

ANS 3.5 Working Group Meeting Minutes
Western Services Corp – Frederick, MD
2008 October 18-26

ANS 3.5 Working Group Meeting Minutes Western Services Corporation Frederick, MD 2008 October 18-26

Approved Minutes

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1. **Visitors**

Visitor	Date	Affiliation	Email, Phone Fax
None			

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2. Roll Call – (of Voting Membership for this Meeting Session)

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: jbfflore@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
Absent	William M. (Mike) Shelly Style Editor	507 Texas Drive Georgetown, TX 78633		Email: mshelly51@yahoo.com Phone: 512-240-5378
Present	Lawrence (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. 2300 St. Marys Road Suite D St. Marys, GA 31558	Absent:: 2008oct20 and 2008oct23	Email: gsmccullough@gses.com Phone: 912-576-6730 Cell: 410-707-6946
Present	Robert Felker	Western Services Corporation 7340 Executive Way, Suite A Frederick, MD 21704	Absent:: 2008oct18	Email: felker@ws-corp.com Phone: 301-644-2520 Fax: 301-682-8104
Absent	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
Absent	Dennis Koutouzis	INPO 700 Galleria Parkway, NW Atlanta, GA 30339-5957		Email: koutouzisjd@inpo.org Phone: 770-644-8838 Fax: 770-644-8120
Absent	Oliver Havens, Jr	PSEG Power Hope Creek Generating Station, NTC 244 Chestnut St. Salem, NJ 08079	Proxy: F A Tarselli 2008oct19-26	Email: Oliver.Havens@pseg.com Phone: 856-339-3797 Fax: 856-339-3997

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Present	Frank Tarselli	PO Box 467 Berwick, PA 18603	Proxy for O H Havens Jr 2008oct19 Granted membership 2008oct19	Email: fatarselli@pplweb.com Phone: 570.542.3551 Cell: 570-956-0303 Fax: 570.542.3855
Absent	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
N/A	Patricia Schroeder	Standards Administrator American Nuclear Society 555 North Kensington avenue La Grange Park, IL 60526-5592		Email: PSchroeder@ans.org Phone: 708-579-8269 Fax: 708 352 6464

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3. Action Item List

3.1 Action Item Quick-look Table

Open		Complete		Carried to Next Standard					
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
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3.2 Action Items

No.	Status	Date	Assigned To:	Work Assignment
158	Completed	2008oct20	Florence	Florence will draft and mail letters to former members Cox, Paris and Neis thanking them for their contributions.
159	Completed	2008 oct26	Florence	Revisit and update proposed ANS 3.5 Draft Standard membership and non-member contributors list.
160	Completed	2008oct26	Colby	Update sections 4.1.3.1.3, B2.1 specifying “Reactor Narrow Range Pressure” and “Reactor Wide Range Pressure”.
161	Completed	2008oct 26	Colby	Update Sections 4.4.1 and 4.4.2 Changes.
162	Carry to Next Standard	TBD	TBD	Next standard revision; review Appendix B parameters against standard body
163	Carry to Next Standard	TBD	TBD	Next standard revision; review for next generation nuclear reactor/plant designs
164	Completed	2008oct 26	Tarselli	NFSC Response - Bell
165	Completed	2008oct 26	Felker	NFSC Response - Wehrenberg
166	Completed	2008oct 26	Florence	NFSC Response - Hill
167	Completed	2008oct 26	Florence	NFSC Response - Englehart
168	Completed	2008oct 26	Felker	NFSC Response - Shepherd
169	Completed	2008oct 26	Vick	NFSC Response - Kadambi
170	Completed	2008oct 26	Felker	*NFSC Ballot - Wright
171	Completed	2008oct 26	Colby	*NFSC Ballot - Prillaman
172	Completed	2008oct 26	Dennis	*NFSC Ballot - Reuland
173	Completed	2008oct 26	Felker	*NFSC Ballot - Lloyd
174	Completed	2008oct 26	Colby	*NFSC Ballot - Eggett
175	Completed	2008oct 26	Dennis/Welchel	Package all NFSC Response and send to ANS
176	Open	2008dec15	Vick	Peer check Public Response
177	Open	TBD	Dennis	Package Public Response and send to ANS
178	Open	TBD	Welchel	Update minutes with Dennis updated Ballots

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179	Carry to Next Standard	TBD	McCullough	Real-time and repeatability periodicity
180	Carry to next Standard	TBD	TBD	Performance testing in a non-fully integrated mode Section 3.4.3 Westrain Comment # 26
181	Carry to next Standard	TBD	TBD	Next Standard Revision Section 5 Review; Reference Westrain Comment # 60

4. Working Group Procedural Rules

4.1 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 have voting privileges (Rule changed at this meeting {6.4}, notification e-mailed to absent members);
- Members shall attend the full length of the meeting;
- Word 7.0 shall be the document format;
- The Host shall collect and send all handout material for absent members without proxy;
- Robert's Rules of Order shall be used as a general guide;
- Guest Individual Contributors may receive working copy of the draft standard based on need;
- Chair approval shall be required for distribution of working copies of the draft standard;
- Members shall not 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 could 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.

4.2 Rules Enacted by the Working Group

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

5. Saturday 2008 October 18 (1325)

5.1 Roll Call

Absent Members: * denotes previous members to this session.

Chang
Cox*
Felker
Havens
Koutouzis
Kozak
Neis*
Paris*
Shelly

5.2 Consensus Level

5 - Voting members
No Quorum – only six of fifteen voting members present

N/A - Consensus (75% Rule of the Chair)
N/A – Super Majority
N/A – Majority

Meeting in recess until 2008 Oct 19 1100.

5.3 Recessed: 1330

6. Sunday 2008 Oct 19 (1100)

6.1 Introduction (Felker)

Introduction and Welcome

6.2 Agenda Review

6.3 Roll Call

Absent Members:* denotes previous members to this session.

Chang

Cox*

Havens (Proxy – Frank Tarselli)

Koutouzis

Kozak

Neis*

Paris*

Shelly

6.4 Consensus Level

The Chair declares without objection that Proxy attendees have voting privileges. Chair notified absent members via e-mail.

7 – Voting Members

1 – Proxy Vote (Quorum Achieved 8 of 15 voting members present)

6 - Consensus (75% Rule of the Chair)

6 – Super Majority

5 – Majority

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Revised Rule of the Chair: Proxy shall have voting privileges.

6.5 Week Activities

Tuesday

Picture day

Dinner Night (Optional)

6.6 ANS 3.5 Working Document

The NFSC Ballot ANS 3.5 Draft beta document will be used for markup during this meeting. This document was verified against the revision 26 document sent to ANS by Jim Florence.

File: ANS-3.5 for NFSC Ballot.doc

The working group agreed to continue naming the working draft document continuing with rev 27

File: ans35Rev27ApprovedSinglePage.doc

6.7 Officer Reports:

Florence – Currently reviewing Westrain public comments for relevance.

6.8 NRC

Vick – NRC currently reviewing NEI SBT White Paper.

6.9 Membership

Dennis - Discussion concerning membership.

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Motion: Remove Cox, Neis, and Paris membership.

Reason: Two meeting attendance rule.

Discussion: Send Cox, Neis, and Paris a letter indicating their membership removal.

Action item 158: Florence will draft and mail letters to former members Cox, Neis, and Paris thanking them for their contributions.

Dennis: Chair entertained a motion from the membership 2008 Oct 19 Motion: Remove Neis, Cox, and Paris from ANS-3.5 Working Group membership.	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
--	--

Motion: Accept Frank Tarselli as a Working Group member.

Reason: Long term proactive participation during the ANS-3.5-200x standard's development.

Action item 159: Revisit and update proposed ANS 3.5 Draft Standard membership and non-member contributors list.

Dennis: Chair entertained motion from the membership 2008 Oct 19 Motion: Accept Frank Tarselli as a Working Group member.	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 1 – Abstained
--	--

Mr. Florence was granted the floor to facilitate comment resolution business.

6.10 Lloyd Comment #1

Motion: Delete the last sentence in first paragraph of the Foreword.

“These issues include extended plant and simulator life cycles, elements to support evolving operator licensing and crew performance expectations, and potential new power plant and simulator construction.”

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Discussion: The Foreword is not part of the standard; therefore this is not a substantive change.

Reference:

Owner: Florence

2008 Oct 19 Motion: Delete the last sentence in first paragraph of the Foreword.	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
--	--

Mr Florence was delegated the chair to facilitate comment resolution business.

6.11 Kadambi Comment # 2

Motion: Add sentence to end of the first paragraph in the Foreword.

“This revision of the standard does not preclude applying the functional requirements and criteria of this standard to next-generation reactors.”

Discussion: The Foreword is not part of the standard therefore this is not a substantive change.

Reference: NFSC Ballot, Kadambi Comment #2

Impact: Non-substantive

Owner: Vick

2008 Oct 19 Motion: Add sentence to end of the first paragraph in the Foreword. “This revision of the standard does not preclude applying the functional requirements and criteria of this standard to next-generation reactors.”	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
--	--

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6.12 Russell Comment # 1

Motion: Regarding the Foreword 4th Paragraph change the word “compliment” to “complement”.

Discussion: The Foreword is not part of the standard therefore this is not a substantive change.

Reference: Public, Russell Comment #1

Impact: Non-substantive

Owner: Vick

2008 Oct 19 Motion: Regarding the Foreword 4th Paragraph change the word “compliment” to “complement”.	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
---	--

6.13 Lloyd Comment # 2

Motion:

Clarify the definition of freeze:

freeze. The controlled pause of simulation.

[and] add a definition for the term “run”

run. The controlled resumption of simulation.

Discussion: Non-Substantive change. Does not alter the meaning or interpretation of usage.

Reference: NFSC Ballot, Lloyd Comment #2

Impact: Non-substantive

Owner: Vick

2008oct19 Motion: Clarify the definition of freeze: freeze. The controlled pause of simulation.	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
--	--

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Add a definition for the term “run” run. The controlled resumption of simulation.	
---	--

6.14 Lloyd Comment #3

Motion: Revise the definition of “stimulated components” to read as follows:

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

Discussion: Non-Substantive change. Does not alter the meaning or interpretation of usage.

Reference: NFSC Ballot, Lloyd Comment #3

Impact: Non-substantive

Owner: Vick

2008 Oct 19 Motion: Revise the definition of “stimulated components” to read as follows: Hardware/software components that are integrated with the simulator process via simulator inputs/outputs which perform their functions parallel to, and either independently of or synchronized with the simulation process.	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
--	--

6.15 Kadambi Comment # 3

Motion: Clarify the definition of the term malfunction to read as follows:

malfunction. A simulator feature or capability that provides for instructor controlled degradation of performance of simulated plant components, equipment, or systems. Override capability is not considered a malfunction.

Discussion: Non-Substantive change. Does not alter the meaning or interpretation of usage. Clarifies the WG’s intent.

Reference: NFSC Ballot, Kadambi Comment #3

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Impact: Non-Substantive

Owner: Vick

2008 Oct 19 Motion: Clarify the definition of the term malfunction to read as follows: malfunction. A simulator feature or capability that provides for instructor controlled degradation of performance of simulated plant components, equipment, or systems. Override capability is not considered a malfunction.	Motion: Carried <ul style="list-style-type: none">• 6 – For• 1 – Against• 1 – Abstained
--	--

Against – Not all overrides are malfunctions; but overrides can be used as malfunctions.

Abstained – Override capability is called out specifically, but remote functions are not call out specifically, therefore we have introduced a potential conflict or misunderstanding between remote functions and malfunctions.

6.16 Eggett Comment # 1

Motion: Do not adopt Eggett Comment # 1

Discussion: Term is singular versus plural. No change.

Reference: NFSC Ballot, Eggett Comment #1

Impact: N/A

Owner: Vick

2008 Oct 19 Motion: Do not adopt Eggett Comment # 1	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
--	--

6.17 Eggett Comment # 2

Motion: Add the word “a” in front of recommendation.

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shall, should, and may. The word "shall" is used to denote a requirement; the word "should" is used to denote *a* recommendation; and the word "may" is used to denote a permission, neither a requirement nor a recommendation.

Discussion: NFSC glossary conforms to recommendation; No substantive change.

Reference: NFSC Ballot, Eggett Comment #2

Impact: Non-substantive

Owner: Vick

2008 Oct 19 Motion: Add the word “a” in front of recommendation. shall, should, and may. The word "shall" is used to denote a requirement; the word "should" is used to denote <i>a</i> recommendation; and the word "may" is used to denote a permission, neither a requirement nor a recommendation.	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
---	--

6.18 Reuland Comment # 4

Motion: Do not adopt Reuland Comment # 4

Discussion: Action Item No. 126 – Adding a ‘Performance Test Program’ is tabled to the next standard revision. This issue was discussed during the development of this revision and it was tabled to the next standard revision.

Reference: NFSC Ballot, Reuland Comment #4

Impact: N/A

Owner: Vick

2008oct19 Motion: Do not adopt Reuland Comment # 4	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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6.19 Prillaman Comment # 3

Motion: Do not adopt Prillaman Comment # 3

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Discussion: Specific Regulatory Guides are not referenced in this ANS-3.5 Standard Revision. Generally, by design, if the simulator's reference unit control room has accident monitoring instrumentation, then the simulator would have the same simulated instrumentation. The standard does not preclude modeling of accident monitoring instrumentation internal to the control room.

Reference: NFSC Ballot, Prillaman Comment #3

Impact: N/A

Owner: Colby

2008 Oct 19 Motion: Do not adopt Prillaman Comment # 3	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
---	--

6.20 Lloyd Comment # 10a

Motion: Adopt Lloyd Comment # 10a

Discussion: Precedent - Section B2.2.2 Transient Performance Tests specifies Narrow and Wide range Pressure Instrumentation. Update sections 4.1.3.1.3, B2.1 specifying “Reactor Narrow Range Pressure” and “Reactor Wide Range Pressure”.

Reference: NFSC Ballot, Lloyd Comment #10a

Impact: Non-substantive

Owner: Colby/Vick

Action Item 160: Update sections 4.1.3.1.3, B2.1 specifying “Reactor Narrow Range Pressure” and “Reactor Wide Range Pressure”

2008oct19 Motion: Adopt Lloyd Comment # 10a	Motion: Carried <ul style="list-style-type: none">• 7 – For• 1 – Against• 0 – Abstained
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Against: Failed to review EPRI study to determine origins of the initial list. Since the Appendices specify the Narrow and Wide Range pressure Instrumentation listed, the standard body is following the appendices.

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6.21 Lloyd Comment # 10b

Motion: Do not adopt Lloyd Comment # 10b

Discussion: The Standard is addressing a parameter and not a meter.

Reference: NFSC Ballot, Lloyd Comment #10b

Impact: N/A

Owner: Colby

2008 Oct 19 Motion: Do not adopt Lloyd Comment # 10b	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
---	--

6.22 Lloyd Comment # 10c

Motion: Do not adopt Lloyd Comment # 10c

Discussion: Within the context of the extensive study completed by EPRI, with respect to parameters to be monitored and tolerances, it is inconsistent to change one parameter without regard to impact to other parameters.

Reference: NFSC Ballot, Lloyd Comment #10c

Impact: N/A

Owner: Colby

2008oct19 Motion: Do not adopt Lloyd Comment # 10c	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
---	--

6.23 Prillaman Comment # 2

Motion: Do not adopt Prillaman Comment # 2

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Discussion: NRC documents such as BTP (Branch Technical Position) are not referenced in this Standard Revision. Section 3.2.1.1 defines Scope of Panel Simulation.

Reference: NFSC Ballot, Prillaman Comment #2

Impact: N/A

Owner: McCullough

2008 Oct 19 Motion: Do not adopt Prillaman Comment # 2	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
---	--

6.24 Prillaman Comment # 1

Motion: Do not adopt Prillaman Comment # 1

Discussion: Section 3.2.1.1, “Scope of Panel Simulation” defines “other components or displays that are used during normal, abnormal, off-normal, and emergency evolutions”. Section 3.2.2.2 includes “Display systems”. The working group believes the present wording adequately covers HSI (Human System Interface).

Reference: NFSC Ballot, Prillaman Comment #1

Impact: N/A

Owner: McCullough

2008 Oct 19 Motion: Do not adopt Prillaman Comment # 1	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
---	--

Mr Dennis resumed the chair.

6.25 The chair entertained a motion to recess until 8am Monday 2008 Oct 20: No objections were had.

6.26 Recessed: 1745

7. **Monday 2008 Oct 20 (0818)**

7.1 Agenda Review

7.2 Roll Call

Absent Members:

McCullough
Chang
Havens
Koutouzis
Kozak
Shelly

7.3 Consensus Level

7 – Member Votes
7 – Quorum attained
0 – Proxy Vote

6 - Consensus (75% Rule of the Chair)
5 – Super Majority
4 – Majority

7.4 Agenda

Dennis - New meeting start and stop time 0830-1730.

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7.5 Eggett Comment # 9; Eggett Comment # 25; Kadambi Comment # 5; Kadambi Comment # 6

Motion: Do not Adopt Eggett Comment # 9.
Do not Adopt Eggett Comment # 25.
Do not Adopt Kadambi Comment # 5.
Do not Adopt Kadambi Comment # 6.

Discussion:

The phrase “Certain Reference Unit Events” does not imply all Reference Unit Events. The intent of PEST is to ensure that the simulator response is compared to the reference unit response for a specific event.

The word “shall” in Paragraph 3.4.3 simply refers to the environment in which performance testing is performed (i.e. in a fully integrated mode of operation).

In Paragraphs 3.4.3.4 and 4.4.3.4 the word “should” was carefully selected to prevent users from misinterpreting the intent of these paragraphs. Post Event Simulator Testing is expected to be conducted when a facility determines that the event could provide worthwhile data for comparison with simulator performance. The Working Group is concerned that if the word “shall” is used, it would be misinterpreted that **“all”** (emphasis added) reference unit events would have to be evaluated against simulator performance. This is not the intent of Post Event Simulator Testing.

Reference: NFSC Ballot, Eggett Comment # 9 and # 25; Kadambi Comment # 5 and # 6

Impact: N/A

Owner: Florence/Vick

2008 Oct 20 Motion: Do not Adopt Eggett Comment # 9. Do not Adopt Eggett Comment # 25.	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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Do not Adopt Kadambi Comment # 5. Do not Adopt Kadambi Comment # 6.	
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7.6 Eggett Comment # 17

Motion: Do not Adopt Eggett Comment # 17

Discussion: Technical Edit Reviews have not warranted change.

Reference: NFSC Ballot, Eggett Comment # 17

Impact: N/A

Owner: Florence

2008 Oct 20 Motion: Do not Adopt Eggett Comment # 17	Motion: Carried <ul style="list-style-type: none">• 6 – For• 1 – Against• 0 – Abstained
---	--

Against: The use of the word “shall” to replace “are” and “has been” in the second and third phrase is recommended and adds clarity and is more consistent.

Mr Florence was delegated the chair to facilitate comment resolution business.

7.7 Eggett Comment # 18

Motion: Do not Adopt Eggett Comment # 18.

Discussion: Section 4.2.1.3 requires “It shall be demonstrated ... that a training needs assessment has been conducted in accordance with the criteria provided by 4.2.1.4” and Sections 4.2.1.1, 4.2.1.2 and 4.2.1.3 all require deviation assessment via a Training Needs Assessment.

Reference: NFSC Ballot, Eggett Comment # 18

Impact: N/A

Owner: Vick

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2008 Oct 20 Motion: Do not Adopt Eggett Comment # 18.	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
--	--

7.8 Eggett Comment # 19

Motion: Do not Adopt Eggett Comment # 19

Discussion: This comment is basically criteria selection that is part of a Training needs Assessment. This standard does not provide guidance for conducting a Training Needs Assessment.

Reference: NFSC Ballot, Eggett Comment # 19

Impact: N/A

Owner: Vick

2008oct20 Motion: Do not Adopt Eggett Comment # 19	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
---	--

7.9 Eggett Comment # 20

Motion: Do not Adopt Eggett Comment # 20

Discussion: Paragraph 4.2.1.3 provides direction for deviations that detract from training. This standard appropriately discusses Training Needs Assessments.

Reference: NFSC Ballot, Eggett Comment # 20

Impact: N/A

Owner: Vick

2008 Oct 20 Motion: Do not Adopt Eggett Comment # 20	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against
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	<ul style="list-style-type: none">• 0 – Abstained
--	---

7.10 Eggett Comment # 22

Motion: Do not Adopt Eggett Comment # 22

Discussion: The word “should” was carefully selected to prevent users from misinterpreting the intent of this section which is that documentation comes in various forms and there is no requirement to “file away” the demonstration for this section.

Reference: NFSC Ballot, Eggett Comment # 22

Impact: N/A

Owner: Vick

2008 Oct 20 Motion: Do not Adopt Eggett Comment # 22	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
---	--

7.11 Englehart Comment # 1

Motion: Do not Adopt Englehart Comment # 1

Discussion: The word “should” was carefully selected to prevent users from misinterpreting the intent of this section which is that documentation comes in various forms and there is no requirement to “file away” the demonstration for this section. This Standard appropriately does not address Software QA.

Reference: NFSC Ballot, Englehart Comment #1

Impact: N/A

Owner: Vick

2008 Oct 20 Motion: Do not Adopt Englehart Comment # 1	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
---	--

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7.12 Lloyd Comment # 12

Motion: Adopt Lloyd Comment # 12

Discussion: The Working Group agrees to modify the phrase “simulation facility organization” to “simulation support organization” in Sections 4.4.1 and 4.4.2.

Reference: NFSC Ballot, Lloyd Comment # 12 – [Summary changes for the Removal of the phrase “Simulation Facility.”]

Impact: Non-Substantive

Owner: Vick

Action Item 161: Update Sections 4.4.1 and 4.4.2 Changes.

2008 Oct 20 Motion: Adopt Lloyd Comment # 12	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
---	--

7.13 Reuland Comment # 2

Motion: Do not Adopt Reuland Comment # 2

Discussion:

Based on another comment resolution (Kadambi Comment # 2) the following sentence was added to the first paragraph in the Foreword:

“This revision of the standard does not preclude applying the functional requirements and criteria of this standard to next-generation reactors.”

