ANS 3.5 Working Group Meeting Minutes
Dominion Resources
2006 May 1 - 3

1   Next Meeting Proposed

Location: 1. Trial Webex meeting – Felker
2. Metrification of the Standard – E-Meeting (Chang)
3. ANS-21 Comment Resolution – Millstone (Chang)
4. NFSC Comment Resolution – Millstone (Chang)

Airport: N/A
Date: TBD

2   **Motions**

Kozak **2006May2** Description: Motion to accept Salem/Hope Creek Minutes Rev 11	Motion: **Carried** • 8 – For • 0 – Against • 0 – Abstained
Koutouzis **2006May2** Description: No Change to PINS regarding Bell Comment #1 and Reulands Comment #1.	Motion: **Carried** • 8 – For • 0 – Against • 0 – Abstained
Vick **2006May2** Description: No Change to PINS regarding Kadambi Comment #1.	Motion: **Carried** • 8 – For • 0 – Against • 0 – Abstained
Dennis **2006May2** Description: No Change to PINS regarding Lloyd Comment #1.	Motion: **Carried** • 8 – For • 0 – Against • 0 – Abstained

Dennis **2006May2** Description: Change to PINS regarding Mazzola Comment #5; change Bud Havens affiliation to correctly state PSEG Nuclear LLC; no change to PINS in regards to Mazzola Comments #4 & #6 (subj: Dennis and Shelly affiliation).	Motion: **Carried** • 8 – For • 0 – Against • 0 – Abstained
Vick **2006May2** Change PINS to accept McFetridge comment #1 to add US to NRC.	Motion: **Carried** • 8 – For • 0 – Against • 0 – Abstained
Kozak **2006May2** Accept McFetridge Comments #2, #4, & #5; changed PINS accordingly.	Motion: **Carried** • 8 – For • 0 – Against • 0 – Abstained
Vick **2006May2** No change to PINS regarding McFetridge Comment #3.	Motion: **Carried** • 8 – For • 0 – Against • 0 – Abstained
Chang **2006May2** Accept PINS regarding McFetridge Comment #6 to incorporate SI Units where appropriate (addresses Mazzola Comment #2 as well).	Motion: **Carried** • 7 – For • 0 – Against • 1 – Abstained
McCullough **2006May2** Description: Change PINS in regards to Mazzola Comment #1.	Motion: **Carried** • 7 – For • 0 – Against • 1 – Abstained

Dennis **2006May2** Description: Change PINS regarding Mazzola Comment #3.	Motion: **Carried** • 8 – For • 0 – Against • 0 – Abstained
Dennis **2006May2** Description: Accept the PINS form as modified by previous motions.	Motion: **Carried** • 7 – For • 0 – Against • 1 – Abstained

3 Action Item Activity

143	Submit PINS Comment Review Responses	Dennis
144	Incorporate SI units in the Standard as appropriate by E-Vote	Chang
145	Setup Webex demonstration test	Felker
146	Send letters as appropriate regarding membership participation in meetings	Dennis

4   **Visitors**

Visitor	Date	Affiliation	Email, Phone Fax
Frank A Tarselli	2006May1-3	PPL Corporation Susquehanna Steam Electric Station PO Box 467 Berwick, PA 18603	Email: FATarselli@PPLweb.com Phone: 570.542.3551 Fax: 570.542.3855
Dan Hudnut	2006May1-3	Constellation Energy R E Ginna Power Plant 1503 Lake Road Ontario, NY 14519-9364	Email: dan.hudnut@constellation.com Phone: 585.771.5225 Fax: 585.771.5379
Wyatt A Godes	2006May1-3	NMC Point Beach Nuclear Station 6590 Nuclear Road, Two Rivers, WI 54241.	Email: Wyatt.Godes@NMCco.com Phone: (920) 755-7725 Fax: (920) 755-7859
Edmund A Chrzanowski	2006May1-3	Constellation Energy Calvert Cliffs Nuclear Power Plant Lusby, Maryland	Email: Edmund.a.chrzanowski@constellation.com Phone: (410) 495-3960 Note: retires from Constellation Energy end of September 2006

5   **Roll Call**

Present	Member	Address	Notes-Proxy	Email-Phone-Fax
Present	Timothy Dennis **Chair**	645 Lehigh Gap St. P. O. Box 119 Walnutport, PA 18088-0119		Email: a243@yahoo.com Phone:610-767-0979 Fax: 610-767-7095
Absent	Jim Florence **Vice Chair**	Nebraska Public Power District P. O. Box 98 Brownville, Nebraska 68321		Email: jbflore@nppd.com Phone: 402-825-5700 Fax: 402-825-5584
Absent	Keith Welchel **Secretary**	Duke Power Company Oconee Training Center- MC:ON04OT 7800 Rochester Hwy Seneca, SC 29672		Email: kwelchel@duke-energy.com Phone: 864-885-3349 Fax: 864-885-3432
Absent	F.J. (Butch) Colby **Editor**	L-3 Communications - MAPPS 8585 Cote-de-Liesse P.O, Box 1800 Saint-Laurent Quebec, Canada H4L 4X4		Email: butchcolby@cs.com Email: butch.colby@cae.com Phone: (410) 381-3557 Fax: (410) 381-2017
Present	William M. (Mike) Shelly **Style Editor**	Entergy Services, Inc. 1340 Echelon Parkway Jackson, MS 39213-8298		Email: wshelly@entergy.com Phone: 601-368-5861 Fax: : 601-368-5753
Present	Larry Vick **Parliamentarian**	US NRC, Office of Nuclear Reactor Regulation 09-D24 Washington, DC 20555		Email: Lxv@nrc.gov Phone: 301-415-3181 Fax: 301-415-2222
Present	George McCullough	GSE Systems, Inc 107 Industrial Drive, Suite E St Mary's GA 31558		Email: gsmccullough@gses.com Phone: 912-576-6730 Fax: Cell: 410-707-6946
Absent	Hal Paris	GSE Systems 7133 Rutherford Road Suite 200 Baltimore, MD 21244		Email: hal.paris@gses.com Phone: 410-277-3744 Fax:
Present	Robert Felker	Western Services Corporation 7340 Executive Way, Suite A Frederick, MD 21704		Email: felker@ws-corp.com Phone: 301-644-2520 Fax: 301-682-8104
Present	Allan A. Kozak	Dominion Generation North Anna power Station P.O. Box 402 Mineral, VA 23117-0402		Email: allan_kozak@dom.com Phone: 540-894-2400 Fax:540-894-2441
Present Tuesday Only	Dennis Koutouzis	INPO 700 Galleria Parkway, NW Atlanta, GA 30339-5957		Email: koutouzisjd@inpo.org Phone: 770-644-8838 Fax: 770-644-8120

Absent	Oliver Havens, Jr	PSEG Power Hope Creek Generating Station, NTC 244 Chestnut St. Salem, NJ 08079		Email: Oliver.Havens@pseg.com Phone: 856-339-3797 Fax: 856-339-3997
Absent	Kevin Cox	Exelon Generation Dresden Nuclear Power Station 6500 North Dresden Rd. Morris, IL 60450		Email: kevin.cox@exeloncorp.com Phone: 815-942-2920 x-2109 Fax: 815-941-7121
Present	SK Chang	Dominion Nuclear Connecticut, Inc. Millstone Power Station L. F. Sillin, Jr. Nuclear Training Ctr. Rope Ferry Road Waterford, CT 06385		Email: Shih-Kao_Chang@dom.com Phone: 860-437-2521 Fax: 860-437-2671
Proxy	Jane Neis	R.E. Ginna Nuclear Power Plant Training Center 1517 Lake Rd Ontario, NY 14519	Dan Hudnut	Email: jane.neis@reginna.com Phone: (585) 771-5216 Fax: (585) 771-5379
NA	Patricia Schroeder	Standards Administrator American Nuclear Society 555 North Kensington avenue La Grange Park, IL 60526-5592		Email: Phone: 708-579-8269 Fax: 708 352 6464

6   **Action Item List**

6.1   Action Item Quick-look Table

Open	Complete	Carried to 2010

~~1~~	~~2~~	~~3~~	~~4~~	~~5~~	~~6~~	~~7~~	~~8~~	~~9~~	~~10~~
~~11~~	~~12~~	~~13~~	~~14~~	~~15~~	~~16~~	~~17~~	~~18~~	~~19~~	~~20~~
~~21~~	~~22~~	~~23~~	~~24~~	~~25~~	~~26~~	~~27~~	~~28~~	~~29~~	~~30~~
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~~41~~	~~42~~	~~43~~	~~44~~	~~45~~	~~46~~	~~47~~	~~48~~	~~49~~	~~50~~
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~~61~~	~~62~~	~~63~~	~~64~~	~~65~~	~~66~~	~~67~~	~~68~~	~~69~~	~~70~~
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~~121~~	~~122~~	~~123~~	~~124~~	~~125~~	126	~~127~~	~~128~~	~~129~~	~~130~~
~~131~~	132	~~133~~	134	135	136	137	~~138~~	~~139~~	~~140~~
141	~~142~~	143	144	145	146				

6.2   Action Items

No.	Status	Date	Assigned To:	Work Assignment
120		Opened 2003Apr05	**Dennis**	Formalize a process for the industry to request a clarification and distribute through USUG
135		Opened 2004Aug26	**Neis**	Mail PINS Form to ANS Headquarters
136		Opened 2004aug27	**Dennis Koutouzis Tarselli**	Write Forward
143		Opened 2006May2	**Dennis**	Submit PINS Comment Review Responses **2006May02 Initial AI**
144		Opened 2006May2	**Chang**	Incorporate SI units in the standard as appropriate **2006May02 Initial AI**
145		Opened 2006May3	**Felker**	Setup Webex demonstration for possible future meetings **2006May03 Initial AI**
146		Opened 2006May3	**Dennis**	Send letters as appropriate regarding membership participation in meetings **2006May03 Initial AI**

7   Working Group Procedural Rules

7.1   Rules of the Chair

- Interim Voting (Motions – Substantive Changes) shall be by Consensus (75% [rounded up] of quorum in session)
- The Chairman rules that no Motions will be accepted when not in session
- Administrative issues by simple majority (quorum in session);
- The Chair shall be informed of absences;
- The absent member is encouraged to send a proxy;
- A Proxy shall not have voting privileges;
- Members attend the full length of the meeting;
- Word 7.0 will be the document format;
- The Meeting Host will collect and send all handout material for absent members without proxy;
- Robert's Rules of Order will be used as a general guide;
- Guest Individual Contributors may receive working copy of the draft standard based on need;
- Chair approval required for distribution of working copies of the draft standard;
- Members cannot Vote against their own non-amended Motion;
- The WG will through the course of normal business, generate confidential documentation applicable to the WG charter. As a result of this business, documentation may be released to the public through approved minutes posted on the ANS 3.5 WEB site. Other information may be released to the public as deemed appropriate by the WG Chair or Vice-Chair. In addition, information may be supplied to non-working group members on a need-to-know basis for the purpose of review and comment.

7.2   Rules Enacted by the Working Group

Missing two consecutive meetings in a row without representation could result in loss of membership on the committee.

