American Nuclear Society (ANS)
STANDARDS BOARD (SB) Minutes
Hyatt Regency, Chicago, Illinois
June 26, 2012

Members Present:
Donald J. Spellman, *Standards Board Chair, Oak Ridge National Laboratory*
James K. August, *Standards Board Vice Chair, CORE, Inc.*
Robert J. Budnitz, *JCNRM Co-Chair*, *Lawrence Berkeley National Laboratory*
Robert D. Busch, *N16 Chair, University of New Mexico*
Calvin M. Hopper, *Observer, Individual*
Walter M. Justice, *Member at Large, Tennessee Valley Authority*
N. Prasad Kadambi, *ISO & ANSI Liaison, Individual*
James Mallay, *Observer, Individual*
Herbert W. Massie, *Member at Large, Defense Nuclear Facilities Safety Board*
Carl A. Mazzola, *NFSC Chair, Shaw Environmental, Inc.*
Caroline McAndrews, *Southern California Edison*
Charles H. (Chuck) Moseley, *Member at Large, Individual*
James Riley, *Liaison, Nuclear Energy Institute*
R. Michael Ruby, *Member at Large, Individual*
R. David Sachs, *Member at Large, Individual*
Andrew Smetana, *N17 Interim 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*

Members Absent:
William C. Gattoni, *Member at Large, Burns & Roe*
Peter S. Hastings, *Member at Large*, *Babcock & Wilcox*
Mathew M. Panicker, *Member at Large, U.S. Nuclear Regulatory Commission*

Guests:
Bruce Bevard, *Oak Ridge National Laboratory*
William Bell, *South Carolina Electric & Gas Co.*
Dimitrios Cokinos, *Brookhaven National Laboratory*
Rick Michal, *American Nuclear Society*
William Reuland, *Individual*
Nathalie Studer, *Western European Nuclear Regulators' Association* (*WENRA) Secretariat*
Hans Wanner, *WENRA Chairman*
*Abraham Weitzberg, *Individual*

*participated by phone

1. Welcome and Introductions
Chairman Donald Spellman called the meeting to order. He welcomed members and recognized guests. Introductions were made. Western European Nuclear Regulators' Association (WENRA) Chair, Hans Wanner, introduced himself and WENRA Secretariat Nathalie Studer. He explained that it was WENRA's goal to harmonize nuclear regulatory standards within Europe.

2. Approval of Agenda; Overview of Major Topics
Donald Spellman provided an overview of planned discussions. Robert Budnitz informed members that he would be calling for a motion to approve the creation of the ANS/American Society of Mechanical Engineers (ASME) Joint Committee on Nuclear Risk Management (JCNRM) and asking to dissolve the Risk Informed Consensus Committee (RISC) under his consensus committee report. The agenda was approved as presented.

3. Preliminary Discussion of Standards Committee Reorganization
Donald Spellman explained his interest for restructuring the Standards Committee. He noted that work with the Nuclear Energy Standards Coordinating Collaborative (NESCC) had put an emphasis on the amount of work needed on ANS standards. Additionally, the Nuclear Facilities Standards Committee (NFSC) had an extremely large number of standards to maintain. Carl Mazzola agreed that the workload of the NFSC was great, but at this point, he felt that it was manageable. He conceded that additional standards assigned under NFSC would make its management more difficult.

Spellman stated that there were a number of ways to align our standards; (1) regulatory-based; (2) technology-based; and, (3) risk-based. Prasad Kadambi explained why he felt it was necessary to reorganize the Standards Committee, that is, the collection of all the volunteers that serve ANS standards. He believed the first reason was that the existing structure was no longer workable. Each consensus body had developed its own culture and lacked cross-communication. Kadambi saw benefit to better align standards committees with the ANS Society's technical professional divisions and committees. He saw the possibility for ANS to lose its ability to produce what was necessary for our stakeholders. Kadambi added that the framework presented in NUREG-2150, "A Proposed Management Regulatory Framework," made a lot of sense and would be advantageous for ANS to follow. Kadambi saw restructuring as a strategic opportunity as he did not believe that the Standards Committee was in a position to meet future needs.

Spellman stated that he wanted a responsive committee positioned to support the needs of the industry. He agreed with many members that positioning the Standards Committee in alignment with any one stakeholder would not be appropriate, as standards are driven by a consensus process.

A second proposal divided standards into four new consensus committees while maintaining the JCNRM as the fifth committee. The proposal included the following:

1) Reactor and Nuclear Facilities Consensus Committee,
2) Operational Analysis and Criticality Safety Consensus Committee,
3) Nuclear Environmental Consensus Committee
4) Risk Applications Consensus Committee, and
5) JCNRM.

William Reuland suggested that a business plan be prepared to show how the proposed reorganization kept us in business. Robert Budnitz questioned what problems we currently had that a new organization would fix. Is the current organization able to maintain and develop standards, respond to inquiries, develop revisions of historical standards, communicate effectively? If not, why? If it is because of the structure, he would understand a reorganization. At this time, Budnitz believed we had no definitive reason, and any effort to reorganize was premature. Several members also expressed opinions that questioned the benefit of a reorganization. Robert Busch noted that he felt the perception that the N16 Committee did not communicate with other consensus committees was not correct. The following motion was made:

MOTION:

An ad hoc task group be established with the charter 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,
4) provide evaluation to the SB on how the proposed organizational changes would improve the Standards Committee,

The motion was amended for the ad hoc task group to provide an interim report to the SB one month before the November 2012 meeting and to provide a draft transition plan with impact.

The amended motion was approved unanimously.

Jim August, Robert Budnitz, Carl Mazzola, Prasad Kadambi, Steven Stamm, James Mallay, and William Reuland were appointed to the ad hoc task group with the chair to be determined by the task group.

Action Item 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 on how the proposed organizational changes would 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)

Spellman recognized the amount of work required of SB members and expressed his appreciation. He explained that he really needed support from all to be successful.

4. Discussion with Hans Wanner, Chairman of WENRA and Director General of the Swiss Federal Nuclear Safety Inspectorate (Attachment A)

WENRA Chairman Hans Wanner provided a presentation to the SB available as Attachment A to these minutes. He explained that WENRA was an association of the heads of nuclear regulatory authorities of the European Union with nuclear power plants and other countries that are interested in nuclear applications. They were committed to the improvement of safety through a common approach and harmonization across the Union. Chairman Wanner reviewed the scope and purpose for WENRA working groups. When questioned, Chairman Wanner confirmed that each country funded its own work, but they were in the process of establishing a central secretariat. WENRA was very active in International Atomic Energy Agency (IAEA), and there was much exchange, but was not involved with the International Organization of Standardization (ISO).

Steven Stamm stated that he invited WENRA Chairman Hans Wanner to present at the SB to determine if continued communication was needed. Chairman Wanner believed that there was an interest to exchange information to see how each other standards compare. He recommended that a representative be appointed to attend the next meeting of both organizations. The next WENRA meeting was scheduled for the end of October 2012 in Paris, France. Chairman Wanner mentioned that WENRA had a list of safety references that were of interest to the SB.

Action Item 6/12-02: Pat Schroeder to request a copy of WENRA safety references for distribution to the SB.

5. Standards Service Award

Chuck Moseley stated that he had the pleasure of serving as chair of the Standards Service Award Ad hoc Committee for 2012. He reminded members that no award was presented in 2011 for lack of nominations with sufficient detail. Moseley informed members that Elizabeth Johnson was selected by the ad hoc committee for

the award in recognition of her contributions to the ANS-8-series standards, the ANS-1 standard for conduct of critical experiments and dissemination of associated data, and as founding member and secretary of the N16 Consensus Committee and Subcommittee ANS-8 for a quarter of a century. SB members concurred with the selection. Moseley stated that the ad hoc committee had a second selection for the award, that being Pat Schroeder, for her service as standards administrator in recognition of exemplary service to the ANS Standards Committee since 2004. The SB concurred with the second nomination as well. Being in attendance, Schroeder could not have been more shocked, but yet appreciative of the recognition.

6. Current Topics

A. SB Task Group (TG) Reports

i. Sales TG

Steven Stamm explained that the Sales TG was established to increase standards sales within two years. He referred members to the Sales TG action plan (Attachment B). Stamm suggested that the consensus committees be tasked with providing information on ANS standards that were, should, and could be referenced and that he would be drafting a letter to the Chair of each consensus committee.

Action Item 6/12-03: Steven Stamm to draft a letter to consensus committee chairs to provide the following information in order to increase the number of standards referenced by the U.S. Nuclear Regulatory Commission (NRC), IAEA, international regulators, U.S. Department of Energy, and other standards development organizations (SDOs):

a) Create a listing of standards currently referenced
b) Create a list of standards that should / could be referenced but are not

David Sachs provided an update on his action items with the TG (Attachment C). He evaluated standards and provided recommendations for clarity and consistency. Sachs stated that he was neutral on a decision. Members were in agreement that user-friendly format changes to ANS standards suggested by Sachs should be considered. As much of the format was directed by documents in the "Toolkit," SB Chair Spellman agreed to perform a review.

Action Item 6/12-04: Donald Spellman to review the "Toolkit" for potential improvements as suggested by David Sachs.

The Sales TG was also concerned with the loss of revenue due to unauthorized distribution of standards and was working with the ANS Information Technology (IT) and Building Services departments to find a solution. A more comprehensive notification list for information on standards activities would be developed with input from consensus committees and subcommittees. The TG suggested engaging college students in nuclear programs as a long-range plan to increase future sales. The ANS IT Department was acceptable to creating a database to support an e-notice system providing standards updates.

Members looked at the changes to the Project Initiation Notification System (PINS) form proposed by the Sales TG to acquire key words for the proposed standard. With well-thought key words identified, they would be used to increase internet hits. The TG recommended that ANS track standards purchasers and use in a targeted sales approach. The TG would also be looking at the pricing of standards to make sure they were competitively priced. Finally, the Sales TG recommended development of a method to expedite the development of standards to capitalize on industry need.

Stamm reported that he had met with the ANS Membership Committee which approved his proposed addition to the annual membership forms to allow ANS members to identify standards of interest. He also met with the

Education Committee for a discussion on increasing the access to standard in colleges and universities and suggested further effort in this area including contacting universities with nuclear programs and consideration of volume discounts for students for standards used as part of a curriculum. Members of the Education Committee indicated that it would be useful to have a training overview on ANS standards. Additionally, Stamm met with the International Committee and obtained concurrence to enlist the support of its members to increase the spread of ANS standards information internationally.

ii. Policy TG
Donald Spellman noted that the restructuring of the ANS Standards Committee previously discussed should stand as the Policy TG report.

iii. Priority TG
Jim August reported that the Priority TG was working with the NESCC to move forward with the top priorities across all SDOs. He welcomed suggestions from the members for standards that need to be revised or developed.

iv. External Communications TG
In the absence of a chair, Caroline McAndrews noted that progress was reported at the last SB teleconference. They had not had additional communication. Members expressed difficulty organizing without a chair. Herbert Massie volunteered to chair the External Communications TG.

v. Internal Communications TG (previously Information Technology TG)
Spellman explained that he revised the scope of this TG to include internal communication. William Turkowski summarized the work of the TG. After research, members found a few non-cost sites that could be utilized. While not perfect, "anymeeting.com" was easy to use and provided the needed online document editing for working groups. Other non-cost options were recognized for hosting teleconferences, document libraries, and discussion. The TG would explore the possibility of completing the web-based membership database.

Action Item 6/12-05: Internal Communications TG to request that the web-based online standards membership database be completed.

A recommendation was made for the TG to develop a presentation for ANS members (committees/divisions). Past presentations would be provided to the TG as reference.

Action Item 6/12-06: Pat Schroeder to send Internal Communications TG previous presentations on ANS standards for reference.

Action Item 6/12-07: Internal Communications TG to develop presentation on standards for ANS members.

B. Preliminary Discussion of ANS Response to Current Nuclear Incidents

i. Discussion of Approach to Beyond Design Basis Event (BDBE) Inclusion
This topic was briefly discussed under 6.B.iii.a and subsequently under the NESCC report 8.C.

ii. Implementation of Recent Incidents into ANS Standards
This topic was briefly discussed under 7.D.

iii. Incorporation of ANS Effort with NESCC

a. Congressional Lobbying

Spellman reported that a brief meeting was held the previous day with Craig Piercy about lobbying for funding. He explained that Piercy recommended that a brief statement be prepared to address a specific standard of great priority that ANS was uniquely qualified to develop. With success of the first standard, the next step would be to go back and ask for more funding. Targeting a standard on small modular reactors (SMRs) and defense in depth (DID) were discussed with Piercy. Spellman reported that Prasad Kadambi was tasked to prepare a statement defining the need for a standard on DID and why ANS was in the best position to develop it. Once prepared, the statement will be used by the NFSC to plan an approach to developing a DID voluntary consensus standard.

Action Item 6/12-08: Prasad Kadambi to prepare a statement defining the need for a standard on DID.

b. Priority list
The standards priority list was discussed briefly under the Priority TG, Item 6.A.iii.

c. Discussion of Impact of SMR Program on National Standards
Spellman introduced Bruce Bevard, a fellow staff member at the Oak Ridge National Laboratory (ORNL). Bevard stated that he had been working since 2005 with the NRC on SMRs. He prefaced his presentation (Attachment D) that it was his opinion and not necessarily the view point of the NRC or ORNL. Bevard explained that there were some struggles on what needed to be done. Members noted that the industry had a difference of opinion on whether standards should precede NRC regulations or if NRC regulations should fuel standards development.

Bevard explained that there were a number of areas identified that standards were not up to speed. It was recognized that vendors may have different approaches. He felt that ANS needed to be ahead of the curve in developing standards to support SMRs and recommended that they be risk informed to be consistent with industry trend. Robert Budnitz reported that he was the point person on a research project to review regulatory documents on civil seismic structural engineering that could support SMRs. He expected that his review would find areas where standards were needed.

Carl Mazzola questioned whether vendors had been contacted about their need for standards. Bevard explained that as a subcontractor, contacting vendors was outside the scope of his work. Several SB members had heard that vendors were making due with existing standards. Budnitz expressed his opinion that a standard specifically for SMRs would probably be beneficial. William Bell explained he was heavily involved with SMRs within his organization, South Carolina Electric & Gas, and had not heard of anyone calling for new standards. Bell offered to check with his company on potential needs they saw for standards to support SMRs and report back to the SB.

Action Item 6/12-09: Donald Spellman to follow up with William Bell on whether his company finds the need for standards to support SMRs.

7. Consensus Committee Chair Reports

A. JCNRM (Committee Report – Attachment E)
Robert Budnitz addressed the committee. He explained that the JCNRM was functioning well. He recognized that the procedures and business agreement in development did not prohibit the functioning of the committee. Budnitz reported that Addendum B of joint standard ANSI/ASME/ANS RA-S-2008, "Standard for Level 1/Large Early Release Frequency Probabilistic Risk Assessment for Nuclear Power Plant Applications," was approved. He expected that in the next year, five standards would be issued for ballot. The low power and shutdown standard was close to being reissued. Both the Level 2 and Level 3 probabilistic risk assessment (PRA) draft standards had been issued for ballot and received many comments. A PRA standard for advanced light water reactors (ALWRs) was anticipated to be issued in the fall. The PRA standard for non-LWR power reactors would take a little longer. Budnitz stated that the JCNRM had great participation from both ANS and ASME. As noted earlier, Budnitz

provided the SB a prepared motion to clarify the status of JCNRM in one central location. The motion was seconded for discussion. After discussion the motion was amended as follows:

MOTION:

NOTE: This motion is intended to clarify a series of ANS SB positions, some of which the JCNRM co-chair believes are currently ambiguous. The motion is framed as a series of SB affirmations.

1) THE SB AFFIRMS THAT the former ANS RISC has effectively ceased operations. It has disbanded.

2) THE SB AFFIRMS THAT the successor to the ANS RISC is the joint ANS-ASME JCNRM.

3) THE SB AFFIRMS THAT the JCNRM has assumed the on-going ANS standards actions and responsibilities that were previously the responsibility of the ANS RISC. This includes the JCNRM's assuming responsibility for the three on-going new standards development projects with currently active PINS forms that have formerly been the responsibility of the ANS RISC. This affirmation also means that the JCNRM is now one of the consensus committees reporting to the ANS SB.

4) THE SB AFFIRMS THAT the JCNRM's "Rules and Operating Procedures," as approved by the ANS SB in an earlier action, are the effective governing rules for the JCNRM. The SB notes that, as set down in these "Rules and Operating Procedures" themselves, they can be amended only by approval of both the ANS SB and the corresponding ASME board, the ASME Board on Nuclear Codes and Standards (BNCS).

5) THE SB AFFIRMS THAT it has designated Robert Budnitz as the ANS co-chair of the JCNRM. It recognizes that C. Richard Grantom is ASME's designated co-chair of the JCNRM.

6) THE SB AFFIRMS THAT, although the SB can appoint an ANS vice chair for the JCNRM, this position is now vacant. It recognizes that Pamela Nelson is ASME's designated vice chair of the JCNRM.

7) THE SB AFFIRMS THAT the initial membership of the JCNRM consists of the merged membership lists of the former ANS RISC and the former ASME Committee on Nuclear Risk Management.

8) Negotiations between ANS and ASME about a "financial and business agreement" governing the JCNRM are under way but have not yet been concluded. This agreement, when consummated, will govern how the ANS and ASME staff support for the JCNRM is to be deployed and will also establish how the costs, revenues, and risks arising from JCNRM activities are to be shared between ANS and ASME. THE SB AFFIRMS THAT the ongoing staff-support and financial operations of the JCNRM, which are now occurring under an interim arrangement, are satisfactory to the ANS SB, as a short-term interim measure, even in the absence of a final "financial and business agreement" with ASME.

9) However, the SB AFFIRMS THAT its long-standing position remains, namely that no new standards actions are to be completed by the JCNRM until the final "financial and business agreement" is in place. In any event, the JCNRM "Rules and Operating Procedure" requires ANS SB and ASME BNCS approval of new standards actions.

The motion was approved unanimously, as amended.

B. N16 (Committee Report – Attachment F)
N16 Chair Robert Busch referred members to the N16 written report. He asked for the 2011 Standards Committee Report of Annual Activities to be amended to recognize that the N16 held a meeting last November in D.C.

Action Item 6/12-10: Pat Schroeder to correct 2011 Standards Committee Report of Activities to recognize that the N16 Committee met at the 2011 ANS Winter Meeting in Washington D.C.

C. N17 (Committee Report – Attachment G)
Andrew Smetana noted that a report of N17 activities was provided with the meeting materials and directed members to the report for the committee's progress. He explained that as interim chair he had not assessed the committee's needs. Smetana stated that he would talk to N17 Chair Tawfik Raby as soon as feasible to get his insight.

D. NFSC (Committee Report – Attachment H & NRC Order Impact on NFSC Report – Attachment I)
Carl Mazzola stated that he was asked to provide a report to the SB on three recent NRC orders in response to Fukushima lessons learned and their impact on NFSC standards. He explained that the NFSC held a lengthy discussion the previous day regarding the effects of the orders and whether these orders would drive the need for new standards or the revision of existing standards. Mazzola reported that it was the sentiment of the NFSC to proceed cautiously at least for now. NFSC members were also concerned about the amount of resources required to write or rewrite standards for beyond design basis events (BDBEs); or whether BDBE's should even be addressed in its standards.

There was general agreement by SB members that the regulatory environment was fluid. Walter Justice explained what he classified as three categories – 1) design basis, 2) beyond design basis, and a new 3) extended design basis which was a wave higher than you designed for. The new classification posed yet another level to determine how to design or write standards to.

8. Liaison Reports

A. American National Standards Institute (ANSI)
Prasad Kadambi reported as the ANSI liaison. He explained that much discussion was going on within ANSI regarding conformity assessment. The Europeans are much more affected by balancing performance and conformity standards. He expected that ANSI would play more of a role in working with the SDOs through NESCC, but nuclear technology was a small portion of their business. He explained that ANSI was not an advocate for specific technology. What they do depends on the initiative by the industry. Donald Spellman questioned members on their interest in supporting ISO Technical Committee 85 Subcommittee 6. While members expressed interest, most felt that limited resources had a negative effect on their ability to participate.

B. Institute of Electrical and Electronics Engineers (IEEE)
Spellman reported that he has had minimal communication with IEEE but that he was not aware of any new standards projects being initiated.

C. NESCC Report
Jim August reiterated that he was working on a priority list for the NESCC. He had received input from IEEE and would need to incorporate and determine the appropriate priority. Members recommended that ANSI/ANS-58.11-1995 (R2002), "Design Criteria for Safe Shutdown Following Selected Design Basis Events in Light Water Reactors," be included on the priority list. Carl Mazzola requested that a copy of the priority list be provided to William Reuland who chairs an important ad hoc committee on standards development in response to Japan Near-Term Task Force recommendations and the subsequent NRC orders.

Action Item 6/12-11: Jim August to provide NESCC priority list to William Reuland once completed.

August stated that the original goal of NESCC was to support new plants, but the focus has been adjusted to existing plants. Moreover, the upcoming July 17, 2012, NESCC meeting would concentrate on SMRs.

D. Nuclear Risk Management Coordination Committee (NRMCC) Report
NRMCC Co-Chair Chuck Moseley provided the committee a written report available as Attachment J.

9. Other Business

A. Staff/Secretary's Report, Sales Report, Standards Reports
Pat Schroeder referred members to the reports provided with the meeting materials. The reports are provided as Attachments K, L, M, N and O.

B. Outstanding Action Items
With the creation of Action Item 6/12-09 for Donald Spellman to follow up with William Bell on standards to support SMRs, Action Item 11/10-05 to identify one or more SMR-related standards was closed. Open action items were reviewed and closed, if completed. A new action item was opened for the selection of the 2013 Standards Service Award recipient.

Action Item 6/12-12: Chuck Moseley, Steven Stamm, and Michael Ruby to serve as the 2013 Standard Service Award Ad hoc Committee.

10. New Business
Jim August informed members that he was heading a proposed new standard ANS-3.13, "Nuclear Plant Reliability Assurance Program (RAP) Development Guidance for Design, Construction and Operations," to simplify and streamline the process. He asked members to consider supporting the standard. Spellman questioned whether the SB would want to take on a reliability assurance program or a conformity assessment program. Spellman expressed concern about taking on additional work in addition to the current workload.

The following motion was made:

MOTION:

> The SB recommends that the decision be deferred on both a reliability assurance program and conformity assessment program.

The motion was approved with one abstention.

