



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division

Minutes from the ANS NCSD Executive Committee

Marriot Wardman Park
Washington, DC
2015 ANS Winter Meeting
Sunday 8 November 2015

1. Call to Order

The Executive Committee Chair, Sedat Goluoglu, convened the meeting. All of the Division Officers were present. The serving Division Officers were as follows:

Position	Name
Chair	Sedat Goluoglu
Vice Chair/Chair Elect	John Miller
Treasurer/ Finance Chair	Larry Wetzel
Secretary	Chad Pope
Past Chair (<i>ex officio</i>)	Jerry Hicks

Eight members of the Executive Committee were present or on the phone. The serving Executive Committee members and those participating were as follows:

Term Ending June of (Year)	Name	Participating
2018	Tracy Henson	yes
2018	Margret Marshall	yes
2018	Jason McCall	yes
2017	Katherin Goluoglu	yes
2017	Andrew Prichard	yes
2017	Kevin Reynolds	yes
2016	James Baker	phone
2016	Catherine Percher	yes
2016	Ellen Saylor	no

Additional NCSD members were present providing broad nuclear industry representation {Refer to Appendix A}.

2. Approval of Previous Meeting Minutes

The minutes for the previous meeting, 2015 Annual Meeting in San Antonio, TX, were approved by email vote in July 2015.



3. Chair and Vice Chair Report

The Chairman summarized the content of the ANS President's meeting. The importance of ANS facilitating technology transfer was discussed along with the upcoming ANS IT system update. The ANS collaboration initiative, similar to LinkedIn, was also discussed. Additionally, the ANS is examining the overall society function including meeting schedules and frequency.

The Chairman also reviewed recent Division votes which included: committee appointments, past meeting minutes, formation of a special committee to review bids to host the 2017 topical meeting, establishment of a lifetime achievement award, selection of the topical meeting location (Carlsbad, NM), and removal of Lon Paulson from the Education Committee. All items were approved with the exception of the establishment of a lifetime achievement award which was tabled.

The Chairman also discussed the composition of the division membership and the need for liaisons with the student section and membership committee. Andy Prichard volunteered to serve as the student section liaison. Julie Ezold volunteered to serve as the membership committee liaison.

The Vice Chairman discussed the November 7, 2015 National Program Committee meeting. The Vice Chairman noted that Division Officers should contact Toni Bishop for login information to the ANS archive system. The Vice Chairman also noted the potential change in topical meeting protocol to incentivize embedded topical meetings in the summer meeting.

Movement of items from the collaborative area to the archive area was also discussed. It was decided that the Division Secretary would perform this task. Committee Chairs will inform the Secretary when an item is complete and is ready to be archived.

4. Treasurer's Report

The Treasurer summarized the treasurer's report *{Refer to Appendix B}*. The key discussion points involved the scholarship funding and protocol as well as the anticipated income from ICNC as noted below in section 6.

A motion to approve the 2016 budget which includes moving \$21,000 to the scholarship fund (fully funding the scholarship) was made by Katherin Goluoglu and seconded by Jerry Hicks. The motion was approved. The approved 2016 budget is included in Appendix B.

5. Division Committee Reports

Program Committee: Deborah Hill

A summary of the program committee meeting was provided. New additions to the Program Committee was announced: Catherine Percher, Kristen Wessels, and Margret Marshal. Paper sessions at the next meeting were also discussed.



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division

Special Topical Committee Committee: Deborah Hill

The special committee recommended acceptance of the Carlsbad, NM bid. Meeting leadership identification is in progress. The budget estimate will be delivered to ANS. Recommendations for the technical program chair should be sent to the Division Chairman and Deborah Hill.

Scholarship Committee: Julie Ezold

Only one applicant for the scholarship was received. An announcement at the NEDHO meeting was planned to advertise the scholarship.

Education Committee: Jason McCall

A summary of the status of various white papers was provided {Refer to Appendix C}.

Membership Committee

No report.

Publications/Newsletter/Web Site: Larry Wetzel

Continued improvement of the Division website was discussed. No newsletter was issued this past year.

An executive committee member volunteer to assemble the newsletter was solicited. No volunteer was identified, however it was agreed that the Division Secretary would assist in coordination of preparing the newsletter once a volunteer is identified.

Honors and Awards Committee: Tracy Henson

A total of 65 participants in the awards dinner, including 18 students, was announced. Work is continuing on development of a lifetime achievement award. Andy Prichard discussed the potential nomination of Mikey Brady Rapp as an ANS Fellow. A motion to nominate Mikey Brady Rapp as an ANS Fellow was made by Kathrin Goluoglu. The motion was seconded by Larry Wetzel. The motion was unanimously passed.

Nominating Committee: Jerry Hicks

Nominations for the Vice Chairman, Treasurer, Secretary, and Executive Committee have been identified.

6. ICNC 2015 Meeting

Robert Bush gave a summary of the ICNC meeting held in Charlotte, NC. The meeting is held every four years with a five country rotation. The meeting was last held in the US in 1995. The meeting had 264 registrants with 176 papers. The meeting attendees were roughly half from the US and half



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division

international. Revenue from the meeting is shared with 65% going to ANS and 35% going to the Division. The amount going to the division is approximately \$39K.

