

ANS 3.5 –2003 Working Group Approved Minutes  
September 14-16, 1999  
Cooper Nuclear Station

**American Nuclear Society  
Standards Committee Working Group 3.5  
Nuclear Power Plant Simulators for Use in Operator Training and Examination**

MEETING MINUTES  
September 14-15, 1999  
**Cooper** Nuclear Station  
Nebraska Public Power District  
Brownville, NE 68321

**Summaries:**

**Motions:**

To unseat Ken Rach from the Working Group, send a letter of thanks, and solicit ComEd for another member.	<b>Approved</b>
To unseat Jim Davis from the Working Group and a send letter thanking him for past participation and send NEI a letter requesting a new member	<b>Approved</b>
Send Bob Felker a letter stating this is an excused absence and we look forward to his continued participation and presence	<b>Approved</b>
Accept Robert Boire of CAE as voting member.	<b>Approved</b>
Accept Oliver Havens of PSE&G as voting member.	<b>Approved</b>
Accept George Huang of NU as voting member.	<b>Approved</b>
Tim Dennis elected to the duties of the Chair.	<b>Approved</b>
Keith Welchel elected to the duties of the Secretary.	<b>Approved</b>
Jim Florence elected to the duties of the Vice Chairman.	<b>Approved</b>
Butch Colby elected to the duties of the Editor.	<b>Approved</b>
Do not develop a Mission Statement for the 2003 standard for the Working Group	<b>Approved</b>
Reaffirm the 1998 ANS3.5 standard without revision and discontinue working group meetings until additional major changes to the Standard can be identified:  <b>Motion to Table the Motion to</b> Reaffirm the 1998 ANS3.5 standard without revision. Pending the Colby survey results. <b>No Second.</b>	

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<b>Motion to Table the Motion to</b> Reaffirm the 1998 ANS3.5 standard without revision.	<b>Approved</b>
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**Action Items:**

- Send Letters to Ken Rach and Jim Davis thanking them for their past participation.
- Possibly, Send letters to Com-Ed and CAE requesting resumes depending on response from Rach and Davis;
- Send letters to new members (Robert Boire, George Huang, and Oliver Havens) stating their acceptance into the working group.
- Prepare a two-column working document with the 1998 and 2003 side-by-side.
- Add additional detail in minutes for action items;
- March minutes (Going To '98 Standard and the NRC) last sentence. Delete the last sentence in the March 02-03 Minutes in section 'Going to '98 Standard and the NRC' ;
- Designate meeting minutes by revision;

**Next Meeting:**

Tentatively March 13-15, 2000 at Virginia Power

**Previous Meetings:**

<b>Date</b>	<b>Loction</b>
November 04-05, 1998	American Nuclear Society Headquarters
March 02-03, 1999	Oconee Nuclear Station

**Tuesday 14 Sep. 1999**

**Opening Comments Jeff Cataudella:**

Jeff resigned as Chairman and from the working group due to other job assignments. Resignation deferred to New Business

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**Roll Call:**

<b>Present</b>	<b>Member</b>	<b>Address</b>	<b>E-Mail</b>	<b>Notes</b>
Present	Jeff Cataudella	Northeast Utilities P. O. Box 128 Waterford, Conn. 06385	Email: CATAUJJ@NU.COM Phone 860-437-2603 Fax 860-437-2671	Resigned
Present	Timothy Dennis	P. O. Box 119 645 Lehigh Gap St. Walnutport, PA 18088-0119	E Mail a243@yahoo.com Phone 610-767-0979 Fax 610-767-7095	
Present	Jim Florence	Nebraska Public Power District P. O. Box 98 Brownville, Nebraska 68321	E Mail: jbflore@nppd.com Phone: 402-825-5700 Fax: 402-825-5584	
Present	Keith Welchel	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	General Physics Corporation 6700 Alexander Bell Drive Suite 400 Columbia, MD 21046	Email: bcolby@genphysics.com Phone: (410) 290-2566 Fax: (410) 290-2481 (attn: B.Colby)	
Present	Frank Collins	US NRC, Office of Nuclear Reactor Regulation 09-D24 Washington, DC 20555	E Mail JFC1@NRC.GOV Phone 301-415-3173 Fax 301-415-2222	
Present	George McCullough	American Electric Power Cook Nuclear Plant One Cook place Bridgman, MI 49106	Phone: (616) 466-3333 Fax: (616) 466-3388 Email: gsmccullough@aep.com	
Proxy	Hal Paris	Enserv A Division of S3 Technologies 8930 Stanford Blvd. Columbia, MD. 21004	E Mail: hal.paris@gses.com Phone 410-772-3559 Fax 410-772-3595	Proxy: Don Noe RNI Technologies 107 Industrial Dr. St Marys, GA 31558 E-Mail: <a href="mailto:dnoe@rmitech.com">dnoe@rmitech.com</a> Phone: 912-576-6730
Absent	Robert Felker	EXITECH Corporation 102 E. Broadway Maryville, TN	Phone 410-461-4295 Fax 410-461-5984 Email rfelker@EXITECH.com	
Present	Allan A. Kozak	Virginia Power North Anna power Station P.O. Box 402 Mineral, VA 23117-0402	Phone: (540) 894-2400 Email: allan_kozak@vapower.com	

