ANS 3.5 Working Group Meeting Minutes
Dominion Resources
L.F. Sillin, Jr. Nuclear Training Center
2007 April 30-May 3

1.   <u>Next Meeting Proposed</u>

Location: Exelon Nuclear, Cornerstone II at Cantera, Warrenville, IL
Airport: O'Hare/Midway
Date: 2007 August/September

2. __Motions__

2007Apr30 **Name**: Dennis **Description**: Agenda	Motion: **Carried** • 10 – For • 0 – Against • 0 – Abstained
2007Apr30 **Name**: Dennis **Description**: Report	Motion: **Carried** • 10 – For • 0 – Against • 0 – Abstained
2007Apr30 **Name**: Florence **Description**: Not to accept Stevenson Comment #2	Motion: **Carried** • 10 – For • 0 – Against • 0 – Abstained
2007Apr30 **Name**: Florence **Description**: Not to accept Stevenson Comment #3	Motion: **Carried** • 10 – For • 0 – Against • 0 – Abstained
2007May01 **Name**: Dennis **Description**: Accept Agenda Rev4 (Day 2)	Motion: **Carried** • 10 – For • 0 – Against • 0 – Abstained
2007May01 **Name**: Hansen **Description**: Not to include Eldridge/Burns Comment #2	Motion: **Carried** • 10 – For • 0 – Against • 0 – Abstained
2007May01 **Name**: Chang **Description**: Not to include Roe/Ludlam Comment #1	Motion: **Carried** • 10 – For • 0 – Against • 0 – Abstained

2007May01 **Name**: Havens **Description**: Not to include Roe/Ludlam Comment #2	Motion: **Carried** • 11 – For • 0 – Against • 0 – Abstained
2007May01 **Name**: Havens **Description**: Not to include Roe/Ludlam Comment #3	Motion: **Carried** • 11 – For • 0 – Against • 0 – Abstained
2007May01 **Name**: Havens **Description**: Not to include Roe/Ludlam Comment #6	Motion: **Carried** • 11 – For • 0 – Against • 0 – Abstained
2007May01 **Name**: Kozak **Description**: Calvert Cliffs Request for Clarification Response	Motion: **Carried** • 8 – For • 2 – Against • 1 – Abstained
2007May02 **Name**: Dennis **Description**: Accept Agenda Rev 5	Motion: **Carried** • 10 – For • 0 – Against • 0 – Abstained
2007May02 **Name**: Colby **Description**: To respond to Burns Comment #1	Motion: **Carried** • 10 – For • 0 – Against • 0 – Abstained
2007May02 **Name**: Colby **Description**: Not to include Burns comment #4	Motion: **Carried** • 11 – For • 0 – Against • 0 – Abstained
2007May02 **Name**: Colby **Description**: Include Stevenson Comment #1 Include the Table of Contents, Section, and Appendices with titles and exclude Table C1	Motion: **Carried** • 10 – For • 1 – Against • 0 – Abstained

in revised standard Rev 24.	
2007May02 **Name**: Vick **Description**: Not to include Eldridge/Burns comment #3	Motion: **Carried** • 11 – For • 0 – Against • 0 – Abstained
2007May02 **Name**: Koutouzis **Description**: Not to include Eldridge/Burns comment #5	Motion: **Carried** • 11 – For • 0 – Against • 0 – Abstained
2007May02 **Name**: Tarselli **Description**: Not to include Roe/Ludlam comment #4	Motion: **Carried** • 11 – For • 0 – Against • 0 – Abstained
2007May02 **Name**: Tarselli **Description**: Not to include Roe/Ludlam comment #5	Motion: **Carried** • 10 – For • 0 – Against • 1 – Abstained
2007May03 **Name**: Dennis **Description**: Accept Agenda Rev-6	Motion: **Carried** • 11 – For • 0 – Against • 0 – Abstained
2007May03 **Name**: Colby **Description**: Accept Draft Standard 200X Rev 25 to include the following changes made to Rev 24	Motion: **Carried** • 11 – For • 0 – Against • 0 – Abstained

