American Nuclear Society (ANS)
STANDARDS BOARD (SB) Minutes
Hyatt Regency Atlanta Hotel, Atlanta, Georgia
June 18, 2013

Members Present:
Donald J. Spellman, *Standards Board Chair, Oak Ridge National Laboratory*
Robert J. Budnitz, *JCNRM Co-Chair***,** *Lawrence Berkeley National Laboratory*
Robert D. Busch, *N16 Chair, University of New Mexico*
N. Prasad Kadambi, *ISO & ANSI Liaison, Individual*
Herbert W. Massie, *Member at Large, Defense Nuclear Facilities Safety Board*
Carl A. Mazzola, *NFSC Chair, Shaw Environmental, Inc.*
Charles H. (Chuck) Moseley, *Member at Large, Individual*
Mathew M. Panicker, *Member at Large, U.S. Nuclear Regulatory Commission*
James Riley, *Liaison, Nuclear Energy Institute*
Andrew Smetana, *N17 Chair, Savannah River National Laboratory*
Patricia A. Schroeder, *Standards Board Secretary, American Nuclear Society*
Steven L. Stamm, *Member at Large, Individual*
William M. Turkowski, *Member at Large, Westinghouse*
Edward Wallace, *Member at Large*, *NuScale Power Inc.*

Members Absent:
James K. August, *Standards Board Vice Chair, CORE, Inc.*
William C. Gattoni, *Member at Large, Burns & Roe*
Walter M. Justice*, Member at Large, Tennessee Valley Authority*
Caroline McAndrews, *Southern California Edison*
R. Michael Ruby, *Member at Large, Individual*
R. David Sachs, *Member at Large, Individual*

Guests:
William H. Bell, *South Carolina Electric & Gas*
Gene Carpenter, *U.S. Nuclear Regulatory Commission*
Donald Hoffman, ANS President-Elect, *Excel Services Corporation*
Joseph Koblich, *American Nuclear Society*
Eric Loewen, *General Electric*
Sheila Lott, *Los Alamos National Laboratory*
Richard Michal, *American Nuclear Society*
Maryanne Stasko, *Duke Energy*
William Reuland, *Individual*

1. Welcome and introductions
Chairman Donald Spellman called the meeting to order at 9:06 a.m. and welcomed all. Introductions were made. Spellman informed members that he had asked Steven Stamm to fulfill the remainder of James August's term as Standards Board (SB) Vice Chair due to August's inability to travel for a while for medical reasons.

2. Approval of agenda
The agenda was approved with one change. A presentation from Edward Wallace on the SMR approach to systems, structures, and component (SSC) categorization methodology replaced item 6, ASME Standards & Certification Senior Vice President report, as Kenneth Balkey was not able to attend.

3. Approval of minutes from the November 13, 2012, Standards Board meeting
The minutes of the November 13, 2012, Standards Board meeting were approved as presented.

4. Chairman's Report

A. Overview of major topics
SB Chair Donald Spellman reported to members that the business agreement for the American Nuclear Society (ANS)/American Society of Mechanical Engineers (ASME) Joint Committee on Nuclear Risk Management (JCNRM) had not yet been finalized.

Spellman noted the following areas that he saw of particular interest to the Standards Committee:

- BDBA into Gen III, III+, IV, and Non-Rx Facilities
- Defense-in-Depth (DID)
- Enhanced design categories
- Proper alignment of ANS standards with Fukushima lessons learned
- Classification of SSCs
- Deterministic/performance based/risk informed
- U.S. national standards harmonization through the Nuclear Energy Standards Coordination Collaboration (NESCC)
- International standards collaboration

Spellman addressed the subject of why standards were needed (see Attachment A). Reasons stated included the establishment of safe practices, commercial necessity, consumer acceptance, influence on regulatory guidance, and professional obligation. He explained the term "voluntary consensus standards" (VCS) referring to the voluntary use of standards not that they were developed by volunteers. The difference between a code and a standard was discussed. It was believed that a standard would become a code if adopted or endorsed by a federal or state agency. Patricia Schroeder reminded members of the recent notice in the Federal Register regarding an inquiry into whether VCS cited in the CFR should be made publicly available at no cost. Until this issue is settled, it may be better not to encourage citing of our standards in the CFR as this may require ANS to make these standards publicly available at no cost.

B. Terms of members of the Standards Board
Spellman reviewed the terms of members and chairs. With the exception of ex-officio members (consensus committee chairs), members are appointed by the ANS incoming president at the recommendation of the SB Chair for a term of three years. The chair and vice chair are appointed for a period of one year, not to exceed three successive terms.

C. Handling inquiries on withdrawn standards
Spellman addressed the handling of inquiries to withdrawn standards and explained how withdrawn standards were currently labeled. The statement that is added to the withdrawn standard cover sheet clearly informs purchasers that the standard had been withdrawn and may longer reflect current requirements; the statement directs users to determine if the standard was appropriate for their intended use. Spellman felt that the ANS method of handling withdrawn standards was sufficient and members agreed.

D. Presentation - "National Standards--Maintain Course or Take the Great Circle Route"
The presentation is available as Attachment B with greater details. Spellman questioned whether the ANS Standards Committee should continue on the same course or if we should change course and reach for a different end point. He reviewed strengths and weaknesses of the Standards Committee and needed resources. Spellman saw greater opportunities once the reorganization was completed. He identified several targets including:

- Work with NESCC to realign their priorities
- Enhance relationship between standards development organizations (SDOs) and the Nuclear Energy Institute (NEI)
- Enhance international coordination
- Improve Information Technology (IT) capabilities for standards committees to reduce development and maintenance time and working group travel
- Complete relational volunteer database
- Secure consistent funding

5. ANS President-Elect/Vice President Report
ANS incoming President Donald Hoffman addressed the SB. He informed members that the ANS Board of Directors (BOD) was re-evaluating all activities of the Society including the integrated IT plan. Hoffman explained that he reviewed the list of SB IT requests. He asked that the SB provided details on the need and benefit of the six IT resources requested.

Action Item 6/2013-01: Standards Board Chair to provide Donald Hoffman with specific details on the need and benefit for each of the six IT resources requested within 30 days.

Hoffman stated that he was working to streamline all processes at the Society adding that we needed to make the Society valuable to its members. He believed that standards were an integral part of this. Hoffman added that his highest priority must be what was best for the Society. He strongly endorsed ANS as the intended focal point of where all nuclear technology should begin.

6. NuScale SSC Categorization Methodology
As requested by Donald Spellman, Ed Wallace addressed the committee on SSC categorization methodology and how this issue was handled by NuScale. Additionally, supplemental issues and observations were discussed. His presentation is available as Attachment C.

7. Standards Service Award
Chuck Moseley expressed his disappointment that more nominations were not received for this year's Standards Service Award. Although only a few nominations were received, a very well deserving recipient was selected. Moseley informed the membership that Carl Mazzola was selected for the 2013 Standards Service Award. The selection was well received by the membership.

8. Certification of consensus committee balance of interest
The balance of interest reports for all four consensus committees were approved unanimously as presented.

9. Update on standards IT requests from ANS director of IT
Joseph Koblich, ANS director of IT, attended the SB meeting at the request of Donald Spellman to update the committee on IT updates. Koblich stated that the ANS IT central database was being updated and that it may be possible to build off of to create a standards volunteer database. He explained challenges competing with larger SDOs in the area of IT with much larger resources. Koblich reviewed all six IT issues identified in the SB chair letter addressed to incoming ANS President Donald Hoffman.

10. Standards Committee reorganization special committee report

Steven Stamm brought the members up to date on the status of the reorganization. He confirmed that Nuclear Criticality Safety Committee (N16) and JCNRM would remain untouched as previously agreed. The reorganization affected the Nuclear Facilities Standards Committee (NFSC) and the Research Reactors, Reactor Physics, Radiation Shielding, and Computational Methods (N17) only. Stamm explained that current and historical standards within these two committees will need to be reallocated and staffing assignments made. Proposed consensus committees leaders had been contacted and all have committed to serve. Stamm's presentation (Attachment D) provides a breakdown of the new consensus committees, proposed chairs and recommended vice chairs, and the distribution of standards. Members were asked to review the list of proposed consensus committee chairs and vice chairs included in the presentation. The following motion was made:

> **MOTION:**
> The Standards Board approves the recommended candidates for consensus committee chair and the candidates for vice chair are acceptable but permits the CC chairs to make the final determination of the CC Vice Chairs and reallocation of standards.

The motion was approved unanimously. The following individuals were confirmed as chairs of the new consensus committees:

New Consensus Committee	**Consensus Committee Chair**
LWR Design and Operations	William Reuland
Non-Large LWR Rx	George Flanagan
Fuel & Waste	Donald Eggett
Safety and Radiological Analyses	Andrew Smetana
Non Rx Facilities	James O'Brien
Environmental and Siting	Carl Mazzola

With the leadership of the new consensus committees approved, Stamm will forward the list of proposed staff assignments to the new consensus committee chairs with a request to finalize membership by September 30, 2013.

Action Item 6/2013-02: New consensus committee chairs to finalize consensus committee titles, vice chairs, membership, subcommittee organizational chart, and standards assignments by September 30, 2013.

The next step for the reorganization committee was to prepare an implementation plan with actionable, achievable goals. Schroeder asked that consideration be given to a proposed meeting structure so that she could support all consensus committee meetings.

Action Item 6/2013-03: Reorganization committee to prepare an implementation plan with actionable, achievable goals. Date: November 2013. Steven Stamm lead.

Members agreed that new consensus committee chairs should be requested to attend the SB meeting in Washington D.C.

Action Item 6/2013-04: SB Chair Donald Spellman to invite new consensus committee chairs to attend the SB meeting in Washington, D.C in November 2013.

11. Risk-informed and Performance-based Principles Policy Committee (RP3C)
Prasad Kadambi reported on the first meeting of the RP3C held the preceding day. He had prepared a plan for the RP3C as a basis for discussion at their first meeting. It was Kadambi's sentiment that the

existing deterministic and prescriptive methods were unsustainable, and when applied indiscriminately, become too expensive. Included in the plan for the committee were the following:

- Standards under development
- Small modular reactor (SMR) standards
- Post-Fukushima activities
- Standards to support the reactor oversight process
- Standards related to DID

Robert Budnitz added that the JCNRM had created a subcommittee called the Subcommittee on Risk Application (SCoRA) to provide guidance to ANS, ASME, and other standards development organizations in risk-informing their standards. The SCoRA and the RP3C are expected to work closely together.

12. Current Topics

A. Standards Board Strategic Plan
Due to time constraints, a decision was made to postpone the discussion of the SB Strategic Plan.

B. Proposed Policy on Specifying Requirements in ANS Standards (Attachment E)
Steven Stamm explained the need for a policy on specifying requirements in ANS standards. He noted that a discussion was held the previous day at the NFSC meeting resulting in the concurrence on a draft policy and agreement to elevate to the Standards Board for consistency across all ANS consensus committees. A discussion ensued in how and where to include the definition for "shall, should, and may." Members agreed that this definition should take prominence and shall appear ahead of other terms in all standards opposed to alphabetically within the terms and definition section.

Action Item 6/2013-05: Steven Stamm to finalize the draft Policy on Specifying Requirements in ANS Standards for Patricia Schroeder to issue for SB ballot.

C. Standards Board Task Group (TG) Reports

Policy TG
Donald Spellman reported on the policy TG activities. He reported that the group had held a couple teleconference calls. The TG also reviewed the ANS/ASME JCNRM business agreement and offered comments.

Priority TG
No report.

External TG
Herbert Massie reported that Robert Budnitz was added as Western European Nuclear Regulators' Association (WENRA) liaison. Budnitz reported that Nathalie Studer was designated as the WENRA liaison to this group. Budnitz stated that WENRA was preparing a list of areas they would like to interface with ANS. Massie recommended that the Defense Nuclear Facilities Safety Board appoint a staff member to join RP3C as a liaison. Carl Mazzola reported that much work was being done internationally with the International Organization of Standardization (ISO) under Technical Committee (TC) 85 Subcommittee (SC) 6 on reactor technology.

Internal Communications (IC) TG
Much of this issue was addressed by Joseph Koblich earlier. Patricia Schroeder suggested that the presentation prepared on the standards development process by the IC TG could be used as a web training guide for new working groups. Busch offered to forward the presentation to Schroeder.

Action Item 6/2013-06: Robert Busch to provide Patricia Schroeder the standards presentation that was prepared last year for use in guidance.

Sales TG

Stamm reported that the sales brochure was coming along and that a distribution list would be prepared. He stated that a list of keywords was slowly being accumulated; but there were more struggles acquiring user information. More work was needed in soliciting both keywords and user information. Sneak peeks were added to the online ANS Store for current and historic standards. Stamm expressed concern with "giving" ANS standards to ISO without reaping any financial benefit. Members had differing opinions on this subject. Lastly, he stated that we needed to do something to actively improve utility participation in standards. Stamm felt that a good starting point would be to present the benefits of ANS standards and solicit support at meetings where there were a large number of senior utility representatives such as the Institute of Nuclear Power Operation's CEO conference or NEI's Nuclear Energy Assembly. A discussion ensued in determining the appropriate groups to approach to solicit utility participation. No decision was reached.

13. Consensus committee chair reports

A. JCNRM (Attachment F)

Robert Budnitz reported that the committee was operating well although the business agreement between ANS and ASME had not been formally approved. He acknowledged that an effort to solicit young professionals to the committee and its subcommittees had been very successful. Budnitz confirmed that the JCNRM Executive Committee was scheduled to meet the following day and invited members to attend. The JCNRM would also be meeting with the ASME Board of Nuclear Codes and Standards in the near future.

B. N16 (Attachment G)

Robert Busch confirmed that there were no items needing SB action. He felt that the written report was sufficient.

C. N17 (Attachment G)

Andrew Smetana also confirmed that there were no items needing SB action. He added that two members were recently removed from the committee due to lack of participation.

D. NFSC (Attachment I)

Carl Mazzola stated that the NFSC met the previous day. A few items needed direction from the SB. Mazzola was asked to elevate a suggestion to the SB to sell the NFSC Glossary. Members discussed the value of selling the glossary and whether there was benefit of incorporating definitions used by N16 and N17. The majority of members thought that the NFSC Glossary would be of interest to the public and should be sold. An action item was assigned to the Sales Task Group to review the glossary and make a determination on appropriateness/readiness to release for sale.

Action item 6/2013-07: The Sales TG to review the revised NFSC Glossary and determine if it is acceptable to be released for sale. November 2013

Mazzola informed members of a recent letter that was issued under the signature of Donald Spellman regarding recent conflicts between NEI and ANS activities. As a result, NFSC members suggested that Mazzola draft a Memorandum of Understanding (MOU). The draft MOU was reviewed by the NFSC with the intent of it being elevated to the Standards Board for issuance under the signature of the ANS president. The draft MOU was provided to the SB members for. Members asked that they be provided an opportunity to review in greater lengthy. Schroeder was requested to resend the MOU to SB members for comment before finalizing and presented to Donald Hoffman.

Action item 6/2013-08: Patricia Schroeder to distribute the draft ANS/NEI MOU to SB members for comment.

Mazzola reported that a task group under the NFSC was developing a white paper on DID. He asked that SB members provide feedback on a list of 23 standards projects that were being considered to support post-Fukushima issues.

Action Item 6/2013-09: Patricia Schroeder to distribute the NFSC list of 23 standards that could be considered to support post-Fukushima issues for SB comment.