11. Adjourn
The meeting was adjourned at 5:20 p.m.

American Nuclear Society
Standards Board Action Items

Action Item	Description	Responsibility	Status
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
6/12-02	Pat Schroeder to request a copy of WENRA safety references for distribution to the SB. Due Date: July 2012	Pat Schroeder	OPEN
6/12-03	Steven Stamm to draft a letter to consensus committee chairs to provide the following information in order to increase the number of standards referenced by the U.S. Nuclear Regulatory Commission (NRC), IAEA, international regulators, U.S. Department of Energy, and other standards development organizations (SDOs): a) Create a listing of standards currently referenced b) Create a list of standards that should / could be referenced but are not Due Date: November 2012	Steven Stamm	OPEN
6/12-04	Donald Spellman to review the "Toolkit" for potential improvements as suggested by David Sachs. Due Date: November 2012	Donald Spellman	OPEN
6/12-05	Internal Communications TG to request that the web-based online standards membership database be completed. Due Date: November 2012	Robert Busch, Walter Justice, Michael Ruby, William Turkowski	OPEN
6/12-06	Pat Schroeder to send Internal Communications TG previous presentations on ANS standards for reference. Due Date: July 2012	Pat Schroeder	OPEN
6/12-07	Internal Communications TG to prepare presentation on standards for ANS members. Due Date: November 2012	Robert Busch, Walter Justice, Michael Ruby, William Turkowski	OPEN
6/12-08	Prasad Kadambi to prepare a statement defining the need for a standard on DID. Due Date: November 2012	Prasad Kadambi	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: November 2012	Donald Spellman	OPEN
6/12-10	Pat Schroeder to correct 2011 Standards Committee Report of Activities to recognize that the N16 Committee met at the 2011 ANS Winter Meeting in Washington D.C.	Pat Schroeder	OPEN

	Due Date: July 2012		
6/12-11	Jim August to provide NESCC priority list to William Reuland once completed. Due Date: November 2012	Jim August	OPEN
6/12-12	Chuck Moseley, Steven Stamm, Michael Ruby to serve as the 2013 Standard Service Award Ad hoc Committee. Due Date: June 2013	Chuck Moseley, Steven Stamm, Michael Ruby	OPEN
11/11-01	Donald Spellman to reassign Carl Mazzola to the Communications Task Group. Due Date: November 2011	Donald Spellman	CLOSED
11/11-02	Task groups to prepare a scope for proposed group activities and goals for the next six months to be promulgated prior to and discussed at the January/February telecon. Due Date: February 2012	SB Task Groups	CLOSED
11/11-03	Donald Spellman to prepare a letter to Mike Wright expressing the Standards Committee's appreciation of his participation. Due Date: December 2011	Donald Spellman	CLOSED
11/11-04	Donald Spellman to prepare a letter to Richard Black expressing the Standards Committee's appreciation of his support. Due Date: December 2011	Donald Spellman	CLOSED
11/11-05	Consensus committee chairs and subcommittee chairs (if desired) to provide input to the SB Policy Task Group related to the proposed restructuring. Due Date: January 2012	Consensus Committee Chairs	CLOSED
6/11-03	Steve Stamm, Chuck Moseley, and Michael Ruby to serve as the 2012 Standards Service Award Ad hoc Committee.	Steve Stamm, Chuck Moseley, Mike Ruby	CLOSED
11/10-05	Peter Hastings to establish one or more SMR-related standards to be identified at a subsequent conference call and directed to the appropriate consensus committee for development.	Peter Hastings	CLOSED
06/10-09	Policy Task Group ~~Donald Spellman~~ to define what international participation is desired. Due Date: November 2012	Policy Task Group	OPEN

Attachment A

WENRA
General Presentation

American Nuclear Society Annual Meeting, ANS Standards Board
Chicago, 26 June 2012
Hans Wanner, WENRA Chairman

Contents
American Nuclear Society Annual Meeting Chicago, 24 – 28 June 2012

01
WENRA

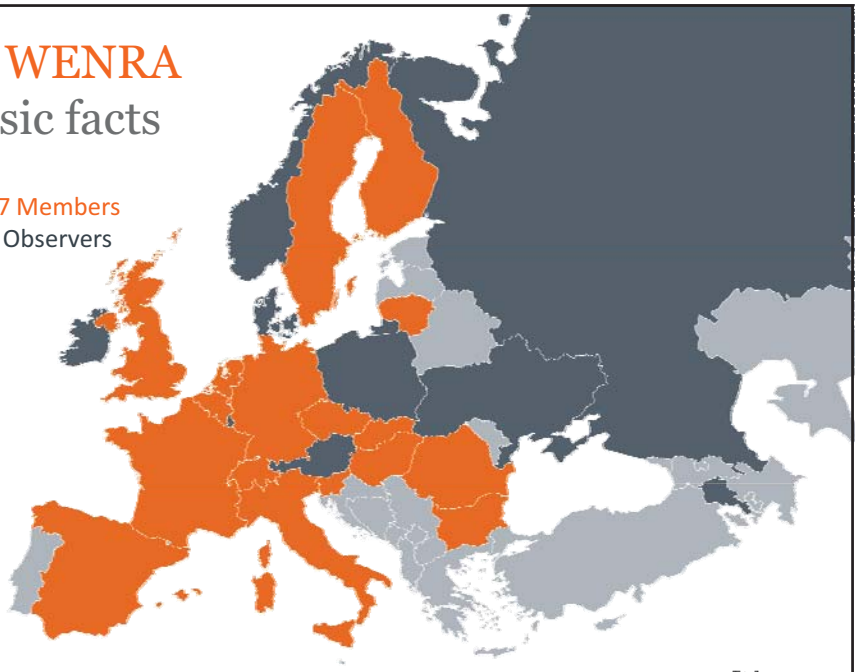
01 WENRA
Basic facts

- Association of the heads of Nuclear Regulatory Authorities of the EU countries with NPPs & Switzerland
- Original Terms of Reference signed 04 February 1999

www.wenra.org

01 WENRA
Basic facts

- 17 Members
- 9 Observers



01 WENRA
Policy Statements

- Commitment to continuous improvement of nuclear safety
- Safety is the responsibility of the operator
- Common approach to nuclear safety

02
Working Groups

02 Working Groups

RHWG Reactor Harmonization Working Group

WGWD Working Group on Waste and Decommissioning

WIG WENRA Inspection Group (mandate fulfilled)

Ad-hoc Working Groups

02 Working Groups
RHWG

Originally
Harmonization of requirements for existing reactors

2008
- Safety objectives for „new reactors“
- Position papers on several safety issues (e.g. airplane crash)

2011 Stress Tests contents definitions
New task – resulting from the stress tests

Creation of 5 sub-working groups
- Mutual Assistance
- Natural Hazards
- Containment in severe Accident
- Accident Management
- Periodic safety review

→ Update of SRLs

02 Working Groups
WGWD

Originally
Harmonization of requirements in the field of radioactive waste and spent fuel storage, and decommissionning

2008
SRLs for Radioactive Waste Disposal Facilities

02 Working Groups
RHWG SRLs

Methodology

Formulation of Safety Reference Levels (SRLs)
Use of IAEA safety standards & good national practices

Self-assessment
National assessment of SRLs implementation

Benchmarking
Common validation of national self-assessments

Review of SRLs
Based on benchmarking experience & comments of stakeholders

Development of National Action Plans
For modifiction of national legal systems and practices according to benchmarking results

Monitoring of implementation
Experience feedback on update of regulations
Ensuring non-divergence of interpretations

02 Working Groups
RHWG SRLs

Issues

A	Safety Policy
B	Operating Organisation
C	Management System
D	Training and Authorization of NPP staff
E	Design Basis Envelope for Existing Reactors
F	Design Extension of Existing Reactors
G	Safety Classification of Structures, Systems and Components
H	Operational Limits and Conditions
I	Ageing Management
J	System for Investigation of Events and Operational Experience Feedback
K	Maintenance, In-service inspection and Functional Testing
LM	Emergency Operating Procedures and Severe Accident Management Guidelines
N	Contents and updating of Safety Analysis Report
O	Probabilistic Safety Analysis
P	Periodic Safety Reviews
Q	Plant Modifications
R	On-site Emergency Prepardness
S	Protection against Internal Fires

02 Working Groups
WGWD Disposal SRLs

Safety Area	Safety Issue
Safety Management	Responsibility
	Organizational structure
	Management System
Site characterization and disposal facility development	General Requirements
	Site characterization
	Design
	Information gathering and monitoring
	Construction
	Operation
	Record and knowledge keeping
	Decommissioning and closure of disposal facility
	Post-closure phase and release from regulatory control
Waste acceptance	Derivation of waste acceptance criteria
	Revision of waste acceptance criteria
Safety verification	Scope and content of safety case
	Operational and post-closure safety assessment
	Periodic safety review (PSR)

02 Working Groups
RHWG SRLs Example

O: Probabilistic Safety Analysis (PSA)
Scope and content of PSA

	WENRA SRLs	IAEA NS-G-1.2, Para 4.
1.1	For each plant design, a specific PSA shall be developed for levels 1 and 2, including all modes of operation, all relevant initiating events and hazards, including internal fire, internal flooding, severe weather conditions and seismic events.	Level 1 PSA has now been carried out for most NPPs worldwide. However, in recent years, the emerging standard is for level 2 PSA to be carried out for many types of nuclear power plants.

WENRA

RHWG
REACTOR HARMONISATION WORKING GROUP

WGWD
WORKING GROUP ON WASTE AND DECOMISSIONING

WIG
WENRA INSPECTION GROUP

Thank you…

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Attachment B

ANS Standards Board Sales Task Group (STG)
Action Plan – 6/5/2012

ITEM	RESP.	DUE DATE	STATUS
1) Review the Mattson Report for items to increase standards sales and provide report on results including any additional recommendations(STG)	R.D.Sachs	5/1/12	Review Complete - recommendation to SB on 6/26/2012
2) Increase the number of standards referenced by NRC, IAEA, International Regulators, DOE and other Standards Organizations. (ANS SB) a) Create listing of standards that are currently referenced b) Create listing of standards already referenced c) Create a listing of those standards that should be referenced but are not d) Meet with the above organizations to negotiate approaches for referencing ANS standards e) Improve standards Board interface with International standards clients	SB / Subcommittees		Approach to be discussed with SB on 6/26/2012
3) Evaluate standards to assess whether they are too complex or too high level. (ANS SB) a) Develop criteria and recommendations b) Review Criteria and recommendations with ANS SB (including a Ballot review) c) Modify Standards Policies and procedures to incorporate approved recommendations	R.D.Sachs R.D.Sachs R.D.Sachs SB	 5/1/12 6/26/12	 Complete For SB discussion

ITEM	RESP.	DUE DATE	STATUS
4) Prevention of Unauthorized Distribution of Standards	W.Gattoni		
a) Perform online investigation of distribution control options	W.Gattoni	6/1/12	Preliminary investigations have included discussions with IHS, ANSI and ASTM. As of this time we have not identified economically attractive approaches to control unauthorized distribution. ANS Building services and IT are evaluating possible options.
b) Contact other electronic publishers to collect information on their approaches to restricting distribution	W.Gattoni	6/1/12	
c) Review potential approaches with ANS IT department and assess potential solutions and costs of electronic document security measures (Pat Schroeder)	W.Gattoni	6/1/12	
d) Evaluate options to increase the sensitivity of standards purchasers to unauthorized redistribution of standards			
i) Review current standard wording related to this issue	W.Gattoni	6/1/12	
ii) Develop wording to be used for online sales agreement acceptance by standards purchasers	W.Gattoni	6/1/12	
e) Implement on-line control system(s) (ANS HQ)	ANS IT	12/1/12	

ITEM	RESP.	DUE DATE	STATUS
5) Develop plan and approach for creating more comprehensive targeted notification list. (STG)	S.Stamm		Completed 3/31/12- not received
a) Request all standards subcommittees to identify list of interested users for each ANS standard.	S.Stamm	5/1/12	
b) Request potential national and international standards clients to identify specific contacts in their organizations for each area of ANS standards	S.Stamm	7/1/12	Not Started
c) Add link to ANS standards website to allow users to add themselves to be on distribution for updates and events related to specific nuclear standards.			
i) Recommend specific website changes	S.Stamm	5/1/12	Complete
ii) Obtain Membership Committee approval	S.Stamm	6/24/12	Planned discussion 6/24/12
iii) Implement changes & Tie to online membership renewal	ANS IT	7/1/12	9/1/12 (For 2013 renewals)
d) Revise PINS forms to identify specific prospective buyers			
i) Develop PINS form recommendations	S.Stamm	5/1/12	Complete
ii) Present recommendations to SB	S.Stamm	6/26/12	6/26 SB discussion
iii) Revise PINS form	P.Schroeder	8/1/13	
e) Instruct WGs to provide an updated list of potential buyers when the standard is published	S.Stamm	6/1/12	Complete; need responses
f) Specify database requirements	S.Stamm	6/1/12	Complete
g) Develop database integrated into ANS IMS	ANS IT	12/1/12	ANS IT suggests a list-serve type approach

ITEM	RESP.	DUE DATE	STATUS
6) ANS develop approach to track standards purchasers so there is sufficient information to track standard sales by purchaser classifications and such that the sales information can be used in a targeted sales approach.	S.Stamm		
a) Develop proposed report content and format	S.Stamm	5/1/12	Complete
b) Develop initial report	ANS IT/ Pub.	7/1/12	For presentation at 6/26 mtg
c) Review initial report and identify any needed changes	S.Stamm	9/1/12	
d) Implement changes and develop report	ANS IT	12/1/12	
7) Re-look at an expedited standards process (ANS SB)	W.Gattoni		
a) Discuss present expediting recommendations with Mike Ruby	W.Gattoni	5/1/12	Complete
b) Joint process walkthrough with Mike Ruby to assess additional options	W.Gattoni	6/30/12	Discuss in or before Chicago
c) Issue recommendations to ANS SB	W.Gattoni	9/1/12	

ITEM	RESP.	DUE DATE	STATUS
8) Put together a plan to increase ANS standards internet search hits as well as establish links from key sites such as Wikipedia (ANS HQ)			
a) Add standards summaries to and key words to ANS Website			
i) Memo request to ANS Subcommittees	S.Stamm	5/1/12	Complete – no response
ii) Add to ANS website	S.Stamm	9/1/12	Use of keywords to organize standards searches would accomplish this goal
b) Wikipedia			
i) Develop guideline and specific recommendations for initial recommendation for Wikipedia inputs	W.Gattoni	6/24/12	Discuss with ANS SB and BOD
ii) Provide direction to subcommittees	ANS SB	8/1/12	
c) Implement program to count ANS standards website hits	Stamm/ANS IT	7/1/12	ANS IT has implemented Gooole program to track website hits. Initial result to be presented on 6/26.
d) Assess NRC, NEI, INPO and ANS sites for meaningful standards links	W.Gattoni	9/1/12	Recommendations developed and concept reviewed with ANS Advertising and Publications
i) Contact organizations and provide recommendations	ANS SB	12/1/12	
e) Identify other potential sites to provide links	R.D.Sachs	12/1/12	Done
i) Contact recommended sites and negotiate links	R.D.Sachs	3/1/13	

ITEM	RESP.	DUE DATE	STATUS
9) ANS Standards Website a) Review Website steps for purchasing a standard and information collected and provide specific recommendations for website improvements b) Implement recommended changes	D.Sachs ANS IT	3/15/12 8/1/12	Recommendation provided ANS IT has added links from the Standards drop-down to purchase, will add a standard purchase section to the ANS Home page, and will check standards purchase process to eliminate any incorrect paths that do not allow a smooth continuation of the purchase process. Advisories on Purchase options, purchase security, and standards use limitations are to be added at the beginning of the Standards purchase page. Also being pursued are use of personal checks and direct checking account electronic payments.

ITEM	RESP.	DUE DATE	STATUS
10) Increased University and DOE Sales	S.Stamm		
a) Meet with ANS education committee to discuss the incorporation of ANS standards into course curricula	S.Stamm	6/25/12	Meeting with Education Comm. on 6/25
b) Develop Standards workshop plan to continue to have standards related workshops at national and international nuclear meetings	S.Stamm	6/1/12	Open
c) Work with DOE to develop Standards workshop plan to continue to have standards related workshops at DOE seminars	S.Stamm	7/1/12	Planned for discussion in Chicago
d) Develop Standards training materials that can be used by training companies, University and nuclear companies to indoctrinate their personnel on ANS Standards.			
e) Evaluate discount plans that would allow universities/ students to utilize ANS Standards for their courses. (May require implementation of distribution controls)			
11) Make Standards available in eBook format			Contingent on development of unauthorized distribution controls
12) An Assessment should be performed to determine what standards the industry needs. (Proposed by Jim August)			For discussion at SB
13) An assessment should be performed to ascertain if ANS Standards are price appropriately. (Proposed by Mike Ruby) The Nuclear Energy Standards Coordination Collaborative (NESCC) may be useful in this area. The NESCC is a joint initiative of the American National Standards Institute and the National Institute for Standards and Technology (NIST) to identify and respond to the current needs of the nuclear industry.			For discussion at SB

Recommendations to Improve the ANS Standards, Sales Task Group (STG), Tasks 3) a) and b)

TO: STG

By: R David Sachs, PE

Date: March 21, 2012 (Wednesday)

Revision #: 0

a) Exact statement of the problem.

3) Evaluate standards to assess whether they are too complex or too high level. (ANS SB)
   a) Develop criteria and recommendations
   b) Review Criteria and recommendations with ANS SB (including a Ballot review)
   c) Modify Standards Policies and procedures to incorporate approved recommendations (SB)

Immediately Below are Some Objective Observations of the ANS Standards

1) . Some of the ANS standards could be simplified.

2) . Some ANS standards do not number their equations, even when they are only used once.

3) . Some ANS standards are obviously trying to impress their readers with the authors knowledge and/or their physical work location

Below are my Recommendations to Hopefully Improve the ANS Standards.

1. Task 3), a)

As far as I am concerned good technical writing, including engineering standards, should have the following attributes:

a. Have an acronym and/or glossary list, hopefully near the beginning of the report [or standard].

b. Easy to read. Use the KISS principal, that is, Keep it Simple Stupid.

c. Used to inform, and NOT try to impress the readers with the author(s) knowledge and/or their physical location.

d. Concise.

e. Somewhat enjoyable to read.

f. All equations should be numbered, near the right margin, and all of the equation components should be clearly spelled out. For example, the following F = ma should be represented by the following, using SI [metric] units,

"F = ma 1)"

where,

F is the force, N, or Newtons ($kg.m/s^2$)
m is the mass, kilograms (kg)
a is the acceleration, m/s^2 "

g. Should have good technical references [old and new] to back up what is in the body of the report. I prefer that references be placed near the back of the report [or standard].

h. All references should be sequentially numbered in the report body, and the corresponding reference list should be one to one sequentially numbered. That is, reference [1] in the report body would be reference number [1] in the reference list, and so on.

i. Use figures and/or engineering drawings to clearly explain some technical narrative. All figures should be numbered in sequential order.

j. Figures referenced in the standard should be placed as close and after, to where they are referenced. Thus, for example, if "Fig. 3" is referenced on page 9 of the standard, then I prefer to see the figure on page 10 [or 9 if room allows]. I do not like referencing "Fig. 3" in the body of the report, and the actual "Figure 3." resides in some obscure appendix – ridiculous?

k. A list of figures, with their corresponding page numbers, is highly recommended. This list should be placed near the beginning of the report [standard]. In my experience this list is placed immediately behind the CONTENTS [or sometimes called Table of Contents], and *before* the list of appendices.

l. The report should have the report authors mentioned somewhere in the report, and my preference is on the first page, or at least near the first page of the report. Place authors in the body of the page, and use the same font for the authors, as the rest of the information on that page. .

m. The report date should be near the front of the report.

n. Detailed calculation examples should be placed in appendices, and clearly referenced in the report body.

o. Page numbers should be immediately obvious. So, I prefer to have the page numbers in the bottom center of the page – see immediately below on this page.

p. I would like to see the ANS standard alphanumeric number repeated on all of the pages of the standard. This could be accomplished using some combination of top/bottom left/right headers. WHY, because when the standard is printed out then scattered pages can be reassembled correctly. This is especially true when more than one hardcopy standard is being viewed simultaneously. On one Architect and Engineering (A&E) criticality engineering contract that I was working on, we were viewed many of the ANS 8.X [nuclear criticality safety standards] hardcopy standards, on top of a table. Sometimes, when reassembling the standards, we would inadvertently mix up pages from different standards. This can be disconcerting, and frustrating, especially when you are in a hurry.

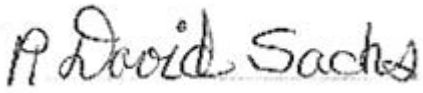
q. Footnotes should only be used for further and immediate clarification of a subject occurring in the present page.

r. Other suggestions are welcome

2. Task 3), b)

Apparently, I presume that the final and approved Sales Task Group (STG) version of the above attributes, would then be sent out by ballot to be voted on by all of the of the ANS standards members? So, I have gone about as far as I can go on this task.

R David Sachs



Attachment D

Thoughts for ANS Standards Committee

Impact of SMRs on National Standards

Bruce Bevard, bevardbb@ornl.gov

Reactor and Nuclear Systems Division
June 2012

U.S. DEPARTMENT OF ENERGY

OAK RIDGE NATIONAL LABORATORY
MANAGED BY UT-BATTELLE FOR THE DEPARTMENT OF ENERGY

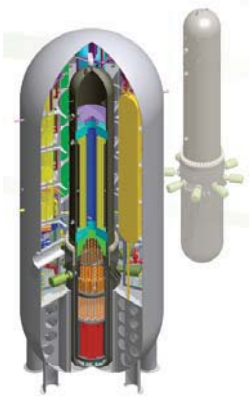
National Standards Bodies are Faced with the Classic "Chicken and the Egg" Dilemma

- How do you write standards until the NRC or other cognizant organization provides the needed input
  - Standards bodies can not "get out in front" but must support and respond to identified needs
- NRC has not reconciled their positions on key issues
  - Draft documents exist, but the positions may change before final acceptance

NuScale SMR

Good News - NRC and Industry Are Successfully Moving Forward Using Existing Standards

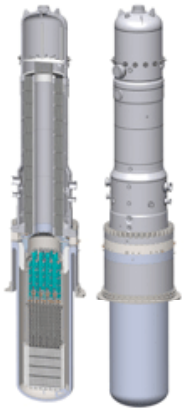
- ANS standards are sufficient – but do not always clearly address some key issues
- NRC guidance is sometimes dated – but is being updated to reflect the current design issues
  - Design Specific Review Standards are being developed for mPower and NuScale
  - Out of date Reg Guides are identified during this process
  - Pre-application design reviews are identifying potential issue early



Westinghouse SMR

SMRs – and New Nuclear Facilities in General – Face Several Important Issues That ANS Can Support

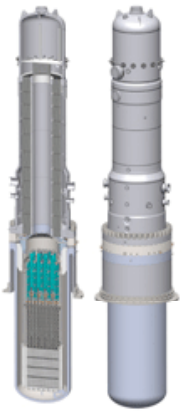
- Modularity of Construction
- Manufacturing License vs. Fabrication Facility License (whole nuclear island is factory constructed)
- Staffing; Siting; EPZ; Control Room; Security;
- Source Term (actual vs potential)
- Risk Informing Standards
  - NUREG 2150 has the recent NRC thoughts
  - Regulatory Treatment of Non-Safety Systems (RTNSS)
  - Incorporate 10CFR50.69 or similar criteria
- Fabrication – how to manage QA & QC given tight spaces in SMRs; how to manage ITAAC



mPower SMR

SMRs – and New Nuclear Facilities in General – Face Several Important Issues That ANS Can Support

- Update accidents to be analyzed (may not be the same for SMRs as for large NPPs – need PRA inputs)
- Inspectability of constructed SMRs
  - Very tight clearances between equipment and containments; limited access
- ISI and IST
  - requirements may be different from existing plants
- Fukushima Response
  - the need for consensus standards that can be used to meet these requirements that are not "Voluntary Industry Standards"
- White Paper on benefits of partially/fully embedded SMR. What does it "buy" seismically (pro's and con's of seismic isolation designs) and what are the flooding considerations.



mPower SMR

RTNSS covers risk-significant non-safety-related equipment

- Backs up the passive safety-related equipment by providing active systems for defense-in-depth that would be used for normal shutdown and for post-72 hour recovery operations following a DBA once ac electrical power is restored.
  - RTNSS is PRA based, but is not addressed in a consistent manner in the GEN III+ reviews
  - In current DSRS documents, NRC is using 4 SSC categories: Safety related and risk significant; safety related, non-risk significant; non-safety related and risk significant; and non-safety related and non-risk significant

HI-SMUR

Summary

- ANS has a window of opportunity to update and/or develop standards on issues that are in the forefront of SMR licensing and deployment
  - Time is of the essence if the standards are to be used for the first licenses and new builds
  - Unfortunately, the issues aren't all well defined
- Leadership is needed
  - NRC, NEI, utilities, other stakeholders can't take the lead – but all would participate and provide the valuable input needed to successfully develop consensus standards
  - Some of the changes may be by other Standards Orgs
    - Reflect unique design issues (helical S/G)
    - ½ height fuel – storage and transportation issues

Attachment E

JCNRM Chairman's Report to the Standards Board
June 26, 2012, Meeting ● Chicago, Illinois

Standards in Development

[This list includes only those standards under development by the JCNRM which began under ANS-RISC before the ANS-ASME merger. Two others being developed under JCNRM began under ASME before the merger, and are not covered here. These two cover PRA methodology for advanced LWRs in the design and construction phase, and PRA methodology for non-LWR power reactors.]