Also, Section 3.2.1.1, “Scope of Panel Simulation” defines “other components or displays that are used during normal, abnormal, off-normal, and emergency evolutions”. Section 3.2.2.2 includes “Display systems”. The proposed standard adequately covers MFD (Multifunction Display).

Reference: NFSC Ballot, Reuland Comment # 2, Also Kadambi Comment #2

Impact: N/A

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Owner: Florence

2008 Oct 20 Motion: Do not Adopt Reuland Comment # 2	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
---	--

7.14 Reuland Comment #3

Motion: Do not Adopt Reuland Comment # 3

Discussion:

The comment is editorial in nature and does not warrant changing the proposed standard language in Section 3.2.1.2 and 3.2.1.3 respectively. The term “considered” appropriately describes the intent of the requirement by ensuring that “one has to think carefully about something.” In this case, the listed items in the referenced Sections are required to be “considered.”

Whereas, the term “evaluated for impact on training” means to examine something in order to judge its value, quality, importance, extent, or condition. In accordance with Section 1.1, the standard does not establish criteria for the use of simulators in training programs.

Reference: NFSC Ballot, Reuland Comment #3

Impact: N/A

Owner: Vick

2008 Oct 20 Motion: Do not Adopt Reuland Comment # 3	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
---	--

7.15 Lloyd Comment #4

Motion: Do not Adopt Lloyd Comment # 4

Discussion:

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ANS-3.5-1998 Section 3.1.3, Item #9 treats “unit performance testing” (i.e. Core testing) as a discrete endpoint. The proposed standard moves this general requirement to Sections 3.4.3.3 and 4.4.3.3.

ANS-3.5-1998 Section 3.1.3, Item #5 treats “hot-standby” as a discrete endpoint. The proposed standard includes “hot-standby” in Section 3.1.3.2 Items: (1) Unit startup from cold shutdown to rated power conditions; (2) Unit shutdown from rated power to cold shutdown conditions.

Refer to meeting minutes: 09_Aproved_ANS 3.5 Meeting Minutes_AEP WV_2002oct28.doc

Reference: NFSC Ballot, Lloyd Comment #4, 09_Aproved_ANS 3.5 Meeting Minutes_AEP WV_2002oct28.doc

Impact: N/A

Owner: Tarselli

2008oct20 Motion: Do not Adopt Lloyd Comment # 4	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
---	--

7.16 Lloyd Comment # 5

Motion: Do not Adopt Lloyd Comment # 5

Discussion: The Working Group consensus is that “Plant Computer” means plant process computer(s).

Reference: NFSC Ballot, Lloyd Comment # 5

Impact: N/A

Owner: McCullough

2008 Oct 20 Motion: Do not Adopt Lloyd Comment # 5	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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7.17 Kadambi Comment # 7

Motion: Do not Adopt Kadambi Comment # 7

Discussion: The Working Group consensus is that “Plant Computer” means plant process computer(s) and the list in Section 3.2.1.2 is not intended to be all inclusive.

Reference: NFSC Ballot, Kadambi Comment # 7, also Lloyd Comment #5

Impact: N/A

Owner: Vick

2008 Oct 20 Motion: Do not Adopt Kadambi Comment # 7	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
---	--

7.18 Lloyd Comment # 6

Motion: Do not Adopt Lloyd Comment # 6

Discussion: During the development of this standard revision a review was completed to better align general requirements and testing requirements. This is now specified in section 4.3.2 as a testing requirement: “The initiation of malfunctions shall not alert the operators to pending events other than by indications that would occur in the reference unit”.

Reference: NFSC Ballot, Lloyd Comment # 6

Impact: N/A

Owner: Vick

2008 Oct 20 Motion: Do not Adopt Lloyd Comment # 6	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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7.19 Lloyd Comment # 7

Motion: Do not Adopt Lloyd Comment # 7

Discussion: During the development of this standard revision a review was completed to better align general requirements and testing requirements. This is now specified in section 4.3.5 Data Collection.

Reference: NFSC Ballot, Lloyd Comment # 7

Impact: N/A

Owner: Vick

2008 Oct 20 Motion: Do not Adopt Lloyd Comment # 7	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
---	--

7.20 Lloyd Comment # 8

Motion: Adopt Lloyd Comment # 8 (Modified)

Discussion: The word “test” is added to Section 3.4.2 to clarify the intent to read as follows: “Simulator validation testing shall be conducted by comparison of simulated component or system test results against actual or predicted reference unit performance data in a stand-alone or integrated fashion.”

Reference: NFSC Ballot, Lloyd Comment # 8

Impact: Non-substantive

Owner: Vick

2008 Oct 20 Motion: Adopt Lloyd Comment # 8 (Modified)	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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7.21 Lloyd Comment # 9

Motion: Do not Adopt Lloyd Comment # 9

Discussion: The working group consensus is that Section 4.4.3.3 provides adequate guidance:

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

Reference: NFSC Ballot, Lloyd Comment # 9, Section 4.4.3.3

Impact: N/A

Owner: Tarselli

2008 Oct 20 Motion: Do not Adopt Lloyd Comment # 9	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
---	--

7.22 Lloyd Comment # 11

Motion: Do not Adopt Lloyd Comment # 11

Discussion: The working group consensus agrees in principle with this comment. However, it is acknowledged that stimulated components may be problematic with respect to the simulator environment and may be unable to totally satisfy Section 3.3.3 requirements. In this case, a training needs assessment is the acceptable method to resolve this issue.

Reference: NFSC Ballot, Lloyd Comment # 11, Section 3.3.3, 4.3.3.

Impact: N/A

Owner: Florence / Vick

2008 Oct 20 Motion: Do not Adopt Lloyd Comment # 11	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
--	--

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7.23 Lloyd Comment # 15a

Motion: Adopt Lloyd Comment # 15a

Discussion: The working group consensus agrees with this comment. The following phrase “based upon their training impact” is deleted from Section 5.3.2.

Reference: NFSC Ballot, Lloyd Comment # 15

Impact: Non-substantive

Owner: Koutouzis / Dennis

2008 Oct 20 Motion: Adopt Lloyd Comment # 15a	Motion: Carried <ul style="list-style-type: none">• 6 – For• 0 – Against• 1 – Abstained
--	--

Abstained: Lack of full understanding of the origin of the phrase. (Carry-over from the 1993 standard.)

7.24 Lloyd Comment # 15b

Motion: Do not Adopt Lloyd Comment # 15b

Discussion: Based on another comment resolution (Kadambi # 2) the following sentence was added to the first paragraph in the Foreword: “This revision of the standard does not preclude applying the functional requirements and criteria of this standard to next-generation reactors.”

Reference: NFSC Ballot Lloyd Comment # 15, also Kadambi Comment #2

Impact: N/A

Owner: Koutouzis / Dennis

2008 Oct 20 Motion: Do not Adopt Lloyd Comment # 15b	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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7.25 Eggett Comment # 10

Motion: Do not Adopt Eggett Comment # 10

Discussion: Section 3.1.3.1 establishes the general requirements for steady-state operation whereas Section 4.1.3.1 establishes the testing requirements for steady-state operation. The proposed standard language intentionally reflects the difference between the two sections.

Reference: NFSC Ballot, Eggett Comment # 10

Impact: N/A

Owner: Colby

2008 Oct 20 Motion: Do not Adopt Eggett Comment # 10	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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7.26 Eggett Comment # 11; Eggett Comment # 12; Eggett Comment # 13; Eggett Comment # 14; and Eggett Comment # 15

Motion:

Do not Adopt Eggett Comment # 11.

Do not Adopt Eggett Comment # 12.

Do not Adopt Eggett Comment # 13.

Do not Adopt Eggett Comment # 14.

Do not Adopt Eggett Comment # 15.

Discussion:

The working group consensus regarding tolerances related to these comments is that the tolerances are sufficient and adequate to assure the fidelity of the simulator for the intended scope for use in operator training and examination.

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The 1993 working group requested a study that was sponsored and funded by EPRI and conducted by General Physics Corporation during the formation of the 1993 Standard. This study was to obtain feedback from the industry on what parameters were important to operators in controlling the plant both in normal and transient conditions.

Additionally, the present working group conducted a survey in 2002 of the same sections (4.1.3.1.1, .2, .3, and .4), concerning the list of parameters and associated tolerances. Input was received from 55 different simulator sites representing approximately 90% of the total operating reactor sites for both BWR and PWR types.

Reference: NFSC Ballot, Eggett Comment # 11, # 12, # 13, # 14, and # 15

Impact: N/A

Owner: Colby

2008 Oct 20 Motion: Do not Adopt Eggett Comment # 11. Do not Adopt Eggett Comment # 12. Do not Adopt Eggett Comment # 13. Do not Adopt Eggett Comment # 14. Do not Adopt Eggett Comment # 15.	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
---	--

7.27 Eggett Comment # 16

Motion: Do not Adopt Eggett Comment # 16

Discussion:

Item one in Section 4.1.3.2 refers to the Initial Startup Test procedure prior to commercial operation.

Item three in Section 4.1.3.2 refers to Normal Operation during commercial power operation

Item one test acceptance criteria are not to be confused with item three test acceptance criteria.

Reference: NFSC Ballot, Eggett Comment # 16

Impact: N/A

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Owner: Tarselli

2008 Oct 20 Motion: Do not Adopt Eggett Comment # 16	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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Mr Dennis resumed the chair.

7.28 The chair entertained a motion to recess until 8:00am Tuesday 2008 Oct 21: No objections were had.

7.29 Recessed: 1735

8. Tuesday 2008 Oct 21 (0835)

8.1 Agenda Review

8.2 Roll Call

Absent Members:

Chang
Havens
Koutouzis
Kozak
Shelly

8.3 Consensus Level

8 – Member Votes

7 – Quorum attained

6 - Consensus (75% Rule of the Chair)

6 – Super Majority

5 – Majority

8.4 Approval Status Discussion

Working group reviewed requirements to achieve an approved Standard.

8.5 SBT Presentation (Felker)

Presented industry feedback via the NEI (LOTG) White Paper and considerations for new SBT language.

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The membership decided not take up SBT activity at this time in the agenda.

Mr. Florence was delegated the chair to facilitate comment resolution.

8.6 Eggett Comment # 4

Motion: Do not Adopt Eggett Comment # 4

Discussion: The comment is editorial in nature and does not provide any additional clarity to the proposed requirement Section 3.1.3.2 since the lead Section 3.1.3 fully articulates “in a continuous manner.”

Reference: NFSC Ballot, Eggett Comment #4

Impact: N/A

Owner: Vick

2008 Oct 21 Motion: Do not Adopt Eggett Comment # 4	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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8.7 Eggett Comment # 5

Motion: Do not Adopt Eggett Comment # 5

Discussion: Regarding Section 3.1.4 Item 8, consensus is that the word “system” (e.g. Component Cooling System) is appropriate.

Reference: NFSC Ballot, Eggett Comment # 5

Impact: N/A

Owner: Vick

2008 Oct 21 Motion: Do not Adopt Eggett Comment # 5	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against
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	• 0 – Abstained
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8.8 Eggett Comment # 6; Russell Comment # 15

Motion:

Adopt Eggett Comment # 6

Adopt Russell Comment # 15

Discussion: Note: Formatting issues are the responsibility of the ANS Standards Administrator

Reference: NFSC Ballot, Eggett comment # 6 and Russell Public Comment # 15

Impact: Non-substantive

Owner: Vick/Colby

2008 Oct 21 Motion: Adopt Eggett Comment # 6 Adopt Russell Comment # 15	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
--	--

8.9 Eggett Comment # 7

Motion: Do not Adopt Eggett Comment # 7

Discussion: The terms “Stimulated” and “Simulated” are correctly used. A review of the standard confirms the terms are not interchangeably used. Please refer to Section 2 for the definition of Stimulated Component.

Reference: NFSC Ballot, Eggett Comment # 7

Impact: N/A

Owner: Vick

2008 oct 21 Motion: Do not Adopt Eggett Comment # 7	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against
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	<ul style="list-style-type: none">• 0 – Abstained
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8.10 Eggett Comment # 8

Motion: Do not Adopt Eggett Comment # 8

Discussion: The last paragraph in Section 3.3.3 defines the context of managing data required to initialize and manage the real-time aspect of Stimulated Components. Override within this context is not appropriate.

Reference: NFSC Ballot, Eggett Comment # 8

Impact: N/A

Owner: Vick

2008 Oct 21 Motion: Do not Adopt Eggett Comment # 8	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
--	--

8.11 Eggett Comment # 21

Motion: Do not Adopt Eggett Comment # 21

Discussion: Working Group consensus is that changing the phrase “when evaluated against” to “and” alters the context of this requirement.

Reference: NFSC Ballot, Eggett Comment # 21

Impact: N/A

Owner: Vick

2008 Oct 21 Motion: Do not Adopt Eggett Comment # 21	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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8.12 Eggett Comment # 23

Motion: Do not Adopt Eggett Comment # 23

Discussion:

Paragraph one in section 4.4.3.2 is based on an industry request to clarify and address the intent of SBT. The general and test requirements are maintained in Section 3.4.3.2 and 4.4.3 respectively.

Reference: NFSC Ballot, Eggett Comment # 23

Impact: N/A

Owner: Felker

2008 Oct 21 Motion: Do not Adopt Eggett Comment # 23	Motion: Carried <ul style="list-style-type: none">• 7 – For• 1 – Against• 0 – Abstained
---	--

Against: The Intent statement implies criteria. Intent is not used elsewhere.

8.13 Eggett Comment # 24

Motion: Do not Adopt Eggett Comment # 24

Discussion: Previous technical edit reviews have not warranted a change to this wording. Additionally, the working group consensus is that adding the word “for” may lead the reader to misinterpret that testing for more than one reference unit must be completed. This may lead to additional confusion and is less clear.

Reference: NFSC Ballot, Eggett Comment # 24

Impact1: N/A

Owner: Vick

2008 Oct 21 Motion: Do not Adopt Eggett Comment # 24	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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8.14 Eggett Comment # 3

Motion: Adopt Eggett Comment # 3

Discussion: In Section 3, Paragraph 1, the last sentence is revised to read:

“The scope of simulation shall permit conduct of all evolutions required in this section until plant conditions are stable.”

Reference: NFSC Ballot, Eggett Comment # 3

Impact: Non-Substantive

Owner: Vick

2008oct21 Motion: Adopt Eggett Comment # 3	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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8.15 Englehart Comment # 2

Motion: Do not Adopt Englehart Comment # 2

Discussion: Working Group consensus is that the word “should” allows simulator data references data sources such as plant calculations, etc to be maintained in other locations. The word “shall” is too restrictive and implies that all data must be maintained in a simulator database.

Reference: NFSC Ballot, Englehart Comment # 2

Impact: N/A

Owner: Felker

Note: The Chair was not present during the vote.
Mr Dennis resumed the chair.

2008oct21 Motion: Do not Adopt Englehart Comment # 2	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
---	--

Mr Florence was delegated the chair to facilitate comment resolution business.

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8.16 Englehart Comment # 3

Motion: Do not Adopt Englehart Comment # 3

Discussion: This standard intentionally does not address software QA requirements but defines minimum functional requirements for a simulator used in operator training and examination.

Reference: NFSC Ballot, Englehart Comment # 3

Impact: N/A

Owner: Vick

2008 oct 21 Motion: Do not Adopt Englehart Comment # 3	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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8.17 Englehart Comment # 4

Motion: Do not Adopt Englehart Comment # 4

Discussion: This standard intentionally does not address software QA requirements but defines minimum functional requirements for a simulator used in operator training and examination. Appendix A is not a part of American National Standard for Nuclear Power Plant Simulators for Use in Operator Training and Examination, ANSI/ANS-3.5-200x, but is included for information purposes only

Reference: NFSC Ballot, Englehart Comment # 4

Impact: N/A

Owner: Vick

2008 oct 21 Motion: Do not Adopt Englehart Comment # 4	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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8.18 Hill Comment # 1

Motion: Do not Adopt Hill Comment # 1

Discussion:

It is true that Section 3 (General Requirements) second paragraph, 2nd sentence requires, among other things, that "...The overall simulator design should incorporate provisions for examination security..." The term "should" is appropriate since it denotes a recommendation whereas the term "shall" is a requirement denoting a requirement. Hence, the removal of the term "shall" was replaced with the term "should" which is a better scope alignment for this topical area. Generally, a provision for examination security is under the purview of administrative controls rather than hardware and software control.

The proposed standard acknowledges that the reference plant has no provisions for examination security and accordingly the plant-referenced simulator does not. The rationale for the change from "shall" to "should" is found in Section 1.1 (Scope) which emphasizes that the [proposed] standard does not establish criteria for the use of simulators in training programs [or for examinations].

Reference: NFSC Ballot, Hill Comment # 1

Impact: N/A

Owner: Vick

2008 oct 21	Motion: Carried
Motion: Do not Adopt Hill Comment # 1	<ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained

8.19 Hill Comment # 2

Motion: Do not Adopt Hill Comment # 2

Discussion: The comment suggests additional capabilities of the simulator for which there is no current technology to support severe accident conditions in real time simulation. The modeling to simulate core degradation to the point of fuel melt and exiting the reactor pressure vessel in real time simulation is not currently available in the nuclear power plant simulator industry.

Reference: NFSC Ballot, Hill Comment # 2

Impact: N/A

Owner: Florence

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2008 oct 21 Motion: Do not Adopt Hill Comment # 2	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
--	--

8.20 Hill Comment # 3

Motion: Do not Adopt Hill Comment # 3

Discussion: While the phrase “shall consider” is not quantitative, the list identifies a specific set of items that are quantifiable.

Reference: NFSC Ballot, Hill Comment #3

Impact: N/A

Owner: Vick

2008 oct 21 Motion: Do not Adopt Hill Comment # 3	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
--	--

8.21 Hill Comment # 4

Motion: Do not Adopt Hill Comment # 4

Discussion:

The proposed standard is applicable to full scope simulators used for operator training and examinations; the use of approved “engineering” computer codes is not recommended nor required until the scope of the standard is changed to include use for engineering purposes.

Reference: NFSC Ballot, Hill Comment # 4

Impact: N/A

Owner: Vick

2008 oct 21	Motion: Carried <ul style="list-style-type: none">• 8 – For
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Motion: Do not Adopt Hill Comment # 4	<ul style="list-style-type: none">• 0 – Against• 0 – Abstained
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8.22 Kadambi Comment # 4

Motion: Adopt Kadambi Comment # 4 (Tabled)

Discussion:

The working group expressed disagreement with the proposed comment. Section 3.3.1 identifies a sufficient set of initial conditions to support evolutions identified in Section 3.1.3.

Proposed response:

A review warrants a change to the proposed standard to address foundation initial condition (IC) set(s) to support Section 3.1.3 (Normal Evolutions) for which the simulation commences with the simulated plant at cold shutdown conditions and ready for plant and systems startup from cold ambient conditions.

It is recommended that Section 3.3.1 include a requirement that a foundation IC set for Beginning of Cycle (BOC) with the simulated nuclear reactor core in cold shutdown operation in preparation for unit startup be established and maintained for the life of the simulator. The foundational BOC IC set is to be bench-marked against the referenced unit identical BOC initial condition. This foundational IC shall support the commencement of reactor and plant operations over the entire nuclear power plant operations spectrum i.e. from 0% power to 100% power and back down to 0%. Foundational IC sets for Middle of Cycle (MOC) and End of Cycle (EOC) cycles are to be established if such life cycles are used to demonstrate and qualify the simulator's performance.

Reference: NFSC Ballot, Kadambi Comment # 4

Impact: N/A

Owner: Vick

2008 oct 21 Motion: Adopt Kadambi Comment # 4 (Tabled)	Motion: Tabled <ul style="list-style-type: none">• x – For• x – Against• x – Abstained
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Motion: Table Kadambi [Comment #4] discussion until tomorrow.

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2008 oct 21 Motion: Table Motion Kadambi Comment # 4	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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8.23 Kadambi Comment # 8

Motion: Do not Adopt Kadambi Comment # 8

Discussion: The working group consensus is that a simulator training needs assessment qualifies deviations.

Reference: NFSC Ballot, Kadambi Comment # 8

Impact: N/A

Owner: Vick

Note: Felker was not available for the vote.

2008 oct 21 Motion: Do not Adopt Kadambi Comment # 8	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
---	--

8.24 Kadambi Comment # 9; Kadambi Comment # 10;

Motion:

Do not Adopt Kadambi Comment # 9

Do not Adopt Kadambi Comment # 10

Discussion:

The working group consensus is that this issue has two parts; 1) the time it takes a plant operator to actually get to the component, and 2) the time the component takes to actually operate from one state to another.

Part one is handled at the scenario development stage and travel times are expected to be validated during scenario validation or SBT. This standard does not address this issue.

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Part two is addressed by the simulator design. The fact that the component is operated from the instructor console does not relieve the requirement for the component to operate as designed.

Reference: NFSC Ballot, Kadambi Comment # 9 and # 10

Impact: N/A

Owner: Dennis

2008 oct 21 Motion: Do not Adopt Kadambi Comment # 9 Do not Adopt Kadambi Comment # 10	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
---	--

Mr Dennis resumed the chair.

8.25 The chair entertained a motion to recess until 8:00am Wednesday 2008 oct 22. No objections were made.

8.26 Recessed: 1740

9. **Wednesday 2008oct22 (0835)**

9.1 Agenda Review

9.2 Roll Call

Absent Members:

Chang
Havens
Koutouzis
Kozak
Shelly

9.3 Consensus Level

8 – Member Votes
7 – Quorum attained

6 - Consensus (75% Rule of the Chair)
6 – Super Majority
5 – Majority

9.4 Bell Comment # 1

Motion: Do not Adopt Bell Comment # 1

Discussion: Section 3.1.4 Item 17 adequately addresses failures of automatic control systems that affect reactivity.

Reference: NFSC Ballot, Bell Comment # 1

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Impact: N/A

Owner: Florence

2008 oct 22 Motion: Do not Adopt Bell Comment # 1	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
--	--

Mr Florence was delegated the chair to facilitate comment resolution business.

9.5 Bell Comment # 2

Motion: Do not Adopt Bell Comment # 2

Discussion: Working Group consensus is that the simulator core acceptance criteria is expected to be the same as the reference unit's core test acceptance criteria within the limits of simulation.

