu.edu	random	5/27/2016	ANS-6.4.2	Accepted to 6.4.2 on 10/13/16 and notification issued same date.
37	Matthew Chapa	matt.r.chapa@gmail.com	random	10/11/2016	ANS-8.19	Accepted to ANS-8.19 on 1/13/17; letter sent 1/16/17.
38	Chelsea Gunter	Chelsea.Gunter@Shearman.com	Feb 2017 NSN Brief	2/16/2017	ANS-57.11	Accepted to ANS-57.11 on 2/21/17; message sent 2/21/17.
39	Charles Cohen	charles.cohen.72@gmail.com	NN	3/12/2017	ANS-2.18	Accepted to ANS-2.18 on 3/15/17; e-letter sent 2/16/17.



ANS

ANS Standards Board RP3C Report

San Francisco, CA

June 13, 2017

RP3C Operating Plan



- RP3C has developed the structure of an Operating Plan
 - Section on RIPB guidance
 - Section on indoctrination of WGs on RIPB
 - Section on review and support of ANS standards
 - Section on interfaces with SDOs, industry, regulators
 - Section on self-assessment for effectiveness (including coherence with the Standards Committee Strategic Plan)
- RP3C will complete the outline of the Operating Plan by September 2017
 - The Operating Plan outline will have dates and names to achieve the objectives under each element
 - It will contain a listing of ANS standards (current, active withdrawn) categorized as
 - RIPB
 - PB
 - Not Applicable
 - Development of the content will include example implementation of RIPB principles in ANS-3.14 and ANS-58.14
 - The Operating Plan will incorporate SB decisions on Executive Committee inputs and the Busch proposal

Survey Recommendations - TOP 10 Standards

Rank	Title or Topical Area (No.)	Assigned Consensus Committee
#1	Criteria for Severe Accident Evaluation (ANS-58.15)	SRACC
#2	Design Criteria for Safe Shutdown Following Selected Design Basis Events in Light Water Reactors (ANS-58.11)	LLWRCC
#3	Risk-Informed and Performance-Based Nuclear Power Plant Design Process (ANS-30.1)	RARCC
#4	Post-Accident Monitoring (ANS-TBD)	LLWRCC
#5	Standard for Level 1/Large Early Release Frequency Probabilistic Risk Assessment for Nuclear Power Plant Applications (ASME/ANS RA-S	JCNRM
#6	Design Requirements for Light Water Reactor Spent Fuel Facilities at Nuclear Power Plants (ANS-57.2)	FWDCC
#7	Containment Hydrogen Control (ANS-56.1)	LLWRCC
#8	Properties of Planning, Development, Conduct, and Evaluation of Drills and Exercises for Emergency Preparedness at Nuclear Facilities (ANS-3.8.7)	LLWRCC
#9	Properties of Radiological Emergency Response Plans and Implementing Procedures and Maintaining Emergency Response Capability for Nuclear Facilities (ANS-3.8.3)	LLWRCC
#10	Determining Design Basis Flooding at Power Reactor Sites (ANS-2.8)	ESCC

July 2015 Priority Survey • Standards Ranked 11-20

Rank	Standard	Consensus Committee
11	Probabilistic Seismic Hazard Analysis (ANS-2.29)	ESCC
12	Categorization of Nuclear Facility Structures, Systems, and Components For Seismic Design (ANS-2.26)	ESCC
13	Criteria for Onsite Protective Actions During a Radiological Emergency (ANS-3.8.8)	LLWRCC
14	Design Requirements for New Fuel Storage Facilities at LWR Plants (ANS-57.3)	FWDCC
15	Radioactive Source Term for Normal Operation of Light Water Reactors (ANS-18.1)	LLWRCC
16	Criteria for Investigations of Nuclear Facilities Sites for Seismic Hazard Assessments (ANS-2.27)	ESCC
17	Nuclear Plant Reliability Assurance Program (RAP) (ANS-3.13)	LLWRCC
18	Requirements for Preoperational and Startup Testing (ANS-3.6)	LLWRCC
19	Integrated Safety Assessments for Fuel Cycle Facilities (ANS-57.11)	NRNFCC
20	Nuclear Power Plant Decommissioning Process (ANS-TBD)	FWDCC