ANS-58.22-201x, "Low Power Shutdown PRA Methodology"

- Working group is led by Don Wakefield, underway since 1999.
- An earlier ballot resulted in substantive changes.
- A reballot closed in October 2008, and resulted in 674 committee comments and 116 public comments.
- Comment responses and a revised draft were issued to RISC in November 2009. Since then, considerable additional work has been done to improve the draft.
- Whether this standard will be balloted for release under the TUPA policy ("Trial Use and Pilot Applications") remains uncertain at this time, but this is the likely approach.
- The working group continues to work on resolving comments and expects to meet in the next few months to finalize the draft for a readiness review; recirculation ballot to be issued by the JCNRM shortly after.

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 Mark Leonard, underway since 2005.
- A draft was issued to RISC & ASME CNRM for preliminary review in January 2010.
- Comments were provided to the working group for consideration in May 2010.
- This standard will almost certainly be released for ballot under the TUPA policy.
- A ballot was issued in December of 2011
- Ballot closed in May of 2012with significant comments; the working group has scheduled a meeting at ANS July 12 – July 14, 2012, to begin resolving comments.
- The realistic schedule for completing comment resolution is that the standard will be ready for another ballot no sooner than several months thereafter. This next ballot will be done under the JCNRM.

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.
- Draft issued to RISC & ASME CNRM for preliminary review in October 2009.
- Comments were provided to the working group for consideration in February 2010, and the NRC comments were made available in April 2010.
- Draft issued for TUPA ballot to RISC & CNRM; ballot closed March 2011.
- The working group has held multiple meetings to resolve comments from the 2011 ballot; the most recent being June 12-14, 2012, at ANS.
- Unsure whether this standard will be issued under the TUPA Policy. Will be resolved when the next ballot occurs. This next ballot will be done under the JCNRM.

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 involves developing a “Rules and Operating Procedure” and a new structure for the joint committee. The structure consists of three subcommittees and a series of about ten writing groups, project teams, and working groups. After two years of work, this organizational aspect has been completed. The two societies’ Boards approved the “Rules and Operating Procedure” in final form about a half year 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 e 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. Their two memberships have been merged to form the membership of the new JCNRM, and each of the subsidiary writing groups, working groups, and project teams has come under the JCNRM. The JCNRM “secretariat” is under ASME, although ANS (Pat Schroeder) continues to play an important role to support the JCNRM.

The JCNRM “business” aspect in 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 more than a year during which they had not advanced at all due to ASME’s not having been ready to negotiate. 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 former two societies’ former roles remains as an impediment.

Standards Inquiries and Delinquent Standards

The JCNRM has not received any standards inquiries and does not have any delinquent standards in need of maintenance.

Future Plans

The JCNRM’s Executive Committee has been meeting regularly 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 fall 2014. This next version, which we will call a ”new edition” instead of a “revision”, 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. During this use, many areas have been identified where inconsistencies exist between different parts of the large PRA standard, some due to variable interpretations and some due to problems or errors that 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 a few dozen volunteers.

The JCNRM has also embarked on an evaluation as to whether it should begin the development of a new standard for PRA to evaluate the risk from spent fuel pools. A decision on this will be debated by the JCNRM in the next half year or so.

Finally, the JCNRM Executive Committee is evaluating the mix of expertise on the main committee, which after the merger consists of about 35, ten of whom were members of both ANS-RISC and ASME-CNRM beforehand. It is clear that the “mix” is not optimal to undertake some of the work coming up, and therefore efforts are under way to identify some possible new members and to encourage roll-off of some existing members.

Attachment F

N16 Chairman's Report to the Standards Board
June 26, 2012, Meeting ● Chicago, Illinois

PINS in Development (1)

- ANS-8.22, "Nuclear Criticality Safety Based on Limiting and Controlling Moderators" (revision of ANSI/ANS-8.22-1997 (R2006))

PINS in Approval Process/Resolving Comments (1)

- ANS-8.29, "Nuclear Criticality Safety in Fuel Reprocessing Facilities" (new standard)

Standards in Development – Approved PINS (9)

- ANS-8.1, "Nuclear Criticality Safety in Operations With Fissionable Materials Outside Reactors" (revision of ANSI/ANS-8.1-1998 (R2007))
- 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-8.19, "Administrative Practices for Nuclear Criticality Safety" (revision of ANSI/ANS-8.19-2005)
- 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 Approved by N16 (2)

- ANSI/ANS-8.3-1997 (R2003) (R201x), "Criticality Accident Alarm System" (reaffirmation to be processed to allow sufficient time for completion of revision – Letter ballot with the SB for certification)

Reaffirmations Approved by ANSI

- ANSI/ANS-8.14-2004 (R2011), "Use of Soluble Neutron Absorbers in Nuclear Facilities Outside Reactors"
- ANSI/ANS-8.22-1997 (R2011), "Nuclear Criticality Safety Based on L imiting and Controlling Moderators"
- ANSI/ANS-8.23-2007 (R2012), "Nuclear Criticality Accident Emergency Planning and Response"
- ANSI/ANS-8.24-2007 (R2012), "Validation of Neutron Transport Methods for Nuclear Criticality Safety Calculations"
- ANSI/ANS-8.26-2007 (R2012), "Criticality Safety Engineer Training and Qualification Program"

Responses to Inquiries (completed: 1 / in development: 1)

An inquiry was received 5/9/11 on ANSI/ANS-8.3-1997 (R2003), “Criticality Accident Alarm System Inquiry.” The response was approved and sent to the inquirer 2/13/12.

Another inquiry was received 1/11/12 on ANSI/ANS-8.3-1997 (R2003), “Criticality Accident Alarm System Inquiry.” A response was drafted and is with the ANS-8 Subcommittee for approval.

Delinquent Standards – 5+ Years Since ANSI Approval (4)

- 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 initiated)
- ANSI/ANS-8.20-1991 (R2005), “Nuclear Criticality Safety Training” (revision initiated)

Future Plans

At the present time, we are putting most of our energies into revising the basic criticality standard, ANS-8.1. Revisions and contents for other ANS-8 standards are highly dependent on what is included in ANS-8.1. It is expected that a revised draft of this standard will go to ballot with the ANS-8 Subcommittee before the November ANS meeting.

Also, the current chair of ANS-8 has retired and will be resigning his position as chair effective with the end of the Chicago meeting. An interim has been appointed, but the search for a permanent chair continues.

I hope to work with the 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.

Attachment G

N17 Chairman's Report to the Standards Board

June 26, 2012, Meeting ● Chicago, Illinois

PINS in Development (6)

- 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/ANS6.6.1-1987 (R2007))
- ANS-15.4, "Selection and Training of Personnel for Research Reactors" (revision of ANSI/ANS-15.4-2007)
- ANS-15.15, "Criteria for the Reactor Safety Systems of Research Reactors" (reinvigoration of historical standard ANSI/ANS-15.15-1978 (R1986))
- ANS-15.16, "Emergency Planning for Research Reactors" (revision of ANSI/ANS-15.16-2008)
- ANS-15.20, "Criteria for the Reactor Control and Safety Systems of Research Reactors" (new standard)

PINS in Approval (2)

- ANS-6.4.2, "Specification for Radiation Shielding Materials" (revision of ANSI/ANS-6.4.2-2006)
- ANS-19.5, "Requirements for Reference Reactor Physics Measurements" (reinvigoration of historical standard ANSI/ANS-19.5-1995)

PINS submitted to ANSI (1)

- ANS-6.4.3, "Gamma-Ray Attenuation Coefficients & Buildup Factors for Engineering Materials" (reinvigoration of historical standard ANSI/ANS-6.4.3-1991)

Standards in Development – Approved PINS (9)

- ANS-5.1, "Decay Heat Power in Light Water Reactors" (revision of ANSI/ANS-5.1-2005)
- 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))
- 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-15.8, "Quality Assurance Program Requirements for Research Reactors" (revision of ANSI/ANS-15.8-1995 (R2005))
- 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 Projects being Considered for Termination (2)

- ANS-15.17, "Fire Protection Program Criteria for Research Reactors" (reinvigoration of historical standard ANSI/ANS-15.17-1981 (R2000))
- ANS-15.19, "Shipment and Receipt of Special Nuclear Material (SNM) by Research Reactor" (reinvigoration of historical standard ANSI/ANS-15.19-1991)

Standards at Ballot/Resolving Comments (3)

- ANSI/ANS-1-2000; R2007 (R201x), "Conduct of Critical Experiments" (reaffirmation of ANSI/ANS-1-2000 (R2007))
- ANS-10.7, "Non-Real Time, High Integrity Software for the Nuclear Industry" (new standard)
- ANS-15.21, "Format and Content for Safety Analysis Reports for Research Reactors" (revision of ANSI/ANS-15.21-1996 (R2006))

Standards Published (1)

- ANSI/ANS-19.3-2011, "Determination of Steady-State Neutron Reaction-Rate Distributions and Reactivity of Nuclear Power Reactors" (revision of ANSI/ANS-19.3-2005 approved by ANSI 8/26/11)

Delinquent Standards — 5+ Years Since ANSI Approval (4)

- ANSI/ANS-5.1-2005, "Decay Heat Power in Light Water Reactors" (revision initiated)
- ANSI/ANS-6.4-2006, "Nuclear Analysis and Design of Concrete Radiation Shielding for Nuclear Power Plants"
- ANSI/ANS-6.4.2-2006, "Specification for Radiation Shielding Materials"
- ANSI/ANS-15.8-1995 (R2005), "Quality Assurance Program Requirements for Research Reactors" (revision initiated)

Responses to Inquiries (1)

- An inquiry was received 9/5/11 on ANSI/ANS-6.4.3-1991 (W2001), "Gamma-Ray Attenuation Coefficients & Buildup Factors for Engineering Materials." The response was approved and issued to the inquirer in June 2012. An erratum is being prepared.

Future Plans

- N17 Committee activities will be discussed with N17 Chair Tawfik Raby as soon as possible to determine appropriate direction for the committee.

Attachment H

NRC ORDERS ON FUKUSHIMA IMPACT ON NFSC STANDARDS

Overview

In late-May 2012, ANS Standards Board (SB) requested the Nuclear Facilities Standards Committee (NFSC) to undertake an analysis and evaluation to determine what potential effects on existing standards and future standards would the three (3) orders recently issued by the Nuclear Regulatory Commission (NRC) in response to Fukushima Dai-ichi lessons learned. These orders contained its assessment of actions that should be taken by nuclear power plant Licensees under 10 CFR 50 and by utilities receiving and holding Construction Operating Licenses (COLs) issued under 10 CFR 52.

In response to this request, the NFSC Chairman analyzed the orders and determined what design, engineering, operations and programmatic requirements were contained and developed a summary that was sent to each NFSC Subcommittee (SC) chairman and vice-chairman for their evaluation relative to the standards they manage. Three questions were posed: (1) Which new standards could result from these NRC orders?; (2) Are existing standards available to meet the intent of the NRC orders?; and, (3) Are existing standards available to meet the intent of the NRC orders? Their responses are summarized below and will provide a basis for further discussion during the 6/27/12 NFSC meeting.

NRC Orders

EA-12-049: ORDER TO MODIFY LICENSES WITH REGARD TO REQUIREMENTS FOR MITIGATION STRATEGIES FOR BEYOND-DESIGN-BASIS EXTERNAL EVENTS (PART 50 LICENSEES & PART 52 COL HOLDERS)

Requires 3-phase approach for mitigating beyond-design-basis external events:

1. Initial phase: Requires use of installed equipment and resources to maintain or restore core cooling, containment and spent fuel pool (SFP) cooling capabilities;
2. Transition phase: Requires providing sufficient, portable, onsite equipment and consumables to maintain or restore these functions until they can be accomplished with resources brought from off site; and,
3. Final phase: Requires obtaining sufficient offsite resources to sustain those functions indefinitely.

Required actions:

1. Develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment and SFP cooling capabilities following a beyond-design-basis external event;
2. Strategies must be capable of mitigating a simultaneous loss of all alternating current power and loss of normal access to the ultimate heat sink and have adequate capacity to address challenges to core cooling, containment, and SFP cooling capabilities at all units on a site;

3. Provide reasonable protection for associated equipment from external events to demonstrate that there is adequate capacity to address challenges to core cooling, containment, and SFP cooling capabilities at all units on a site;
4. Capability of implementing strategies in all modes; and,
5. Develop procedures, guidance, training, and acquisition, staging, or installing of equipment needed for strategies.

EA-12-050: ORDER TO MODIFY LICENSES WITH REGARD TO RELIABLE HARDENED CONTAINMENT VENTS (PART 50 LICENSEES WITH BWRS WITH MARK I AND MARK II CONTAINMENTS)

Requires a reliable hardened containment vent system (HCVS) to remove decay heat and maintain control of containment pressure within acceptable limits following events that result in loss of active containment heat removal capability or prolonged Station Blackout (SBO). System shall be accessible and operable under a range of plant conditions, including a prolonged SBO and inadequate containment cooling.

HCVS design performance objectives:

- Minimize reliance on operator actions;
- Minimize plant operators' exposure to occupational hazards while operating HCVS system; and,
- Minimize radiological consequences that would impede personnel actions for event response.

HCVS design features:

1. Have capacity to vent steam/energy equivalent of 1% of licensed rated thermal power and be able to maintain containment pressure below primary containment design pressure;
2. Be accessible to plant operators and be capable of remote operation and control, or manual operation, during sustained operations;
3. Include a means to prevent inadvertent actuation;
4. Include a means to monitor status of vent system from control room or other location(s) for sustained operation during a prolonged SBO;
5. Include a means to monitor effluent discharge for radioactivity that may be released from operation of HCVS. Monitoring system shall provide indication in control room or other location(s), and shall be designed for sustained operation during a prolonged SBO;
6. Include design features to minimize unintended cross flow of vented fluids within a unit and between units on site;
7. Include features and provision for operation, testing, inspection and maintenance adequate to ensure that reliable function and capability are maintained;

8. Pressures that are consistent with maximum containment design pressures as well as dynamic loading resulting from system actuation; and,
9. Discharge effluent to a release point above main plant structures.

HCVS quality standards:

- HCVS vent path up to and including second containment isolation barrier shall be designed consistent with the design basis of plant. These items include piping, piping supports, containment isolation valves, containment isolation valve actuators and containment isolation valve position indication components; and,
- All other HCVS components shall be designed for reliable and rugged performance that is capable of ensuring HCVS functionality following a seismic event. These items include electrical power supply, valve actuator pneumatic supply and instrumentation (local and remote) components.

HCVS programmatic requirements:

- Develop, implement, and maintain procedures necessary for safe operation of HCVS. Procedures shall be established for system operations when normal and backup power is available, and during SBO conditions; and,
- Train appropriate personnel in the use of HCVS; curricula shall include system operations when normal and backup power is available, and during SBO conditions.

EA-12-051: ORDER TO MODIFY LICENSES WITH REGARD TO RELIABLE SPENT FUEL POOL INSTRUMENTATION (PART 50 LICENSEES & PART 52 COL HOLDERS)

Have a reliable indication of the water level in associated spent fuel storage pools capable of supporting identification of following pool water level conditions by trained personnel:

- Level that is adequate to support operation of normal fuel pool cooling system;
- Level that is adequate to provide substantial radiation shielding for a person standing on spent fuel pool operating deck; and,
- Level where fuel remains covered and actions to implement make-up water addition should no longer be deferred.

Spent fuel pool level instrumentation design:

1. Instruments: Permanent fixed primary instrument channel and backup instrument channel. Backup instrument channel may be fixed or portable. Portable instruments shall have capabilities that enhance ability of trained personnel to monitor spent fuel pool water level under conditions that restrict direct personnel access to pool, such as partial structural damage, high radiation levels, or heat and humidity from a boiling pool;

NRC ORDERS ON FUKUSHIMA IMPACT ON NFSC STANDARDS

2. Arrangement: Spent fuel pool level instrument channels shall be arranged in a manner that provides reasonable protection of level indication function against missiles that may result from damage to the structure over spent fuel pool. Protection may be provided by locating primary instrument channel and fixed portions of backup instrument channel, if applicable, to maintain instrument channel separation within spent fuel pool area, and to utilize inherent shielding from missiles provided by existing recesses and corners in the spent fuel pool structure;
3. Mounting: Installed instrument channel equipment within spent fuel pool shall be mounted to retain its design configuration during and following maximum seismic ground motion considered in design of spent fuel pool structure;
4. Qualification: Primary and backup instrument channels shall be reliable at temperature, humidity, and radiation levels consistent with spent fuel pool water at saturation conditions for an extended period. Reliability shall be established through use of an augmented quality assurance process (e.g., similar to site fire protection program);
5. Independence: Primary instrument channel shall be independent of backup instrument channel;
6. Power supplies: Permanently installed instrumentation channels shall each be powered by a separate power supply. Permanently installed and portable instrumentation channels shall provide for power connections from sources independent of the plant ac and dc power distribution systems, such as portable generators or replaceable batteries. Onsite generators used as an alternate power source and replaceable batteries used for instrument channel power shall have sufficient capacity to maintain level indication function until offsite resource availability is reasonably assured;
7. Accuracy: Instrument channels shall maintain their designed accuracy following a power interruption or change in power source without recalibration;
8. Testing: Instrument channel design shall provide for routine testing and calibration; and,
9. Display: Trained personnel shall be able to monitor spent fuel pool water level from control room, alternate shutdown panel, or other appropriate and accessible location. Display shall provide on-demand or continuous indication of spent fuel pool water level.

Spent fuel pool level programmatic:

- Training: Personnel shall be trained in use and provision of alternate power to primary and backup instrument channels;
- Procedures: Procedures shall be established and maintained for testing, calibration, and use of primary and backup spent fuel pool instrument channels; and,
- Testing and Calibration: Processes shall be established and maintained for scheduling and implementing necessary testing and calibration of primary and backup spent fuel pool level instrument channels to maintain instrument channels at design accuracy.

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Summary of responses by NFSC SC Chairs and Vice-Chairs

Gene Carpenter (ANS-21 Chair): No response.

Sheila Lott (ANS-21 Vice-Chair): Three ANS-21 standards (ANS-3.1, "Selection, Qualification and Training of Personnel for Nuclear Power Plants;" ANS-3.5, "Nuclear Power Plant Simulators for Use in Operator Training and Examination;", and ANS-58.6, "Criteria for Remote Shutdown for LWRs.") may be affected by these orders, although the orders may be generic enough that major changes will not be required.

Mike Ruby (ANS-22 Chair): Of the three orders issued by NRC in early March, EA-12-049 is by far the most comprehensive; the other two are aimed as specific items. Therefore, EA-12-049 should be the priority. The industry is issuing guidance (i.e., NEI 12-06) for immediate compliance with the Order. Later, the NRC will catch up with new regulations, which can take about the same amount of time to develop as a Standard. It makes sense to move forward with a Standard now to be relevant in future rulemaking. I can think of two options right now, although there may be others: (1) Revise ANSI/ANS-58.11, "Design Criteria for Safe Shutdown Following Selected Design Basis Events in Light Water Reactors", to expand the scope and add a section on Beyond Design Basis Events (BDBE). There are a couple of benefits to that option: (a) The Standard is about to go historical, and hasn't been modified since 1995, and (b) we could update 58.11 to include Design Basis Events (DBE) information for new designs (i.e., AP-1000, etc.), as well as add BDBE info and have all information in one place; or, (2) Develop a new Standard separate from 58.11. Both approaches would require forming a new Working Group.

Don Spellman's comment to Carl Mazzola and Mike Ruby: Per my message about ANSI/ANS-59.3, I'm still concerned about the much larger decision to modify all out standards to include BDBE. I think that is a HUGE decision and we really need to get everyone's input before we make it and determine how to implement it (i.e., change current standards or write new ones.) You are going to have to work closely with ANS-16 and JCNRM on the "DBE or BDBE".

Prasad Kadambi comment to Don Spellman: The issue of BDBE should not be misconstrued to suggest that the entire design basis suddenly changes. If a standard was considered adequate to address DBE issues before, it does not have to change just because BDBEs are required to be considered in the safety analysis. By definition, BDBEs would be considered differently than DBEs. So changing current standards is not a necessary requirement. It may be one way of dealing with a host of issues that have come up since the standard was first written.

Don Spellman rejoinder to Prasad Kadambi: Not sure I agree. Inclusion of BDBE design requirements at the front end of the design process affects equipment classification, control systems, pumps, valves, EP and the design process itself (i.e., when and where do you do a PRA?)

Jim Mallay to Don Spellman: I very much believe we should include what you call "BDBE" in our standards, including ANS-59.3. I highly recommend that we use the NRC term "extended design basis events." (See the special team report on lessons learned from the Fukushima accident.) I believe this term will be more acceptable in the long run once it is defined and used

consistently, and we should be consistent with NRC usage; especially since the term makes a lot of sense.

Mike Ruby to all: I agree with Prasad. There was no suggestion that we need to change Design Basis to respond to BDBE, at least in the area of ANS-58.11. I think a separate standard would do the trick. The only reason I brought it up was that it is an opportunity to clean up other issues since 1995. Perhaps that is too big of a bite all at once. However, on a related topic, the NRC is asking for information and requiring some reanalysis of the plants' seismic and flood design (see the 10 CFR50.54 (f) letter issued in conjunction with the three orders in early March). I guess we will have to see what comes out of that.