8   Monday 2006May1 (1200)

8.1   Introduction to Innsbrook Area (Kozak)

      Introduction and Welcome

8.2   Opening Comments (Dennis):

- Welcomed Visitors

    o Dan Hudnut – Ginna for J. Neis (proxy)

    o Frank Tarselli – PPL Susquehanna

    o Wyatt Godes – NMC Point Beach

    o Ed Chrzanowski – Constellation Energy Calvert Cliffs

- Meeting not called to order – insufficient quorum – only seven (7) member present

- Group Discussion (DENNIS)

    o Discussed the NEI Licensed Operator Task Force (LOTF) which addressed the NUREG 1021 changes; received charge to investigate SBT

    o Industry SBT Approach (November 29, 2005) Proposal; NEI LOFT suggested a limited SBT of examination scenarios and scenarios used to take credit for reactivity manipulations;

    o NRC proposing 2 day workshop in the Sept/Oct timeframe to cover SBT, transient testing, and core testing;

- o Vick – difference between pilot and TI (Temporary Instruction); TI can be done outside of the inspection process, used to collect information; TI's are based on NRC procedures; pilot must be presented to the Commission and senior NRC management;

- o Shelly – WESTRAIN investigating what would be required to move back to the 1985 ANS Standard; Simulator subcommittee tasked with this investigation and report back at the next meeting, May 16 – 17;

- o Tarselli – MANTG Simulator Subcommittee update; still reviewing core performance white paper; reaffirmed BWR core testing white paper; waiting on Training Managers approval at the June meeting in Gettysburg; still discussing documentation issues associated with SBT; tabled SBT discussion until industry consensus matures;

- o Dennis – attended MANTG Simulator Subcommittee meetings at Vermont Yankee in May 2005, at Millstone in August 2005, and at IPEC in January 2006. Attended NFSC San Diego meeting in June 2005 with Colby, and Nov 2005 at the Edison Electric Institute in Washington, DC; SCS Atlanta meeting in February 2006 for ANS-3.5 presentation and Working Group panel discussion;

- Calvert Cliffs Clarification Request:

- o Chrzanowski – Discussed personal background information and the clarification request; submitted thru the ANS website, 30 years with Calvert Cliffs, licensed operator and then came into training, certified Calvert Cliffs simulator in 1991; scheduled normal evolutions testing on a 4 year cycle; first baseline 71111 inspection in 2003; plant transient in January 2004 and submitted an OE based on fidelity issue; simulator corrected in May/June 2004; put Rx trip back into the test program in December 2005, but not run in 2002; NRC Inspector brought up that normal evolutions tests were to be run annually; certification stated that annual normal evolutions was an exception but changed simulator procedures to conduct normal evolutions annually; there are no known potential negative training issues associated with normal evolutions; rapid down power procedure developed using the simulator and later used in the actual plant; not on '85 Standard but possibly a '98 and '0X standard as well; benchmarked other plants in the US and found that some simulator programs were doing normal evolution testing every four years; some utilities did no normal evolutions testing beyond the initial test; others were doing it as part of normal IC development process; no finding related to this issue;

- o Chang – 1985 is an historical standard and can the Working Group offer a clarification on the 1985 standard?; Dennis stated that Working Group should use its best judgment looking backwards from the 1998 standard to the 1985 standard; specifically at section 5.4.2 that is in question;

o Kozak – 1985 Standard analysis:

> The American National Standards Institute (ANSI) recognizes ANSI/ANS-3.5-1998 as the current endorsed standard. Past revisions of the standard are considered historical. The Working group, through the Standards Board, clarifies historical standards on a plain text reading with reference to the current endorsed standard.
>
> Looking at these questions from the current ANSI/ANS-3.5-1998 standards perspective.
>
> The first question asked was:
>
> - Section 3.1.1 of ANS 3.5-1985 covers "Normal Plant Evolutions". I would like to know if there is a periodicity to test these Normal Evolutions. What is the periodicity (if any)?
>
> The preamble of section 4 states the intent and defines the requirements for the evaluation of each of the major elements of the simulator set forth in sections 4.1 through 4.4.
>
> The ANSI/ANS-3.5-1998 standard does not specify a time requirement associated with normal evolutions testing.
>
> Section 4.1.3.2 defines the criteria by which Normal Evolution Testing shall be evaluated.
>
> The second question asked was:
>
> - Section 5.4.2 of ANS 3.5-1985 covers "Simulator Operability Testing". Does "Normal Evolutions" from Section 3.1.1 fall under this heading? What comprises "Simulator Operability Testing" under Section 5.4.2?
>
> Section 4.4.3.1, Simulator Operability Testing, defines the intent of Operability Testing. Footnote 5 within the first sentence of section 4.4.3.1 directs the reader to Appendix B which provides examples of Simulator Operability Testing.
>
> Appendix B sub-part **B1. Categories of Operability Tests** list steady state testing and transient testing. Acceptance criteria should be established for operability validation, commensurate with

the requirements of 4.4 of the standard

Looking at the submitted questions for clarification from the historical ANSI/ANS-3.5-1985 standards perspective

The Working Group discussed whether or not the ANS-3.5-1985 Standard specifies the periodicity of normal evolutions testing; it was noted that this document does not specify the periodicity of normal evolution testing. However, it was called into question by one of the seven Working Group members present during this discussion this date whether or not a link exists within the ANS-3.5-1985 Standard that requires annual testing of normal evolutions; a consensus opinion by the full membership of the Working Group was not reached.

The basis for noting that this document does not specify the periodicity of normal evolution testing is:

Section 5.4.1, Simulator Performance Testing, states Simulator performance shall be established by preparing a simulator performance test, conducting the tests, and comparing the simulator's performance with the simulator design data within the requirements of Section 4 (Performance Criteria). Testing shall be conducted and a report prepared for each of the following occasions:

(1) Completion of initial construction;
(2) If simulator design changes result in significant simulator configuration or performance variations.

When a limited change is made, a specific performance test on the affected systems and components shall be performed.

Section 5.4.2 defines the intent and acceptance criteria of Operability Testing. Footnote 3 immediately following the section 5.4.2 title directs the reader to Appendix B, which provides examples of Operability Tests. Operability testing is required to be performed annually in accordance with section 5.4.2. Normal Evolution testing is not included, as part of Operability Testing and therefore the annual testing requirement specified in 5.4.2 does not apply.

> The **Categories of Operability Tests** in Appendix B of ANSI/ANS-3.5-1985 and ANSI/ANS-3.5-1998 standards are the same.
>
> 8.2.1   Additional open item for discussion
>
> It has been suggested that a link exists that requires annual testing of Normal Evolutions. This link is characterized as section 5.4.2 (Simulator Operability Testing) referring to section 4.2 (Transient Operation) and then section 4.2.1 referring to section 3.1.1 (Normal Plant Evolutions).

o   Tarselli – eleven members of MANTG Simulator Subcommittee all agreed that the annual normal evolution was an incorrect interpretation;

o   Dennis – Question to the committee - Does the 1985 ANS Standard require annual testing of normal evolutions?

o   McCullough – Reviewed periodicity from table AI-134 previously presented at the Salem/Hope Creek meeting; item deferred until the next revision of the standard

o   Working Group agreed that additional discussion was required with regard to this topic and Working Group further agreed without objection that a vote at this time was inappropriate until such discussion was concluded.

9   Tuesday 2006May2 (0730)

9.1   Roll Call (Felker – Acting Secretary)

Absent Members:

> Welchel
> Colby
> Florence
> Paris
> Havens
> Neis – Hudnut present for Neis as Proxy
> Cox

9.2   Day 2 Consensus Level

8 Voting members – Koutouzis participated for this day only – Quorum declared (DENNIS)

6 members for consensus (75% Rule of the Chair)

9.3   NRC Update (Vick)

- o Preparing a RIS (Regulatory Information Summary) regarding standards to be issued this year; update of Reg Guide 1.149; update of IP71111.11 defining simulator problem thresholds; looking at national workshop, term "pilot" is problematic since you have to go before the Commission; Temporary Instruction (TI) is permissible within the NRC procedures and workshop will show means of demonstrating simulator performance to the reference unit; bounding issues still remain with respect to SBT;

- o Workshop should be late summer/early fall;

- o Following the RIS, plan to issue an Information Notice and then update the Reg Guide;

- o Reconsider whether the staff will continue to endorse previous versions of the ANS 3.5 standard thru earlier editions of Reg Guide 1.149;

- o Will participate in a Region 3 workshop this week;

- o The NRC has conducted a large number of IP inspections (typically 30-40 per year) since the new simulator rule took effect;

9.4   Calvert Cliffs Clarification Discussion (Kozak)

- o Presented draft response for committee discussion;

- o Vick asked whether there was any meeting minutes discussion regarding section 5.4.2 in the documentation?; the three column format version of the new standard indicates no discussion and no changes have been made in this section;

- o Godes – 5.4.2 defines criteria for Operability Testing;

- o McCullough – Were normal evolutions testing meant to be for initial simulator construction?;

- o Felker – Appendix "B" defines the contents of an Operability Test, namely steady-state and transient testing; the purpose identified in Appendix "B" ties directly back to section 5.4.2 of the standard;

o Kozak – Need to consider the clarification with respect to the ANS 3.5 1998 standard;

o Following discussion among the Working Group members and guests a draft response was developed. Discussion continued into the following day;

o Vick – Has not seen the actual request that the Working Group was requested to answer; email that Chrzanowski submitted was displayed to the group; Vick questioned whether the process was appropriate and whether the request should be considered at this time in light of trying to complete the current edition of the standard;

o Dennis – suspended the chair rule with respect to proxy voting; an Objection was raised leading to further discussion and henceforth, the Action was withdrawn;

9.5   Salem/Hope Creek Meeting Minutes 2004Nov8 (rev 11)

o Motion to accept the Salem/Hope Creek rev 11 minutes: Kozak motion, Chang second; Motion carried 8 Yes, 0 No, 0 Abstentions;

9.6   PINS Comments Discussion

Note: The consolidation of resolutions to the NFSC comments from the ANS-3.5 PINS ballot are attached to these minutes.

o Koutouzis – Bell Comment #1 and Reulands Comment #1: Commenters indicated Scope Summary comment in contradiction; statements are actually not in conflict and thru discussion with the commenters they agreed and no change is required; caution to include statement that training requirements are not included; MOTION

o Vick – Kadambi Comment #1: No change required; 10CFR55.45 addresses the requirements for a simulation facility; MOTION

o Dennis – Lloyd Comment #1: Affiliations of the working group members; when the Working Group started in 1998 the affiliations were appropriate; No change required; MOTION

- o Chang – McFetridge Comment #6 and Mazzola Comment #2: Add SI units to values in Appendix C; MOTION; AI #144 to conduct E-Meeting

- o Dennis – Incorporate other Mazzola Comments #1, #3, & #5 and McFetridge Comments # 2, #4, & #5 as indicated on the responses; MOTION

- o Vick – Incorporate McFetridge Comment #1: Add US to "US" NRC designation; MOTION

- o Dennis – Stamm Comment #1: Project initiation date as stated is correct per direction of ANS Standards Administrator and discussion with the NFSC; MOTION

- o Vick – Requested that explanation should be provided explaining duration from start to present time to submit the PINS form from actual project initiation to this meeting.

- o Felker – Working group should collectively determine to delay or not delay submission of the draft standard for comment and review.

Dennis **2006May2** Description: Accept the PINS form as modified by previous comments	Motion: **Carried** • 7 – For • 0 – Against • 1 – Abstained

Revised PINS form follows:

	May 2, 2006

PINS: PROJECT INITIATION NOTIFICATION SYSTEM FORM *(Rev. 1/05)*

*NOTE: Adoptions of international standards require compliance with ANSI's Sales & Exploitation Policy.