ESCC Chairman's Report to the ANS Standards Board

Tuesday, June 13, 2017 • Hyatt Regency San Francisco, San Francisco, CA

Projects in Consideration/Interest being Sought (4)

- ANS-2.13, "Evaluation of Surface-Water Supplies for Nuclear Power Sites" (reinvigoration of historical standard ANSI/ANS-2.13-1979 (R1989))
- ANS-2.19, "Guidelines for Establishing Site-Related Parameters for Site Selection and Design of an Independent Spent Fuel Storage Installation (Water Pool Type)" (reinvigoration of historical standard ANSI/ANS-2.19-1981 (R1990))
- ANS-2.22, "Environmental Radiological Monitoring at Nuclear Facilities" (proposed new standard)
- ANS-3.16, "Meteorological Aspects of Wildland Fire Response" (proposed new standard)

PINS in Development/Approval (7)

- ANS-2.10, "Criteria for the Handling and Initial Evaluation of Records from Nuclear Power Plant Seismic Instrumentation" (reinvigoration of historical standard ANSI/ANS-2.10-2003)
- ANS-2.18, "Standards for Evaluating Radionuclide Transport in Surface Water for Power Sites" (new standard) (new chair committed)
- ANS-2.29, "Probabilistic Seismic Hazard Analysis" (revision of ANSI/ANS-2.29-2008 (R2016))
- ANS-2.32, "Guidance on the Selection and Evaluation of Remediation Methods for Subsurface Contamination" (new standard being reinvigorated by interim chair)
- ANS-2.33, "Aquatic Ecological Surveys Required for Siting, Design, and Operation of Thermal Power Plants" (new standard--formerly designated ANS-18.4)
- ANS-2.34, "Probabilistic Volcanic Hazard Assessment" (new standard)
- ANS-16.1, "Measurement of the Leachability of Solidified Low-Level Radioactive Wastes by a Short-Term Test Procedure" (revision of ANSI/ANS-16.1-2003 (R2016))

Standards in Development – Approved PINS (5)

- ANS-2.6, "Guidelines for Estimating Present and Forecasting Future Population Distributions Surrounding Nuclear Facility Sites" (new standard)
- ANS-2.8-201x, "Determining External Flood Hazards for Nuclear Facilities" (reinvigoration of historical standard ANSI/ANS-2.8-1992) (subsumed ANS-2.31)
- ANS-2.9, "Evaluation of Ground Water Supply for Nuclear Facilities" (reinvigoration of historical standard ANSI/ANS-2.9-1980 (R1989))
- ANS-2.16, "Criteria for Modeling Design-Basis Accidental Releases from Nuclear Facilities" (new standard)
- ANS-2.25, "Surveys of Ecology Needed to License Nuclear Facilities" (reinvigoration of historical standard ANSI/ANS-18.5-1982/redesignated ANS-2.25)
- ANS-3.8.10, "Criteria for Modeling Real-time Accidental Release Consequences at Nuclear Facilities" (new standard)

Standard Recently Approved (1)

- ANS-16.1-2003 (R2016), "Measurement of the Leachability of Solidified Low-Level Radioactive Wastes by a Short-Term Test Procedure" (reaffirmation of ANSI/ANS-16.1-2003 (R2008) – processed to keep standard current while revision completed)

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

- ANSI/ANS-2.26-2004 (R2010), "Categorization of Nuclear Facility Structures, Systems, and Components for Seismic Design" (revision being considered, WG being formed)

Responses to Inquiries (1)

- An inquiry on ANSI/ANS-3.11-2005 was received on 9/26/16. A response was drafted, approved, and issued to the inquirer on 1/20/17.

Staffing Needs (2)

- ANS-2.18 Working Group members

- ANS-2.32 Working Group chair and members

Membership Changes (2)

- Ann Miracle, PNNL, resigned from the committee and as Siting: Aquatic Ecology Subcommittee Chair; Rebekah Krieg, also with PNNL, was appointed and approved as her replacement.
- Yong Li was approved as an ESCC member representing the DNFSB.