3. __Action Item Activity__

146	Summarize the E-Vote (Complete)	Welchel
147	Impact of Fully-Integrated Mode of Operation on Performance Testing (Deferred to next standard)	Welchel
148	Core Performance Testing Frequency	Hendricsen
149	Ensure ANSI is aware Appendix Title is listed in Table of Contents	Florence
150	Review consistency in the use of the Term Power Range (Deferred to next standard)	Vick
151	Obtain Calvert Cliffs Clarification Approval from ANS-21	Dennis
152	Send ANS-21 comment resolution letters to ANS-21 commenters	Dennis
153	NFSC List needs to be added to Forward	Dennis
154	Review contributing members list	Colby
155	Develop Emeeting procedure	Florence
156	Research possible use of Webex	Tarselli
157	Research possible use of BLOGs	Chang

4.   **Visitors**

Visitor	Date	Affiliation	Email, Phone Fax
Frank Tarselli	2007Apr30	PO Box 467 Berwick, PA 18603	Email: fatarselli@pplweb.com Phone: 570.542.3551 Cell: 570-956-0303 Fax: 570.542.3855
Jeff Hansen	2007Apr30	Exelon Nuclear Warrenville, IL	Email: jeff.hansen@exeloncorp.com Phone: 630-657-4008 Fax: 815-922-9101
William K. Hendricsen	2007Apr30	Palo Verde 5801 S. Wintersburg Rd M.S. 7894 Tonapah, AZ 85354-7529	Email: whendric@apsc.com Phone: 623-393-6585 Fax: 623-393-6164
Wyatt Godes	2007Apr30	NMC/Point Beach 6590 Nuclear Rd Two Rivers, WI 54241	Email: wyatt.godes@nmcco.com Phone: 920-755-7725 Cell: 920-819-6543 Fax:
David Muller	2007May01	NRC Operator Licensing Office of Nuclear Reactor Regulation Washington, DC 20555	Email: dsm3@nrc.gov Phone: 301-415-1412 Fax:
Charles Walker	2007May01	Constellation Energy Calvert Cliffs	Email: charles.a.walker@constellation.com Phone: 410-474-8039 Fax: 410-495-2475
Anthony F. Armagno	2007apr30	Dominion Nuclear Connecticut, Inc. Millstone Power Station L. F. Sillin, Jr. Nuclear Training Ctr. Rope Ferry Road Waterford, CT 06385	Email: anthony.f.armagno@dom.com Phone: 860-440-0407 Fax: 860-437-2671

5.   <u>Roll Call</u>

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
Present	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
Present	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
Present	F.J. (Butch) Colby **Editor**	L-3 MAPPS 8565 Cote-de-Liesse Quebec, Canada H4T 1G5		Email: butchcolby@cs.com Email: butch.colby@l-3com.com Phone: (410) 756-1924 Fax: (410) 756-1954
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:
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: 404-920-3173 Fax:
Absent	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 End of Route 700 1022 Haley Drive, Mineral, VA 23117		Email: allan.kozak@dom.com Phone: 540-894-2400 Fax:540-894-2441
Present	Dennis Koutouzis	INPO 700 Galleria Parkway, NW Atlanta, GA 30339-5957		Email: koutouzisjd@inpo.org Phone: 770-644-8838 Fax: 770-644-8120

