From: "Pat Schroeder" <PSchroeder@ans.org>
To: <jxu1@nrc.gov>, <NRCREP@nrc.gov>
Date: 10/20/2006 5:02:26 PM
Subject: DG-1145 Comments from ANS Standards Committee

To Whom It May Concern,

Please find attached DG-1145 comments and input form the American Nuclear Society's Standards Committee.

Regards,
Pat

Patricia Schroeder
Standards Administrator
American Nuclear Society
555 North Kensington Avenue
LaGrange Park, Illinois
60526 USA

Tel: 708/579-8269
Fax: 708/352-6464
E-mail: pschroeder@ans.org

9/07/06
71FR52826
(3)

RECEIVED
2006 OCT 23 PM 4:05
RULES AND DIRECTIVES BRANCH USNRC

CC: "Blanca Hinojosa" <BHinojosa@ans.org>, "Harry Bradley" <hbradley@ans.org>, "Mary Beth Gardner" <mgardner@ans.org>, <Richard.Black@eh.doe.gov>, <cag@nrc.gov>, <NPK@nrc.gov>, <SpellmanDJ@ornl.gov>

These comments same notice 71FR52826 (9/7/06)

SUNSI Review Complete
Template = ADM-013

E-RIDS = ADM-03
Add = E. Duncan (EKD1)

Mail Envelope Properties (45393952.E15 : 8 : 52757)

Subject: DG-1145 Comments from ANS Standards Committee
Creation Date 10/20/2006 3:56:17 PM
From: "Pat Schroeder" <PSchroeder@ans.org>

Created By: PSchroeder@ans.org

Recipients
nrc.gov
OWGWPO02.HQGWDO01
CAG CC (Carol Gallagher)

ornl.gov
SpellmanDJ CC

nrc.gov
OWGWPO04.HQGWDO01
NPK CC (N P Kadambi)

eh.doe.gov
Richard.Black CC

ans.org
mgardner CC (Mary Beth Gardner)
hbradley CC (Harry Bradley)
BHinojosa CC (Blanca Hinojosa)

nrc.gov
TWGWPO01.HQGWDO01
NRCREP

nrc.gov
TWGWPO04.HQGWDO01
JXU1 (Jennifer Uhle)

Post Office	Route
OWGWPO02.HQGWDO01	nrc.gov
	ornl.gov
OWGWPO04.HQGWDO01	nrc.gov
	eh.doe.gov
	ans.org
TWGWPO01.HQGWDO01	nrc.gov
TWGWPO04.HQGWDO01	nrc.gov

Files	Size	Date & Time
MESSAGE	345	10/20/2006 3:56:17 PM
DG 1145 Letter & Input.pdf	49098	
Mime.822	69234	

Options

Expiration Date:	None
Priority:	Standard
ReplyRequested:	No
Return Notification:	None
Concealed Subject:	No
Security:	Standard

Junk Mail Handling Evaluation Results

Message is eligible for Junk Mail handling
This message was not classified as Junk Mail

Junk Mail settings when this message was delivered

Junk Mail handling disabled by User
Junk Mail handling disabled by Administrator
Junk List is not enabled
Junk Mail using personal address books is not enabled
Block List is not enabled

Standards Committee

555 North Kensington Avenue
La Grange Park, Illinois
60526 USA

Tel: +1 708 579 8269
Fax: +1 708 352 6464
Email: standards@ans.org
www.ans.org

October 20, 2006

Rules and Directives Branch
Office of Administration
US Nuclear Regulatory Commission
11555 Rockville Pike
Rockville MD 20852

Dear Sir:

Subject: American Nuclear Society (ANS) Standards Committee Comments and Input to DG-1145, "Combined License Applications for Nuclear Power Plants (LWR Edition)"

The American Nuclear Society (ANS) Standards Committee appreciates the opportunity to provide comments and input into this important draft regulatory guidance, as published in *Federal Register/Vol. 71, No. 173, pp 52826-52827*. The following consensus committees have found opportunities for the USNRC to endorse ANS standards that could significantly improve the effectiveness and efficiency of the regulatory guidance when it is issued in final form:

I. N17, Research Reactors, Reactor Physics, Radiation Shielding & Computational Methods;

II. NFSC, Nuclear Facilities Standards Committee;

III. RISC, Risk Informed Standards Committee.

ANS understands that DG-1145 is an update to the existing Regulatory Guide 1.70. On a historical note, current licensees of operating reactors have routinely used ANS standards to meet the provisions of RG 1.70 even though the guidance does not specifically endorse the standards in all cases. It is hoped that the next version of DG-1145 will correct this situation.