7. ANS Student Conference

Representatives from the 2016 Student Conference Organizing Committee from the University of Wisconsin-Madison provided information about the upcoming conference. The conference will be March 31 – April 3, 2016. {A copy of information provided by the students is in Appendix D}

8. 2018 Topical: Applicability of Radiation-Response Models to Low Dose Protection Standards

Representatives from the 2018 topical addressing the applicability of radiation-response models to low dose protection standards provided information about the upcoming topical and solicited Division support. {A copy of information provided by the representatives is in Appendix E}

9. 1 year Tactical Plan and 5 year Plan

The Chairman discussed the Division 1-year tactical plan and the 5 year plan. The chairman also discussed the need to update/capture a handbook for the division officers and standing committees.

10. Old Business

Sandi Larson discussed the upcoming salary survey.

11. New Business

The chair opened the floor for other new items. There was discussion regarding assembling a document that outlines how the NCSD and NCS related ANSI/ANS standards function. The document would be primarily used to help new NCSD members. Additionally, there was discussion regarding NCSD interaction with the scholarship award recipients. In particular, the possibility of covering some of the cost of attending the ANS winter meeting to strengthen their interaction with the NCSD.

12. Adjourn

The Executive Committee Meeting was adjourned after a motion was made, seconded and unanimously approved.



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division

APPENDIX A – Attendance at the Executive Committee Meeting (November 2015) from sign in sheets.

Hatice Akkurt
Jim Baker (phone)
John Bess
Robert Bush
Joe Cashwell
Theresa Cutler
Nathan Doerr
David Erickson
Julie Ezold
Christopher Grenled
Katherin Goluoglu
Sedat Goluoglu
Kevin Hahn
David Heinrichs
Tracy Henson
Jerry Hicks
Deborah Hill
Brian Kiedrowski
Sandi Larson
Margret Marshall
Zander Mausolff
Jason McCall
Dennis Mennerdahl
John Miller
Catherine Percher
Chad Pope
Dustin Popp
Chris Perfetti
Jhonathan Rosales
Andrew Prichard
Kevin Reynolds
Alyse Scurlock
Randy Shackelford
Kristan Wessels
Robert Wilson
Fred Winst



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division

APPENDIX B – Treasurer’s Report



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division

ANS NCSD Executive Committee – Treasurer’s Report

Marriott Wardman Park
Washington, DC
ANS Annual Meeting
Sunday, November 8, 2015

Summary:

1. The NCSD is financially sound.
 - The estimate funds available at the end of September were \$16,686.
 - March 31st 2015 funds are at \$16,882 (Δ = mostly \$15k moved to the NCSD Pioneers Scholarship fund).
 - Estimated End of 2015 Funds is approximately \$15K.
 - The income from ICNC 2015, has not been finalized. The estimated share of the ICNC profit would bring the balance to approximately \$43K.
 - There should also be income from a Class I topical in two years.
2. There has been a large effort with ANS HQ surrounding Division Scholarship funds:
 - No longer refer to NCSD Pioneers Scholarship as “Endowed”; now call it “Fully Funded”.
 - Moving forward, the new system will be better and more transparent. The NCSD will get annual end of year statements that will be beneficial.
 - The past can not be undone but believe we have a good accounting of all the money (2006-current). An extensive effort was made to account for all the past contributions.
 - Only identified two unaccounted donations, both from 2013, for a total of \$150. Working with ANS HQ to resolve if possible.
 - The NCSD actually only disbursed funds to the NCSD scholarship in 2010, 2014 and 2015. These three disbursements total \$27K.
 - We have a current total of approximately \$45K and end of 2015 of ~\$42K.
3. The effort to go through the records for the NCSD scholarship also lead to the treasurer going through the Treasurer’s 3-ring binder/notebook and all of the financial records being maintained (paper and files on various CDs).
 - Resulted in spreadsheet that captures the NCSDs division finances from 1996-current, as well as compiles all the known NCSD scholarship data.
 - The only missing files are for 2010 and requests have been made to retrieve this data.
 - Any files I thought were important files were scanned and uploaded to the ANS Divisions website.
 - I plan to work with the incoming Treasurer to ensure the appropriate files are saved and to aid in moving to the ANS division website/away from the hard copy system.
4. Efforts are being made to provide a more traceability in accounting for money collected for the award banquet.



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division

Details:

NCSD Fund: January 1, 2015 to June 30, 2015:

1. The 2nd quarter 2015 Financial Statement provided by ANS HQ is shown as Exhibit One.
2. Key items to take from Exhibit Three are:
 - 2015 Division Membership Allocations stand at \$804.
 - The student support of \$1500 accounts for the disbursements for the ANS National meetings.
 - A separate disbursement form was filed in January for \$1000 to the ANS Student Conference.
 - The NCSD disbursed \$15,000 to the NCSD Pioneers Scholarship fund for 2015. An additional \$3000 was disbursed in 2015 but credited as disbursed in 2014.
 - The income from ICNC 2015 has not been finalized.
3. *The NCSD Fund Balance as of June 30, 2015 is reported as **\$16,284***

Generic NCSD Financial and Pioneers Scholarship Information:

1. Exhibit Two provides a historic overview of the NCSD funds at the start of the year as well as the earnings made per year from 1996-current.
2. There has been a large effort with ANS HQ surrounding Division Scholarship funds:
 - No longer refer to Pioneers Scholarship as "Endowed"; now call it "Fully Funded".
 - ANS HQ provided a statement for the NCSD scholarship fund covering 2012-2014 (not included as it contains names and donation amounts). However, Exhibit Three provides a summary of the NCSD scholarship from 2006 through 2015, using the best data available.
 - An extensive effort was made to account for all the past contributions.
 - There were only two unaccounted donations, both from 2013, for a total of \$150.
 - The NCSD has actually only disbursed funds in 2010, 2014 and 2015 totaling \$27K.
 - I believe that all individual contributions (including the two missing) equal \$29.5K.
 - We have awarded a total of \$18K and I assume another \$3K later in 2015.
 - Thus we basically should have ~\$38.5K (\$27K+\$29.5K-\$18K).
 - Current total of ~\$45K (does not account for the 2015 award of \$3K) and is about \$7K above what is expected. Potentially due to investment gain?
 - Conservative estimate is that at the end of 2015 the NCSD scholarship will have ~\$42K.
 - **The NCSD Pioneers Scholarship fund is in great shape.**
3. The incoming and outgoing treasurers have been in contact to establish the appropriate level of documentation is transitioned to the ANS Division Website and that the captured data from 2006-current is correct.
4. There are several unresolved questions poised to ANS HQ, covering the NCSD division funds and the NCSD Pioneers Scholarship. The key issues are:
 - a. Is it possible for us to have ANS HQ resolve two names associated with donations on the provided "1/1/2012-12/31/2014 ANS HQ NCSD Pioneers Scholarship" statement?
 - b. Must resolve the two missing donations from 2013 (these are not the same as "a" bullet above). If we can't then the NCSD should consider transferring the appropriate amount per person into the scholarship to honor their original wishes.



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division

- c. The 2010 end of year financial statement has not been located. It was a year when we resolved some ongoing NCSD Pioneers Scholarship issues (I believe \$9K was disbursed to the account). This data was requested from NCSD members as well as ANS HQ. Capturing it will close out the few assumptions made.
- d. ANS HQ has been asked if it provides a "Thank You" letter to people that donate to the scholarship funds. The treasurer is not notified of individual donations (now we should at the end of the year statement). There were ten individual donations last year (2014) and I think those individuals should get some recognition if they did not already.
- e. It is important for the NCSD to clarify the best practice for disbursing funding to the Pioneers Scholarship fund. My current belief is that the Treasurer should fill out a disbursement form early January for the approved budgeted amount.



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division

EXHIBIT ONE – 2nd Quarter of 2015 Financial Statement

AMERICAN NUCLEAR SOCIETY Nuclear Criticality Safety Division 6/30/2015

	<u>Actual</u>	<u>Budget</u>	<u>Variance</u>
Revenues			
Dues Revenue Allocation	\$804.00	\$861.00	(\$57.00)
Meeting Revenue	1,500.00		1,500.00
Total Revenue	2,304.00	\$861.00	1,443.00
Expenditures			
Awards, Prizes		1,100.00	(1,100.00)
National Meeting Costs		250.00	(250.00)
Student Support	2,500.00	2,500.00	
Scholarship & NEED Funding	15,000.00	18,000.00	(3,000.00)
Other Expenses		500.00	(500.00)
Total Expenditures	17,500.00	22,350.00	(4,850.00)
Net Surplus/(Deficit)	(15,196.00)	(21,489.00)	6,293.00
Fund Balance at 1/1/15	31,480.00	31,480.00	-
Fund Balance at 6/30/15	16,284.00	9,991.00	6,293.00



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division

AMERICAN NUCLEAR SOCIETY
Nuclear Criticality Safety Division
6/30/2015

	Actual	Budget	Variance
Revenue			
Dues Revenue Allocation: 05-4115-000000-062100-Sales Division - Dues Revenue Allocation - NCSD 14-4115-000000-062100-Sales Division - Dues Revenue Allocation - NCSD	804.00	881.00	804.00 (881.00)
Total Dues Revenue Allocation	804.00	881.00	(87.00)
Meeting Revenue: 05-4185-000000-062100-Sales Division - Meeting Revenue - NCSD	1,500.00		1,500.00
Total Meeting Revenue	1,500.00		1,500.00
Total Revenue	2,304.00	881.00	1,423.00
Expenditure			
Awards, Plaques: 14-8015-000000-062100-Administrative Expense Division - Awards, Plaques - NCSD		1,100.00	(1,100.00)
Total Awards, Plaques		1,100.00	(1,100.00)
National Meeting Costs: 14-8025-000000-062100-Administrative Expense Division - National Meeting Costs - NCSD		250.00	(250.00)
Total National Meeting Costs		250.00	(250.00)
Student Support: 05-8030-000000-062100-Administrative Expense Division - Student Support - NCSD 14-8030-000000-062100-Administrative Expense Division - Student Support - NCSD	2,500.00	2,500.00	2,500.00 (2,500.00)
Total Student Support	2,500.00	2,500.00	
Scholarship & NEED Funding: 05-8025-000000-062100-Administrative Expense Division - Scholarship & NEED Funding - NC 14-8025-000000-062100-Administrative Expense Division - Scholarship & NEED Funding - NC	15,000.00	18,000.00	15,000.00 (18,000.00)
Total Scholarship & NEED Funding	15,000.00	18,000.00	(3,000.00)
Other Expenses: 14-8040-000000-062100-Administrative Expense Division - Other Expenses - NCSD		500.00	(500.00)
Total Other Expenses		500.00	(500.00)
Total Expenditures	17,500.00	22,100.00	(4,600.00)
Net Surplus(Deficit)	(15,196.00)	(21,498.00)	6,292.00