FWDCC Chairman's Report to the ANS Standards Board

Tuesday, June 13, 2017 • Hyatt Regency San Francisco, San Francisco, CA

Standards in Development – Approved PINS (1)

- 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)

Standards at Ballot/Resolving Comments – (1)

- ANS-57.3, “Design Requirements for New Fuel Storage Facilities at LWR Plants” (reinvigoration of historical withdrawn standard) (Ballot closed 10/17/16)

Standards Recently Approved (1)

- ANSI/ANS-57.8-1995 (R2017), “Fuel Assembly Identification” (reaffirmation of ANSI/ANS-57.8-1995 (R2011)) (WGC: OPEN)

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

- ANSI/ANS-55.1-1992 (R2009), “Solid Radioactive Waste Processing Systems for Light Water Reactor Plants” (WGC: OPEN)

Standards Administratively Withdrawn (2)

- ANSI/ANS-55.4-1992 (R2007), “Gaseous Radioactive Waste Processing Systems for Light Water Reactor Plants” (WGC: OPEN)
- ANSI/ANS-55.6-1993 (R2007), “Liquid Radioactive Waste Processing System for Light Water Reactor Plants” (WGC: OPEN)

Responses to Inquiries Issued (1)

- An inquiry was received 1/12/15 on ANSI/ANS-55.1-1992 (R2009), “Solid Radioactive Waste Processing System for LWR Reactor Plants,” and ANSI/ANS-55.6-1993 (R2007), “Liquid Radioactive Waste Processing System for LWR Plants.” A response was drafted, approved, and sent to the inquirer on 3/9/17.

Staffing Needs

- Subcommittee chair positions (All)
- Working group chairs and members needed for ANS-15.10, ANS-15.19, ANS-40.21, ANS-40.35, ANS-55.1, ANS-55.4, ANS-55.6, ANS-57.1, ANS-57.5, ANS-57.8, ANS-57.10

Membership Changes

- David Hillyer was elected FWDCC Vice Chair.

JCNRM Chairman's Report to the ANS Standards Board

Tuesday, June 13, 2017 • Hyatt Regency San Francisco, San Francisco, CA

ASME/ANS RA-S

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. 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. The new edition is expected to be complete toward the end of calendar 2017.

The next version of the requirements for seismic PRA at power has been approved by the JCNRM to be issued in advance through a case. It should be noted that consensus was reached with three maintained negatives. A significant effort was made to resolve the objections, but in the end, no compromise was found. Approval of both standards boards is in progress in parallel with editing of the case. Release is expected in late June/early July.

New Standards in Development

There are 5 new PRA methodology standards in various stages of development. NOTE: The JCNRM has decided that each of these new standards will be released initially for Trial Use and Pilot Application – not for approval as an American National Standard by the American National Standards Institute.

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

- The writing group is led by Don Wakefield, and took a very long time to complete: the W.G. began its work in 1999.
- ANS/ASME-58.22-2014 was published on March 25, 2015, for a 36-month trial use period.
- Findings from the trial-use period will be incorporated into a future revision of ASME/ANS RA-S (the combined Level 1 standard).
- Five pilot applications are now under way at operating nuclear power plants.

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

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

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

- The writing group is led by Keith Woodard, who has chaired this effort since its inception in 2005.
- Approval of the draft for trial use has been reached by the JCNRM; both societies' standards boards have approved.
- The standard had been edited and the edited version has been provided to the working group chair to approve; publication is expected by the end of June.
- The standard will be issued for a 24-month trial-use period.
- Findings from the trial-use period will be incorporated into a revision of the standard; the revised standard will be issued for ballot with the intent of seeking ANSI approval.

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

- The writing group is led by Karl Fleming, underway since 2007.

- A final JCNRM ballot was held in spring 2013, and the ballot was successful. This standard was published on December 9, 2013, for trial use and pilot application for a 36-month period. The JCNRM is currently considering the possibility to extend this trial period for another year.
- Multiple pilots have been completed.
- The working group is currently reviewing comments from the trial use of the standard.
- Findings from the trial-use period will be incorporated into a revision of the standard; the revised standard will be issued for ballot with the intent of seeking ANSI approval. The revision is expected to be completed by early 2018.

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

- The project was initiated in 2007. Timothy Wheeler is the current 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 related to the NRC’s ALWR Interim Staff Guidance into the draft.
- A ballot readiness review was conducted; the ALWR Working Group and the readiness review team have come to an agreement. They believe that the draft will be ready for ballot in early June after a review by the subcommittee.
- The ALWR appendix will be issued initially for trial use and will later be incorporated into a revision of RA-S.