The enclosed tabulation provides a listing of the consensus committee, the subcommittee that has cognizance over the subject matter, the section of DG-1145, the relevant ANS standard, and some notes regarding the history or the current status. It should be evident that many standards are being revised for the same reason that DG-1145 is important for the renewed activity in the nuclear industry, that is, to provide the infrastructure for the new LWR plants.

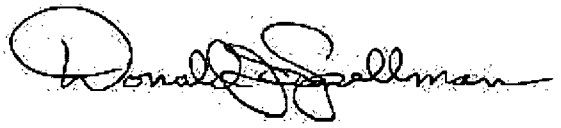
In 2005, the ANS Standards Board implemented a new criteria that recommended all ANS consensus committees strongly consider that, where possible, development and update of ANS standards should be written with performance-based, risk-informed, and technology neutral considerations in mind. If deterministic criteria were still necessary to meet regulatory requirements, those criteria should remain. Since 2005, several new and revised standards have been developed in this format. Some examples of completed standards are ANS-2.26, ANS-2.27, and ANS-3.11. Others in current development are ANS-51.1, ANS-52.1, and ANS-53.1, which are the safety criteria for the design of PWRs, BWRs, and MHTGRs respectively.

These fundamental safety criteria standards are felt to be critical to the resurgence of nuclear power in the United States and elsewhere.

It should be noted that standards require constant maintenance in a cycle of reaffirmation and revision. When standards are withdrawn, it is not necessarily for reason of technical or other deficiency. It is often because the incentive to expend volunteer resources for revision could be limited particularly if the needs of design and operation requirements have already been fulfilled. In the past three years, the ANS Standards Committee has also benefited from the nuclear resurgence and more volunteers are available and organizations have been streamlined to meet the future needs of the industry. ANS is very anxious to support NRC in its efforts to strengthen the foundation for new nuclear power plants and ancillary facilities.

A key issue is recognized to be the length of time and resources required for development and issuance of a standard, and thereafter, its review by the NRC in the endorsement process. During the early days of the current generation of operating nuclear power plants, ANS had supported early delivery of standards through a mechanism by which the regulator and industry benefited from draft standards that had fulfilled the most important elements of the consensus process. This process was known as "standards for trial use" that has actually fell into disuse in the recent past. It is suggested that NRC might consider the advantage of trial use standards from ANS and other Standards Developing Organizations. We would be happy to discuss these potential advantages at your convenience.

Sincerely,



Donald J. Spellman, Vice Chairman
American Nuclear Society Standards Board

Attachment

C: Dr. N. Prasad Kadambi, Chairman ANS Standards Board
Dr. Jennifer Uhle, NRC Standards Executive
Mr. Richard Black, DOE Standards Executive
Dr. Harry F. McFarlane, President, ANS
Mr. Harry A. Bradley, ANS Executive Director

DG 1145 SECTION	ANS STANDARD	COMMENTS/STATUS
NFSC/ANS-21		
C.I.17.5.1 COL Applicant QA Program Responsibilities	ANSI/ANS-3.2-2006, Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants	Previously endorsed as N18.7, redesignated ANS-3.2. Current version approved 2006.
NFSC/ANS-22	General Comment for ANS-22: Direct reference to ANS standard is appropriate for any of the standards. This is especially true for ANS-58.14.	
C.I.3.2.2 System Quality Group Classification	ANS-58.14-1993, Safety and Pressure Integrity Classification Criteria for Light Water Reactors	Withdrawn standard being revised. This standard is mentioned in the GE ESBWR Design Control Document of Standards Design Certification and CI 6.3.2.3.
C.I.3.2.2 System Quality Group Classification	ANS-51.1-1983 (R1988), Nuclear Safety Criteria for the Design of Stationary PWR Plants, and ANS-52.1-1983 (R1988), Nuclear Safety Criteria for the Design of Stationary BWR Plants	Both standards were withdrawn but revisions are planned.
C.I.11.2 Liquid Waste Management System	ANSI/ANS-55.6-1993 (R1999), Liquid Radioactive Waste Processing System for Light Water Reactor Plants	Current standard mentioned in RG 1.143
C.I.11.3 Gaseous Waste Management	ANSI/ANS-55.4-1993 (R1999), Gaseous Radioactive Waste Processing Systems for Light Water Reactor Plants	Current standard mentioned in RG 1.143
C.I.11.4 Solid Waste Management System	ANSI/ANS-55.1-1992 (R2000), Solid Radioactive Waste Processing System for Light-Water-Cooled Reactor Plants	Current standard mentioned in RG 1.143
C.I.10.4.9 Auxiliary Feedwater System	ANSI/ANS-51.10-1991 (R2002), Auxiliary Feedwater System for Pressurized Water Reactors	Current standard
C.I 9.5.7 Diesel Generator Lubrication System	ANSI/ANS-59.52-1998, Lubricating Oil Systems for Safety-Related Emergency Diesel Generators	Current standard
C.I 9.5.4 Diesel Generator Fuel Oil and Transfer System	ANSI/ANS-59.5-1997, Fuel Oil Systems for Safety-Related Diesel Generators	Current standard
C.I 9.3.1 Compressed Air System	ANSI/ANS-59.3-1992 (R2002), Nuclear Safety Criteria for Control Air Systems	Current standard
C.I.15.6 Event Evaluation (specifically CI 15.6.2)	ANSI/ANS-58.8-1994 (R2001), Time Response Design Criteria for Safety-Related Operator Actions	Current standard