14. Liaison reports

NRMCC
A written report of NRMCC activities is available as Attachment J.

ISO
Prasad Kadambi explained the structure of the ISO and its TCs. He stated that the secretariat for TC 85 SC 6 was held by the U.S., with George Flanagan from Oak Ridge National Laboratory as chair. The ANS accepted the secretary role for SC 6 for a two-year trial period. On the national level, the U.S. Nuclear Technical Advisory Group (NTAG) was responsible for the U.S. vote. Kadambi's role as SC 6 overall advisor was to ascertain the U.S. vote and solicit U.S. representation.

NEI
James Riley reported that NEI kicked off an effort to prioritize regulatory efforts for the industry. This effort fits within NRC direction. Separately there was an effort to coordinate industry group activities with the same purpose. With limited time, the discussion was very brief. The NEI presentation on this topic is available as Attachment K.

15. Other business

A. Staff/secretary's report, sales report (Attachments L & M)
In the interest of time, members were asked to review the provided secretary's and sales reports on their own.

B. Outstanding action items (SB Secretary) (Attachment N)

Action Item 11/12-01 on the development of a MOU with ASME was discussed at length. Donald Spellman referred to ASME's Paper on Forging a New Nuclear Construct as a possible example of areas that should be defined in a MOU. A quick review of the paper by Spellman did not find any areas of concern. Members recommended that the action item to develop a MOU with ASME be closed with a subsequent action item for Prasad Kadambi to prepare a basis document for a societal agreement with ASME.

Action Item 6/2013-10: Patricia Schroeder to distribute members a copy of ASME's Paper on Forging a New Nuclear Construct for reference.

Action item 6/2013-11: Prasad Kadambi to prepare a basis document for a societal agreement with ASME.

The status of the remaining action items were reviewed and closed if completed. A list of action items and their status is provided at the end of the minutes.

C. Open discussion
Mathew Panicker informed members that an isotope production facility was planned to open in Florida. Andrew Smetana thought that ANS research reactor standards would be applicable to this facility.

Herbert Massie informed members of an ANS policy statement on reactor safety that he thought would be of interest. He welcomed members to return comments to him on this policy statement. A suggestion was made for a review committee to be established by Steven Stamm.

Action Item 6/2013-12: Patricia Schroeder to send Steven Stamm ANS Policy Statement #51 for review and selection of a review committee.

D. Next meeting
The next meeting was announced for Tuesday, November 12, 2013, at the Omni Shoreham Hotel in Washington, D.C.

16. Adjourn
The meeting was adjourned at 4:51 p.m.

Standards Board (SB) Action Items

Status of Action Items are reported as OPEN until formally CLOSED at SB Meetings.

Action Item	Description	Responsibility	Status
6/13-01	Standards Board Chair to provide Donald Hoffman with specific details on the need and benefit for each of the six IT resources requested within 30 days. Due: July 18, 2013	Donald Spellman	OPEN
6/13-02	New consensus committee chairs to finalize consensus committee titles, vice chairs, membership, subcommittee organizational chart, and standards assignments. Due: September 30, 2013	New Consensus Committee chairs	OPEN
6/13-03	Reorganization committee to prepare an implementation plan with actionable, achievable goals. (Steven Stamm lead) Date: November 2013	Reorganization Committee	OPEN
6/13-04	SB Chair Donald Spellman to invite new consensus committee chairs to attend the SB meeting in Washington, D.C. Due: July 2013	Donald Spellman	OPEN
6/13-05	Steven Stamm to finalize the draft Policy on Specifying Requirements in ANS Standards for Patricia Schroeder to issue for SB ballot. Due: July 2013	Steven Stamm	OPEN
6/13-06	Robert Busch to provide Patricia Schroeder the standards presentation that was prepared last year for use in guidance. Due: July 2013	Robert Busch	OPEN
6/13-07	The Sales TG to review the revised NFSC Glossary and determine if it is acceptable to be released for sale. Due: November 2013	Sales TG	OPEN
6/13-08	Patricia Schroeder to distribute the draft ANS/NEI MOU to SB members for comment. Due: June 2013	Patricia Schroeder SB Members	OPEN
6/13-09	Patricia Schroeder to distribute the NFSC list of 23 standards that could be considered to support post-Fukushima issues for SB comment. Due: June 2013	Patricia Schroeder SB Members	OPEN
6/13-10	Patricia Schroeder to distribute members a copy of ASME's Paper on Forging a New Nuclear Construct for reference. Due: June 2013	Patricia Schroeder	OPEN
6/13-11	Prasad Kadambi to prepare a basis document for a societal agreement with ASME.Due: October 2013	Prasad Kadambi	OPEN
6/13-12	Patricia Schroeder to send Steven Stamm ANS Policy Statement #51 for review and selection of a review committee	Patricia Schroeder, Steven Stamm	OPEN
11/12-01	Robert Budnitz and Prasad Kadambi to prepare a list of items to be defined in a MOU with the ASME. Due: January 2013	Robert Budnitz, Prasad Kadambi	CLOSED
11/12-02	Steven Stamm along with James August and Prasad Kadambi to develop a list of areas needing ANS Executive Committee support for Hoffman w/solutions. Due: December 2012	Steven Stamm, James August, Prasad Kadambi	CLOSED

11/12-03	Robert Budnitz to temporarily serve as the WENRA liaison.	Robert Budnitz	On-going
11/12-04	Donald Spellman to begin development of one or more grants for ANS support. Due: January 2013	Donald Spellman	OPEN
11/12-05	Steven Stamm to incorporate Chuck Moseley's comments into The RPBPPC procedures and provided to Patricia Schroeder to issue for approval of the Standards Board. Due: December 2012	Steven Stamm	CLOSED
11/12-06	Consensus committee chairs to appoint at least one representative to serve as a member of the RPBPPC. Due: January 2012	Consensus Committee Chairs	CLOSED
11/12-07	Donald Spellman to request that the SB Sales TG work with Corey McDaniels and the ANS International Committee to promote ANS standards internationally. Due: November 2013	Donald Spellman, SB Sales TG	OPEN
11/12-08	Donald Spellman to check with Mark Linn for status of the ANS-50.1 draft for preliminary review by Edward Wallace and Peter Hastings to help determine if applicable (or could be) to SMRs. Due: December 2012	Donald Spellman	CLOSED
11/12-09	Carl Mazzola to provide the SB the NFSC DID white paper when available. (Requires completion of NFSC action item.)	Carl Mazzola	OPEN
11/12-10	Edward Wallace to provide the SB a copy of his DID paper. Due: December 2012	Edward Wallace	CLOSED
11/12-11	Robert Budnitz and Carl Mazzola to exchange their consensus committees' reaffirmation/revision checklists when available.	Robert Budnitz, Carl Mazzola	CLOSED
11/12-12	SB members to provide James August a list of standards deemed a priority for new construction. Due: April 2013	ALL Standards Board Members	CLOSED
11/12-13	External Communication (EC) Task Group (TG) to add WENRA to the liaison list. Due: November 30, 2012	EC TG	CLOSED
11/12-14	Carl Mazzola to draft a response to the 11/6/12 NEI letter regarding the ISA standard (ANS-57.11). Due: December 2012	Carl Mazzola	CLOSED
11/12-15	Patricia Schroeder to review archived SB minutes for statement from Jack Roe expressing NEI support for consensus standards.	Patricia Schroeder	CLOSED
11/12-16	James August to prepare a white paper/business case on RAP for SB members to reconsider decision to hold off initiating standards on RAP. Due: June 2012	James August	CLOSED
11/12-17	Prasad Kadambi to prepare a business case for initiating an ANS conformity assessment program. Due: June 2012	Prasad Kadambi	OPEN
6/12-01	Ad hoc task group to 1) identify drivers for reorganization, 2) create a logical approach to apply those drivers to the ANS Standards Committee organization, 3) review organization with existing consensus committee chairs and address comments, and 4) provide evaluation to the SB how the proposed organizational changes improve the Standards Committee. Task group to provide an interim report to the SB one month before the November meeting and to provide a draft transition p	James August, Robert Budnitz, Carl Mazzola, Prasad Kadambi, Steven Stamm, James Mallay, and William Reuland	CLOSED

	with impact. Due: November 2012		
6/12-04	Donald Spellman to review the “Toolkit” for potential improvements as suggested by David Sachs. Due: June 2014	Donald Spellman	OPEN
6/12-09	Donald Spellman to follow up with William Bell on whether his company finds the need for standards to support SMRs. Due: June 2013	Donald Spellman	CLOSED

Why Do We Need Standards?

- **Establishment of safe practices**
- **Commercial necessity**
- **Consumer acceptance – component interchangeability**
- **Influence on regulatory guidance**
- **A professional obligation**

Why Standards and Not Regulations?

- **Standards incorporate broad technical experience**
- **Standards allow recognized expertise to be applied to specific subjects**
- **Standards combine peer review process with prescribed methods to reach consensus**
- **Standards provide workable solutions to concepts and established principles**

What are National Standards?

- ***National Standards (ANSI) are documents formed by a strict national consensus process that set forth requirements for design, manufacture, or operation of a piece of equipment, system, or plant; computer hardware and software; facility siting; hazardous waste management; computational analysis; and/or environmental compliance.**

  (refer to "ANSI Essential Requirements… January 2013)

- ***Standards may address the physical and functional features of equipment, its safe application within a system, emergency response conditions, or some combination of these.**

- *Definitions - mine

Application of Standards

- **Standards use is voluntary and applicable only if an organization invokes its requirements (shall statements).**

  Criteria ("shall, should, may") do not equal **Requirements** ("shall") only

- **A Standard becomes mandatory only if a government agency formally endorses it to meet regulation**s. (NRC, EPA, DOE, DOC, etc.)

- **Standards endorsed by a State Agency or by the Federal Government in the Federal Register are referred to as "Codes"**.

Direction for ANS Standards

"Stay the course or take the great circle route"

Don Spellman, Chair

Standards Board – June 18, 2013

Does the ANS Standards Committee continue on the course that we have been on for the last several years or do we veer off into the wild blue yonder and reach for a somewhat different end point?

- **Stay the course still gets us from point A to B, but in the long haul, it may take much more effort to get there.**
- **Navigationally, if you take the global "great circle route", you actually travel less distance and get from A to B sooner.**

A straight line sail from New York to Gibraltar is longer than a great circle route.

SWOT ANALYSIS

Lets discuss the Strengths, Weaknesses, Opportunities and Targets of the ANS Standards Committee.

First lets set the stage for current conditions in the industry and how those conditions might affect the future direction of the standards committee

Then we will discuss how the SC might align its goals and objectives to meet those industry needs

FIRST, WHAT IS THE INDUSTRY

- **Nuclear Power Production (electricity, process heat)**
  - Large Light Water Power Reactors
  - Non-LWR Power Production Reactors
  - Small Modular Power Production Reactors
- **Non-reactor Nuclear Facilities**
  - Nuclear Fuel Cycle Facilities (production, processing)
  - Nuclear Materials Storage Facilities
  - Hot Cell Facilities
- **Waste Processing Facilities**
  - TRU and Remote Handled Waste
- **Research Reactors**

What is the ANS “Slice of the PIE”?

- Siting and Environmental Analysis
- System and Plant Design (not structures or components)
- Criticality Safety (materials handling, etc.)
- Operational performance and safety
- Radiological Analysis (dispersions, etc.)
- Probability Risk Analysis and Performance Based Operations
- Fuel Cycle (Open and Closed)
- Nuclear Waste Handling (not packaging & transportation)

BROADLY, WHAT ARE THE INDUSTRY NEEDS?

- **Reduce capital, operations, and maintenance costs**
- **Responses to regulatory changes due to recent events**
- NRC plans to upgrade regulations (RI/PB)
    - Beyond design basis
    - Containment
    - Station Blackout
    - Seismic response (North Anna lessons learned)
- **Clearer alignment with 10CFR52 for design and operation**
- **Greater alignment with international "standards" and other organization "standards" (EPRI, INPO, IAEA)**
- **Enhanced synergy between U.S. SDOs**

ANS STRENGTHS

- Large number of volunteers
- Reliable history of consensus standards
- Strong Leadership in the Standards Committee
- Broad experience base from owners/operators, vendors, national labs, private industry, personal volunteers
- Best Standards Administrator we have ever had

ANS WEAKNESSES

- **Poor IT support**
- **Weak ANS management and lobbyist support**
- **Inefficient use of registered volunteers**
- **Inter SDO competition**
- **Matrix organization**
  - Technology-based
  - Process-based
- **Financial Support for committees (sequestration)**
- **Too many of our lead people are becoming unsupported for travel, etc.**

ANS OPPORTUNITIES

- **Reorganization of the standards committee**
  - Levelizes the workload
  - Broadens the spectrum of committees
  - Focuses on technology
  - More CC representation on the Standards Board
- **Formation of Standards Board Task Groups**
  - Need better participation
- **Let's hear from President Elect Don Hoffman**

ANS TARGETS

- Push NESCC to reform to the original vision and scope
- Enhance relationship between SDOs and NEI
- Enhance international coordination – IAEA, WENRA, ISO
- Improve ANS IT capabilities to reduce necessary travel of unsupported volunteers to face-to-face meetings
- Complete relational volunteer database
- Secure consistent funding for committee needs for travel and meeting support

HOW DO WE APPLY THIS SWOT ANALYSIS TO THE COMMITTEE?

