

## NUCLEAR INSTALLATIONS SAFETY DIVISION of the AMERICAN NUCLEAR SOCIETY

### Message From the Chair By Allen Camp

I will start by thanking Chip Martin, our immediate past Chair, for leaving NISD in excellent shape as one of the healthiest divisions in ANS. I will do my best to maintain Chip's high standards during my tenure. The NISD is made up of over 1600 ANS members devoted to the mission of keeping our nuclear facilities safe and secure so that the public can enjoy the full benefits of nuclear technology. In that regard, the nation, and in fact the world, is undergoing a nuclear renaissance driven by the need for clean, economical energy sources and an ever increasing level of trust in our ability to keep the public safe from potential hazards. We hope for as many as 30 new license applications in the U.S. over the next few years, while we continue to safely operate the current fleet of nuclear power plants and numerous other nuclear facilities. It is clear that the success of this nuclear renaissance will depend on our ability to maintain and even increase the confidence of the public and our government that we can safely operate these facilities. Trust is something that takes years to gain (it's been 28 years since the Three Mile Island accident), but only seconds to lose.

At the heart of our ability to maintain public trust is the performance of safety professionals like you. This is not the time for complacency about safety or to "just go along" because we don't want to slow down the rush to new plants. Rather, it is time to maintain the highest professional standards and to ask penetrating questions about the facilities that we are designing and operating. By doing so, you will both ensure public safety and help avoid the sort of mistakes that could derail the entire nuclear enterprise.

ANS and NISD offer many opportunities for you to interact with your colleagues to exchange ideas and further develop safety technology. We encourage you to join the various NISD activities when you renew your membership and participate in our topical meetings dealing with important safety issues. PSA '08 in Knoxville will be an extremely important and timely conference, and I encourage you to attend. If you would like to help shape our future technical meetings, please contact us regarding participation on the NISD Program Committee.

The NISD is also seeking future candidates for our Executive Committee, including increased participation by younger members. We have increased our support to the ANS Student Conference and have established a liaison to the Young Members Group. Please help us to mentor our newest colleagues on the importance of nuclear safety and their opportunities to participate in NISD. Other opportunities to engage with us can be found on our website, http://nisd.ans.org, and you can always contact me at alcamp@sandia.gov if you have any questions about NISD.

### Message From the Vice-Chair By Kevin O'Kula

As Allen Camp has pointed out, NISD's chair and vice-chair have their work cut out for them to achieve the level of success in the Division and in ANS as achieved through the leadership of Chip Martin and his predecessors. We will do our best but your involvement is essential.

A Harris Poll® of the Nuclear Installation Safety Division membership is not available, my own informal sampling of colleagues in the Division would indicate that the majority of us

believe that commercial nuclear sector is fully committed toward the long-awaited renaissance. Many in NISD are significantly involved in the safety aspects of the evolutionary and passive design certification, the combined operating license processes, the associated R&D, regulatory needs, as well as other supporting infrastructure needs to bring new plants online safely. Still other safety fronts are alive and well, and quite active, including GNEP, Nuclear Production of Hydrogen, and space applications to name just a few that were covered recently in this summer's National Meeting. Even if we are more observers than participants in these developments, Division members can still play a large role by finding opportunities to enter into in the discussion and by providing informed, technically sound input. There are several additional investments that we can make to enhance these actions, both now and in the near-term that I would like you to consider:

- Energize your local section. Our grassroots actions occur at the local section level. Become an active player in your local section, whether this is a "traditional" geographic section or one of the plant branches. NISD cannot expect the role of safety and its importance in future plants and current nuclear installation operation to be recognized if we view ANS as a national or topical meeting trip once or twice a year. Take the time to find out what's needed at the local level and volunteer
- Encourage the next generation in the nuclear safety area. Two thoughts come to mind here. First, engage members of ANS's Young Members Group (YMG, http://ymg.ans.org/). As our membership ages with the rest of ANS, working with this professional division should be seen as an opportunity to engage more new scientists and engineers that are transitioning from school to work to consider the safety arena. Secondly, strengthen your organization's involvement in a cooperative (co-op) education or intern program. If one doesn't exist, then work to begin one. These really are effective, and pay tremendous dividends to the employer and the individual. I learned much about our area, and my strengths and weaknesses, during assignments with American Electric Power and Westinghouse in the early 1970s.
- <u>Consider mentoring at the Winter Meeting.</u> Show a newcomer what the national meeting has to offer. The Division need mentors for the November Washington meeting and you can find out more at the meeting website (http://www.ans.org/meetings/winter/).

These are but a few ideas to think about; obviously many more could be discussed. Individually, I ask that you make this a banner year by contributing in some small way and revitalizing your role as a nuclear safety professional. Please don't hesitate to contact me with your comments and ideas (kevin.okula@wsms.com).

### Honors & Awards Committee By Jan Van Erp

Dr. David Okrent (University of California at Los Angeles) and Dr. Dana A. Powers (Sandia National Laboratories) will be the recipients of, respectively, the George C. Laurence Pioneering Award for Nuclear Safety and the Theos J (Tommy) Thompson Award for Nuclear Safety. These awards are scheduled to be presented at the ANS awards luncheon planned for Tuesday November 13, 2007 during the ANS Winter meeting



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in Washington, DC. Members of ANS, and in particular members of NISD, are urged to attend this awards luncheon to honor and celebrate these colleagues who have made major and valuable contributions to the enhancement of nuclear safety. Brief summaries of their careers follow.

David Okrent is Professor Emeritus / Research Professor of Engineering and Applied Science at the University of CA, Los Angeles. He worked at Argonne National Laboratory for twenty years, pioneering in fast reactor physics and safety. His honors and awards include: Guggenheim Fellow, 1961-62 and 1977-78, American Physical Society Fellow; and American Nuclear Society Fellow. He received the first Argonne Universities Association Distinguished Appointment Award in 1970, the first ANS Tommy Thompson Award for Nuclear Safety in 1980, and the ANS Glenn Seaborg Award in 1987. He was elected to the U.S. National Academy of Engineering in 1974 and held the Isaac Taylor Chair at the Technion-Israel Institute of Technology in 1977-78. Okrent served as Chairman and a member of the Statutory U.S. Nuclear Regulatory Commission's Advisory Committee on Reactor Safeguards from 1963-1987. In 1985, he received the US-Nuclear Regulatory Commission Distinguished Service Medal.

Dana A. Powers is Senior Scientist at Sandia National Laboratories where he has served in various functions including that of supervisor of the Reactor Safety Research Division and later acting Manager of the Nuclear Safety Department. His research includes the phenomenology of severe accidents and systems engineering for recovery and processing of defense nuclear wastes. He was promoted to Senior Scientist in 1997. Dr. Powers served from 1988 to 1991 as a member of the Department of Energy's Advisory Committee on Nuclear Facility Safety (ACNFS). In 1994, he was appointed to the Advisory Committee on Reactor Safeguards (ACRS) of the U.S. Nuclear Regulatory Commission where he served as Vice Chairman in 1997 and 1998 and as Chairman in 1999 and 2000, receiving the US-NRC Distinguished Service Award in 2001. He served on committees for the National Research Council involved with the safety of Department of Energy facilities. Dr. Powers is a Fellow of the American Nuclear Society..

### Program Committee By Ray Galluci

The NISD will sponsor five interesting sessions at the meeting in Washington, DC, as follows:

- Innovations in Probabilistic Risk Assessment, Tues. a.m.
- Consideration and Integration of the American Society of Mechanical Engineers and American Nuclear Society Probabilistic Risk Assessment Methodology Standards— Panel, Tues. p.m.
- Emerging Issues in Nuclear Facility Safety and Safety Culture, Wed. p.m.
- Current Issues in Reactor Safety, Thurs. a.m.
- Safety in Waste Burning and Fast Reactors, Thurs. p.m.