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Present	William M. (Mike) Shelly	Entergy Services Inc. Grand Gulf Nuclear Station POBox 756 Port Gibson, MS 39150	Email: wshelly@entergy.com Phone (601) 437-6301 Fax: (601) 437-6363	
Present	Dennis Koutouzis	INPO 700 Galleria Parkway, NW Atlanta, GA 30339-5957	E-mail: KoutouzisJD@inpo.org Phone: (770) 644-8838	
Present	William A. DeLuca	Pennsylvania Power & Light, Co. Susquehanna Steam Electric Station P.O. Box 467 Berwick, PA 18603	Email: WADeLuca@papl.com Phone: (570) 542-1988 Fax: (570) 542-3177	
Absent - Resigned	James Stavely	Public Service Electric & Gas Mail Station S02 P.O. Box 236 Hancocks Bridge, NJ 08038-0236 (Salem/Hope Creek)	Phone: (609) 339-7104 Fax: (609) 339-2749 Email: JStavely@PSEG.com	Resigned
Absent - Resigned	Jim Davis	NEI 1776 Eye St., N.W. Suite 400 Washington, D.C. 20006-3708	Phone 202-739-8105 Fax 202-785-1898 Email jwd@nei.org	Resigned
Absent - Resigned	Allan Abramovitch	CAE Electronics Ltd. 8585 Cote de Liesse C.P. 1800 St-Laurent Quebec, Canada H4L 4X4	EMail ALLANA@CAE.CA Phone 514-341-6780 ext2246 Fax 514-340-5397	Resigned
Absent - Resigned	Kenneth R. Rach	Commonwealth Edison Corporate Downers Grove, IL	Phone: (630) 663-7913 Email: Kenneth.R.Rach@ucm.com	Resigned
Absent	Shawn M. Coyne-Nalbach	NFSC Secretary American Nuclear Society 555 North Kensington avenue La Grange Park, IL 60526-5592	Email: SCoyne-Nalbach@ans.org Phone: (708) 579-8269	

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**Distributed NUPPSCO comments from 1998 standard**

The NUPPSCO comments from the 1998 working group standard were distributed to members for future reference.

**Continued participation for absent members:**

Ken Rach – Discussed sending a note to Ken Rach stating participation is required and that the working group members would like a representative from ComEd. Also, the Working Group needs to determine if Ken has completed the ANS 3.5 membership application (call Shawn). This is Ken's third absence. The Working will contact ComEd for an appropriate replacement for Ken.

**Motion:** To remove Ken from the working group, send a letter of thanks, and solicit ComEd for another member. **Approved – Action for Chair**

Allan Abramovitch – Allen has suggested a substitute member (Robert Boire).

Jim Davis –

**Motion:** To remove Jim Davis from working group and send letter thanking for past participation and send NEI a letter requesting a member. **Approved.-Action for Chair**

Robert Felker – Absent but made good faith effort to have substitute member present.

**Motion:** Send Bob a letter stating this is an excused absence and we look forward to his continued participation and presence . **Approved-Action for Chair**

**Discussion of Resumes:**

Robert Boire of CAE. Recommended by Frank Collins.

**Motion:** Accept Robert Boire as voting member. **Approved.-Action for Chair**

Oliver Havens, Jr. of Public Service Electric and Gas Company– Resume received from Jim Stavely.

**Motion:** Accept Oliver Havens as voting member. **Approved.-Action for Chair**

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George Huang of Northeast Utilities – Recommended by Jeff Cataudella

**Motion:** Accept George Huang as voting member. **Approved.**-Action for Chair

**Tim Dennis:** Meetings are open to the public. Voting is limited to members and voting is consensus.

**Break:** 10:20am

**Selection of New Chairman and change of assigned positions:**

**Motion:** Tim Dennis elected to the duties of the Chair. **Approved.**

**Motion:** Keith Welch elected to the duties of the Secretary. **Approved**

**Motion:** Jim Florence elected to the duties of the Vice Chairman. **Approved**

**Motion:** Butch Colby elected to the duties of the Editor. **Approved**

Frank will continue the duties of a Style Editor.