Present	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
Proxy	Kevin Cox	Exelon Generation Dresden Nuclear Power Station 6500 North Dresden Rd. Morris, IL 60450	Jeff Hansen	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
Absent	Jane Neis	R.E. Ginna Nuclear Power Plant Training Center 1517 Lake Rd Ontario, NY 14519		Email: jane.neis@reginna.com Phone: 585-771-5516 Fax: 585-771-5379
N/A	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~~
~~31~~	~~32~~	~~33~~	~~34~~	~~35~~	36	~~37~~	~~38~~	~~39~~	~~40~~
~~41~~	~~42~~	~~43~~	~~44~~	~~45~~	~~46~~	~~47~~	~~48~~	~~49~~	~~50~~
~~51~~	~~52~~	~~53~~	~~54~~	~~55~~	~~56~~	~~57~~	~~58~~	~~59~~	60
~~61~~	~~62~~	~~63~~	~~64~~	~~65~~	~~66~~	~~67~~	~~68~~	~~69~~	~~70~~
~~71~~	~~72~~	~~73~~	~~74~~	~~75~~	~~76~~	~~77~~	~~78~~	~~79~~	~~80~~
~~81~~	~~82~~	~~83~~	~~84~~	~~85~~	~~86~~	~~87~~	~~88~~	~~89~~	~~90~~
~~91~~	~~92~~	~~93~~	~~94~~	~~95~~	~~96~~	~~97~~	~~98~~	~~99~~	~~100~~
~~101~~	~~102~~	~~103~~	~~104~~	~~105~~	~~106~~	~~107~~	~~108~~	~~109~~	~~110~~
~~111~~	~~112~~	~~113~~	~~114~~	~~115~~	~~116~~	~~117~~	~~118~~	~~119~~	120
~~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~~	147	148	149	150
151	152	153	154	155	156	157	158	159	160

6.2   Action Items

No.	Status	Date	Assigned To:	Work Assignment
143	**Completed:** 2006sep13	Opened 2006May01	**Dennis**	Add new Action Item: PINS Comment Review
144	**Completed:** 2006sep20	Opened 2006May01	**Chang**	Incorporate SI units in the standard as appropriate
145	**Completed:** 2006may12	Opened 2006May1	**Felker**	Setup Webex demonstration for possible future meetings
146	**Completed:** 2007may03	2007apr30	**Welchel**	Summarize the E-Vote (Complete)
147	**Deferred to next Standard**	2007may01	**Welchel**	Impact of Fully-Integrated Mode of Operation on Performance Testing (Deferred to next standard)
148	**Completed:**	2007may01	**Hendricsen**	Core Performance Testing Frequency
149	**Completed:**	2007may01	**Florence**	Ensure ANSI is aware Appendix Title is listed in Table of Contents
150	**Deferred to next Standard**	2007may02	**Vick**	Review consistency in the use of the Term Power Range (Deferred to next standard)
151	**Completed:**	2007may02	**Dennis**	Obtain Calvert Cliffs Clarification Approval from ANS-21
152	**Completed:**	2007may03	**Dennis**	Send ANS-21 comment resolution letters to ANS-21 commenters
153	**Completed:**	2007may03	**Dennis**	NFSC List needs to be added to Forward
154	**Completed:**	2007may03	**Colby**	Review contributing members list
155	**Completed:**	2007may03	**Florence**	Develop Emeeting procedure
156	**Completed:**	2007may03	**Tarselli**	Research possible use of Webex
157	**Completed:**	2007may03	**Chang**	Research possible use of BLOGs

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 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 with out representation could result in loss of membership on the committee.

8.   **Monday 2007Apr30 (1300)**

8.1   Introduction to L.F. Sillin, Jr Training Center, (Chang)

Introduction and Welcome

8.1   Roll Call

Absent Members:

Paris
Cox - Proxy
Neis
Vick
Felker (Excused)

8.2   Day 2 Consensus Level

10 - Voting members
8 - Consensus (75% Rule of the Chair)
7 – Super Majority
6 - Majority

8.3   (Dennis) Opening Comments:

- Welcomed Visitors
  - E-Vote Discussion
    Welchel will summarize the E-Vote and the WG will review and decide how to handle the E-Vote Minute on Tuesday
  - **RESOLUTION PROCESS:**
    - Accept resolution lead

- Draft a resolution based on knowledge, minutes, and other ANS-3.5 WG input
- Offer resolution to WG membership for comment
- Draft coordinated resolution
- Discuss draft with commenter
- Finalize a draft resolution for presentation and send to ANS-3.5 WG

  o Reports
  - Florence
  - Welchel
  - Colby
  - Shelly
    - Some work with new Reactors and recommends utilities ensure Simulator expertise is included in the new reactor procurement process.
  - Kozak (Parliamentarian) -

8.4 (Colby) ANS-21 Stevenson Comment #1

- Reviewed Table of Contents to Standard (rev 24)
  o Shelly – TOC are not required in the standard.
  o Kozak – TOC may allow users to tunnel into certain sections without regard to other sections.