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

The 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 ten writing groups and working groups, and a half-dozen short-term 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 are in development. Once approved by the JCNRM, the supplemental procedures will be provided to the two societies’ oversight boards for approval.

Standards Inquiries and Delinquent Standards

An inquiry was received on RA-Sb-2013 Supporting Requirement SY-A5 on May 3, 2016. An *ad-hoc* review committee was formed and an inquiry response was drafted. The proposed response was issued to the JCNRM for approval with a due date of October 14, 2016. Comments are being addressed. The JCNRM does not have any delinquent standards in need of maintenance, nor any 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 main JCNRM effort now is to develop the next version of the main PRA Combined Standard, which is

planned now for ballot in late calendar 2017. This next version, which we will call a “new edition” instead of an “addendum,” is expected to have substantial changes to the format as well as to the content, based largely on feedback received in the past 2-3 years as this standard has been used by the commercial nuclear-power operating fleet and by the NRC. During this period of use, many areas have been identified where inconsistencies exist between different parts of the large PRA standard, mostly due to variable interpretations, and a few other problems have also been discovered during use. A number of what the JCNRM has called “cross cutting issues” have also been identified, each of which is being worked on by one of several *ad hoc* project teams within the larger JCNRM. Some of these issues have policy implications for how the standard is to be used, but mostly these are issues with technical substance.

The other major JCNRM task in the next year is to issue the ALWR PRA standard under development discussed in the opening section of this report. This is a major effort, involving volunteer resources.

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 approached by groups in several countries about forming what we are calling “JCNRM International Working Groups.” The Chinese have already formed an IWG that the JCNRM has approved, a new IWG in Japan is in the final stages of becoming a formal activity, and another new IWG is in the process of forming in Korea. The Canadians have also inquired about the possibility. 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 new Japanese IWGs consist of a couple of dozen engineers each. An IWG will hold physical meetings, if at all, in the foreign country, and its proceedings will likely take place 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-by-case 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

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

LLWRCC Chairman's Report to the ANS Standards Board

Tuesday, June 13, 2017 • Hyatt Regency San Francisco, San Francisco, CA

PINS in Development/Approval (5)

- ANS-3.15, "Cybersecurity for Nuclear Facilities" (new standard - title TBD)
- ANS-56.1, "Containment Hydrogen Control" (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-59.3, "Nuclear Safety Criteria for Control Air" (reinvigoration of historical standard)
- ANS-60.1, "Export Control Standard" (new standard – title TBD)

Standards in Development – Approved PINS (4)

- 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-56.8, "Containment Leakage Testing Requirements" (revision of ANSI/ANS-56.8-2002 (R2016))
- ANS-58.8, "Time Response Design Criteria for Safety-Related Operator Actions" (revision of ANSI/ANS-58.8-1994 (R2008))

Standards at Ballot/Resolving Comments (3)

- ANS-3.5-201x, "Nuclear Power Plant Simulators for Use in Operator Training and Examination" (revision of ANSI/ANS-3.5-2009)
- ANS-51.10-201x, "Auxiliary Feedwater System for Pressurized Water Reactors" (revision of ANSI/ANS-51.10-1991 (R2008))
- ANS-58.3-1992 (R201x), "Physical Protection for Nuclear Safety-Related Systems and Components" (reaffirmation of ANSI/ANS-58.3-1992 (R2008))

Standards Recently Approved (2)

- ANSI/ANS-3.2-2012 (R2017), "Managerial, Administrative, and Quality Assurance Controls for the Operational Phase of Nuclear Power Plants" (reaffirmation of ANSI/ANS-3.2-2012)
- ANSI/ANS-58.14-2011 (R2017), "Safety and Pressure Integrity Classification Criteria for Light Water Reactors" (reaffirmation of ANSI/ANS-58.14-2011)

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

- ANSI/ANS-3.5-2009, "Nuclear Power Plant Simulators for Use in Operator Training and Examination" (revision issued for reballot)
- ANSI/ANS-51.10-1991 (R2008) "Auxiliary Feedwater System for Pressurized Water Reactors" (revision resolving ballot comments)
- ANSI/ANS-58.3-1992 (R2008), "Physical Protection for Nuclear Safety-Related Systems and Components" (reaffirmation resolving ballot comments)
- ANSI/ANS-58.8-1994 (R2008), "Time Response Design Criteria for Safety-Related Operator Actions" (WG agreed to reaffirm standard to keep current while revision is completed; reaffirmation statement to be prepared)

Responses to Inquiries in Development/Approval (0)

- The LLWRCC has no open inquiries.