Reference: NFSC Ballot, Bell Comment # 2

Impact: N/A

Owner: Vick

2008 oct 22 Motion: Do not Adopt Bell Comment # 2	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
--	--

Mr Dennis resumed the chair.

9.6 Shepherd Comment # 1

Motion: Do not Adopt Shepherd Comment # 1

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Discussion: Section 3.1.4 requires that the simulator shall support consequential failures of systems and equipment due to operator action or malfunction of supporting systems where supported by a training needs assessment.

Reference: NFSC Ballot, Shepherd Comment #1

Impact: N/A

Owner: Florence

2008 oct 22 Motion: Do not Adopt Shepherd Comment # 1	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
--	--

Mr. Felker was not available for vote.

Mr Florence was delegated the chair to facilitate comment resolution business.

9.7 Shepherd Comment # 2; Holl Comment # 9; MANTG Comment # 24

Motion:

Do not Adopt Shepherd Comment # 2

Do not Adopt Holl Comment # 9

Do not Adopt MANTG Comment # 24

Discussion: Working Group consensus is that the simulator core performance is expected to be the same as the reference unit's core test acceptance criteria within the scope of simulation. For cases where the simulator's previous cycle performance test results meet the present reference unit's core cycle acceptance criteria, the simulator's previous core performance is acceptable; however, testing shall be performed in accordance with the reference unit procedures.

Note that this section of the draft standard does not require a model change each refueling cycle.

Reference: NFSC Ballot, Shepherd Comment # 2; Holl [Public] Comment # 9; and MANTG [Public] Comment # 24

Impact: N/A

Owner: Tarselli

2008 oct 22	Motion: Carried <ul style="list-style-type: none">• 6 – For
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Motion: Do not Adopt Shepherd Comment # 2 Do not Adopt Holl Comment # 9 Do not Adopt MANTG Comment # 24	<ul style="list-style-type: none"> • 1 – Against • 1 – Abstained
---	--

Against: One member does not believe that the core must be tested if there are no changes to the core.

Abstained: Discussion is not clear with respect to the fact that the previous core must be tested with today's load.

9.8 Shepherd Comment # 3

Motion: Do not Adopt Shepherd Comment # 3

Discussion: The comment is basically regulatory in nature. The use of a simulator for meeting a regulatory experience provision is outside the scope of the standard. For any core life it is recognized that the neutronics represent only a moment in core life time. However this does not preclude testing the core at a specific core point of interest (e.g. 0EFPD, BOC, MOC, EOC.)

Reference: NFSC Ballot, Shepherd Comment # 3

Impact: N/A

Owner: Tarselli

2008 oct22 Motion: Do not Adopt Shepherd Comment # 3	Motion: Carried <ul style="list-style-type: none"> • 8 – For • 0 – Against • 0 – Abstained
---	--

Mr Dennis resumed the chair.

9.9 Shepherd Comment # 4

Motion: Do not Adopt Shepherd Comment # 4

Discussion:

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Appendix B is not a part of American National Standard for Nuclear Power Plant Simulators for Use in Operator Training and Examination, ANSI/ANS-3.5-200x, but is included for information purposes only. This is noted in the header of Appendix B.

Footnote 5 in Paragraph 4.4.3.1 notes that Appendix B provides examples of acceptable simulator operability tests.

Based on this information, the standard does not preclude a simulation facility to add/delete/modify baseline transients versus the examples in Appendix B or to conduct simulator operability tests for a benchmark set of transients.

Please note that Paragraph 4.4.3.4 Post Event Simulator Testing, provides additional opportunities to conduct comparison testing when a reference unit event generates relevant data for evaluating simulator performance.

Additionally, Section 5.1.1, Utilization of Baseline Data defines the preferred sources of data. This list defines that plant data has the highest priority thus encouraging the user to utilize plant data over other sources of data. The working group consensus is that replacing best estimate data with actual plant data/events is preferred (even for dissimilar initiating events).

Reference: NFSC Ballot, Shepherd Comment # 4

Impact: N/A

Owner: Florence

2008 oct 22	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 1 – Abstained
Motion: Do not Adopt Shepherd Comment # 4	

Abstained: The comment is in regulatory space and is not standard space.

Mr Florence was delegated the chair to facilitate comment resolution business.

9.10 MOTION TO REVISE Section 3.4.3.2 [SBT]

Lengthy discussion to satisfy industry concerns with SBT and the NEI and NRC discussions and white paper.

Use of the term “Minimum” is considered by some members to be diluting this requirement and may result in this change as being substantive.

Other members do not believe this change is substantive but adds clarity.

Motion: Motion to revise Section 3.4.3.2

Revise Section 3.4.3.2 as follows:

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3.4.3.2 Simulator Scenario-Based Testing. Scenario-based testing shall be conducted to ensure the simulator is capable of producing the expected reference unit response to satisfy predetermined learning or examination objectives by utilizing the existing training and examination scenario validation process.

At a minimum, the following types of simulator scenarios shall undergo scenario-based testing:

- 1) NRC Initial License Examination scenarios;
- 2) Licensed Operator Requalification annual examination scenarios;
- 3) Scenarios used for reactivity control manipulation experience.

Additional scenario-based testing should be considered for other operator training scenarios.

Reference: This motion is related to several public SBT comments as discussed below in minutes Section 9.11.

Impact: Non-substantive

Owner: Felker

<p>2008 oct 22</p> <p>Motion: Revise Section 3.4.3.2 as follows:</p> <p>3.4.3.2 Simulator Scenario-Based Testing. Scenario-based testing shall be conducted to ensure the simulator is capable of producing the expected reference unit response to satisfy predetermined learning or examination objectives by utilizing the existing training and examination scenario validation process.</p> <p>At a minimum, the following types of simulator scenarios shall undergo scenario-based testing:</p> <ol style="list-style-type: none">1) NRC Initial License Examination scenarios;2) Licensed Operator Requalification annual examination scenarios;3) Scenarios used for reactivity control manipulation experience. <p>Additional scenario-based testing should be considered for other operator training scenarios.</p>	<p>Motion: Carried</p> <ul style="list-style-type: none">• 7 – For• 0 – Against• 1 – Abstained
--	---

Abstained: NRC member due to ongoing NRC and NEI discussions.

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9.11 Westrain Comment #27a, # 57a, Reuland Comment # 1; Lloyd Comment # 13 and # 14; Englehart Comment # 5; Shepherd Comment # 5; Russell Comment # 24; Wehrenberg Comment # 2; and NEI Comment # 3

Note: Additional review is required to determine the total impact for the comments below.

Motion: Adopt comments based on the modification to Section 3.4.3.2 [as described in previous motion]in minutes Section 9.10):

Westrain # 27a
Westrain # 57a
Wright # 1a
*Reuland # 1
Lloyd # 13
*Lloyd # 14
Englehart # 5
Shepherd # 5
*Russell # 24
Wehrenberg # 2
NEI # 3

Discussion: The working group consensus concerning SBT modifies Section 3.4.3.2 to address industry comments. The revised Section 3.4.3.2 as described in minutes Section 9.10 above is acceptable to the WG.

Reference: NFSC Ballots, Wright Comment # 1a, Reuland Comment # 1, Lloyd Comment # 13 and # 14, Englehart Comment # 5, Shepherd Comment # 5, and Wehrenberg Comment # 2; & Public Comments: Westrain Comment # 27a and # 57a, Russell Comment # 24, and NEI Comment # 3

Impact: N/A

Owner: Felker

2008 oct 22 Motion: Adopt comments based on the modification to Section 3.4.3.2: Westrain # 27a Westrain # 57a Wright # 1a Reuland # 1 Lloyd # 13	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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Lloyd # 14 Englehart # 5 Shepherd # 5 Russell # 24 Wehrenberg # 2 NEI # 3	
--	--

Motion: Table this motion until a full review is completed for each Comment Listed.

2008 oct 22 Motion: Table this motion until a full review is completed for each Comment Listed.	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
--	--

9.12 Wehrenberg Comment # 1

Motion: Do not Adopt Wehrenberg Comment # 1

Discussion:

The working group consensus is that reference unit test procedures are the acceptable method for demonstrating core performance within the scope of simulation to the extent possible.

Performing the reference unit [core] related procedures under the same or similar initial conditions is an important performance and validation function that ensures the simulator is capable of replicating the expected response and behavior of the core using operator actions required by procedures. The WG understands that some procedural steps may be not applicable to the simulator and therefore warrants being “n/a.” Relaxing the standard could lead to insufficient scope and fidelity of the core. In general, off-line testing in the manner noted by the commenter is always an avenue for pre-testing whether or not the core model could withstand the scrutiny that a plant procedure would impose.

Section 4.4.3.3 requires, among other things, that “...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...”

Point 1, the proposed standard does not address regulatory requirements as it is an industry consensus standard for plant-referenced simulators.

Point 2, the remarks regarding regulatory compliance is out scope for public comment on the proposed standard.

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Point 3, the proposed standard specifies the testing requirement in this area in the same and or similar manner consistent with Section 4.1.3.2 (Normal Evolutions) for which core performance testing was one of several evolutions in the adopted standard that required the simulator capability demonstration consistent with reference unit procedures and data availability.
The rationale that a plant-referenced simulator's core model is "usually" subset of an engineering grade core model used by an engineering group is insufficient grounds for not conducting core performance testing in the manner as prescribed by the proposed standard. There is nothing to preclude core validation testing in the manner advocated by the commenter.

Reference: NFSC Ballot, Wehrenberg Comment # 1

Impact: N/A

Owner: Vick

2008 oct 22	Motion: Carried
Motion: Do not Adopt Wehrenberg Comment # 1	<ul style="list-style-type: none">• 7 – For• 0 – Against• 1 – Abstained

Abstained: Conflict of interest.

Mr Dennis resumed the chair.

9.13 The chair entertained a motion to recess until 8am Thursday 2008oct23.

9.14 Recessed: 1800

10. Thursday 2008 Oct 23 (0835)

10.1 Agenda Review

10.2 Roll Call

Absent Members:

Chang
Havens
Koutouzis
Kozak
Shelly
McCullough

10.3 Consensus Level

7 – Member Votes
7 – Quorum attained

6 - Consensus (75% Rule of the Chair)
5 – Super Majority
4 – Majority

Mr. Florence was delegated the chair to facilitate comment resolution.

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10.4 Wright Comment # 1a; Wehrenberg Comment # 2; Westrain Comment # 27a; Westrain Comment # 57a; Shepherd Comment # 5; NEI Comment # 3

Motion: Adopt comments from:

Wright # 1a

Wehrenberg # 2

Westrain # 27a

Westrain # 57a

Shepherd # 5

NEI # 3

Discussion: The working group consensus concerning SBT modifies Section 3.4.3.2 to address industry comments. The revised Section 3.4.3.2 as described in minutes Section 9.10 above is acceptable to the WG.

Reference: NFSC Ballots, Wright Comment # 1a, [Reuland Comment # 1, Lloyd Comment # 13 and # 14], Englehart Comment # 5, Shepherd Comment # 5, and Wehrenberg Comment # 2; & Public Comments: Westrain Comment # 27a and # 57a, [Russell Comment # 24,] and NEI Comment # 3

Impact: N/A

Owner: Felker

2008 oct 23 Motion: Adopt comments based on the modification to Section 3.4.3.2: Wright # 1a Wehrenberg # 2 Westrain # 27a Westrain # 57a Shepherd # 5 NEI # 3	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 1 – Abstained
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Abstained: NRC member due to ongoing NRC and NEI discussions.

Mr Dennis resumed the chair.

10.5 Kadambi Comment # 4

Motion: Do no Adopt Kadambi Comment # 4

Discussion:

The working group consensus is that the standard adequately addresses this issue. The IC set is determined by the user.

Reference: NFSC Ballot, Kadambi Comment # 4

Impact: N/A

Owner: Florence

2008 oct 23	Motion: Carried
Motion: Do no Adopt Kadambi Comment # 4	<ul style="list-style-type: none">• 6 – For• 1 – Against• 0 – Abstained

Against: Supports Kadambi Comment #4.

Mr Florence was delegated the chair to facilitate comment resolution business.

10.6 Administratively Handled Ballots (Dennis)

The following Ballot comments are to be handled administratively by the Chair (Dennis):

Reuland # 1

Englehart # 5

Kadambi # 1

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10.7 Ballot Communication Status

Colby	Eggett	Sent
Colby	Prillaman	Sent
Vick	Kadambi	Sent
Dennis	Reuland	Hold – Admin (NEI Closure)
Felker	Lloyd	Comment 14 Need Resolution
Felker	Shepherd	To be Sent
Felker	Wehrenberg	Sent
Felker	Wright	Sent Item 1B for Discussion
Florence	Englehart	Complete - Approved with Comment
Florence	Hill	Complete - Approved with Comment
Tarselli	Bell	Sent

10.8 Howell Comment # 1

Motion: Do not Adopt Howell Comment # 1

Discussion: The working group consensus that the standard does not warrant defining the term instructor.

Reference: Howell Public Comment # 1

Impact: N/A

Owner: Vick

2008 oct 23	Motion: Carried
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Motion: Do not Adopt Howell Comment # 1	<ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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10.9 MANTG Comment # 1; Westrain Comment # 1; Russell Comment # 2;

Motion:

Adopt MANTG Comment # 1

Adopt Westrain Comment # 1

Adopt Russell Comment # 2

Discussion:

The term malfunction has been clarified:

malfunction. A simulator feature or capability that provides for instructor controlled degradation of performance of simulated plant components, equipment, or systems. Override capability is not considered a malfunction.

Reference: MANTG Comment # 1, Westrain Comment # 1, Russell Comment # 2 The discussion was taken from Kadambi Comment # 3.

Impact: Non-Substantive

Owner: Vick

2008 oct 23 Motion: Adopt MANTG Comment # 1 Adopt Westrain Comment # 1 Adopt Russell Comment # 2	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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10.10 MANTG Comment # 2

Motion: Adopt MANTG Comment # 2

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Discussion:

The definition of “shall, should, and may”; add the word “a” in front of recommendation .

shall, should, and may. The word "shall" is used to denote a requirement; the word "should" is used to denote a recommendation; and the word "may" is used to denote a permission, neither a requirement nor a recommendation.

NFSC glossary conforms to recommendation

Reference: MANTG Comment # 2

Impact: Non-Substantive

Owner: Vick

2008 oct 23 Motion: Adopt MANTG Comment # 2	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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10.11 MANTG Comment # 3; Westrain Comment # 4;

Motion:

Adopt MANTG Comment # 3

Adopt Westrain Comment # 4

Discussion: The definition of Visually Simulated Hardware is modified to read:

Visually simulated hardware. Hardware that is present on the simulator control panels for realistic appearance and visual orientation but has no interface with the dynamic simulation models.

Reference: MANTG Comment # 3, Westrain # 4

Impact: Non-Substantive

Owner: Vick

2008 oct 23 Motion:	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against
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Adopt MANTG Comment # 3 Adopt Westrain Comment # 4	<ul style="list-style-type: none">• 0 – Abstained
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10.12 Westrain Comment # 2

Motion: Do not Adopt Westrain Comment # 2

Discussion: The working group consensus is that the term “Any” is singular and therefore is appropriate.

Reference: Westrain comment # 2

Impact: N/A

Owner: Vick

2008 oct 23 Motion: Do not Adopt Westrain Comment # 2	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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10.13 Westrain Comment # 3

Motion: Do not Adopt Westrain Comment # 3

Discussion:

The working group consensus is that the term “operator interface” is significantly different than the term “panel instrumentation.” Operator interface means the place, situation, or way in which two things or people act together or affect each other, or the point of connection between things. The override definition is solely related to the relationships between the model and the panel instrumentation. It is not related to the relationships between the model and the operator.

Reference: Westrain Comment # 3

Impact: N/A

Owner: Vick

2008 oct 23	Motion: Carried <ul style="list-style-type: none">• 6 – For
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Motion: Do not Adopt Westrain Comment # 3	<ul style="list-style-type: none">• 1 – Against• 0 – Abstained
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Against: Overrides can be used as a malfunction and the relationship between the model and operator is significant.

10.14 Westrain Comment # 28

Motion: Do not Adopt Westrain Comment # 28

Discussion: The working group consensus is that the suggested change would alter the scope of the testing requirement to identifying differences when identified.

Reference: Westrain Comment # 28

Impact: N/A

Owner: Vick

2008 oct 23 Motion: Do not Adopt Westrain Comment # 28	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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10.15 Holl Comment # 1

Motion: Do not Adopt Holl Comment # 1

Discussion: The working group consensus is that the present wording is adequate and does not imply that the simulator may violate the physical laws of nature at any time.

Reference: Holl Comment # 1

Impact: N/A

Owner: Vick

2008 oct 23 Motion: Do not Adopt Holl Comment # 1	Motion: Carried <ul style="list-style-type: none">• 7 – For
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	<ul style="list-style-type: none">• 0 – Against• 0 – Abstained
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10.16 Westrain Comment # 5

Motion: Do not Adopt Westrain Comment # 5

Discussion: The working group consensus is the phrase “while conducting any of the evolutions required by this section” is a general requirement.

Reference: Westrain Comment # 5

Impact: N/A

Owner: Dennis

2008 oct 23 Motion: Do not Adopt Westrain Comment # 5	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
--	--

10.17 Russell Comment # 10

Motion: Do not Adopt Russell Comment # 10

Discussion:

The working group consensus is the phrase “execution within the designed time interval” means the models are operating within their designated calculation rate per unit of time (e.g. cycles per second such as 4 cps verses 1 cps.) Some models are executed at faster or slower cycles per second as determined by the simulation design.

Reference: Russell Comment # 10

Impact: N/A

Owner: Vick

2008 oct 23 Motion: Do not Adopt Russell Comment # 10	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against
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	<ul style="list-style-type: none">• 0 – Abstained
--	---

10.18 Westrain Comment # 6

Motion: Do not Adopt Westrain Comment # 6

Discussion: The working group consensus is the present wording is appropriate to support the intent of this requirement.

Reference: Westrain Comment # 6

Impact: N/A

Owner: Vick

2008 oct 23 Motion: Do not Adopt Westrain Comment # 6	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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10.19 Westrain Comment # 7; Westrain Comment # 31

Motion:

Do not Adopt Westrain Comment # 7

Do not Adopt Westrain Comment # 31

Discussion: The working group consensus is that sections 3.1.3.1 and 4.1.3.1 must be completed in a continuous manner.

Reference: Westrain Comment # 7 and # 31

Impact: N/A

Owner: Vick

2008 oct 23 Motion: Do not Adopt Westrain Comment # 7 Do not Adopt Westrain Comment # 31	Motion: Carried <ul style="list-style-type: none">• 6 – For• 1 – Against• 0 – Abstained
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Against: Agreement with commenter

10.20 Westrain Comment # 8

Motion: Do not Adopt Westrain Comment # 8

Discussion: The consensus of the working group is that 0% power is not considered a valid power operating level for the conduct of 4.1.3.1.

One member of the working group does not agree with this discussion point.

Reference: Westrain Comment # 8

Impact: N/A

Owner: Vick

2008 oct 23	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
Motion: Do not Adopt Westrain Comment # 8	

10.21 Reconsider Motion Eggett Comment # 11, # 12, # 13, # 14, and # 15; Russell Comment # 12

Unanimous motion to reconsider to add Russell Comment # 12

Amended Motion:

- Do not Adopt Eggett Comment # 11.
- Do not Adopt Eggett Comment # 12.
- Do not Adopt Eggett Comment # 13.
- Do not Adopt Eggett Comment # 14.
- Do not Adopt Eggett Comment # 15.
- Do not Adopt Russell Comment # 12.

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Discussion:

The working group consensus regarding tolerances related to these comments is that the tolerances are sufficient and adequate to assure the fidelity of the simulator for the intended scope for use in operator training and examination.

The 1993 working group requested a study that was sponsored and funded by EPRI and conducted by General Physics Corporation during the formation of the 1993 Standard. This study was to obtain feedback from the industry on what parameters were important to operators in controlling the plant both in normal and transient conditions.

Additionally, the present working group conducted a survey in 2002 of the same sections (4.1.3.1.1, .2, .3, and .4), concerning the list of parameters and associated tolerances. Input was received from 55 different simulator sites representing approximately 90% of the total operating reactor sites for both BWR and PWR types.

Reference: NFSC Ballot, Eggett Comment # 11, # 12, # 13, # 14, and # 15; also Russell Public Comment # 12

Impact: N/A

Owner: Colby

2008 oct 20 Motion: Do not Adopt Eggett Comment # 11. Do not Adopt Eggett Comment # 12. Do not Adopt Eggett Comment # 13. Do not Adopt Eggett Comment # 14. Do not Adopt Eggett Comment # 15. Do not Adopt Russell Comment # 12.	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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10.22 MANTG Comment # 12; Westrain Comment # 33; Westrain Comment # 36; Westrain Comment # 37;

Motion:

Do not Adopt MANTG Comment # 12

Do not Adopt Westrain Comment # 33

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Do not Adopt Westrain Comment # 36

Do not Adopt Westrain Comment # 37

Discussion: The consensus of the working group is that the appendix is for information only and the list included in 4.1.3.1 is provides direction for parameter analysis.

During the next standard revision the working group has created an action item to review with due diligence the list in the body and appendix.

Reference: MANTG Comment # 12, Westrain Comment # 33, # 36, and # 37

Impact: N/A

Action Item 162: Next standard revision; review Appendix B parameters against standard body.

Owner: Colby

2008 oct 23 Motion: Do not Adopt MANTG Comment # 12 Do not Adopt Westrain Comment # 33 Do not Adopt Westrain Comment # 36 Do not Adopt Westrain Comment # 37	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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10.23 Westrain Comment # 35

Motion: Do not Adopt Westrain Comment # 35

Discussion: T-average is a parameter used extensively to monitor reactor conditions for some plant designs.

With regards to MWt thermal, the working group agrees that MWt thermal is a calculated value and is a monitored tech spec parameter.

