

American Nuclear Society

Nuclear Criticality Safety Division Newsletter



Spring 2007
<http://ncsd.ans.org>

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Randy Shackelford, Editor
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Message from the Chair

Every year at this time, the Nuclear Criticality Safety Division (NCSD) receives a set of metrics that provide an indication of the health of the division. The topic areas covered are: Division Meetings, Governance, Division Contributions to ANS, and Division Services to Membership. Within each topic area are four (4) specific metrics. Every year I am amazed at the contributions of our members on behalf of the NCSD. However this year, I was tasked with trying to list our accomplishments for input into the metrics, and I was astounded at how much members of the division contribute to the NCSD.

Some of the highlights included:

- Support of 5 to 6 technical sessions at two (2) ANS National meetings **every year** – For such a small division in ANS, we contribute a significant amount of the technical papers presented. This wouldn't happen without a dedicated membership willing to share their work with others so that the area of nuclear criticality safety would continue to improve.
- A continued increase in the division membership.
- Participation by members in the ANS Governance in many areas ranging from leading Topical and National Meetings to serving on the ANS Board itself.
- Working with other Professional Societies including the Energy Facility Contractors Group (EFCOG), the Canadian Nuclear Society and the Russian Nuclear Society in co-sponsoring meetings.
- The continued work in the ANSI/ANS-8 series of standards. Our Standards are very actively used by facilities as evidenced by the fact that a significant portion of the ANS revenue is from National Standards.
- The contribution to professional development of our members through tutorials, white papers, student support and now our NCSD Pioneers Scholarship.

The conclusion of the June meeting ends my term as NCSD Chair. As I talk with Division Chair counterparts, I realize how easy I had it because the members of the Division did all the work! My thanks go to the outgoing NCSD Executive Committee members: Adolf Garcia, Maria LeTellier, and Randy Shackelford. I have seen the slate of new officers and Executive Committee members and I know that the Division will continue to be strong in the years ahead.

Kevin Kimball
NCSD Chair

Nuclear Criticality Safety Division Executive Committee

The people who run our division:

2006-2007 Officers (Term Ending June, 2007):

Chair

Kevin Kimball, (865) 293-2639,
NISYS Corporation,
kkimball@nisyscorp.com

Treasurer/Finance Officer

Robert Frost, (423) 610-0249,
Nuclear Safety Associates,
robert.frost@nuclearassociates.com

Vice Chair/Chair Elect

Fitz Trumble, (803) 502-9615,
Washington Safety Management Solutions,
fitz.trumble@wsms.com

Secretary

David Erickson, (509) 373-6500,
Fluor Government Group,
dg_erickson@blueheron.us

Committee Members:

Term Ending June, 2007

Adolf Garcia, (208) 526-4420,
Department of Energy-Idaho,
garciaas@id.doe.gov

Maria LeTellier, (865) 531-7425,
C. S. Engineering,
cseletellier@comcast.net

Randy Shackelford, (423) 743-2504,
Nuclear Fuel Services, Inc.,
wrshackelford@nuclearfuelservices.com

Term Ending June, 2008

Lawrence J. Berg, (301) 903-0125,
Department of Energy-EM,
larry.berg@em.doe.gov

Thomas D. Burns, Jr., (703) 863-5807,
Defense Nuclear Facility Safety Board,
tomb@dnfsb.com

Charles D. Harmon, II, (505) 667-5940,
Los Alamos National Lab,
charmon@lanl.gov

New Members (Term Ending June, 2009)

Sedat Goluoglu, (865) 574-5255,
Oak Ridge National Lab,
gluoglus@ornl.gov

Sandra Larson, (865) 574-3401,
Nuclear Safety Associates,
sandi.larson@nuclearassociates.com

John Miller, (505) 665-2815,
Los Alamos National Lab,
jamiller@lanl.gov

NCSD Website

Check out the Division's website at: <http://ncsd.ans.org/>

Click on the mail icon (at the website) to let our webmaster, Bob Smith know if you have any suggestions.