**Discussion of improvement to meeting minutes:**

**Mike Shelly** – Action Items do not completely describe what is being considered or what needs to be done. Additional information and detail should be included in the meeting minutes. Action for Secretary

**Discussed NRC possible rule making:**

Standards working group may need to review Core Cycle fidelity with respect to Reactivity Manipulations pending future NRC rule making.

Frank covered proposed changes now at Executive Director Office level as staff recommendation:

- 55.59(re-qualification);
- 55.31(a)(5) (Reactivity Changes);
- 55.45(b)(Certification).

Executive Director Office (EDO) staff presently reviewing proposed Rule Making.

**Break for Lunch 12:00pm:**

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**Revised Scope and Background:**

Consensus achieved for the Standard's Scope and Background as recorded in Working Group minutes dated March 02-03, 1999.

**Discussion of NRC Document DG-1080 (Reg. Guide 1.149 Rev. 3):**

- Added Section B;
- Section C.2 - No change;
- Section C.3 - Still endorses previous standards;
- Section C.4 – Performance Testing is a function of the Training Program. No longer required to list the scheduled four year testing schedule in the four-year report. State that the performance tests follow the scheduled training program;
- Jim Florence will draft a working group letter for approval concerning expediting DG-1080 draft

**Break:** 14:00pm

Scope and Background revision from March 02-03, 1999 meeting will be used and placed in working document; but still waiting on ANS-3 approval.

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Revised Work Assignments:

Action Item No.	Assigned To:	Work Assignment	Origination Date	Completion Date
1	Cataudella Dennis	DOE Nuclear Facility vs. Power Plant Simulators - Check with ANS 3. Inquire as to whether other simulator issues are addressed/referenced in other ANS 3 standards Jeff Call will Mike Wright (ANS-3 chair). Are DOE issues referencing simulators?	<u>1999mar02</u>	
2	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.	<u>1999mar02</u>	
3	Welchel	Get NUPPSCO comments to members	<u>1999mar02</u>	<u>1999sep14</u>
4	Welchel	Send copy of meeting minutes 1998Nov04 and 1999Mar02-03 to Jim Florence	<u>1999mar02</u>	<u>1999sep14</u>
5	Florence	Jim will look at creating a survey on the USUG WEB concerning the Action Items and for soliciting info from the industry	<u>1999mar02</u>	<u>1999sep14</u>
6	Cataudella	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.	<u>1999mar02</u>	<u>1999sep14</u>
7	Cataudella	Talk to ANS about use of footnotes, asterisks, etc in standards <u>To review style guide.</u>	<u>1999mar02</u>	
8	Cataudella	Contact Mike Wright about the scope change Scope and Background submitted to Shawn and Mike. No schedule at present for ANS-3to review scope change.	<u>1999mar02</u>	<u>1999sep14(open)</u>
9	Cataudella Dennis	Is ANS 3 considering that the standard may address other simulators not specific to NRC Regulatory Commission licensing? Jeff will verify with Mike concerning additional scope (adding DOE facilities into 3.5).		
10	Collins	Propose security criteria for Simulators operating in Exam Mode.		



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	<b>Kozak McCullough</b>			
<b>11</b>	<b>Felker Collins</b>	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.		
<b>12</b>	<b>Florence Felker Colby</b>	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.  Review all List; Combined with the 3.1.3(7) item (Moved from 23);		
<b>13</b>	<b>Paris Felker Florence</b>	Review guidance on stimulated devices. Combine stimulated hardware and stimulated devices. Issues relating to various stimulated device functions and compatability with the simulator (e.g. Run/Freeze, History retention and Recalls/Backtracks, software revision control)		
<b>14</b>	<b>Collins Kozak McCullough</b>	Numerous uses of Training Needs Assessment (TNA) Collins - Add paragraph in Section 3.0 detailing TNA and then remove all other references to TNA		
<b>15</b>	<b>Welchel Dennis</b>	Coordinate use of Discrepancy and Deviation. Consider Yoder #12.		
<b>16</b>	<b>Welchel</b>	Get feedback from industry on actually how the 1998 standard is actually used. Use USUG meetings. Cataudella - Seabrook MANTG meeting (Aug-1999) comments: <ul style="list-style-type: none"> <li>• How to document Scenario Based Testing?</li> <li>• Expand on what is V&amp;V and what is necessary.</li> <li>• Shelly – User feedback is not available for inclusion at this time.</li> <li>• Develop Mission statement for working group.</li> <li>• Cataudella – Problems implementing Scenario Based Testing.</li> <li>• Benchmarking of various sites has shown use of V&amp;V and scenario validation.</li> </ul>		
<b>17</b>	<b>Kozak Shelly Boire</b>	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		