Reference: Westrain Comment # 35

Impact: N/A

Owner: Colby

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2008 oct 23 Motion: Do not Adopt Westrain Comment # 35	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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10.24 Meekoff Comment # 1; Meekoff Comment # 2; Meekoff Comment # 3; Meekoff Comment # 4

Motion:

Do not Adopt Meekoff Comment # 1

Do not Adopt Meekoff Comment # 2

Do not Adopt Meekoff Comment # 3

Do not Adopt Meekoff Comment # 4

Discussion: The standard is written based on today's designs, but does not preclude the user from applying the standard where applicable.

During the next standard revision the working group has created an action item to review for next generation nuclear reactor/plant designs.

Reference: Meekoff Comment # 1, # 2, # 3, and # 4

Impact: N/A

Action Item 163: Next standard revision review for next generation nuclear reactor/plant designs.

Owner: Colby

2008 oct 23 Motion: <ul style="list-style-type: none">Do not Adopt Meekoff Comment # 1Do not Adopt Meekoff Comment # 2Do not Adopt Meekoff Comment # 3Do not Adopt Meekoff Comment # 4	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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10.25 Holl Comment # 8

Motion: Do not Adopt Holl Comment # 8

Discussion: The tolerance in the standard is appropriate and the +/-0.5 of the last digit tolerance is not required for a simulator used in operator training and examination.

One member stated consideration of loop tolerances could make the last digit significant.

Reference: Holl Comment # 8

Impact: N/A

Owner: Colby

2008 oct 23 Motion: Do not Adopt Holl Comment # 8	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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10.26 Westrain Comment # 32a; Westrain Comment # 32b; Westrain Comment # 32c;

Motion:

Do not Adopt Westrain Comment # 32a

Do not Adopt Westrain Comment # 32b

Do not Adopt Westrain Comment # 32c

Discussion: The working group consensus is that three points within the power range more adequately ensures simulator fidelity is demonstrated.

Reference: Westrain Comment # 32

Impact: N/A

Owner: Colby

2008 oct 23 Motion:	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against
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Do not Adopt Westrain Comment # 32a Do not Adopt Westrain Comment # 32b Do not Adopt Westrain Comment # 32c	<ul style="list-style-type: none">• 0 – Abstained
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10.27 Westrain Comment # 34

Motion: Do not Adopt Westrain Comment # 34

Discussion: The working group consensus is that the requirement for simulator instrument error is appropriate and meets the intent of Section 4.1.3.1.

Reference: Westrain Comment #34

Impact: N/A

Owner: Colby

2008 oct 23 Motion: Do not Adopt Westrain Comment # 34	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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10.28 Russell Comment # 3; Westrain Comment # 11

Motion:

Do not Adopt Russell Comment # 3

Do not Adopt Westrain Comment # 11

Discussion: The working group consensus is that the last paragraph of section 3.1.3.2 is not a requirement.

Reference: Russell Comment #3, Westrain Comment # 11

Impact: N/A

Owner: Tarselli

2008 oct 23	Motion: Carried
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Motion: Do not Adopt Russell Comment # 3 Do not Adopt Westrain Comment # 11	<ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
--	---

10.29 Westrain Comment # 9

Motion: Do not Adopt Westrain Comment # 9

Discussion: The working group consensus is that Section 3.2.2.2 addresses the scope of simulation external to the control room (i.e. capabilities). The standard appropriately requires that the simulator support a defined set of evolutions in a prescribed manner. Other methods are not acceptable since they may not support expected operator actions or input.

Reference: Westrain Comment # 9

Impact: N/A

Owner: Tarselli

2008oct23 Motion: Do not Adopt Westrain Comment # 9	Motion: Carried <ul style="list-style-type: none">• 5 – For• 0 – Against• 2 – Abstained
--	--

10.30 Reconsider Westrain Comment # 9

Motion: Do not Adopt Westrain Comment # 9

Discussion: The working group consensus is that the standard already allows the use of systems monitored external to the control room identified in section 3.2.2.2 that are necessary to perform the normal evolutions described in 3.1.3.2.

Reference: Westrain Comment # 9

Impact: N/A

Owner: Tarselli

2008 oct 23	Motion: Carried <ul style="list-style-type: none">• 7 – For
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Motion: Do not Adopt Westrain Comment # 9	<ul style="list-style-type: none">• 0 – Against• 0 – Abstained
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10.31 Westrain Comment # 10

Motion: Do not Adopt Westrain Comment # 10

Discussion: The working group consensus is that Section 3.2.2.2 addresses the scope of simulation external to the control room. The standard appropriately requires the simulator to support a defined set of evolutions in a prescribed manner. The capability of the simulator must be able to support the two types of normal evolutions in question.

Regarding periodic valve stroke time surveillances, they are important from a time-based relationship whenever a valve is called upon to operate manually or automatically.

Additionally, the working group does not agree that Section 3.2.2.2 implies that one needs to build functionality into the instructor station to include all local instrumentation for the purpose of performing surveillances. This comment implies a greater scope of simulation than is required by the standard.

Reference: Westrain Comment # 10

Impact: N/A

Owner: Tarselli

2008 oct 23 Motion: Do not Adopt Westrain Comment # 10	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
---	--

10.32 Petersen Comment # 1

Motion: Do not Adopt Petersen Comment # 1

Discussion: The working group consensus is that the proposed standard is silent on the term “licensed power level” as the term is generally a regulatory term and may or may not be related to the term “rated power.”

If “recent power up-rates have left several facilities with a licensed power level that they cannot achieve with current plant configurations” then the design issue should be brought to the attention of the regulator rather than the ANS-3.5 Working Group.

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The term “rated power conditions” is a term typically defined in a facility licensee’s technical specifications in terms of maximum allowable core megawatt thermal generation for a given reactor output and plant heat balance. In general, reactor and turbine-generator design ratings define the scope of the rated power that is to be simulated.

Reference: Petersen Comment # 1

Impact: N/A

Owner: Vick

2008 oct 23 Motion: Do not Adopt Petersen Comment # 1	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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- 10.33 Russell Comment # 13; MANTG Comment # 13; MANTG Comment #14; Westrain Comment # 38a; Westrain Comment # 38b; Westrain Comment # 39

Motion:

- Do not Adopt Russell Comment # 13
- Do not Adopt MANTG Comment # 13
- Do not Adopt MANTG Comment # 14
- Do not Adopt Westrain Comment # 38a
- Do not Adopt Westrain Comment # 38b
- Do not Adopt Westrain Comment # 39

Discussion: With regard to Russell # 13, the working group consensus is that the performance of the simulator is expected to be compared to the reference unit performance using plant procedures. It is possible that plant procedures may not be in order or the fidelity of the simulator may be questionable if no comparisons are made. It could be problematic if all that is being done is checking whether or not a plant procedure can be properly performed. The standard is addressing the issue of simulator performance/response verses expected actual or predicted plant performance/response.

The comparison is defined in the items identified in section 4.1.3.2

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With regard to MANTG Comment # 13 and Westrain comment # 38a and 38b, Section 4.1.3.2 presently states that “It shall be demonstrated during the conduct of Normal Evolutions identified in Section 3.1.3.2”. Therefore, the proposed change is not necessary and does not mean all procedures.

With regard to MANTG comment # 14 and Westrain comment # 39, the standard ensures that performance is demonstrated and met whereas the proposed suggestion eliminates the necessary requirement items 1, 2 and 3.

Reference: Russell Comment # 13, MANTG Comment # 13 and # 14, Westrain Comment # 38 and # 39

Impact: N/A

Owner: Tarselli

2008 oct 23 Motion: Do not Adopt Russell Comment # 13 Do not Adopt MANTG Comment # 13 Do not Adopt MANTG Comment # 14 Do not Adopt Westrain Comment # 38a Do not Adopt Westrain Comment # 38b Do not Adopt Westrain Comment # 39	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
---	--

Mr Dennis resumed the chair.

10.34 The chair entertained a motion to recess until 8:00am Friday 2008 Oct 24.

10.35 Recessed: 1830

11. Friday 2008 Oct 24 (0835)

11.1 Agenda Review

11.2 Roll Call

Absent Members:

Chang
Havens
Koutouzis
Kozak
Shelly

11.3 Consensus Level

8 – Member Votes
7 – Quorum attained

6 - Consensus (75% Rule of the Chair)
6 – Super Majority
5 – Majority

Mr. Florence was delegated the chair to facilitate comment resolution.

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11.4 MANTG Comment # 10

Motion: Do not Adopt MANTG Comment # 10

Discussion:

The working group consensus is that SBT is not a separate “stand-alone” test but utilizes existing training and examination scenario validation processes. In order to conduct SBT, the activities defined in 4.4.3.2 must be completed.

It is anticipated that the proposed NEI white paper will define acceptable guidelines for the conduct and documentation of SBT that support these requirements. The testing process overlaps the scenario validation process and the statement in the standard is appropriate. Applicable Sections are 3.4.3.2 and 4.4.3.2.

As used in Section 3.4.3.2, “utilizing” is a general requirement, whereas Section 4.4.3.2 identifies specific requirements that include collection of test data.

Reference: MANTG Comment # 10, 3.4.3.2, 4.4.3.2

Impact: N/A

Owner: Felker

2008 oct 24	Motion: Carried
Motion: Do not Adopt MANTG Comment # 10	<ul style="list-style-type: none">• 7 – For• 0 – Against• 1 – Abstained

Abstained: NRC member involved in industry discussions

11.5 Westrain Comment # 27b

Motion: Do not Adopt Westrain Comment # 27b

Discussion: The working group consensus is that intent is not a requirement and Section 3 contains general requirements and Section 4 contains test criteria with respect to the requirements. Intent should remain in section 4.

Reference: Westrain Comment # 27, 4.4.3.2

Impact: N/A

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Owner: Felker

2008 oct 24 Motion: Do not Adopt Westrain Comment # 27b	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
--	--

11.6 Lloyd Comment # 13

Motion: Do not Adopt Lloyd Comment # 13

Discussion: The working group consensus is that ANS 3.5 Email dated 23July2007 with attached letter to Jack Roe of NEI contained resolution of the NEI comments to ANS-21. All comments were resolved except for one public comment that is currently under consideration “Key alarms and automatic actions”; reference public comment NEI comment # 1. The previously submitted additional NEI comments will not be considered by the Working Group within these comment resolutions since they are considered resolved and have not been re-submitted.

Reference: NFSC Ballot, Lloyd Comment # 13 [and ANS 3.5 Email dated 23July2007 to ANS-21]

Impact: N/A

Owner: Vick

2008 oct 24 Motion: Do not Adopt Lloyd Comment # 13	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
--	--

11.7 Reconsider Wright Comment # 1a; Wehrenberg Comment # 2

Motion: Reconsider Wright # 1a; Wehrenberg # 2

Discussion: New Motion Wright # 1a; Wehrenberg # 2; Westrain # 27a; Westrain # 57a; Shepherd # 5; NEI # 3
Added Westrain # 27a; Westrain # 57a; Shepherd # 5; NEI # 3

Reference: Refer to Minutes Section 10.4

Impact: N/A

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Owner: Felker

2008 oct 24 Motion: Reconsider Wright # 1a; Wehrenberg # 2	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 1 – Abstained
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Abstained: NRC member due to ongoing NRC and NEI discussions.

11.8 NEI # Comment 1

Motion: Do not Adopt NEI Comment # 1 and add the word “key” in front of automatic actions in Section 4.4.3.2 Item 4.

Discussion: The working group consensus is not to require a check list, positive or assertive, as part of the standard. The standard defines the requirements and not the process. It is the working groups understanding that the proposed NEI white paper may provide an acceptable methodology for conducting and documenting SBT.

Section 4.4.3.2 Item 4 will read “Listing of key alarms and key automatic actions occurring and assertion that they would be expected for the scenario; and”

The working group consensus is the term “key” applies to both alarms and automatic actions.

Reference: NEI Comment # 1

Impact: Non-Substantive

Owner: Felker

2008 oct 24 Motion: Do not Adopt NEI Comment # 1 and add the word “key” in front of automatic actions in Section 4.4.3.2 Item 4.	Motion: Carried <ul style="list-style-type: none">• 6 – For• 2 – Against• 0 – Abstained
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Against: The Section 4.4.3.2 change is substantive

11.9 NEI Comment # 2; NEI Comment # 5; Howell Comment # 5

Motion:

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Do not Adopt NEI Comment # 2

Do not Adopt NEI Comment # 5

Do not Adopt Howell Comment # 5

Discussion: The working group consensus is not to require a check list, positive or assertive, as part of the standard. The standard defines the requirements and not the process. It is the working groups understanding that the proposed NEI white paper may provide an acceptable methodology for conducting and documenting SBT.

Reference: NEI Comment # 2 and # 5, Howell Comment # 5

Impact: Non-Substantive

Owner: Felker

2008 oct 24 Motion: Do not Adopt NEI Comment # 2 Do not Adopt NEI Comment # 5 Do not Adopt Howell Comment # 5	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 1 – Abstained
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Abstained: NRC member involved in industry discussions

11.10 Howell Comment # 6; Westrain Comment # 55a

Motion:

Do not Adopt Howell Comment # 6

Do not Adopt Westrain Comment # 55a

Discussion: The working group consensus is that documentation retention requirements are not specified in the standard but are a part of regulatory requirements.

Reference: Howell Comment # 6, Westrain Comment # 55

Impact: N/A

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Owner: Felker

2008 oct 24 Motion: Do not Adopt Howell Comment # 6 Do not Adopt Westrain Comment # 55a	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 1– Abstained
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Abstained: NRC member involved in industry discussions

11.11 Russell Comment # 19

Motion: Adopt Russell Comment # 19

Discussion: Formatting modification accepted.

Reference: Russell Comment # 19, 4.4.3.2

Impact: Non-substantive

Owner: Felker

2008 oct 24 Motion: Adopt Russell Comment # 19	Motion: Carried <ul style="list-style-type: none">• 7 – For• 1 – Against• 0 – Abstained
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Against: Does not require a vote.

11.12 Russell Comment # 18

Motion: Do not Adopt Russell Comment # 18

Discussion: The working group consensus is that documentation requirements are specified in the draft standard.

It is the working groups understanding that the proposed NEI white paper may provide an acceptable methodology for conducting and documenting SBT.

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Reference: Russell Comment # 18, NEI white paper

Impact: N/A

Owner: Felker

2008 oct 24 Motion: Do not Adopt Russell Comment # 18	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 1 – Abstained
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Abstained: NRC member involved in industry discussions

11.13 Westrain Comment # 57b; Westrain Comment # 57c

Motion:

Do not Adopt Westrain Comment # 57b

Do not Adopt Westrain Comment # 57c

Discussion: As stated in Section 1.2: “The organization of the standard is such that simulator functional and physical requirements described in section 3 correspond to testing and validation requirements described in section 4. The sub-numbering of sections 3 and 4 is consistent so that corresponding section paragraphs address the same subject matter from a requirements and testing standpoint.”

Reference: Westrain comment # 57

Impact: N/A

Owner: Felker

2008 oct 24 Motion: Do not Adopt Westrain Comment # 57b Do not Adopt Westrain Comment # 57c	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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11.14 Westrain Comment # 57d

Motion: Do not Adopt Westrain Comment # 57d

Discussion: The working group consensus is that adding the words “scenario-based” is redundant to the title of this Section 4.4.3.2.

Reference: Westrain Comment # 57

Impact: N/A

Owner: Vick

2008 oct 24	Motion: Carried
Motion: Do not Adopt Westrain Comment # 57b Do not Adopt Westrain Comment # 57c	<ul style="list-style-type: none">• 7 – For• 0 – Against• 1 – Abstained

Abstained: NRC member involved in industry discussions

11.15 McCullough – Periodicity Discussion

11.16 Motion: Delete Sections 3.1.1 and 4.1.1

Motion: Delete Sections 3.1.1 and 4.1.1

Discussion: The real-time requirement is based in a time past and are no longer applicable to today’s computer technology. Additionally, the repeatability requirement for the simulator is no longer valid due to control system, etc are not repeatable.

One member believes that removing section 3.1.1 and 4.1.1 may bring unnecessary scrutiny. This would open up a potential regulatory exception to the standard.

One member believes next generation simulators must also adhere to the real-time design methodology.

Reference: Proposed standard Section 3.1.1 and 4.1.1

Impact: N/A

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Owner: McCullough

2008 oct 24 Motion Withdrawn	Motion: Withdrawn <ul style="list-style-type: none">• x – For• x – Against• x – Abstained
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11.17 Westrain Comment # 29

Motion: Do not Adopt Westrain Comment # 29

Discussion: The working group discussed this issue and agrees that demonstrating real-time and repeatability is not required for every test run. Presently there is no requirement as to when and how often this requirement must be demonstrated as is the case with Operability Testing but real-time and repeatability is subjectively considered every time the simulator is used. The frequency for real-time and repeatability testing presently is left to the facility to determine.

Action item 179 has been created and is carried to the next standard revision.

Reference: Westrain Comment # 29, 3.1.1, 4.1.1

Action Item 179: Real-time and repeatability periodicity

Impact: N/A

Owner: McCullough

2008 oct 24 Motion: Do not Adopt Westrain Comment # 29	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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Felker was not available for the vote

11.18 Westrain Comment # 30b

Motion: Do not Adopt Westrain Comment # 30b

Discussion:

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The working group consensus is that presently there is no requirement as to when and how often the “Limit of Simulation” should be demonstrated. Presently, the frequency for demonstrating “Limit of Simulation” is left to the facility to determine.

The working group will consider adding periodicity as an appendix.

Reference: Westrain Comment # 30

Impact: N/A

Owner: McCullough

2008 oct 24 Motion: Do not Adopt Westrain Comment # 30b	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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11.19 **Motion:** Create Place Keeper Periodicity Appendix

Motion: Create Place Keeper [for proposed new] Periodicity Appendix

Discussion:

The proposed new Appendix format will include the following information:

Appendix Title

Section Reference and Title

Periodicity Description

Note: This Motion is creating the concept of adding new Appendix E that will house future periodicity recommendations.

Reference: McCullough – Proposed new ANSI Periodicity Table [Rev 2.doc]

Impact: N/A

Owner: McCullough

2008 oct 24 Motion: Create place keeper periodicity Appendix	Motion: Carried <ul style="list-style-type: none">• 7 – For• 1 – Against• 0 – Abstained
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Against: Viewed as a substantive change because the appendix may possibly be viewed as part of the standard body [and will therefore act in the capacity of a requirement.]

11.20 Motion: Add to Placeholder Periodicity Appendix Section 4.1.2 Limits of Simulation

Motion: Create Place Keeper Periodicity Appendix

Discussion:

Section	Title	Periodicity Description
4.1.2	Limits of Simulation	A Limits of Simulation test is recommended to be conducted at the completion of the simulator's initial construction or when the Limits of Simulation code is changed and prior to the simulator's use in training and examination.

One member expressed that this motion is unnecessary.

Reference: McCullough – Proposed new ANSI Periodicity Table [Rev 2.doc]

Impact: N/A

Owner: McCullough

2008 oct 24 Motion: Create Place Keeper Periodicity Appendix	Motion: Carried <ul style="list-style-type: none">• 7 – For• 1 – Against• 0 – Abstained
---	--

Against: This motion is unnecessary

11.21 Westrain Comment # 30a

Motion: Do not Adopt Westrain Comment # 30a

Discussion: Consensus could not be reached because the removal of the phrase “are identified as part of the simulator design database” may be considered a substantive change.

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Reference: Westrain Comment # 30

Impact: N/A

Owner: McCullough

2008 oct 24 Motion: Do not Adopt Westrain Comment # 30a	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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11.22 Westrain Comment # 32d

Motion: Do not Adopt Westrain Comment # 32d

Discussion: Consensus could not be reached because adding periodicity to Section 4.1.3.1 Steady-State Operation may be considered a substantive change.

Reference: Westrain Comment # 32

Impact: N/A

Owner: Vick

2008 oct 24 Motion: Do not Adopt Westrain Comment # 32d	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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11.23 Motion: Add to Placeholder Periodicity Appendix Section 4.1.3.1 Steady-State Operation

Motion: Create [new] Placeholder Periodicity Appendix Section 4.1.3.1 Steady-State Operation

Discussion:

Section	Title	Periodicity Description
4.1.3.1	Steady-State Operation	Steady-State Operation tests are recommended to be conducted at the completion of the simulator's initial construction and each reference unit fuel cycle update and prior to the simulator's use in training and examination.

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One member expressed that this motion is unnecessary.

This recommendation conflicts with the annual requirement in Section 4.4.3.1; this will be addressed in Westrain Comment # 56a.

Reference: McCullough [Proposed new ANSI Periodicity Table Rev 2.doc]

Impact: N/A

Owner: McCullough

2008 oct 24 Motion: Create Placeholder Periodicity Appendix Section 4.1.3.1 Steady-State Operation	Motion: Carried <ul style="list-style-type: none">• 7 – For• 1 – Against• 0 – Abstained
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Against: This motion is unnecessary

11.24 Howell Comment # 3; Westrain Comment # 38c

Motion:

Do not Adopt Howell Comment # 3

Do not Adopt Westrain Comment # 38c

Discussion: Consensus could not be reached because adding periodicity to Section 4.1.3.2 Normal Evolutions may be considered a substantive change.

Note: Normal Evolutions are not prescribed in Section 4.4.3.1 as Operability Test.

One member considers the note unnecessary.

Reference: Howell Comment # 3, Westrain Comment # 38

Impact: N/A

Owner: McCullough

2008 oct 24 Motion:	Motion: Carried <ul style="list-style-type: none">• 8 – For
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Do not Adopt Howell Comment # 3 Do not Adopt Westrain Comment # 38c	<ul style="list-style-type: none"> • 0 – Against • 0 – Abstained
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11.25 Motion: Add to Placeholder Periodicity Appendix Section 4.1.3.2 Normal Evolutions

Motion: Create Placeholder Periodicity Appendix Section 4.1.3.2 Normal Evolutions

Discussion:

Section	Title	Periodicity Description
4.1.3.2	Normal Evolutions	Normal Evolution tests are recommended to be conducted at the completion of the simulator's initial construction and each reference unit fuel cycle update and prior to the simulator's use in training and examination.

One member stated this "Periodicity" test matches well with the normal simulator testing activities in that this testing should occur after refueling.

Normal Evolution Testing is also addressed in Simulator Validation Testing.

One member expressed that this motion is unnecessary.