Staffing Needs

- LLWRCC NRC representative
- Power Generation and Plant Support Systems Subcommittee Chair
- ANS-3.13 Working Group members
- ANS-51.10 Working Group chair and members

- ANS-58.2 Working Group members
- ANS-58.3 Working Group chair and members
- ANS-58.6 Working Group chair and members
- ANS-58.9 Working Group chair and members
- ANS-58.11 Working Group chair and members
- ANS-59.51/59.52 Working Group members

Membership Changes

- Mark Colby, Global Nuclear Fuels (previously with GE Hitachi), was approved as the Light Water Reactor and Reactor Auxiliary Systems Design Subcommittee Chair and a member of the LLWRCC.
- Michelle French, WECTEC, was approved as the Light Water Reactor and Reactor Auxiliary Systems Design Subcommittee Vice Chair and a member of the LLWRCC.

NRNFCC Chairman's Report to the ANS Standards Board

Tuesday, June 13, 2017 • Hyatt Regency San Francisco, San Francisco, CA

Standards in Development – Approved PINS (2)

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

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

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

Staffing Need

ANS-58.16 Working Group Chair Pranab Guha has expressed interest in being replaced.

Membership Changes

There have been no recently changes to membership.

NCSCC Chairman's Report to the ANS Standards Board

Tuesday, June 13, 2017 • Hyatt Regency San Francisco, San Francisco, CA

Standards in Development – Approved PINS (8)

- ANS-8.3, "Criticality Accident Alarm System" (revision of ANSI/ANS-8.3-1997 (R2012))
- ANS-8.7, "Nuclear Criticality Safety in the Storage of Fissile Materials" (revision of ANSI/ANS-8.7-1998 (R2012))
- 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-8.21, "Use of Fixed Neutron Absorbers in Nuclear Facilities Outside Reactors" (revision of ANSI/ANS-8.21-1995 (R2011))
- ANS-8.23, "Nuclear Criticality Accident Emergency Planning and Response" (revision of ANSI/ANS-8.23-2007 (R2012))
- ANS-8.26, "Criticality Safety Engineer Training and Qualification Program" (revision of ANSI/ANS-8.26-2007 (R2012))
- ANS-8.28, "Administrative Practices for the Use of Non-Destructive Assay Measurements for Nuclear Criticality Safety" (new standard)

Standard @ Ballot/Resolving Comments (1)

- ANS-8.24-201x, "Validation of Neutron Transport Methods for Nuclear Criticality Safety Calculations" (revision of ANSI/ANS-8.24-2007; R2012)

Standard Recently Approved (1)

- ANSI/ANS-8.26-2007 (R2016), "Criticality Safety Engineer Training and Qualification Program" (reaffirmation of ANSI/ANS-8.26-2007 (R2012))

Delinquent Standards – 5+ Years Since ANSI Approval (7)

- ANSI/ANS-8.3-1997 (R2012), "Criticality Accident Alarm System" (revision in development)
- ANSI/ANS-8.5-1996 (R2012), "Use of Borosilicate-Glass Raschig Rings as a Neutron Absorber in Solutions of Fissile Material" (standards being incorporated into a revision of ANS-8.21)
- ANSI/ANS-8.6-1983 (R2010), "Safety in Conducting Subcritical Neutron-Multiplication Measurements in Situ" (reaffirmation ballot @ subcommittee)
- ANSI/ANS-8.7-1998 (R2012), "Nuclear Criticality Safety in the Storage of Fissile Materials" (revision in development)
- ANSI/ANS-8.21-1995 (R2011), "Use of Fixed Neutron Absorbers in Nuclear Facilities Outside Reactors" (draft issued to subcommittee)
- ANSI/ANS-8.23-2007 (R2012), "Nuclear Criticality Accident Emergency Planning and Response" (revision in development)
- ANSI/ANS-8.24-2007 (R2012), "Validation of Neutron Transport Methods for Nuclear Criticality Safety Calculations" (draft @ ballot)

Responses to Inquiries in Development (0)

- The NCSCC has no inquiries in need of response.