NFSC/ANS-23		
C.I.11 Radioactive Waste Management	ANS-41.5, Verification and Validation of Radiological Data for Use in Waste Management and Environmental Remediation	New standard expected to receive approval in 2007.
NFSC/ANS-24		
C.I.11.1 Source Terms	ANSI/ANS-18.1-1999, Radioactive Source Term for Normal Operation of Light Water Reactors	Current standard referenced in RG 1.70. A revision is in development.
C.I.3.6.2.4 Dynamic Analysis Methods to Verify Integrity and Operability	ANS-58.2-1988, Design Basis for Protection of Light Water Nuclear Power Plants Against the Effects of Postulated Pipe Rupture	"...Demonstrate the design adequacy of these SSCs to ensure that their design-intended functions will not be impaired to an unacceptable level of integrity or operability as a result of pipe whip or jet impingement loading. These analyses should be prepared using the models in ANSI/ANS 58.2-20xx." (This standard was withdrawn but a revision is in the works.)
C.I.6.3.2.8 Manual Actions and C.I.15.6.2 Sequence of Events and Systems Operations	ANSI/ANS-58.8-1994 (2001), Time Response Design Criteria for Safety-Related Operator Actions	"... Discuss the information available to the operator, the time delay during which the operator's failure to act properly will have no unsafe consequences, and the consequences if the operator fails to perform the action at all. Operator actions and timing should be evaluated using ANSI/ANS-58.8-1994 (R2001)." "... Identify all operator actions credited in accordance with ANSI/ANS-58.8-1994 (R2001) in the transient and accident analyses for consequences mitigation."
NFSC/ANS-25		
C.I.2.1 Geography and Demography	ANS-2.6, Guidelines for Estimating Present and Forecasting Future Population Distributions Surrounding Power Reactor Sites B34	New standard in development.
C.I.2.2 Nearby Industrial, Transportation and Industrial Facilities	None	None required
C.I.2.3 Meteorology		

C.I.2.3.1 Regional Climatology	ANS-2.3-1983, Determining Tornado and Other Extreme Wind Characteristics at Nuclear Facility Sites	Standard withdrawn in 1993. New working group formed. Draft due Summer 2007.
C.I.2.3.2 Local Meteorology	None	None required
C.I.2.3.3 Onsite Meteorological Measurements Program	ANSI/ANS-3.11-2005, Determining Meteorological Information at Nuclear Facilities	Originally ANS-2.5, redesignated ANS-3.11, current standard approved 2005.
C.I.2.4 Short Term Dispersion Estimates	ANS-2.16, Criteria for Modeling Design-Basis Accidental Releases from Nuclear Facilities	WG produced first draft of this new standard
C.I.2.5 Long Term Dispersion Estimates	ANS-2.15, Criteria for Modeling and Calculating Atmospheric Transport of Routine Releases from Nuclear Facilities	WG developing draft of this new standard
C.I.2.4.1 Hydrologic Description	None	None required
C.I.2.4.2 Floods	ANS-2.8-1992, Determining Design Basis Flooding at Power Reactor Sites	Revision is planned for this withdrawn standard.
C.I.2.4.3 Probable Maximum Flood (PMF) on Streams and Rivers	ANS-2.8-1992, Determining Design Basis Flooding at Power Reactor Sites	Revision is planned for this withdrawn standard.
C.I.2.4.4 Potential Dam Failures, Seismically Induced	ANS-2.8-1992, Determining Design Basis Flooding at Power Reactor Sites	Revision is planned for this withdrawn standard.
C.I.2.4.5 Probable Maximum Surge and Seiche Flooding	ANS-2.8-1992, Determining Design Basis Flooding at Power Reactor Sites	Revision is planned for this withdrawn standard.
C.I.2.4.6 Probable Maximum Tsunami Flooding	ANS-2.4, Guidelines for Determining Tsunami Criteria for Power Reactor Sites	New standard being considered.
C.I.2.4.7 Ice Effects	ANS-2.8-1992, Determining Design Basis Flooding at Power Reactor Sites	Revision is planned for this withdrawn standard.
C.I.2.4.8 Cooling Water Canals and Reservoirs	ANS-2.8-1992, Determining Design Basis Flooding at Power Reactor Sites	Revision is planned for this withdrawn standard.
C.I.2.4.9 Channel Diversions	ANS-2.8-1992, Determining Design Basis Flooding at Power Reactor Sites	Revision is planned for this withdrawn standard.
C.I.2.4.10 Flooding Protection Requirements	ANS-2.8-1992, Determining Design Basis Flooding at Power Reactor Sites	Revision is planned for this withdrawn standard.
C.I.2.4.11 Low Water Considerations	None	None required