Reference: McCullough [Proposed new - ANSI Periodicity Table Rev 2.doc]

Impact: N/A

Owner: McCullough

2008 oct 24 Motion: Create Placeholder Periodicity Appendix Section 4.1.3.2 Normal Evolutions	Motion: Carried <ul style="list-style-type: none"> • 7 – For • 1 – Against • 0 – Abstained
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Against: This motion is unnecessary

11.26 Russell Comment # 4

Motion: Do not Adopt Russell Comment # 4

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Discussion: Commenter incorrectly referred to item 3 instead of item 2. The term “static” means “not moving or changing, or fixed in position.” The term “dynamic” is “characterized by vigorous activity and producing or undergoing change and development.” Generally, within the context of a loss of instrument air malfunction, the reference unit response may or may not be dynamic by design. For example, a loss of instrument air may result in an air-operated valve to fail as-is which is a static condition. In another case, an air-operated valve may “hunt” resulting in a dynamic condition.

Reference: Russell Comment # 4, 3.1.4 Item 2

Impact: N/A

Owner: Vick

2008 oct 24 Motion: Do not Adopt Russell Comment # 4	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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11.27 MANTG Comment # 5; Westrain Comment # 12; Westrain Comment # 13

Motion:

Do not Adopt MANTG Comment # 5

Do not Adopt Westrain Comment # 12

Do not Adopt Westrain Comment # 13

Discussion: The working group consensus is that the standard appropriately addresses malfunction determination versus capability.

Reference: MANTG Comment # 5, Westrain Comment # 12, Westrain Comment # 13, 3.1.4

Impact: N/A

Owner: Vick

2008 oct 24 Motion: Do not Adopt MANTG Comment # 5 Do not Adopt Westrain Comment # 12	Motion: Carried <ul style="list-style-type: none">• 6 – For• 2 – Against• 0 – Abstained
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Do not Adopt Westrain Comment # 13	
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Against: Language is redundant and change is non-substantive.

11.28 MANTG Comment # 6

Motion: Do not Adopt MANTG Comment # 6

Discussion: The working group consensus is that the common definition of consequential is adequate and a definition is not necessary.

Reference: MANTG Comment # 6

Impact: N/A

Owner: Vick

2008 oct 24 Motion: Do not Adopt MANTG Comment # 6	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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11.29 MANTG Comment # 7b; Westrain Comment #14

Motion:

Do not Adopt MANTG Comment # 7b

Do not Adopt Westrain Comment # 14

Discussion: The working group consensus is that last sentence adds one additional condition allowing the limits of simulation to be reached and considers this additional condition necessary. Additionally, it is not required that each malfunction be tested by taking the simulator to a stable or cold shutdown condition.

Reference: MANTG Comment # 7, Westrain Comment # 14, 3.1.4

Impact: N/A

Owner: Vick

2008 oct 24	Motion: Carried
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Motion: Do not Adopt MANTG Comment # 7b Do not Adopt Westrain Comment # 14	<ul style="list-style-type: none">• 7 – For• 1 – Against• 0 – Abstained
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Against: Last sentence does state that a cold shutdown or limit of simulation condition be reached.

Mr Dennis resumed the chair.

11.30 Hostman Comment # 1

Motion: Do not Adopt Hostman Comment # 1

Discussion: The working group consensus is that loss of coolant includes those malfunctions inside and outside containment.

Reference: Hostman Comment # 1, 3.1.4

Impact: N/A

Owner: Florence

2008 oct 24 Motion: Do not Adopt Hostman Comment # 1	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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11.31 Russell Comment # 5

Motion: Do not Adopt Russell Comment # 5

Discussion: The working group consensus is that degraded as used in section 3.1.4 Item 3 refers to a loss of power from various power supplies.

Note: Correct Reference is Item 3 rather than Item 4.

Reference: Russell Comment # 5, 3.1.4 Item # 4

Impact: N/A

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Owner: Florence

2008 oct 24 Motion: Do not Adopt Russell Comment # 5	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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11.32 Russell Comment # 6

Motion: Do not Adopt Russell Comment # 6

Discussion: The working group consensus is that intent of this paragraph is that the simulator can be manipulated after malfunctions and transients to reach a safe and controllable condition which can be continued either to cold shutdown or until the limit of simulation is reached.

Reference: Russell Comment #6, 3.1.4 Last Paragraph

Impact: N/A

Owner: Florence

2008 oct 24 Motion: Do not Adopt Russell Comment # 6	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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11.33 The chair entertained a motion to recess until 8:00am Saturday 2008 Oct 25.

11.34 Recessed: 1900

12. Saturday 2008 Oct 25 (0841)

12.1 Agenda Review

12.2 Roll Call

Absent Members:

Chang
Havens
Koutouzis
Kozak
Shelly

12.3 Consensus Level

8 – Member Votes
7 – Quorum attained

6 - Consensus (75% Rule of the Chair)
6 – Super Majority
5 – Majority

Mr. Florence was delegated the chair to facilitate comment resolution.

12.4 MANTG Comment # 4

Motion: Do not Adopt MANTG Comment # 4

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Discussion: The working group consensus is that the list in Section 3.1.4 is a minimum list and is part of defining a full scope simulator and does not preclude adding malfunctions that support the systematic approach to training.

Reference: MANTG Comment # 4, 3.1.4

Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt MANTG Comment # 4	Motion: Carried <ul style="list-style-type: none">• 7 – For• 1 – Against• 0 – Abstained
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Against: The list is irrelevant because the SAT process defines the list.

12.5 MANTG Comment # 7a

Motion: Do not Adopt MANTG Comment # 7a

Discussion: With regard to requirements, Section 3 of the standard not only specifies the scope of simulation but also the simulator functional and physical requirements.

Also section 3 – (General Requirements) first paragraph states “The scope of simulation shall require the operator to take the same action on the simulator to conduct an evolution as on the reference unit, using the reference unit operating procedures. The scope of simulation shall permit conduct of all of the evolutions required in this section until plant conditions are stable.” This is very close to the wording in section 3.

Reference: MANTG Comment # 7a, 3.1.4

Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt MANTG Comment # 7a	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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12.6 Russell Comment # 14

Motion: Do not Adopt Russell Comment # 14

Discussion: The acceptance criteria for those malfunctions not listed in Section 3.1.4 is the same as the acceptance criteria for those that are listed. The standard addresses malfunctions criteria for all malfunctions regardless of the selection process.

Reference: Russell Comment # 14, 3.1.4

Impact: N/A

Owner: McCullough

2008 oct 25 Motion: Do not Adopt Russell Comment # 14	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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12.7 MANTG Comment # 16b; Westrain Comment # 41b

Motion:

Do not Adopt MANTG Comment # 16b

Do not Adopt Westrain Comment # 41b

Discussion: The comment is unclear and Section 4.2.1.1 contains only one sentence. Configuration Management is not mentioned in Section 4.2.1.1.

One member finds the comment clear but does not agree.

Reference: MANTG Comment # 16; Westrain Comment # 41b, 4.2.1.1

Impact: N/A

Owner: Colby

2008 oct 25 Motion: Do not Adopt MANTG Comment # 16b	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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Do not Adopt Westrain Comment # 41b	
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12.8 Hostman Comment # 2

Motion: Do not Adopt Hostman Comment # 2

Discussion: The working group consensus is that the common understanding of tactile is sufficient and does not warrant a definition. Additionally, component touch and feel is an important consideration.

Reference: Hostman Comment # 2, 3.2.1.2

Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt Hostman Comment # 2	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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12.9 Albright Comment # 1

Motion: Do not Adopt Albright Comment # 1

Discussion: The working group consensus is that reordering the sentences two and three does not add or detract from the intent of this requirement.

Reference: Albright Comment # 1, 4.2.1.2

Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt Albright Comment # 1	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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- 12.10 MANTG Comment # 17b; Westrain Comment # 42b; MANTG Comment # 18b; Westrain Comment # 43b; MANTG Comment # 8; Westrain Comment # 16; Westrain Comment # 44; Westrain Comment # 24; Westrain Comment # 53; Westrain Comment # 25; Westrain Comment# 54

Motion:

Do not Adopt MANTG Comment # 17b
Do not Adopt Westrain Comment # 42b
Do not Adopt MANTG Comment # 18b
Do not Adopt Westrain Comment # 43b
Do not Adopt MANTG Comment # 8
Do not Adopt Westrain Comment # 16
Do not Adopt Westrain Comment # 44
Do not Adopt Westrain Comment # 24
Do not Adopt Westrain Comment # 53
Do not Adopt Westrain Comment # 25
Do not Adopt Westrain Comment # 54

Discussion: The working group consensus is that with regard to Sections 4.2.1.2, 4.2.1.3, 3.2.1.4, 4.2.1.4, 3.4.1, 4.4.1, 3.4.2 and 4.4.2 the last sentence is not related to configuration management.

Reference: MANTG Comment # 8 and # 17; Westrain Comment # 16, # 17, # 24, # 25, # 42, # 43, # 44, # 53, and # 54, 4.2.1.2, 4.2.1.3, 3.2.1.4, 4.2.1.4, 3.4.1, 4.4.1, 3.4.2, 4.4.2

Impact: N/A

Owner: Colby/Vick

2008 oct 25	Motion: Carried
Motion:	<ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
Do not Adopt MANTG Comment # 17b	

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Do not Adopt Westrain Comment # 42b Do not Adopt MANTG Comment # 18b Do not Adopt Westrain Comment # 43b Do not Adopt MANTG Comment # 8 Do not Adopt Westrain Comment # 16 Do not Adopt Westrain Comment # 44 Do not Adopt Westrain Comment # 24 Do not Adopt Westrain Comment # 53 Do not Adopt Westrain Comment # 25 Do not Adopt Westrain Comment # 54	
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Felker: unavailable for vote

12.11 MANTG Comment # 19

Motion: Do not Adopt MANTG Comment # 19

Discussion: The working group consensus is that changing “should” to “shall” changes the intent. i.e. a recommendation to a requirement.

The suggested wording changes the intent of the requirement in that only deviations identified by the testing conducted in 4.2.1.1, 4.2.1.2, and 4.2.1.3 are recommended to be corrected or a training needs assessment (TNA) is needed to document an acceptable deviation. The proposed standard requires that a TNA shall be performed for each deviation. Those deviations deemed acceptable would be documented in the TNA.

Reference: MANTG Comment # 19

Impact: N/A

Owner: Vick

2008 oct 25	Motion: Carried
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Motion: Do not Adopt MANTG Comment # 19	<ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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- 12.12 MANTG Comment # 20; Westrain Comment # 45; MANTG Comment # 19, MANTG Comment # 21; Westrain Comment # 46

Motion:

Adopt MANTG Comment # 20, Westrain Comment # 45, MANTG Comment # 19, MANTG Comment # 21 and Westrain Comment # 46 applicable to sections 4.2.1.1, 4.2.1.2, 4.2.1.4, 4.2.2.1 and 4.2.2.2 to the following wording:

4.2.1.1 Scope of Panel Simulation.

A comparison shall be performed to demonstrate that panels, consoles, and operating stations that are simulated as required by 3.2.1.1 replicate the size, shape, color, and configuration of those of the reference unit; [that noticeable differences are corrected or that a training needs assessment has been conducted in accordance with the criteria provided by 4.2.1.4.](#)

4.2.1.2 Instrumentation, Controls, Markings, and Operator Aids.

A comparison shall be performed to demonstrate that instrumentation, controls, markings, and operator aids that are on panels, consoles, and operating stations, which are simulated in accordance with 3.2.1.2, replicate the size, shape, color, configuration, feel, and dynamic functioning of those of the reference unit. Components located on simulated panels but not used by the operator during training may be visually simulated hardware. It shall be demonstrated that information is displayed to the operator in the same format and engineering units as in the reference unit control room. [It shall be demonstrated that noticeable differences are corrected or that a training needs assessment has been conducted in accordance with the criteria provided by 4.2.1.4.](#)

4.2.1.4 Assessment of Deviations.

A training needs assessment shall be performed for each identified deviation [or noticeable difference](#). Deviations [and noticeable differences](#) that do not impact the actions to be taken by the operator or do not detract from training are acceptable.

The following parameters should be evaluated to determine if the deviation [or noticeable difference](#) has an impact on the actions to be taken by the operators:

- (1) The human-system interface required for normal, abnormal, or emergency procedures;
- (2) The differences in performing the task on the simulator versus performing the task in the reference unit control room;
- (3) The differences in operator cues, auditory and visual information presented to the operator, and the critical decisions and actions required of the operator;

- (4) The function of the equipment and the potential for impacting reference unit safety, tripping the reference unit, or damaging reference unit equipment;
- (5) The differences required by the team response to normal, abnormal, or emergency actions; and
- (6) Review of operational experience to identify the potential for operator error or the necessity for reinforcement of the skills required for the task.

4.2.2.1 Systems Controlled or Monitored from the Control Room.

It shall be demonstrated that the systems of the reference unit that are within the scope of simulation are adequate to perform the normal evolutions required by 3.1.3.2 and the malfunctions required by 3.1.4. It shall be demonstrated that the scope of simulation includes system interactions with other simulated systems so as to provide a total integrated unit response. *It shall be demonstrated that deviations are corrected or that a training needs assessment has been conducted in accordance with the criteria provided by 4.2.1.4.*

4.2.2.2 Systems Controlled or Monitored External to the Control Room.

It shall be demonstrated that systems operated or monitored external to the control room, and necessary to perform the normal evolutions required by 3.1.3.2 and the malfunctions required by 3.1.4, are simulated. It shall be demonstrated that the operator is able to interface with the remote activity in a similar manner as in the reference unit. *It shall be demonstrated that deviations are corrected or that a training needs assessment has been conducted in accordance with the criteria provided by 4.2.1.4.*

Discussion: This motion better aligns and clarifies sections 4.2.1.1, 4.2.1.2, 4.2.1.4, 4.2.2.1 and 4.2.2.2 to Section 4.2.1.3 by providing the option to correct deviations or noticeable differences before a training needs assessment is considered.

Several members believe this change is a non-substantive change because the new wording clarifies the present wording and intent.

Several members believe this change is a substantive change.

With regards to Westrain comment # 46, the operator is able to interface (not manipulate) with the remote activity in a similar manner as the reference unit.

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Reference: MANTG Comment # 20, MANTG Comment #19, MANTG Comment #21, Westrain Comment #45, and Westrain Comment #46, 4.2.1.1, 4.2.1.2, 4.2.1.3, 4.2.1.4, 4.2.2.1, 4.2.2.2

Impact: None

Owner: Florence

2008 oct 25 Motion: Refer to wording above	Motion: Carried <ul style="list-style-type: none">• 6 – For• 1 – Against• 1 – Abstained
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Against: Changes intent and scope by changing “and” to “or” requirements.

Abstained: Unable to complete a sufficient review as to determine this change’s impact.

12.13 Westrain Comment # 17

Motion: Do not Adopt Westrain Comment # 17

Discussion: The working group consensus is that deleting the last sentence in section 3.2.2.1 changes the scope and intent of this requirement. This section defines two requirements: 1) operator interface with systems and, 2) system interactions with other simulated systems.

Reference: Westrain Comment # 17, 3.2.2.1

Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt Westrain Comment # 17	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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Felker: unavailable for vote

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12.14 Hostman Comment # 3

Motion: Do not Adopt Hostman Comment # 3

Discussion: The working group consensus is that there is no specific requirement related to specific poison activity in initial conditions.

Reference: Hostman Comment # 3, 3.3.1

Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt Hostman Comment # 3	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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12.15 Westrain Comment # 18

Motion: Do not Adopt Westrain Comment # 18

Discussion: The working group consensus is that removal of the 2nd sentence in the 2nd paragraph on page 18 of 45 would significantly change the intent of the functional requirement for initial conditions for which the simulator must meet. The context of the comment applies to the application of the ICs rather than to the functional requirement for ICs.

One member agrees with the comment.

Reference: Westrain Comment # 18

Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt Westrain Comment #18	Motion: Carried <ul style="list-style-type: none">• 7 – For• 1 – Against• 0 – Abstained
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Against: Agrees with comment

12.16 Westrain Comment # 47

Motion: Do not Adopt Westrain Comment # 47

Discussion: The working group consensus is that the suggested change would significantly change the scope of the requirement. The standard does not address simulator certification i.e. no formal certification is required by the standard. The standard establishes the functional requirements for full-scope nuclear power plant control room simulators for use in operator training and examination. It is reasonable to expect and require that simulators have sufficient IC capacity and be administratively controlled to support the training program.

Reference: Westrain Comment # 47, 4.3.1

Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt Westrain Comment # 47	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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Mr Dennis resumed the chair.

12.17 Westrain Comment # 20

Motion: Do not Adopt Westrain Comment # 20

Discussion: The working group consensus is the standard is not driven by regulation but rather by what the working group considers, by consensus, to be the minimum requirements for simulators within the scope of this standard. The working group considers this requirement to be a minimum capability.

Reference: Westrain Comment # 20

Impact: N/A

Owner: Florence

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2008 oct 25 Motion: Do not Adopt Westrain Comment # 20	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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Mr Florence was delegated the chair to facilitate comment resolution business.

12.18 MANTG Comment # 9; Westrain Comment # 19

Motion:

Do not Adopt MANTG Comment # 9

Do not Adopt Westrain Comment # 19

Discussion: The working group consensus is that the functional requirement is that the simulator must be capable to initiate, as a minimum, the malfunctions identified in Section 3.1.4 as well as any other malfunction(s) that are programmed into the simulator to support the operator licensing program.

Reference: MANTG Comment # 9, Westrain Comment # 19

Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt MANTG Comment # 9 Do not Adopt Westrain Comment # 19	Motion: Carried <ul style="list-style-type: none">• 7 – For• 1 – Against• 0 – Abstained
--	--

Against: Agrees with comment

12.19 Westrain Comment # 48

Motion: Do not Adopt Westrain Comment # 48

Discussion: The working group consensus is that the commenter's 1st sentence regarding bounding is not clear.

Addressing the second part of the comment, the testing requirement in 4.3.2 appropriately addresses the general requirement in 3.3.2.

Reference: Westrain Comment # 48, 3.3.2, 4.3.2

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Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt Westrain Comment # 48	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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12.20 Westrain Comment # 21

Motion: Do not Adopt Westrain Comment # 21

Discussion: The working group consensus is that “panel hardware” better defines this requirement than does “operator interface.” Additionally, the standard does not preclude the facility from including additional override capability (e.g. CRTs, Digital Input Controls, etc) based on training needs.

Placing a specific requirement regarding testing into a general requirement does not follow the conventions as prescribed in Section 1.2.

Reference: Westrain Comment # 21, 3.3.3

Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt Westrain Comment # 21	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
---	--

Mr Dennis resumed the chair.

12.21 Russell Comment # 7

Motion: Do not Adopt Russell Comment # 7

Discussion: The working group consensus is that the extent of simulation for stimulated components should be determined by the simulation facility.

Reference: Russell Comment # 7

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Impact: N/A

Owner: Florence

2008 oct 25 Motion: Do not Adopt Russell Comment # 7	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
---	--

12.22 MANTG Comment # 22

Motion: Do not Adopt MANTG Comment # 22

Discussion: The working group consensus is that the last paragraph in Section 4.3.3 is appropriate.

Reference: MANTG Comment # 22, 4.3.3

Impact: N/A

Owner: Florence

2008 oct 25 Motion: Do not Adopt MANTG Comment # 22	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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Mr Florence was delegated the chair to facilitate comment resolution business.

12.23 Westrain Comment # 49

Motion: Do not Adopt Westrain Comment # 49

Discussion: The working group consensus is the testing requirement in 4.3.3 appropriately addresses the general requirement in 3.3.3. Placing a specific requirement regarding testing into a general requirement does not follow the conventions as prescribed in Section 1.2.

Section 4.3.3 is related to the instructor station and section 4.2 is related to the scope of simulation.

Reference: Westrain Comment # 49

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Impact: N/A

Owner: Vick/Colby

2008 oct 25 Motion: Do not Adopt Westrain Comment # 49	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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12.24 Westrain Comment # 22

Motion: Do not Adopt Westrain Comment # 22

Discussion: The working group consensus is the testing requirement in 4.3.4 appropriately addresses the general requirement in 3.3.4. Placing a specific requirement regarding testing into a general requirement does not follow the conventions as prescribed in Section 1.2.

Reference: Westrain Comment # 22, 3.3.4, 4.3.4

Impact: N/A

Owner: Vick/Colby

2008 oct 25 Motion: Do not Adopt Westrain Comment # 22	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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12.25 Westrain Comment # 50; MANTG Comment # 23

Motion:

Do not Adopt Westrain Comment # 50

Do not Adopt MANTG Comment # 23

Discussion: The working group consensus is the testing requirement in 4.3.4 appropriately addresses the general requirement in 3.3.4.

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Placing a specific requirement regarding testing into a general requirement does not follow the conventions as prescribed in Section 1.2.

Reference: Westrain Comment #50, MANTG Comment # 23, 4.3.4

Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt Westrain Comment # 50 Do not Adopt MANTG Comment # 23	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
---	--

12.26 Russell Comment # 15

Discussion: This comment amends Eggett # 6

Reference: Russell Comment # 15 [also Eggett Comment # 6]; [see meeting minutes Section 8.8]

Impact: Non-Substantive

Owner: Colby

12.27 Westrain Comment # 51

Motion: Do not Adopt Westrain Comment # 51

Discussion: The working group consensus is that adding the stipulation that the requirement be met during initial implementation is not warranted since the simulator as a digital computer always has the capability to demonstrate the requirement.

Reference: Westrain Comment # 51, 4.3.5

Impact: N/A

Owner: Vick

2008 oct 25	Motion: Carried <ul style="list-style-type: none">• 7 – For
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Motion: Do not Adopt Westrain Comment # 51	<ul style="list-style-type: none">• 0 – Against• 0 – Abstained
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Absent Vote: McCullough not available

12.28 Howell Comment # 2

Motion: Do not Adopt Howell Comment # 2

Discussion: The working group consensus is that section 4.3.3 requires that stimulated components that have a noticeable difference have been defined and a training needs assessment has been performed in accordance with section 4.2.1.4 (e.g. - an evaluation).