ANS Standards Committee

Strategic Plan

Tim Tovar

Manager, Design Integration

June 4, 2013

NuScale Nonproprietary

NP-PM-0413-3546

Agenda

- Purpose
- Background
- Structure, system, and component (SSC) categorization methodology
- Summary and next steps

Purpose

- Describe SSC categorization methodology (presented in the technical report)
- Elicit feedback related to the methodology from the NRC

Background

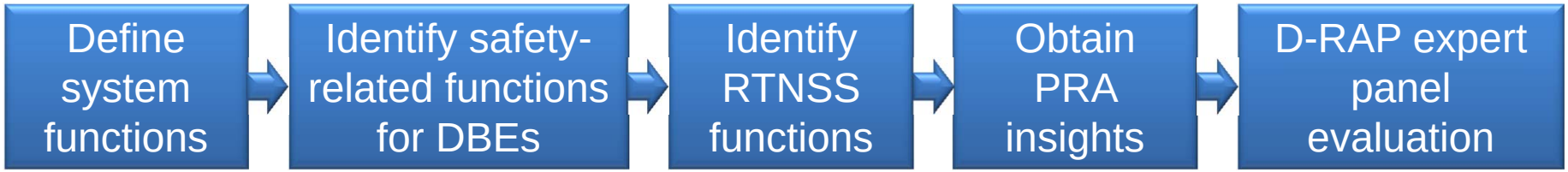
- Regulatory framework or guidance
  - 10 CFR 50.2, “Definitions” – defines safety-related SSCs
  - SECY-95-132, “Policy and Technical Issues Associated with the Regulatory Treatment of Non-Safety Systems (RTNSS) in Passive Plant Designs (SECY-94-084)”
  - SRP 17.4 , “Reliability Assurance Program (RAP)”
  - DC/COL-ISG-018, “Interim Staff Guidance on Standard Review Plan, Section 17.4, ‘Reliability Assurance Program’”
  - SRP 19.3, “Regulatory Treatment of Non-Safety Systems for Passive Advanced Light Water Reactors,” Draft Rev. 0
  - SECY-11-0024, “Use of Risk Insights to Enhance the Safety Focus of SMR Reviews”
  - SRP Introduction – Part 2, Draft Rev. 0

Background

- Other relevant regulatory and industry documents
  - ANS 58.14, “Safety and Pressure Integrity Classification Criteria for LWRs”
  - NEI 00-04 – 10 CFR 50.69, “SSC Categorization Guideline”
  - EPRI document 1023008, “Design Reliability Assurance Program Implementation Guidance”
- NuScale Preliminary Structure, System, and Component Categorization Report, NP-RP-0413-3490-P

SSC Categorization Methodology

- High-level overview of methodology



SSC Categorization Methodology

- Four categories

  S = Safety-related, risk-significant

  X = Safety-related, not risk-significant

  R = Nonsafety-related, risk-significant

  N = Nonsafety-related, not risk-significant

- This corresponds to the Draft SRP Introduction – Part 2 guidance

  A1 = Safety-related, risk-significant

  A2 = Safety-related, not risk-significant

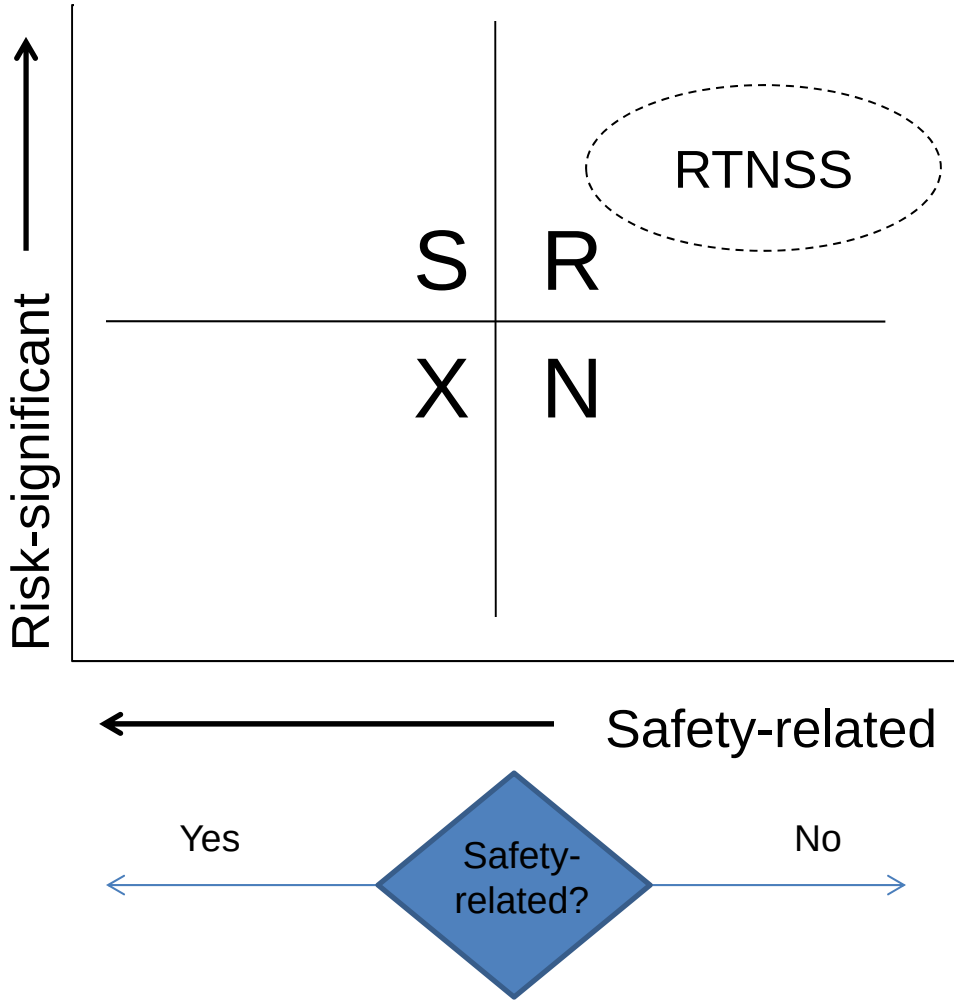
  B1 = Nonsafety-related, risk-significant

  B2 = Nonsafety-related, not risk-significant

Safety-Related Functions

- 10 CFR 50.2 criteria
  - integrity of reactor coolant pressure boundary
  - safe shutdown
  - prevent or mitigate the consequences of accidents
- Plant level safety functions
  - control core reactivity
  - maintain primary coolant inventory
  - maintain reactor pressure control
  - remove core heat
  - maintain containment integrity

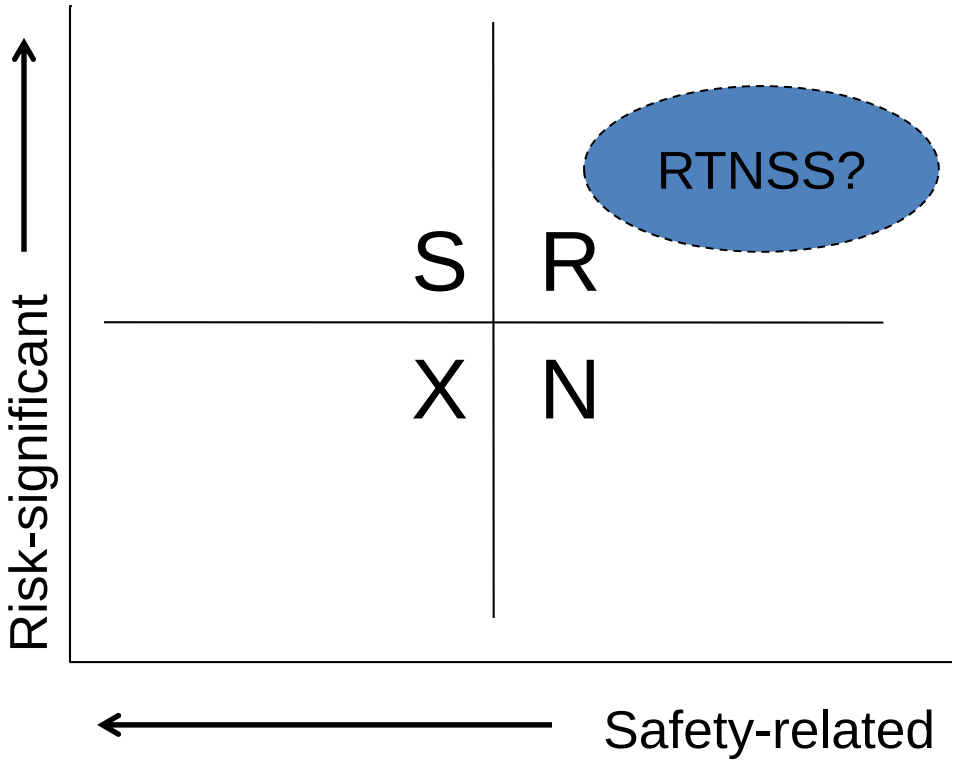
Safety-Related Classification



Regulatory Treatment of Nonsafety Systems

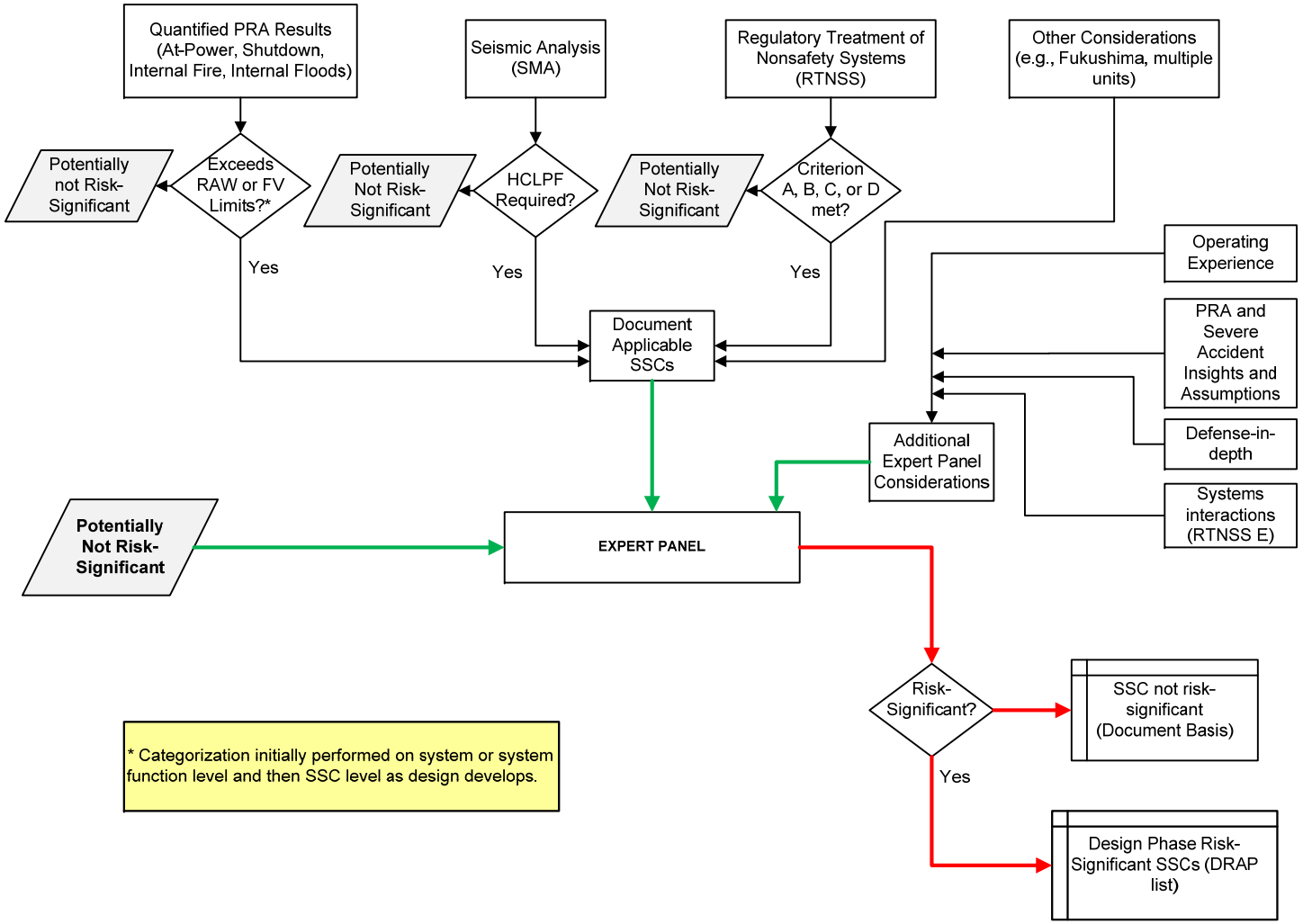
- SSC required to meet one of five regulatory treatments of nonsafety systems (RTNSS) criteria?
  - A. Anticipated transient without scram and station blackout
  - B. Ensure long-term safety and address seismic events
  - C. Meet the safety goal guidelines
    - core damage frequency of less than 1 x 10^{-4}/year
    - large release frequency of less than 1 x 10^{-6}/year
  - D. Containment performance goal
  - E. Prevent significant adverse system interactions between passive safety systems and active nonsafety SSCs

RTNSS Selection

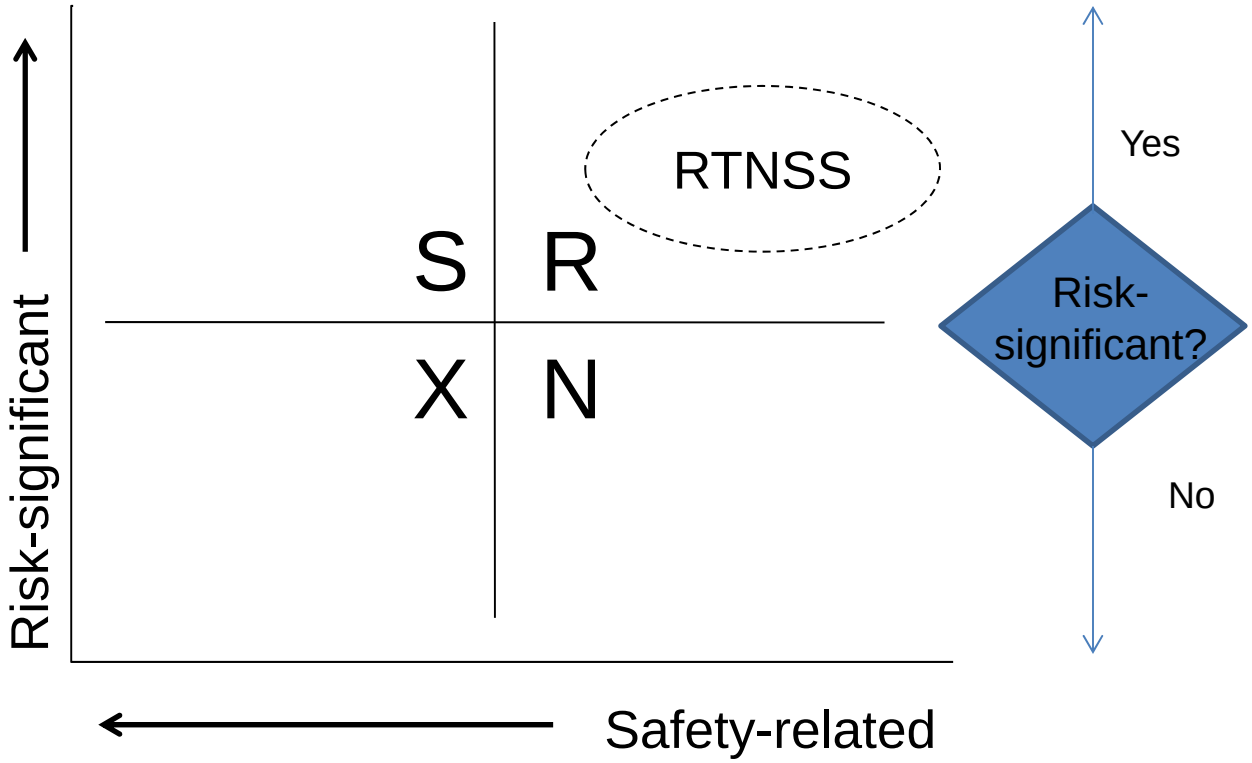


Design Reliability Assurance Program

NuScale Design Reliability Assurance Program (D-RAP) Process for SSC Risk-Significance Determination