C.I.2.4.12 Groundwater	ANS-2.9-1980 (R1989), Evaluation of Ground Water Supply for Nuclear Facilities	Standard withdrawn 1999. New working group established. Writing to begin after completion of ANS-2.17.
C.I.2.4.13 Pathways of Liquid Effluents in Ground and Surface Waters	ANS-2.17-1980 (R1989), Evaluation of Radionuclide Transport in Ground Water for Nuclear Facilities, and ANS-2.18, Standards for Evaluating Radionuclide Transport in Surface Water for Nuclear Power Sites.	ANS-2.17 withdrawn in 1999 – a revision to ANS-2.17-1980 currently in works. ANS-2.18 never developed past project charter approval. Project withdrawn in 1989 may be reactivated.
C.I.2.4.14 Technical Specification and Emergency Operation Requirements	None	None required
C.I.2.5 Geology, Seismology, and Geotechnical Engineering		
C.I.2.5.1 Basic Geologic and Seismic Information	None	None required
C.I.2.5.2 Vibratory Ground Motion	ANSI/ANS-2.26-2004, Categorization of Nuclear Facility Structures, Systems, and Components For Seismic Design, ANS-2.27, Criteria for Investigations of Nuclear Facility Sites for Seismic Hazard Assessments, ANS-2.29, Probabilistic Seismic Hazard Analysis	ANSI/ANS-2.26-2004 applies to nuclear facilities other than power plants but may provide useful guidance toward a performance-based approach to seismic categorization. ANS-2.27 and ANS-2.29 WGs developing new standards.
C.I.2.5.3 Surface Faulting	ANSI/ANS-2.26, ANS-2.27, ANS-2.29	ANSI/ANS-2.26-2004 applies to nuclear facilities other than power plants but may provide useful guidance toward a performance-based approach to seismic categorization. ANS-2.27 and ANS-2.29 WGs developing new standards.
C.I.2.5.4 Stability of Subsurface Materials and Foundations	ANSI/ANS-2.26, ANS-2.27, ANS-2.29	ANSI/ANS-2.26-2004 applies to nuclear facilities other than power plants but may provide useful guidance toward a performance-based approach to seismic categorization. ANS-2.27 and ANS-2.29 WGs developing new standards.
C.I.2.5.5 Stability of Slopes	ANSI/ANS-2.26, ANS-2.27, ANS-2.29	ANSI/ANS-2.26-2004 applies to nuclear facilities other than power plants but may provide useful guidance toward a performance-based approach to seismic categorization. ANS-2.27 and ANS-2.29 WGs developing new standards.
NFSC/ANS-27		