Staffing Needs

- The ANS-8.12 Working Group Chair position is open. A new chair has been proposed.
- ANS-8.17 Working Group Chair Brian Kidd has expressed an interest in stepping down as chair.
- The ANS-8 Subcommittee Vice Chair position is open. A new vice chair has been proposed.

Membership Changes

- Robert Busch stepped down as NCSCC Chair and remains an NCSCC member. Larry Wetzel was elected NCSCC Chair (previously the vice chair); W. Randy Shackelford was elected NCSCC Vice Chair.
- Brian Kidd resigned as ANS-8 Subcommittee Chair; Douglas Bowen was appointed ANS-8 Subcommittee Chair and assumed the ex officio position on NCSCC.

RARCC Chairman's Report to the ANS Standards Board

Tuesday, June 13, 2017 • Hyatt Regency San Francisco, San Francisco, CA

PINS in Development/Approval

- ANS-1, "Conduct of Critical Experiments" (revision of ANSI/ANS-1-2000 (R2012))

Standards in Development – Approved PINS (6)

- ANS-15.22, "Classification of Structures, Systems and Components for Research Reactors" (new standard)
- ANS-20.1, "Nuclear Safety Criteria and Design Process for Fluoride Salt-Cooled High-Temperature Reactor Nuclear Power Plants" (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)
- ANS-54.1, "Nuclear Safety Criteria and Design Process for Liquid-Sodium-Cooled Reactor Nuclear Power Plants" (revision of historical standard ANSI/ANS-54.1-1989)

Standards Recently Approved (1)

- ANSI/ANS-53.1-2011 (R2016), "Nuclear Safety Design Process for Modular Helium-Cooled Reactor Plants" (reaffirmation of ANSI/ANS-53.1-2011)

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

The RARCC has no delinquent standards.

Responses to Inquiries (0)

The RARCC has no open inquiries.

Staffing Needs

The RARCC has no staffing needs.

Membership Changes (0)

There have been no recent membership changes.

SRACC Chairman's Report to the ANS Standards Board

Tuesday, June 13, 2017 • Hyatt Regency San Francisco, San Francisco, CA

PINS in Development/Approval (3)

- ANS-6.1.1, "Neutron and Gamma-Ray Fluence-To-Dose Factors" (reinvigoration of historical standard ANSI/ANS-6.1.1-1991) – PINS OVER DUE as draft is close to being completed per WGC
- 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-19.3.4, "Determination of Thermal Energy Deposition Rates in Nuclear Reactors" (revision of ANS-19.3.4-2002 (R2017))

Standards in Development – Approved PINS (7)

- ANS-6.4.2, "Specification for Radiation Shielding Materials" (revision of ANSI/ANS-6.4.2-2006)
- ANS-6.4.3, "Gamma-Ray Attenuation Coefficients & Buildup Factors for Engineering Materials" (reinvigoration of historical standard ANSI/ANS-6.4.3-1991)
- ANS-19.1, "Nuclear Data Sets for Reactor Design Calculations" (revision of ANSI/ANS-19.1-2002 (R2011))
- ANS-19.5, "Requirements for Reference Reactor Physics Measurements" (historical revision of ANSI/ANS-19.5-1995—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-19.4, "A Guide for Acquisition and Documentation of Reference Power Reactor Physics Measurements for Nuclear Analysis Verification" (historical revision of ANSI/ANS-19.4-1976 (R2000)—new standard)

Standards Recently Approved (4)

- ANSI/ANS-10.5-2006 (R2017), "Accommodating User Needs in Scientific and Engineering Computer Software Development" (reaffirmation of ANSI/ANS-10.5-2006 (R2011))
- ANSI/ANS-19.3-2011 (R2017), "Determination of Steady-State Neutron Reaction-Rate Distributions and Reactivity of Nuclear Power Reactors" (reaffirmation of ANSI/ANS-19.3-2011)
- ANSI/ANS-19.3.4-2002 (R2017), "The Determination of Thermal Energy Deposition Rates in Nuclear Reactors" (reaffirmation of ANSI/ANS-19.3.4-2002 (R2008))
- ANSI/ANS-19.11-2017, "Calculation and Measurement of the Moderator Temperature Coefficient of Reactivity for Pressurized Water Reactors" (revision of ANSI/ANS-19.11-1997 (R2011))