Dennis Newton (ANS-22 Vice-Chair): I would like to see a standard that addressed the grey design area between safety-related Structures Systems and Components (SSCs) and completely non-safety-related SSCs. A standard that sorts out differences among a BDBE, safety significance, important to safety, regulatory treatment of non-safety systems, etc. would be useful.

Utilities are already addressing the orders so may be too late for a standard to do this.

Something can always happen that a plant is not designed for, so what should be done if that happens? How is design readiness determined after such an event?

My preference is to not mix DBs and BDBs in the same standard. The acceptance criteria are too different.

We probably need a plan and process for revising existing standards and or developing new standards and prioritizing work before assessing recourses.

Jim August response to Dennis Newton: Generally, I agree. I would like to have someone address Dennis' item, as a ten-minute summary.

There is a grey design area between safety-related SSCs and completely non-safety-related SSCs. A standard that sorts out differences among a BDBE, safety significance, important to safety, regulatory treatment of non-safety systems, etc. is useful. Any takers?

Andy Wehrenberg (ANS-24 Chair): No comment.

Kevin Bryson (ANS-25 Chair): No comment.

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Evan Lloyd (ANS-26 Chair): No comment**.**

Charlie Brown (ANS-26 Co-Chair): I'm not on board with this! We may be running to the cliffs as we speak! Yes the NRC, INPO, and NEI are pushing to address "BDBEs," however the NRC has been extremely political on this! It was the NRC that started this mess with the 50-mile evacuation statement in a country we had no business trying to address regulation in. Now they are pushing to address a 25-mile EPZ up to and including warning systems (i.e., sirens, evacuation routes, communication, etc.). This does not make sense to drive this on the industry as a whole. We need to look at individual sites that this may impact (e.g., coast, earthquake-prone areas).

We cannot get Yucca mountain setup and running because of this type of philosophy!

If we are not careful we will regulate ourselves out of business! I believe in standards, but they need to serve a purpose and add to this industry, not to promote a socialist type agenda.

Carl Mazzola response to Charlie Brown: I agree. This whole thing is very political and very fluid. We do not have enough volunteer resources to chase a moving target.

Don Eggett (ANS-27 Chairman): Resources will be very difficult to come by to develop any new standard, or for that matter to revise an existing one that aligns with any of the orders. It's my belief that maximum utility and vendor resources will be focused on the Orders and not revising standards or developing new standards. I agree standards must be revised or developed but the timing is when. I don't believe you'll find any support from anyone in the near-term including NEI until each Order is well down the road in implementation and resolution. I will talk to one of my close colleagues at NEI if you wish to get some answers, as NEI will be an important organization in getting standards in place for these Orders.

My comments on each item below from Subcommittee 27 perspective:

Which new standards could result from these NRC orders: NRC Order EA-49 - Impact of high temperatures; NRC Order EA-50 - MK II Design plants ONLY; NRC Order EA-51: - assuming there are existing standards, those probably should only need to be revised rather than developing a new standard.

Are existing standards available to meet the intent of the NRC orders: NRC Order EA-49: - existing standards exist that would need to be revised, and some possible new standards also would need to be considered (e.g., excessive temperatures); NRC Order EA-50: - if they do exist, they will need to be revised for the MK I plants and a new one written for the MK II designs; NRC Order EA-51: – There has to be some that would need to be revised but without researching the list of standards, I don't know any specific.

Are there resources available now to begin the process of revising existing standards and/or developing new standards: NRC Order EA-49, EA-50 and EA-51: - see above

Jeff Brault (ANS-27 Vice-Chair): No comment.

Jim August (ANS-28 Chair): No comment.

NRC ORDERS ON FUKUSHIMA IMPACT ON NFSC STANDARDS

Don Spellman (ANS-29 Chair): No comment.

Mark Linn (ANS-29 Vice-Chair): No comment.

Conclusion

The chairs and vice-chairs that commented provided a wide-range of discussion on many topics. One thing that emerged is that the situation is still very fluid and the path forward by regulatory agencies, utilities, Federal agencies, and others is quite uncertain. There will be a need for significant discussion before volunteer resources should be committed and this will commence during the next NFSC meeting.

Attachment I

NFSC Chairman's Report to the Standards Board

June 26, 2012, Meeting ● Chicago, Illinois

Overview

The NFSC and its eight subcommittees were very active and successful since the 2011 Winter Meeting with positive progress on 29 different ANS standards including ANSI approval of 3 new standards and 1 revised standard. Listed below are the specific activities by standard.

I. PINS Activities (5)

A. PINS in Preparation (2)	Status	SC
(1) ANS-40.21, Siting, Construction, and Operation of Commercial Low Level Radioactive Waste Burial Grounds (new standard)	in development by WG	ANS-25
(2) 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 (2)	Status	SC
(1) ANS-2.32, Guidance on the Selection and Evaluation of Remediation Methods for Subsurface Contamination (new standard)	resolving comments/under revision	ANS-27
(2) ANS-3.13, Nuclear Plant Reliability Assurance Program (RAP) Development Guidance for Design, Construction and Operations	to be approved by SC	ANS-21

C. PINS Approved by NFSC (1)	Status	SC
(1) ANS-50.1, Nuclear Safety Criteria for the Design of Light Water Reactor Plants (new standard)	PINS submitted to ANSI and draft in development by WG	ANS-29

II. Standards Activities (29)

A. Standards and Draft Standards in Development with Approved PINS (23)	Status	SC
(1) ANS-2.2, Earthquake Instrumentation Criteria for Nuclear Power Plants (revision of ANSI/ANS-2.2-2002)	in development by WG	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	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	ANS-25
(7) ANS-2.31, Standard for 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-3.4, Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants (revision of ANSI/ANS-3.4-1996 (R2002))	draft @ subcommittee review	ANS-21
(10) ANS-3.5, Nuclear Power Plant Simulators for Use in Operator	in development by WG	ANS-21

Training and Examination (revision of ANSI/ANS-3.5-2009)		
(11) 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	ANS-26
(12) 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	ANS-26
(13) 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	ANS-26
(14) 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	ANS-26
(15) 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	ANS-26
(16) ANS-3.8.10, Criteria for Modeling Real-time Accidental Release Consequences at Nuclear Facilities (new standard)	in development by WG	ANS-24
(17) 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 found	ANS-24
(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-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
(23) ANS-58.16, Safety Classification and Design Criteria for Non-Reactor Nuclear Facilities (new standard)	draft @ subcommittee review	ANS-22

B. Standards and Draft Standards at Ballot or Comment Resolution (2)	**Status**	**SC**
(1) ANS-2.15, Criteria for Modeling and Calculating Atmospheric Dispersion of Routine Radiological Releases from Nuclear Facilities (new standard)	Issued for recirculation ballot	ANS-24
(2) ANSI/ANS-59.3-1992 (R2002), Nuclear Safety Criteria for Control Air Systems	Reaffirmation ballot issued with 7/4/12 due date (PR closes 7/31/12)	

NFSC Chairman's Report to the Standards Board

June 26, 2012, Meeting ● Chicago, Illinois

C. Standards Approved by NFSC/SB/ANSI (4)	Status	SC
(1) ANSI/ANS-2.21-2012, Criteria for Assessing Atmospheric Effects on the Ultimate Heat Sink (new standard)	approved by ANSI 6/5/2012	ANS-25
(2) ANSI/ANS-3.2-2012, Managerial, Administrative, and Quality Assurance Controls For the Operational Phase of Nuclear Power Plants (revision of ANSI/ANS-3.2-2006)	approved by ANSI 3/20/12	ANS-21
(3) ANSI/ANS-41.5-2012, Verification and Validation of Radiological Data for Use in Waste Management and Environmental Remediation (new standard)	approved by ANSI 2/15/12	ANS-24
(4) ANSI/ANS-53.1-2011, Nuclear Safety Design Process for Modular Helium-Cooled Reactor Plants (new standard)	approved by ANSI 12/21/11	ANS-28

D. Standards in Publication Process (4)	Status	SC
(1) ANSI/ANS-2.21-2012, Criteria for Assessing Atmospheric Effects on the Ultimate Heat Sink (new standard)	in production	ANS-25
(2) ANSI/ANS-3.2-2012, Managerial, Administrative, and Quality Assurance Controls For the Operational Phase of Nuclear Power Plants (revision of ANSI/ANS-3.2-2006)	publication anticipated July 2012	ANS-21
(3) ANSI/ANS-41.5-2012, Verification and Validation of Radiological Data for Use in Waste Management and Environmental Remediation (new standard)	publication anticipated July 2012	ANS-24
(4) ANSI/ANS-53.1-2011, Nuclear Safety Design Process for Modular Helium-Cooled Reactor Plants (new standard)	in production	ANS-28

III. Standards Inquiries (5)

A. Responses to Standards Inquiries (5)	Status	SC
(1) ANSI/ANS-2.26-2004 (R2010), Categorization of Nuclear Facility Structures, Systems, and Components for Seismic Design (Inquiry received 6/28/11)	response approved by NFSC; with SB for certification	ANS-22
(2) ANSI/ANS-3.5-2009, Nuclear Power Plant Simulators for Use in Operator Training and Examination (Inquiry received 4/3/12)	Response being drafted by WG	ANS-21
(3) ANSI/ANS-18.1-1999 (W2009), Radioactive Source Term for Normal Operation of Light Water Reactors (Inquiry received 3/2/12)	?	ANS-24
(4) ANSI/ANS-18.1-1999 (W2009), Radioactive Source Term for Normal Operation of Light Water Reactors (Inquiry received 4/6/12)	?	ANS-24
(5) ANSI/ANS-58.2-1988, Design Basis for Protection of Light Water Nuclear Power Plants Against the Effects of Postulated Pipe Rupture (Inquiry received 5/21/10)	response approved and issued November 2011	ANS-24

IV. Delinquent Standards (9)

A. Maintenance of Delinquent Standards (9)	Status	SC
(1) ANSI/ANS-2.2-2002, Earthquake Instrumentation Criteria for Nuclear Power Plants	revision in development	ANS-25
(2) ANSI/ANS-2.10-2003, Criteria for the Handling and Initial Evaluation of Records from Nuclear Power Plant Seismic Instrumentation	new WG chair	ANS-21
(3) ANSI/ANS-3.4-1996 (R2002), Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants	ANS-21 comments on draft being resolved; reaffirmation not deemed appropriate	ANS-21

(4) ANSI/ANS-5.10-1998 (R2006), Airborne Release Fractions at Non-Reactor Nuclear Facilities	reaffirmation to be processed	ANS-24
(5) ANSI/ANS-57.1-1992 (R2005), Design Requirements for Light Water Reactor Fuel Handling Systems	inactive WG	ANS-27
(6) ANSI/ANS-57.5-1996 (R2006), Light Water Reactors Fuel Assembly Mechanical Design and Evaluation	inactive WG	ANS-22
(7) ANSI/ANS-57.10-1996 (R2006), Design Criteria for Consolidation of LWR Spent Fuel	inactive WG	ANS-27
(8) ANSI/ANS-58.11-1995 (R2002), Design Criteria for Safe Shutdown Following Selected Design Basis Events in Light Water Reactors	inactive WG; not deemed appropriate for reaffirmation	ANS-22
(9) ANSI/ANS-59.3-1992 (R2002), Nuclear Safety Criteria for Control Air Systems	reaffirmation ballot due 7/4/2012 (PR closes 7/30/12)	ANS-22

Future Plans

Insight from NFSC members at the meeting will be discussed.

Attachment J

AMERICAN NUCLEAR SOCIETY

555 North Kensington Avenue
La Grange Park, Illinois
60526-5592 USA

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NRMCC Report to the ANS Standards Board Chicago Illinois

June 26, 2012

REPLY TO:

Charles H. Moseley, Jr
1321 Heritage Heights Lane
Wake Forest, North Carolina 27587
919-435-8105; 919-435-8105(Fax)
longgray65@nc.rr.com

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 this past winter. The last meeting of the NRMCC was in St. Petersburg in late February 2012.

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 in St. Petersburg. This committee is proceeding to develop all the procedures necessary for governance. The next meeting is in Denver in September.

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

Attachment K

Staff/Secretary Report
June 2012

ANS Standards Board Organizes Response to Federal Register Notices

The ANS Standards Board prepared responses to *Federal Register* notices to 1) define "reasonably available" for material incorporated by reference in the *Code of Federal Regulations* and 2) Federal agencies' standards and conformity assessment related activities and suggestions on whether and how to supplement OMB Circular A–119, "Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities." Both responses were submitted formally under the signature of ANS President Eric Loewen.

ANS Participates in Standards Webcast

A webcast titled "Setting a New Standard for Quality in Nuclear Power One Year after Fukushima" was held on March 29, 2012. The webcast was a collaboration of the ANS, the American Society of Mechanical Engineers (ASME), and the Information Handling Services providing insights into the critical role of standards in ensuring quality throughout nuclear operations. The history, lessons learned, and correlation of ANSI/ANS-3.2-2012, "Managerial, Administrative, and Quality Assurance Controls for the Operational Phase of Nuclear Power Plants," and ANSI ASME NQA-1-2008/2009a, "Quality Assurance Requirements for Facility Application," were discussed along with regulations and industry standards. The webcast drew nearly 300 live participants and has had well over a hundred viewings of the recorded, on-demand version.

Standards Committee News

Andrew Smetana was appointed the interim chair of the N17 Consensus Committee on Research Reactors, Reactor Physics, Radiation Shielding, and Computational Methods effective April 12, 2012.

Formation of ANS/ASME Joint Consensus Committee

The ANS and ASME standards boards approved the charter of the ANS/ASME Joint Committee on Nuclear Risk Management (JCNRM). Operating procedures for the JCNRM are being updated and will be approved by the JCNRM and both standards boards.

Restructuring of the ANS Standards Committee

The ANS Standards Board is considering a reorganization of its Standards Committee to more effectively align with user needs and balance out the load on consensus committees and subcommittees. The primary focus will be on development and maintenance of national voluntary consensus standards that are directly in support of nuclear facility owners and operators, nuclear industry vendors, and nuclear industry regulators. The decision will attempt to maximize the relationship between the ANS Standards Committee and the ANS technical society.

Grant Activities

The U.S. Nuclear Regulatory Commission (NCR) issued ANS a grant to cover travel-related and meeting expenses for working group members to develop three probabilistic risk assessment standards. The grant was effective July 31, 2009, for a three-year period. With funds remaining, a request for a two-year extension was approved by the NRC. All three standards have completed drafts that received hundreds of committee comments. The additional two years will help support physical meetings needed to resolve these comments.

Standards Price Increase

A 15% price increase for all standards was effective June 1, 2012. The increase was long overdue. The last increase was November of 2007.

Availability of E-Standards

Only a limited number of standards are currently available in electronic format through the online ANS Store. With a recent equipment upgrade at ANS, standards available in print only are being converted to a searchable, electronic format. Once completed, all standards will be made available in print and electronic format. Consideration is also being given to publishing standards in e-reader format.

Standards Development

We have received approval of the American National Standards Institute (ANSI) of three new standards, one revised standards, and eight reaffirmations of current standards.

Attachment L

Standards Sales Report

October 16, 2011 - May 31, 2012

Designation & Title of Standard	# of Paper/Electronic Copies Sold	Total Price
ANS-1-2000;R2007, Conduct of Critical Experiments	1/1	58.90
ANS-2.2-2002, Earthquake Instrumentation Criteria for Nuclear Power Plants	2/3	211.20
ANS-2.3-2011, Estimating Tornado, Hurricane, and Extreme Straight Line Wind Characteristics at Nuclear Power Plants	11/4	764.40
ANS-2.8-1992;W2002, Determining Design Basis Flooding at Power Reactor Sites	8	1074.40
ANS-2.10-2003, Criteria for the Handling and Initial Evaluation of Records from Nuclear Power Plant Seismic Instrumentation	2/1	103.60
ANS-2.17-2010, Evaluation of Subsurface Radionuclide Transport at Commercial Nuclear Power Plants	3/5	801.15
ANS-2.23-2002;R2009, Nuclear Plant Response to an Earthquake	2/2	382.59
ANS-2.26-2004;R2010, Categorization of Nuclear Facility Structures, Systems, and Components For Seismic Design	4/6	897.70
ANS-2.27-2008, Criteria for Investigations of Nuclear Facility Sites for Seismic Hazard Assessments	2/9	1012.80
ANS-2.29-2008, Probabilistic Seismic Hazard Analysis	4/8	1248.05
ANS-3.1-1993;R1999;W2009, Selection, Qualification Training of Personnel for Nuclear Power Plants	4	276.00
ANS-3.2-2006, Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants	1/2	333.50
ANS-3.4-1996;R2002, Medical Certification and Monitoring of Personnel Requiring Operator LTC	2	83.60
ANS-3.5-1998;W2008, Nuclear Power Plant Simulators for Use in Operator Training and Examination	1	78.30
ANS-3.5-2009, Nuclear Power Plant Simulators for Use in Operator Training and Examination	3/4	619.20
ANS-3.11-2005;R2010, Determining Meteorological Information at Nuclear Facilities	2/10	1273.30
ANS-4.5-1980;R1986;W2001, Criteria for Accident Monitoring Functions in Light-Water-Cooled Reactors	1	50.40
ANS-5.1-1994;W2004, Decay Heat Power in Light Water Reactors	/2	240.00
ANS-5.1-2005, Decay Heat Power in Light Water Reactors	2/17	2172.00
ANS-5.4-2011, Method for Calculating the Fractional Release of Volatile Fission Products from Oxide Fuel	8/10	1047.80
ANS-5.10-1998;R2006, Airborne Release Fractions at Non-Reactor Nuclear Facilities	3	280.80
ANS-6.1.1-1991;W2001, Neutron and Gamma-Ray Fluence-To-Dose Factors	3	255.00
ANS-6.1.2-1999;R2009, Neutron and Gamma-Ray Cross Sections for Nuclear Radiation Protection Calculations for Nuclear Power Plants	2	58.90
ANS-6.3.1-1987;R1998;R2007, Program for Testing Radiation Shields in Light Water Reactors	1/1	117.80
ANS-6.4-1997;R2004;W2006, Nuclear Analysis and Design of Concrete Radiation Shielding for Nuclear Power Plants	1	156.00
ANS-6.4-2006, Nuclear Analysis and Design of Concrete Radiation Shielding for Nuclear Power Plants	2/3	770.80
ANS-6.4.2-2006, Specifications for Radiation Shielding Materials	1/1	111.60

ANS-6.4.3-1991;W2001, Gamma-Ray Attenuation Coefficients and Buildup Factors for Engineering Materials	1	165.60
ANS-6.6.1-1987;R1998;R2007, Calculation & Measurement Direct & Scattered Gamma Radiation from LWR Nuclear Power Plants	1/3	425.60
ANS-8.1-1983;R1988;W1998, Nuclear Criticality Safety in Operations with Fissionable Materials Outside Reactors	1	69.00
ANS-8.1-1998;R2007, Nuclear Criticality Safety in Operations with Fissionable Materials Outside Reactors	40/9	3082.50
ANS-8.3-1997;R2003, Criticality Accident Alarm Systems (RF of ANS-8.3-1997)	3/5	615.60
ANS-8.5-1996;R2002;R2007, Use of Borosilicate-Glass Raschig Rings as a Neutron Absorber in Solutions of Fissile Material	2	90.00
ANS-8.6-1983;R1988;R1995;R2001;R2010, Safety in Conducting Subcritical Neutron-Multiplication	2	45.00
ANS-8.7-1975;R1987;W1997, Guide for Nuclear Criticality Safety in the Storage of Fissile Materials	1	69.00
ANS-8.7-1998:R2007, Guide for Nuclear Criticality Safety in the Storage of Fissile Materials	3	193.20
ANS-8.10-1983;R1988;R1999;R2005, Criteria for Nuclear Criticality Safety Controls	0/1	33.30
ANS-8.12-1987;R1993;R2002;R2011, Nuclear Criticality Control and Safety of Plutonium-Uranium Fuel Mixtures Outside Reactors	6	412.50
ANS-8.14-2004, Use of Soluble Neutron Absorbers in Nuclear Facilities Outside Reactors	1/1	66.60
ANS-8.15-1981;R1987;R1995;R2005, Nuclear Criticality Control of Special Actinide Elements	3	200.10
ANS-8.17-2004;R2009, Criticality Safety Criteria for the Handling, Storage, and Transportation of LWR Fuel Outside Reactors	0/5	177.60
ANS-8.19-1996, Administrative Practices for Nuclear Criticality Safety	1	25.00
ANS-8.19-2005, Administrative Practices for Nuclear Criticality Safety	42/3	1150.10
ANS-8.20-1991;R1999;R2005, Nuclear Criticality Training	2	66.60
ANS-8.21-1995;R2001;R2011, Use of Fixed Neutron Absorbers in Nuclear Facilities Outside Reactors	7/1	266.40
ANS-8.22-1997;R2006, Nuclear Criticality Safety Based on Limiting & Controlling Moderators	2	83.60
ANS-8.23-2007;R2012, Nuclear Criticality Accident Emergency Planning and Response	0/4	357.20
ANS-8.24-2007IR2012, Validation of Neutron Transport Methods for Nuclear Criticality Safety Calculations	1/2	243.60
ANS-8.26-2007;R2012, Criticality Safety Engineer Training and Qualification Program	0/3	94.90
ANS-8.27-2008, Burnup Credit for LWR Fuel	3/5	279.35
ANS-10.2-2000;R2009, Portability of Scientific and Engineering Software	1	33.30
ANS-10.4-1987;R1998;W2008, Guidelines for the V&V of Scientific and Engineering Computer Programs in the Nuclear Industry	1/1	218.00
ANS-10.4-2008, Verification and Validation of Non-Safety Related Scientific and Engineering Computer Programs for the Nuclear Industry	1/3	401.70
ANS-10.5-2006, Accommodating User Needs in Scientific and Engineering Computer Software Development	1/1	83.60
ANS-14.1-2004;R2009, Operation of Fast Pulse Reactors (RV of 14.1-1975;R1982;R1989;R2000)	0/2	70.30
ANS-15.1-2007, The Development of Technical Specifications for Research Reactors	0/3	217.50