  The general consensus is that the TOC is beneficial to the standard.
- **Motion** – Accept the Table of Contents as defined in draft Rev 24 of the Standard.
- **Motion – To table this motion. This motion will be taken up at a later time.**

8.5 (Florence) ANS-21 Stevenson Comment #2

- The WG reviewed the Email received from Neis.

- Scope previously approved by ANSI/NFSC

- Simulator is not Safety related plant component

- Local building codes may apply

- Std define capabilities and fidelity and does not define construction

- **Motion:**

  After considering the Stevenson Comment #2, the suggested text

  "This standard does not establish the safety related seismic, tornado, or quality categorization or classification or reference standards to which the simulator shall be constructed"

  is not considered for inclusion for the following reasons:

  - **Simulator is not a Safety related plant component; local building codes may apply**
  - **The Standard defines capabilities and fidelity for the use of simulators to support operator training and examination and does not define construction requirements of simulation facilities**
  - **The existing Scope is approved by the PINS process**

  o **For – 10**
  o **Against - 0**
  o **Abstained - 0**

8.6　　　(Florence) ANS-21 Stevenson Comment #3

- Reviewed Email from Neis
- Dennis - The original malfunction list defined the capabilities that defines a full scope simulator.
- 10CFR55.59 does not reference PRA and external events

  Many training scenarios relate to the consequences associated with external events. The existing list of malfunctions has shown to be sufficient to support scenarios designed for external event training; additional simulator capabilities to support external events would be implemented using the Systematic Approach to Training process.

  Motion:

Not to include Stevenson Comment #3

"Add the following item to the list under Section 3.1.4, Malfunctions:
(26) Design Basis External Events to the extent they are not addressed by the malfunctions listed in (1) -
(25)"

Reason:

Many training scenarios relate to the consequences associated with external events. The existing list of malfunctions has shown to be sufficient to support scenarios designed for external event training; additional simulator capabilities to support external events would be implemented using the Systematic Approach to Training process.

- **For – 10**
- **Against - 0**
- **Abstained – 0**

8.7 (Dennis) Membership

Desired qualities:

- Attendance
- Work Ethic
- Knowledge
- Experience

8.8 Adjourned: 1800

9. **<u>Tuesday 2007May01 (0800)</u>**

9.1 Roll Call

Absent Members:

    Cox
    Neis
    Paris
    Felker (Excused)

9.2 Day 2 Consensus Level

    10 - Voting members
    8 - Consensus (75% Rule of the Chair)
    7 – Super Majority
    6 - Majority

9.3 Motion – Accept Agenda Rev 4

- For – 10

- Against - 0

- Abstained – 0

9.4 (Chang) List of new Reactors on NRC WEB site

http://www.nrc.gov/reactor/new-licensing/ new-licensing-files/expected-new-rx-applications.pdf

9.5   (Hansen) Eldridge/Burns Comment #2

Comment:

Page 12 of 35 - 3.4.3 - Simulator Performance Testing
Simulator performance testing shall be performed in a **fully integrated mode of operation**.

Currently no definition for "fully integrated mode of operation". Can this be accomplished on a standalone computer not attached to the control boards? This needs to be better defined.

Motion:

Not to include Eldridge/Burns Comment #2

Reason:

Section 3.4.3, which contains "fully integrated mode of operation", is new to the 200x standard. However, Section 4.4.3 from the 98 standard utilized the same wording. Additionally, two definitions that gave some support to the term in the 98 standard were significantly revised or deleted in the draft standard. That said, the use of "integrated" in several sections in the 200x standard would indicate that, when "fully integrated" is utilized, the intent is the simulation facility including the simulator computer, control board panels and all associated peripheral systems are to be used for testing unless specific exceptions are noted. The wording does not support use of a standalone computer to accomplish performance testing. Section 4.4.1 provides clarification of an exception in that testing "in a non-integrated environment" could be done "on a computer system other than the simulator." Additionally, the wording in Section 4.4.2 discusses "fully integrated, partially integrated, or stand-alone" as modes of system operation in which simulator validation testing can be performed.