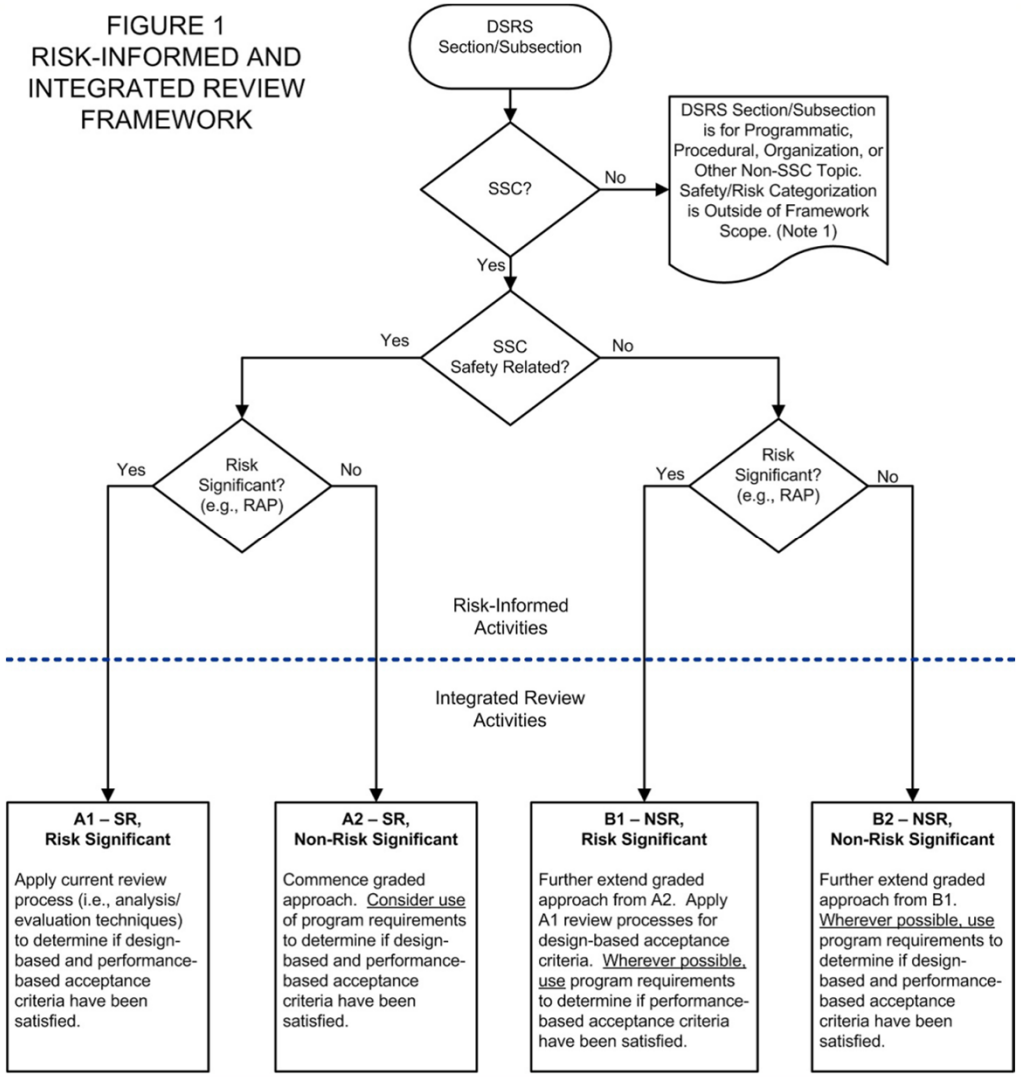


Risk-Significance Determination



SRP Introduction: Risk-Informed Review

FIGURE 1
RISK-INFORMED AND
INTEGRATED REVIEW
FRAMEWORK



Summary and Next Steps

- NuScale methodology is established
- Methodology follows evolving regulatory guidance
- Methodology takes precedent into account
- Preliminary results
  - Categorized systems in support of DSRS development
- Next steps
  - Continue classification to the structure and component level
  - Implement a feedback process to revisit systems based on an evolving design

Reorganization Update Report - June 2013

- Reorganization Task Group established at June 2012 SB meeting
- Conclusions of evaluation presented at November 2012 Meeting
  - NFSC too large and diverse
  - N17 too diverse; very unbalanced load between subcommittees.
  - Risk and performance based principles are not being proactively applied.
- SB approved proposed CC structure w no change to N16
- Risk & Perf. Based Principles Policy Committee created
  - Prasad Chair; 1st mtg 6/17/2013
- Preliminary assignments of standards to CCs agreed upon (Slide 2)
- Chair and V-Chair nominees selected and contacted
  - Results will be provide to SB for final selection and approval
- White Paper – "Consensus Committee Leadership Responsibilities And Expectation" distributed
- Preliminary CC staffing selected – to be reviewed by CC Chairs and nominees notified with commitment requests

Approved SC Organization – High Level

Consensus Committees	Subcommittee Topical Areas				
LWR Design and Operation CC	LWR Design Criteria	Facility Design	System Design	Plant Operations, Emergency Planning Training	
Non Large LWR Rx CC	SMR	Research Rx	LM Rx	Gas Rx	
Fuel & Waste CC	LWR Fuel Design	Waste Management	Decommissioning		
Safety and Radiological Analyses CC	Safety Analysis	Radiological Anal.			
Criticality Safety CC	Criticality Safety 1	Criticality Safety 2			
Non Rx Facilities CC	Fuel Cycle Facilities	Wast Processing Facilities	Reprocessing	Fuel Transport, Long Term Storage and Disposal	Research Facilities
Environmental and Siting CC	Siting Criteria	Geohydrology	Transport	Monitoring	General design criteria for external hazards
ASME/ANS Risk CC (JCNRM)	Standards Maintenance	Standards Development	Planning and Interpretations	Risk Applications	

Notes:
Evaluated several options and took the best parts to create the above organization which includes the following changes from the current structure:

- Areas changed since 11/12 indicated in RED
- No change to JCNRM or N16
- LW Power Rx CC excludes Small LWRs, Fuel Design, Waste Facilities and Non Rx Facilities
- Created Fuel and Waste Management CC
- Created Env. & Siting CC that includes rad. Transport

SC Reorganization

Standards Reallocation Results

	TOTALS	LWR Design and Operation CC	Non Large LWR Rx CC	Fuel & Waste CC	Safety and Radiological Analyses CC	Criticality Safety CC	Non Rx Facilities CC	Environmental and Siting CC	ASME/ ANS Risk CC (JCNRM)
TOTALS	**321**	**77**	**47**	**49**	**56**	**27**	**17**	**42**	**6**
ACTIVE & CURRENT	**116**	**27**	**10**	**13**	**23**	**17**	**3**	**18**	**5**
INACTIVE	**163**	**32**	**34**	**30**	**25**	**8**	**14**	**19**	**1**
WITHDRAWN & OTHER	**42**	**18**	**3**	**6**	**8**	**2**	**0**	**5**	**0**
Initial Staffing Allocation		**27**	**26**	**17**	**21**	**No Change to current membership**	**10**	**18**	**No Change to current membership**

Reorganization Numerical Goals

The following are suggested as goals for our reorganization.

ITEM	NUMERICAL GOALs
Number of Standards per Subcommittee including Inactive Standards	5 to 10
Number of Subcommittees per Consensus Committee	3 to 6
Number of Consensus Committees	5 to 8
Number of Standards under Consensus Committee including Inactive Standards	6 to 12
Number of person on a Subcommittee	15 to 40
Number of Persons on a Consensus Committee	10 to 20

Reorganization Comparison

	Existing SC Organization	Proposed Reorganization
Number of CCs	4	8
SCs per CC	1 to 7	2 to 5
NFSC Active Standards	~62	27

Other Proposed SB Committees

Committee	Functions	Comments
Risk & Perf. Based Principles Policy Committee	• Develop R&PB Plan • Oversee implementation	• Bylaw has been approved
Policy & Procedures Standing Committee	• Expand SB procedures to reduce individual CC procedures • Manage review and updating SB Policies and Procedures	• Dedicated subcommittee of SB • Continuous Policy and Procedure focus
NRC Interface Management Standing Committee	• Develop and manage high level NRC interfaces	• Two or three high level Washington area personnel
DOE Interface Management Standing Committee	• Develop and manage high level DOE interfaces	• Two or three high level Washington area personnel (May be combined with NEC Interface Comm.)
Beyond Design Basis/ Defense in Depth - Ad HOC Committee	• Develop BDB/DID Plan • Oversee implementation	• Similar to R&PB Principles Policy Committee

Reorganization Update Report - Chair / Vice Chair Nominations

- LWR Design and Operations
  - Chair Bill Reuland
  - VChair Bill Bell/Tim Meneely
- Non-Large LWR Rx
  - Chair. George Flanagan
  - VChair Sean O'Kelly/ Bruce Brevard
- Fuel & Waste
  - Chair Don Eggett
  - VChair Sheila Lott
- Safety and Radiological Analyses
  - Chair Andy Smetana
  - VChair Abe Weitzberg
- Non Rx Facilities
  - Chair James O'Brien
  - VChair Jeff Brault
- Environmental and Siting
  - Chair Carl Mazzola
  - VChair Yan Gao

SC Policy - Specification Of Requirements (Shall, Should and May) June 2013

- Existing guidance
  - NFSC Policy 7.2 – June 2012
  - Guidance for Use and Consistency of Requirements, Recommendations, and Permissions in Standards Developed by the American Nuclear Society
  - ANS Glossary – Definitions
- Issue – Several recent standards being balloted did not adequately define requirements
  - Use of wording other than shall, should and may to specify requirements, recommendations and permissions
  - Overuse of recommendations
  - Overuse of appendices
  - Use of shall, should or may in factual statements
- Single SC Policy draft developed and circulated to NSFC for comments
- Comments received and incorporated into new draft

SC Policy - Specification Of Requirements (Shall, Should and May) June 2013

- Comments received and incorporated into new draft which has been recirculated
- NFSC - to provide recommendations to SB
- Items for consideration
  - Definitions in ANS standards
  - Addition of "compared to" statements in definitions?
  - NFSC or SB Policy?
  - Use of term "Voluntary Consensus Standards"
  - Allowing use of "need not" and "may not"
  - Should we keep the portion in red?
    - "Should also indicates that the issue must be addressed and that either the recommended action shall be taken or an equivalent action shall be taken and a basis given for equivalency."
  - Should SB require that all standards summarized requirements in a table at the end of each section like 53.1?

SC Policy - Specification Of Requirements (Shall, Should and May) June 2013

- Plan forward
  - Summarize NFSC comments to SB on 6/18/2013
  - Either vote to approve Policy at SB m3eeting, or
  - Issue policy for ballot by SB
  - Issue as a SC Policy

JCNRM Chairman's Report to the Standards Board
June 18, 2013, Meeting ● Atlanta, Georgia

Standard in Revision

A new addendum to the JCNRM's main "flagship" PRA methodology standard for LWR PRA was approved a half year ago by the JCNRM, and approved recently by ASME and ANS. It is now in the editing process at ASME. It is expected to be issued in final form in the fall of 2013. This "Addendum" contains changes that are mostly of a clarifying or consistency-across-the-standard nature, plus bringing many citations and other things up to date. The new one will be designated ANS-ASME RA-Sb (2013).

Work on the next revision, which the JCNRM will call a "new edition", is already underway and is expected to be ready for ballot by the end of calendar 2014. This new version is expected to contain many substantive changes based on feedback from recent users of the standard, along with extensive re-formatting and the like.

Standards in Development

NOTE #1: This list includes both standards being developed by the JCNRM that began under ANS-RISC before the ANS-ASME merger, and those being developed under JCNRM that began under ASME before the merger.

NOTE #2: Please note that the numerical designators below (like ANS 58.22, etc.) are the old numbers. The JCNRM will provide new designators when each of the standards below finally goes out for final approval.

NOTE #3: 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-58.22-201x, "Low Power Shutdown PRA Methodology"

- Working group is led by Don Wakefield, underway since 1999.
- After several ballots and comment resolutions, the WG has completed a final draft and it is being prepared for submittal to the JCNRM for final ballot. This submittal is expected in the July-August time frame. We expect the final Standard to be issued by the JCNRM in the second quarter of 2014.

ANS/ASME-58.24-201x, "Severe Accident Progression and Radiological Release (Level 2) PRA Methodology to Support Nuclear Installation Applications"

- Writing group is led by Ed Burns, underway since 2005. Burns took over as chair from Mark Leonard in early 2013. Leonard had led the WG since its inception.
- After several ballots and comment resolutions, the WG has completed a final draft and it is being prepared for submittal to the JCNRM for final ballot. This submittal is expected by the end of July. We expect that the final Standard will be issued in the second quarter of 2014.

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

- Working group is led by Keith Woodard, underway since 2005.
- After several ballots and comment resolutions, the WG has completed a final draft and it is being prepared for submittal to the JCNRM for final ballot. We expect that the final Standard will be issued in the third quarter of 2014.

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

- Working group is led by Karl Fleming, underway since 2007.
- A final JCNRM ballot was held in spring 2013, and the ballot was successful. This standard is now in the editing process at ANS, and should be out of editing in 3-4 months.

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

- Working group is led by Jim Chapman, underway since 2007.
- A final JCNRM ballot was held in spring 2013, and it was approved by the JCNRM. Final comment resolution is now under way. We expect that the final Standard will be issued by the JCNRM in the fourth quarter of 2013.

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

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

The "organizational" aspect, which was completed in early 2012 after over two years of administrative and liaison work, involved developing a "Rules and Operating Procedure" and a new structure for the joint committee. The structure consists of four subcommittees and a series of about ten writing groups and working groups, and a half-dozen short-term project teams. The two societies' Boards approved the "Rules and Operating Procedure" in final form about 2 years ago, and the new structure has also been put into place. The new JCNRM is now formally in existence and has been operating as such since spring 2012, after having operated informally as a single joint entity for over a year prior to spring 2012. With this series of steps in place, the former ANS RISC Committee and the former ASME Committee on Nuclear Risk Management have effectively ceased to exist.

The JCNRM "business" aspect is not yet in place. Issues of revenue sharing and sharing of administrative tasks still need to be formally resolved. Negotiations have been advancing recently after a long period of slower movement. The outlines of the final business arrangement are now in place, although nothing has been "approved" in final form yet. The tentative arrangement consists of 50-50 revenue and cost sharing; ANS assumption of the administrative work of editing and publishing all new JCNRM standards; and ASME assumption of the work of arranging meetings, managing the finances, managing the ballot process, and a few other administrative tasks.

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

Standards Inquiries and Delinquent Standards

The JCNRM has received one standards inquiry that was recently approved for publication. The JCNRM does not have any delinquent standards in need of maintenance.

Future Plans

The JCNRM's Executive Committee has been meeting more-or-less bi-weekly by conference call to plan the next two years' activities. The main effort is to develop the next version of the main PRA Combined Standard, which is planned now for late 2014. 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, although a few other problems have been discovered during use. A number of what the JCNRM has called "cross cutting issues" have also been identified, each of which is being evaluated and 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 is to ballot and issue the five new standards under development that are discussed in the opening section of this report. This is a major effort, involving several dozen volunteers.

The JCNRM has also recently established a separate new subcommittee, the Subcommittee on Risk Applications, with the charter to be the JCNRM interface with ANS and ASME (and other SDOs in the future) so as to provide

assistance to other standards-development projects whenever such a project desires to develop a new standard (or modify an existing standard) to provide risk-informed or performance-based requirements. This new JCNRM Subcommittee will be the JCNRM interface with the ANS Standards Board's new Risk Informed and Performance Based Principles Policy Subcommittee (RPBPPC.)

The JCNRM has also recently appointed two task groups, one to recommend whether it should begin the development of a new standard for PRA to evaluate the risk from spent fuel pools, and another to evaluate the need and efficacy of a possible new standard covering PRA for small modular reactors of various designs. Decisions on these will be debated by the JCNRM at its upcoming meeting in Baltimore in September 2013. There is also some early discussion on whether the JRNRM should start working on PRA standards for non-reactor nuclear facilities.