1.	**Designation of Proposed Standard:**	**ANS-3.5**	
2.	**Title of Standard:**	**Nuclear Power Plant Simulators for Use in Operator Training and Examination**	
3.	**Project Intent:** (Check the applicable box below)		**Supersedes or Affects:** (Specify designation of approved ANSI standard(s) or international standard(s)* affected or superseded.)
	Create new standard		
	*Adopt identical international standard (see Expedited Procedures, Section 1.2.9.2, Annex H: IDT and Annex I)		
	*Adopt modified international standard (see Requirements Associated, Section 1.2.9.1, Annex H: MOD and Annex I)		
	***AND** this adoption revises this current ANS		
	Revise current standard	X	**To supercede ANSI/ANS-3.5-1998**
	Revise and Re-designate current standard		
	Revise, Re-designate and Consolidate current standard		
	Revise and Partition current standard		
	Reaffirm current standard		
	Reaffirm and Re-designate current standard		
	Supplement to a current standard		
	Withdraw current standard		
4.	**This standard contains excerpted text from an international standard, but is not an ISO or IEC adoption.**		Check here if this standard includes excerpted text from an ISO or IEC standards but is not an identical or modified adoption of an international standard.

5.	**Provide an explanation of the need for the project:**	**Current standard is actively endorsed by the U.S. Nuclear Regulatory Commission and requires review and update to meet industry expectations. Other factors that drive the update are the incorporation of technological advances in simulators, incorporation of user feedback, and clarification**
6.	**Identify the stakeholders** (e.g., telecom, consumer, medical, environmental, etc.) **likely to be directly impacted by the standard:**	**Domestic and International owners, operators, vendors and regulators of nuclear power plant simulators.**
7.	**Scope Summary:** (Provide a one paragraph description, not to exceed 500 characters.)	This standard establishes the functional requirements for full-scope nuclear power plant control room simulators for use in operator training and examination. The standard also establishes criteria for the scope of simulation, performance, and functional capabilities of simulators. This standard does not address simulators for reactors not subject to U.S. Nuclear Regulatory Commission licensing. This standard does not establish criteria for the use of simulators in training programs.
8.	**Consumer Product or Service:**	Check here if standard covers Consumer or Service Product
9.	**Units of Measurement Used:** (check one)	
10.	**Accredited Standards Developer Acronym:**	**ANS**

11.	**Submitter:** (Specify submitter's name and complete contact information, address, phone, email, etc.)	Name:	*Patricia Schroeder, Standards Administrator*
		Organization:	*American Nuclear Society*
		Address:	*555 North Kensington Avenue*
		City, ST, Zip	*La Grange Park, IL 60526*
		Phone/Fax:	*1708 589 8269 – Fax: 1708 589 8269*

	E-mail:	*PSchroeder@ANS.org*

The information on this page is not an official part of the ANSI PINS form. It was designed for ANS Standards Committee purposes to provide more background information about the standard. It is not required that this section be approved. Only the ANSI PINS form on page 1 requires approval.

Project #: ANS-3.5

1. Purpose:
Revise existing standard to incorporate new technologies since last edition and to incorporate user feedback and clarification.
_____

2. Benefit to Users:
Provide nuclear power plant simulation facilities guidance regarding operation and maintenance of nuclear power plant simulators. Provide consistency among the users of power plant simulators.
_____

3. Consensus Body: Nuclear Facility Standards Committee
_____

4. Subcommittee under which it is assigned: ANS-21
_____

5. Working Group Chair: Timothy Dennis
_____

6. Working Group Members:

Nuclear Power Plant Owners & Operators:
James B Florence (vice-chair), Nebraska Public Power District (Cooper Nuclear Station)
Keith P Welchel (secretary), Duke Energy (Oconee Nuclear Station)
William M (Mike) Shelly (style editor), Entergy Services, Inc
Allan A Kozak, Dominion Resources (North Anna Power Station)
Oliver H (Bud) Havens Jr, PSEG Nuclear LLC (Hope Creek Nuclear Plant)
Shih-Kao (SK) Chang, Dominion Resources (Millstone Power Station)
Kevin Cox, Exelon Generation (Dresden Nuclear Power Plant)
Jane B Neis, Constellation Energy (R E Ginna Nuclear Power Plant, LLC)

Vendors:
F J (Butch) Colby (editor), L-3 Communications MAAPS (formerly CAE)
Robert A Felker, Western Services Corporation
Hal O Paris, GSE Systems, Inc.
George S McCullough, GSE Systems, Inc.

Regulatory:
Lawrence Vick (parliamentarian), U S Nuclear Regulatory Commission

Individuals and Industry Association:
Timothy Dennis (chair), Individual
J Dennis Koutouzis, Institute of Nuclear Power Operations

_____
7. Interests Represented in Development of Standard:
Interests represented in the development of this Standard include nuclear power plant owners, operators, vendors, individuals, and regulatory authorities.
_____
8. Coordination and Interfaces (Liaison):
None
_____
9. Related Standards or References, or Both:
10 CFR 55.45, Regulatory Guide 1.149 Revision 3
_____
10. Project Initiation Date:
 November 4, 1998

Action Item # 143 (Dennis): Submit PINS comments responses to ANS Standards office

Adjourned 2006May02 at 1800

10   **Wednesday 2006May03(Day 3 7:30am)**

ROLL CALL:

Absent – Florence, Welchel, Colby, Paris, Koutouzis, Havens, Cox, Neis (Hudnut present as Neis proxy)

Meeting Not Called to Order, Insufficient quorum:

10.1   Per Felker request, Dennis forwarded to all members the email indicating that the Working Group has an extension until 14 April 2008 to complete the revision to the Standard; the following is a copy of that correspondence:

-----Original Message-----
From: Timothy Dennis [mailto:a243@yahoo.com]
Sent: Wednesday, July 27, 2005 12:06 PM
To: Shih-Kao Chang; FJ (Butch) Colby; Kevin J Cox; Robert A Felker; Florence, James B.; Oliver H Havens, Jr; John Dennis Koutouzis; Allan A Kozak; George S McCullough; Jane B Neis; Hal Paris; W Mike Shelly; Lawrence Vick; Keith P Welchel; Micheal Wyatt; Dan Hudnut; Frank A Tarselli Jr; Scott Mark Halverson
Cc: Donald J Spellman; Pat Schroeder
Subject: Fwd: ANSI Acknowledgement of Request for Extension for BSR/ANS 3.5-1998

Dateline: Pamunkey Regional Library
                 Ashland, Hanover County, Virginia

ANS-3.5 Working Group, Proxies, and Interested Parties:

Please find below the administrative memos regarding extension of the 5 year review period for ANSI/ANS-3.5-1998.

Timothy Dennis
Chair - ANS-3.5
Chair - ANS-21
Executive Committee - NFSC

copy: Donald J Spellman, chair-NFSC (ORNL)
            Patricia Schroeder, ANS Standards Administrator

--- Pat Schroeder <PSchroeder@ans.org> wrote:

Date: Wed, 27 Jul 2005 10:17:28 -0500
From: "Pat Schroeder" <PSchroeder@ans.org>
To: <SpellmanDJ@ornl.gov>,<a243@yahoo.com>
CC: "Blanca Hinojosa" <BHinojosa@ans.org>, "Mary Beth Gardner",mgardner@ans.org>
Subject: ANSI Acknowledgement of Request for Extension for BSR/ANS 3.5-1998

Don and Tim,

Below is the acknowledgment from ANSI that ANS-3.5-1998 has been granted an extension until 4/14/08 or a day before its tenth anniversary. Please let me know if you have any questions.

Regards,
Pat

        From: Heather Benko
        Standards Administrator Procedures and Standards Administration

        To: Pat Schroeder
        American Nuclear Society

        SUBJECT: Extension granted for BSR/ANS 3.5-1998 Nuclear Power Plant Simulators for Use in Operator Training and Examination
        Extension Date: 4/14/2008
        Extension Type: 3 -- ExSC /Designee Extn. of 5-Yr Review

        In response to your recent request for an extension of time for further action on the standard listed, the American National Standards Institute is pleased to grant an extension period as indicated.

Please note that any substantive change in the BSR draft standard as originally submitted for public review will require an additional review in Standards Action.

If you have any questions contact Heather Benko at psa@ansi.org or call (212) 642-4912.

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

10.2   Action Item AI-145; Felker will arrange a Webex test next week to ensure all members would have access for possible Webex meeting votes in the future;

10.3   Continuation of Calvert Cliffs Clarification Discussion:

Chrzanowski – resubmitted clarification request to ANS asking the following: 1) Section 3.1.1 of ANS 3.5 1985 covers "normal Plant Evolutions". I would like to know if there is a periodicity to these Normal Evolutions. What is the periodicity (if any)? 2) Section 5.4.2 of ANS 3.5 1985 covers "Simulator Operability Testing". Does "Normal Evolutions" from section 3.1.1 fall under this heading? What comprises "Simulator Operability Testing" under section 5.4.2?

Shelly – previously drafted clarification does not respond to the questions posed by Chrzanowski;

Kozak – began the process of reviewing comments supplied on the draft clarification;

DRAFT

The American National Standards Institute (ANSI) recognizes ANSI/ANS-3.5-1998 as the current endorsed standard. Past revisions of the standard are considered historical. The Working group, through the Standards Board, clarifies historical standards on a plain text reading with reference to the current endorsed standard.

Looking at these questions from the current ANSI/ANS-3.5-1998 standards perspective.

The first question asked was:

- Section 3.1.1 of ANS 3.5-1985 covers "Normal Plant Evolutions". I would like to know if there is a periodicity to test these Normal Evolutions. What is the periodicity (if any)?

The preamble of section 4 states the intent and defines the requirements for the evaluation of each of the major elements of the simulator set forth in sections 4.1 through 4.4.

The ANSI/ANS-3.5-1998 standard does not specify a time requirement associated with normal evolutions testing.

Section 4.1.3.2 defines the criteria by which Normal Evolution Testing shall be evaluated.

The second question asked was:

- Section 5.4.2 of ANS 3.5-1985 covers "Simulator Operability Testing". Does "Normal Evolutions" from Section 3.1.1 fall under this heading? What comprises "Simulator Operability Testing" under Section 5.4.2?

Section 4.4.3.1, Simulator Operability Testing, defines the intent of Operability Testing. Footnote 5 within the first sentence of section 4.4.3.1 directs the reader to Appendix B which provides examples of Simulator Operability Testing.

Appendix B sub-part **B1. Categories of Operability Tests** list steady state testing and transient testing. Acceptance criteria should be established for operability validation, commensurate with the requirements of 4.4 of the standard.

Looking at the submitted questions for clarification from the historical ANSI/ANS-3.5-1985 standards perspective.

The Working Group discussed whether or not the ANS-3.5-1985 Standard specifies the periodicity of normal evolutions testing; it was noted that this document does not specify the periodicity of normal evolution testing. However, it was called into question by one of the seven Working Group members present during this discussion this date whether or not a link exists within the ANS-3.5-1985 Standard that requires annual testing of normal evolutions; a consensus opinion by the full membership of the Working Group was not reached.