The WG proposes that "fully integrated mode of operation" is defined in context of the use of integrated in the remainder of the 200x standard and that no additional clarification is necessary.

For – 10

Against - 0

Abstained – 0

Page 21

9.6 (Chang) Roe/Ludlam Comment #1

Comment:

ANS-21 comment (Roe/Ludlam #1)**:**
On page 11, section 3.3.3 "Other Features" states: "For stimulated components that store historical data or whose performance is dependent on history, requirements for freeze, run, initial condition reset, snapshot, and backtrack shall be included **wherever practicable**." NEI recommends that this requirement should be deleted or significantly altered as noted in bold above. It is very difficult to make ALL stimulated components do this and in fact is not desirable in some cases (stimulated paperless recorders, for example).

Motion::

Not to include Roe/Ludlam Comment #1

Reason:

The ANS-3.5 Working Group believes the current 200x Standard text is adequate and proposes no change to the current 200x standard. The reason is:

The second paragraph of Section 4.3.3 defines the testing requirement for Stimulated components.

For a stimulated component it shall be documented that noticeable differences have been defined and that a training needs assessment has been performed in accordance with 4.2.1.4.

Where Noticeable Difference is defined in Section 2. of the standard:

noticeable difference. Any difference in the physical attributes or dynamic response between the simulator and the reference unit that is distinguishable by an observer and confirmed by a subject matter expert.

For – 10

Against - 0

Abstained – 0

9.7   Consensus Level

> 11 - Voting members
> 8 - Consensus (75% Rule of the Chair)
> 7 – Super Majority
> 6 - Majority

9.8   (Havens) Roe/Ludlam Comment #2

Comment:

> On page 12, section 3.4.3 "Simulator Performance Testing": NEI is in favor of the addition of "reactor core performance testing" to this paragraph, although some guidance concerning what this means for a BWR would have been even nicer.

Motion:

> **Not to include Roe/Ludlam Comment #2**

Reason:

> **The Working Group considered making references to specify testing for the reactor types. It was noted, however, that PWRs have a standard for core acceptance tests while BWRs do not. In all cases, each facility has core performance acceptance tests that are conducted on the reference unit. The Working Group concluded that using the acceptance tests for the reference unit in 4.4.3.3 would hold the simulator to the same standard as its reference unit.**

> **For – 11**

> **Against - 0**

> **Abstained – 0**

9.9   (Havens) Roe/Ludlam Comment #3

Comment:

On page 13, section 3.4.3.3 "Simulator Core Performance Testing": the word "replicate" should be avoided. NEI recommend using wording similar to that used in the second paragraph of Section 4.4.3.3 only: "It shall be demonstrated that the simulator response during conduct of simulator reactor core performance testing meets the reference unit procedures' acceptance criteria."

Motion:

Not to include Roe/Ludlam Comment #3

Reason:

The Working Group considered this wording and the Working Group consensus was to use language similar to the regulation. The general consensus was that using the similar wording here was consistent with the regulatory guidance.

For – 11

Against – 0

Abstained – 0

9.10   (Havens) Roe/Ludlam Comment #6

Comment:

On Page 20, section 4.4.3.3 "Simulator Reactor Core Performance Testing", the same comment as on page 13, section 3.4.3.3 applies. NEI recommends a rewrite of the entire first and second paragraph to read as follows: **"Simulator reactor core performance testing shall be conducted each reference fuel cycle. Testing shall be performed in accordance with the reference unit procedures and shall meet the reference unit procedures' acceptance criteria."**

Motion:

Not to include Roe/Ludlam Comment #6

Reason:

The Working Group considered this wording and the Working Group consensus was to use language similar to the regulation. The general consensus was that using the similar wording here was consistent with the regulatory guidance.