ANS-15.2-1999;R2009, Quality Control for Plate-Type Uranium-Aluminum Fuel Elements	2	90.00
ANS-15.4-1988;R1999;W2007, Selection and Training of Personnel for Research Reactors	1	44.00
ANS-15.4-2007, Selection and Training of Personnel for Research Reactors	1/5	324.80
ANS-15.8-1995;R2005, Quality Assurance Program Requirements for Research Reactors	3/1	187.20
ANS-15.11-2009, Radiation Protection at Research Reactors	2/2	362.60
ANS-15.15-1978;R1986;W1996, Criteria for the Reactor Safety Systems of Research Reactors	4	185.00
ANS-15.16-2008, Emergency Planning for Research Reactors	1/3	185.00
ANS-15.21-1996;R2006, Format and Content for Safety Analysis Reports for Research Reactors	1	103.50
ANS-16.1-2003;R2008, Measurement of the Leachability of Solidified Low-Level Radioactive Wastes by a Short-Term Test Procedure	1/6	738.30
ANS-18.1-1999;W2009, Radioactive Source Term for Normal Operation of Light Water Reactors	1	75.00
ANS-19.1-2002;R2011,, Nuclear Data Sets for Reactor Design Calculations (RV of 19.1-1983;R1989)	1/1	100.80
ANS-19.3-2011, Steady State Neutronics Methods for Power Reactor Analysis	2/3	499.80
ANS-19.3.4-2002;R2008, The Determination of Thermal Energy Deposition Rates in Nuclear Reactors	0/1	39.60
ANS-19.4-1976;R1983;R1989;R2000;W2010, A Guide for Acquisition and Documentation of Reference Power Reactor Physics Measurements for Nuclear Analysis Verification	5	279.00
ANS-19.6.1-2005, Reload Startup Physics Test for Pressurized Water Reactors	1	94.00
ANS-19.6.1-2011, Reload Startup Physics Tests for Pressurized Water Reactors	6/5	993.60
ANS-19.10-2009, Methods for Determining Neutron Fluence in BWR	2/1	113.95
ANS-19.11-1997;R2002;R2011, Calculation and Measurement of the Moderator Temperature Coefficient of Reactivity for Water Moderated Power Reactors	2	142.50
ANS-40.37-2009, Mobile Low-Level Radioactive Waste Processing System	1/2	336.40
ANS-51.1-1983;R1988;W2000, Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants	5	813.40
ANS-51.10-1991;R2002;R2008, Auxiliary Feedwater System for Pressurized Water Reactors	1	78.30
ANS-52.1-1983;R1988;W2001, Nuclear Safety Criteria for the Design of Stationary Boiling Water Reactor Plants	2	311.60
ANS-55.1-1992;R2000;R2009, Solid Radioactive Waste Processing System for Light-Water-Cooled Reactor Plants	3	339.30
ANS-55.4-1993;R1999;R2007, Gaseous Radioactive Waste Processing Systems for Light Water Reactor Plants	3	295.80
ANS-55.6-1993;R1999;R2007, Liquid Radioactive Waste Processing System for Light Water Reactor Plants	7	717.60
ANS-56.6-1986;W1996, Pressurized Water Reactor Containment Ventilation Systems	2	145.80
ANS-56.8-2002;R2011, Containment System Leakage Testing Requirements	3/2	492.20
ANS-56.10-1982;R1987;W1997, Subcompartment Pressure and Temperature Transient Analysis in LWR's	1	102.00

ANS-57.1-1992;R1998;R2005, Design Requirements for Light Water Reactor Fuel (RV of 57.1-1980)	6	313.60
ANS-57.2-1983,W1999;R2006, Design Requirements for LWR Spent Fuel Facilities at NPPs	3	287.10
ANS-57.3-1983;W1993, Design Requirements for New Fuel Storage Facilities at LWR Plants	3	140.00
ANS-57.5-1981;W1991, Light Water Reactors Fuel Assembly Mechanical Design and Evaluation	1	62.10
ANS-57.5-1996;R2006, Light Water Reactors Fuel Assembly Mechanical Design and Evaluation	4	255.30
ANS-57.8-1995;R2005, Fuel Assembly Identification	2	70.30
ANS-57.9-1992;R2000;W2010, Design Criteria for an Independent Spent Fuel Storage Installation (Dry Type)	0/1	138.00
ANS-57.10-1996;R2006, Design Criteria for Consolidation of LWR Spent Fuel	2	203.30
ANS-58.2-1988;W1998, Design Basis for Protection of Light Water Nuclear Power Plants Against the Effects of Postulated Pipe Rupture	4	573.80
ANS-58.3-1992;R1998;R2008, Physical Protection for Nuclear Safety-Related Systems & Components	4	414.20
ANS-58.4-1979;W1990, Criteria for Technical Specifications for Nuclear Power Stations	1	75.00
ANS-58.6-1996;R2001, Criteria for Remote Shutdown for Light Water Reactors	4	171.60
ANS-58.8-1994;R2001;R2008, Time Response Design Criteria for Safety-Related Operator Actions	6	400.20
ANS-58.9-2002;R2009, Single Failure Criteria for Light Water Reactor Safety-Related Fluid Systems	6	210.90
ANS-58.11-1995;R2002, Design Criteria for Safe Shutdown Following Selected Design Basis Events in Light Water Reactors	4	212.80
ANS-58.14-2011, Safety and Pressure Integrity Classification Criteria for Light Water Reactors	12/5	2409.75
ANS-58.21-2007, External Events PRA Methodology	1	214.00
ANS-58.23-2007, Fire PRA Methodology	1	169.00
ANS-59.3-1992;R2002 Safety Criteria for Control Air Systems	3	127.60
ANS-59.51-1997;R2007, Fuel Oil Systems for Safety-Related Emergency Diesel Generators	1	55.80
ANS-59.52-1998;R2007, Lubricating Oil Systems for Safety-Related Emergency Diesel Generators	2	106.40
Misc Standards – Historical & Drafts	17	439.40
GRAND TOTAL		**$ 38,957.74**

**Any totals showing as x / x - The first number is for the quantity sold of a hard copy of the actual standard and the second number represents the quantity of electronic versions of the standard sold.

Attachment M

Project Activity Report

6/19/2012

NFSC

ANS- 2 . 2	Earthquake Instrumentation Criteria for Nuclear Power Plants	ANS-25	Farhang Ostadan	WG Writing Draft
ANS- 2 . 6	Guidelines for Estimating Present & Forecasting Future Population Distributions Surrounding Nuclear Facility Sites	ANS-25	OPEN	CC PINS Comment w/WG
ANS- 2 . 8	Determining Design Basis Flooding at Power Reactor Sites	ANS-25	Yan Gao	WG Writing Draft
ANS- 2 . 9	Evaluation of Ground Water Supply for Nuclear Facilities	ANS-25	James S. Bollinger	WG Writing Draft
ANS- 2 . 13	Evaluation of Surface-Water Supplies for Nuclear Power Sites	ANS-25	OPEN	PINS Development
ANS- 2 . 15	Criteria for Modeling and Calculating Atmospheric Dispersion of Routine Radiological Releases from Nuclear Facilities	ANS-24	John Ciolek & Cliff Glantz - VC	CC Ballot Comment w/ WG
ANS- 2 . 16	Criteria for Modeling Design-Basis Accidental Releases from Nuclear Facilities	ANS-24	John Ciolek / Jeremy Rishel	WG Writing Draft
ANS- 2 . 18	Standards for Evaluating Radionuclide Transport in Surface Water for Nuclear Power Sites	ANS-25	Angelos Findikakis	PINS Development
ANS- 2 . 25	Surveys of Terrestrial Ecology Needed to License Thermal Power Plants	ANS-25	OPEN	WG Writing Draft
ANS- 2 . 30	Assessing Capability for Surface Faulting at Nuclear Facilities	ANS-25	James Beavers & Ivan Wong (co-chairs)	WG Writing Draft
ANS- 2 . 31	Standard for Estimating Extreme Precipitation at Nuclear Facility Sites	ANS-25	John D. Stevenson	PINS @ SB
ANS- 2 . 32	Guidance on the Selection and Evaluation of Remediation Methods for Subsurface Contamination (unapproved)	ANS-27	Bob Runge	PINS @ CC
ANS- 3 . 1	Selection, Qualification, and Training of Personnel for Nuclear Power Plants	ANS-21	Julie Sickle	WG Writing Draft
ANS- 3 . 4	Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants	ANS-21	Barbara Stevens	SB PINS Comments w/ WG
ANS- 3 . 5	Nuclear Power Plant Simulators for Use in Operator Training and Examination	ANS-21	James Florence	PINS @ SB
ANS- 3 . 8 . 1	Properties of Radiological Emergency Response Functions and Organizations for Nuclear Facilities -- for RV of 1995 version	ANS-26	Ronald Markovich	WG Writing Draft
ANS- 3 . 8 . 2	Properties of Functional and Physical Characteristics of Radiological Emergency Response Facilities at Nuclear Facilities -- for RV of 1995 Criteria for the Functional and Physical Characteristics of Radiological Emergency Response Facilities -- 1995	ANS-26	Ronald Markovich	WG Writing Draft
ANS- 3 . 8 . 3	Properties of Radiological Emergency Response Plans and Implementing Procedures and Maintaining Emergency Response Capability for Nuclear Facilities -- for RV of 1995 Criteria for Radiological Emergency Response Plans and Implementing Procedures -- 1995	ANS-26	Ronald Markovich	WG Writing Draft
ANS- 3 . 8 . 6	Properties of the Conduct of Offsite Radiological Assessment for Emergency Response and Emergency Radiological Field Monitoring, Sampling and Analysis for Nuclear Facilities	ANS-26	Ronald Markovich	WG Writing Draft
ANS- 3 . 8 . 7	Properties of Planning, Development, Conduct, and Evaluation of Drills and Exercises for Emergency Preparedness at Nuclear Facilities -- for RV of 1998	ANS-26	Ronald Markovich	WG Writing Draft

ANS- 3 . 8 . 10	Criteria for Modeling Real-time Accidental Release Consequences at Nuclear Facilities	ANS-24	John Ciolek & Cliff Glantz - V C	WG Writing Draft
ANS- 40. 21	Siting, Construction, and Operation of Commercial Low Level Radioactive Waste Burial Grounds	ANS-25	William Dornsife	CC PINS Comment w/WG
ANS- 40. 35	Volume Reduction of Low-Level Radioactive Waste or Mixed Waste	ANS-27	Dennis Ferrigno & Mark Gerboth	PINS Development
ANS- 50. 1	Nuclear Safety Criteria for the Design of Stationary Light Water Reactor Plants	ANS-22	Mark Linn	WG Writing Draft
ANS- 51. 10	Auxiliary Feedwater System for Pressurized Water Reactors	ANS-22	Earnestine Johnson	WG Writing Draft
ANS- 54. 1	General Safety Design Criteria for a Liquid Sodium Reactor Nuclear Power Plants	ANS-29	George Flanagan	SB PINS Comments w/ WG
ANS- 56. 8	Containment System Leakage Testing Requirements	ANS-21	Jim Glover	WG Writing Draft
ANS- 57. 2	Design Requirements for Light Water Reactor Spent Fuel Facilities at Nuclear Power Plants	ANS-27	OPEN	CC Ballot Comment w/ WG
ANS- 57. 3	Design Requirements for New Fuel Storage Facilities at LWR Plants	ANS-27	OPEN	CC Ballot Comment w/ WG
ANS- 58. 2	Design Basis for Protection of Light Water Nuclear Power Plants Against the Effects of Postulated Pipe Rupture	ANS-24	Mahmoud Massoud	PINS Development
ANS- 58. 8	Time Response Design Criteria for Safety-Related Operator Actions	ANS-22	Patrick Salkeld	WG Writing Draft
ANS- 58. 16	Safety Classification and Design Criteria for Non- Reactor Nuclear Facilities -- for NFSC approval 4/2010	ANS-22	Pranab Guha	WG Writing Draft
ANS- 59. 3	Nuclear Safety Criteria for Control Air Systems	ANS-22	OPEN	Ballot @ CC

N16

ANS- 8 . 1	Nuclear Criticality Safety in Operations with Fissionable Materials Outside Reactors	ANS-8	Nick Brown & Doug Bowen	WG Writing Draft
ANS- 8 . 3	Criticality Accident Alarm System	ANS-8	Shean Monahan	WG Writing Draft
ANS- 8 . 10	Criteria for Nuclear Criticality Safety Controls in Operations with Shielding and Confinement	ANS-8	Linda M. Farrell	WG Writing Draft
ANS- 8 . 12	Nuclear Criticality Control and Safety of Plutonium-Uranium Fuel Mixtures Outside Reactors	ANS-8	Debdas Biswas	WG Writing Draft
ANS- 8 . 15	Nuclear Criticality Control of Selected Actinide Nuclides	ANS-8	Charles Rombough	WG Writing Draft
ANS- 8 . 19	Administrative Practices for Nuclear Criticality Safety	ANS-8	R.W. (Bill) Carson	WG Writing Draft
ANS- 8 . 20	Nuclear Criticality Safety Training	ANS-8	Ronald Knief	WG Writing Draft
ANS- 8 . 21	Use of Fixed Neutron Absorbers in Nuclear Facilities Outside Reactors	ANS-8	David Erickson	WG Writing Draft
ANS- 8 . 22	Nuclear Criticality Safety Based on Limiting and Controlling Moderators	ANS-8	Michael Crouse	PINS Development
ANS- 8 . 28	Administrative Practices for the Use of Non-Destructive Assay Measurements for Nuclear Criticality Safety	ANS-8	Jerry McKamy / Larry Berg (co-chairs)	WG Writing Draft
ANS- 8 . 29	Nuclear Criticality Safety in Fuel Reprocessing Facilities		Adolpf Garcia/N. Schira & J. Christensen - co-vice chairs	PINS @ CC

N17

ANS- 1	Conduct of Critical Experiments	ANS-1	Ted Schmidt	Ballot @ CC
ANS- 5 . 1	Decay Heat Power in Light Water Reactors	ANS-19	Ian Gauld	WG Writing Draft

ANS- 6 . 1 . 1	Neutron and Gamma-Ray Fluence-To-Dose Factors	ANS-6	Nolan Hertel & Paul Bergstrom	PINS Development
ANS- 6 . 1 . 2	Neutron and Gamma-Ray Cross Sections for Nuclear Radiation Protection Calculations for Nuclear Power Plants	ANS-6	F. Arzu Alpan	WG Writing Draft
ANS- 6 . 4 . 2	Specification for Radiation Shielding Materials	ANS-6	Steven Nathan	SB PINS Comments w/ WG
ANS- 6 . 4 . 3	Gamma-Ray Attenuation Coefficients & Buildup Factors for Engineering Materials	ANS-6	Jeffrey C. Ryman	WG Writing Draft
ANS- 10. 3	Documentation of Computer Software	ANS-10	Ted Quinn	PINS Development
ANS- 10. 7	Non-Real Time, High Integrity Software for the Nuclear Industry	ANS-10	Charles Martin	Ballot @ CC
ANS- 15. 2	Quality Control for Plate-Type Uranium-Aluminum Fuel Elements	ANS-15	John Sease/Clinton Dana Cooper	WG Writing Draft
ANS- 15. 4	Selection and Training of Personnel for Research Reactors	ANS-15	Tom Myers (per W. Richards email 10/10/06)	PINS Development
ANS- 15. 8	Quality Assurance Program Requirements for Research Reactors	ANS-15	William Schuster	WG Writing Draft
ANS- 15. 19	Shipment and Receipt of Special Nuclear Material (SNM) by Research Reactor	ANS-15	Les Foyto	WG Writing Draft
ANS- 15. 20	Criteria for the Reactor Control and Safety Systems of Research Reactors	ANS-15	Thomas Myers	PINS Development
ANS- 15. 21	Format and Content for Safety Analysis Reports for Research Reactors	ANS-15	Alexander Adams	Ballot @ CC
ANS- 19. 1	Nuclear Data Sets for Reactor Design Calculations	ANS-19	Bob Little	WG Writing Draft
ANS- 19. 5	Requirements for Reference Reactor Physics Measurements	ANS-19	Mark DeHart	CC PINS Comment w/WG
ANS- 19. 9	Delayed Neutron Parameters for Light Water Reactors	ANS-19	Mikey Brady Raap	WG Writing Draft
ANS- 19. 11	Calculation and Measurement of the Moderator Temperature Coefficient of Reactivity for Pressurized Water Reactors (for RV of 1997 issue)	ANS-19		WG Writing Draft
ANS- 19. 12	Nuclear Data for the Production of Radioisotope	ANS-19	Robert Schenter	WG Writing Draft

RISC

ANS- 58. 22	Low Power and Shutdown PRA Methodology	RISC	Don Wakefield	CC Ballot Comment w/ WG
ANS- 58. 24	Severe Accident Progression and Radiological Release (Level 2) PRA Methodology to Support Nuclear Installation Applications	RISC	Mark Leonard	CC Ballot Comment w/ WG
ANS- 58. 25	Standard for Radiological Accident Offsite Consequence Analysis (Level 3 PRA) to Support Nuclear Installation Applications	RISC	Keith Woodard	CC Ballot Comment w/ WG

Attachment N

Delinquent Standards

6/19/2012

NFSC

Designation	Title	Subcommittee	ANSI Approval Date	Extension Date	Action Needed By	Project Activity	History
ANS- 2 . 2	Earthquake Instrumentation Criteria for Nuclear Power Plants	ANS-25	11/21/2002	12/31/2010	12/31/2010	WG Writing Draft	Approved as N18.5-1974; revised 1978; revised 5/3/88. Referenced in RG 1.12. Extended to 12/31/95. Second (maximum) extension to 12/31/98. Nuppsco ballot on revision closed 9/30/97. Public review closes 11/28/97. Consensus not resolved. ANSI admin withdrew the 1988 version of this stnd on 5/19/2000. 11/21/2002- ANSI approved revision. Per Mazzola 6/04 NFSC Report -- reaffirmation should be address in 2006. 11/22/05: Per Dennis Ostrom, this standard could be written for all nuclear facilities -- C. Mazzola suggested preparing a PINS in 2006 to revise for this direction. Looking for new chair. Extension granted until 12/31/2010. Farhang Ostadan appointed WGC 12/11/08 and will lead a revision. PIINS for RV submitted to ANSI 8/18/09.
ANS- 2 . 10	Criteria for the Handling and Initial Evaluation of Records from Nuclear Power Plant Seismic Instrumentation	ANS-21	4/14/2003	4/14/2013	4/14/2013	NONE	Approved in 1979. Under revision and ballot. Extended to 7/31/86; maximum extension to 12/31/89. ANSI withdrawn on 4/90. Re-ballot on 6/19/91. Substantive changes to draft. Ballot new draft. Re-ballot due 3/19/98. 2.01-this stnd has been transferred from ANS-25 subcommittee to ANS-21. 09/30/02- sent to third ballot to NFSC. ANSI Approved - April 14, 2003; Publication Delivered: June 1, 2004. Extension granted until 12/31/2011. New WGC appointed 5/2011 - Robert Carpenter.

ANS- 3 . 4	Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants	ANS-21	7/23/2002	7/1/2010	12/31/2010	SB PINS Comments w/ WG	Approved as N546 1976; revised 1983; reaffirmed 4/18/88; revised 2/7/96. Extension until 12/31/02. Reaffirmed-ANSI approved 7/23/02 (this RF also includes the new statement to the Fwd.). Per Mike Ruby at June 04 NFSC meeting, just lost WG Chair. Action Item 11/05-07 for Tim Dennis to find new chair. Extension granted until 12/31/2010. 1/2009: New Chair B. Stevens committed to project. Last ext. granted through 7/1/2010. WGC does not feel reaffirmation is appropriate. PINS in development. PINS Vote closed on 12/9/2010 and comments sent to WGC on 12/10/2010. Bill Reuland negative vote changed to accepted on 1/7/2011. PINS sent to SB on 1/13/2011. SB PINS review closed 2/20/11 w/minimal comments provided to WGC 2/21/10. PINS submitted to ANSI on 3/15/2011.
ANS- 5 . 10	Airborne Release Fractions at Non-Reactor Nuclear Facilities	ANS-24	11/6/2006	12/31/2014	12/31/2014	NONE	Second version balloted; ballot due 9/5/97. Approved 5/11/98. First extension until 12/31/2005. (7/21/03)-Requested extension from ANSI until 12/31/2005. (8/20/03) - ANSI granted LAST extension until 5/10/2008. Reaffirmation received final approval from ANSI on 11/6/06. Working Group chair J. Mishima retired from 5.10 12/2008. October 2010 - Mukesh Gupta is the new Chair and beginning stages of establishing the working group membership.
ANS- 55. 4	Gaseous Radioactive Waste Processing Systems for Light Water Reactor Plants	ANS-22	5/14/2007		5/14/2012	NONE	N196 and N200 combined. Revisioi approved 1979. Referenced in RG 1.143. Second extension 12/31/89. 1979 standard withdrawn by ANSI in 4/90. Revision approved 7/16/93. 1st extension to 12/31/01. Reaffirmation approved 11/19/99. (7/21/03) - Requested extension from ANSI until 12/31/04. (8/20/03) - ANSI granted extension until 12/31/2004. Second extension until 12/31/07. RF ballot closed with no negative but one public comment. Pubic comment resolved. BSR-9 sent to ANSI 5/9/07. Final Approval of RF rec'd 5/14/2007.
ANS- 55. 6	Liquid Radioactive Waste Processing System for Light Water Reactor Plants	ANS-22	5/14/2007		5/14/2012	NONE	Approved 1979. Revision balloted by NUPPSCO, closed 5/11/1988. Second extension 12/31/89. 1979 standard withdrawn by ANSI in 4/9/90. Revision approved 7/16/93. 1st extension to 12/31/01. Reaffirmation approved 11/19/99. (7/21/03) - Requested extension from ANSI until 12/31/04. (8/20/03) - ANSI granted extension until 12/31/2004. Second extension granted until 12/31/07. RF Ballot close with no negatives but with a public comment. Public comment resolved. BSR-9 sent to ANSI 5/9/07. Final approval of RF rec'd 5/14/2007. ANS-22 SCC Dennis Newton agreed to initiate a RV of this standard in order to resolve comment on RF ballot of ANS-55.6. RV to be iniated. New WGC needed.

ANS- 57. 1	Design Requirements for Light Water Reactor Fuel Handling Systems	ANS-27	7/20/2005	12/31/2013	12/31/2013	NONE	Approved 1980. Withdrawn on 3/20/91. Revised 07/28/1992. Reaffirmed 08/12/1998. Per Joe Cohen (4/25/02), Don (WG Chair) is currently in the Ukraine. (8/20/03) - ANSI granted extension until 12/31/2005. Don Gardner suggested reaffirmation & Don Spellman agreed. RF ballot sent to NFSC 1/31/05 -- due 3/31/05. Neg. vote regarding references satified with use of reaffirmation statement/label. WG will be to be formed to update references and possible changes to body. A few potential WGM identified. 9/29/10: List of potential WGMs sent to Don Eggett for consideration.
ANS- 57. 5	Light Water Reactors Fuel Assembly Mechanical Design and Evaluation	ANS-27	2/28/2006	12/31/2014	12/31/2014	NONE	Approved 1978. Revised 5/14/81. Extended to 12/31/91. SSC approves charter November 1991. 1981 version withdrawn on 12/31/1991. Revision approved 2/8/96. First extension to 12/31/2003. 3/14/2003-ANSI granted ext to 12/31/2005. (7/21/03) - Requested extension from ANSI until 12/31/06. (8/20/03) - ANSI granted LAST extension until 2/7/2006. RF Ballot sent to NFSC 11/29/05. Ballot closed w/o negs. RF granted by ANSI 2/28/2006. Erratum issued in August 2010.
ANS- 57. 10	Design Criteria for Consolidation of LWR Spent Fuel	ANS-27	7/6/2006	12/31/2014	12/31/2014	NONE	Approved 12/2/87. Extended to 12/31/94. Second extension to 12/31/97. Revised 05/7/96. First extension until December 31, 2005. (7/21/03) - Requested extension from ANSI until 12/31/06. (8/20/03) - ANSI granted LAST extension until 5/6/2006. NFSC RF Ballot closed 3/29/06 with one standing negative. Recirculation ballot due 4/14/06. Orginal neg reversed, but additional neg received. RUSH LB issued 5/2/06 - due 5/4/06. BSR-9 sent to ANSI 5/5/06. Rec'd ANSI approval of RF on 7/6/06. Errata issued March 2008 for typographical errors on designations of three standards in the 1996 issuance.
ANS- 58. 11	Design Criteria for Safe Shutdown Following Selected Design Basis Events in Light Water Reactors	ANS-22	7/23/2002	7/1/2012	12/31/2010	NONE	Approved 5/10/83. Reaffirmed 02/02/1989. Under MC-1 Management. Extended to 12/31/96. SSC approves PC November 1992. Revised 7/10/95. First extension to 12/31/03. Reaffirmed 7/23/02 with new statement to the foreword. Transferred from ANS-21 to ANS-22 in 2007 NFSC restructuring. Extension granted until 12/31/2010. Open Action Item for D. Newton to find new WGC. Last extension granted through 7/1/2012.