Election Results (New Officers/Committee Members)

Congratulations to the following officers and committee members who will take office at the conclusion of the June, 2007 ANS Meeting in Boston:

Chair – Fitz Trumble

Vice Chair/Chair-Elect – David K. Hayes

Secretary – Bradley T. Rearden

Treasurer/Financial Officer – Robert L. Frost

Executive Committee – Peter L. Angelo, Donna M. D’Aquila, and Darby S. Kimball

Thanks to Outgoing Officers/Members

“Thank you” to the outgoing executive committee officers and members for a great job during your terms. The outgoing officers and members are as follows: Kevin Kimball (Chair), Fitz Trumble (Vice Chair/Chair-Elect), David Erickson (Secretary), Adolph Garcia (Committee Member), Maria LeTellier (Committee Member), and Randy Shackelford (Committee Member).

Upcoming Meetings (at a glance)

Dates and locations of upcoming ANS meetings are listed below:

Dates	Location
June 24-28, 2007	Boston Marriott Copley, Boston, MA (ANS Annual Meeting); http://www.ans.org/meetings/annual/
Nov. 11-15, 2007	Omni Shoreham Hotel, Washington, DC (ANS/ENS International Meeting); http://www.ans.org/meetings/docs/2007/wm2007-cfp.pdf
June 8-12, 2008	Disneyland Resort, Anaheim, CA (ANS Annual Meeting)
Nov. 9-13, 2008	Grand Sierra Resort, Reno, NV (ANS Winter Meeting)
June 14-18, 2009	Atlanta, GA (ANS Annual Meeting)
Nov. 15-19, 2009	Washington, D.C. (ANS Winter Meeting)
June 13-17, 2010	San Diego, CA (ANS Annual Meeting)
Nov. 14-18, 2010	New Orleans, LA (ANS Winter Meeting)

ANS Meeting Program Details

Lane S. Paschal, Program Chair

lpaschal@comcast.net

(270) 217-0548

June 24-28, 2007 (Boston, MA)

The **2007 ANS Annual Meeting** will be held June 24-28, 2007 at the Boston Marriott Copley in Boston, Massachusetts. There will be a total of three (3) sessions for the meeting and the DOE Nuclear Criticality Safety Program on Friday. The sessions are shown below. Program information can be found at: <http://www.ans.org/meetings/winter/>

- Data, Analysis, and Operations for Nuclear Criticality Safety – I, Wednesday, a.m.
- Data, Analysis, and Operations for Nuclear Criticality Safety – II, Wednesday p.m.
- Nuclear Criticality Safety Standards – Forum, Thursday a.m.
- DOE Nuclear Criticality Safety Program – Friday, 8:00 a.m.-2:00 p.m.

The following NCS-related committee meetings will also take place:

- NCS Education Committee – Sunday, 1:00-1:30 p.m.
- NCS Program Committee – Sunday, 1:30-2:30 p.m.
- NCS Executive Committee – Sunday, 2:30-4:00 p.m.
- N16 Committee – Monday, 1:00-5:00 p.m.
- ANS-8.1 Committee – Tuesday, 7:00-8:30 a.m.
- ANS-8.12 Committee – Tuesday, 3:00-6:00 p.m.
- ANS-8.20 Committee – Thursday, 7:00-8:30 a.m.
- ANS-8.21 Committee – Tuesday, 7:00-8:30 a.m.; Thursday, 7:00-8:30 a.m.
- ANS-8.26 Committee – Wednesday, 7:00-8:30 a.m.

ANS Winter Meeting and Call for Papers

Lane S. Paschal, Program Chair

lpaschal@comcast.net

(270) 217-0548

November 11-15, 2007 (Washington, DC)

The **2007 ANS Winter Meeting** will be held November 11th – 15th at the Omni Shoreham Hotel in Washington, DC.

The deadline for summary submission is June 8, and the Call for Papers for the meeting is available on the Internet at:

<http://www.ans.org/meetings/docs/2007/wm2007-cfp.pdf>

A total of five (5) sessions have been proposed for the meeting. Summaries describing the sessions are shown below.

1. Data, Analysis, and Operations for Nuclear Criticality Safety

The purpose of this session is to provide a forum for timely presentation of general issues in the area of nuclear criticality safety that are not covered in other special session topics. **Session Organizer:** Lane Paschal, Paschal Solutions, Inc., (270) 217-0548, lpaschal@comcast.net.