The current standard draft wording sufficiently addresses the remaining issue in the comment.

Testing shall be performed in accordance with the reference unit procedures and shall be compared and demonstrated to replicate the response of the reference unit.

It shall be demonstrated that the simulator response during conduct of simulator reactor core performance testing meets the reference unit procedures' acceptance criteria.

For – 11

Against – 0

Abstained – 0

9.11   (Kozak) Calvert Cliffs Clarification

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.

Motion:

Calvert Cliffs Request for Clarification Response:

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

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

It is the Working Group's opinion the ANSI/ANS-3.5-1985 standard does not specify the periodicity of normal evolution testing.

The basis for this opinion 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.

For – 8

Against – 2

Abstained – 1

Against Reason:

Minority position should have been address regarding the suggested linkage by stating that the linkage is broken by reference to "Transient Criteria"

Linkage exists and requires Annual Evolution testing and this motion did not discuss the Historical perspective leading up to the 1985 Standard.

9.12   Adjourned: 1745

10. <u>**Wednesday 2007May02 (0800)**</u>

10.1 Roll Call

Absent Members:

  Cox
  Neis
  Paris
  Felker (Excused)

10.2 Day 3 Consensus Level

  10 - Voting members
  8 - Consensus (75% Rule of the Chair)
  7 – Super Majority
  6 - Majority

10.3 Motion – Accept Agenda Rev 5

- For – 10

- Against - 0

- Abstained – 0

10.4 (Tarselli) Roe/Ludlam Comment #4 and #5

Comment # 5A lengthy discuss over the use of the work Key in Section 4.4.3.2 Item 4 "Listing of **key** alarms and automatic actions occurring and assertion that they would be expected for the scenario" whether Key refers to both alarms and automatic actions

10.5 (Colby) Burns Comment # 1

Comment:

Old Item #4, #6, #9 were not changed and are now new item #3, 4 and 5. Only items 3 and 4 are listed in the associated table, item # 5 does not exist in the table.

Motion:

To respond to Burns Comment #1

Response:

During the conduct of normal evolutions such as a unit startup and shutdown, the simulator is operated through a hot standby condition. Therefore, item #5 (Operations at hot standby) of section 3.1.3 of the 1998 Standard is contained in items #1 and #2 of section 3.1.3.2 in the new Standard 200X.

- For – 10
- Against - 0
- Abstained – 0

10.6 Consensus Level

11 - Voting members
8 - Consensus (75% Rule of the Chair)
7 – Super Majority
6 - Majority

10.7 (Colby) Burns Comment # 4

Comment:

Page 14 of 35 - 4.1.3.1.1

Discussion: All of the parameters listed in the paragraph have corresponding instrument loops/channels except "Core MWt" which is a calculated parameter, not a sensed property.

Currently:

"It shall be demonstrated that the following PWR parameters match reference unit data within 1% of the reference unit instrument loop range:"

The following is proposed wording to better define the requirements:

Proposed:

"It shall be demonstrated that, for a given calculated Core MWt, the following PWR parameters match reference unit data within 1% of the reference unit instrument loop range:" and remove "Core MWt" from the bulleted list of parameters.

Paragraphs 4.1.3.1.2 through 4.1.3.1.4 should similarly be changed to reference a given calculated Core MWt as the starting benchmark for the comparisons

Motion:

Not to include Burns comment #4

Reason:

The working group agrees that MWt is a calculated parameter, not an instrumented loop/channel parameter. Historical use of this list and industry surveys conducted by the ANS-3.5 Working Group and EPRI support the continued use of the list as written.

Rewording as suggested would remove the flexibility afforded by the current practice of using either power range instrumentation or MWt to establish conditions for the simulator/reference unit comparison. The current wording allows the flexibility to adjust the simulator to match reference unit conditions. Using the proposed wording without having MWt in the list would require an exact match of thermal power thus taking away this flexibility.

- o **For – 11**
- o **Against - 0**
- o **Abstained – 0**

10.8   (Colby) ANS-21 Stevenson Comment #1

TOC inserted into Draft Standard Rev 24 using 4-level TOC

Appendix Titles do not presently show on Draft Standard.