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division

EXHIBIT TWO –NCS Division Financial Statement

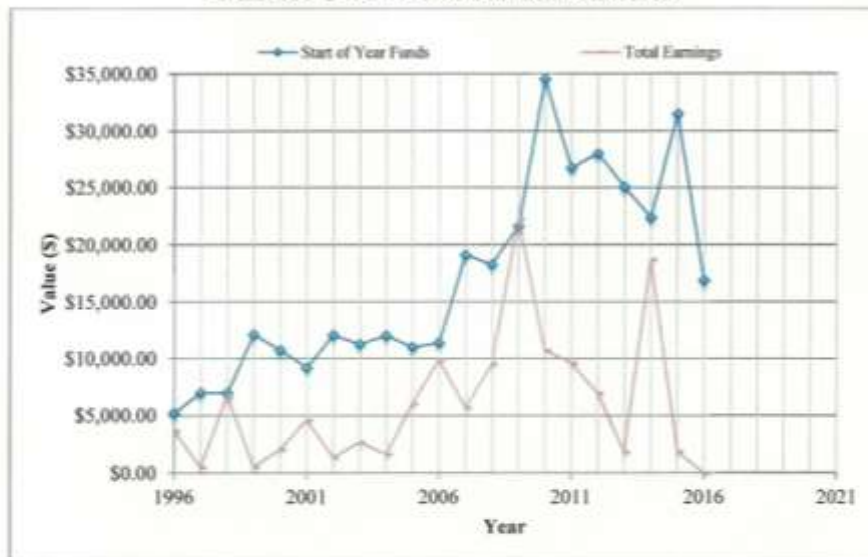


EXHIBIT THREE –NCS Division Scholarship Summary

Year	Starting Balance	Ending Balance	Yr End. Temp. Restricted	Yr End. Division Designated	Division Transfer	Yearly Individual Gift	Interest Temp Restricted	Interest Division Designated	Scholarship Award
2006	\$0.00	\$6,175.00	\$175.00	\$6,000.00	\$6,000.00	\$175.00	-	-	0
2007	\$6,175.00	\$6,275.00	\$275.00	\$6,000.00	\$0.00	\$100.00	-	-	\$0.00
2008	\$6,275.00	\$3,625.00	\$625.00	\$3,000.00	\$0.00	\$350.00	-	-	\$3,000.00
2009	\$3,625.00	\$3,625.00	\$625.00	\$3,000.00	\$0.00	\$0.00	-	-	\$0.00
2010	\$3,625.00	\$3,775.00	\$625.00	\$3,000.00	\$3,000.00	\$150.00	-	-	\$3,000.00
2011	\$3,775.00	\$15,404.00	\$11,024.00	\$4,380.00	\$0.00	\$10,775.00	-	-	\$3,000.00
2012	\$15,404.00	\$17,401.00	\$12,868.00	\$4,533.00	\$0.00	\$4,416.00	\$428.00	\$153.00	\$3,000.00
2013	\$17,401.00	\$16,511.00	\$11,978.00	\$4,533.00	\$0.00	\$150.00	\$2,110.00	\$0.00	\$3,000.00
2014	\$16,511.00	\$30,356.00	\$24,640.00	\$5,716.00	\$3,000.00	\$13,350.00	\$359.00	\$136.00	\$3,000.00
2015	\$30,356.00	\$42,356.00	-	-	\$15,000.00	\$0.00	-	-	\$3,000.00

Data for 2006-2011 is summarized based on multiple records maintained in the Treasurer Notebook, the NCS Division website, and supplemented/cross-checked by data provided by Larry Wietzel and Deb Hill that was previously collected from ANS-HQ.

Data for 2012-2014 is summarized from an ANS HQ NCS Division Scholarship Account Statement

Data for 2015 is based on the NCS Division March 2015 statement, assuming \$0 individual donations and a \$3K award later this year



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division

2016 Approved Budget

2016 Approved	
Balance Forward from Previous Year	\$55,736
Budget Funds	
Member Dues Allocation (\$2/member)	\$1,722
Division Income	
Prior period Topical Mtg revenue	
Total Income	\$1,722
Budget Expenses	
Newsletters, Website	\$0
Awards & Plaques	\$1,100
National Meeting Costs	\$250
Topical Meeting Costs	\$0
Division Officer Expenses	\$0
Student Support	\$2,500
Scholarship/NEED Funding	\$21,000
YMG Support	\$0
Other Expenses	\$500
Total Expenses	\$25,350
Net	(\$23,628)
Total Year End Funds	\$32,108



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division

APPENDIX C – Education Committee Minutes



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division

Minutes from the ANS NCSD Education Committee

Marriot Wardman Park, Washington, DC
ANS Winter Meeting
Sunday 8th November, 2015

1. Call to Order

The Committee Chair, Jason McCall, convened the meeting at 1pm. The agenda for the meeting was distributed and an attendance roster routed (see Appendix A). Jason started the meeting by approving the previous 2015 Annual Meeting (San Antonio, TX) minutes.