N16 Chairman's Report to the Standards Board
June 18, 2013, Meeting ● Atlanta, Georgia

PINS in Development (2)

- ANS-8.22, "Nuclear Criticality Safety Based on Limiting and Controlling Moderators" (revision of ANSI/ANS-8.22-1997 (R2006))
- ANS-8.24, "Validation of Neutron Transport Methods for Nuclear Criticality Safety Calculations" (revision of ANSI/ANS-8.24-2007)

PINS in Approval Process/Resolving Comments (3)

- ANS-8.26, "Criticality Safety Engineer Training and Qualification Program"(revision of ANSI/ANS-8.26-2007 (R2012))
- ANS-8.27, "Burnup Credit for LWR Fuel" (revision of ANSI/ANS-8.27-2007)
- ANS-8.29, "Nuclear Criticality Safety in Fuel Reprocessing Facilities" (new standard)

Standards in Development – Approved PINS (97)

- ANS-8.3, "Criticality Accident Alarm System" (revision of ANSI/ANS-8.3-1997 (R2003))
- ANS-8.10, "Criteria for Nuclear Criticality Safety Controls in Operations with Shielding and Confinement" (revision of ANSI/ANS-8.10-1983 (R2005))
- ANS-8.12, "Nuclear Criticality Control and Safety of Plutonium-Uranium Fuel Mixtures Outside Reactors" (revision of ANSI/ANS-8.12-1987 (R2011))
- ANS-8.15, "Nuclear Criticality Control of Selected Actinide Nuclides" (revision of ANSI/ANS-8.15-1981 (R2005))
- ANS-8.20, "Nuclear Criticality Safety Training" (revision of ANSI/ANS-8.20-1991 (R2005))
- ANS-8.21, "Use of Fixed Neutron Absorbers in Nuclear Facilities Outside Reactors" (revision of ANSI/ANS-8.21-1995 (R2011))
- ANS-8.28, "Administrative Practices for the Use of Non-Destructive Assay Measurements for Nuclear Criticality Safety" (new standard)

Standards at Ballot/Resolving Comments (2)

- ANS-8.1, "Nuclear Criticality Safety in Operations With Fissionable Materials Outside Reactors" (revision of ANSI/ANS-8.1-1998 (R2007))
- ANS-8.19, "Administrative Practices for Nuclear Criticality Safety" (revision of ANSI/ANS-8.19-2005)

Responses to Inquiries in Development (2)

- An inquiry was received 1/11/12 on ANSI/ANS-8.3-1997 (R2003), "Criticality Accident Alarm System Inquiry." A response was drafted; comments from the ANS-8 Subcommittee are being resolved.
- An inquiry was received 1/9/13 on ANSI/ANS-8.19-2005, "Administrative Practices for Nuclear Criticality Safety." A response was drafted; comments from the ANS-8 Subcommittee are being resolved.

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

- ANSI/ANS-8.1-1998 (R2007), “Nuclear Criticality Safety in Operations with Fissionable Materials Outside Reactors” (revision at ballot with N16)
- ANSI/ANS-8.10-1983 (R2005), “Criteria for Nuclear Criticality Safety Controls in Operations with Shielding and Confinement” (revision initiated)
- ANSI/ANS-8.15-1981 (R2005), “Nuclear Criticality Control of Special Actinide Elements” (revision initiated)
- ANSI/ANS-8.19-2005, “Administrative Practices for Nuclear Criticality Safety” (revision at ballot with N16)
- ANSI/ANS-8.20-1991 (R2005), “Nuclear Criticality Safety Training” (revision balloted by ANS-8; comments being resolved)

Future Plans

Thomas McLaughlin stepped in as interim chair of ANS-8 effective at the end of the June 2012 ANS meeting. Lon Paulson will take over as the permanent ANS-8 chair after the close of the June 2013 ANS meeting.

Reaffirmations of 6 standards were approved in 2012 maintaining their status as current American National Standards. Revisions of all 5 standards considered delinquent by ANSI have been initiated. Efforts continue with WGs for the delinquent standards to speed up the revision process and determine what resources need to be made available so these revisions move forward as quickly as possible.

N17 Chairman's Report to the Standards Board
June 18, 2013, Meeting ● Atlanta, Georgia

PINS in Development (3)

- ANS-6.1.1, "Neutron and Gamma-Ray Fluence-To-Dose Factors" (reinvigoration of historical standard ANSI/ANS-6.1.1-1991)
- ANS-6.6.1, "Calculation and Measurement of Direct and Scattered Gamma Radiation from LWR Nuclear Power Plants" (revision of ANSI/ANS-6.6.1-1987 (R2007))
- ANS-15.15, "Criteria for the Reactor Safety Systems of Research Reactors" (reinvigoration of historical standard ANSI/ANS-15.15-1978 (R1986))

PINS in Approval (2)

- ANS-15.16, "Emergency Planning for Research Reactors" (revision of ANSI/ANS-15.16-2008)

PINS submitted to ANSI (2)

- ANS-10.8, "Non-Real Time, High-Integrity Software for the Nuclear Industry: User Requirements" (new standard)
- ANS-19.5, "Requirements for Reference Reactor Physics Measurements" (reinvigoration of historical standard ANSI/ANS-19.5-1995)

Standards in Development – Approved PINS (10)

- ANS-5.1, "Decay Heat Power in Light Water Reactors" (revision of ANSI/ANS-5.1-2005)
- 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-15.2, "Quality Control for Plate-Type Uranium-Aluminum Fuel Elements" (revision of ANSI/ANS-15.2-1999 (R2009))
- ANS-15.4, "Selection and Training of Personnel for Research Reactors" (revision of ANSI/ANS-15.4-2007)
- ANS-15.8, "Quality Assurance Program Requirements for Research Reactors" (revision of ANSI/ANS-15.8-1995 (R2013))
- ANS-19.1, "Nuclear Data Sets for Reactor Design Calculations" (revision of ANSI/ANS-19.1-2002 (R2011))
- ANS-19.9, "Delayed Neutron Parameters for Light Water Reactors" (new standard)
- ANS-19.11, "Calculation and Measurement of the Moderator Temperature Coefficient of Reactivity for Pressurized Water Reactors" (revision of ANSI/ANS-19.11-1997 (R2011))
- ANS-19.12, "Nuclear Data for the Production of Radioisotope" (new standard)

Standards at Ballot/Resolving Comments (1)

- ANS-6.1.2, "Neutron and Gamma-Ray Cross Sections for Nuclear Radiation Protection Calculations for Nuclear Power Plants" (revision of ANSI/ANS-6.1.2-1999 (R2009))

Standards Approved by N17/ANSI (4)

- ANSI/ANS-10.7-2013, "Non-Real Time, High Integrity Software for the Nuclear Industry: Developer Requirements" (new standard)
- ANSI/ANS-15.1-2007 (R2013), "The Development of Technical Specification for Research Reactors" (reaffirmation of ANSI/ANS-15.1-2007)
- ANSI/ANS-15.8-1995 (R2013), "Quality Assurance Program Requirements for Research Reactors" (reaffirmation of ANSI/ANS-15.8-1995 (R2005))
- ANSI/ANS-15.21-2012, "Format and Content for Safety Analysis Reports for Research Reactors" (revision of ANSI/ANS-15.21-1996 (R2006))

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

- ANSI/ANS-5.1-2005, “Decay Heat Power in Light Water Reactors” (revision initiated)
- ANSI/ANS-6.3.1-1997 (R2007), “Program for Testing Radiation Shields in Light Water Reactor (LWR)” (chair needed)
- ANSI/ANS-6.4-2006, “Nuclear Analysis and Design of Concrete Radiation Shielding for Nuclear Power Plants” (chair needed)
- ANSI/ANS-6.4.2-2006, “Specification for Radiation Shielding Materials” (revision initiated)
- ANSI/ANS-6.6.1-1987 (R2007), “Calculation and Measurement of Direct and Scattered Gamma Radiation from LWR Nuclear Power Plants” (Revision being initiated)
- ANSI/ANS-15.1-2007, “The Development of Technical Specifications for Research Reactors”(reaffirmation to be initiated)
- ANSI/ANS-15.4-2007, “Selection and Training of Personnel for Research Reactors” (revision initiated)

Responses to Inquiries (0)

- The N17 Committee has no current inquiries in need of a response.

NFSC Chairman Report to the Standards Board

June 18, 2013, Meeting ● Atlanta, Georgia

Overview

The NFSC and each of its eight subcommittees were very active, as well as successful since the beginning of 2013 with positive progress on 29 different ANS standards, including ANSI approval of 1 new standard, 1 revised standard, 1 reaffirmed standard; as well as 4 new PINS activities which will lead to new standards. Three inquiries on existing standards were also addressed. Listed below are the specific activities by standard.

I. PINS Activities (4)

A. PINS in Preparation (1)	Status	SC
(1) ANS-40.35, Volume Reduction of Low-Level Radioactive Waste or Mixed Waste (reinvigoration of historic standard ANSI/ANS-40.35-1991)	in development by WG	ANS-27

B. PINS in NFSC Approval Process (3)	Status	SC
(1) ANS-2.32, Guidance on the Selection and Evaluation of Remediation Methods for Subsurface Contamination (new standard)	resolving comments (lost WG Chair)	ANS-27
(2) ANS-3.13, Nuclear Plant Reliability Assurance Program (RAP) Development Guidance for Design, Construction and Operations	resolving comments	ANS-21
(3) ANS-3.14, Process for Aging Management and Life Extension of Non-Reactor Nuclear Facilities (new standard)	resolving comments	ANS-21

II. Standards Activities (29)

A. Standards and Draft Standards in Development with Approved PINS (25)	Status	SC
(1) ANS-2.2, Earthquake Instrumentation Criteria for Nuclear Power Plants (revision of ANSI/ANS-2.2-2002)	in development by WG (Fukushima-related)	ANS-25
(2) ANS-2.8, Determining External Flood Hazards for Nuclear Facilities (reinvigoration of historic standard ANSI/ANS-2.8-1992)	in development by WG (Fukushima-related)	ANS-25
(3) ANS-2.9, Evaluation of Ground Water Supply for Nuclear Facilities (reinvigoration of historical standard ANSI/ANS-2.9-1980 (R1989))	in development by WG	ANS-25
(4) ANS-2.16, Criteria for Modeling Design-Basis Accidental Releases from Nuclear Facilities (new standard)	in development by WG	ANS-24
(5) ANS-2.25, Surveys of Terrestrial Ecology Needed to License Thermal Power Plants (reinvigoration of historical standard ANSI/ANS-2.25-1982 (R1989))	in development by WG	ANS-25
(6) ANS-2.30, Assessing Capability for Surface Faulting at Nuclear Facilities (new standard)	in development by WG (Fukushima-related)	ANS-25
(7) ANS-2.31, Estimating Extreme Precipitation at Nuclear Facility Sites (new standard)	in development by WG	ANS-25
(8) ANS-3.1, Selection, Qualification, and Training of Personnel for Nuclear Power Plants (reinvigoration of historical standard ANSI/ANS-3.1-1993(R1999))	in development by WG	ANS-21
(9) ANS-3.5, Nuclear Power Plant Simulators for Use in Operator Training and Examination (revision of ANSI/ANS-3.5-2009)	in development by WG	ANS-21
(10) ANS-3.8.1, Criteria for Radiological Emergency Response Functions and Organizations for Nuclear Facilities (reinvigoration of historic standard ANSI/ANS-3.8.1-1995)	to be initiated after ANS-3.8.7 drafted (Fukushima-related)	ANS-26
(11) ANS-3.8.2, Criteria for Functional and Physical Characteristics of Radiological Emergency Response Facilities at Nuclear Facilities	to be initiated after ANS-3.8.7 drafted	ANS-26

(reinvigoration of historic standard ANSI/ANS-3.8.2-1995)	(Fukushima-related)	
(12) ANS-3.8.3, Criteria for Radiological Emergency Response Plans and Implementing Procedures and Maintaining Emergency Response Capability for Nuclear Facilities (reinvigoration and consolidation of historic standards ANSI/ANS-3.8.3-1995 and ANSI/ANS-3.8.4-1995)	to be initiated after ANS-3.8.7 drafted (Fukushima-related)	ANS-26
(13) ANS-3.8.6, Criteria for the Conduct of Offsite Radiological Assessment for Emergency Response and Emergency Radiological Field Monitoring, Sampling and Analysis for Nuclear Facilities (reinvigoration and consolidation of historic standards ANSI/ANS-3.8.5-1992 and ANSI/ANS-3.8.6-1995)	to be initiated after ANS-3.8.7 drafted (Fukushima-related)	ANS-26
(14) ANS-3.8.7, Criteria for Planning, Development, Conduct, and Evaluation of Drills and Exercises for Emergency Preparedness at Nuclear Facilities (reinvigoration of historic standard ANSI/ANS-3.8.7-1998)	in development by WG (Fukushima-related)	ANS-26
(15) ANS-3.8.10, Criteria for Modeling Real-time Accidental Release Consequences at Nuclear Facilities (new standard)	in development by WG (Fukushima-related)	ANS-24
(16) ANS-18.1, Radioactive Source Term for Normal Operation of Light Water Reactors (reinvigoration of historical standard ANSI/ANS-18.1-1999)	on-hold until new data acquired	ANS-24
(17) ANS-20.1, Nuclear Safety Criteria and Design Process for Fluoride Salt-Cooled High-Temperature Reactor	in development by WG	ANS-29
(18) ANS-50.1, Nuclear Safety Criteria for the Design of Light Water Reactor Plants (new standard)	in development by WG	ANS-29
(19) ANS-51.10, Auxiliary Feedwater System for Pressurized Water Reactors (revision of ANSI/ANS-51.10-1991(R2008))	in development by WG	ANS-22
(20) ANS-54.1, General Safety Design Criteria for a Liquid Sodium Reactor Nuclear Power Plants (reinvigoration of historical standard ANSI/ANS-54.1-1989)	in development by WG	ANS-29
(21) ANS-56.8, Containment System Leakage Testing Requirements (revision of ANSI/ANS-56.8-2002)	in development by WG	ANS-21
(22) ANS-57.2, Design Requirements for Light Water Reactor Spent Fuel Facilities at Nuclear Power Plants	in development by WG (Fukushima-related)	ANS-27
(23) ANS-57.3, Design Requirements for New Fuel Storage Facilities at LWR Plants	in development by WG (Fukushima-related)	ANS-27
(24) ANS-57.11, Integrated Safety Assessment for Fuel Fabrication Facilities (new standard)	in development by WG (Requested by NRC Commissioners)	ANS-27
(25) ANS-58.8, Time Response Design Criteria for Safety-Related Operator Actions (revision of ANSI/ANS-58.8-1994(R2008))	in development by WG	ANS-22

B. Standards and Draft Standards at Ballot or in Comment Resolution (1)	**Status**	**SC**
(1) ANS-58.16, Safety Classification and Design Criteria for Non-Reactor Nuclear Facilities (new standard)	ballot comments being resolved	ANS-22

NFSC Chairman Report to the Standards Board

June 8, 2013, Meeting ● Atlanta, Georgia

C. Standards Approved (3)	Status	SC
(1) ANSI/ANS-2.15-2013, Criteria for Modeling and Calculating Atmospheric Dispersion of Routine Radiological Releases from Nuclear Facilities (new standard)	Received ANSI approval 2/27/2013	ANS-24
(2) ANSI/ANS-3.4-2013, Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants (reinvigoration of historical standard ANSI/ANS-3.4-1996 (R2002))	Received ANSI approval 4/29/13	ANS-21
(3) ANSI/ANS-5.10-1998 (R2013), Airborne Release Fractions at Non-Reactor Nuclear Facilities (reaffirmation of ANSI/ANS-5.10-1998(R2006))	Received ANSI approval 1/15/2013	ANS-24