Reference: Howell Comment # 2, 4.3.3

Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt Howell Comment # 2	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
--	--

12.29 Russell Comment # 8; Russell Comment # 16

Motion:

Do not Adopt Russell Comment # 8

Do not Adopt Russell Comment # 16

Discussion: The working group consensus is that changing “and” to “or” changes the requirement of this section. “and” is all inclusive whereas “Or” allows selection.

Reference: Russell Comment # 8 and # 16, 3.4

Impact: N/A

Owner: Felker

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2008 oct 25 Motion: Do not Adopt Russell Comment # 8 Do not Adopt Russell Comment # 16	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
---	--

12.30 Westrain Comment # 23; Westrain Comment # 52

Motion:

Do not Adopt Westrain Comment # 23

Do not Adopt Westrain Comment # 52

Discussion: The working group consensus is that the titles are appropriate.

Reference: Westrain Comment # 23 and # 52, 3.4.4

Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt Westrain Comment # 23 Do not Adopt Westrain Comment # 52	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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12.31 Russell Comment # 9

Motion: Do not Adopt Russell Comment # 9

Discussion: The working group consensus is that simulator verification testing is conducted by comparing the simulated component or system software design to the original requirements/specification for this component/system.

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V&V is a generally accepted industry practice.

Reference: Russell Comment # 9, 3.4.1

Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt Russell Comment # 9	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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- 12.32 Amended Motion MANTG Comment # 17b; Westrain Comment # 42b; MANTG Comment # 18b; Westrain Comment # 43b; MANTG Comment # 8; Westrain Comment # 16; Westrain Comment # 44 (See Minutes Section 12.10 for amended motion results.)

Discussion: The [original] motion

MANTG # 17b

Westrain # 42b

MANTG # 18b

Westrain # 43b

MANTG # 8

Westrain # 16

Westrain # 44

To add [to the original motion in Section 12.10]

Westrain # 24

Westrain # 53

Westrain # 25

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Westrain # 54

Reference: Refer to Minutes Section 12.10 for details.

Impact: N/A

Owner: Vick

12.33 Russell Comment # 17

Motion: Do not Adopt Russell Comment # 17

Discussion: The working group consensus is that the phrase “Whenever there are changes that have the potential to affect simulator capabilities” covers any new/additional malfunctions.

Reference: Russell Comment # 17, 4.4.2

Impact: N/A

Owner: Florence

2008 oct 25 Motion: Do not Adopt Russell Comment # 17	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
--	--

12.34 Albright Comment # 2

Motion: Do not Adopt Albright Comment # 2

Discussion: The working group consensus is that the proposed standard does not address requirements defined in ANS 3.5-1985. Section 3.4.3.2 SBT is a requirement in the proposed standard.

Reference: Albright Comment # 2, 3.4.3, 4.4.3

Impact: N/A

Owner: Vick

2008 oct 25	Motion: Carried <ul style="list-style-type: none">• 8 – For
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Motion: Do not Adopt Albright Comment # 2	<ul style="list-style-type: none">• 0 – Against• 0 – Abstained
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12.35 Westrain Comment # 26

Motion: Do not Adopt Westrain Comment # 26 and add an Action Item

Discussion: The working group consensus is that the working group is not ready to tackle the issue of performance testing in a non-fully integrated mode of operation i.e. without the panels.

Action item 180 was created to address this issue in the next revision.

Reference: Westrain Comment # 26, 3.4.3

Action Item: #180

Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt Westrain Comment # 26	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
---	--

12.36 Amended Motion Howell Comment # 6

Discussion: Motion Howell Comment # 6 was amended to add Westrain Comment # 55a (See Minutes Section 11.10 for motion results.)

Reference: Minutes Section 11.10

Impact: N/A

Owner: Vick

12.37 Westrain Comment # 55b; Westrain Comment # 55c

Motion:

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Do not Adopt Westrain Comment # 55b

Do not Adopt Westrain Comment # 55c

Discussion: The working group consensus is that Section 5.1.1 defines the order of preference for baseline data used for design or test. When actual plant data is not available, other forms of data are acceptable, including subject matter experts.

No sections were deleted to cause section renumbering.

Reference: Westrain Comment # 55

Impact: N/A

Owner: Felker

2008 oct 25 Motion: Do not Adopt Westrain Comment # 55b Do not Adopt Westrain Comment # 55c	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
--	--

12.38 Westrain Comment # 56b; Westrain Comment # 56c; Westrain Comment # 56d

Motion:

Do not Adopt Westrain Comment # 56b

Do not Adopt Westrain Comment # 56c

Do not Adopt Westrain Comment # 56d

Discussion:

Footnote 5 (Appendix B) identifies operability tests.

Section 4.1.4 defines the acceptance criteria for transient test identified in Appendix B-B1.2.

Footnote 6 (Appendix A) appropriately links acceptable performance test documentation.

The proposed standard does not prescribe a specific set of transients. Refer to Appendix B for examples.

Reference: Westrain Comment # 56

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Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt Westrain Comment # 56b Do not Adopt Westrain Comment # 56c Do not Adopt Westrain Comment # 56d	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
---	--

12.39 MANTG Comment # 15; WESTRAIN Comment # 40

Motion:

Do not Adopt MANTG Comment # 15

Do not Adopt WESTRAIN Comment # 40

Discussion: The periodicity of malfunction testing is not defined by the standard. Adding the requested wording to the standard would constitute a substantive change to the standard. In light of the continuing industry initiative by NEI in regards to SBT testing (which is ongoing), the working group is unwilling to make a standard requirement for an unresolved issue.

Reference: MANTG Comment # 15, Westrain Comment # 40

Impact: N/A

Owner: McCullough

2008 oct 25 Motion: Do not Adopt MANTG Comment # 15 Do not Adopt WESTRAIN Comment # 40	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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12.40 Create Placeholder for proposed future Periodicity Appendix Section 4.1.4 Malfunctions

Motion: Create Placeholder Periodicity Appendix Section 4.1.4 Malfunctions

Discussion:

Section	Title	Periodicity Description
4.1.4	Malfunctions	Malfunction tests are recommended to be conducted at the completion of the simulator's initial construction, upon initial implementation of a malfunction and modifications that affect malfunctions.

Reference: McCullough – Proposed future Periodicity Table [Rev 2.doc]

Impact: N/A

Owner: McCullough

2008 oct 25 Motion: Create Placeholder Periodicity Appendix Section 4.1.4 Malfunctions	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 1 – Abstained
---	--

Abstained: NRC involved in industry discussions

12.41 Howell Comment # 4; MANTG Comment # 16a; WESTRAIN Comment # 41a; MANTG Comment # 17a; WESTRAIN Comment # 42a; MANTG Comment # 18a; WESTRAIN Comment # 43a

Motion:

Do not Adopt Howell #4

Do not Adopt MANTG Comment # 16a

Do not Adopt WESTRAIN Comment # 41a

Do not Adopt MANTG Comment # 17a

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Do not Adopt WESTRAIN Comment # 42a

Do not Adopt MANTG Comment # 18a

Do not Adopt WESTRAIN Comment # 43a

Discussion: The periodicity of Section 4.2.1.1. Scope of Panel Simulation, Section 4.2.1.2 Instrumentation, Controls, Markings, and Operator Aids, and Section 4.2.1.3 Control Room Environment comparisons are not defined by the standard. Adding the requested wording to the standard would constitute a substantive change to the standard.

Reference: Howell Comment # 4, MANTG Comment # 16, # 17, and # 18; Westrain Comment # 41, # 42, and # 43, 4.2.1.1, 4.2.1.2, 4.2.1.3

Impact: N/A

Owner: McCullough

2008 oct 25 Motion: Do not Adopt Howell Comment # 4 Do not Adopt MANTG Comment # 16a Do not Adopt WESTRAIN Comment # 41a Do not Adopt MANTG Comment # 17a Do not Adopt WESTRAIN Comment # 42a Do not Adopt MANTG Comment # 18a Do not Adopt WESTRAIN Comment # 43a	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
--	--

Absent Vote: Felker not available for vote.

12.42 Create Placeholder for Proposed Future Periodicity Appendix Section 4.2.1. Physical Fidelity and Human Factors

Motion: Create Placeholder Periodicity Appendix Section 4.2.1. Physical Fidelity and Human Factors

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Discussion:

Section	Title	Periodicity Description
4.2.1	Physical Fidelity and Human Factors	Physical Fidelity and Human Factors comparisons are recommended to be conducted: (1) Upon completion of simulator initial construction; (2) Upon completion of modification of panels, consoles or operating stations; (3) Upon completion of modification of instrumentation, controls, markings or operator aids; (4) Upon completion of modification of control room environment

Reference: McCullough – Proposed future Periodicity Table [Rev 2.doc]

Impact: N/A

Owner: McCullough

2008 oct 25 Motion: Create Placeholder Periodicity Appendix Section 4.2.1. Physical Fidelity and Human Factors	Motion: Carried <ul style="list-style-type: none">• 6 – For• 0 – Against• 1 – Abstained
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Abstained: NRC member in discussion with industry.

Absent Vote: Felker not available for vote.

12.43 WESTRAIN Comment # 20c

Motion: Do not Adopt Westrain Comment # 20c

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Discussion: While the requirement of instructor station capabilities for malfunctions is detailed in Section 3.3.2, the requirement for demonstration of this capability is detailed in Section 4.3.2. The periodicity of Section 4.3.2 Malfunctions is not defined by the standard. Adding the requested wording to the standard would constitute a substantive change to the standard.

Reference: Westrain Comment #20, 3.3.2, 4.3.2

Impact: N/A

Owner: McCullough

2008 oct 25 Motion: Do not Adopt Westrain Comment # 20c	Motion: Carried <ul style="list-style-type: none">• 6 – For• 0 – Against• 1 – Abstained
--	--

Abstained: NRC member in discussion with industry.

Absent Vote: Felker not available for vote.

12.44 Create Placeholder for Proposed Future Periodicity Appendix Section 4.3 Simulator Instructor Station Capabilities

Motion:

Section	Title	Periodicity Description
4.3	Simulator Instructor Station Capabilities	Demonstrations of Simulator Instructor Station Capabilities are recommended to be conducted at the completion of the simulator's initial construction, upon initial implementation of a simulator instructor station capability and modification of an instructor station capability.

Reference: McCullough – Proposed future Periodicity Table [Rev 2.doc]

Impact: N/A

Owner: McCullough

2008 oct 25	Motion: Carried
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Motion: Create Placeholder Periodicity Appendix Section 4.3 Simulator Instructor Station Capabilities	<ul style="list-style-type: none">• 6 – For• 0 – Against• 1 – Abstained
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Abstained: NRC member in discussion with industry.

Absent Vote: Felker not available for vote.

12.45 Adopt WESTRAIN Comment # 56a to Align Section 4.4.3.1 Simulator Operability Testing With the Reference Unit Fuel Cycle

Motion: Adopt WESTRAIN # 56a to Align Section 4.4.3.1 Simulator Operability Testing with the Reference Unit Fuel Cycle with Section 4.4.3.1 to read:

4.4.3.1 Simulator Operability Testing. A simulator operability test shall be conducted once per reference unit fuel cycle by testing the following:

- (1) Simulator steady-state performance; and
- (2) Simulator transient performance for a benchmark set of transients.

A record of the conduct of this test and its evaluation shall be maintained.

Note: The original footnotes still apply.

Discussion: Given that significant changes to the reference unit systems and controls that could impact simulator steady-state and transient performance occur during reference unit refueling outages, aligning the testing periodicity requirement with the reference unit fuel cycle will optimize testing to reference unit conditions.

One member indicated that the 1985 requirement was meant to identify possible simulator modification impacts not found with the simulator's V&V testing.

Note: This change modifies the periodicity requirement in Section 4.4.3.1 Simulator Operability Testing.

Reference: Westrain Comment # 56, 4.4.3.1

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Impact: Some members believe this is substantive.

Owner: McCullough

<p>2008 oct 25</p> <p>Motion:</p> <p>Adopt WESTRAIN # 56a to Align Section 4.4.3.1 Simulator Operability Testing with the Reference Unit Fuel Cycle with Section 4.4.3.1 to read:</p> <p>4.4.3.1 Simulator Operability Testing. A simulator operability test shall be conducted once per reference unit fuel cycle by testing the following:</p> <p>(1) Simulator steady-state performance; and</p> <p>(2) Simulator transient performance for a benchmark set of transients.</p> <p>A record of the conduct of this test and its evaluation shall be maintained.</p>	<p>Motion: Carried</p> <ul style="list-style-type: none">• 6 – For• 0 – Against• 1 – Abstained
--	---

Abstained: NRC member in discussion with industry.

Absent Vote: Felker not available for vote.

12.46 Russell Comment # 22b

Motion: Do not Adopt Russell Comment # 22b

Discussion: Appendix A is not part of the standard but is a guideline for meeting documentation requirements. Since it is not part of the standard, there is no requirement for periodicity nor should there be. Section 4 and Section 5 reference in the footnotes that Appendix A is an example of testing documentation, and therefore if you choose to use the example, that would imply that you would update it when you perform your tests.

Reference: Russell Comment # 22, Appendix A

Impact: N/A

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Owner: McCullough

2008 oct 25 Motion: Do not Adopt Russell Comment # 22b	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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Absent Vote: Felker not available for vote.

12.47 Howell Comment # 7; Russell Comment # 22a; Russell Comment # 23

Motion:

Do not Adopt Howell Comment # 7

Do not Adopt Russell Comment # 22a

Do not Adopt Russell Comment # 23

Discussion: The working group consensus is the appendices do not specify the format of documentation or data.

Please note: “(This Appendix is not a part of American National Standard for Nuclear Power Plant Simulators for Use in Operator Training and Examination, ANSI/ANS-3.5-200x, but is included for information purposes only.)”

Reference: Howell Comment #7, Russell Comment # 22 and # 23, Appendix A

Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt Howell Comment # 7 Do not Adopt Russell Comment # 22a Do not Adopt Russell Comment # 23	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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Absent Vote: Felker not available for vote.

12.48 Meekoff Comment # 2; Meekoff Comment # 3; Meekoff Comment # 4; Westrain Comment #61

Motion:

Do not Adopt Meekoff Comment # 2

Do not Adopt Meekoff Comment # 3

Do not Adopt Meekoff Comment # 4

Do not Adopt Westrain Comment # 61

Discussion: The standard is written based on today's designs, but does not preclude the user from applying the standard where applicable. During the next standard revision the WG has created Action Item 163 to review for the next generation nuclear reactor/plant designs. Refer to Minutes Section 10.24 for details.

Reference: Meekoff Comment # 2, # 3, and # 4; Westrain Comment # 61

Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt Meekoff Comment # 2 Do not Adopt Meekoff Comment # 3 Do not Adopt Meekoff Comment # 4 Do not Adopt Westrain Comment # 61	Motion: Tabled <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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Absent Vote: Felker not available for vote.

Tabled until tomorrow.

Mr Dennis resumed the chair.

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12.49 The chair entertained a motion to recess until 7:30am Sunday 2008 Oct 26.

12.50 Recessed: 1840

Approved Minutes

13. Sunday 2008 Oct 26 (0730)

13.1 Agenda Review

13.2 Roll Call

Absent Members:

Chang
Havens
Koutouzis
Kozak
Shelly
Tarselli

13.3 Consensus Level

7 – Member Votes
7 – Quorum attained

6 - Consensus (75% Rule of the Chair)
5 – Super Majority
4 – Majority

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13.4 Hostman Comment # 4

Motion: Do not Adopt Hostman Comment # 4

Discussion: The working group consensus is that intent of Sections 3.4.3.4 and 4.4.3.4 is to allow simulation facilities to determine what event data might be relevant to acquire for simulator comparison; the facility is not restricted to, or have to include, those parameters listed in Appendix B. Appendix B only provides examples for simulator operability tests and not for Post Event Simulator Testing.

Additionally, when conducting PEST, the simulator is compared to the reference unit response for the same initial conditions. One plant event set of parameters may not be the same for another plant event set of parameters.

Reference: Hostman Comment # 4

Impact: N/A

Owner: Florence / Vick

2008 oct 25 Motion: Do not Adopt Hostman Comment # 4	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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Abstained: NRC member in discussion with industry.

Absent Vote: Tarselli is unavailable for the vote

13.5 Westrain Comment # 59

Motion: Do not Adopt Westrain Comment # 59

Discussion: The working group consensus is that evaluation of which events are to be considered is at the discretion of the facility based on an analysis of the event and that parameters relevant to that event should be recorded.

Reference: Westrain Comment # 59

Impact: N/A

Owner: Florence

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2008 oct 25 Motion: Do not Adopt Westrain Comment # 59	Motion: Tabled <ul style="list-style-type: none">• x – For• x – Against• x – Abstained
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Motion Tabled

Mr. Florence was delegated the chair to facilitate comment resolution.

13.6 Russell Comment # 21

Motion: Do not Adopt Russell Comment # 21

Discussion: The working group consensus is that when the requirement is read in full context “Such testing shall” the grammar is correct.

Mr. Tarselli arrived during this discussion.

Reference: Russell Comment # 21, 4.4.3.4

Impact: N/A

Owner: Vick

2008 oct 25 Motion: Do not Adopt Russell Comment # 21	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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13.7 Westrain Comment # 60

Motion: Do not Adopt Westrain Comment # 60

Discussion: With the magnitude this consideration will bring, at this time the working group will not reconsider Section 5.

The working group acknowledges this comment is worth consideration and has taken an action item for review during the next standard revision.

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One member states that the proposed changes are structural only and will not substantively modify the standard.

Reference: Westrain Comment # 60, Section 5

Action Item: 181 – Next Standard Revision Section 5 Review; Reference Westrain Comment # 60.

Impact: N/A

Owner: Welchel

2008 oct 25 Motion: Do not Adopt Westrain Comment # 60	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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Mr Dennis resumed the chair,

13.8 Westrain Comment # 61

Motion: Do not Adopt Westrain Comment # 61

Discussion: Appendix B is not a part of American National Standard for Nuclear Power Plant Simulators for Use in Operator Training and Examination, ANSI/ANS-3.5-200x, but is included for information purposes only. The working group consensus considers Appendix B is adequate at this time.

Reference: Westrain Comment # 61

Action Item:

Impact: N/A

Owner: Florence

2008 oct 25 Motion: Do not Adopt Westrain Comment # 61	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
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13.9 Westrain Comment # 62; Westrain Comment # 63

Motion:

Do not Adopt Westrain Comment # 62

Do not Adopt Westrain Comment # 63

Discussion: These comments are not considered by the working group based on the fact other closely related comments from Westrain # 16 and Westrain # 44 were not adopted.

Reference: Westrain Comment # 62 and # 63

Action Item:

Impact: N/A

Owner: Florence

2008 oct 25	Motion: Carried <ul style="list-style-type: none">• 8 – For• 0 – Against• 0 – Abstained
Motion: <ul style="list-style-type: none">Do not Adopt Westrain Comment # 62Do not Adopt Westrain Comment # 63	

Mr. Florence was delegated the chair to facilitate comment resolution.

13.10 Amended Motion: Add to Placeholder for Proposed Future Periodicity Appendix Section 4.1.2 Limits of Simulation

Motion: Modify Placeholder Periodicity Appendix Section 4.1.2 Description

Discussion:

Section	Title	Periodicity Description
4.1.2	Limits of Simulation	A Limits of Simulation test is recommended to be conducted at the completion of the simulator's initial construction or when the Limits of Simulation code is changed or

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		modifications that affect a limit of simulation.
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One member expressed that this motion is unnecessary.

Reference: McCullough – Proposed future periodicity appendix

Impact: N/A

Owner: McCullough

2008 oct 26 Motion: Modify Placeholder Periodicity Appendix Section 4.1.2 Description	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 1 – Abstained
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Abstained: NRC member involved in industry discussions.

13.11 Amended Motion: Placeholder for Proposed Future Periodicity Appendix Section 4.1.3.1 Steady-State Operation

Motion: Modify Placeholder Periodicity Appendix Section 4.1.3.1 Steady-State Operation

Discussion:

Section	Title	Periodicity Description
4.1.3.1	Steady-State Operation	Steady-State Operation tests are recommended to be conducted at the completion of the simulator's initial construction and once per reference unit fuel cycle.

One member expressed that this motion is unnecessary.

As a result of the resolution of Westrain # 56a comment, the standard no longer conflicts with this placeholder appendix.

Reference: McCullough – proposed future periodicity appendix

Impact: N/A

Owner: McCullough

2008 oct 24	Motion: Carried
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Motion: Modify Placeholder Periodicity Appendix Section 4.1.3.1 Steady-State Operation	<ul style="list-style-type: none">• 7 – For• 0 – Against• 1 – Abstained
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Abstained: NRC member involved in industry discussions.

13.12 Amended Motion: Placeholder for Proposed Future Periodicity Appendix Section 4.1.3.2 Normal Evolutions

Motion: Modify Placeholder Periodicity Appendix Section 4.1.3.2 Normal Evolutions

Discussion:

Section	Title	Periodicity Description
4.1.3.2	Normal Evolutions	Normal Evolution tests are recommended to be conducted at the completion of the simulator's initial construction and once per reference unit fuel cycle.

One member stated this “Periodicity” test matches well with the normal simulator testing activities in that this testing should occur after refueling.

Normal Evolution Testing is also addressed in Simulator Validation Testing.

One member expressed that this motion is unnecessary.

One member expressed that text should be added to append “or modifications that affect a normal evolution”.

Reference: McCullough – proposed future periodicity appendix

Impact: N/A

Owner: McCullough

2008 oct 24	Motion: Carry
Motion: Modify Placeholder Periodicity Appendix Section 4.1.3.2 Normal Evolutions	<ul style="list-style-type: none">• 6 – For• 1 – Against• 1 – Abstained

Abstained: NRC member involved in industry discussions.

Against: text should be added to append “or modifications that affect a normal evolution”.

13.13 New Consensus Level

McCullough is no longer available.