The basis for noting that this document does not specify the periodicity of normal evolution testing is:

Section 5.4.1, Simulator Performance Testing, states Simulator performance shall be established by preparing a simulator performance test, conducting the tests, and comparing the simulator's performance with the simulator design data within the requirements of Section 4 (Performance Criteria). Testing shall be conducted and a report prepared for each of the following occasions:

(1) Completion of initial construction;
(2) If simulator design changes result in significant simulator configuration or performance variations.

When a limited change is made, a specific performance test on the affected systems and components shall be performed.

Section 5.4.2 defines the intent and acceptance criteria of Operability Testing. Footnote 3 immediately following the section 5.4.2 title directs the reader to Appendix B which provides examples of Operability Tests. Operability testing is required to be performed annually in accordance with section 5.4.2. Normal Evolution testing is not included as part of Operability Testing and therefore the annual testing requirement specified in 5.4.2 does not apply.

The **Categories of Operability Tests** in Appendix B of ANSI/ANS-3.5-1985 and ANSI/ANS-3.5-1998 standards are the same.

Additional item for discussion

It has been suggested that a link exists that requires annual testing of Normal Evolutions. This link is characterized as section 5.4.2 (Simulator Operability Testing) referring to section 4.2 (Transient Operation) and then section 4.2.1 referring to section 3.1.1 (Normal Plant Evolutions).

10.4 Administrative Items (Dennis)

Action Item #146: Tim Dennis to send letters as appropriate regarding membership participation in meetings.

10.5   **Adjourned 2006May03 at 11:30**

11   Action Items Carried to 2008 Standard

60	2004aug25 **Remain Deferred** **Moved to 2008**	Priority 1	**McCullough** **Shelly**	Define the Term **Training Needs Assessment** in such a manner that it is clear in intent to both Training and Simulator staffs **2004aug25** **McCullough** **Recommend to keep deferred due to effort to correct** 2002apr23 McCullough History presentation of Training Need Assessment. See Appendix 2001Apr05 McCullough Trainers and Simulator personal view Training Needs Assesments Differently; Training Needs Analysis and Training Needs Assessment are not used consistently. McCullough will revisit this item in a future date; Reference: ACAD-85-006 "A Suppliment to Principles of Training Systems Development"

126	**Status:** **2004aug26** **Deferred**		**Vick** **Shelly – BWR** **Kozak – PWR** **Golightly -** **BWR**	Consider adding Performance Test Program in next standard **2004aug26** **Deferred** **Vick** 2003Apr05 Initial AI
132	**Status:** **2004nov09** **Deferred to the next standard**		**Wyatt**	Review Section 4.1.4 – Malfunction testing **2004nov09** **Deferred to the next standard revision** 2004aug26 Felker Required Malfunction testing is ambiguous. Lengthy Discussion concerning removing the malfunction list in 4.1.3. Wyatt will assume lead role for this AI in the next standard's revision.
134	**Status:** **2004nov08** **Deferred to the next standard**		**McCullough** **Felker** **Florence**	Minimum Testing Periodicity Table **2004nov10** **After lengthy discussion, deferred to the next standard** 2004nov8 Presented proposed Appendix E 2004aug26 Initial AI

137	Status: **Deferred** **2004nov11**		**Florence** **Koutouzis** **Shelly**	Establish better (routine) communication on ANS WG makeup and activities Target audience – Plant management **2004nov11** **Deferred to the next meeting** 2004aug27 Initial AI
141	Status: **Deferred** **2004nov10**		**Tarselli**	Review incorporation of alternative testing methods into Section 3.4.3.2. **2004nov10** **Due to magnitude of subject matter, Tarselli recommended** **Alternative Testing be deferred to next standard** 2004aug27 Initial AI

12 Closed Action Items

No.	Status	Date	Assigned To:	Work Assignment
1	**Status:** **2004aug26** **Complete** **Dennis** contacted Mike Wright. No Input from Mike. The Scope change should be approved soon. 2001Apr05 Scope statement will be revised based on SubCommittee-1 comments that ANS 3.1 is not Training Criteria	Priority 1 – PINS form will be completed by next meeting (15min)	**Dennis**	DOE Nuclear Facility vs. Power Plant Simulators – Check with ANS 3. Inquire as to whether other simulator issues are addressed/referenced in other ANS 3 standards Dennis will contact Mike Wright (ANS-3 chair). Are DOE issues referencing simulators? 2001Apr05 Dennis Dennis attended the SubCommittee-1 meeting and was informed the PINS form needs to be completed. Additionally, the scope statement states ANS 3.1 establishes Training Criteria, but does not. Accepted 3.5 Scope change and Appendix D 2000mar09 Chandler Comments (NUPPSCO) relating to DOE simulators. We need to resolve Open NUPPSCO comments from the 1998 standards approval process.
2	**Date: 2000oct25** **Status:** Additional Editorial Review Required **Date: 2000mar09** **Status: Complete**		**Colby** **Welchel**	Obtain a Master Copy of the ANS 3.5 standard in Dual Column (working/1998) format. The WordPerfect copy from Shawn does not port into WORD correctly Assigned to Butch Colby.
3	**Date: 1999sep14** **Status: Complete**		**Welchel**	Get NUPPSCO comments to members

4	**Date: 1999sep14** **Status: Complete**		**Welchel**	Send copy of meeting minutes 1998Nov04 and 1999Mar02-03 to Jim Florence
5	**Date: 1999sep14** **Status: Complete**		**Florence**	Jim will look at creating a survey on the USUG WEB concerning the Action Items and for soliciting info from the industry
6	**Date: 1999sep14** **Status: Complete**		**Dennis**	Jeff will contact ANS about ANSI Historical standards Cataudella-Spoke with ANS Standards Secretary, Shawn Coyne-Nalbach Historical Standards: Past standards are retired and are only available as historical standards. 1979, 1981, 1985, and 1993 are no longer endorsed by ANSI and ANS only the 1998 standard is endorsed.
7	**Date: 2001Aug9** **Status: Complete**		**Shelly** **Vick** **Dennis**	Talk to ANS about use of footnotes, asterisks, etc in standards To review style guide. 2001Apr05 Shelly Shelly will call Shawn.
8	**Status:** **2004aug26** **Complete**	Priority 1 – PINS form will be completed by next meeting (15min)	**Dennis**	Contact Mike Wright about the scope change Scope and Background submitted to Shawn and Mike. No schedule at present for ANS-3 to review scope change. **2002Oct29** **PINs form completed and ready to send to ANS**. 2001Apr05 Contacted Sub-Committee-1 and Dennis needs to complete PINS forms;

| 9 | Date: 2001Apr05
Status: Complete
Dennis | | Dennis | Is ANS 3 considering that the standard may address other simulators not specific to NRC Regulatory Commission licensing?

2001Apr05
Dennis - No - per SubCommittee-1 Tamp Meeting

Dennis will verify with Mike concerning additional scope (adding DOE facilities into 3.5).
2001Apr05
Dennis - No - per SubCommittee-1 Tamp Meeting

2000mar09
Dennis will check at the next ANS 3 meeting |

| 10 | **Date: 2001Apr04**
Status: Awaiting Kozak conversation with Chandler and Mallay

Date: 2001Aug09
Status: Closed Pending input from Alan Kozak

Date: 2001Aug27
Status: Complete | | **Kozak**
Collins
(Vick)
McCullough | Propose security criteria for Simulators operating in Exam Mode

2001aug27
Kozak
Contact was made with James Mallary (NUPPSCO) to clarify the comment concerning "non-prescriptive" His concern was the inclusion of further details within the body and stated that if this was not the case then he has no further comment.

Contact could not be made with Harish Chandler.

Information gathered via the ANS survey presents the fact that all of the responding sites are applying Exam Security measures that meet the requirements of their training programs and review from other agencies, i.e. NRC, INPO. It can be safely assumed that non responders are doing like wise.

Based on this information no further action should be needed for this AI.

2001Apr04
Kozak
PPT Presentation outlining several Security concerns. The presentation is included in the AI-10 documentation dated 2001Apr04. Final conclusion was that the current wording is sufficient.

AI Originator: Parking Lot Issue

2001Apr05
Kozak
Two NUPPSCO comments:
NUPPSCO supporting comment: James: Mallay stated that this item should be non-prescriptive.
NUPPSCO supporting comment: Harish Chandler

Kozak will call Chandler and Mallay and discuss their NUPPSCO

2000mar09
Determine source of Exam Security comment |

11	**Date: 2001Apr05** **Status: Complete** **Moved to AI 13**		**Felker** **Collins** **(Vick)**	Standard Section 3.1.4 - Add information notices and any other information; establish threshold of documents to be reviewed. Correspondences change over time. Discuss at next meeting with Felker present. Origin: Parking Lot List 2001Apr05 Deferred for later discussion pending more important issues
12	**Date: 2001Aug09** **Status: Complete**			Intentionally Left Blank

| 13 | **Date: 2002oct29**
Status: Complete | Priority 1 –
Waiting input
from Florence on
feedback from
industry | **Felker**
Florence
Colby | Standard Section 3.1.3(7) - Rated coolant Flow - are BWR's OK with this? Review entire list in section 3.1.3 for applicability. Review present parameter list.
Colby has additional information for discussion at the next meeting. Consider instrument accuracy relating to different plant types.

2002OCT29
Florence
Approved change of 3.1.3 items 1 trough 5 from April 22-25, 2002: Action item #13. The new words in Item 1 includes the intent of old items #1, 2, 3, 5, 7, and 10 and as a result has replaced them. Old item # 8 wording changed in new item #2 to be consistent with wording in new #1. Old item # 4, # 6 and #9 were not changed and are now new item #3, 4, and 5. The main reason for the change is to eliminated unnecessary wording contained within various tables of the Standard and to make them a little more in tune with the industry as it exist in today's environment. This was also the consensus of the industry peer group based on a survey conducted by the ANS Working Group.

Origin: Parking Lot List

Review all List;
Combined with the 3.1.3(7) item (Moved from 23);

Standard Section 3.1.4 - Add information notices and any other information; establish threshold of documents to be reviewed. Correspondences change over time. Discuss at next meeting with Felker present.

Note: Review associations between removal of List and Appendix.

2001Apr05
Moved AI 11 to AI 13
Deferred for later discussion pending more important issues

Felker: The Simulator shall cause an alarm or automatic action |

| 14 | **Closed: 2002apr23 Motion** | Priority 1 – | **Paris Felker Florence Chang** | 2001Aug 09

SK Chang proposes including *synchronization* in the new definition for stimulated device. Hal Paris and SK Chang to provide working group a revised document regarding stimulated devices in one month. Members shall respond within 30 days.