ANS- 59. 3	Nuclear Safety Criteria for Control Air Systems	ANS-22	8/30/2002	8/1/2012	12/31/2010	Ballot @ CC	Approved 1977. Revised 09/14/84. Extended to 12/31/92. Revised 7/28/92. Draft on file dated 9/1/83. Second extension to 7/28/02. At ballot RF ballot 2/23/02. ANSI withdrew on 7/26/2002. Reaffirmed 8/30/2002. Extension granted until 12/31/2010. Standard reviewed by R. Hill. Findings sent to D. Newton/M. Ruby for consideration if RF appropriate. Last extension approved through 8/1/2012. Standard was reviewed (by Rick Hill & Dennis Newton) and determined appropriate for reaffirmation. Due to the time factor of 10th anniversary date, a 30 day ballot for reaffirmation was issued on 6/4/2012.

N16

Designation	Title	Subcommittee	ANSI Approval Date	Extension Date	Action Needed By	Project Activity	History
ANS- 8. 1	Nuclear Criticality Safety in Operations with Fissionable Materials Outside Reactors	ANS-8	5/16/2007		5/16/2012	WG Writing Draft	Initially approved as N6.1-1964 as a joint project with ASME - actually published by ASME. (Ref. in RG 3.4). Approved as N16.1-1969. Revised 1975. Revised (with ANS-8.11, N16.9 criteria incorporated) 10/7/83. Reaffirmed 11/30/88. Extended to 12/31/95. second extension to 12/31/98. Revised 9/9/98. (7/21/03) - Requested extension from ANSI until 12/31/2008. (8/20/03) - ANSI granted LAST extension until 9/8/2008. With next revision -- correct title on front page -- add "s" to name of standard. New chairs 2005: Doug Bowen/Nick Brown take over for Adolph Garcia who will remain w/ the WG as member. BSR-9 for RF sent to ANSI 5/15/07 -- Final approval granted 5/16/07. Currently being revised & PINS at ANS-8. PINS due from N16 7/25/07. CR distributed to N16 commenter. PINS sent to SB 1/15/08 due 2/15/08. PINS submitted to ANSI 4/11/08. Erratum issued to correct typo in 1998 version 5/2009.

ANS- 8 . 3	Criticality Accident Alarm System	ANS-8	6/12/2003	6/12/2011	6/12/2011	WG Writing Draft	Approved as N16.2-1969. Revised 1979. Revised (and combined with N2.3) 1986; (ref. in RG 8.12). Revised 8/29/86. Revision to ANS-8 ballot 9/10/92; closes 10/12/92. Extended to 12/31/93. 2nd extension to 12/31/95. 3rd extension to 12/31/96. Withdrawn 12/31/1996. Revised 5/28/97. ISO 7753 in file for comparison. ANSI reaffirmed on 6/12/2003. According to N16 SB 11/2004 report, revision in works. Per 11/05 Minutes, PINS form in works for revision. Work has been underway for some time on the revision w/o a PINS form. Project is currently out of compliance with ANSI's PINS requirement. New WGC 9/2007: Shean Monahan. Sent email 5/20/08 to S. Monahan regarding PINS requirement. Extension granted until 6/12/2001. N16 approved PINS for RV on 3/17/2010. PINS gained SB approved 4/20/2010 and sent to ANSI same day. 2/17/12 RF Ballot sent to N16 committee while ongoing revision is completed. N16 RF ballot closed 4/18/12 w/1-neg; CRs due 5/19/12. CR's addressed, one neg ballot was upgraded to approved. LB for reaffirmation sent to SB on 6/8/2012.
ANS- 8 . 10	Criteria for Nuclear Criticality Safety Controls in Operations with Shielding and Confinement	ANS-8	4/1/2005		4/1/2010	WG Writing Draft	Approved as N16.8-1975. Revised 9/14/83. Reaffirmed 11/30/88. First extension to 12/31/95. Second extension to 12/31/98. Reaffirmed 2/4/99. (7/21/03) - Requested extension from ANSI until 12/31/2004. (8/20/03) - ANSI granted extension until 12/31/2004. Second extensin granted until 12/31/07. Subcommittee reaffirmation ballot closed Sept. 16. Received verbal approval to sent reaffirmation to N16. Ballot sent to N16 10-28-04 due 12-17-04. BSR-8 sent to ANSI 10-29-04. Ballot extended to 1/15/05. Reaffirmation approved 4/1/05. PINS for revision approved and submitted to ANSI 1/31/06. Linda Farrell replaced Harry Felsher as WGC (some time before June 2007).

ANS- 8 . 15	Nuclear Criticality Control of Selected Actinide Nuclides	ANS-8	7/15/2005	7/15/2015	WG Writing Draft	Approved 1981. Reaffirmed 10/30/87. First extension to 12/31/94. Second extension to 12/31/97. Reaffirmed 9/12/95. First extension to 12/31/03. (7/21/03) - Requested extension from ANSI until 12/31/2005. (8/20/03) - ANSI granted LAST extension until 9/11/2005. Per John Schlesser 5/04 report -- WG convened. Per John Schlesser e-mail - working group to develop a PINS for revision and provide draft for ANS-8 ballot by June 05. 11/1/04--John Schlesser sent PINS to WGC for revision. With not enough time to process PINS and ballot revision, it was decided to reaffirm this standard first. Reaffirmation ballot sent to N16 on 4/5/05 due 6/6/05. Ballot closed 6/6/05 w/ no comments. LB sent to SB 6/22/05 -- due 7/7/05. Reaffirmation received ANSI final approval 7/15/05. Per N. Pruvost, WG still working on PINS, but should have by end of 2005. From ANS-8 11/05 minutes: WG reviewing latest draft. PINS submitted to ANS-8 listing the nuclides explicitly addressed -- goal for draft to ANS-8 in 2006. Title changed slightly for RV. PINS submitted to ANSI 9/20/06. N. Pruvost retired as WGC in 2008. C. Rombough accepted WGC position. 8/23/10: Draft issued to ANS-8 for approval w/due date of 9/30/10. Subcommittee comments with WG for resolution.
ANS- 8 . 19	Administrative Practices for Nuclear Criticality Safety	ANS-8	5/16/2005	5/16/2010	WG Writing Draft	Approved 10/1/84. Reaffirmed 8/29/89. SSC approves November 1992. Extended to 12/31/96. Revised 4/17/96. 2/18/04 - requested extension from ANSI until 12/31/06. PINS for revision approved by N16 5/10/04. PINS approved by SB 6/15/04 and sent to ANSI 6/28/04. ANS-8.19-2005 rec'd ANSI approval 5/16/05. Per ANS-8 minutes 11/05: WG discussion revision to include addition of words describing the qualifications of a peer. Received email from WGC 5/19/06 regarding revision underway. PINS for RV submitted to ANSI 11/20/07.

ANS- 8 . 20	Nuclear Criticality Safety Training	ANS-8	9/16/2005		9/16/2010	WG Writing Draft	Approved 5/20/91First extension to 12/31/98. Reaffirmed 9/20/99. 07/18/2003- Need new WG Chair. (7/21/03) - Requested extension from ANSI until 12/31/2004. (8/20/03) - ANSI granted extension until 12/31/2004. Second extension to 12/31/07 granted. Will be reviewed at 6/04 ANS meeting. 11/1/04 Ballot sent to ANS-8 for reaffirmation due 12/15/04. 12/20/04 Requested approval from SCC(McLaughlin) to send to N16. 1/13/05-Sent RF Ballot to N16 - Due Date: 3/23/05. Also sent BSR8 to ANSI. Ballot due date extended to 4/14/05. One neg vote rec'd by Bindinger. All comments sent to McLaughlin/Schlesser to resolve as no current working group chair. Ron Knief took over as chair and resolved comments. Reaffirmation approved by ANSI 9/16/2005. New PINS will be developed for revision. Per ANS-8 11/05 minutes: WG being reconstituted for revision -- meeting planned for Albuquerque in 2006. PINS issued to ANS-8 for approval 6/29/10. Comment with WG for resolution. PINS issued to N16 w/due date of 11/24/10. PINS for RV of 1991 version approved by N16 w/o comment and sent directly to SB. Comments from SB PINS review forwarded to WG on 1/19/11. 3/10/2011 PINS for the revision of ANS-8.20 were sent to ANSI.

N17

Designation	Title	Subcommittee	ANSI Approval Date	Extension Date	Action Needed By	Project Activity	History
ANS- 5 . 1	Decay Heat Power in Light Water Reactors	ANS-19	4/1/2005		4/1/2010	WG Writing Draft	1971 and 1973 drafts printed. Approved 1979. Errata sheet issued. Reaffirmed 7/17/85. Approved 8/23/94. ISO 10645 file for comparison. Requested 1st extension to 12/31/02. ANSI approved. At ballot for reaffirmation (8/01). According to SSC meeting in 11.01, this stnd was transferred to N17's ANS-19 around 1996. Therefore, the RF ballot under NFSC has been terminated. N17's ANS-19 is presently revising ANS-5.1. June 10-2003: Requested ext. to 12/04 from ANSI - ANSI approved extension until August 22, 2004 for this extension. Sent Dr. Brady-Rapp information regarding extension date - 6/13/03. PINS submitted to ANSI on 5/4/04 for revision of ANS-5.1-1994. BSR-8 submitted concurrently with N17 ballot on 10/5/04. ANSI approved 4/1/05. Per 6/2005 ANS-19 minutes: WGM working on "wish list" for next revision. Per 6/2005 minutes, WG to begin drafting a new revision. Noitified of new chair 6/2006 -- Ian Gauld replaced Mikey Brady Raap. PINS for RV of 2005 issue submitted to ANSI 2/26/08.

ANS- 6 . 3 . 1	Program for Testing Radiation Shields in Light Water Reactors (LWR)	ANS-6	4/20/2007		4/20/2012	NONE	First published as N18.9-1972. Revised 7/24/87. Extended to 12/31/94. 2nd extension to 12/31/97. Reaffirmed 1/9/98. (7/21/03) - Requested extension from ANSI until 12/31/2003. (8/20/03) - ANSI granted extension until 12/31/2003. 2/18/04 - Requested extension until 12/31/2005 from ANSI. Granted 11/9/04. ANSI granted last extension until 1/8/08. Revision planned. Tanner accepted chair position January 2005. Reaffirmation rec'd ANSI approval 4/20/07. Revision to be started.
ANS- 6 . 4	Nuclear Analysis and Design of Concrete Radiation Shielding for Nuclear Power Plants	ANS-6	9/29/2006	12/31/2014	12/31/2014	NONE	Approved 1977 (ref. in RG 1.142); Revised 3/1/85. Maintenance Due 1990. Extended to 12/31/93. Second extension to 12/31/95. Withdrawn 1995. Old N101.6-1972 (see 11.13). Revised 5/28/97. On 10/27/03, requested extension from ANSI until 12/31/2005. 2/18/04-Sent another request to ANSI for extension until 12/31/2005. Reaffirmation received ANSI approval 7/23/2004. PINS sent to ANSI 10/5/05 for revision. ANSI/ANS-6.4-2006 received ANSI final approval on 9/29/06.
ANS- 6 . 4 . 2	Specification for Radiation Shielding Materials	ANS-6	9/28/2006	12/31/2014	12/31/2014	SB PINS Comments w/ WG	Approved 5/31/85. Maintenance Due 1990. Extended to 12/31/93. Second extension to 12/31/95. Reaffirmed 5/28/97. (7/21/03) - Requested extension from ANSI until 12/31/05. (8/20/03) - ANSI granted extension until 12/31/05. Re: Reaffirmation: Rec'd Ballot from Tawfik & sent BSR-8 to ANSI for public review 4/28/04. Reaffirmation received ANSI approval 7/23/04. PINS for revision sent to ANSI 10/5/05. BSR-9 sent to ANSI 7/27/06 -- final approval received 9/28/06. Steven Nathan accepted WGC position 9/30/10. 3/21/2012 PINS for Revision of 2006 standard was sent to consensus committee (no comments recvd). 5/2/2012 PINS sent to SB for review. One comment sent to wg for review.
ANS- 6 . 6 . 1	Calculation and Measurement of Direct and Scattered Gamma Radiation from LWR Nuclear Power Plants	ANS-6	3/5/2007		3/5/2012	NONE	Approved 1/25/79. Revised 6/24/87. Extended to 12/31/94. Second extension to 12/31/97. Reaffirmed 1/9/98. (7/21/03) - Requested extension from ANSI until 12/31/05. (8/20/03) ANSI granted extension until 12/31/05. 1/28/05 e-mail from Hopkins to John Wagner urges for WG to iniatiate reaffirmation as soon as possible. ANSI granted last extension until 1/8/08. Reaffirmed approved to allow time to complete a revision. Reaffirmation received final approval by ANSI on 3/5/07. PINS for revision will have to be developed. WGC John Wagner notified ANS via email 3/11/08 to find new chair for 6.6.1. A call has gone out in the RPSD newsletter for a new chair. Project on HOLD. Richard Amato accepted WGC position 9/30/2010.

ANS- 15. 1	The Development of Technical Specifications for Research Reactors	ANS-15	4/20/2007	4/20/2012	NONE	Approved as N378- 1974. Revised 1982 (includes 15.3, 15.6, & 15.18). Revised 9/22/82. First extension to 12/31/89. Extended to 12/31/90. Revised 12/7/90. First extension to 12/31/98. Reaffirmed 12/14/99. Per 1/9/03 letter from Wade Richards: Ted Schmidt reviewed the draft standard and the comments from Univ. of Missouri, Penn State Univ. and the NRC. Ted will incorporate the committee comments and send a final copy to the chair by 1/31/03. The chair will send the standard for ANS15 balloting by 3/7/03.7/21/03) - Requested extension from ANSI until 12/31/2004. (8/20/03) - ANSI granted extension until 12/31/2004. Requested 2nd extension from ANSI until 12/31/2007. PINS submitted to ANSI 10/1/04. Revision certified by SB & final approval request to ANSI 4/16/07. Revision rec'd ANSI final approval on 4/20/07. WGC T. Schmidt anticipates that a reaffirmation will be appropriate in 2012.
ANS- 15. 8	Quality Assurance Program Requirements for Research Reactors	ANS-15	9/14/2005	9/14/2010	WG Writing Draft	Approved as N402-1976. Reaffirmed 12/15/1988. Ref. in RG 2.5. First extension to 12/31/93. Second extension to 12/31/95. Revised 9/12/95. Per Wade Richard's 1/9/03 letter: Sean O'Kelly performed a maintenance review of this standard. Sean will make the suggested revision to ANS-15.8 and send to the chair by 1/31/03. The chair will send the revised standard to ANS 15 for balloting by 3/7/03. First extension to 12/31/03. ANSI approved. (7/21/03) - Requested extension from ANSI until 12/31/2005. (8/20/03) - ANSI granted LAST extension until 9/11/2005. Per Tawfik's 9/24/04 e-mail: current plans are to reaffirm and begin the revision process next year. Project will need PINS for revision. 1-19-05 Per phone conversation w/Wade R., he feels revision w/b approved before 9/12/05 sunset date. He will do a new PINS ASAP as not enough time to get PINS/draft approved before 10th anny. RF approved by ANSI 9/14/05. PINS for RV submitted to ANSI 1/11/07. Bill Schuster replaced Sean O'Kelly as WGC ~2011.

ANS- 15. 21	Format and Content for Safety Analysis Reports for Research Reactors	ANS-15	9/29/2006	9/29/2011	Ballot @ CC	Approved 11/29/96. Per Wade Richard's 1/9/03 letter: Al Adams will perform a maintenance review on this standard and send his recommendations to the chair by 8/4/03. The chair will send the recommendations to ANS for their review at the next meeting.First extension to 12/31/2004. (7/21/03) - Requested extension from ANSI until 12/31/2006. (8/20/03) - ANSI granted LAST extension until 11/28/2006. Per ANS-15 2004 meeting minutes, revision underway. Per 1/19/05 phone call, Wade R. will do new PINS this year. Revision will not be completed before 10th anniversary so standards will be processed for reaffirmation. Reaafirmation received ANSI final approval on 9/29/06. PINS approved by N17 & sent to SB. SB PINS comments sent to WGC - due 5/13/07. WGC asked to discuss SB neg comment re: single member WG at Sept. 2007 ANS-15 meeting. Decision at 9/07 ANS-15 meeting was to put WG together. As of 5/08, working group still forming. PINS for rev. submitted to ANSI 8/6/08. 2/3/2012: Ballot for rev to 15.21-1996;R2006 was sent out to N17.

Attachment O

Status of Standards

6/19/2012

NFSC

Designation	Title	Subcommittee	Status	ANSI Approval Date	Extension Date	Action Needed By	Project Activity
ANS- 2 . 1	Guidelines for Determining the Vibratory Ground Motion for the Design of Earthquake for Nuclear Facilities	ANS-25	Inactive Project				NONE
ANS- 2 . 2	Earthquake Instrumentation Criteria for Nuclear Power Plants	ANS-25	Current ANSI/ANS	11/21/2002	12/31/2010	12/31/2010	WG Writing Draft
ANS- 2 . 3	Estimating Tornado, Hurricane, and Extreme Straight Line Wind Characteristics at Nuclear Facility Sites	ANS-25	Current ANSI/ANS	4/22/2011			NONE
ANS- 2 . 4	Guidelines for Determining Tsunami Criteria for Power Reactor Sites	ANS-25	Inactive Project				NONE
ANS- 2 . 5	Standard for Determining Meteorological Information at Nuclear Power Sites	ANS-25	Historical				NONE
ANS- 2 . 6	Guidelines for Estimating Present & Forecasting Future Population Distributions Surrounding Nuclear Facility Sites	ANS-25	Active Project				CC PINS Comment w/WG
ANS- 2 . 7	Guidelines for Assessing Capability for Surface Faulting at Power Reactor Sites	ANS-25	Historical				NONE
ANS- 2 . 8	Determining Design Basis Flooding at Power Reactor Sites	ANS-25	Active Project				WG Writing Draft
ANS- 2 . 9	Evaluation of Ground Water Supply for Nuclear Facilities	ANS-25	Active Project				WG Writing Draft
ANS- 2 . 10	Criteria for the Handling and Initial Evaluation of Records from Nuclear Power Plant Seismic Instrumentation	ANS-21	Current ANSI/ANS	4/14/2003	4/14/2013	4/14/2013	NONE
ANS- 2 . 11	Guidelines for Evaluating Site-Related Geotechnical Parameters at Nuclear Power Sites	ANS-25	Historical				NONE
ANS- 2 . 12	Guidelines for Combining Natural and External Man-Made Hazards at Power Reactor Sites	ANS-21	Historical				NONE
ANS- 2 . 13	Evaluation of Surface-Water Supplies for Nuclear Power Sites	ANS-25	Active Project				PINS Development
ANS- 2 . 14	Determination of the Shape of Response Spectra for Use in Nuclear Facilities Design	ANS-25	Inactive Project				NONE
ANS- 2 . 15	Criteria for Modeling and Calculating Atmospheric Dispersion of Routine Radiological Releases from Nuclear Facilities	ANS-24	Active Project				CC Ballot Comment w/ WG
ANS- 2 . 16	Criteria for Modeling Design-Basis Accidental Releases from Nuclear Facilities	ANS-24	Active Project				WG Writing Draft
ANS- 2 . 17	Evaluation of Subsurface Radionuclide Transport at Commercial Nuclear Power Plants	ANS-25	Current ANSI/ANS	12/23/2010		12/23/2015	NONE

ANS- 2 . 18	Standards for Evaluating Radionuclide Transport in Surface Water for Nuclear Power Sites	ANS-25	Active Project				PINS Development
ANS- 2 . 19	Guidelines for Establishing Site-Related Parameters for Site Selection and Design of an Independent Spent Fuel Storage Installation (Water Pool Type)	ANS-27	Historical				NONE
ANS- 2 . 20	Geology, Seismology, and Seismic Criteria (Tentative title)	ANS-25	Inactive Project				NONE
ANS- 2 . 21	Criteria for Assessing Atmospheric Effects on the Ultimate Heat Sink	ANS-25	Current ANSI/ANS	6/5/2012		6/5/2017	NONE
ANS- 2 . 22	Environmental Radiological Monitoring at Nuclear Facilities	ANS-25	Inactive Project				NONE
ANS- 2 . 23	Nuclear Plant Response to an Earthquake	ANS-21	Current ANSI/ANS	6/15/2009		6/15/2014	NONE
ANS- 2 . 24	Establishing Geotechnical Parameters for Evaluating Geologic Repositories for High-Level Nuclear Waste	ANS-27	Inactive Project				NONE
ANS- 2 . 25	Surveys of Terrestrial Ecology Needed to License Thermal Power Plants	ANS-25	Active Project				WG Writing Draft
ANS- 2 . 26	Categorization of Nuclear Facility Structures, Systems, and Components For Seismic Design	ANS-22	Current ANSI/ANS	5/27/2010			NONE
ANS- 2 . 27	Criteria for Investigations of Nuclear Facility Sites for Seismic Hazard Assessments	ANS-25	Current ANSI/ANS	7/31/2008		7/31/2013	NONE
ANS- 2 . 28	Nuclear Material Facility Design Against Natural Phenomena	ANS-25	Inactive Project				NONE
ANS- 2 . 29	Probabilistic Seismic Hazard Analysis	ANS-24	Current ANSI/ANS	7/31/2008		7/31/2013	NONE
ANS- 2 . 30	Assessing Capability for Surface Faulting at Nuclear Facilities	ANS-25	Active Project				WG Writing Draft
ANS- 2 . 31	Standard for Estimating Extreme Precipitation at Nuclear Facility Sites	ANS-25	Active Project				PINS @ SB
ANS- 2 . 32	Guidance on the Selection and Evaluation of Remediation Methods for Subsurface Contamination (unapproved)	ANS-27	Active Project				PINS @ CC
ANS- 3 . 1	Selection, Qualification, and Training of Personnel for Nuclear Power Plants	ANS-21	Active Project	2/4/1999	2/4/2009		WG Writing Draft
ANS- 3 . 2	Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants	ANS-21	Current ANSI/ANS	3/20/2012		3/20/2017	NONE
ANS- 3 . 3	Security for Nuclear Power Plants	ANS-26	Historical				NONE
ANS- 3 . 4	Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants	ANS-21	Current ANSI/ANS	7/23/2002	7/1/2010	12/31/2010	SB PINS Comments w/ WG
ANS- 3 . 5	Nuclear Power Plant Simulators for Use in Operator Training and Examination	ANS-21	Current ANSI/ANS	9/4/2009		9/4/2014	PINS @ SB
ANS- 3 . 6	Requirements for Preoperational and Startup Testing		Inactive Project				NONE
ANS- 3 . 7	Guide to Standard Format and Content of Emergency Plans for Nuclear Power Generating Facilities		Inactive Project				NONE
ANS- 3 . 7 . 1	Facilities and Medical Care for On-Site Nuclear Power Plant Radiological Emergencies	ANS-26	Historical				PINS Development
ANS- 3 . 7 . 2	Emergency Control Centers for Nuclear Power Plants	ANS-26	Historical				NONE
ANS- 3 . 7 . 3	Radiological Emergency Preparedness Exercises for Nuclear Power Plants	ANS-26	Historical				NONE