7 – Member Votes

7 – Quorum attained

6 - Consensus (75% Rule of the Chair)

5 – Super Majority

4 – Majority

13.14 MOTION to Add New Appendix E Recommended Minimum Periodicity for Section 4 Testing Requirements

Motion: Add New Appendix E Recommended Minimum Periodicity for Section 4 Testing Requirements

Appendix E		
(This Appendix is not a part of American National Standard for Nuclear Power Plant Simulators for Use in Operator Training and Examination, ANSI/ANS-3.5-200X, but is included for information purposes only.)		
Recommended Minimum Periodicity for Section 4. Testing Requirements		
Note: Those Periodicities Contained In The Standard Are Not Listed In This Table		
Section	Title	Periodicity Description
4.1.2	Limits of Simulation	A Limits of Simulation test is recommended to be conducted at the completion of the simulator’s initial construction or when the Limits of Simulation code is changed or modifications that affect a limit of simulation.
4.1.3.1	Steady-State	Steady-State Operation tests are recommended to be conducted at the completion of the simulator’s initial construction and once per

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	Operation	reference unit fuel cycle.
4.1.3.2	Normal Evolutions	Normal Evolution tests are recommended to be conducted at the completion of the simulator's initial construction and once per reference unit fuel cycle.
4.1.4	Malfunctions	Malfunction tests are recommended to be conducted at the completion of the simulator's initial construction, upon initial implementation of a malfunction and modifications that affect malfunctions.
4.2.1	Physical Fidelity and Human Factors	Physical Fidelity and Human Factors comparisons are recommended to be conducted: <ul style="list-style-type: none"> (1) Upon completion of simulator initial construction; (2) Upon completion of modification of panels, consoles or operating stations; (3) Upon completion of modification of instrumentation, controls, markings or operator aids; (4) Upon completion of modification of control room environment
4.3	Simulator Instructor Station Capabilities	Demonstrations of Simulator Instructor Station Capabilities are recommended to be conducted at the completion of the simulator's initial construction, upon initial implementation of a simulator instructor station capability and modification of an instructor station capability.

Discussion: The WG discussed and debated at length a proposal to add a new periodicity appendix to the proposed ANS-35-200x standard.

Reference: McCullough – initiative to add a new appendix to the standard.

Action Item:

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Impact: N/A

Owner: McCullough

2008 oct 25 Motion: Add New Appendix E Recommended Minimum Periodicity for Section 4 Testing Requirements	Motion: Not Carried <ul style="list-style-type: none">• 4 – For• 2 – Against• 1 – Abstained
--	--

Abstained: NRC member involved in industry discussions.

Against:

- Normal Evolution periodicity should also be related to modifications.
- Required periodicities are already identified in the proposed standard.

13.15 MANTG Comment # 11

Motion: Adopt MANTG Comment 11

Discussion: In Section 4.1.1, the second sentence is redundant to the first sentence.

Reference: MANTG Comment # 11

Action Item:

Impact: N/A

Owner: Felker

2008 oct 25 Motion: Adopt MANTG Comment # 11	Motion: Not Carried <ul style="list-style-type: none">• 5 – For• 2 – Against• 0 – Abstained
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Against:

- Recommendation changes intent of Section 4.1.1. Tests are required to be repeatable as opposed to just a capability.

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- Section 4.1.1 requires an action, the definition is a capability.

13.16 Russell Comment # 11

Motion: Do not Adopt Russell Comment # 11

Discussion: Any two tests run on the simulator should be repeatable. There is no requirement to run all tests more than once to demonstrate repeatability.

Reference: Russell Comment # 11, 4.1.1

Action Item:

Impact: N/A

Owner: Felker

2008 oct 25 Motion: Do not Adopt Russell Comment # 11	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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13.17 NEI Comment # 4

Motion: Do not Adopt NEI Comment # 4

Discussion: There currently is no agreement between the NRC and NEI concerning malfunction testing/documentation. A NEI white paper regarding this subject is currently under consideration by the NRC.

The comment is outside the scope of this standard.

Reference: NEI Comment # 4

Action Item:

Impact: N/A

Owner: Felker / Florence

2008 oct 25	Motion: Carried <ul style="list-style-type: none">• 6 – For
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Motion: Do not Adopt NEI Comment # 4	<ul style="list-style-type: none">• 1 – Against• 0 – Abstained
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Against: Action is incorrect and should be tabled.

13.18 Westrain Comment # 58; Russell Comment # 20

Motion:

Do not Adopt Westrain Comment # 58

Do not Adopt Russell Comment # 20

Discussion:

The standard addresses core performance for use in operator training and examination, but does not address core performance for use in establishing eligibility experience requirements.

Performing the reference unit [core] related procedures under the same or similar initial conditions is an important performance and validation function that ensures the simulator is capable of replicating the expected response and behavior of the core using operator actions required by procedures. The WG understands that some procedural steps may be not applicable to the simulator and therefore warrants being “n/a.”

Additionally, the working group does not agree with the comment that an Appendix for Core Performance Testing Appendix is required at this time.

Reference: Westrain Comment # 58, Russell Comment # 20

Action Item:

Impact: N/A

Owner: Tarselli

2008 oct 25 Motion: Do not Adopt Westrain Comment # 58 Do not Adopt Russell Comment # 20	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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Mr Dennis resumed the chair.

13.19 Westrain Comment # 59

Motion: Adopt Westrain # 59 and Modify Section 4.4.3.4

4.4.3.4 Post Event Simulator Testing. Post event simulator testing should be conducted when a reference unit event generates relevant data for evaluating simulator performance. Such testing shall:

- (1) Consider the sequence-of-events, operator actions; and
- (2) Demonstrate that post event simulator testing is capable of reproducing the response of relevant reference unit parameters within the scope of simulation.

Discussion:

"Demonstrate that post event simulator testing is conducted..." is redundant in this section, and regarding "...performed in accordance with reference unit procedures", as long as the sequence of events and operator actions are already considered then the reference unit procedure performance is moot.

Reference: Westrain Comment # 59

Action Item:

Impact: N/A

Owner: Florence

2008 oct 25

Motion: Adopt Westrain # 59 and Modify Section 4.4.3.4 as defined above

Motion: Not Carried

- 1 – For
- 6 – Against
- 0 – Abstained

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Against:

- Sequence of events already included operator actions and procedural use as they occurred.
- Changes intent and scope

13.20 Motion: The [Revised] Draft Standard Rev 27 Contains No Substantive Changes

Motion: The draft Standard Rev 27 contains no Substantive changes

Discussion: The WG discussed at length the revised draft standard [Rev 27] and noted from its review that 28 changes were made. [The majority of changes were related to editing whereas the minority of changes revised the standard by on a consensus of the WG . No agreement could be reached by the WG whether or not the changes to the revised draft were substantive.]

One member stated changes are not substantive and do not change requirements.

Reference: N/A

Action Item:

Impact: N/A

Owner:

2008 oct 25	Motion: Not Carried
Motion: The draft Standard Rev 27 contains no Substantive changes	<ul style="list-style-type: none">• 2 – For• 5 – Against• 0 – Abstained

Against: Several WG members believe that the revised draft Standard does have Substantive changes.

Mr Florence was delegated the chair to facilitate comment resolution business.

13.21 Albright Comment # 3

Motion: Do not Adopt Albright Comment # 3

Discussion: Installation of modifications in the simulator prior to reference unit installation is a regulatory issue and is handled on a case by case basis with the regulator.

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The standard does not preclude installing modifications prior to reference unit installation.

Reference: Albright Comment # 3

Action Item:

Impact: N/A

Owner: Felker

2008 oct 25 Motion: Do not Adopt Albright Comment # 3	Motion: Carried <ul style="list-style-type: none">• 7 – For• 0 – Against• 0 – Abstained
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13.22 Kadambi Comment # 1; Englehart Comment # 5; Reuland Comment # 1; Lloyd Comment # 14

Responses to certain NFSC Ballot Items

Discussion: The following are responses to NFSC Ballots Items that were not a result of Working Group Votes and discussions but were supplied by the WG Chairman.

Kadambi # 1

The working group addressed each NEI comment received on the proposed standard.

NEI # 1

NEI # 2

NEI # 3

NEI # 4

NEI # 5

Englehart # 5

"The ANS-3.5 Working Group addressed the comments provided by Jack Roe of the Nuclear Energy Institute (NEI), deliberated on a resolution, and voted on a response to all the NEI issues."

Reuland # 1

The working group addressed each NEI comment received on the proposed standard.

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NEI # 1

NEI # 2

NEI # 3

NEI # 4

NEI # 5

Lloyd # 14

The working group addressed each NEI comment received on the proposed standard.

NEI # 1

NEI # 2

NEI # 3

NEI # 4

NEI # 5

In context to your comment, the working group addressed your comment.

The chair entertained a motion to adjourn: No objections were had.

Adjourned: 1115

14. Action Items Carried to Next Standard [For WG Use Only]

60	2004 Aug 25 Deferred to Next Standard for consideration	Priority 1	McCullough Shelly	<p>Define the Term Training Needs Assessment in such a manner that it is clear in intent to both Training and Simulator staffs</p> <p>2004aug25 McCullough Recommend to keep deferred due to effort to correct</p> <p>2002apr23 McCullough History presentation of Training Need Assessment. See Appendix</p> <p>2001Apr05 McCullough</p> <p>Trainers and Simulator personal view Training Needs Assessments Differently; Training Needs Analysis and Training Needs Assessment are not used consistently. McCullough will revisit this item in a future date;</p> <p>Reference: ACAD-85-006 “A Supplement to Principles of Training Systems Development”</p>
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126	Status: 2004 Aug 26 Deferred to next standard for consideration		Vick Shelly – BWR Kozak – PWR Golightly - BWR	Consider adding Performance Test Program in next standard 2004 Aug 26 Deferred to next standard for consideration Vick 2003 Apr 05 Initial AI
132	Status: 2004 Nov 09 Deferred to the next standard for consideration		Wyatt	Review Section 4.1.4 – Malfunction testing 2004 Nov 09 Deferred to the next standard for consideration 2004 Aug 26 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: 2004 Nov 08 Deferred to the next standard for consideration		McCullough Felker Florence	Minimum Testing Periodicity Table 2004 Nov 10 After lengthy discussion, deferred to the next standard for consideration 2004 Nov 8 Presented Proposed Appendix E 2004 Aug 26 Initial AI

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137	Status: 2004 Nov 11 Deferred to the next standard for consideration		Florence Koutouzis Shelly	Establish better (routine) communication on ANS WG makeup and activities Target audience – Plant management 2004 Nov 11 Deferred to the next standard for consideration 2004 Aug 27 Initial AI
141	Status: 2004 Nov 10 Deferred to the next standard for consideration		Tarselli	Review incorporation of alternative testing methods into Section 3.4.3.2. 2004 Nov 10 Due to magnitude of subject matter, Tarselli recommended Alternative Testing be deferred to next standard for consideration 2004 Aug 27 Initial AI
147	Deferred to next Standard	2007may01	Welchel	Impact of Fully-Integrated Mode of Operation on Performance Testing (Deferred to next standard)
150	Deferred to next Standard	2007may02	Vick	Review consistency in the use of the Term Power Range (Deferred to next standard)
162	Deferred to Next Standard	TBD	TBD	Next standard revision review Appendix B parameters against standard body. 2008 October 18-26 Meeting Minutes; Section 10.22 Initial AI
163	Deferred to Next Standard	TBD	TBD	Next standard revision review for next generation nuclear reactor/plant designs. 2008 October 18-26 Meeting Minutes; Sections 10.24 & 12.48 Initial AI
179	Deferred to Next Standard	TBD	McCullough	Real-time and repeatability periodicity. 2008 October 18-26 Meeting Minutes; Section 11.17 Initial AI

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180	Deferred to Next Standard	TBD	TBD	Performance testing in a non-fully integrated mode Section 3.4.3. 2008 October 18-26 Meeting Minutes; Section 12.35 Initial AI
181	Deferred to next Standard	TBD	TBD	Section 5 Separate Requirements for Initial Simulator Construction and Subsequent Simulator Changes 2008 October 18-26 Meeting Minutes; Section 13.7 Initial AI

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15. Closed Action Items [For WG Use Only]

No.	Status	Date	Assigned To:	Work Assignment
1	<p>Status: 2004aug26 Complete</p> <p>Dennis contacted Mike Wright. No Input from Mike. The Scope change should be approved soon.</p> <p>2001Apr05 Scope statement will be revised based on SubCommittee-1 comments that ANS 3.1 is not Training Criteria</p>	<p>Priority 1 – PINS form will be completed by next meeting (15min)</p>	<p>Dennis</p>	<p>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?</p> <p>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</p> <p>2000mar09 Chandler Comments (NUPPSCO) relating to DOE simulators. We need to resolve Open NUPPSCO comments from the 1998 standards approval process.</p>

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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.

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No.	Status	Date	Assigned To:	Work Assignment
8	Status: 2004aug26 Complete	Priority 1 – PINS form will be completed by next meeting (15min)	Dennis	<p>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.</p> <p>2002Oct29 PINs form completed and ready to send to ANS.</p> <p>2001Apr05 Contacted Sub-Committee-1 and Dennis needs to complete PINS forms;</p>
9	Date: 2001Apr05 Status: Complete Dennis		Dennis	<p>Is ANS 3 considering that the standard may address other simulators not specific to NRC Regulatory Commission licensing?</p> <p>2001Apr05 Dennis - No - per SubCommittee-1 Tamp Meeting</p> <p>Dennis will verify with Mike concerning additional scope (adding DOE facilities into 3.5). 2001Apr05 Dennis - No - per SubCommittee-1 Tamp Meeting</p> <p>2000mar09 Dennis will check at the next ANS 3 meeting</p>

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10	<p>Date: 2001Apr04 Status: Awaiting Kozak conversation with Chandler and Mallay</p> <p>Date: 2001Aug09 Status: Closed Pending input from Alan Kozak</p> <p>Date: 2001Aug27 Status: Complete</p>		<p>Kozak Collins (Vick) McCullough</p>	<p>Propose security criteria for Simulators operating in Exam Mode</p> <p>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.</p> <p>Contact could not be made with Harish Chandler.</p> <p>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 likewise.</p> <p>Based on this information no further action should be needed for this AI.</p> <p>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.</p> <p>AI Originator: Parking Lot Issue</p> <p>2001Apr05 Kozak Two NUPPSCO comments: NUPPSCO supporting comment: James: Mallay stated that this item should be non-prescriptive. NUPPSCO supporting comment: Harish Chandler</p> <p>Kozak will call Chandler and Mallay and discuss their NUPPSCO</p> <p>2000mar09 Determine source of Exam Security comment</p>
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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

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13	<p><u>Date: 2002oct29</u> <u>Status: Complete</u></p>	<p>Priority 1 – Waiting input from Florence on feedback from industry</p>	<p>Felker Florence Colby</p>	<p>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.</p> <p>2002OCT29 Florence Approved change of 3.1.3 items 1 through 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 eliminate 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.</p> <p>Origin: Parking Lot List</p> <p>Review all List; Combined with the 3.1.3(7) item (Moved from 23);</p> <p>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.</p> <p>Note: Review associations between removal of List and Appendix.</p> <p>2001Apr05 Moved AI 11 to AI 13 Deferred for later discussion pending more important issues</p> <p>Felker: The Simulator shall cause an alarm or automatic action</p>
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14	<u>Closed:</u> <u>2002apr23</u> <u>Motion</u>	Priority 1 –	Paris Felker Florence Chang	<p>2001Aug 09</p> <p>SK Chang proposes including <i>synchronization</i> 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.</p> <p>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)</p> <p>2002apr23 Motion:</p> <p>Change Definition of Stimulated Hardware to Stimulated Components with the definition of Stimulated Components:</p> <ul style="list-style-type: none"> • 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 <p>2001Apr04 Paris Recommends new definition:</p> <p>Old Definition: “Stimulated hardware. Components or devices that perform their functions independently of and parallel to the simulation process”</p> <p>2001Apr05 Paris Considerations for new definitions for later review New Definitions: Suggested choices for new definitions:</p>
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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	<u>2002apr24</u> Status: Complete <u>Motion No Carried</u>	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

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17	<p>Date: 2001Aug09 Status: Complete</p>		<p>Dennis Welchel</p>	<p>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.</p> <p>2000mar09 Welchel – Add relevant SSNTA meeting minutes to WG minutes.</p> <p>Wait for industry experience</p> <p>2001Apr05 Industry Feedback Callaway has implement the 1998 Standard and presently reports no concerns.</p> <p>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</p>
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18	<p>Date: 2000mar09 Status:</p> <p>Closed Statement (Do we need to put some boundaries as to the limits simulator)</p>		<p>Kozak Shelly Cox Havens Florence</p>	<p>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)</p> <p>Origin: Scope Change at Oconee Meeting</p> <p>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.</p> <p>2001Apr05 Kozak Close the Boundry issue <i>Do we need to put some boundaries as to the limits simulator;</i></p> <p>2001Apr05 Kozak See Minutes Body</p> <p>2000mar09 Presentation of Virginia Power Classroom/Part-task trainer at the 2000mar09 meeting</p> <p>Related AI: 41</p>
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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: <u>2004Nov8</u> Complete <u>2004aug25</u> <u>Reactivated</u> <u>Date: 2002oct29</u> <u>Status: Deferred to 2008</u>	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)

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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;

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22	Date: 2001apr05 Status: Complete		Florence Kozak	<p>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</p> <p>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</p> <p>Jim gave a presentation at the 2000 SCS conference during the USUG meeting.</p>
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

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No.	Status	Date	Assigned To:	Work Assignment
				<p>Dennis and Hudnut gave presentation on adding Item (5) to Section 5. AI-25 is Closed. No action.</p> <p>2004aug24 Reactivated Try to complete during this revision</p> <p>2002apr24 Dennis Gave presentation on Millstone experience Defer AI-25 to 2008</p> <p>2001Apr05 Dennis Deferred</p>
26	<p>Date: 2000mar10 Status: Complete</p> <p>Historical information was presented at the SCS conference.</p> <p>Dennis checked with ANS Headquarters and this issue was discussed in detail</p>		Dennis	<p>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.</p> <p>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</p> <p>Dennis will call Mike Wright confirming ANS-3 understands the Historical Standard issue</p>

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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.

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30	Date: 2001Apr05 Status: Complete		Florence Welchel	<p>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</p> <p>Florence: Check with Shawn (ANS) for WEB space. Check with USUG for WEB Space</p> <p>2001Apr05 Florence Membership List Minutes Meeting Schedules Will not use ANS WEB Site</p> <p>All future approved ANS WG minutes will be placed on the USUG WEB site.</p>
31	Date: 1999sep15 Status: Complete		Dennis	<p>Mission statement for Working Group for the 2003 standard. AI #31 added 1999sep14</p> <p>1999sep15: Voted not to complete</p>

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32	Date: 2001Apr04 Status: Closed by Motion	1999sep15	Colby Collins Koutouzis Havens Felker McCullough	<p>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;</p> <p>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;</p> <p>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.</p> <p>2000Oct26: Butch will request bullets on Multi-Unit from the Group for next meeting</p>
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33	<p>Date: 2001Apr04 Status: Complete</p>		<p>Havens Kozak Shelly Welchel</p>	<p>Change 24-month design change limit to some shorter period.</p> <p>2001apr03 Welchel Proposed new wording: 5.3.1.2 Subsequent Upgrade. <i>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.</i></p> <p>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:</p> <p>5.3.1.2 Subsequent Upgrade. <i>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.</i></p> <p>5.1.2.2 Subsequent Update. <i>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.</i></p> <p>5.1.2.2 Subsequent Update. <i>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.</i></p> <p>.</p> <p>WG agreed to close this AI with no further discussion. The 12 and 24 month timelines could be used to ensure the modifications.</p>
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34	Date: 2001Apr05 Status: Complete	1999sep15	Welchel McCullough DeLuca Koutouzis	<p>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.</p> <p>Origin: Welchel</p> <p>2001Apr05 Closed – Other issues are handled with the Simulator Configuration Process</p> <p>Related AI: 36</p>
35	Date: 2001Apr05 Status: Complete	2000mar08	McCullough Collins(Vick)	<p>Review the double column Draft Working Document prepared by Butch Colby</p> <p>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.</p>
36	2004aug25 Closed Date: 2003Mar10 Status: Deferred until 2008	Priority 2	Koutouzis Havens	<p>Questions from Review of INPO Documents:</p> <ul style="list-style-type: none"> • Timeline for incorporation of Plant design changes into the simulator • Instructor Performance • Long Term Open Simulator Fidelity Issues <p>This is an information AI</p> <p>2004aug25 Koutouzis update</p>

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

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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

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41	Date: 2000Oct26 Status: Complete	2000mar08	DeLuca Colby	Appendices consideration up-front and not as an afterthought. 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
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42	Closed: 2002apr23 Motion	Priority 1 -	Chang Felker Cox	<p>Use of Verification and Validation Origination: Colby Survey</p> <p>2002apr23 Closed by Motion</p> <p>2000Oct26: Chang to look at Survey and determine the issues with Verification and Validation and bring to next meeting</p> <p>Origin: ANS 3.5 WG Survey #1</p> <p>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;</p> <p>It is not V&V as defined in the Nuclear Industry.</p> <p>2001Aug09 SK will put out a revised document on V&V in one week. Members shall respond within 30 days.</p>
43	Date: 2001Apr03 Status: Complete	2000mar08	Welchel	<p>Send 1998 Standard NUPPSCO comments to: Hal Paris Bob Felker Bud Havens</p> <p>2001apr03 Welchel - Delivered 2001apr03</p>

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44	Date: 2002oct29 Status: Complete	Priority 1 -	Paris Havens Chang	<p>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.</p> <p>2002oct29 Paris Closed Refer to 2002apr motion to leave wording as is. This item is closed (originated from 1998 NUPSCO comments TVA)</p> <p>2001Apr05 Paris Concern: What is Repeatability? Further review is needed. See Attachment for AI 44</p> <p>2000Oct26: Hal and Group will review the use of these terms and consistency</p>
45	Date: 2000Oct26 Status: Complete	2000mar08	Shelly Chang Havens	<p>Clarify Overrides do not have to be tested like Malfunctions and are not Malfunctions. (Survey Comment 3.15 p20)</p> <p>2000Oct26: Non-issue because it's related to CFR and not the standard</p> <p>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</p>

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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 NUPPSO.