2. Nuclear Criticality Safety Standards Forum – Panel

Subcommittee ANS-8, Operations with Fissile Material Outside Reactors, meets to discuss various technical and administrative aspects of the approximately 20 national consensus standards under its purview. In addition to status and progress updates by representatives of individual working groups, formal presentations on the technical bases of numerical values such as subcritical limits and experiences with applications of particular standards are solicited. Agenda topics such as new and expanded standards are also encouraged. **Session Organizer:** Tom McLaughlin, LANL-retired, (505) 667-7628, tpm@lanl.gov.

3. Historical Critical Experiments Significant to Nuclear Criticality Safety – Contributed

The facilities to conduct experiments to provide the basic information necessary for the analysis of multiplying systems are being shut down. In a similar sense, the personnel that have direct experience with these measurements have retired, and many of them have died. This session will collect representatives from critical facilities from throughout the world to describe the details and results of selected experiments of historical significance. The facilities will include representatives from France, England, Russia, Japan, and Canada; in addition to the United States (Los Alamos, Oak Ridge, Richland, Rock Flats, and Sandia). **Session Organizers:** Richard Malenfant, LANL, (505) 821-5017.

4. NCS Program Improvements and Associated Metrics – Contributed

The goal of all NCS programs, both by good business practice and regulation is to constantly improve the quality of their program. In order to improve a program, systems must be in place to identify non-compliance issues. These issues arise from facility operations and regulatory requirements. Non-compliances must be tracked from the initial identification through implementation to operation. The metrics that track the number of non-compliances and the effectiveness of the corrections are essential to assessing the improvement of the program. The goal of this session is to share experiences and methods that have been used to assess the improvement of NCS programs. **Session Organizer:** Larry Wetzel, (434) 522-6580, llwetzel@bwxt.com.

5. ANSI/ANS Standard for Criticality Safety Engineer Training and Qualification - Contributed

The American Nuclear Society has recently issued a standard that defines the elements of a training and qualification program for nuclear criticality safety engineers. This standard, ANSI/ANS-8.26, *Criticality Safety Engineer Training and Qualification Program*, provides guidance for the content of training programs for those responsible for developing the analyses, controls and safety documentation for the safe handling of fissile materials. This session will begin with several presentations that explain the target audience for this standard, the

qualification levels defined in the standard, and the content elements of the training and qualification program. The presentations will be followed by a panel discussion during which members of the standard working group and the audience will exchange ideas on the implementation of the standard and how it relates to other criticality safety training requirements defined by regulatory bodies. **Session Organizers:** Sedat Goluoglu, ORNL, (865) 574-5255, goluoglu@ornl.gov and James Morman, (ANL), jamorman@anl.gov.

Cecil Parks Awarded Grade of Fellow

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The American Nuclear Society awarded the grade of Fellow to Dr. Cecil V. Parks. The grade of Fellow is the highest grade of ANS membership and is conferred upon members who have made outstanding contributions to the advancement of nuclear science and technology. Dr. Parks joined ANS as a student member in 1974. He is currently an active working group member of three working groups under the N16 Nuclear Criticality Safety Consensus Committee's Subcommittee ANS-8 on Fissionable



Materials Outside Reactors. Dr. Parks is the Nuclear Analysis Research & Development Group Leader at Oak Ridge National Laboratory. He received the grade of Fellow for exceptional technical leadership in guiding the development of the SCALE (Standardized Computer Analyses for Licensing Evaluation) code system from a prototypic to a rigorous and robust system used worldwide for fuel cycle and reactor analysis, and for contributions to developing consensus solutions to important nuclear safety programs.

ANS Fellows Recognized for Nuclear Criticality Safety Accomplishments

Mike Westfall
westfallrm@ornl.gov

Over the last six (6) years, the NCSA Honors and Awards (H&A) Committee has been organizing and/or assisting in the development of ANS Fellow nominations for candidates whose principal contributions are in the field of nuclear criticality safety. Since the initiation of the ANS Fellow status, a total of approximately 19 NCSA members have been recognized. This is likely to be on the order of one (1) to two (2) percent of the total NCSA membership during this period. Six (6) NCSA members were awarded ANS Fellow status in the last six (6) years. The increase reflects the organized effort to develop recognition for NCSA members.