ANS- 3 . 8	Criteria for Establishing Emergency Response Facilities	ANS-26	Inactive Project				NONE
ANS- 3 . 8 . 1	Properties of Radiological Emergency Response Functions and Organizations for Nuclear Facilities -- for RV of 1995 version	ANS-26	Active Project				WG Writing Draft
ANS- 3 . 8 . 2	Properties of Functional and Physical Characteristics of Radiological Emergency Response Facilities at Nuclear Facilities -- for RV of 1995 Criteria for the Functional and Physical Characteristics of Radiological Emergency Response Facilities -- 1995	ANS-26	Active Project				WG Writing Draft
ANS- 3 . 8 . 3	Properties of Radiological Emergency Response Plans and Implementing Procedures and Maintaining Emergency Response Capability for Nuclear Facilities -- for RV of 1995 Criteria for Radiological Emergency Response Plans and Implementing Procedures -- 1995	ANS-26	Active Project				WG Writing Draft
ANS- 3 . 8 . 4	Criteria for Maintaining Radiological Emergency Response Capability	ANS-26	Historical				NONE
ANS- 3 . 8 . 5	Criteria for Emergency Radiological Field Monitoring, Sampling and Analysis	ANS-26	Historical				NONE
ANS- 3 . 8 . 6	Properties of the Conduct of Offsite Radiological Assessment for Emergency Response and Emergency Radiological Field Monitoring, Sampling and Analysis for Nuclear Facilities	ANS-26	Active Project				WG Writing Draft
ANS- 3 . 8 . 7	Properties of Planning, Development, Conduct, and Evaluation of Drills and Exercises for Emergency Preparedness at Nuclear Facilities -- for RV of 1998	ANS-26	Active Project	1/30/1998	1/29/2008		WG Writing Draft
ANS- 3 . 8 . 8	Criteria for Onsite Protective Actions During a Radiological Emergency	ANS-26	Inactive Project				NONE
ANS- 3 . 8 . 9	Criteria for Radiological Emergency Response Plans and Implementing Procedures for Permanently Defueled Commercial Nuclear Power Plants	ANS-23	Inactive Project				NONE
ANS- 3 . 8 . 10	Criteria for Modeling Real-time Accidental Release Consequences at Nuclear Facilities	ANS-24	Active Project				WG Writing Draft
ANS- 3 . 9	Criteria for Radiological Emergency Response Plans and Implementing Procedures for Permanently Defueled Commercial Nuclear Power Plants Management of Light Water Reactor Maintenance Programs		Inactive Project				NONE
ANS- 3 . 10	Human Factors Design in Nuclear Power Plants		Inactive Project				NONE
ANS- 3 . 11	Determining Meteorological Information at Nuclear Facilities	ANS-21	Current ANSI/ANS	12/23/2010		12/22/2010	NONE
ANS- 3 . 12. 1	Decommissioning of Nuclear Production and Utilization Facilities: - Defueled Security Plan	ANS-23	Inactive Project				NONE
ANS- 3 . 12. 2	Decommissioning of Nuclear Production and Utilization Facilities: - Defueled Safety Analysis Report and Emergency Plan	ANS-23	Inactive Project				NONE
ANS- 3 . 12. 3	Decommissioning of Nuclear Production and Utilization Facilities: Operator Training	ANS-21	Inactive Project				NONE
ANS- 4	Criteria, Control and Dynamics		Inactive Project				NONE
ANS- 4 . 1	Design Basis Criteria for Safety Systems in Nuclear Power Generating Stations		Historical				NONE
ANS- 4 . 2	(No Assignment)		Inactive Project				NONE

ANS- 4 . 3	Functional Classification and Standards for Application Functions in Nuclear Power Generating Stations		Inactive Project				NONE
ANS- 4 . 3 . 1	Functional Classification for Digital Computers in Nuclear Power Generating Stations		Inactive Project				NONE
ANS- 4 . 3 . 3	Criteria for Beta Class Digital Computers Used in Critical Control and Monitoring Applications in Nuclear Power Plants		Inactive Project				NONE
ANS- 4 . 3 . 4	Criteria for the Application of Digital Computers in Non-Safety Related Functions for Nuclear Power Generating Stations		Inactive Project				NONE
ANS- 4 . 4	Functional Design of PWR Reactivity Control Systems		Inactive Project				NONE
ANS- 4 . 5	Criteria for Accident Monitoring Functions in Light-Water-Cooled Reactors	ANS-21	Historical				NONE
ANS- 4 . 6	Functional Criteria for Data Acquisition and Recording for Transient Reconstruction in Nuclear Power Plants		Inactive Project				NONE
ANS- 5 . 2	Standard Fission-Product Yields for 235U, 238U and 239PU		Inactive Project				NONE
ANS- 5 . 4	Method for Calculating the Fractional Release of Volatile Fission Products from Oxide Fuel	ANS-24	Current ANSI/ANS	5/19/2011			NONE
ANS- 5 . 6 . 2	Post Accident Access Control and HP Facilities	ANS-21	Inactive Project				NONE
ANS- 5 . 7 . 2	Post Accident Monitoring	ANS-21	Inactive Project				NONE
ANS- 5 . 9	Design Criteria for Nuclear Power Plant Radiation Monitoring Systems	ANS-22	Inactive Project				NONE
ANS- 5 . 10	Airborne Release Fractions at Non-Reactor Nuclear Facilities	ANS-24	Current ANSI/ANS	11/6/2006	12/31/2014	12/31/2014	NONE
ANS- 7 . 60	Leakage-Rate Testing of Containment Structures for Nuclear Reactors		Inactive Project				NONE
ANS- 16 . 1	Measurement of the Leachability of Solidified Low-Level Radioactive Wastes by a Short-Term Test Procedure	ANS-24	Current ANSI/ANS	8/4/2008		8/4/2013	NONE
ANS- 18 . 1	Radioactive Source Term for Normal Operation of Light Water Reactors	ANS-24	Historical	9/21/1999	12/31/2007		WG Writing Draft
ANS- 18 . 1 . 2	Radioactive Materials in Effluents from Light-Water-Cooled Nuclear Power Plants	ANS-24	Inactive Project				NONE
ANS- 18 . 1 . 3	Monitoring of Radioactive Materials in Effluents from Light-Water-Cooled Nuclear Power Plants	ANS-24	Inactive Project				NONE
ANS- 18 . 5	Surveys of Terrestrial Ecology Needed to License Thermal Power Plants	ANS-25	Historical				NONE
ANS- 29 . 1	Operational Reactivity Management and Oversight at Light Water, Pressurized Water Power Reactors	ANS-29	Inactive Project				NONE
ANS- 40 . 4	Storage of Bottled Gases		Inactive Project				NONE
ANS- 40 . 11	Radioactive Waste Categories		Inactive Project				NONE
ANS- 40 . 12	Radioactive Waste Categories		Inactive Project				NONE
ANS- 40 . 21	Siting, Construction, and Operation of Commercial Low Level Radioactive Waste Burial Grounds	ANS-25	Active Project				CC PINS Comment w/WG
ANS- 40 . 22	Siting and Operating High-Level Waste Storage Areas		Inactive Project				NONE

ANS- 40. 23	Criteria for Acceptance of Radioactive Wastes at Federal Repositories		Inactive Project			NONE
ANS- 40. 35	Volume Reduction of Low-Level Radioactive Waste or Mixed Waste	ANS-27	Active Project			PINS Development
ANS- 40. 36	Measurement of Radionuclides in Low Level Solid Wastes	ANS-26	Inactive Project			NONE
ANS- 40. 37	Mobile Low-Level Radioactive Waste Processing Systems	ANS-27	Current ANSI/ANS	11/20/2009	11/20/2014	NONE
ANS- 41	Environmental Remediation of Radioactivity Contaminated Sites		Inactive Project			NONE
ANS- 41. 2	Criteria for Remote Sensing Techniques for Site Characterization in Environmental Remediation	ANS-23	Inactive Project			NONE
ANS- 41. 3	Determination of Soil Source Terms for Use in Risk Assessment	ANS-23	Inactive Project			NONE
ANS- 41. 4	Analytical Methods for In-Situ Y-Ray Emitters in Soil	ANS-23	Inactive Project			NONE
ANS- 41. 5	Verification and Validation of Radiological Data for Use in Waste Management and Environmental Remediation	ANS-24	Current ANSI/ANS	2/15/2012	2/15/2017	NONE
ANS- 41. 6	Performance Tests to Evaluate Solid Waste Forms for LL Radioactive Waste and MW	ANS-23	Inactive Project			NONE
ANS- 41. 7	Performance Tests to Evaluate Waste Forms and Emissions for the Thermal Treatment of LL Radioactive and MW	ANS-23	Inactive Project			NONE
ANS- 41. 8	Performance Tests to Evaluate Criteria and Specifications for a Polymer or Cement Waste Form	ANS-23	Inactive Project			NONE
ANS- 41. 9	Performance Tests to Evaluate Criteria and Specifications for Treatment of Waste by Incineration	ANS-23	Inactive Project			NONE
ANS- 50. 1	Nuclear Safety Criteria for the Design of Stationary Light Water Reactor Plants	ANS-22	Active Project			WG Writing Draft
ANS- 50. 2	HTGR Plant Solid Radwaste System (N204)		Inactive Project			NONE
ANS- 50. 3	LMFBR Gas Radwaste (N205)		Inactive Project			NONE
ANS- 50. 4	LMFBR Liquid Radwaste (N206)		Inactive Project			NONE
ANS- 50. 5	LMFBR Solid Radwaste (N207)		Inactive Project			NONE
ANS- 51	Pressurized Water Reactor Management Committee		Inactive Project			NONE
ANS- 51. 1	Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants	ANS-22	Historical			NONE
ANS- 51. 2	Safety Inspection System (N183)		Inactive Project			NONE
ANS- 51. 3	Residual Heat Removal System Design PWR (N185)		Inactive Project			NONE
ANS- 51. 4	Criteria for Safety Related Operator Actions (N660)		Inactive Project			NONE
ANS- 51. 5	Evaluation of Anticipated Transients Without Trip on Pressurized Water Reactor Plants (N661)		Inactive Project			NONE
ANS- 51. 6	Improved Reactor Shutdown Systems on Future PWR Plants (N662)		Inactive Project			NONE

ANS- 51. 7	Single Failure Criteria for PWR Fluid Systems	ANS-22	Historical			NONE
ANS- 51. 8	Revision and Addendum to Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants ANSI N18.2-1973		Historical			NONE
ANS- 51. 9	Criteria for Remote Shutdown of PWR Plants (N659)		Inactive Project			NONE
ANS- 51. 10	Auxiliary Feedwater System for Pressurized Water Reactors	ANS-22	Current ANSI/ANS	10/14/2008	10/14/2013	WG Writing Draft
ANS- 52	BWR Management Committee		Inactive Project			NONE
ANS- 52. 1	Nuclear Safety Criteria for the Design of Stationary Boiling Water Reactor Plants	ANS-22	Historical			NONE
ANS- 52. 2	Boiling Water Reactor Standby Core and Containment Heat Removal System		Inactive Project			NONE
ANS- 52. 3	Criteria for Safety-Related BWR Operator Actions		Inactive Project			NONE
ANS- 52. 5	Criteria for Remote Shutdown for Boiling Water Reactors		Inactive Project			NONE
ANS- 53	High Temperature Gas-Cooled Reactor Management Committee	ANS-28	Inactive Project			NONE
ANS- 53. 1	Nuclear Safety Design Process for Modular Helium-Cooled Reactor Plants	ANS-28	Current ANSI/ANS	12/21/2011	12/21/2016	NONE
ANS- 53. 2	Radioactive Gas Waste System for the Stationary Gas-Cooled Reactor Plant	ANS-28	Inactive Project			NONE
ANS- 53. 3	Gas Cooled Reactor Plant Reactor Core Assembly System	ANS-28	Inactive Project			NONE
ANS- 53. 4	Gas-Cooled Reactor Plant Containment System	ANS-28	Inactive Project			NONE
ANS- 53. 5	Gas-Cooled Reactor Plant Containment System	ANS-28	Inactive Project			NONE
ANS- 53. 6	Gas-Cooled Reactor Plant Reactivity Control System	ANS-28	Inactive Project			NONE
ANS- 53. 8	High Temperature Gas-Cooled Reactor Fuel Handling System Design	ANS-28	Inactive Project			NONE
ANS- 53. 9	Gas-Cooled Reactor Plant Containment Atmospheric Clean-Up System	ANS-28	Inactive Project			NONE
ANS- 53. 10	Gas-Cooled Reactor Plant Electric Power Systems	ANS-28	Inactive Project			NONE
ANS- 53. 11	Gas-Cooled Reactor Plant Protection System	ANS-28	Inactive Project			NONE
ANS- 53. 12	Gas-Cooled Reactor Plant Core Auxiliary Cooling System	ANS-28	Inactive Project			NONE
ANS- 53. 13	Stationary Gas-Cooled Reactor Plant Helium Purification System	ANS-28	Inactive Project			NONE
ANS- 53. 14	Gas-Cooled Reactor Plant Helium Storage System	ANS-28	Inactive Project			NONE
ANS- 53. 15	Design Criteria for the Reactor Cooling Water System of Gas-Cooled Reactor Plants	ANS-28	Inactive Project			NONE
ANS- 53. 16	Design Criteria for the Service Water System of Gas-Cooled Reactor Plants	ANS-28	Inactive Project			NONE
ANS- 53. 17	Gas-Cooled Reactor Plant New Fuel Storage System	ANS-28	Inactive Project			NONE
ANS- 53. 18	Gas-Cooled Reactor Plant Liquid Nitrogen System	ANS-28	Inactive Project			NONE

ANS- 53. 19	Gas-Cooled Reactor Plant Chilled Water System	ANS-28	Inactive Project			NONE
ANS- 53. 20	Gas-Cooled Reactor Plant Secondary Coolant Systems	ANS-28	Inactive Project			NONE
ANS- 53. 21	Gas-Cooled Reactor Plant Other Structures	ANS-28	Inactive Project			NONE
ANS- 53. 22	Gas-Cooled Reactor Plant Control Room	ANS-28	Inactive Project			NONE
ANS- 53. 23	Gas-Cooled Reactor Plant Multi-Unit Stations	ANS-28	Inactive Project			NONE
ANS- 53. 24	Gas-Cooled Reactor Plant Radioactive Liquid Waste Systems	ANS-28	Inactive Project			NONE
ANS- 54	Liquid Metal Fast Breeder Reactor (LMFBR)	ANS-22	Inactive Project			NONE
ANS- 54. 1	General Safety Design Criteria for a Liquid Sodium Reactor Nuclear Power Plants	ANS-29	Active Project			SB PINS Comments w/ WG
ANS- 54. 2	Design Bases for Facilities for LMFBR Spent Fuel Storage in Liquid Metal Outside the Primary Coolant Boundary	ANS-22	Historical			NONE
ANS- 54. 3	Principal Design Criteria for LMFBR Containments	ANS-22	Inactive Project			NONE
ANS- 54. 5	Requirements for Sustaining Safe Shutdown in Liquid Metal Cooled Fast Reactors	ANS-22	Inactive Project			NONE
ANS- 54. 6	LMFBR Safety Classification and Related Requirements	ANS-22	Inactive Project			NONE
ANS- 54. 7	Source Terms to be Used in Evaluation of Radiological Site Suitability for LMFBR Power Plants	ANS-22	Inactive Project			NONE
ANS- 54. 8	Liquid Metal Fire Protection in LMR Plants	ANS-22	Historical			NONE
ANS- 54. 9	Environmental Qualification of Safety Related Equipment in LMFBRs	ANS-22	Inactive Project			NONE
ANS- 54. 10	Risk Limit Criteria for LMFBR Design	ANS-22	Inactive Project			NONE
ANS- 54. 11	Application of Risk Limit Criteria for LMFBR Design	ANS-22	Inactive Project			NONE
ANS- 54. 12	Event Categorization Guidelines for LMFBR Design	ANS-22	Inactive Project			NONE
ANS- 54. 13	Requirements for Evaluating the Potential Radiological Consequences of LMFBR Radioactive Gas Process and Storage System Failures	ANS-22	Inactive Project			NONE
ANS- 55	Fuel and Radwaste		Inactive Project			NONE
ANS- 55. 1	Solid Radioactive Waste Processing System for Light-Water-Cooled Reactor Plants	ANS-22	Current ANSI/ANS	6/15/2009	6/15/2014	NONE
ANS- 55. 2	Liquid Radioactive Waste Processing System for Pressurized Water Reactor Plants		Historical			NONE
ANS- 55. 3	Boiling Water Reactor Liquid Radioactive Waste Processing Systems		Historical			NONE
ANS- 55. 4	Gaseous Radioactive Waste Processing Systems for Light Water Reactor Plants	ANS-22	Current ANSI/ANS	5/14/2007	5/14/2012	NONE
ANS- 55. 5	no title		Inactive Project			NONE
ANS- 55. 6	Liquid Radioactive Waste Processing System for Light Water Reactor Plants	ANS-22	Current ANSI/ANS	5/14/2007	5/14/2012	NONE

ANS- 56	Containment		Inactive Project				NONE
ANS- 56. 1	Containment Hydrogen Control	ANS-24	Inactive Project				NONE
ANS- 56. 2	Containment Isolation Provisions for Fluid Systems After a LOCA	ANS-22	Historical				NONE
ANS- 56. 3	Overpressure Protection of Low Pressure Systems Connected to the Reactor Coolant Pressure Boundary	ANS-22	Historical				NONE
ANS- 56. 4	Pressure and Temperature Transient Analysis for Light Water Reactor Containments	ANS-22	Historical				NONE
ANS- 56. 5	PWR and BWR Containment Spray System Design Criteria	ANS-22	Historical				NONE
ANS- 56. 6	Pressurized Water Reactor Containment Ventilation Systems	ANS-22	Historical				NONE
ANS- 56. 7	Boiling Water Reactor Containment Ventilation Systems	ANS-22	Historical				NONE
ANS- 56. 8	Containment System Leakage Testing Requirements	ANS-21	Current ANSI/ANS	8/9/2011		8/9/2016	WG Writing Draft
ANS- 56. 9	Environmental Envelopes for Light Water Reactor Nuclear Power Plants	ANS-21	Inactive Project				NONE
ANS- 56. 10	Subcompartment Pressure and Temperature Transient Analysis in LWRs	ANS-24	Historical				NONE
ANS- 56. 11	Design Criteria for Protection Against the Effects of Compartment Flooding in LWR Plants	ANS-24	Historical				NONE
ANS- 56. 12	Environmental Qualifications of Mechanical Equipment for Nuclear Power Plants		Inactive Project				NONE
ANS- 57	Fuel Management Committee		Inactive Project				NONE
ANS- 57. 1	Design Requirements for Light Water Reactor Fuel Handling Systems	ANS-27	Current ANSI/ANS	7/20/2005	12/31/2013	12/31/2013	NONE
ANS- 57. 2	Design Requirements for Light Water Reactor Spent Fuel Facilities at Nuclear Power Plants	ANS-27	Active Project				CC Ballot Comment w/ WG
ANS- 57. 3	Design Requirements for New Fuel Storage Facilities at LWR Plants	ANS-27	Active Project				CC Ballot Comment w/ WG
ANS- 57. 4	Failed Fuel Detection Systems	ANS-27	Inactive Project				NONE
ANS- 57. 5	Light Water Reactors Fuel Assembly Mechanical Design and Evaluation	ANS-27	Current ANSI/ANS	2/28/2006	12/31/2014	12/31/2014	NONE
ANS- 57. 6	Quality Assurance Program Requirements for Design and Manufacture of Fuel for Nuclear Power Plants	ANS-27	Inactive Project				NONE
ANS- 57. 7	Design Criteria for an Independent Spent Fuel Storage Installation (Water Pool Type)	ANS-27	Historical	5/28/1997	5/27/2007		NONE
ANS- 57. 8	Fuel Assembly Identification	ANS-27	Current ANSI/ANS	8/26/2011		8/26/2016	NONE
ANS- 57. 9	Design Criteria for an Independent Spent Fuel Storage Installation (Dry Type)	ANS-27	Historical				NONE
ANS- 57. 10	Design Criteria for Consolidation of LWR Spent Fuel	ANS-27	Current ANSI/ANS	7/6/2006	12/31/2014	12/31/2014	NONE
ANS- 58. 1	Plant Design Against Missiles	ANS-21	Inactive Project				NONE
ANS- 58. 2	Design Basis for Protection of Light Water Nuclear Power Plants Against the Effects of Postulated Pipe Rupture	ANS-24	Active Project				PINS Development

ANS- 58. 3	Physical Protection for Nuclear Safety-Related Systems and Components	ANS-22	Current ANSI/ANS	3/18/2008		3/18/2013	NONE
ANS- 58. 4	Criteria for Technical Specifications for Nuclear Power Stations	ANS-21	Historical				NONE
ANS- 58. 5	Probabilistic Risk Assessment	ANS-24	Inactive Project				NONE
ANS- 58. 6	Criteria for Remote Shutdown for Light Water Reactors	ANS-21	Historical				NONE
ANS- 58. 8	Time Response Design Criteria for Safety-Related Operator Actions	ANS-22	Current ANSI/ANS	8/25/2008		8/25/2013	WG Writing Draft
ANS- 58. 9	Single Failure Criteria for Light Water Reactor Safety-Related Fluid Systems	ANS-22	Current ANSI/ANS	2/24/2009		2/24/2014	NONE
ANS- 58. 10	Realistic Methods for LWR Event Analysis	ANS-24	Inactive Project				NONE
ANS- 58. 11	Design Criteria for Safe Shutdown Following Selected Design Basis Events in Light Water Reactors	ANS-22	Current ANSI/ANS	7/23/2002	7/1/2012	12/31/2010	NONE
ANS- 58. 12	Criteria for Availability of AC Power at Light Water Reactor Power Plants	ANS-21	Inactive Project				NONE
ANS- 58. 14	Safety and Pressure Integrity Classification Criteria for Light Water Reactors	ANS-22	Current ANSI/ANS	4/22/2011		4/22/2016	NONE
ANS- 58. 15	Criteria for Severe Accident Evaluation	ANS-24	Inactive Project				NONE
ANS- 58. 16	Safety Classification and Design Criteria for Non- Reactor Nuclear Facilities -- for NFSC approval 4/2010	ANS-22	Active Project				WG Writing Draft
ANS- 58. 20	Program for Collection of Reliability Data on Nuclear Power Plant Protection and Engineered Safety Systems and Components		Historical				NONE
ANS- 59			Inactive Project				NONE
ANS- 59. 1	Nuclear Safety Related Cooling Water Systems for Light Water Reactors	ANS-22	Historical				NONE
ANS- 59. 2	Safety Criteria for HVAC Systems Located Outside Primary Containment	ANS-22	Historical				NONE
ANS- 59. 3	Nuclear Safety Criteria for Control Air Systems	ANS-22	Current ANSI/ANS	8/30/2002	8/1/2012	12/31/2010	Ballot @ CC
ANS- 59. 4	Generic Requirements for Light Water Nuclear Power Plant Fire Protection		Historical				NONE
ANS- 59. 6	Requirements for Fire Hazard Analysis at Light Water Nuclear Power Plants		Inactive Project				NONE
ANS- 59. 7	Control Room HVAC		Inactive Project				NONE
ANS- 59. 51	Fuel Oil Systems for Safety-Related Emergency Diesel Generators	ANS-22	Current ANSI/ANS	10/4/2007		10/4/2012	NONE
ANS- 59. 52	Lubricating Oil Systems for Safety-Related Emergency Diesel Generators	ANS-22	Current ANSI/ANS	10/4/2007		10/4/2012	NONE
ANS- 59. 53	Starting Air Systems for Standby Diesel Generators	ANS-22	Inactive Project				NONE
ANS- 59. 54	Combustion Air Systems for Standby Diesel Generators	ANS-22	Inactive Project				NONE
ANS- 59. 55	Coolant System for Standby Diesel Generators	ANS-22	Inactive Project				NONE