III. Standards Inquiries (3)

A. Responses to Inquiries on Existing Standards (3)	Status	SC
(1) ANSI/ANS-3.5-2009, Nuclear Power Plant Simulators for Use in Operator Training and Examination (Inquiry received 4/3/12)	At ballot with NFSC with due date of 7/1/13	ANS-21
(2) ANSI/ANS-18.1-1999 (W2009), Radioactive Source Term for Normal Operation of Light Water Reactors (Inquiry received 3/2/12)	Approved by NFSC; certified by SB; released	ANS-24
(3) ANSI/ANS-18.1-1999 (W2009), Radioactive Source Term for Normal Operation of Light Water Reactors (Inquiry received 4/6/12)	Approved by NFSC; certified by SB; released	ANS-24

IV. Activities on Delinquent Standards (8)

A. Maintenance of Delinquent Current Standards (8)	Status	SC
(1) ANSI/ANS-2.10-2003, Criteria for the Handling and Initial Evaluation of Records from Nuclear Power Plant Seismic Instrumentation	WG reformed under new chair (Fukushima-related)	ANS-21
(2) ANSI/ANS-55.4-1993 (R2007), Gaseous Radioactive Waste Processing Systems for LWR Plants	acquired new WG chair	ANS-22
(3)ANSI/ANS-55.6-1993 (R2007), Liquid Radioactive Waste Processing Systems for LWR Plants	acquired new WG chair	ANS-22
(4) ANSI/ANS-57.1-1992 (R2005), Design Requirements for Light Water Reactor Fuel Handling Systems	no WG Chair/WG (Fukushima-related)	ANS-27
(5) ANSI/ANS-57.5-1996 (R2006), Light Water Reactors Fuel Assembly Mechanical Design and Evaluation	no WGC/WG	ANS-22
(6) ANSI/ANS-57.10-1996 (R2006), Design Criteria for Consolidation of LWR Spent Fuel	no WGC/WG (Fukushima-related)	ANS-27
(7) ANSI/ANS-59.51-1997 (R2007), Fuel Oil Systems for Safety-Related Emergency Diesel Generators	no WGC/WG (Fukushima-related)	ANS-22
(8) ANSI/ANS-59.52-1998 (R2007), Lubricating Oil Systems for Safety-Related Emergency Diesel Generators	no WGC/WG (Fukushima-related)	ANS-22

NFSC Chairman Report to the Standards Board

June 8, 2013, Meeting ● Atlanta, Georgia

Future Plans

Sixteen (16) standards and standards projects have been identified as Fukushima-related by the NFSC Chairman and the ad hoc Committee that was established at the 2012 Annual Meeting. This committee is chaired by NFSC Vice-Chair, Bill Reuland and its charter is to develop recommendations regarding any additional future standards development activities in response to the NRC Near-Term Task Force (NTTF) Tier I, Tier II, and Tier III recommendations. This committee looked at the standards priorities that were assigned during the 2012 Winter Meeting and indicated no additional standards projects were needed at this time. Additional insight from NFSC members at this 2013 Annual Meeting will be discussed and a path forward defined. These standards and standards projects are being managed by 6 of the 8 NFSC SCs. They are:

(1) ANS-57.2, Design Requirements for Light Water Reactor Spent Fuel Facilities at Nuclear Power Plants	resolving comments (Fukushima-related)	ANS-27
(2) ANS-57.3, Design Requirements for New Fuel Storage Facilities at LWR Plants	resolving comments (Fukushima-related)	ANS-27
(3) ANS-2.2, Earthquake Instrumentation Criteria for Nuclear Power Plants (revision of ANSI/ANS-2.2-2002)	in development by WG (Fukushima-related)	ANS-25
(4) ANS-2.8, Determining External Flood Hazards for Nuclear Facilities (reinvigoration of historic standard ANSI/ANS-2.8-1992)	in development by WG (Fukushima-related)	ANS-25
(5) ANSI/ANS-2.10-2003, Criteria for the Handling and Initial Evaluation of Records from Nuclear Power Plant Seismic Instrumentation	WG reformed under new chair (Fukushima-related)	ANS-21
(6) ANS-2.30, Assessing Capability for Surface Faulting at Nuclear Facilities (new standard)	in development by WG (Fukushima-related)	ANS-25
(7) ANS-3.8.1, Criteria for Radiological Emergency Response Functions and Organizations for Nuclear Facilities (reinvigoration of historic standard ANSI/ANS-3.8.1-1995)	to be initiated after ANS-3.8.7 drafted (Fukushima-related)	ANS-26
(8) ANS-3.8.2, Criteria for Functional and Physical Characteristics of Radiological Emergency Response Facilities at Nuclear Facilities (reinvigoration of historic standard ANSI/ANS-3.8.2-1995)	to be initiated after ANS-3.8.7 drafted (Fukushima-related)	ANS-26
(9) ANS-3.8.3, Criteria for Radiological Emergency Response Plans and Implementing Procedures and Maintaining Emergency Response Capability for Nuclear Facilities (reinvigoration and consolidation of historic standards ANSI/ANS-3.8.3-1995 and ANSI/ANS-3.8.4-1995)	to be initiated after ANS-3.8.7 drafted (Fukushima-related)	ANS-26
(10) ANS-3.8.6, Criteria for the Conduct of Offsite Radiological Assessment for Emergency Response and Emergency Radiological Field Monitoring, Sampling and Analysis for Nuclear Facilities (reinvigoration and consolidation of historic standards ANSI/ANS-3.8.5-1992 and ANSI/ANS-3.8.6-1995)	to be initiated after ANS-3.8.7 drafted (Fukushima-related)	ANS-26
(11) ANS-3.8.7, Criteria for Planning, Development, Conduct, and Evaluation of Drills and Exercises for Emergency Preparedness at Nuclear Facilities (reinvigoration of historic standard ANSI/ANS-3.8.7-1998)	in development by WG (Fukushima-related)	ANS-26
(12) ANS-3.8.10, Criteria for Modeling Real-time Accidental Release Consequences at Nuclear Facilities (new standard)	in development by WG (Fukushima-related)	ANS-24

(13) ANSI/ANS-57.1-1992 (R2005), Design Requirements for Light Water Reactor Fuel Handling Systems	no WGC/WG (Fukushima-related)	ANS-27
(14) ANSI/ANS-57.10-1996 (R2006), Design Criteria for Consolidation of LWR Spent Fuel	no WGC/WG (Fukushima-related)	ANS-27
(15) ANSI/ANS-59.51-1997 (R2007), Fuel Oil Systems for Safety-Related Emergency Diesel Generators	no WGC/WG (Fukushima-related)	ANS-22
(16) ANSI/ANS-59.52-1998 (R2007), Lubricating Oil Systems for Safety-Related Emergency Diesel Generators	no WGC/WG (Fukushima-related)	ANS-22

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NRMCC Report to the ANS Standards Board
Atlanta Georgia
June 18, 2013

REPLY TO:

Charles H. Moseley, Jr

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This report is from the NRMCC Co Chair representing ANS. The other Co Chair represents ASME.

Risk Based Standards
The ASME Board on Nuclear Codes and Standards (BNCS) and American Nuclear Society (ANS) Standards Board mutually agreed in 2004 to form a Nuclear Risk Management Coordinating Committee (NRMCC). This committee was chartered to coordinate Standards activities related to probabilistic risk assessment (PRA) between the two Standards development organizations.

I serve as the ANS Co Chair; a new ASME Co Chair, Ralph Hill of Westinghouse, was named in 2012. The last meeting of the NRMCC was held by phone in February.

Discussions were successful between ASME and ANS and the new joint technical consensus committee, the Joint Committee on Nuclear Risk Management, met for the first time in February 2012 in St. Petersburg. They last met in Phoenix in February. This committee is proceeding to develop all the procedures necessary for governance. The next meeting is scheduled for Baltimore this fall. The Business Agreement between the two societies still has not been signed.

There is still great concern being raised within the Risk informed standards community on the impact of the March 11, 2011 Fukishima incident on the existing scope of standards development.

C. H. Moseley, Jr.

Charles H. Moseley, Jr
ANS Standards Board Member
ANS Co Chair NRMCC
ANS Nuclear Facilities Standards Committee Member
ANS 21- Reactor Standards Member
ANS 3.2 Member

As you can see from the title this has two elements:

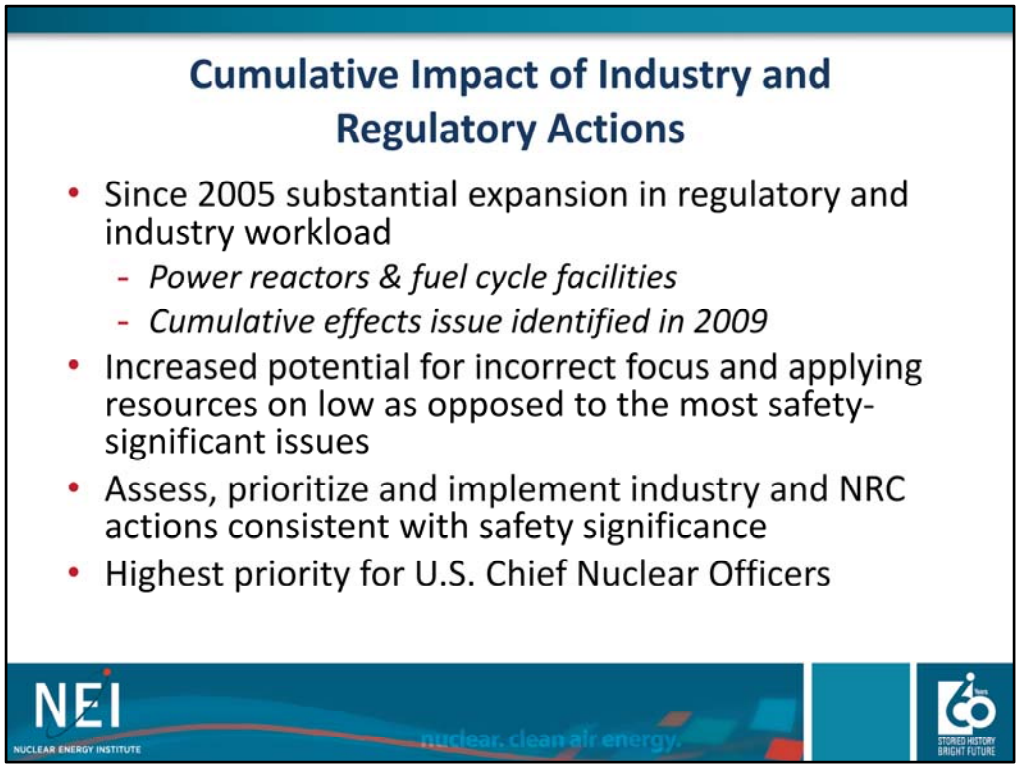
- Impact from industry actions
- Impact from regulatory actions

Cumulative Impact is not about not taking action

It's not about costs --

It's about ensuring management attention and resources (industry and NRC) are focused on the most important safety issues.

This issue is associated with power reactors and fuel cycle facilities.



This is not a new issue – it was identified by the industry and NRC in 2010 but work was suspended following Fukushima. Regulatory interactions restarted in May 2012.

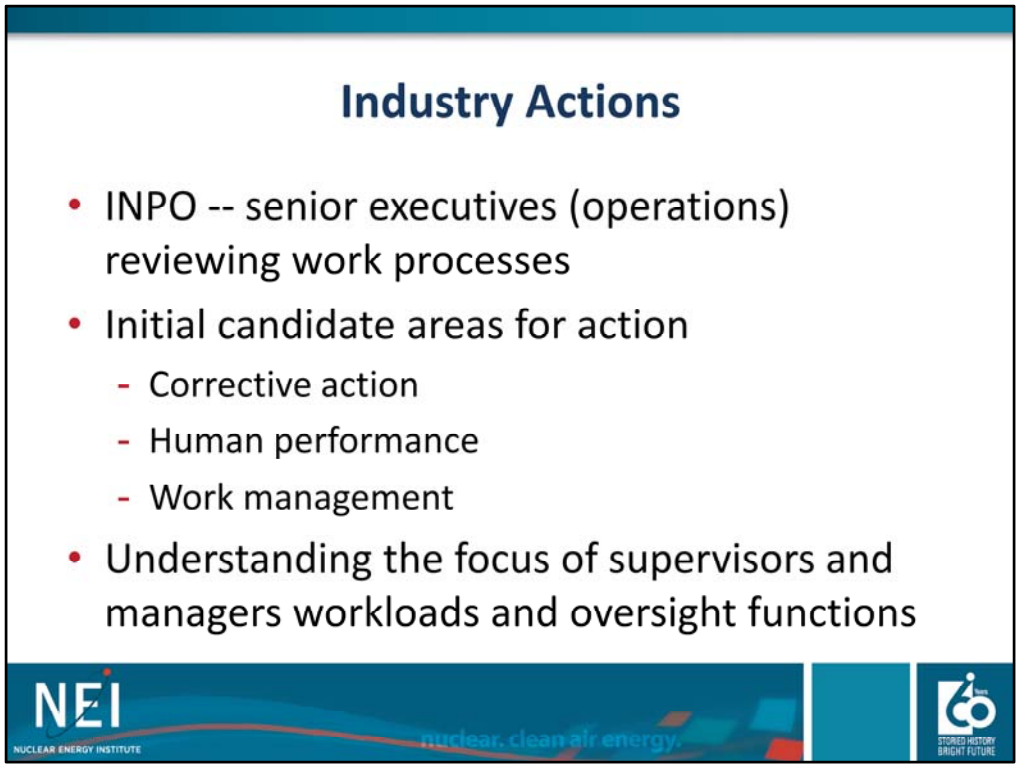
With the Fukushima workload, the issue is now more acute.

Resources are finite – and as the workload increases it is important that we continue to focus on the most safety-significant issues, especially continuing the high standard of safety and reliability performance that has been achieved in the US fleet plants

Need to ensure the focus of regulatory and industry actions is consistent with safety significance, the protection and reliability of critical equipment and the protection of the environment.