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51	Date: 2001Apr04 Status: Closed by Motion	2000mar09	Colby	<p>Send out another survey concerning Multi-unit questions and will try to target Simulator, Training, and OPS</p> <p>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;</p>
52	Date: 2000Oct26 Status: Complete	2000mar09	Felker	<p>Locate previous Multi-Unit work completed by the 1993 WG. Bob will contact Bill Geiss</p> <p>Resolution: 2000Oct26 Felker</p> <p>Material does not exist.</p>
53	Date: 2001Aug09 Status: Complete		Colby	<p>Review the Appendix A – A(3) (BOM). Consider removal of the BOM list and replace with I&C list</p> <p>2001Apr05 Colby March 2000 meeting minutes Working Doc Editor to remove BOM from App A</p>
54	Date: 2000Apr05 Status: Complete	2000mar09	Vick	<p>Acquire US Government Style Guide</p> <p>2001Apr05 Style manual given to Style Editor.</p>
55	Date: 2000Oct25 Status: Complete	2000oct25	Dennis	<p>Distribute Robert Boire work assignments</p> <p>2001Oct25 Completed</p>

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56	Date: 2000Oct26 Status: Complete	2000oct25	Colby	<p>Contact Mr. Cox (Com Ed) for 3.5 WG participation.</p> <p>2000Oct26 Colby called Mr. Cox but Mr. Cox is out until 2000Oct30. Terrill Laughton attended on behalf of Mr. Cox</p>
57	Date: 2002Oct29 Status: Complete	Priority 1 -	Dennis Vick Colby	<p>Remove all references to 3.1</p> <p>2002oct29 Dennis - Closed Verified by working group in Standard Draft Rev 6.</p> <p>2002apr24 Dennis Vick and Colby will determine the changes necessary and bring these to the committee for approval.</p> <p>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)</p> <p>2002apr23 Dennis Get Copy of 3.1 for review.</p> <p>2001Apr05 Dennis Deferred for later discussion.</p>

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

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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

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67	Date: 2001Aug09 Status: Complete		Dennis	<p>Contact Shawn concerning Clarification Statement</p> <p>2001jul11</p> <p>Ms. Shawn M. Coyne-Nalbach NFSC Secretary American Nuclear Society 555 North Kensington Avenue La Grange Park, IL 60526-5592</p> <p>Dear Ms. Coyne-Nalbach:</p> <p>Subject: Request for Clarification</p> <p>Reference: ANSI/ANS-3.5-1998 Standard Document, Section 4.4.3.2</p> <p>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.</p> <p>I am writing this letter to your organization to request a clarification to the reference document in regards to Simulator Scenario-Based Testing.</p> <p>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.</p> <p>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.</p> <p>Please clarify the preceding paragraph by addressing the following questions:</p> <p>1. What is the intent of scenario-based testing? Does scenario-based testing impose additional training program requirements?</p> <p>ANS-3.5 Working Group answer:</p> <p>Scenario Based Testing is intended to best utilize, to the extent possible, the existing training scenario development process</p>
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68	<p>Date: 2003Mar11 Status: Complete</p> <p>Date: 2002oct30 Status: Re-Opened</p> <p>Closed 2002apr24</p>	Priority 1	Colby Shelly Felker	<p>Survey #2 Multi-Unit Different OPS Procedures Fuel Cycles Time Delay loading Sim Fuel load Unit Procedure Differences and Training</p> <p>2003Mar11 Colby Presented list of survey results. Motion: Delete Malfunction List Table in Section 3.1.4 and move to Appendix A</p> <p>2003Mar10 Colby Presented list of survey results. This item was originally discussed in AI-83.</p> <p>2002oct30 Reopened to consider additional Survey data. Consider AI-83 - Malfunctions List and Survey Results</p> <p>2002apr24 Colby Recommend Closing due to information will be handled by future Action Items.</p> <p>2002apr23 Colby Nothing here that would be changed in the 2003 standard.</p> <p>2001AUG7 All survey's have not been received, so the final results of the survey will be discussed at our next meeting in March.</p>
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69	Status: Complete 2002apr24		Vick	<p>Check out and report information on SECY-01-0125</p> <p>2002apr24 Vick Simulator rule is in effect Nov 16,2001 and SECY reference is now background info only.</p>
70	Date: 2002oct29 Status: Complete		Florence	<p>Come up with a set of rules for use and what will go on the web site.</p> <p>2002oct29 Florence Closed WEB Site Changes:</p> <ul style="list-style-type: none"> • 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 <p>2002apr24 Florence Handout presented to members for review. AI-70 will be closed when the ANS 3.5 WEB site is password protected.</p> <p>Password protect the ANS 3.5 WEB site and post amended ANS 3.5 WEB page use policy.</p>
71	Date: 2002apr24 Status: Complete		Dennis	<p>Vary if ANS normally provide the minutes of group meetings</p> <p>2002apr24 Dennis Provided by request by ANS.</p>

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72	Date: 2001Nov27 Status: Complete		Shelly	<p>Check if we can add an appendix and still reaffirm</p> <p>2001Nov27 Shelly</p> <p>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.</p> <p>The standards cannot 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.</p> <p>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.</p> <p>I consider this action closed unless someone knows of a need for further research on this issue.</p>
73	Status: Complete 2002apr24		Dennis	<p>Send the clarification letter to ANS on the Scenario Based Testing</p> <p>2002apr24 Dennis Published in the Nuclear Standards News, Vol. 33/No. 2 March-April 2002</p>

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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.

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

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81	Date: 2002Oct29 Status: Complete		Dennis	<p>Get copy of ANS 3.1 for members review.</p> <p>2002oct29 ANS 3.1 is no longer referenced in ANS 3.5; No need for ANS 3.1.</p> <p>2002Apr24 Closed Dennis Copy of ANS-3.1 obtained from ANS Standards Secretary. Copy given to requesting Working Group member for review.</p>
82	Status: Complete 2002apr24		Dennis	<p>Get copy of Letter of thanks to Robert Boire for members review</p> <p>2002apr24 Dennis Members reviewed letter</p>
83	Date: 2002oct30 Status: Complete		Colby	<p>Compare 3.1.4 Malfunction List with 10 CFR Part 55.59</p> <p>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.</p> <p>2002oct29 Colby Reviewed 10CFR55.59 List (See Appendix AI-83)</p>

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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”

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

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

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92	Date: 2003Mar11 Status: Complete		Florence Colby Kozak	<p>Improve Definition of Simulation facility to include Part-task and limited scope. (coordinate with Scope State)</p> <p>2003Mar11 Colby Motion: Revise Scope Statement</p>
93	Date: 2003Mar10 Status: Complete		Shelly	<p>Appendix and Standard Dates referencing Are Appendices required to reference the standard's published date.</p> <p>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 cannot be removed.</p>
94	Date: 2003Mar10 Status: Complete		Colby	<p>Align Appendix Header dates to Appropriate Published Standard Date</p> <p>2003Mar11 Colby: Presented New Appendix Wording</p>

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95	Date: 2003Mar11 Status: Complete		Felker Florence Kozak	<p>Section 4.4.3.2 New 4.4.3.2 wording and/or integrate 4.4.3.1 and 4.4.3.2</p> <p>2003Mar11 McCullough Motion to add procedural in Section 4.4.3.2 and Appendix E.</p> <p>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;</p> <p>Modify paragraph after “Scenario Lesson Plan Title:” in Appendix E</p> <p>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.</p>
96	Date: 2002Oct30 Status: Complete		Kozak Chang	<p>Locate a copy of INPO document concerning pre-running Scenarios and determine what validation is required.</p> <p>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.</p>

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97	Date: 2003Jul24 Status: Complete		Dennis	<p>Determine reference usage within ANS Standards. Can the 3.5 Standard reference an INPO document?</p> <p>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.</p> <p>2003Mar11 Dennis Researching using documents not available to general public.</p>
99	Status: Complete 2003Oct28		Vick Koutouzis	<p>Vick and Koutouzis will have Standard reviewed by Technical Editors for consistency</p> <p>2003Oct28 Complete Technical Review completed and present to working group.</p> <p>2003Mar10 Initial Action Item.</p>

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100	2003Jul24 Status: Complete		<p><u>PWR</u> McCullough - Lead Neis Chang Kozak Welchel</p> <p><u>BWR</u> Havens - Lead Felker Florence Panfil Tarselli</p> <p>Vick - Coordinator</p>	<p>Create two subcommittee's (PWR and BWR) that will investigate Core Performance testing inclusion into the Standard.</p> <ul style="list-style-type: none"> 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. <p>2003Jul24 Closed Accept changes to sections: 3.1.5, 4.1.5, 4.4.3.1, 5.3.2</p> <p>2003Mar10 Initial Action Item.</p>
101	2003Jul24 Status: Complete		<p>Neis Felker Kozak</p>	<p>Review 3.2.1.4 for language clarification</p> <p>2003Jul24 Neis Proposed new Wording Passed by Amended Motion</p> <p>2003Mar10 Initial Action Item.</p>

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102	Status: 2003Oct30 Complete		Colby Paris Dennis Koutouzis Shelly Cox Vick - Coordinator	<p>Review Sections 3, 4, 5 and 6 for alignment and consistency and possible merge.</p> <p>2003Jul21 Colby Distributed comparison and groups were formed to review and report next meeting</p> <p>Inform Tim Cassidy that Sections are under review.</p> <p>Options:</p> <ul style="list-style-type: none"> • This Standard • Next Standard <p>Formatting</p> <ul style="list-style-type: none"> • Keep the Sections separate but aligned • Merge the Sections <p>2003Mar10 Initial Action Item.</p>
103	Status: 2003Oct28 Complete		Colby	<p>Will create two Revised Standards Versions</p> <p>Version 1 1998 versus 2003 No History</p> <p>Version 2 1998 versus 2003 with Revision History</p> <p>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.</p> <p>2003Mar10 Initial Action Item.</p>

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

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No.	Status	Date	Assigned To:	Work Assignment
106	Status: Closed 2004Apr05		Shelly-Lead Committee	<p>Working Group will review tech Editing markup</p> <p>Marked up version was distributed to committee members</p> <p>Comments to Shelly by 2003Sep01</p> <p>2004Apr05 Shelly presentation</p> <p>Closed per Section 5.3 of the ANSI Style Manual (8th edition, version 1.0, 1991) addresses the use of notes within a standard.</p> <p>2003Oct31 Determine use of the term “NOTE” in the standard.</p> <p>2003Jul24 Initial Action Item</p>
107	Status: 2003Oct27 Complete		Wyatt-Lead Neis Vick Koutouzis Havens Florence	<p>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.</p> <p>2003Oct27</p> <p>2003Jul24 Initial Action Item</p>

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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: <ul style="list-style-type: none"> • 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

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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

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No.	Status	Date	Assigned To:	Work Assignment
113	Status: Closed 2004Apr07		Havens McCullough Tarselli Kozak	<p>Appendix B</p> <p>Revision to Appendix B will address requirements as a result of AI-100</p> <p>Update Appendix B with Core Performance as a result of adding Core Performance Testing in the Standard</p> <p>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.</p> <p>2003Oct31 Havens presented a revised Appendix B. Havens will review and make another recommendation at the next meeting.</p> <p>2003Jul24 Initial Action Item</p>
114	Status: 2004Apr08 Complete		Felker Florence Neis	<p>SBT Resolution</p> <p>Felker will review section 4.4.3 and recommend a resolution to the SBT and checklist problem.</p> <p>2004Apr08 Completed SBT with various changes</p> <p>2003Oct28</p>

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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

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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: <ul style="list-style-type: none"> • Section 4.2.2.2 • Section 5.3.1.2 • Section 4.1.2.3 2004aug23 Several motions were considered. 2003Apr05 Initial AI

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

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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

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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

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No.	Status	Date	Assigned To:	Work Assignment
133	Status: 2004nov08 Complete		Neis Havens Felker- Presenter	<p>Review 3.4.3.2 and 4.4.3.2 for redundancy and consolidation</p> <p>2004nov8 Hudnut Reviewed proposed wording changes. Intent change determined. Closed without further action.</p> <p>2004aug27 Review Section 4.4.3.2</p> <p>2004aug27 Section 3.4.3.2 was modified by Motion</p> <p>2004aug26 Initial AI</p>
138	2004nov10 Completed		Colby	<p>Revision Tracking</p> <ul style="list-style-type: none"> • Kennett Square (2003oct27) – Rev 14b • DS&S (2004apr05) – Rev 16b • Post DS&S – rev 15 (Rev 14 Tech Editing) • Ginna (2004aug23) – Rev 17 <p>2004nov10 Reviewed draft standard rev 19</p> <p>2004aug27 Initial AI</p>

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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: Completed 9 Sep 2006		Dennis	PINS Comment Review 09sep2006; E-mail correspondence from Pat Schroeder to Tim Dennis, Subj: ANS-3.5 Okay to Proceed w/SC Ballot
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)
148	Completed:	2007may01	Hendricsen	Core Performance Testing Frequency

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149	Completed:	2007may01	Florence	Ensure ANSI is aware Appendix Title is listed in Table of Contents
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 E-meeting procedure
156	Completed:	2007may03	Tarselli	Research possible use of Webex
157	Completed:	2007may03	Chang	Research possible use of BLOGs
158	Completed:	2008oct20	Florence	Florence will draft and mail letters to former members Cox, Paris and Neis thanking them for their contributions.
159	Completed	2008oct26	Florence	ANS 3.5 Draft Standard membership and non-member contributors list
160	Completed	2008oct26	Florence	Update sections 4.1.3.1.3, B2.1 specifying “Reactor Narrow Range Pressure” and “Reactor Wide Range Pressure”
161	Completed	2008oct26	Colby	Update Sections 4.4.1 and 4.4.2 Changes
164	Completed	2008oct26	Tarselli	NFSC Response - Bell
165	Completed	2008oct26	Felker	NFSC Response - Wehrenberg
166	Completed	2008oct26	Florence	NFSC Response - Hill
167	Completed	2008oct26	Florence	NFSC Response - Englehart
168	Completed	2008oct26	Felker	NFSC Response - Shepherd
169	Completed	2008oct26	Vick	NFSC Response - Kadambi
170	Completed	2008oct26	Felker	*NFSC Ballot - Wright
171	Completed	2008oct26	Colby	*NFSC Ballot - Prillaman
172	Completed	2008oct26	Dennis	*NFSC Ballot - Reuland
173	Completed	2008oct26	Felker	*NFSC Ballot - Lloyd
174	Completed	2008oct26	Colby	*NFSC Ballot - Eggett
175	Completed	2008oct30	Dennis/Welch	Package all NFSC Response and send to ANS

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16. Working Group Subgroup Meeting Minutes 2008 October 26 (Holl Public Comments & Membership List)

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26october2008

E-Meeting Coversheet

Overview

An e-meeting of the ANS-3.5 Working Group noticed on 12december 2008 by chair-delegate, James B Florence, was conducted to consider the recommendations of the ANS-3.5 Working Group Sub-Group meeting conducted on 26october2008. The sub-group previously provided a meeting report in the form of minutes approved 12december 2008 by them to the full Working Group on 12december 2008.

The full ANS-3.5 Working Group unanimously e-approved the recommendations of the aforementioned sub-group on 05january2009 without objection or call for debate. It is so recorded.

The record of these minutes follows this E-Meeting Coversheet.

James B Florence
Chair-delegate

Keith P Welchel
Secretary

ANS 3.5 Working Group Subgroup Meeting Minutes Resolution of Holl Public Comments and Membership List

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1. **Motions**

2008Oct26 Motion: Do not Adopt Holl Comment #2 Do not Adopt Holl Comment #3	Motion: Carried <ul style="list-style-type: none">• 6 – For• 0 – Against• 0 – Abstained
2008Oct26 Motion: Do not Adopt Holl Comment #4	Motion: Carried <ul style="list-style-type: none">• 6 – For• 0 – Against• 0 – Abstained
2008Oct26 Motion: Do not Adopt Holl Comment #5	Motion: Carried <ul style="list-style-type: none">• 6 – For• 0 – Against• 0 – Abstained
2008Oct26 Motion: Adopt Holl Comment #6	Motion: Not Carried <ul style="list-style-type: none">• 1 – For• 5 – Against• 0 – Abstained
2008Oct26 Motion: Do not Adopt Holl Comment #7	Motion: Carried <ul style="list-style-type: none">• 6 – For• 0 – Against• 0 – Abstained
2008Oct26 Motion: Move Frank Tarselli from contributor to member in the Foreword.	Motion: Carried <ul style="list-style-type: none">• 6 – For• 0 – Against• 0 – Abstained

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2. Roll Call

Present	Member	Address	Notes-Proxy	Email-Phone-Fax
Present	Timothy Dennis	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 Chair	Nebraska Public Power District P. O. Box 98 Brownville, Nebraska 68321		Email: jbfflore@nppd.com Phone: 402-825-5700 Fax: 402-825-5584
Present	F.J. (Butch) Colby	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	Larry Vick	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	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	Frank Tarselli	PO Box 467 Berwick, PA 18603		Email: fatarselli@pplweb.com Phone: 570.542.3551 Cell: 570-956-0303 Fax: 570.542.3855

Majority Level

6 – Member Votes

4 – Super Majority

4 – Majority

3. Working Group Procedural Rules

3.1 Rules of the Chair

- Administrative issues by simple majority (quorum in session);
- Members attend the full length of the meeting;
- Word 7.0 will be the document format;
- Robert's Rules of Order will be used as a general guide;
- 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.

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4. Sunday 2008oct26 (1300)

An ANS-3.5 Working Group Subgroup meeting is held to resolve responses from ANS-3.5-200x DRAFT Standard public comments from Dr. Burkhard Holl and to discuss the ANS-3.5 Working Group membership list in the Foreword of the Standard.

4.1 Holl Comment #2; Holl Comment #3

Motion:

Do not Adopt Holl Comment #2

Do not Adopt Holl Comment #3

Discussion: Section 3.3.1.2 allows evolutions not germane to this section, such as reactor core end-of-cycle coastdown, mid-loop operations, refueling operations, or evolutions in which the reactor vessel head is removed, conditions may be achieved in a non-continuous manner, and mathematical model or initial condition changes are permitted.

The Standard does not preclude deleting mid-loop operations from Section 3.3.1.2.

With regard to Holl Comment #3, the above paragraph applies.

Reference: Public Holl Comment #2, Holl Comment #3

Owner: Tarselli

2008oct26 Motion: Do not Adopt Holl Comment #2 Do not Adopt Holl Comment #3	Motion: Carried <ul style="list-style-type: none">• 6 – For• 0 – Against• 0 – Abstained
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4.2 Holl Comment #4

Motion: Do not Adopt Holl Comment #4

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Discussion: The majority does not agree with this comment in light of not adopting NFSC Kadambi Comment #7 by working group consensus (the Working Group consensus is that the list in Section 3.2.1.2 is not intended to exclude Distributed Control Systems).

Reference: NFSC Kadambi Comment #7

Owner: Florence

2008oct26 Motion: Do not Adopt Holl Comment #4	Motion: Carried <ul style="list-style-type: none">• 6 – For• 0 – Against• 0 – Abstained
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4.3 Holl Comment #5

Motion: Do not Adopt Holl Comment #5

Discussion: Section 3.2.1.2 includes the requirements to be considered regarding “look and feel” for distributed control systems.

Reference:

Owner: Colby

2008oct26 Motion: Do not Adopt Holl Comment #5	Motion: Carried <ul style="list-style-type: none">• 6 – For• 0 – Against• 0 – Abstained
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4.4 Holl Comment #6

Motion: Adopt Holl Comment #6

Discussion: Change the term “simulated” to “simulator” as noted below in Sections 3.2.2.1 and 4.2.2.1 ***bold red italicized text:***

Reference: 3.2.2.1, 4.2.2.1

“3.2.2.1 Systems Controlled or Monitored from the Control Room

The scope of simulation shall include systems of the reference unit to the extent necessary to allow the operator to perform the normal evolutions described in 3.1.3.2 and respond to the malfunctions described in 3.1.4. These systems *shall be complete to the extent that the operator can perform these control manipulations and observe simulated unit response as in the reference unit. The scope of simulation shall include system interactions with other simulator systems to provide a total integrated unit response.*”

“4.2.2.1 Systems Controlled or Monitored from the Control Room

It shall be demonstrated that the systems of the reference unit that are within the scope of simulation are adequate to perform the normal evolutions required by 3.1.3.2 and the malfunctions required by 3.1.4. It shall be demonstrated that the scope of simulation includes system interactions with other simulator systems so as to provide a total integrated unit response. A training needs assessment shall be performed for each deviation identified in accordance with criteria provided in 4.2.1.4.”

The majority does not agree with the comment; the standard is adequate and appropriate as written; the proposed change would be a change in the requirement. DCS implementation approaches, including emulation and stimulation, are not precluded in Sections 3.2.2.1 and 4.2.2.1.

Owner: Florence

2008oct26 Motion: Adopt Holl Comment #6	Motion: Not Carried <ul style="list-style-type: none">• 1 – For• 5 – Against• 0 – Abstained
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Against: The majority does not agree with the comment; the standard is adequate and appropriate as written; the proposed change would be a change in the requirement. DCS implementation approaches, including emulation and stimulation, are not precluded in Sections 3.2.2.1 and 4.2.2.1.

ANS 3.5 Working Group Meeting Minutes
Western Services Corp – Frederick, MD
2008 October 26

4.5 Holl Comment #7

Motion: Do not Adopt Holl Comment #7

Discussion: The majority disagrees that the scope of simulation is insufficient to replicate the reference unit core response; the standard adequately determines the scope of simulation for use in operator training and examination purposes.

Reference: 3.4.3.3

Owner: Tarselli

2008oct26 Motion: Do not Adopt Holl Comment #7	Motion: Carried <ul style="list-style-type: none">• 6 – For• 0 – Against• 0 – Abstained
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4.6 Membership

Motion: Move Frank Tarselli from contributor to member in the Foreword.

Discussion: Level of participation and contribution to the technical aspects of the proposed standard has been extensive during the development of this standard.

Reference: Foreword

Owner: Dennis

2008oct26 Motion: Move Frank Tarselli from contributor to member.	Motion: Carried <ul style="list-style-type: none">• 6 – For• 0 – Against• 0 – Abstained
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4.7 ADJOURN

Meeting adjourned 1530.

Approved Minutes