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		of simulators that are not related to Operator Training. Do we need to put some boundaries as to the limits simulator;		
<b>18</b>	<b>Colby Florence</b>	Using the simulator for other than Operator Training. Uses in predictive analysis and design mods, SAMGS procedures changes;		
<b>19</b>	<b>Paris Colby Boire</b>	Exploiting technology changes and future industry trends. What's coming around the corner;		
<b>20</b>	<b>Collins Welchel Huang</b>	(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. Keith Welchel moved to dismiss this item. Jim Florence Seconded;		
<b>21</b>	<b>Florence Kozak</b>	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 lead material development.  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.		

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<b>22</b>	<b>Dennis DeLuca</b>	Real Time - Tim will give further consideration and he will look at industry standards; Measuring Real-Time;		
<b>23</b>	<b>Dennis</b>	Process Guidelines (Mods and Testing) ;Institutionalizing Procedures Dennis: Next meeting, present external review showing procedures etc... and present recommendations using Millstone experience.		
<b>4</b>	<b>Dennis</b>	1985 ANS 3.5 Standard is Historical Standard; Jeff will follow up with Shawn and Mike Wright about Historical/Active Standards and how the present process does not follow the five year; How should we handle or should we comment that the 1985 ANS/ANSI 3.5 standard is now an Historical standard and is no longer in the ANSI catalog. Does the ANS 3.5 Working Group need to comment on this issue; Utilities would need to take exception by treating Certification as other; Mark up the Form 474 and state the other that you are going to do. Scenario Based testing (> 25%/yr.); Performance Based testing Plan;  Dennis will call Mike Wright confirming ANS-3 understands the Historical Standard issue;		
<b>5</b>	<b>Collins Dennis Koutouzis</b>	(JFC/TD) Possible cross-pollination with other standards. Frank and Tim will contact others;		
<b>26</b>	<b>Florence</b>	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;		<b><u>1999sep15</u></b>

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27	<b>Florence Dennis</b>	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.		
28	<b>Florence Welchel</b>	Jim Florence suggested that the following information be placed on the USUG Web Page: ANSI-3.5 Membership List, approved meeting minutes, meeting schedules and meeting agendas. Florence/Welchel will ensure WEB page is updated  Florence: <ul style="list-style-type: none"> <li>• Check with Shawn (ANS) for WEB space.</li> <li>• Check with USUG for WEB Space</li> </ul>		<u><b>1999sep15</b></u>
29	<b>Dennis</b>	Mission statement for Working Group for the 2003 standard. AI #31 added 1999sep14		<u><b>Status:</b></u> <u><b>COMPLETE</b></u> <u><b>Voted not to be</b></u> <u><b>done: 1999sep15</b></u>
30	<b>Collins Colby Koutouzis</b>	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; Added: AI #32 added 1999sep15		
31	<b>Welchel</b>	Change 24 month design change limit to some shorter period.		
32	<b>Welchel McCullough DeLuca</b>	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. Added: AI #34 added 1999sep15		

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**ADJOURN 1999sep14**

**Wednesday 15 Sep 1999**

**Motion:** NOT TO develop a Mission Statement for the 2003 standard for the Working Group. **Approved**

**Clarifications and Interpretations:**

Dennis: The ANS 3.5 working-group will only clarify and/or interpret on the 1998 standard;

**Discussion concerning additional changes:**

Collins:

- No Pending Technology changes
- No Regulatory changes
- No New training needs

**Motion:** Reaffirm the 1998 ANS-3.5 standard without revision.

**Motion to Table:** Reaffirm the 1998 ANS-3.5 standard without revision. Pending the survey results. **No Second.**

**Motion to Table:** Reaffirm the 1998 ANS-3.5 standard without revision. **Approved.**

**Next Meeting Schedule:**

Move next meeting to shortly after the January 2000 SCS.

- Allan Kozak offered to host the next meeting., March 13, 14, and 15, 2000;

**Tour of Cooper Simulator**

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**Review of Colby Survey:**

Butch Colby produced a survey that is focused on collecting industry information related to if, when and how the 1998 ANS 3.5 Standard will be used. Butch will send the final survey to Jim Florence and Jim will send it to USG members.

Reviewed Survey Introduction, Purpose, and Specific Issue;

Added questions relating to industry's perception of the 1998 standard and when and if utilities will commit to the 1998 standard;

Adjourned Wednesday 15 Sep 1999