It is evident that some regulatory actions are not as safety significant as company or plant initiated improvements, Example RCP seal upgrades

In December 2012, the US Chief Nuclear Officers listed this issue as the most important activity for 2013



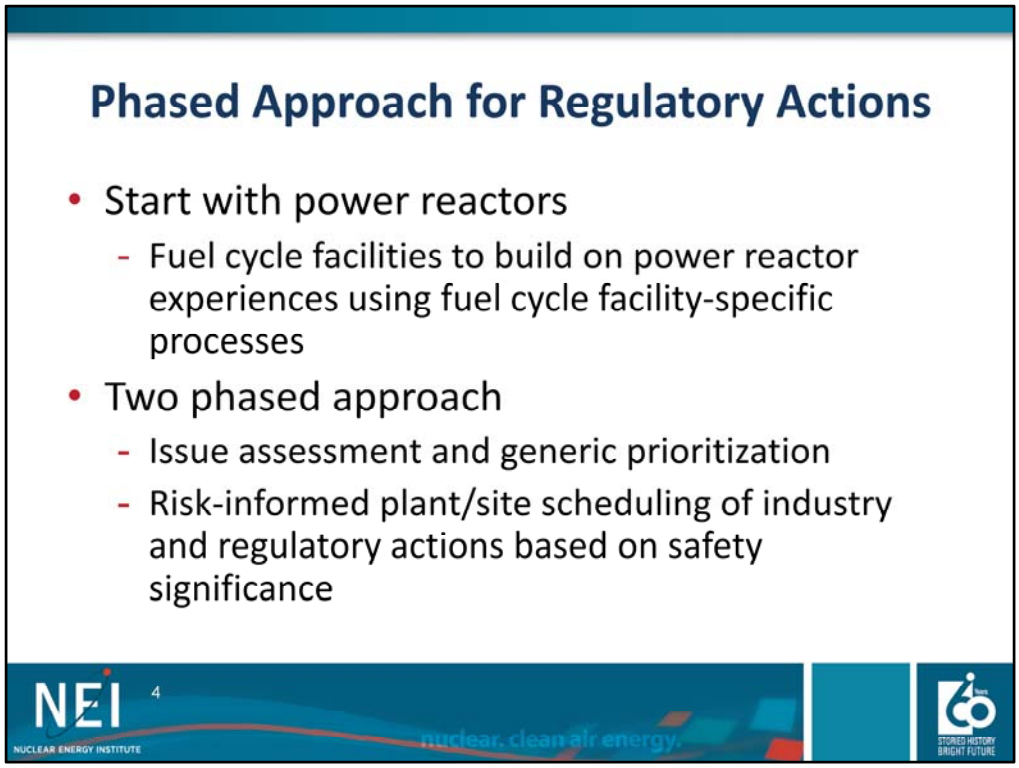
For the industry actions, INPO has the lead and is focused on the impact of industry's work processes and on ensuring that supervisors and managers are correctly applying their time to monitoring, mentoring and managing work to ensure we maintain our high safety standards.

INPO and senior industry executives have performed a review of plant and support activities and have identified three work processes to focus on as a first step.

Cap Example: We should not be processing minor deficiencies or deficiencies of low safety significance in the same way as those that have high safety significance.

We have found that first line supervisors and middle managers are spending too much time on administrative paperwork and in meetings rather than managing, monitoring and mentoring plant staff and work activities. – that needs to change

INPO, EPRI and NEI are also looking at their own processes with the aim of making them more efficient

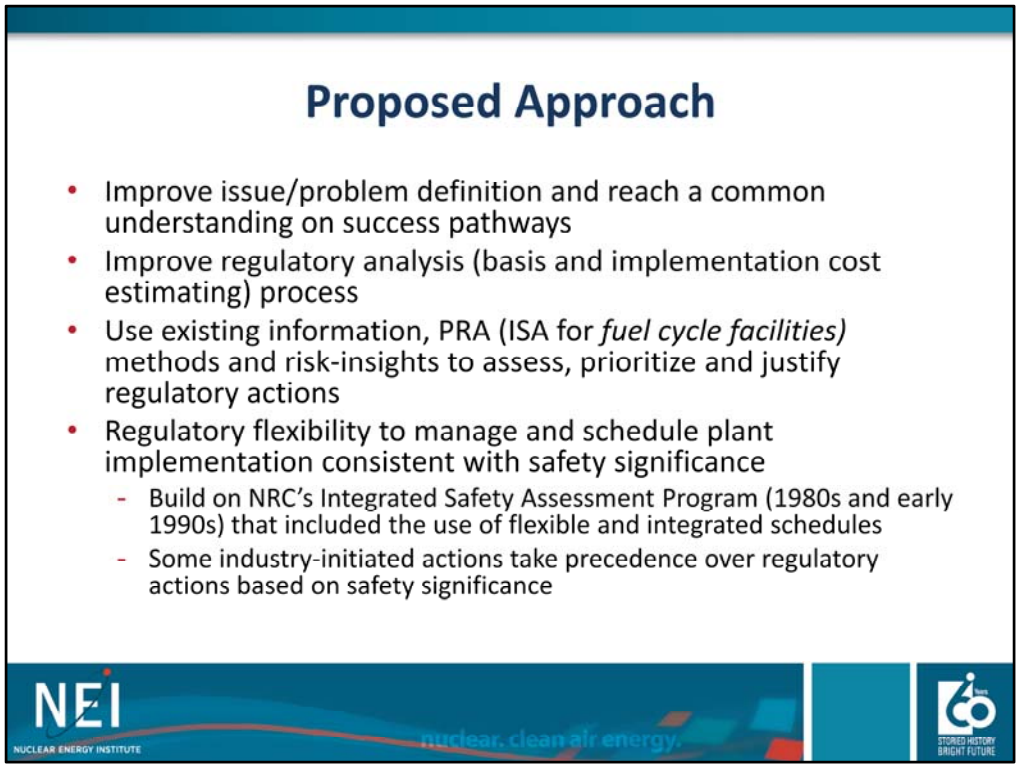


We believe a multi-phased approach – starting with power reactors and then the fuel cycle facilities can build on the experiences of the power reactor community is the optimum approach

Our preliminary thoughts are that there are two implementation phases

1. Assessment and generic prioritization of regulatory actions

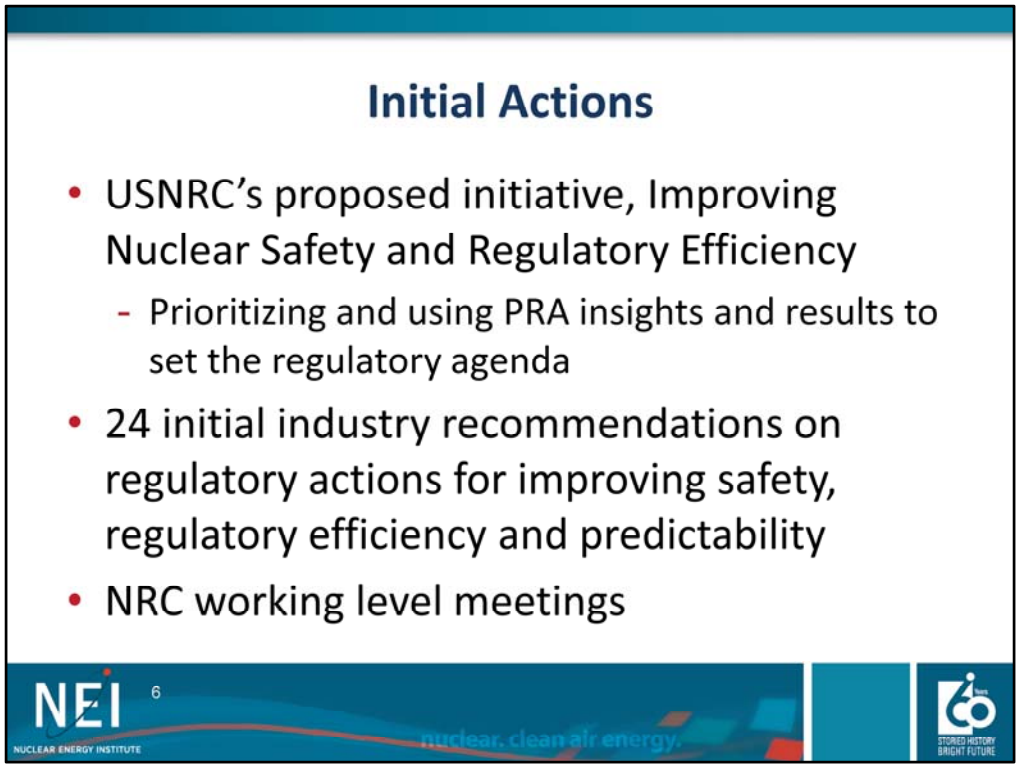
2. The development of integrated (industry and regulatory actions) schedules based on safety significance



The first phase includes three elements

- Reaching a common understanding on what the problem is – problem statement
- Developing accurate and realistic basis and implementation cost estimates. In recent years the NRC has significantly underestimated the cost of implementation, sometimes by a factor of 5 or more. This skews the US cost-benefit determinations which are integral to the USNRC's Safety Goal Policies.
- Determining the relative safety significance of the regulatory issue using insights from PRAs and by answering a series of risk-informed questions.

The Second phase is attaining the regulatory flexibility to manage and schedule work consistent with its safety significance no matter whether it is industry-initiated or regulatory initiated. We have identified a number of industry, company of plant actions that are more significant than regulatory requirements: such as RCP seal improvements compared with regulatory work hours and fatigue monitoring programs.

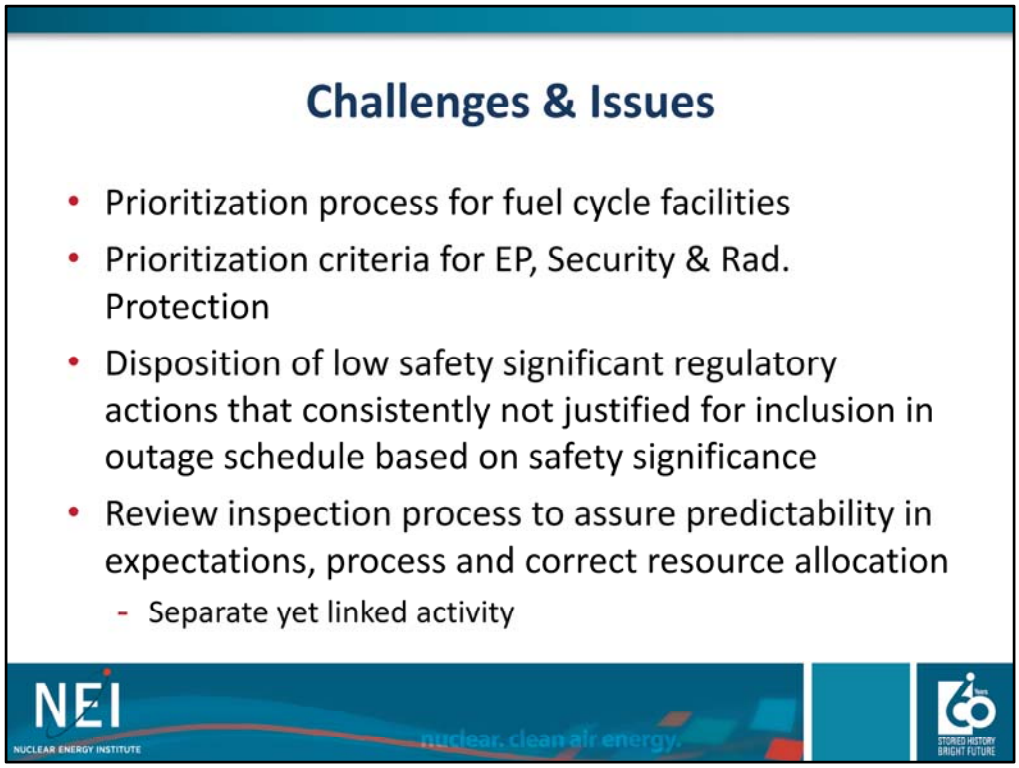


Actions are already being taken
The commission has proposed an initiative that would use PRA insights and analyses to prioritize regulatory actions and dictate regulatory requirements. The industry generally supports this initiative

Separately, the industry has recommended 24 actions that could be taken to improve safety, resource loading and regulatory efficiency and predictability. One third of these recommendations are to increase priority on resolving the issue and proceeding with implementation.

Regulatory interactions have started and there is a common understanding between NRC and industry management on the need for addressing cumulative impact and taking action to manage this facet going forward.

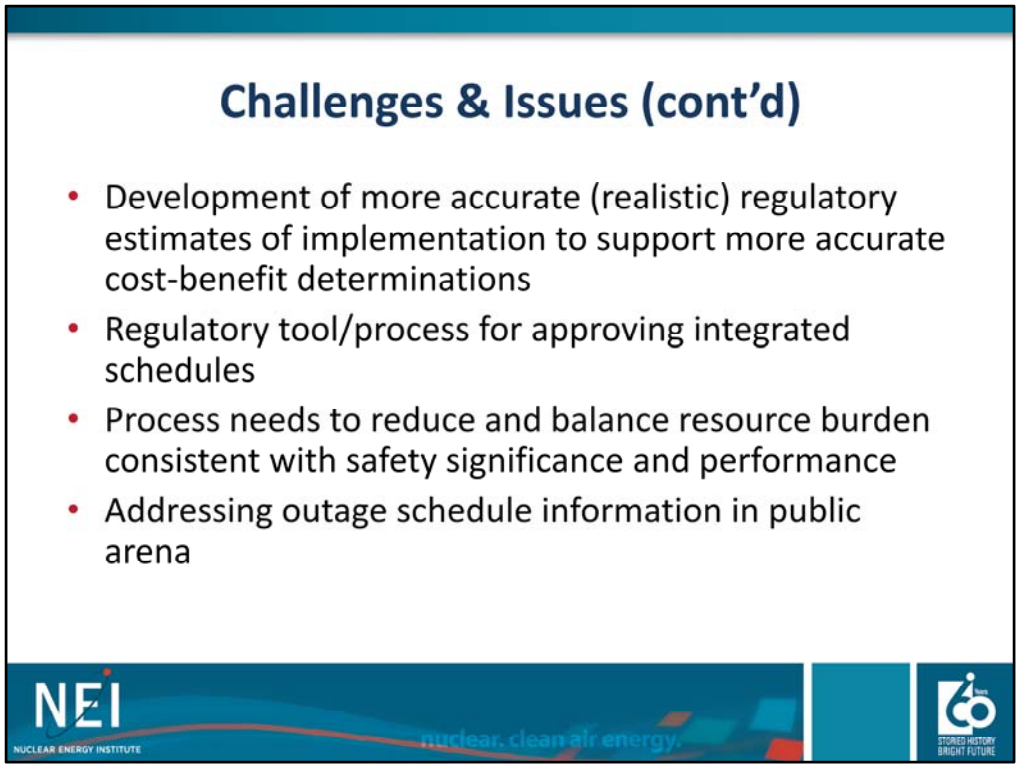
Now we get into the details and issues will surface.