In addition, the NISD is conducting a *Professional Development Course* on Sunday, November 11, 2007, from 9:00 a.m. to 5:00 p.m. in the Capitol Room. This is intended as a Severe Accident Primer for young engineers. The course will focus on the specific aspects that led to the accident at the Three Mile Island-2 plant, the behaviors during the severe accident as

well as those actions and phenomena that stabilized the accident condition enabling the molten core material to be quenched. In describing the major elements of the accident progression, the specific features addressed cover almost the entire spectrum of issues to be considered when evaluating severe accidents for any design. Complete information regarding the course is available at http://www.ans.org/meetings/docs/2007/wm2007-prelim.pdf.

At its regular meeting on Sunday the Program Committee will be planning sessions for the next Annual Meeting and welcomes suggestions from all concerning sessions that would be of interest and use to the membership. The NISD Executive and Program Committees are always seeking new members who are interested in actively participating in the work of the division. This is your chance to influence the future direction of the division and the content of technical sessions at future ANS meetings. It is also an excellent way to increase your visibility among nuclear safety professionals. Any NISD member who is interested in joining either committee please contact Ray Gallucci (rhg@nrc.gov), or attend the next meeting in Washington, D.C.

### New Topical Meetings Coordinator is Sought By Kevin O'Kula

Any NISD member that would be interested in serving as the Topical Meetings Coordinator is asked to contact either Kevin O'Kula (kevin.okula@wsmscom) or Ray Gallucci (rhg@nrc.gov).

# Probabilistic Safety Assessment 2008 (PSA '08)

The Nuclear Installation Safety Division will continue its series of topical meetings on probabilistic safety assessment with PSA'08 to be held in Knoxville, TN, September 7-11, 2008 at the Knoxville Hilton Hotel. Dr. Robert Budnitz will be the Honorary Chairman. George Flanagan is the general chairman for the topical meeting. David Johnson is the US Technical Program Committee (TPC) Chairman and is calling upon many of the members of the Division to help organize sessions. Overseas co-chairs for the TPC include Tadakuni Hakata and Pekka Pyy. The web site for PSA'08 can be accessed at http://meetingsandconferences.com/psa2008/. The Call for Papers can be directly accessed at http://meetingsandconferences.com/psa2008/call.html. A copy is provided as the last page in this newsletter

### Scheduled NISD Meetings

All NISD members are welcome to attend the following NISD committee meetings at the November 2007 Meeting in Washington, DC:

• Executive Committee: Monday, 5:00 P.M. – 8:00 P.M.

LOCATION: Parlor 2

Program Committee: Sunday, 7:30 P.M. – 11:00 P.M.

LOCATION: Parlor 1

The Executive and Program Committees invite NISD members to express their interest in serving on those committees, particularly by participation in one or both of the indicated meetings.

Members may also wish to attend the Honors & Award Luncheon on Tuesday November 13, 11:30am-1:00pm in the



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Blue Room. Tickets can be purchased in advance or on-site at the ANS Registration Desk for \$54.

## Safety & Technology of Nuclear Hydrogen Production, Control and Management

The NISD and the Technical Program Chair Kevin O'Kula wish to thank all members who participated in authoring papers, technical review and running the sessions during the June 2007 Embedded Topical on the Safety and Technology of Nuclear Hydrogen Production, Control and Management. Sixty-one papers and four panel sessions were provided during the meeting with participation from ten countries, nearly all of the national laboratories, and fifteen universities. We were very fortunate to have an outstanding opening plenary featuring Jeff Serfass of the National Hydrogen Association, Paul Kruger of Stanford University (presented by his son, Louis), Carl Sink of DOE's Nuclear Hydrogen Initiative, Steven Sherman of INL, and Charles Forsberg (presented by Steve Herring). A special issue of Nuclear Technology is planned for 2008 that will feature a collection of the top papers from the topical.