Review guidance on stimulated devices. Combine stimulated hardware and stimulated devices. Issues relating to various stimulated device functions and compatibility with the simulator (e.g. Run/Freeze, History retention and Recalls/Backtracks, software revision control)

2002apr23
Motion:

Change Definition of Stimulated Hardware to Stimulated Components with the definition of Stimulated Components:

- ==**stimulated components** Hardware/software components that are integrated to the simulator process via simulator inputs/outputs which perform their functions parallel to, and either independently of or synchronized with the simulation process==

- Replace Stimulated hardware and Stimulated Device with Stimulated Components

2001Apr04
Paris
Recommends new definition:

Old Definition:
"**Stimulated hardware.** Components or devices that perform their functions independently of and parallel to the simulation process"

2001Apr05
Paris
Considerations for new definitions for later review |

15	**Date: 2000mar09** **Status: Complete** Presentation by Allan Kozak		**Collins** **(Vick)** **Kozak** **McCullough**	Numerous uses of Training Needs Assessment (TNA) Collins - Add paragraph in Section 3.0 detailing TNA and then remove all other references to TNA. Training Needs Assessment was changed to Training Impact Assessment **2000mar09** Determine Source of this comment
16	**2002apr24** **Status: Complete** **Motion No Carried**	Priority 1 –	**Welchel** **Dennis**	Coordinate use of Discrepancy and Deviation. Consider Yoder #12. NUPPSCO Comment 2002apr24 Welchel Prepared and presented Deviation/Discrepancy and Differences replacement. Closed – Motion Not Carried **2001apr03** Welchel Discrepancy is used in sections 4.4.3.2 and 5.2. Webster's definition: Discrepancy-inconsistency Deviation – diverge

| 17 | Date: 2001Aug09
Status: Complete | | Dennis
Welchel | Get feedback from industry on actually how the 1998 standard is actually used. Use USUG meetings.
Cataudella – Seabrook MANTG meeting (Aug-1999) comments:
    How to document Scenario Based Testing?
    Expand on what is V&V and what is necessary.
    Shelly – User feedback is not available for inclusion at this time.
    Develop Mission statement for working group.
    Cataudella – Problems implementing Scenario Based Testing.
    Benchmarking of various sites has shown use of V&V and scenario validation.

2000mar09
Welchel – Add relevant SSNTA meeting minutes to WG minutes.

Wait for industry experience

2001Apr05
Industry Feedback
Callaway has implement the 1998 Standard and presently reports no concerns.

2001apr03
Welchel
As of Jan 2001, Callaway (Scott Halverson) is the only simulator presently implementing the 1998 standard.
The industry consensus, as expressed at the 2001 USUG meeting, is that implementing Scenario based testing for License Class Simulator Scenarios is unworkable. It is generally agreed that the Regulatory carrot for using the simulator for License Candidate Reactivity Manipulations, is a significant positive for adopting the 1998 3.5 ANS standard.
Activity:
MANTG Mar 2001
SSNTA Jan 2001
SCS Jan 2001
USUG Jan 2001 |

| 18 | **Date: 2000mar09**
Status:

Closed Statement (Do we need to put some boundaries as to the limits simulator) | | **Kozak**
Shelly
Cox
Havens
Florence | Part-Task – Should Part-Task become part of the standard or remain as an appendix. Possibly look at tying the Standard body to the Appendix; Application of Full Scope Simulators. Outside interest are asking for uses of simulators that are not related to Operator Training. (Closed 2001Apr05)

Origin: Scope Change at Oconee Meeting

2001Apr05
Florence
Moved from AI 22
Look at the use of Simulator, Simulation Facility; Definitions change Simulation Facility becomes Simulator; Simulation Facility is now defined as the collection of Simulators; Coordinate use of Simulator and Simulation Facility.

2001Apr05
Kozak
Close the Boundry issue
Do we need to put some boundaries as to the limits simulator;

2001Apr05
Kozak
See Minutes Body

2000mar09
Presentation of Virginia Power Classroom/Part-task trainer at the 2000mar09 meeting

Related AI: 41 |

19	**Date: 2001apr05** **Status: Complete** (This Item will be ask on Survey#2)		**Colby** **Florence**	Using the simulator for other than Operator Training. Uses in predictive analysis and design mods, SAMGS procedures changes; 2001Apr05 Colby Include this as part of Survey #2 and Closed **2000mar09** Scope change. This will require approval from ANS-3
20	**Status:** **2004Nov8** **Complete** **2004aug25** **Reactivated** **Date: 2002oct29** **Status: Deferred to 2008**	Priority 1 –	**Paris (Noe)** **Colby** **Kozak** **McCullough** **Felker**	Exploiting technology changes and future industry trends. What's coming around the corner; **2004Nov8** **Consensus from working group to close item based on discussions during this meeting.** **2004aug25** **Reactivated** **Consensus to reactivate this AI and try to develop some language during this period. If DCS is postponed until the next standard, that will possibly be six years before DCS is addressed.** 2002oct29 Paris Deferred to 2008. Additional technologies will need to be considered (e.g. Virtual reality, DCS, WEB based training) 2001Apr05 Paris Presentation: What is Around the Corner (See Attachments Section)

No.	Status	Date	Assigned To:	Work Assignment
				2001Aug09 Paris Presentation – Distributed Control Systems scope needs to be considered in the standard (Hal will e-mail his presentation to Butch).
21	Date: 2000mar10 Status: Complete Keith Welchel wanted to dismiss this item. The WG agreed.		**Collins (Vick) Welchel Chang**	(JFC/KPW/JS) Hybrid Simulators. Hybrid Simulator refers to a simulator that implements many different technologies, source code vendors, different operating systems, integration vendors, etc. Maybe we need to have words that stipulate that testing needs to cover all the other changes we make to the simulator that may affect the operation of the simulator: Instructor Console, Operating Systems, New I/O, etc. (Voted to Dismiss-Consensus) Comments on regulation - The Working Group will not comment on regulations. The Standards Working Group is working in Working Group space. **2000mar10** Keith Welchel moved to dismiss this item. Jim Florence Seconded;
22	**Date: 2001apr05 Status: Complete**		**Florence Kozak**	Closed 2001Apr05 Complete Look at the use of Simulator, Simulation Facility; Definitions change Simulation Facility becomes Simulator; Simulation Facility is now defined as the collection of Simulators Coordinate use of Simulator and Simulation Facility. Closed Moved to AI 18 Jim gave a presentation at the 2000 SCS conference during the USUG meeting.

23				
				Intentionally Left Blank
24	**Date: 2000mar09** **Status: Complete** **No Action.** Real-time at this time does not seem to be an industry concern at this time. Committee members had no issues with the definition or Section 4.1.1. Therefore, this AI was Closed.		**Dennis DeLuca**	Real Time - Dennis will give further consideration and he will look at industry standards; Measuring Real-Time;
25	**Status** **2004nov10** **Closed**		**Dennis Neis**	Process Guidelines (Mods and Testing) ;Institutionalizing Procedures **2004nov10** Dennis and Hudnut gave presentation on adding Item (5) to Section 5. AI-25 is Closed. No action. 2004aug24 Reactivated Try to complete during this revision 2002apr24 Dennis Gave presentation on Millstone experience Defer AI-25 to 2008 2001Apr05 Dennis Deferred

26	**Date: 2000mar10** **Status: Complete** Historical information was presented at the SCS conference. Dennis checked with ANS Headquarters and this issue was discussed in detail		**Dennis**	1985 ANS 3.5 Standard is Historical Standard; Dennis will follow up with Shawn and Mike Wright about Historical/Active Standards and how the present process does not follow the five year; How should we handle or should we comment that the 1985 ANS/ANSI 3.5 standard is now an Historical standard and is no longer in the ANSI catalog. Does the ANS 3.5 Working Group need to comment on this issue; Utilities would need to take exception by treating Certification as other; Mark up the Form 474 and state the other that you are going to do. Scenario Based testing (> 25%/yr.); Performance Based testing Plan Dennis will call Mike Wright confirming ANS-3 understands the Historical Standard issue
27	**Date: 2001Aug09** **Status: Complete**		Collins(Vick) Dennis Koutouzis	(JFC/TD) Possible cross-pollination with other standards. Frank and Dennis will contact others 2001Apr05 Dennis Reference: ANSI/ISA–77.20–1993 Fossil Fuel Power Plant Simulators – Functional Requirements Reviewed FAA WEB Site: www.faa.gov/nsp Simulator Qualifications: www.faa.gov/nsp/ac.htm Colby –To research Navy Simulator Systems Colby – To research Germany regulatory standards
28	**Date: 1999sep15** **Status: Complete**		**Florence**	Suggested a letter to Jim Stavely asking for a commitment to attend meetings along with 02Mar1999 meeting minutes; however, Jim Stavely resigned and submitted replacement resume Oliver Havens, Jr;

29	Date: 2000mar10 Status: Complete		Florence Dennis	Vice-chair prepare letter to Jim Davis asking for commitment to attend meetings along with 02Mar1999 meeting minutes; Chair to sign and send. Chair to send letter to Jim Davis and Ken Rach thanking them for their past participation and asking them for substitute resumes.

30	Date: 2001Apr05
	Status: Complete
			Florence
			Welchel
				Jim Florence suggested that the following information be placed on the USUG Web Page: ANSI-3.5 Membership List, approved meeting minutes, meeting schedules and meeting agendas. Florence/Welchel will ensure WEB page is updated
				
				Florence:
				    Check with Shawn (ANS) for WEB space.
				    Check with USUG for WEB Space
				
				2001Apr05
				Florence
				Membership List
				Minutes
				Meeting Schedules
				Will not use ANS WEB Site
				
				All future approved ANS WG minutes will be placed on the USUG WEB site.

31	Date: 1999sep15 Status: Complete		Dennis	Mission statement for Working Group for the 2003 standard. AI #31 added 1999sep14 **1999sep15:** Voted not to complete

| 32 | Date: 2001Apr04 Status: Closed by Motion | 1999sep15 | Colby Collins Koutouzis Havens Felker McCulough | Description: Multi-Units. Application of reference unit simulators to non-referenced units. Butch has offered to survey the industry. INPO will assist by supplying information from their databases;

Misc Info:
    Reg Guide 1.149 refers to Multi-Unit Plant, but 3.5 does not.
    Felker - Simulators other than the referenced unit are not covered by this standard;

2001Apr04
The WG, by Motion, closed AI 51 and 32. There was agreement that the 3.5 Standard does not cover simulator configured for Multi-Unit use. The Multi-Unit issues are basically training related and are not minimum reference unit Standard's space. Additional Survey questions will be directed by AI 50. The WG approved a motion to delete AI 32 and AI 51 and Colby will still ask survey questions concerning multi-unit plants.

2000Oct26:
Butch will request bullets on Multi-Unit from the Group for next meeting |

| 33 | **Date: 2001Apr04**
Status: Complete | | **Havens**
Kozak
Shelly
Welchel | Change 24-month design change limit to some shorter period.

2001apr03
Welchel
Proposed new wording:
5.3.1.2 Subsequent Upgrade. Following the initial upgrade, reference unit modifications determined to be relevant to the training program shall be implemented on the simulator within 24 months of their reference unit in-service dates, or earlier if warranted by a training needs assessment.

Requiring that a determination of the relevance to training and that a training needs assessment be completed should be sufficient. Recommendation is that the "24 months" be removed and that section 5.3.1.2 should read:

5.3.1.2 Subsequent Upgrade. Following the initial upgrade, reference unit modifications determined to be relevant to the training program shall be implemented on the simulator based on training needs assessments in accordance with the criteria provided in 4.2.1.4.

5.1.2.2 Subsequent Update. Following the initial update, new data shall be reviewed, and the simulator design data base appropriately revised, once per calendar year. Modifications made to the reference unit shall be reviewed for determination of the need for simulator modification within 12 months.