We have been using risk-insights from PRAs as a prioritization tool in the power reactor community for a number of years , but the use of risk-insights from ISAs (Integrated Safety Assessments) has not been so prevalent in the fuel cycle community – we proposed to move forward with power reactors and use lessons learned to develop a prioritization process for fuel cycle facilities

Some activities are not directly amenable to risk-insights in the traditional sense: EP, Security and Rad Protection. We need to determine the metrics for prioritization

If a regulatory issue is of low safety significance and does not make the threshold for implementation for three outages – must it be implemented or reassessed?
There needs to be a review, reassess and reconcile element in prioritization
Inspections need to follow set guidance – if they do not the regulatory process becomes unstable – if there is an issue or concern there are well proven processes for the licensee and the inspector/agency to follow.
And we need to use the established procedures, where appropriate

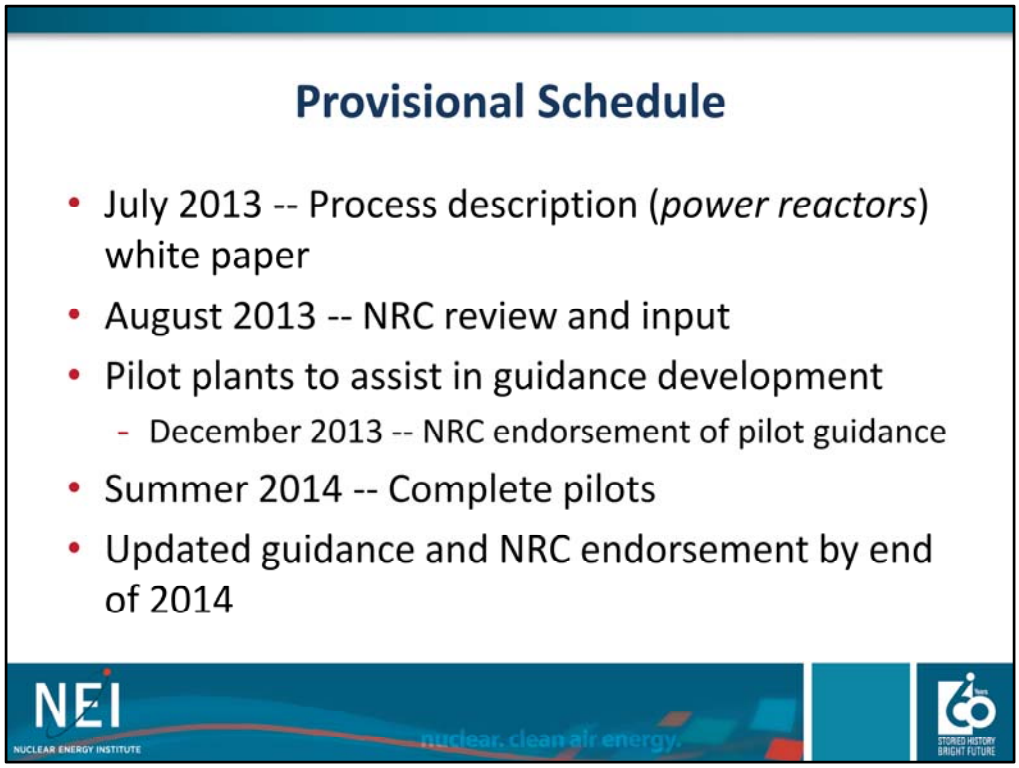


In recent years, the regulatory analyses have become less accurate and the basis more opaque. NRC staff needs to better understand what it takes to implement a regulatory action and the industry must be more effective in the details and manner in which they interact with the NRC staff on the regulatory analysis and basis. This means more upfront work before we get to finalize the action.

If we move forward with providing the regulatory flexibility to adjust schedules, we need to determine an effective and efficient process for the regulatory endorsement of the outage schedule.

The assessment and prioritization process should ease not add to the overall burden.

How do we address the outage schedules in a public arena – when we operate in a competitive market



Proposed schedule is aggressive – yet achievable.

ANS Standards Staff Report
June 2013

Improvements to the Online ANS Store

- Worked with ANS Building Services and Information Technology departments to create electronic versions of all ANS standards and post to the online ANS Store.
- Created "sneak peeks" for all standards available in the online ANS Store. ("Sneak peeks" provide customers access to the foreword and table of contents of a standard before purchasing.)
- The "sneak peeks" provide an opportunity for interested individuals to select the right standard for their need and increase internet search hits leading to greater sales.

Techstreet Added as Authorized Standards Distributor

- A royalty contract was signed with Techstreet granting them nonexclusive rights to sell ANS standards.
- ANS also has a nonexclusive contract with the Information Handling Services to provide electronic access to our standards on a subscription basis.
- The contract with Techstreet is believed to tap a different market and increase revenue from the sale of ANS standards.
- ANS continues to explore ways to increase standards sales.

***Nuclear Standards News* (*NSN*)**

- Subscriptions to *NSN* were offered to ANS members for the first time in 2013. Several members opted for the subscription.
- While revenue was not significant, there are no additional expenses associated with this program.

Standards Activities

- Received approval of 4 new and/or revised standards and 3reaffirmations in 2013.
- Published 1 standard year to date with the support of the Building Services Department.
- Four standards are in production with editors from the ANS Scientific Publications Department.
- Maintaining 76 current American National Standards.
- Issued responses to two inquiries on ANSI/ANS-18.1-1999 (withdrawn), "Radioactive Source Term for Normal Operation for Light Water Reactors."
- Five Project Initiation Notification Systems (PINS) forms were submitted to ANSI to announce the initiation of a new or revised standard in 2013.

ISO/TC 85/SC 6 Progress Report

- The ANS took over the role of secretary to the ISO Technical Committee 85 Subcommittee (SC) 6 effective January of 2013.
- Year to date five projects have been registered as active; one ballot has been issued to approve a proposed new international standards project.
- SC 6 will hold a meeting on Friday, June 14, and Saturday, June 15, preceding the ANS 2013 Annual Meeting in Atlanta at the Hyatt.

ANS Standards Staff Participation on Other Committees

- ANS staff supported remote meetings of the Nuclear Risk Management Coordinating Committee on February 21, and March 5, 2013.
- ANS staff attended the ANS/ASME Joint Committee on Nuclear Risk Management meetings February 26 – February 28, 2013, in Phoenix, Arizona.
- ANS staff attended the American National Standards Institute (ANSI) International Organization of Standardization (ISO) Forum meeting on May 29, 2013, in Chicago, Illinois.

Grant Activities

- The grant from the U.S. Nuclear Regulatory Commission (NRC) for work on probabilistic risk assessment standards effective through July 31, 2014, was suspected due to the sequestration.
- Additional grant opportunities will be explored once the sequestration is cancelled.

Standards Sales Report

October 16, 2012 - May 16, 2013

Designation & Title of Standard	# of Paper/ E-Copies Sold	Total
ANS-1-2000;R2007, Conduct of Critical Experiments	10 / 2	428.40
ANS-2.2-2002, Earthquake Instrumentation Criteria for Nuclear Power Plants	0 / 2	102.00
ANS-2.3-1983, Standard for Estimating Tornado and Extreme Wind Characteristics at Nuclear Power Plants	0 / 1	71.00
ANS-2.3-2011, Estimating Tornado, Hurricane and Extreme Straight Line Wind Characteristics at Nuclear Facility Sites	4 / 3	448.00
ANS-2.8-1992;W2002, Determining Design Basis Flooding at Power Reactor Sites	0 / 5	764.40
ANS-2.10-2003, Criteria for the Handling and Initial Evaluation of Records from Nuclear Power Plant Seismic Instrumentation	0 / 3	129.00
ANS-2.12-1978 (W1988), Guidelines for Combining Natural & External Man-Made Hazards at POW Reactor Sites	1	147.00
ANS-2.17-2010, Evaluation of Subsurface Radionuclide Transport at Commercial Nuclear Power Plants	0 / 1	112.50
ANS-2.21-2012, Criteria for Assessing Atmospheric Effects on the Ultimate Heat Sink	2 / 6	380.00
ANS-2.23-2002;R2009, Nuclear Plant Response to an Earthquake	1 / 0	117.00
ANS-2.26-2004;R2010, Categorization of Nuclear Facility Structures, Systems, and Components For Seismic Design	1 / 7	853.20
ANS-2.27-2008, Criteria for Investigations of Nuclear Facility Sites for Seismic Hazard Assessments	1 / 2	330.00
ANS-2.29-2008, Probabilistic Seismic Hazard Analysis	1 / 2	375.00
ANS-3.1-1993;R1999;W2009, Selection, Qualification Training of Personnel for Nuclear Power Plants	2 / 7	679.40
ANS-3.2-2006, Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants	1 / 0	118.80
ANS-3.2-2012, Managerial Administrative and Quality Assurance Controls for the Operational Phase of Nuclear Power Plants	1 / 3	433.20
ANS-3.5-1998;W2008, Nuclear Power Plant Simulators for Use in Operator Training and Examination	0 / 1	100.00
ANS-3.5-2009, Nuclear Power Plant Simulators for Use in Operator Training and Examination	3 / 7	1089.00
ANS-3.11-2005;R2010, Determining Meteorological Information at Nuclear Facilities	1 / 0	123.00
ANS-5.1-1994;W2004, Decay Heat Power in Light Water Reactors	0 / 2	276.00
ANS-5.1-2005, Decay Power in Light Water Reactors	1 / 6	966.00
ANS-5.4-2011, Method for Calculating the Fractional Release of Volatile Fission Products from Oxide Fuel	0 / 3	205.90
ANS-5.10-1998;R2006, Airborne Release Fractions at Non-Reactor Nuclear Facilities	0 / 1	120.00
ANS-6.1.1-1991;W2001, Neutron and Gamma-Ray Fluence-To-Dose Factors	1 / 1	93.00
ANS-6.1.2-R2009, Neutron and Gamma-Ray Cross Sections for Nuclear Radiation Protection, Calculations for Nuclear Power Plants	1 / 0	36.00
ANS-6.3.1-1987;R1998;R2007, Program for Testing Radiation Shields in Light Water Reactors (LWR)	1 / 1	142.00
ANS-6.4-2006, Nuclear Analysis and Design of Concrete Radiation Shielding for Nuclear Power Plants	1 / 1	378.00
ANS-6.4.2-2006, Specifications for Radiation Shielding Materials	1 / 0	71.00

Standards Sales Report

October 16, 2012 - May 16, 2013

Designation & Title of Standard	# of Paper/ E-Copies Sold	Total
ANS-6.4.3-1991;W2001, Gamma-Ray Attenuation Coefficients and Buildup Factors for Engineering Materials	1 / 0	212.00
ANS-6.6.1-1987;R1998;R2007, Calculation and Measurement Direct and Scattered Gamma Radiation from LWR Nuclear Power Plants	2 / 0	232.00
ANS/HPSSC-6.8.1-1981;W1992, Location and Design Criteria for Area Radiation Monitoring Systems for Light Water Nuclear Reactors	1	64.00
ANS-8.1-1998;R2007, Nuclear Criticality Safety in Operations with Fissionable Materials Outside Reactors	27 / 6	2803.60
ANS-8.3-1997;R2003;R2012, Criticality Accident Alarm Systems	0 / 2	176.70
ANS-8.7-1998:R2007, Guide for Nuclear Criticality Safety in the Storage of Fissile Materials	1 / 1	150.10
ANS-8.10-1983;R1988;R1999;R2005, Criteria for Nuclear Criticality Safety Controls	1 / 1	81.70
ANS-8.15-1981;R1987;R1995;R2005, Nuclear Criticality Control Spec Actinide	0 / 2	142.20
ANS-8.17-2004;R2009, Criticality Safety Criteria for the Handling, Storage, and Transportation of LWR Fuel Outside Reactors	1 / 6	292.40
ANS-8.19-2005, Administrative Practices for Nuclear Criticality Safety	20 / 3	824.40
ANS-8.20-1991;R1999;R2005, Nuclear Criticality Training	1 / 0	38.70
ANS-8.21-1995;R2001;R2011, Use of Fixed Neutron Absorbers in Nuclear Facilities Outside Reactors	0 / 2	86.00
ANS-8.23-2007;R2012, Nuclear Criticality Accident Emergency Planning and Response	0 / 2	205.20
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ANS-8.26-2007;R2012, Criticality Safety Engineer Training and Qualification Program	0 / 4	140.40
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ANS-14.1-2004;R2009, Operation of Fast Pulse Reactors	0 / 1	43.00
ANS-15.1-2007 (R2013), The Development of Technical Specifications for Research Reactors	1 / 1	163.40
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ANS-15.4-2007 (R2013), Selection and Training of Personnel for Research	3 / 2	320.00
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Standards Board (SB) Action Items

Status of Action Items are reported as OPEN until formally CLOSED at SB Meetings.

Action Item	Description	Responsibility	Status
11/12-01	Robert Budnitz and Prasad Kadambi to prepare a list of items to be defined in a MOU with the ASME. Due: January 2013	Robert Budnitz, Prasad Kadambi	OPEN
11/12-02	Steven Stamm along with Jim August and Prasad Kadambi to develop a list of areas needing ANS Executive Committee support for Hoffman w/solutions. Due: December 2012	Steven Stamm, Jim August, Prasad Kadambi	OPEN (done)
11/12-03	Robert Budnitz to temporarily serve as the WENRA liaison.	Robert Budnitz	On-going
11/12-04	Donald Spellman to begin development of one or more grants for ANS support. Due: January 2013	Donald Spellman	OPEN
11/12-05	Steven Stamm to incorporate Chuck Moseley's comments into the RPBPPC procedures and provided to Pat Schroeder to issue for approval of the Standards Board. Due: December 2012	Steven Stamm	OPEN (done)
11/12-06	Consensus committee chairs to appoint at least one representative to serve as a member of the RPBPPC. Due: January 2012	Robert Budnitz, Robert Busch, Carl Mazzola, Andrew Smetana	OPEN (done)
11/12-07	Donald Spellman to request that the SB Sales TG work with Corey McDaniels and the ANS International Committee to promote ANS standards internationally. Due: January 2013	Donald Spellman, SB Sales TG	OPEN
11/12-08	Donald Spellman to check with Mark Linn for status of the ANS-50.1 draft for preliminary review by Edward Wallace and Peter Hastings to help determine if applicable (or could be) to SMRs. Due: December 2012	Donald Spellman	OPEN
11/12-09	Carl Mazzola to provide the SB the NFSC DID white paper when Available. (Requires completion of NFSC action item.)	Carl Mazzola	OPEN
11/12-10	Edward Wallace to provide the SB a copy of his DID paper. Due: December 2012	Edward Wallace	OPEN (done)
11/12-11	Robert Budnitz and Carl Mazzola to exchange their consensus committees' reaffirmation/revision checklists when available.	Robert Budnitz, Carl Mazzola	OPEN
11/12-12	SB members to provide Jim August a list of standards deemed a priority for new construction. Due: April 2013	ALL Standards Board Members	OPEN
11/12-13	External Communication (EC) Task Group (TG) to add WENRA to the liaison list. Due: November 30, 2012	EC TG	OPEN (done)
11/12-14	Carl Mazzola to draft a response to the 11/6/12 NEI letter regarding the ISA standard (ANS-57.11). Due: December 2012	Carl Mazzola	OPEN (done)
11/12-15	Pat Schroeder to review archived SB minutes for statement from Jack Roe expressing NEI support for consensus standards.	Pat Schroeder	OPEN (done)

11/12-16	Jim August to prepare a white paper/business case on RAP for SB members to reconsider decision to hold off initiating standards on RAP. Due: June 2012	Jim August	OPEN (done)
11/12-17	Prasad Kadambi to prepare a business case for initiating an ANS conformity assessment program. Due: June 2012	Prasad Kadambi	OPEN
6/12-01	Ad hoc task group to 1) identify drivers for reorganization, 2) create a logical approach to apply those drivers to the ANS Standards Committee organization, 3) review organization with existing consensus committee chairs and address comments, and 4) provide evaluation to the SB how the proposed organizational changes improve the Standards Committee. Task group to provide an interim report to the SB one month before the November meeting and to provide a draft transition plan with impact. (Members include Jim August, Robert Budnitz, Carl Mazzola, Prasad Kadambi, Steven Stamm, James Mallay, and William Reuland – chair TBD) Due Date: November 2012	Jim August, Robert Budnitz, Carl Mazzola, Prasad Kadambi, Steven Stamm, James Mallay and William Reuland	OPEN (in works)
6/12-04	Donald Spellman to review the "Toolkit" for potential improvements as suggested by David Sachs. Due Date: June 2013	Donald Spellman	OPEN
6/12-09	Donald Spellman to follow up with William Bell on whether his company finds the need for standards to support SMRs. Due Date: June 2013	Donald Spellman	OPEN