2. Approval of Previous Meeting Minutes

The minutes from the previous 2015 Annual Meeting were discussed in the meeting and subsequently approved as an accurate record.

3. Distribution of ANS Annual (Summer) 2015 Old/New Business Notes

After the approval of the previous 2015 Annual Meeting minutes, Jason McCall discussed the ANS Winter 2015 Old/New Business Notes (see Appendix B) which were distributed at the beginning of the meeting.

4. Current Status of the Whitepapers

The following Whitepapers are currently available on the NCSD website or are in production (archived/historical Whitepapers are not included):

NOTE: The currently maintained Whitepapers listed on the newly designed NCSD need to be clearly differentiated from the archived/historical Whitepapers.

General Process	Primary Author	Activity
Integrating Nuclear Criticality Safety into Design	Kevin Reynolds <i>New Author</i>	New Whitepaper <i>This Whitepaper is undergoing comment resolution phase. Once existing comments have been resolved this paper must be resubmitted to the Education Committee for approval to move forward.</i>
NCSD Whitepaper Overview and Process Lifecycle	Lon Paulson	Recently published in 2015.
Successful NCS Mentorship Program	Kristan Wessels <i>New Author</i>	Latest Revision 6/06 (Rev. 0)-Reaffirmed 11/15 <i>This paper has been reaffirmed as of November 2015. The NCSD webpage still needs updating.</i>
Nuclear Criticality Safety Evaluations	John Miller <i>New Author</i>	Latest Revision 11/09 (Rev. 1) <i>Revision 2 is undergoing comment resolution phase. Once existing comments have been resolved this paper must be</i>



		<i>resubmitted to the Education Committee for approval to move forward.</i>
Nuclear Criticality Accidents in the Workplace: Fact Sheet	John Miller <i>New Author</i>	Latest Revision 6/06 (Rev 1) Minor Revision 4/09 (Rev 1)-Reaffirmed 11/15 <i>This paper has been reaffirmed as of November 2015. The NCSD webpage still needs updating.</i>

The following discussions occurred relating to these Whitepapers on November 8, 2015:

- Whitepaper General Overview Discussion –It was discussed during the meeting that there needs to be improved communication when Whitepapers get posted for 60 Day Review.
- Integrating Nuclear Criticality Safety into Design – See ANS Winter 2015 Old/New Business Notes for meeting discussion and please refer to Action Items Update 2. In addition to the items discussed in the business notes, Kevin Reynolds stated that he will take over as primary author for this Whitepaper.
- NCSD Whitepaper Overview and Process Lifecycle – See ANS Winter 2015 Old/New Business Notes for meeting discussion please refer to Action Items Update 3.
- Successful NCS Mentorship Program – See ANS Winter 2015 Old/New Business Notes for meeting discussion please refer to Action Items Update 3.
- Nuclear Criticality Safety Evaluations – See ANS Winter 2015 Old/New Business Notes for meeting discussion refer to Action Items Update 1.
- Nuclear Criticality Accidents in the Workplace: Fact Sheet – See ANS Winter 2015 Old/New Business Notes for meeting discussion please refer to Action Items Update 3. John Miller resolved the minor (i.e., editorial) comments. The NCSD Education Chair and primary author reaffirmed the Whitepaper.

5. Tutorial on Plutonium and Uranium Chemistry

See ANS 2015 Winter Old/New Business Notes for meeting discussion refer to Action Items Update 4. It was determined that Howard Greenwood would need some additional assistance for this tutorial but it is not quite clear who would be available. It was mentioned during the meeting that having several contributing papers on the topic may be another option and that this tutorial should be postponed.

6. NCSD Survey

See ANS Winter 2015 Old/New Business Notes Action Items 5. At the meeting, Katherin Golougou stated she is finalizing the delivery mechanism for an updated NCSD survey since it was not possible to conduct the survey at the 2015 ICNC. After the survey data is gathered the Education Chair and others will start working on an Action Plan report.



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division

7. Chair Position

Alyse Scurlock will be assuming all NCSD Education Chair responsibilities at the conclusion of the 2016 New Orleans meeting.

8. Any Other Business

None.

9. Adjourn

The Education Committee Meeting was adjourned on time at 1:21 pm.



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division

APPENDIX B – Distributed ANS Winter 2015 Old/New Business Notes

ANS Winter Meeting 2015 Old/New Business Notes

Date: Sunday November 8, 2015
Time: 1:00 pm - 2:00 pm
Location: Marriott Wardman Park, Washington, DC

Why do we do white papers?

"In essence, they were established so that the division could fill holes and gaps in the standards with the idea that white papers may even eventually turn into standards themselves. Other purposes were to address issues confronting the community, to help disseminate best practices and lessons learned, and to provide any NCSO position statements."

Old Business:

- No updates.