The ANS Fellow Subcommittee promotes NCSD nominations by performing two (2) functions: 1) Stimulating nominations for NCSD members and assisting ANS local section leadership in developing the nomination package; and, 2) Responding to suggestions for nominations by developing the nomination package within the subcommittee. Often, these two (2) functions overlap.

The currently active ANS Fellows comprise the ANS Fellow Subcommittee. If you wish to suggest a potential candidate or need assistance in developing a nomination package, please contact Mike Westfall.

The following is a list of ANS Fellows with reputation for nuclear criticality safety professional orientation (a listing of all ANS fellows can be found at <http://www.ans.org/honors/fellows/>):

C. Les Brown	Thomas P. McLaughlin	Joseph T. Thomas
Dixon Callihan*	John T. Mihalcz	Hans Toffer
Hugh K. Clark	Cecil V. Parks	R. Michael Westfall
E. Duane Clayton	Hugh Paxton*	G. Elliott Whitesides
Calvin M. Hopper	Robert L. Seale	Robert E. Wilson
Ronald A. Knief	David Smith*	
Kenneth D. Lewis	William R. Stratton	*Deceased

NCSD Awards Dinner 2006 (Albuquerque, NM)

The annual NCSD Awards Dinner was again a success (see a few pictures at end of newsletter) and congratulations to Bob Wilson (Distinguished Service Award) and David Heinrichs (Technical Excellence Award) on their awards (refer to pictures and award information below). Thanks again to the following individuals and companies who sponsored the Dinner:

- * C. S. Engineering, Inc. *
- * Nuclear Safety Associates *
- * NISYS Corporation *
- * Richard Taylor *
- * Lee Dodds (for HLD Associates) *
- * Paschal Solutions, Inc. *
- * BWX Technologies, Inc. *
- * BWXT Y-12 *
- * Nuclear Fuel Services, Inc. *
- * Larry Wetzel *

**AMERICAN NUCLEAR SOCIETY
NUCLEAR CRITICALITY SAFETY DIVISION
DISTINGUISHED SERVICE AWARD**

Awarded to:

Robert E. Wilson

Bob Wilson's unparalleled role in the governance of the Nuclear Criticality Safety Division includes service on the NCSD executive committee, as NCSD secretary, and in two terms each as the NCSD Vice Chairman and Chairman. Additionally, Wilson has served as General Chairman and Technical Program Chairman of two of the important NCSD topical meetings. He served as a keynote speaker of a third topical meeting and as a lecturer in an ANS workshop on criticality safety. In the development of NCS standards, Wilson has served as a member of the ANS-8.1, ANS-8.5, and ANS-8.14 working groups and as a member of the N-16 Consensus Committee on NCS Standards. Bob Wilson's record of service to the Nuclear Criticality Safety Division stands as an outstanding example to the entire NCSD membership. The Nuclear Criticality Safety Division would not be enjoying its current success without the tireless efforts of Bob Wilson.



AMERICAN NUCLEAR SOCIETY NUCLEAR CRITICALITY SAFETY DIVISION TECHNICAL EXCELLENCE AWARD

Awarded to:

David P. Heinrichs

David Heinrichs is recognized for technical leadership in the establishment and conduct of the Department of Energy's "Hands On" criticality safety training course at the Lawrence Livermore National Laboratory. In response to a strong national need for maintaining this training capability, Heinrichs identified LLNL facility, material and personnel resources, modified the course curriculum to utilize these resources, and instituted the administrative procedures required to organize and conduct this course. From project initiation to the performance of the first series of course instruction, this was accomplished in a most expeditious and efficient manner.

Additionally, as a lead criticality safety specialist at LLNL, Heinrichs has performed a number of other technical roles in the Department of Energy's Nuclear Criticality Safety Program. These include the identification and evaluation of benchmark critical experiments, the identification of needs for improved differential nuclear data, and the demonstration of advanced analytical capabilities of LLNL neutron transport analysis software. Concurrent with this effort has been the development of the LLNL technical safety basis for the upcoming conduct of critical experiments at the Nevada Test Site.