5.1.2.2 Subsequent Update. Following the initial update, new data shall be reviewed, and the simulator design data base appropriately revised, once per calendar year. Modifications made to the reference unit shall be implemented on the simulator based on training needs assessments in accordance with the criteria provided in 4.2.1.4.
.
WG agreed to close this AI with no further discussion. The 12 and 24 month timelines could be used to ensure the modifications. |

34	**Date: 2001Apr05** **Status: Complete**	**1999sep15**	**Welchel** **McCullough** **DeLuca** **Koutouzis**	Present standard does not address software bugs, discrepancies, and enhancements. Time limits only relate to plant design changes, no time limits are associated for simulator fidelity and enhancements. Origin: Welchel 2001Apr05 Closed – Other issues are handled with the Simulator Configuration Process Related AI: 36
35	**Date: 2001Apr05** **Status: Complete**	**2000mar08**	**McCullough** **Collins(Vick)**	Review the double column Draft Working Document prepared by Butch Colby 2001Apr05 McCullough Reviewed and recommend no changes at this time. Footnotes in the side-by-side format do not agree with the original document but this should clear up when the double format is deleted. Additional editorial work may be needed to ensure the footnotes align correctly.
36	**2004aug25** **Closed** **Date: 2003Mar10** **Status: Deferred until 2008**	Priority 2	**Koutouzis** **Havens**	Questions from Review of INPO Documents: - Timeline for incorporation of Plant design changes into the simulator - Instructor Performance - Long Term Open Simulator Fidelity Issues This is an information AI **2004aug25** **Koutouzis update**

No.	Status	Date	Assigned To:	Work Assignment
				The Chair closed this AI. **2003Mar10** **Koutouzis** **No INPO statements on Simulator Fidelity.** **INPO is primarily focused on performance based issues, but will address programmatic issues.** 2002Apr24 Havens – Keep this AI open pending additional input and data. Koutouzis is gathering additional data. Recommends to do nothing right now No Update 2001Apr05 Koutouzis No Update Related AI: 34
37	**Date: 2001Apr05** **Status: Complete** **Group agreed to closed this item. No additional information required.**	2000mar08	**Koutouzis** **Collins(Vick)**	Five Required Control Manipulations Clarification 2001Apr05 Koutouzis No Update

38	**Date: 2001Apr05** **Status: Complete**	2000mar08	**Dennis**	Discuss the ANS definitions and process of Clarification and Interpretation 2001Apr05 Refer to Meeting Minutes {find the meeting minutes and place here}
39	**Date: 2001Apr05** **Status: Complete**	2000mar08	**McCullough** **Florence** **Felker**	Consider differentiating validation of Requal and Initial License Scenarios 2001Apr05 McCullough {Add LTI Document Here}
40	**Date: 2002oct31** **Status: Complete**	Priority 1	**Cox** **Vick** **Florence** **Collins** **McCullough**	Appendix Update for Scenario Based Testing Documentation. 2002oct31 Florence New Appendix E Accepted See Minutes Appendix 2001Apr05 Draft a Scenario Based Testing Guideline (new) Appendix

| 41 | **Date: 2000Oct26** **Status**: **Complete** | 2000mar08 | **DeLuca** **Colby** | Appendices consideration up-front and not as an after thought. Tie documentation and Testing to the Standard Body

Related AI: 18

Resolution (2000Oct26 – Colby):
    Continue using Appendices A and B as is
    Recommendation to revisit appendices content
    Consider moving Appendix D (Part-Task) into standard main body
    Related AI-18 |

42	**Closed: 2002apr23 Motion**	Priority 1 -	**Chang Felker Cox**	Use of Verification and Validation Origination: Colby Survey **2002apr23** **Closed by Motion** **2000Oct26:** **Chang to look at Survey and determine the issues with Verification and Validation and bring to next meeting** **Origin: ANS 3.5 WG Survey #1** **2001Apr05** **Felker** **The use of V&V as espoused through the IEEE 7xxx standards for SW Validation. We have outside documentation regarding the use of the term SW Validation &Verification;** **It is not V&V as defined in the Nuclear Industry.** **2001Aug09** **SK will put out a revised document on V&V in one week. Members shall respond within 30 days.**
43	**Date: 2001Apr03** **Status: Complete**	2000mar08	**Welchel**	Send 1998 Standard NUPPSCO comments to: Hal Paris Bob Felker Bud Havens **2001apr03** Welchel - Delivered 2001apr03

| 44 | **Date: 2002oct29**
Status: Complete | Priority 1 - | **Paris**
Havens
Chang | Clarify Simulator Repeatability wrt to Real-time and not Scenario Based Testing. Repeatability is not specified for Scenario Based Testing but is related to Real-time.

2002oct29
Paris
Closed
Refer to 2002apr motion to leave wording as is. This item is closed (originated form 1998 NUPSCO comments TVA)

2001Apr05
Paris
Concern: What is Repeatability? Further review is needed. See Attachment for AI 44

2000Oct26:
Hal and Group will review the use of these terms and consistency |
| 45 | **Date: 2000Oct26**
Status: Complete | 2000mar08 | **Shelly**
Chang
Havens | Clarify Overrides do not have to be tested like Malfunctions and are not Malfunctions. (Survey Comment 3.15 p20)

2000Oct26:
Non-issue because it's related to CFR and not the standard
    Not all Overrides need to be tested
    Only Overrides in Scenarios need to be tested
    AI45 Originated from Colby survey
    Confusion between the CFR about 25%/yr and the 98 standard linking Overrides to Malfunctions
    Recommend that this is a non-issue and should be closed because its not an issue with the standard but is with the 10CFR Part 55 |

46	**Date: 2001Aug09** **Status: Complete**		**Committee**	Request members review the other parts of the survey and comment. Members are ask to review and submit two bullets that they consider important for further ANS3.5WG consideration
47	**Date: 2000Oct26** **Status: Complete**	2000mar09	**Colby**	Send Thank You notes to all Survey Participants
48	**Date: 2000Oct26** **Status: Complete**	2000mar09	**Colby**	Modify DCD Training Needs Assessment to Training Impact Assessment **2000Oct26:** **Deleted due to Motion by Felker being Carried** **WG decided to revert back to Training Needs Assessment**
49	**Date: 2000Oct26** **Status: Complete**	2000mar09	**Kozak**	Determine source of Training Needs Assessment Related AI: 15 **2000Oct26:** **Could not determine the Source of Training Needs Assessment**
50	**Date: 2001Apr04** **Status: Complete** **Redundant to AI 10**	2000mar09	**Colby**	Additional survey concerning Exam Security Concerns 2001Apr05 Colby Close redundant to AI 10. Closed 2001Apr04 Kozak presented a PPT presentation outlining and defining security issues Closed based on better understanding of NUPPSCO.

51	Date: 2001Apr04 Status: Closed by Motion	2000mar09	Colby	Send out another survey concerning Multi-unit questions and will try to target Simulator, Training, and OPS 2001Apr04 The WG, by Motion, closed this AI 51 and 32. There was agreement that the 3.5 Standard does not cover simulator configured for Multi-Unit use. The Multi-Unit issues are basically training related and are not minimum reference unit Standard's space. Additional Survey questions will be directed by AI 50. The WG approved a motion to delete AI 32 and AI 51 and Colby will still ask survey questions concerning multi-unit plants;
52	Date: 2000Oct26 Status: Complete	2000mar09	Felker	Locate previous Multi-Unit work completed by the 1993 WG. Bob will contact Bill Geiss Resolution: 2000Oct26 Felker Material does not exist.
53	Date: 2001Aug09 Status: Complete		Colby	Review the Appendix A – A(3) (BOM). Consider removal of the BOM list and replace with I&C list 2001Apr05 Colby March 2000 meeting minutes Working Doc Editor to remove BOM from Appx A
54	Date: 2000Apr05 Status: Complete	2000mar09	Vick	Aquire US Government Style Guide 2001Apr05 Style manual given to Style Editor.
55	Date: 2000Oct25 Status: Complete	2000oct25	Dennis	Distribute Robert Boire work assignments 2001Oct25 Completed

56	Date: 2000Oct26 **Status: Complete**	2000oct25	**Colby**	Contact Mr. Cox (Com Ed) for 3.5 WG participation. **2000Oct26** **Colby called Mr Cox but Mr Cox is out until 2000Oct30.** **Terrill Laughton attended on behalf of Mr Cox**
57	**Date: 2002Oct29 Status: Complete**	Priority 1 -	**Dennis Vick Colby**	Remove all references to 3.1 2002oct29 Dennis - Closed Verified by working group in Standard Draft Rev 6. 2002apr24 Dennis Vick and Colby will determine the changes necessary and bring these to the committee for approval. Revised wording presented to Working Group. One negative comment resolved by personal review of ANS-3.1; Motion passed to accept wording (see 14.11 2002apr22 minutes) 2002apr23 Dennis Get Copy of 3.1 for review. 2001Apr05 Dennis Deferred for later discussion.

58	Date: 2002apr24 Status: Complete	Priority 1	Dennis	Send Robert Boire a note of thanks for his participation 2002apr24 Dennis Closed Letter reviewed by members. 2002apr23 Dennis Letter sent. Get copy of letter for members review. 2001Apr05 Dennis Letterhead not available. Florence will contact Shawn at ANS and request letterhead.
59	Date: 2002apr23 Status: Complete	Priority 1	Florence McCullough	Develop a list of Action Items for 3.5-WG resulting from the 2000Oct26 USUG Ops Test Directors Meeting at DC Cook 2002apr23 Closed Closed – Items were reviewed by WG in the Oct 2000 meeting and they were incorporated into the Working Groups public comment to the NRC's proposed rule change. 2001Apr05 Florence Deferred until Florence communicates with McCullough
61	Date: 2001apr03 Status: Complete	2000oct26	Welchel Dennis	Write letter to NRC concerning the WG comments on the proposed rule change 2001apr03 Welchel – Letter Written and mailed to NRC stating the three issues regarding the proposed rule change.

62	**Date: 2001Aug09** **Status: Complete**		Koutouzis	Send Meeting Materials to Absent members;
63	**Date: 2001Aug09** **Status: Complete**		Dennis	Address the problem of other standards placing requirements on the ANS 3.5 Standard without our knowledge. (NFSC Sub-Committee I);
64	**Date: 2001Aug09** **Status: Complete**		Florence Dennis	Florence to prepare W. DeLuca letter for T. Dennis signature;
65	**Date: 2001apr03** **Status: Complete**		Welchel	NUPPSCO comment to Kevin Cox (Complete)
66	**Date: 2001Aug09** **Status: Complete**		Havens	Scan NRC Form 398 and Email to WG members

| 67 | Date: 2001Aug09
Status: Complete | | Dennis | Contact Shawn concerning Clarification Statement

2001jul11

Ms. Shawn M. Coyne-Nalbach
NFSC Secretary
American Nuclear Society
555 North Kensington Avenue
La Grange Park, IL 60526-5592

Dear Ms. Coyne-Nalbach:

Subject: Request for Clarification

Reference: ANSI/ANS-3.5-1998 Standard Document, Section 4.4.3.2

I am a supervisor for the Nebraska Public Power District's Cooper Nuclear Station responsible for maintaining the functional requirements for our full-scope nuclear power plant control room simulator used for operator training and examination.

I am writing this letter to your organization to request a clarification to the reference document in regards to Simulator Scenario-Based Testing.

Section 4.4.3.2 of the reference document states that scenarios developed for the simulator, including the appropriate instructor interfaces and cueing, shall be tested before use for operator training or examination. The simulator shall be capable of being used to satisfy predetermined learning or examination objectives without exceptions, significant performance discrepancies, or deviation from the approved scenario sequence. A record of the conduct of these tests, typically in the form of a completed scenario or lesson plan checklist, and the evaluation of the test results, shall be maintained.