Delinquent Standards (5+ years since ANSI approval) (3)

- ANSI/ANS-5.4-2011, "Method for Calculating the Fractional Release of Volatile Fission Products from Oxide Fuel (maintenance requested)
- ANSI/ANS-10.2-2000 (R2009), "Portability of Scientific and Engineering Software" (SRACC concurred with working group's decision to allow the standard to be administratively withdrawn; update to be initiated when technology stable)
- ANSI/ANS-19.1-2002 (R2011), "Determination of Steady-State Neutron Reaction-Rate Distributions and Reactivity of Nuclear Power Reactors" (revision in development)

Responses to Inquiries in Development (1)

An inquiry on ANSI/ANS-5.1-2014, "Decay Heat Power in Light Water Reactors," was received on 1/19/17. A response was prepared, approved, and issued to the inquirer on 4/26/17.

Staffing Needs

ANS-6.3.1 Working Group chair
 ANS-10.3 Working Group chair
 ANS-10.7 Working Group chair
 ANS-10.8 Working Group chair
 ANS-41.5 Working Group chair
 ANS-19.8 Working Group chair
 ANS-19.12 Working Group chair

Membership Changes

Julie Jarvis, Bechtel, replaced Abraham Weitzberg as SRACC Vice Chair. Weitzberg remains a SRACC member.

Links Between the ANS Standards Committee and Other SDOs and Other Related Organizations (updated 12/7/16)

NOTE: List will need updating/verification by new External Communications TG Chair

Name of SDO/and Other Related Organizations	Standards Committee Liaison	Link Adequate Y or N?	Next Actions
AISC	Carl Mazzola	Y	
ACI/ASCE		N	Need assignment
AGS	Jeffery Brault (NRNFCC)	Y	
AICHe		N	Need assignment
ANSI/ ISO TC 85 SC 6	Prasad Kadambi (SB)	Y	
ASME NQA	Chuck Moseley (LLWRCC)	Y	
ASTM-C26		N	Need assignment
EPRI	Andrew Sowder (SB)	Y	
IEEE/NPEC		N	Need assignment
INMM	Ronald Knief (NCSCC)	Y	
INPO		N	Need assignment
HPS	Christopher Gramham (SRACC)	Y	
JCNRM/SCoRA	Stanley Levinson (SB)	Y	
NCRP		N	Need assignment
NEI	James Riley (SB & LLWRCC)	Y	
NFPA	Bernie Till	Y	On NFPA Tech Com for Fire Protection for Nuclear Facilities
WENRA	Robert Budnitz (SB)	Y	

Acronyms

ACI - American Concrete Institute

AGS - American Glovebox Association

AICHe - American Institute of Chemical Engineers

AISC - American Institute of Steel Construction

ANSI - American National Standards Institute

ASCE - American Society of Civil Engineers

ASTM- American Society for Testing and Materials

C26 - Nuclear Fuel Cycle

EPRI - Electric Power Research Institute

HPS-Health Physics Society

IEEE - Institute of Electrical and Electronics Engineers

INMM-Institute of Nuclear Materials Management

INPO - Institute of Nuclear Plant Operations

ISO - International Organization for Standardization

JCNRM/SCoRA - Joint Committee on Nuclear Risk Management/SubCommittee on Risk Application

NCRP-National Council on Radiation Protection

NEI - Nuclear Energy Institute

NFPA - National Fire Protection Association

NEI Brief Report and Comments from Russ Bell

- I am looking forward to serving as SB liaison in place of the retiring Jim Riley and will plan to attend the Winter meeting in person.
- I also plan to attend the NRC Standards Forum in September and look forward to seeing the agenda to help guide preparations for that meeting.
- I agree with the comments of Bob Coward and others that advanced (non-LWR) reactors is a good area of focus for ANS standards development activities.
- NEI is rolling out a National Nuclear Energy Strategy that aims to broaden support for existing and new nuclear by highlighting the nuclear imperative behind a variety of higher purposes, including jobs and infrastructure, national security, technology leadership, and combating climate change. Joe Pollock, NEI VP and CNO, plans to present on NNES and other NEI priorities at the UWC in August.