C.I.9.1.1 New Fuel Storage	ANS-57.3-1983, Design Requirements for New Fuel Storage Facilities at LWR Plants	Revision planned for this withdrawn standard.
C.I.9.11.4 Solid Waste Management Systems	ANS-40.35-1991, Volume Reduction of Low-Level Radioactive Waste or Mixed Waste	Revision in works.
C.I.11.2 Liquid Waste Management Systems & C.I.11.3 Gaseous Waste Management	ANS-40.37-1993, Mobile Radioactive Waste Processing Systems	Revision in works.
ANS-28: None applicable		
ANS-21, ANS-26 did not respond		
RISC		
C.I.19 Probabilistic Risk Assessment and Severe Accident Evaluation & C. II. 1 Probabilistic Risk Assessment (PRA)	ANS-58.21, Rev 1, External-Events PRA Methodology; ANS-58.22, Low Power and Shutdown PRA Methodology; ANS-58.23, Standard on Methodology for Fire PRA, ANS-58.24, Severe Accident Progression and Radiological Release (Level 2) PRA Methodology to Support Nuclear Installation Applications; and ANS-58.25, Standard for Radiological Accident Offsite Consequence Analysis (Level 3 PRA) to Support Nuclear Installation Applications	ANSI/ANS-58.21-2003 published in 2003. Approval of Rev 1 expected by end of 2006. Approval of ANS-58.22 and ANS-58.23 expected in 2007. ANS-58.24 and ANS-58.25 in early stages of development. DG-1145 should be consistent with RG 1.200.
N17/ANS-6		
C.I.12.3.2 Shielding	ANSI/ANS-6.1.2-1999, Neutron and Gamma-Ray Cross Sections for Nuclear Radiation Protection Calculations for Nuclear Power Plants; ANSI/ANS-6.3.1-1987 (R1998), Program for Testing Radiation Shields in Light Water Reactors (LWR); ANSI/ANS-6.4-2006, Nuclear Analysis & Design of Concrete Radiation Shielding for Nuclear Power Plants; ANSI/ANS-6.4.2-2006, Specification for Radiation Shielding Materials, and ANSI/ANS-6.6.1-1987 (R1998), Calculation and Measurement of Direct and Scattered Gamma Radiation from LWR Nuclear Power Plants	All standards current

N17/ANS-19		
	ANSI/ANS-5.1-2005, Decay Heat Power in Light Water Reactors	Current standard
C.I.4.3.2 Reactor Design Description, C.I.4.3.2.8 Vessel Irradiation, and C.I.4.3.4 Changes	ANSI/ANS-19.1-2002, Nuclear Data Sets for Reactor Design Calculations	Current standard, revision planned
C.I.4.3.2 Reactor Design Description, C.I.4.3.2.1 Nuclear Design Description, C.I.4.3.2.2 Power Distribution, C.I.4.3.2.3 Reactivity Coefficients, C.I.4.3.2.4 Control Requirements, C.I.4.3.2.5 Control Rod Patterns & Rod Worths, C.I.4.3.2.6 Criticality During Refueling, C.I.4.3.2.8 Vessel Irradiation, C.I. 4.3.3 Analytical Methods, and C.I.4.3.4 Changes	ANSI/ANS-19.3-2005, Determination of Steady-State Neutron Reaction-Rate Distributions and Reactivity of Nuclear Power Reactors	Current standard
	ANSI/ANS-19.3.4-2002, The Determination of Thermal Energy Deposition Rates in Nuclear Reactors	Current standard
C.I.4.3.2.2 Power Distribution, C.I.4.3.2.4 Control Requirements, C.I.4.3.2.5 Control Rod Patterns & Rod Worths, C.I.4.3.2.6 Criticality During Refueling, and C.I.4.3.4 Changes	ANSI/ANS-19.6.1-2005, Reload Startup Physics Tests for Pressurized Water Reactors	Current standard
C.I.4.3.2.3 Reactivity Coefficients and C.I.4.3.4 Changes	ANSI/ANS-19.9, Delayed Neutron Parameters for Light Water Reactors	New standard in development

C.I.4.3.2.8 Vessel Irradiation	ANSI/ANS-19.10, Methods for Determining Neutron Fluence in BWR and PWR Pressure Vessel and Reactor Internals	New standard in development
C.I.4.3.2.3 Reactivity Coefficients, C.I.4.3.3 Analytical Methods, and C.I.4.3.4 Changes	ANSI/ANS-19.11-1997 (R2002), Calculation and Measurement of the Moderator Temperature Coefficient of Reactivity for Water Moderated Power Reactors	Current standard
N17/ANS-10		
C.I.17 Quality Assurance and Reliability Assurance	ANSI/ANS-10.5-2006, Accommodating User Needs in Scientific and Engineering Computer Software Development	Current standard
	ANSI/ANS-10.4-1987 (1998), Standard for the Verification and Validation of Scientific and Engineering Computer Programs in the Nuclear Industry	Current standard under revision