New Business:

- For additional New Business see action item discussions with **New Information Added** in the title.

Action Item (1): **TAKEN FROM ANNUAL (SUMMER) 2015 MEETING MINUTES**

- The Nuclear Criticality Safety Evaluations whitepaper was distributed amongst the NCSO Education Committee and received no comments. The Nuclear Criticality Safety Evaluations whitepaper was sent for Executive Approval and failed to make it through that part of the approval process. It was determined that some additional improvements could be made on the white paper. The currently published whitepaper has some dated verbiage that had been carried forward in the new revision. John Miller has taken over authorship of the white paper since he was the source of several of the comments. Jason McGill has requested that Jerry Hicks withdraw the request for the Executive Committee to approve this whitepaper.

Action Item Update (1): **NEW INFORMATION ADDED**

- John Miller sent an updated draft of the Nuclear Criticality Safety Evaluations whitepaper to Jim Baker and Jim and John are still in the comment resolution phase.

Action Item (2): **TAKEN FROM ANNUAL (SUMMER) 2015 MEETING MINUTES**

- The Integrating Nuclear Criticality Safety into Design white paper was sent out to the Executive Committee and approved. The white paper is currently posted on the NCSO webpage for the 60-Day review. NOTE: Shortly after the meeting, the white paper made it through the 60 Day Review period with no comments.

Action Item Update (2): **NEW INFORMATION ADDED**

- The Education Chair requested to have the Executive Committee vote on the Integrating Nuclear Criticality Safety into Design white paper because he was not aware of any existing comments left to resolve after the 60-Day posting period.

Jim Baker stated the following via email "This paper suffers a number of defects. I have put several comments in the attached draft, which must be addressed before I would approve it. Moreover, it has a high "fog" index. That is, it has many big words & long sentences. This

1 | Page



APPENDIX B (cont.) – Distributed ANS Winter 2015 Old/New Business Notes

ANS Winter Meeting 2015 Old/New Business Notes

detracts from its worth as a teaching tool for new practitioners. I would urge the Education Committee to rewrite it with less fog. I did comment on a previous draft of this paper in May 2012, per my notes. Some of those comments were addressed, some not. I think we should be getting more input when something is posted on the website. Perhaps we need to advertise this process further among the community."

The Integrating Nuclear Criticality Safety into Design white paper should be revised to address Jim Baker comments. The Education Committee is currently seeking volunteer(s) to address Jim's comments and improve the white paper overall.

Action Items (3): TAKEN FROM ANNUAL (SUMMER) 2015 MEETING MINUTES

- During the 2015 ANS Annual (Summer) Meeting, Jason McCall will try to confirm with the NCSD Division Chair if the "NCSD White Paper Overview and Process Lifecycle" is ready for publishing since it has recently gone through the 60-Day review with no comments. Once the "NCSD White Paper Overview and Process Lifecycle" is published the two old white papers which were combined will be stored on the NCSD webpage and the updated affirmation process will commence.

Action Items Update (3): NEW INFORMATION ADDED

- The NCSD White Paper Overview and Process Lifecycle white paper has been published and the two old white papers which were combined are stored on the NCSD webpage.

Current Status of Successful NCS Mentorship Program white paper - Education Chair and Education Committee members have reaffirmed this white paper via email. The NCSD webpage still needs to be updated.

Current Status of Nuclear Criticality Accidents in the Workplace: Fact Sheet - John Miller has been sent several comments for review.

New Primary Authors: Kristan Wessels - Successful NCS Mentorship Program.

John Miller - Nuclear Criticality Accidents in the Workplace: Fact Sheet

Action Items (4): TAKEN FROM ANNUAL (SUMMER) 2015 MEETING MINUTES

- The Fundamentals of Uranium and Plutonium Chemistry Tutorial speaker search is coming to a close. Deb Hill found a willing speaker for the Uranium Chemistry portion who should be able to attend the ANS Annual 2016 Meeting (New Orleans). At this point the NCSD Education Chair is willing to move forward with conducting the Uranium Chemistry Tutorial only unless a speaker for the Plutonium Chemistry portion is found shortly.

During the meeting Deb confirmed the fact that she found a speaker for the Uranium Chemistry Tutorial. Several others in the Education Committee members spoke up about potentially helping out with the Plutonium portion but additional speakers were not formally agreed upon. Deb Hill, John Miller, and Jason McCall decided to meet after the Education Meeting to discuss the Uranium and Plutonium Chemistry Tutorial further. NOTE: Shortly after the meeting, ANS HQ was provided an initial 100 word summary for the Uranium and Plutonium Chemistry Tutorial. This tutorial is now called The Impact of Chemistry in Nuclear Criticality Safety Evaluations. This session(s) will take place during the 2016 ANS Summer Meeting (New Orleans).



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APPENDIX B (cont.) – Distributed ANS Winter 2015 Old/New Business Notes

ANS Winter Meeting 2015 Old/New Business Notes

Action Items Update (4): NEW INFORMATION ADDED

- The Education Chair has asked Deb Hill about the status of Howard Greenwood and the Uranium Chemistry Tutorial. Deb Hill stated that she will be contacting Howard Greenwood.