I am concerned that the Standard requires scenarios developed for the simulator shall be tested before use for operator training or examination. It appears that this requirement may not be achievable with all operator training programs, namely initial license candidate training programs.

Please clarify the preceding paragraph by addressing the following questions:

1. What is the intent of scenario-based testing? Does scenario-based testing impose additional training program requirements?

ANS-3.5 Working Group answer:

        Scenario Based Testing is intended to best utilize, to the extent possible, the existing training scenario development process |

| 68 | **Date: 2003Mar11**
Status: Complete

Date: 2002oct30
Status: Re-Opened

Closed
2002apr24 | Priority 1 | **Colby**
Shelly
Felker | Survey #2
Multi-Unit
Different OPS Procedures
Fuel Cycles
Time Delay loading Sim Fuel load
Unit Procedure Differences and Training

2003Mar11
Colby
Presented list of survey results.
Motion:
Delete Malfunction List Table in Section 3.1.4 and move to Appendix A

2003Mar10
Colby
Presented list of survey results.
This item was originally discussed in AI-83.

2002oct30
Reopened to consider additional Survey data.
Consider AI-83 - Malfunctions List and Survey Results

2002apr24
Colby
Recommend Closing due to information will be handled by future Action Items.

2002apr23
Colby
Nothing here that would be changed in the 2003 standard.

2001AUG7
All survey's have not been received, so the final results of the survey will be discussed at our next meeting in March. |

69	**Status: Complete** **2002apr24**		**Vick**	Check out and report information on SECY-01-0125 2002apr24 Vick Simulator rule is in effect Nov 16,2001 and SECY reference is now background info only.
70	**Date: 2002oct29** **Status: Complete**		**Florence**	Come up with a set of rules for use and what will go on the web site. **2002oct29** Florence Closed WEB Site Changes: - Only latest minutes will be posted - Contact Keith Welchel to request previous minutes - ANS 3.5 WEB will not be password protected - Remove membership contact info accessible by general public 2002apr24 Florence Handout presented to members for review. AI-70 will be closed when the ANS 3.5 WEB site is password protected. Password protect the ANS 3.5 WEB site and post amended ANS 3.5 WEB page use policy.
71	**Date: 2002apr24** **Status: Complete**		**Dennis**	Vary if ANS normally provide the minutes of group meetings 2002apr24 Dennis Provided by request by ANS.

| 72 | Date: 2001Nov27
Status: Complete | | Shelly | Check if we can add an appendix and still reaffirm

2001Nov27
Shelly

I contacted Suriya with this question, and her response was that a standard can be reaffirmed if the appendix/annex will be informative. If the additional appendix is informative, then you should supply a statement in the foreword regarding this informative piece. The statement in the foreword is NOT required but highly recommended.

The standards can not be reaffirmed if the additional appendix will be normative. In this case the standard will have to be considered under the revision process through ANSI.

According to Webster's, NORMATIVE means "of, relating or conforming to, or prescribing norms". Based on this, we could add an appendix to the standard and still reaffirm the current standard, but we must ensure the appendix contains clarifying information and doesn't prescribe any new requirements or parameter limits.

I consider this action closed unless someone knows of a need for further `research on this issue.` |
| 73 | Status: Complete
2002apr24 | | Dennis | Send the clarification letter to ANS on the Scenario Based Testing

2002apr24
Dennis
Published in the Nuclear Standards News, Vol. 33/No. 2 March-April 2002 |

74	**Status: Complete 2002apr24**		**Dennis**	Contact ANS Standards Administer to determine if we can refer to documents other than ANS Standards 2002apr24 Dennis
75	**Status: Complete 2002apr24**		**Jim Florence**	Contact the industry 2002apr24 Florence does not know what this is about. Recommend to close.
76	**Status: Complete 2002apr24**		**Butch & Hal**	To research Germany regulatory standards and navy standards 2002apr24 Colby Most International simulator customers refer to ANS 3.5 in their purchase spec
77	**Status: Complete 2002apr22 Dennis**		**Dennis**	Determine if the ANS 3.5 Working Group name will change due to the ANS 3 to ANS-21 name change. Closed 2002apr22 Dennis contacted Suriya Ahmad at ANS headquarters and no change is planned for ANS 3.5.

78	**Status: Complete** **2002apr24**		**Keith** **Welchel**	AI16 - Prepare a document for review by ANS members that shows the result of substituting Difference for Deviation/Discrepancy. 2002apr24 Colby Prepared summary of all Deviation/Discrepancy and Difference replacements and reviewed with members.
79	**Date: 2002oct30** **Status: Complete**		**Vick** **Cox** **Kozak**	Bring to the committee recommendation for implementing Roberts Rules or Order. (i.e. Revisiting Motions Not-carried) **2002Oct30** **Cox** **Consensus that Robert's Rules of Order will used a general guide**
80	**Status** **2004nov08** **Complete**		**Florence**	2008 Copy and Paste RG 1.149 Rev 3 Section 1.5 into the 2008 Standard. (Software V&V) **2004nov8** **Florence** Item discussed and concluded no change to the standard should occur. This item was closed. **2004aug25** **Florence** **Reactivated and will be considered at this meeting.**

81	**Date: 2002Oct29** **Status: Complete**		**Dennis**	Get copy of ANS 3.1 for members review. **2002oct29** **ANS 3.1 is no longer referenced in ANS 3.5; No need for ANS 3.1.** **2002Apr24 Closed** **Dennis** **Copy of ANS-3.1 obtained from ANS Standards Secretary.** **Copy given to requesting Working Group member for review.**
82	**Status: Complete** **2002apr24**		**Dennis**	Get copy of Letter of thanks to Robert Boire for members review 2002apr24 Dennis Members reviewed letter
83	**Date: 2002oct30** **Status: Complete**		**Colby**	Compare 3.1.4 Malfunction List with 10 CFR Part 55.59 **2002oct30** **Colby** **Reviewed items that are in 10CFR55.59 but are not in the Standard. This item was discussed before.** **This item may be discussed in AI-68.** 2002oct29 Colby Reviewed 10CFR55.59 List (See Appendix AI-83)

84	Date: 2002oct29 Status: Complete		Florence	Review 4.4.3.1 for clarity concerning SBT and to remove Certification reference **2002oct29** **Florence** Complete Refer to AI-40 AI-84 was completed at Jackson meeting via AI-40. Cannot find reference in past minutes why this AI was created. AI-84 has been completed and is thus Closed.
85	Date: 2002Oct28 Status: Complete		Welchel	Create another Bucket to place 2008 deferred AI's **2002Oct28 Closed** **Welchel** **New Section and Table to Hold Deferred Action Items**
86	Date: 2002oct29 Status: Complete		Colby Florence	Create Frank Collins Plaque for review membership 2002oct29 Colby Colby create a plaque for the group to consider. Plaque is mahogany base with Brass ANS Logo and wording.
87	Date: 2002oct29 Status: Complete		Colby	Review MANTG Simulator Historical base-line data 2002oct29 Colby Closed – Reference Section 5.1 "Current Simulator"

88	**Date: 2003Mar10** **Status: Complete**		**Cox**	Review simulator Fidelity. Standard does not define Software Fidelity, only HW Fidelity **2003Mar10** **Vick** **New AI - Recommends having Document Edited by a Technical Editor** **Complete – No need to define SW fidelity.** 2002oct30 Cox Cox and Vick will recommend new definition.
89	**Date: 2002oct29** **Status: Complete**		**Shelly** **Vick**	Review 4.4.3.1 "once per year on a calendar basis language" **2002oct29** **Shelly** **Defeated on Motion**

90	**Date: 2003Mar12** **Status: Complete**		**Florence** **Colby** **Cox** **Chang**	Review all Section for alignment specifically Sections 3.4 and 4.4 and report and recommend new Section alignments **2003Mar12** **Colby** **Report to committee complete** **AI-Closed** **Refer to AI-102** **2003Mar11** **Colby** **Motion: Defer AI-90 to 2008 Standard** **Motion withdrawn pending further discussions** 2002oct30 Colby Action deferred to next meeting. See AI-90 meeting minutes 2002oct30.
91	**Date: 2003** **Status: Complete**		**Dennis**	Call Mike Wright and get a determination on standards organizational alignment and possible standards name change **2003Mar11** **Dennis** **Refer to AI-77** **No further change from NFSC Nov 2002 meeting** 2002oct28 Dennis

92	Date: 2003Mar11 Status: Complete		Florence Colby Kozak	Improve Definition of Simulation facility to include Part-task and limited scope. (coordinate with Scope State) **2003Mar11** **Colby** **Motion:** **Revise Scope Statement**
93	Date: 2003Mar10 Status: Complete		Shelly	Appendix and Standard Dates referencing Are Appendices required to reference the standard's published date. **2003mar10** **Shelly** **Contacted Suriya Ahmad of ANS.** **Response: The appendix reference to the standard's published date is part of the ANSI's format when publishing a standard. Therefore, it can not be removed.**
94	Date: 2003Mar10 Status: Complete		Colby	Align Appendix Header dates to Appropriate Published Standard Date **2003Mar11** **Colby:** **Presented New Appendix Wording**

| 95 | **Date: 2003Mar11**
Status: Complete | | **Felker**
Florence
Kozak | Section 4.4.3.2
New 4.4.3.2 wording and/or integrate 4.4.3.1 and 4.4.3.2

2003Mar11
McCullough
Motion to add procedural in Section 4.4.3.2 and Appendix E.

Modify Paragraph Numbered Item (2) Section 4.4.3.2
(2) the simulator is capable of producing the expected reference unit response without procedural exception, significant performance discrepancies, or deviation from an approved scenario sequence;

Modify paragraph after "Scenario Lesson Plan Title:" in Appendix E

This test verifies that the simulator may be used to satisfy predetermined learning or examination objectives without procedural exception, significant performance discrepancies or deviation from the approved scenario sequence, including the appropriate instructor interfaces, operator actions, and operator cues. |
| 96 | **Date: 2002Oct30**
Status: Complete | | **Kozak**
Chang | Locate a copy of INPO document concerning pre-running Scenarios and determine what validation is required.

2002Oct30
ACAD 90-022 – "Guidelines for Simulator Training"
The document uses the word "should" to validate scenarios before use in operator training.
This document is only a guide. |

97	Date: 2003Jul24 Status: Complete		Dennis	Determine reference usage within ANS Standards. Can the 3.5 Standard reference an INPO document? **2003Jul24** **Dennis presented minutes from NFSC meeting. It was noted that INPO documents are generally available to the public at large and should be avoided. But, may be used if required.** 2003Mar11 Dennis Researching using documents not available to general public.
98	Date: 2003Mar10 Status: Complete		Colby	Insert correct standard Title in appendices headers **2003Mar11** **See AI-94**
99	Status: Complete 2003Oct28		Vick Koutouzis	Vick and Koutouzis will have Standard reviewed by Technical Editors for consistency 2003Oct28 Complete Technical Review completed and present to working group. 2003Mar10 Initial Action Item.

| 100 | 2003Jul24
Status: Complete | | **PWR**
McCullough -
Lead
Neis
Chang
Kozak
Welchel

BWR
Havens - Lead
Felker
Florence
Panfil
Tarselli

Vick -
Coordinator | Create two subcommittee's (PWR and BWR) that will investigate Core Performance testing inclusion into the Standard.