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Designation	Title	Subcommittee	Status	ANSI Approval Date	Extension Date	Action Needed By	Project Activity
ANS- 8	Fissionable Materials Outside Reactors		Inactive Project				NONE
ANS- 8 . 1	Nuclear Criticality Safety in Operations with Fissionable Materials Outside Reactors	ANS-8	Current ANSI/ANS	5/16/2007		5/16/2012	WG Writing Draft
ANS- 8 . 2	Proposed Standard on Computer Codes -- never named	ANS-8	Inactive Project				NONE
ANS- 8 . 3	Criticality Accident Alarm System	ANS-8	Current ANSI/ANS	6/12/2003	6/12/2011	6/12/2011	WG Writing Draft
ANS- 8 . 4	Proposed Standard on Shipping Containers -- not named	ANS-8	Inactive Project				NONE
ANS- 8 . 5	Use of Borosilicate-Glass Raschig Rings as a Neutron Absorber in Solutions of Fissile Material	ANS-8	Current ANSI/ANS	2/23/2012		2/23/2017	NONE
ANS- 8 . 6	Safety in Conducting Subcritical Neutron-Multiplication Measurements in Situ	ANS-8	Current ANSI/ANS	11/16/2010		11/16/2015	NONE
ANS- 8 . 7	Nuclear Criticality Safety in the Storage of Fissile Materials	ANS-8	Current ANSI/ANS	2/23/2012		2/23/2017	NONE
ANS- 8 . 7 . 1	Storage of Fissile Material	ANS-8	Inactive Project				NONE
ANS- 8 . 8	Criticality Safety Limits for Special Applications	ANS-8	Inactive Project				NONE
ANS- 8 . 9	Nuclear Criticality Safety Guide for Pipe Intersections Containing Aqueous Solutions of Enriched Uranyl Nitrate	ANS-8	Historical				NONE
ANS- 8 . 9 . 1	Nuclear Criticality Safety Criteria for Steel-Pipe Intersections Containing Aqueous Solutions of Fissile Materials	ANS-8	Historical				NONE
ANS- 8 . 10	Criteria for Nuclear Criticality Safety Controls in Operations with Shielding and Confinement	ANS-8	Current ANSI/ANS	4/1/2005		4/1/2010	WG Writing Draft
ANS- 8 . 11	Validation of Calculational Methods for Nuclear Criticality Safety	ANS-8	Historical				NONE
ANS- 8 . 12	Nuclear Criticality Control and Safety of Plutonium-Uranium Fuel Mixtures Outside Reactors	ANS-8	Current ANSI/ANS	2/11/2011		2/11/2016	WG Writing Draft
ANS- 8 . 13. 1	Criteria for Establishing and Applying a Solid Angle Method for Nuclear Criticality Safety		Inactive Project				NONE
ANS- 8 . 13. 2	Guide for Evaluating Interaction Between Units of Low Enriched Uranium Using the Surface Density Method		Inactive Project				NONE
ANS- 8 . 14	Use of Soluble Neutron Absorbers in Nuclear Facilities Outside Reactors	ANS-8	Current ANSI/ANS	11/16/2011		11/16/2016	NONE
ANS- 8 . 15	Nuclear Criticality Control of Selected Actinide Nuclides	ANS-8	Current ANSI/ANS	7/15/2005		7/15/2015	WG Writing Draft
ANS- 8 . 16	Maximum Subcritical Limits for Slightly Enriched Uranium Compounds Processed in LWR Fuel Cycle	ANS-8	Inactive Project				NONE
ANS- 8 . 17	Criticality Safety Criteria for the Handling, Storage and Transportation of LWR Fuel Outside Reactors	ANS-8	Current ANSI/ANS	9/14/2009		9/14/2014	NONE

ANS- 8 . 18	Use of Chlorinated Polyvinyl Chloride (CPVC) as a Neutron Absorber	ANS-8	Inactive Project				NONE
ANS- 8 . 19	Administrative Practices for Nuclear Criticality Safety	ANS-8	Current ANSI/ANS	5/16/2005		5/16/2010	WG Writing Draft
ANS- 8 . 20	Nuclear Criticality Safety Training	ANS-8	Current ANSI/ANS	9/16/2005		9/16/2010	WG Writing Draft
ANS- 8 . 21	Use of Fixed Neutron Absorbers in Nuclear Facilities Outside Reactors	ANS-8	Current ANSI/ANS	5/19/2011		5/19/2016	WG Writing Draft
ANS- 8 . 22	Nuclear Criticality Safety Based on Limiting and Controlling Moderators	ANS-8	Current ANSI/ANS	11/11/2011		11/11/2016	PINS Development
ANS- 8 . 23	Nuclear Criticality Accident Emergency Planning and Response	ANS-8	Current ANSI/ANS	5/31/2012		5/31/2017	NONE
ANS- 8 . 24	Validation of Neutron Transport Methods for Nuclear Criticality Safety Calculations	ANS-8	Current ANSI/ANS	5/31/2012		5/31/2017	NONE
ANS- 8 . 25	Development of Nuclear Criticality Safety Related Postings	ANS-8	Inactive Project				NONE
ANS- 8 . 26	Criticality Safety Engineer Training and Qualification Program	ANS-8	Current ANSI/ANS	5/31/2012		5/31/2017	NONE
ANS- 8 . 27	Burnup Credit for LWR Fuel	ANS-8	Current ANSI/ANS	8/14/2008		8/14/2013	NONE
ANS- 8 . 28	Administrative Practices for the Use of Non-Destructive Assay Measurements for Nuclear Criticality Safety	ANS-8	Active Project				WG Writing Draft
ANS- 8 . 29	Nuclear Criticality Safety in Fuel Reprocessing Facilities		Active Project				PINS @ CC

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Designation	Title	Subcommittee	Status	ANSI Approval Date	Extension Date	Action Needed By	Project Activity
ANS- 1	Conduct of Critical Experiments	ANS-1	Current ANSI/ANS	10/11/2007		10/11/2012	Ballot @ CC
ANS- 5	Energy and Fission Product Release, a management committee of NUPPSCO		Inactive Project				NONE
ANS- 5 . 1	Decay Heat Power in Light Water Reactors	ANS-19	Current ANSI/ANS	4/1/2005		4/1/2010	WG Writing Draft
ANS- 5 . 3	Fission Product Release to the Coolant of Light Water Reactors from Failed or Defective Fuel		Inactive Project				NONE
ANS- 5 . 6	Radiation Protection Design Criteria		Inactive Project				NONE
ANS- 5 . 6 . 1	Criteria for Accident Shielding		Inactive Project				NONE
ANS- 5 . 7 . 1	Post Accident Sampling		Inactive Project				NONE
ANS- 5 . 8	Delayed Neutron Data		Inactive Project				NONE
ANS- 6	Radiation Protection and Shielding	ANS-6	Inactive Project				NONE
ANS- 6 . 1 . 1	Neutron and Gamma-Ray Fluence-To-Dose Factors	ANS-6	Active Project				PINS Development
ANS- 6 . 1 . 2	Neutron and Gamma-Ray Cross Sections for Nuclear Radiation Protection Calculations for Nuclear Power Plants	ANS-6	Current ANSI/ANS	2/23/2009		2/23/2014	WG Writing Draft

ANS- 6 . 2 . 1	Shielding Benchmark Problems	ANS-6	Inactive Project				NONE
ANS- 6 . 2 . 2	Benchmark Problems for Radiation Energy Spectra Unfolding		Inactive Project				NONE
ANS- 6 . 3 . 1	Program for Testing Radiation Shields in Light Water Reactors (LWR)	ANS-6	Current ANSI/ANS	4/20/2007		4/20/2012	NONE
ANS- 6 . 4	Nuclear Analysis and Design of Concrete Radiation Shielding for Nuclear Power Plants	ANS-6	Current ANSI/ANS	9/29/2006	12/31/2014	12/31/2014	NONE
ANS- 6 . 4 . 2	Specification for Radiation Shielding Materials	ANS-6	Current ANSI/ANS	9/28/2006	12/31/2014	12/31/2014	SB PINS Comments w/ WG
ANS- 6 . 4 . 3	Gamma-Ray Attenuation Coefficients & Buildup Factors for Engineering Materials	ANS-6	Active Project				WG Writing Draft
ANS- 6 . 5	Glossary of Terms in Shielding and Dosimetry		Inactive Project				NONE
ANS- 6 . 6 . 1	Calculation and Measurement of Direct and Scattered Gamma Radiation from LWR Nuclear Power Plants	ANS-6	Current ANSI/ANS	3/5/2007		3/5/2012	NONE
ANS- 6 . 6 . 2	Standard on Neutron Air Scattering		Inactive Project				NONE
ANS- 6 . 7 . 1	Radiation Zoning for Design of Nuclear Power Plants		Inactive Project				NONE
ANS- 6 . 7 . 2	Radiation Zoning of LWR Plants for Accident Conditions		Inactive Project				NONE
ANS- 6 . 8 . 1	Location and Design Criteria for Area Radiation Monitoring Systems for Light Water Nuclear Reactors (under ANS-5)	ANS-5	Historical				NONE
ANS- 6 . 8 . 2	Selection of and Design Criteria for Continuous Process and Effluent Radiation Monitors for Light Water Reactors (under ANS-5)	ANS-5	Inactive Project				NONE
ANS- 6 . 9	Criteria for Post Accident Radiological Control	ANS-6	Inactive Project				NONE
ANS- 6 . 9	Designing for Post-Accident Radiological Conditions		Inactive Project				NONE
ANS- 7 . 4 . 3	Standard Criteria for Digital Computers in Safety Systems of Nuclear Power Generating Stations		Historical				NONE
ANS- 10	Mathematics and Computation		Inactive Project				NONE
ANS- 10 . 2	Portability of Scientific and Engineering Software	ANS-10	Current ANSI/ANS	8/14/2009		8/14/2014	NONE
ANS- 10 . 3	Documentation of Computer Software	ANS-10	Active Project				PINS Development
ANS- 10 . 4	Verification and Validation of Non-Safety-Related Scientific and Engineering Computer Programs for the Nuclear Industry	ANS-10	Current ANSI/ANS	10/28/08		10/28/2013	NONE
ANS- 10 . 5	Accommodating User Needs in Scientific and Engineering Computer Software Development	ANS-10	Current ANSI/ANS	11/17/2011		11/17/2016	NONE
ANS- 10 . 6	Guidelines for Tailoring Computer Standards to the Creation and Control of Nuclear Industry Software		Inactive Project				NONE
ANS- 10 . 7	Non-Real Time, High Integrity Software for the Nuclear Industry	ANS-10	Active Project				Ballot @ CC
ANS- 14	Fast Pulse Reactors	ANS-14	Inactive Project				NONE
ANS- 14 . 1	Operation of Fast Pulse Reactors	ANS-14	Current ANSI/ANS	10/27/2009		10/27/2014	NONE

ANS- 15	Operations of Research Reactors	ANS-15	Inactive Project				NONE
ANS- 15. 1	The Development of Technical Specifications for Research Reactors	ANS-15	Current ANSI/ANS	4/20/2007		4/20/2012	NONE
ANS- 15. 2	Quality Control for Plate-Type Uranium-Aluminum Fuel Elements	ANS-15	Current ANSI/ANS	3/23/2009		3/23/2014	WG Writing Draft
ANS- 15. 3	Records and Reports for Research Reactors	ANS-15	Inactive Project				NONE
ANS- 15. 4	Selection and Training of Personnel for Research Reactors	ANS-15	Current ANSI/ANS	8/17/2007		8/17/2012	PINS Development
ANS- 15. 5	Never Titled		Inactive Project				NONE
ANS- 15. 6	Review of Experiments for Research Reactors		Inactive Project				NONE
ANS- 15. 7	Research Reactor Site Evaluation	ANS-15	Historical				NONE
ANS- 15. 8	Quality Assurance Program Requirements for Research Reactors	ANS-15	Current ANSI/ANS	9/14/2005		9/14/2010	WG Writing Draft
ANS- 15. 9	Never Titled	ANS-15	Inactive Project				NONE
ANS- 15. 10	Decommissioning of Research Reactors	ANS-15	Historical				NONE
ANS- 15. 11	Radiation Protection at Research Reactors	ANS-15	Current ANSI/ANS	10/8/2009		10/8/2014	NONE
ANS- 15. 12	Design Objectives for and Monitoring of Systems Controlling Research Reactor Effluents	ANS-15	Historical				NONE
ANS- 15. 14	Design Objectives for and Monitoring of Systems Controlling Research Reactor Effluents	ANS-15	Inactive Project				NONE
ANS- 15. 15	Criteria for the Reactor Safety Systems of Research Reactors	ANS-15	Historical				NONE
ANS- 15. 16	Emergency Planning for Research Reactors	ANS-15	Current ANSI/ANS	9/23/2008		9/23/2013	NONE
ANS- 15. 17	Fire Protection Program Criteria for Research Reactors	ANS-15	Active Project	5/3/2000	5/3/2010		NONE
ANS- 15. 18	Administrative Controls for Research Reactors	ANS-15	Historical				NONE
ANS- 15. 19	Shipment and Receipt of Special Nuclear Material (SNM) by Research Reactor	ANS-15	Active Project				WG Writing Draft
ANS- 15. 20	Criteria for the Reactor Control and Safety Systems of Research Reactors	ANS-15	Active Project				PINS Development
ANS- 15. 21	Format and Content for Safety Analysis Reports for Research Reactors	ANS-15	Current ANSI/ANS	9/29/2006		9/29/2011	Ballot @ CC
ANS- 19	Physics of Reactor Design	ANS-19	Inactive Project				NONE
ANS- 19. 1	Nuclear Data Sets for Reactor Design Calculations	ANS-19	Current ANSI/ANS	6/17/2011		6/17/2016	WG Writing Draft
ANS- 19. 2	Definitions of Reactor Physics Terms and Parameters	ANS-19	Inactive Project				NONE
ANS- 19. 2 . 1	Terms and Definitions for Breeder Reactor Systems	ANS-19	Inactive Project				NONE
ANS- 19. 3	Steady-State Neutronics Methods for Power Reactor Analysis	ANS-19	Current ANSI/ANS	8/26/2011		8/26/2016	NONE
ANS- 19. 3 . 4	The Determination of Thermal Energy Deposition Rates in Nuclear Reactors	ANS-19	Current ANSI/ANS	10/31/2008		10/31/2013	NONE

ANS- 19. 4	A Guide for Acquisition and Documentation of Reference Power Reactor Physics Measurements for Nuclear Analysis Verification	ANS-19	Historical	5/3/2000	5/3/2010		NONE
ANS- 19. 5	Requirements for Reference Reactor Physics Measurements	ANS-19	Active Project				CC PINS Comment w/WG
ANS- 19. 6 . 1	Reload Startup Physics Tests for Pressurized Water Reactors	ANS-19	Current ANSI/ANS	1/13/2011		11/29/2010	NONE
ANS- 19. 7	Calculation of Doppler Reactivity for Use in Thermal Light Water Reactor Safety Analysis (New)	ANS-19	Inactive Project				NONE
ANS- 19. 8	Fission Product Yields for 235U, 238U, and 239P	ANS-19	Active Project				NONE
ANS- 19. 9	Delayed Neutron Parameters for Light Water Reactors	ANS-19	Active Project				WG Writing Draft
ANS- 19. 10	Methods for Determining Neutron Fluence in BWR and PWR Pressure Vessel and Reactor Internals	ANS-19	Current ANSI/ANS	2/24/2009		2/24/2014	NONE
ANS- 19. 11	Calculation and Measurement of the Moderator Temperature Coefficient of Reactivity for Pressurized Water Reactors (for RV of 1997 issue)	ANS-19	Current ANSI/ANS	6/17/2011		6/17/2016	WG Writing Draft
ANS- 19. 12	Nuclear Data for the Production of Radioisotope	ANS-19	Active Project				WG Writing Draft
ANS- 54. 4	Nonmetallic Thermal Insulation for Austenitic Stainless Steel in LMFBRs		Inactive Project				NONE
ANS- 58. 13	Design for Post-Accident Access External to LWR Primary Reactor Containments	ANS-5	Inactive Project				NONE

RISC

Designation	Title	Subcommittee	Status	ANSI Approval Date	Extension Date	Action Needed By	Project Activity
ANS- 58. 21	External-Events PRA Methodology	RISC	Historical	3/1/2007		3/1/2012	NONE
ANS- 58. 22	Low Power and Shutdown PRA Methodology	RISC	Active Project				CC Ballot Comment w/ WG
ANS- 58. 23	Fire PRA Methodology	RISC	Historical	11/20/2007			CC Ballot Comment w/ WG
ANS- 58. 24	Severe Accident Progression and Radiological Release (Level 2) PRA Methodology to Support Nuclear Installation Applications	RISC	Active Project				CC Ballot Comment w/ WG
ANS- 58. 25	Standard for Radiological Accident Offsite Consequence Analysis (Level 3 PRA) to Support Nuclear Installation Applications	RISC	Active Project				CC Ballot Comment w/ WG

None

Designation	Title	Subcommittee	Status	ANSI Approval Date	Extension Date	Action Needed By	Project Activity
ANS-			Inactive Project				NONE
ANS-							NONE

ANS- 7 . 20	Proposed Guide for the Design of a Nuclear Pool Facility -- draft	ANS-7	Inactive Project	NONE
ANS- 9	Glossary of Terms in Nuclear Science and Technology		Historical	NONE
ANS- 9 . 1	Health Physics		Inactive Project	NONE
ANS- 9 . 2	Shielding		Inactive Project	NONE
ANS- 9 . 3	Regulatory Guide		Inactive Project	NONE
ANS- 9 . 4	Utility		Inactive Project	NONE
ANS- 9 . 5	Safeguards		Inactive Project	NONE
ANS- 9 . 6	Glossary Liaison		Inactive Project	NONE
ANS- 9 . 7	Special Activities		Inactive Project	NONE
ANS- 9 . 8	Fusion Term		Inactive Project	NONE
ANS- 10. 1	Nuclear Reactor Classification System		Historical	NONE
ANS- 11	Design Guides for Radioactive Materials Handling Facility and Specialized Equipment		Inactive Project	NONE
ANS- 11. 1	General Criteria for Design, Construction, Operation, Maintenance, and Decommissioning for Radioactive Materials Handling Facilities		Inactive Project	NONE
ANS- 11. 2			Inactive Project	NONE
ANS- 11. 3	Shielding Wall Service Penetrations		Inactive Project	NONE
ANS- 11. 4	Direct View Windows		Inactive Project	NONE
ANS- 11. 6	Direct Viewing/TV-Audio		Inactive Project	NONE
ANS- 11. 7	Access Doors and Transfer Devices for Personnel and Equipment		Inactive Project	NONE
ANS- 11. 8	Illumination		Inactive Project	NONE
ANS- 11. 9	Manipulators, Auxilliary Tools and Remote Handling Devices		Inactive Project	NONE
ANS- 11. 11			Inactive Project	NONE
ANS- 11. 12	Hot Cell Atmosphere Control Systems		Inactive Project	NONE
ANS- 11. 13	In-Cell Utility Requirements		Historical	NONE
ANS- 11. 13	Concrete Radiation Shields		Historical	NONE
ANS- 11. 14	Design Guide for Fire Prevention, Detection and Control for Radioactive Materials Handling Facilities		Inactive Project	NONE
ANS- 11. 15	Wall Finishes and Protective Coatings		Inactive Project	NONE
ANS- 11. 16	Gloveboxes		Inactive Project	NONE

ANS- 11. 17	Operations and Maintenance of Radioactive Materials Handling Facilities	Inactive Project	NONE
ANS- 11. 18	Decontamination and Decommissioning	Inactive Project	NONE
ANS- 13		Inactive Project	NONE
ANS- 16	Isotopes and Radiation	Inactive Project	NONE
ANS- 18	Environmental Impact Evaluation	Inactive Project	NONE
ANS- 18. 2	Environmental Monitoring and Data Evaluation	Inactive Project	NONE
ANS- 18. 2 . 1	Methods for Inferring Environmental Doses	Inactive Project	NONE
ANS- 18. 2 . 2	Specific Environmental Monitoring Program to Assess Operational Dose from LWR Power Reactors	Inactive Project	NONE
ANS- 18. 3 . 1	Entrainment: Guide to Steam Electric Power Plant Cooling System Siting, Design and Operation for Controlling Damage to Aquatic Organisms	Inactive Project	NONE
ANS- 18. 3 . 2	Cold Shock: Guide to Steam Electric Power Plant Cooling System Siting, Design and Operation for Controlling Damage to Aquatic Organisms	Inactive Project	NONE
ANS- 18. 3 . 3	Entrapment/Impingement: Guide to Steam Electric Power Plant Cooling System Siting, Design and Operation for Controlling Damage to Aquatic Organisms at Water Intake Structures	Inactive Project	NONE
ANS- 18. 4	Aquatic Ecological Surveys Required for Siting, Design, and Operation of Thermal Power Plants	Inactive Project	NONE
ANS- 18. 6	Discharge of Thermal Effluents into Surface Waters	Inactive Project	NONE
ANS- 18. 7	Control and Monitoring of the Discharge of Chemicals	Inactive Project	NONE
ANS- 18. 8	Guidelines for Environmental and Economic Analysis of the Regional Effects of Power Facilities	Inactive Project	NONE
ANS- 40. 6	Design Guide for a Radioisotope Laboratory (Type B)	Inactive Project	NONE
ANS- 40. 31	Collection and Storage of Waste for Disposal at Disposal Sites	Inactive Project	NONE
ANS- 40. 32	Compaction of Wastes for Disposal at Disposal Sites	Inactive Project	NONE
ANS- 60	Power Plant Productivity Definitions	Inactive Project	NONE