Action Items (5): TAKEN FROM ANNUAL (SUMMER) 2015 MEETING MINUTES

- The Education Chair discussed the NCSD Survey results. It was noted that the NCSD Survey lacked non-DOE participants. In order to improve non-DOE participation Katherin Golouglu stated that she will streamline the NCSD Survey, make it multiple choice, and present it at the 2015 ICNC. After the ICNC survey data is gathered the Education Chair and others will start working on an Action Plan report.

Action Items (5): NEW INFORMATION ADDED

- Katherin Golouglu was not able to get the survey completed by the ICNC meeting because of other commitments. It is thought that Katherin is working on an online survey, but this should be confirmed.

3 | Page

APPENDIX D – Student Conference Handout



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division



American Nuclear Society Student Conference 2016

Department of Engineering Physics
University of Wisconsin-Madison
1500 Engineering Drive
Madison, WI 53076



The University of Wisconsin-Madison ANS student section is excited to announce that we will be hosting the 2016 American Nuclear Society Student Conference. It will be hosted in the Madison Concourse Hotel, located in the heart of Madison near the Wisconsin State Capitol. The Student Conference plans to bring together 400 students and 150 professionals from across the country between March 31 and April 3, 2016 to discuss the latest technologies, research, and opportunities in the nuclear industry.

The theme of our conference is *Being a Critical Member of the Nuclear Industry*. In a nuclear reactor, a balance of the right conditions is necessary for the reactor to be "critical", or stable. As in a nuclear reactor, having a balance of many different qualities is also important for an individual to succeed in the professional world. Our theme is modeled after the Four-Factor Formula for nuclear reactor criticality, $k = \eta f p \epsilon$. We have defined our own "Four Factors", around which conference events will be focused: (η) nuclear opportunities, (f) forming our public image, (p) professional development, and (ϵ) entrepreneurship. These factors will be realized through series of technical sessions, hands-on workshops, and panels, and dinners that individually highlight a specific factor.

Organizers who sponsor our conference will be given myriad opportunities to engage with the next generation of nuclear engineers. These opportunities include talking to students at the career fair, interviews with potential employees, and dining with students during the networking dinner. Organizations who sponsor the conference have several sponsorship packages to choose from. The benefits associated with each are described below. Sponsorship of an event will be prominently displayed during the conference through signage and advertisement in our program, website, and conference app.

The core benefit of all sponsorship packages is attendance at the career fair. The career fair will take place all day Friday and Saturday morning of the conference. Each attending sponsor will have access to a six-foot long table to display material and set up posters. We can also make accommodations for companies with large posters to display. In addition, we will offer private interview rooms upon request, giving recruiters the chance to meet potential interns and employees face-to-face.

The Supercritical and Critical sponsorship packages come with designation as the sponsor of one of the three conference dinners. The dinners are focal points of the conference, where every attendee is present in one room. The Thursday night "Networking" dinner will take place at the Madison Concourse Hotel. The number and locations of the tables designated for each sponsor will be tied to its sponsorship package. Students will choose which company to sit with based on their interests, allowing professionals and students to interact in a less-formal environment. The Friday night Wisconsin-themed dinner will take place at the Monona Terrace and will be followed by a dance social with a DJ. The closing Saturday night awards dinner's theme is "Public Image" and will take place at the Concourse Hotel. Company representatives are encouraged to attend all three dinners to make the most impact on students.



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division



American Nuclear Society Student Conference 2016

Department of Engineering Physics
University of Wisconsin-Madison
1500 Engineering Drive
Madison, WI 53076



A summary of our available sponsorship packages is included on the following page. If your company has interest in being a sponsor for the 2016 ANS Student Conference at the University of Wisconsin-Madison, please contact us either by phone (608-572-7267) or by email at ANSStudentConference2016@gmail.com. We also encourage you to check out our website, <http://www.ansstudentconference2016.com>. Sponsorship will help make your company more visible to the nuclear engineers of tomorrow and will help them develop them into critical members of the nuclear industry. We hope you will help us make the 2016 ANS Student Conference the best yet!

Sincerely,

Three handwritten signatures in black ink.

Matthew Jasica, Kalin Kiesling, AJ Gross
General Co-Chairs
2016 ANS Student Conference
University of Wisconsin-Madison
608.572.7267

ANSStudentConference2016@gmail.com
<http://www.ansstudentconference2016.com/>



AMERICAN NUCLEAR SOCIETY

Nuclear Criticality Safety Division



American Nuclear Society Student Conference 2016

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Madison, WI 53076



Sponsorship Items

Item	Price (per line item)	Privileges
\$30,000		
Friday "Wisconsin" Dinner		Keynote speaker at company-named dinner and dance social
\$20,000		
Thursday "Networking" Dinner		Keynote speaker at company-named dinner
Saturday "Public Image" Dinner		
\$10,000		
Materials Science Instrumentation Workshop		Naming rights of hosted workshop
PyNE Tutorial Workshop		
Education & Curriculum Workshop		
Public Image Workshop		
Ethics Workshop		
Academia to Startup Panel		Naming rights of hosted panel
Thinking Beyond the Pressure Vessel Panel		
Developing Interdisciplinary Cohesion Panel		
Diversity in Nuclear Engineering Panel		
Nuclear Policy and Non-Proliferation Panel		
Fusion and Plasma Panel		
Materials Science Panel		
Medical Physics & Radiation Technology Panel		Naming rights of breakfast
Core Thermal Hydraulics V&V Panel		
Conference Breakfast (Thursday and Sunday)		
Conference Breakfast (Friday)		
Conference Breakfast (Saturday)		