• Review Section 3.1.3 "Normal Evolutions" Item 9 ANS 3.5 1998 with regard to Core Performance testing for PWR and BWR types.
• Should Core Performance be in Section 3.1.3
Is Unit Performance Testing the correct term or did the committee mean Core Performance Testing.

2003Jul24
Closed
Accept changes to sections: 3.1.5, 4.1.5, 4.4.3.1, 5.3.2

2003Mar10
Initial Action Item. |
| 101 | 2003Jul24
Status: Complete | | **Neis**
Felker
Kozak | Review 3.2.1.4 for language clarification

2003Jul24
Neis
Proposed new Wording
Passed by Amended Motion

2003Mar10
Initial Action Item. |

102	**Status:** **2003Oct30** **Complete**		**Colby** **Paris** **Dennis** **Koutouzis** **Shelly** **Cox** **Vick -** **Coordinator**	Review Sections 3, 4, 5 and 6 for alignment and consistency and possible merge. **2003Jul21** **Colby** **Distributed comparison and groups were formed to review and report next meeting** Inform Tim Cassidy that Sections are under review. Options: • This Standard • Next Standard Formatting • Keep the Sections separate but aligned • Merge the Sections **2003Mar10** **Initial Action Item.**
103	**Status:** **2003Oct28** **Complete**		**Colby**	Will create two Revised Standards Versions Version 1 1998 versus 2003 No History Version 2 1998 versus 2003 with Revision History **2003Oct28** **WG is not sure what the reason for this AI. The WG recommend closing this AI. Colby can deliver this information at a later time.** 2003Mar10 Initial Action Item.

104	Status: **2003Oct28** **Complete**		**Vick**	Review the parliamentarian procedure for motion approval (75% Consensus Rule of the Chair) Rule of the Chair: Interim Voting (Motions) shall be by Consensus Action: Vick will review and advise at future meetings **2003Oct28** **Rule of the Chair is 75% for consensus motions. 75% for consensus is from ANS.** 2003Jul24 Initial Action Item
105	Status: **2003Oct28** **Complete**		**Shelly** **Neis** **Koutouzis**	Incorporate technical writing editor modifications for committee review Refer to Colby AI-102 handout (Comment 1 and 2) concerning technical editor review and suggested changes **2003Oct28** **Complete** **Delivered to WG via Email. AI-106 will continue Tech Editing Review.** **2003Jul24** **Initial Action Item**

No.	Status	Date	Assigned To:	Work Assignment
106	**Status:** **Closed** **2004Apr05**		**Shelly-Lead** **Committee**	Working Group will review tech Editing markup Marked up version was distributed to committee members Comments to Shelly by 2003Sep01 **2004Apr05** **Shelly presentation** **Closed per Section 5.3 of the ANSI Style Manual (8th edition, version 1.0, 1991) addresses the use of notes within a standard.** 2003Oct31 Determine use of the term "NOTE" in the standard. 2003Jul24 Initial Action Item
107	**Status:** **2003Oct27** **Complete**		**Wyatt-Lead** **Neis** **Vick** **Koutouzis** **Havens** **Florence**	Determine what may be acceptable performance test documentation and evaluation test results documentation to take credit for a scenario-based test. Provide a white paper to the Working group for discussion at the next meeting. **2003Oct27** 2003Jul24 Initial Action Item

108	**Status:** **2003Oct30** **Complete**		**Felker** **Vick**	Review Section Comparison Section 3.0 Section 3.1 Section 3.1.1 Section 3.1.2 Format of change: • Reline changes (Track Changes) • Add "why change is made" comment for each change • Email changes to Florence for consolidation by 2003Oct01 Be prepared to present to WG at next meeting **2003Oct30** 2003Jul24 Initial Action Item
109	**Status:** **2003Oct28** **Complete**		**Havens** **McCullough**	Review Section Comparison Section 3.1.3 Section 3.1.4 **2003Oct28** **Amended Sections:** 2003Jul24 Initial Action Item

110	Status: **2003Oct28** **Complete**		**Welchel** **Paris/Noe**	Review Section Comparison Section 3.2 **2003Oct28** **Amended Sections:** **3.2.1.1 – 4.2.1.1** **3.2.1.2 – 4.2.1.2** **3.2.1.3 – 4.2.1.3** **3.2.1.4 – 4.2.1.4** 2003Jul24 Initial Action Item
111	Status: **2003Oct30** **Complete**		**Neis** **Kozak**	Review Section Comparison Section 3.3 **2003Oct30** 2003Jul24 Initial Action Item
112	Status: **2003Oct30** **Complete**		**Florence** **Tarselli** **Chang**	Review Section Comparison Section 3.4 **2003Oct30** 2003Jul24 Initial Action Item

No.	Status	Date	Assigned To:	Work Assignment
113	**Status: Closed 2004Apr07**		**Havens McCullough Tarselli Kozak**	Appendix B Revision to Appendix B will address requirements as a result of AI-100 Update Appendix B with Core Performance as a result of adding Core Performance Testing in the Standard **2004Apr07** **Closed with no Action. WG could not come to a consensus on the placement and word for adding additional CPT requirements and testing criteria into the standard.** 2003Oct31 Havens presented a revised Appendix B. Havens will review and make another recommendation at the next meeting. 2003Jul24 Initial Action Item
114	**Status: 2004Apr08 Complete**		**Felker Florence Neis**	SBT Resolution Felker will review section 4.4.3 and recommend a resolution to the SBT and checklist problem. **2004Apr08** **Completed SBT with various changes** **2003Oct28**

115	Status: 2003Oct30 Complete		McCullough	Find a another home the existing wording of Section 3.4 Create Data Collection Section **2003Oct30** **Removed all wording Section 3.4 and added new Section 3.3.5 and 4.3.5 Data Collection** **AI-115 and AI-115 were considered at the same time and Accepted by Motion** **2003Oct29** **Initial AI**
116	Status: 2003Oct30 Complete		Koutouzis Florence	Develop the requirements, Section 3.4 for Section 4.4 that better defines the requirements for V&V **2003Oct30** **2003Oct30** **New wording for Section 3.4** **AI-116 and AI-115 were considered at the same time and Accepted by Motion** **2003Oct29** **Initial AI**
117	Status: 2004Apr08 Complete		Havens	Review and evaluate references to Section 3.1.3 to determine if the correct linkage is still maintained **2004Apr08** **Changes to 3.2.2.1, 3.2.2.2, 4.2.2.1, 4.2.2.2, 4.1.3.2 to reference 3.1.3.2 instead of 3.1.3** 2003Oct30 Initial AI

No.	Status	Date	Assigned To:	Work Assignment
118	**Status:** **2004Apr08** **Complete**		**Colby**	Examine Stimulated Hardware references to determine modification to Stimulated Components **2003Apr08** **Review presented by Colby and no Action required** 2003Oct30 Initial AI
119	**Status:** **2004Apr08** **Complete**		**Kozak**	Investigate the impact of removing "or initial condition" in paragraph one of Section 3.1.3 **2004Apr08** **Review and presentation by Kozak** **Recommendation to Do Nothing** **WG agreed to Close** 2003Oct30 Initial AI
121	**Status:** **2004aug23** **Complete**		**Florence**	During review of AI-106, three technical edits were considered "more than just technical edits" and were not adopted. Florence will champion the three issues: Affected sections: • Section 4.2.2.2 • Section 5.3.1.2 • Section 4.1.2.3 **2004aug23** **Several motions were considered.** 2003Apr05 Initial AI

No.	Status	Date	Assigned To:	Work Assignment
122	**Status:** **2004aug26** **Complete**		**Vick**	Simulator Performance testing Item Experience **2004aug26** **Presentation to WG** 2003Apr05 Initial AI
123	**Status:** **2004aug24** **Closed**		**Felker**	Consideration of Change of Section 1.2 first two sentences **2004aug24** **Felker will send a note to Peer stating WG will take no action.** 2003Apr05 Initial AI
124	**Status:** **Complete** **2004nov11**		**Florence** **Tarselli** **Welchel**	Evaluate plant transient and for simulator performance (Post Event Data) Consider Reference unit post event guidance to evaluate simulator performance **2004nov11** **The WG added Post Event Simulator testing Sections 3.4.3.4 and 4.4.3.4** 2004aug24 Florence will lead development of additional language for "Post Event Processing". 2003Apr05 Initial AI

No.	Status	Date	Assigned To:	Work Assignment
125	**Status:** **2004aug24** **Closed**		**Florence**	Consider placing 4.1.4 performance criteria into Appendix B1.2 **2004aug24** **Closed** **This AI was discussed and no final resolution. Florence agreed to close AI-125 with further action** 2003Apr05 Initial AI
127	**Status:** **2004aug25** **Completed by Motion**		**Neis** **Havens** **Chang**	Divorce Core Performance Testing from Operability Testing **2004aug25** **Havens presented several changes to Sections 3 and 4. Two new sections were added 3.4.3.3 and 4.4.3.3** 2003Apr05 Initial AI
128	**Status:** **Complete** **2004nov11**		**Shelly**	Single column Version of Standard ready for final reading **2004nov11** **Complete and used for final reading** 2003Apr05 Initial AI
129	**Status:** **2004aug24** **Complete**		**Colby**	Resolve that Appendix D is no longer referenced in standard **2004aug24** **Move Appendix D Footnote reference from Section 1.2 to Section 1.1** 2003Apr05 Initial AI

130	**Status:** **2004aug26** **Closed**		**Florence**	Impact to 3.4.3.2 and 4.4.3.2 resulting from Kennett Square AI-115 and AI-116 **2004aug26** **Neis, Florence** **Closed to AI-133** 2004aug23 Initial AI
131	**Status:** **2004aug26** **Complete**		**Havens**	Review 2003oct27 minutes concerning Continuation of the discussion Section 3.1.3 and 3.1.4 Comparison **2004aug26** **Havens** **Closed- No error in minutes found after review** 2003augxx Initial AI

No.	Status	Date	Assigned To:	Work Assignment
133	**Status:** **2004nov08** **Complete**		**Neis** **Havens** **Felker-** **Presenter**	Review 3.4.3.2 and 4.4.3.2 for redundancy and consolidation **2004nov8** **Hudnut** **Reviewed proposed wording changes. Intent change determined. Closed without further action.** **2004aug27** **Review Section 4.4.3.2** **2004aug27** **Section 3.4.3.2 was modified by Motion** **2004aug26** **Initial AI**
138	**2004nov10** **Completed**		**Colby**	Revision Tracking - Kennet Square (2003oct27) – Rev 14b - DS&S (2004apr05) – Rev 16b - Post DS&S – rev 15 (Rev 14 Tech Editing) - Ginna (2004aug23) – Rev 17 **2004nov10** **Reviewed draft standard rev 19** 2004aug27 Initial AI

No.	Status	Date	Assigned To:	Work Assignment
139	**Status: Complete 2004nov11**		**All Members**	Members to review their action items to ensure correct incorporation into the standard **2004Nov11** **Complete** 2004aug27 Initial AI
140	**2004nov10 Complete**		**Havens**	Review Section 4.1.3.2 needs tech editing consideration due to Kennett Square modification **2004nov10** **Replaced Item (4) in Section 4.1.2.3** 2004nov8 Presented potential change to standard 2004aug27 Initial AI
142	**2 May 2006 Complete**		**Dennis**	PINS Comment Review **2 May 2006**; Working Group carried a Motion to accept the PINS form as modified by previous comments.