AI – Florence – Ensure ANS is aware the Appendix Titles display in the camera ready ANS proof

Motion:

Include the Table of Contents, Section, and Appendices with titles and exclude Table C1 in revised standard Rev 24.

- • **For – 10**
- • **Against - 1**
- • **Abstained – 0**

Against Reason: Section in the motion is not inclusive for all sections

10.9   (Vick) Eldridge/Burns Comment #3

Discussion concerning the use varied uses of the term Power Range

AI 150 – Vick – Review for consistency the various uses of the term Power Range

Comment:

Page 13 of 35 – 4.1.3.1 – Steady State Operation

The simulator power levels at which the comparison is performed shall have been attained through continuous operation over the **power range.**

Consider changing "power range" to "range of comparison" or match to wording in Appendix B-B1.1 – Steady State Test – operation range which heat balance data is available.

Motion:

Not to include Eldridge/Burns comment #3

Reason:

Based on a conversation with Mr. Burns, Mr. Burns indicated he can accept the standard as written. Mr. Burns had no further concerns other than making the language similar in section 4.1.3.1 and Appendix B1.1.

- **For – 11**
- **Against - 0**
- **Abstained – 0**

10.10   (Koutouzis) Eldridge/Burns Comment #5

Comment:

Page 15 of 35 - 4.1.3.2 Normal Evolutions (4) and 4.1.1 Malfunctions (2)
Both use the wording "observable change"; this is not defined in the definitions section of the standard.
Consider replacing "observable change" with "noticeable difference", which is defined.

Motion:

Not to include Eldridge/Burns comment #5

Reason:

The term "observable change" is used in the Standard only in reference to the change in simulated parameters. The activity of distinguishing a change in a parameter is sufficiently clear, and needs no further definition. In these cases, a difference is acceptable and the limit of the "observable change" is defined within the acceptance criteria; therefore, the term "noticeable difference" would not be sufficient to describe the activity of evaluating the acceptance criteria where "observable change" is used.

- **For – 11**
- **Against - 0**
- **Abstained – 0**

10.11   (Tarselli) Roe/Ludlam Comment #4

Comment:

One Page 19, section 4.4.3.2 "Simulator Scenario-Based Testing", the word "subsequent" needs to be deleted from the 2nd full paragraph as noted in bold. "Test data shall be acquired during scenario validation for subsequent validation of malfunctions, local operator actions, and other features exercised by the scenario.

Motion:

Not to include Roe/Ludlam comment #4

Reason:

The word "subsequent" clarifies that the evaluation does not have to be performed immediately. However, this does not prohibit the evaluation from being performed during the test.

- **For – 11**
- **Against - 0**
- **Abstained – 0**

10.12   (Tarselli) Roe/Ludlam Comment #5

Comment:

On Page 20, same section, item (4) needs to be revised to soften the requirement that "...and automatic actions" be listed. This could potentially be a huge list, depending on the complexity of the scenario. NEI recommends that it be revised as follows: "Results of this evaluation shall be documented, typically in the form of an assertion checklist, and include:"

Motion:

Not to include Roe/Ludlam comment #5

Reason:

The working group believes that no change is needed to item number 4, because it is bounded by the word "key" which applies to both alarms and automatic actions; therefore, the proposed revision is not necessary.

- **For – 10**

- **Against - 0**

- **Abstained – 1**

Abstain reason: The word "key" is ambiguous as applied to alarms and automatic actions.