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Nuclear Criticality Safety Division



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Summary of Benefits

Supercritical Sponsor: \$30,000+

- Sponsor of the Friday night "Wisconsin" dinner and dance social at Monona Terrace
- Full-page advertisement on the program's inside cover
- Advertising space on conference website and app
- Logo printed on t-shirts provided in registration bag
- Preferential location and multiple tables at the career fair
- Private interview rooms
- Preferential seating in the networking dinner

Critical Sponsor: \$20,000 - \$29,999

- Sponsor of the Thursday "Networking" or Saturday "Public Image" dinner at the Madison Concourse Hotel
- Full-page advertisement in the program
- Recognition on conference website and app
- Logo printed on one of the above registration bag items
- Preferential location and multiple tables at the career fair
- Semi-private interview rooms
- Preferential seating in the networking dinner

Fissile Sponsor: \$10,000 - \$19,999

- Sponsor one of the above \$10,000 line items
- Sponsor of one technical session track
- Half-page advertisement in the program
- Recognition on conference website and app
- Logo printed on one of the above gift bag items
- Preferential table location at the career fair

Fissionable Sponsor: \$5,000 - \$9,999

- Sponsor of one of the above \$5,000 line items
- Quarter-page advertisement in the program
- Recognition on conference website and app
- Inclusion of appropriate branded item for registration bags (provided by sponsor)
- Table at the career fair

Radioactive Sponsor: \$2,500 - \$4,999

- Table at the career fair
- Recognition in conference program
- Recognition on conference website and app

Contributor ≥ \$500

- Recognition in conference program



2016 Student Conference

Being a Critical Member
of the Nuclear Industry

Important
Details

March 31 - April 3, 2016
Madison, WI

ANSStudentConference2016.com

Conference Chairs:
AJ Gross
Matt Jasica
Kalin Kiesling

Follow us on Facebook!
www.facebook.com/ans2016sc

Follow us on Twitter!
[@ANSStudent2016](https://twitter.com/ANSStudent2016)

General Information

The 2016 ANS Student Conference will be in Madison, Wisconsin, from March 31st to April 3rd. This year's theme ***Being a Critical Member of the Nuclear Industry*** is inspired by the iconic Four-Factor Formula for reactor criticality, $k = \eta f p \epsilon$. We have defined our own "Four Factors" that students will explore at the conference to help them become critical members of the nuclear industry:

η Nuclear opportunities
 f Forming our public image
 p Professional development
 ϵ Entrepreneurship

Each of these factors will be explored through various technical sessions, hands-on workshops, panels, and dinners that individually target one of the four factors.

Call for Summaries, Call for Innovations, and registration will open shortly following the 2015 ANS Winter Meeting.

More information and updates can be found on the conference website ANSStudentConference2016.com.

Program Sneak Peak

- Innovation Competition where students can pitch any ideas for startups in the nuclear sector
- Tours of Fermi National Accelerator Laboratory, local nuclear startup companies SHINE Medical Technologies and Phoenix Nuclear Labs, campus tours of fusion and plasma facilities, the UW Nuclear Reactor, thermal hydraulics lab and more
- Panels on a variety of topics including Fusion and Plasma, Nuclear Policy and Nonproliferation, and Entrepreneurship
- Workshops including Argonne National Laboratory's Fast Reactor workshop and Material Science Instrumentation workshop as well as others focusing on ethics, education, and public image related to professionalism in the nuclear field

ANS Student Conference 2016
University of Wisconsin–Madison

Page 25 of 26



APPENDIX E – 2018 Topical

**2018 TOPICAL:
APPLICABILITY OF RADIATION-RESPONSE
MODELS TO LOW DOSE PROTECTION
STANDARDS**

Tri-Cities, Washington September 23-27, 2018

Why Now?

- For two decades, a major debate has taken place over the science supporting current radiation protection standards.
- Public and governmental response to radiological events raise serious questions regarding the appropriateness of existing standards.
- The rationale behind the LNT and biological response mechanisms needs careful review, new scientifically-based experience considered.
- Concerns over low dose response issues are beginning to be brought forward by regulators.
- Professional society leadership is both necessary and appropriate.

Why Here?

- Hanford site ANS and HPS sections have over 30 years successful experience hosting topicals.
- Significant nuclear radiation science initiated and developed locally.
- Knowledgeable personnel.
- Home of the Parker Foundation, B Reactor, Manhattan Project National Park, and supportive communities.
- Organizers have a long range vision coupled with high level of enthusiasm.

How Can your Division Help?

- Actively support & promote the topical.
- Contribute Members for the Technical Program Committee
- Publicize the Meeting in Division Publications

CONTACT INFO

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Assistant General Chairs:

- Wanda Munn – wimunn@aol.com
- Virginia Cleary-Ivanoff – vdcleary@gmail.com

Technical Program Chair

- Ron Kathren – kathren@bmi.net