#### **NISD** Website

The NISD Website may be accessed directly at <a href="http://nisd.ans.org">http://nisd.ans.org</a> or indirectly at <a href="http://www.ans.org">http://www.ans.org</a>.

#### **NISD Officers and Committees 2007-2008**

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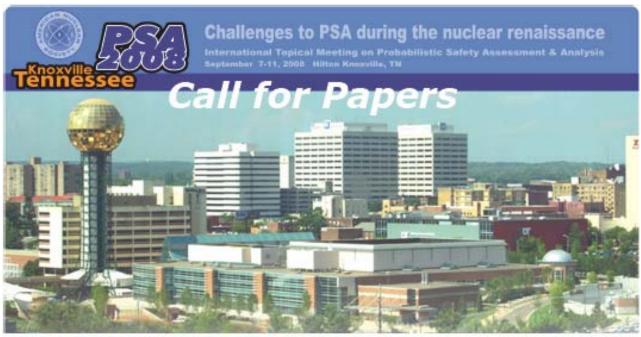
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### NUCLEAR INSTALLATIONS SAFETY DIVISION of the AMERICAN NUCLEAR SOCIETY



#### PRELIMINARY TECHNICAL SESSIONS TOPICS

PSA Technology

Advanced PSA Technology

Computer Codes

Human Reliability Analysis

Common Cause Failures

Balance of Plant Modeling

Instituitional Issues

Risk Informed Regulation & Licensing

Low Power / Shutdown PSA

Challenges for PSA Community (future man-

power)

SDP Issues

PSA - Related Standards and Regulatory Guides

Safety Culture & Organizational Fators

Spent Fuel & Rad Waste Issues

Transportation

Storage

Plant Security

Risk Informed Plant Security

Public Issues

Safety & Risk Perception

Safety & Risk Communication

Managing for Safety

Accident Analysis

DEADLINES

September 14, 2007

Indicate intention to attend/present

January 18, 2008

Electronic submission of summaries

February 29, 2008

Author acceptance notification June 27, 2008

Submission of full papers

Oak Ridge National Laboratory

E-mail: flanagangf@oml.gov

August 7, 2008

George Flanagan

(865) 574-8541

Early registration & Hotel reservation

Level 2/Level 3 Internal Events

Natural External Events

Man-Caused External Events

Fire PSA and NFPA 805

Operational Issues

Integrated PSA

Lessons Learned

Best Practices

Configuration Risk Management

Reliability Centered Maintenance

Generation Risk (All operating modes) Non-Reactor, Non-Nuclear Applications

Chemical and other Industral Applications

Transportation Risks

NASA and Space Applications

Advanced Nuclear Systems

Generation IV Reactors

Heavy-Metal Cooled Reactors

Pebble Bed Reactors

new LWRs

Space Reactors

#### SUMMARY PREPARATION INSTRUCTIONS

Describe new and significant work

Use 300-400 words

Electronic submission in Adobe Acrobat (pdf) or MS-Word format

Additional instructions will be posted on psa2008.org

**ANS Sponsoring Division** 

Nuclear Installation Safety Division (NISD)

ANS Local Section Host Oak Ridge-Knoxville Section

For more information, please go http://psa2008.org or contact:

Mike Muhlheim Oak Ridge National Laboratory

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ABS Consulting Inc.

#### ORGANIZING COMMITTEE

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General Chair George Flanagan, ORNL/NSTD

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Technical Program Chair David H. Johnson, ABS Consulting

Tech. Prog. Co-Chairs Tadakuni Hakata, MHI Pekka Pyy, NEA

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Hospitality Arrangements Deborah Flanagan

Publicity

Mike Muhlheim, ORNL/NSTD

Finance Larry Proctor, ORNL/RRD

**Publications** Charles Ramsey, ORNL/RRD

Registration Mark Linn, ORNL/RRD



Challenges to PSA during the nuclear renaissance