11. <u>**Thursday 2007May03 (0800)**</u>

11.1 Roll Call

Absent Members:

> Cox
> Neis
> Paris
> Felker (Excused)

11.2 Day 4 Consensus Level

> 11 - Voting members
> 8 - Consensus (75% Rule of the Chair)
> 7 – Super Majority
> 6 - Majority

11.3 Motion – Accept Agenda Rev 6

- For – 11

- Against - 0

- Abstained – 0

11.4 Reviewed ANS-21 Letter and Comment

Reviewed proposed resolution letters to ANS-21 commenters

- **Stevenson Comments**

- **Eldridge/Burns Comments**

- **Roe-Ludlam Comments**

   AI 152 - (Dennis) Send Resolution Letters to ANS-21 Commenters

11.5   (Colby) Draft Standard Review

Reviewed Rev 24 Draft Standard and made the following changes

- Table of Contents Addition
- ANS-21 Member List
- Footnote Superscripting
- First Energy to FirstEnergy
- Krieder to Kreider
- Page Break before Table C1
- Colby Company affiliation changed from CAE to L3-Communications MAPPS, Inc.
- Draft Standard Rev changed from Rev 24 to Rev 25

AI-153 – Dennis – NFSC List needs to be added to Forward

AI-154 – Colby – Review contributing members list

Motion:

   Accept Draft Standard 200X Rev 25 to include the following changes made to Rev 24:
   - **Table of Contents addition**
   - **ANS-21 Member List addition**
   - **Footnote Superscripting**
   - **First Energy changed to FirstEnergy**
   - **Krieder changed to Kreider**

- o **Page Break added before Table C1**
- o **Colby Company affiliation changed from CAE to L-3 Communications MAPPS Inc.**
- o **Draft Standard revision changed from Rev 24 to Rev 25**
- o **Graftel Inc. to Graftel, Inc.**
- o **PPL, Susquehanna LLC changed to PPL Susquehanna, LLC**
- o **ANS-21 membership list lead-in changed to** *Subcommittee ANS-21, Nuclear Facility Design Criteria & Operations, had the following membership at the time of its approval of this standard*
- o **NFSC membership list lead-in changed to** *The Nuclear Facility Standards Committee had the following membership at the time of its approval of this standard*

- For – 11
- Against - 0
- Abstained – 0

11.6   (Dennis) E-Voting Discussion

Have other sub-committees conducted Email Voting (Evote)?

E-Voting not conducted as an open meeting

Hendricson – consider public notification of an Evote

11.7   (Dennis) Emeeting

Rule of the Chair "No Emeeting" will stand

AI 155 (Florence) – Develop Emeeting procedure

11.8 Day 4 Consensus Level

10 - Voting members
8 - Consensus (75% Rule of the Chair)
7 – Super Majority
6 - Majority

11.9 WEB-EX, Blogging/Chat Rooms, Alternative forms of Communication

Discussion of the merits and difficulties of conducting meetings using Webex.

May need to download and install SW for use

Difference between Webex and Net-meeting

Webex incurs a charge… commercial SW

Webex is a bit more advanced

Possible I/T issues and company support

Blogs are online chat rooms

Consider using ANS web site/services for communications

AI 156 (Tarselli) – Research possible use of Webex

AI 157 (Chang) - Research possible use of BLOGS

11.10 (Dennis) Distribution and assignment of Comment resolution

Improvemnent in indexing and labeling of comment for ease of use.

11.11   (Colby) Burns Comments #1 - #5

Burns accepted all comment

11.12   Day 4 Consensus Level

10 - Voting members
8 - Consensus (75% Rule of the Chair)
7 – Super Majority
6 - Majority

11.13   Motion to Accept Millstone Meeting Minutes 2007may03

Motion:

Accept Millstone minutes inclusive of this vote

- For – 10

- Against - 0

- Abstain - 0

Adjorned: 1300

12. 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

13.   __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? **2004augxx Get Reason** 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.

No.	Status	Date	Assigned To:	Work Assignment
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
New Definitions:
Suggested choices for new definitions:

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. ~~Do we need to put some boundaries as to the limits simulator;~~(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	~~Workshops on Testing Philosophy (what are the benefits? testing that provides results); USUG participation;~~ ~~Schedule workshop during USUG at SCS in Jan. 1999. Develop materials for handout. Florence led material development.~~ 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

No.	Status	Date	Assigned To:	Work Assignment
				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.

Additional content for item 33 (continuation of right column):

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. |
| 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	**Status: Open** **2 May 2006**		**Dennis**	PINS Comment Review