1993 Marx Isaacs Award Recipient

NEWSLETTER

Volume 15, Number 1 Winter 2006

American Institute of Chemical Engineers Nuclear Engineering Division

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Farewell, Nate

The Nuclear Engineering Division bids a fond farewell to our own Nathan Chipman. Nate was a longtime member of AIChE and NED, and just a couple of years ago he was recognized as an AIChE Fellow. He also received our division's Robert E. Wilson Award at about the same time.

The late Nathan Chipman (at left) with Charles Forsberg, then-AIChE President Elect John Chen, and Randy Robinson at the 2005 Atlanta meeting. Chipman was the Wilson Award winner in 2004, Forsberg in 2005 and Robinson in 2003.

Then-NED chair Bill Rhodes sent the following message upon learning of Nate's death:

> *I regret to inform you of the recent passing (4:30 p.m. on October 11, 2005) of Dr. Nathan Chipman, a long-standing member of the AIChE Nuclear Engineering Division.*
>
> *Nate was presented the NED Robert E. Wilson Award at the 2004 Spring American Institute of Chemical Engineers (AIChE) meeting in New Orleans. Nate presented the Robert E. Wilson award to Charles Forsberg at the 2005 Spring AIChE meeting in Atlanta. The photo (page 1) shows Nate, Charles Forsberg, AIChE-President Elect John Chen, and the 2003 NED Robert E. Wilson awardee, Dr. Randy Robinson, at the 2005 Atlanta meeting.*
>
> *Dr. Chipman was very well respected for his outstanding chemical engineering contributions to the nuclear industry in the areas of management of spent nuclear fuel, special nuclear materials, high-level waste, and education of chemical engineers. AIChE President William Byers spoke at the 2004 Robert E. Wilson award luncheon and praised the many achievements of Nate, describing him as a role model for future generations of aspiring chemical engineers and educators. President Byers reminisced about Nate's leadership role in NED "in his formative years" and noted that Nate had a special place in his heart for students, with education being his prime passion in life.*

Bill Byers also expressed the following thoughts on Nathan:

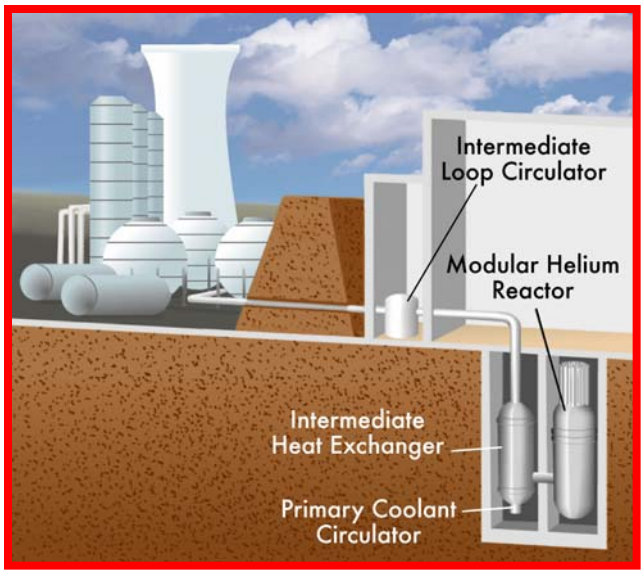
> *I was stunned and saddened to learn of the passing of Nate Chipman. I first met Nate in 1997 when I was assigned to serve as liaison between the AIChE's Board of Directors and the Nuclear Engineering Division. Nate was one of the first NED leaders to welcome me to their meetings and, from that time on, he went out of his way to make me feel welcome at NED meetings and social events. Over time, I got to know Nate as a researcher, a teacher, an advocate for nuclear engineering and a supporter of AIChE. He has represented the importance of our profession in nuclear technology. AIChE is both the greater for his dedication and the lesser for his absence. I will miss him; I'm glad to have known him.*

Former NED Chair Bob Wham said that Nate "was always very enthusiastic and helpful. He leaves a significant void and will be missed." Former Chair Luis Canas said that he "did not become aware of Nate's magnificent career until he was appointed as fellow member of AIChE (Nate was rather humble about his accomplishments)."

Please join us in mourning the loss of our friend and colleague, Nathan Chipman. ■

AIChE and NED Go to Orlando

You're invited to join AIChE and the Nuclear Engineering Division at the AIChE Spring 2005 National Meeting, to be held April 23 - 27 at Disney's Dolphin Hotel, near Orlando, Florida. The AIChE NED has traditionally gathered every year at the Spring Meeting. Even though we had a full set of NED sessions for the first time at an Annual Meeting in 2005, the overwhelming increase in research and development efforts in hydrogen storage and production and in nuclear waste management has allowed us to support sessions at both meetings. The highlight of the NED program this spring is the Hydrogen Topical Conference, which is being cosponsored with the Research and New Technology



Nuclear Hydrogen Production Plant

Committee, the Separations Division, and the Sustainability Engineering Forum. NED is also sponsoring a session on recent advances in the treatment of nuclear waste.

We understand that this year's Spring Meeting will feature a distinguished speaker, Secretary of Energy Dr. Samuel W. Bodman, whose leadership has a direct impact on what most of us do day in and day out. While we have no further information at this point, you should be able to find the specifics in the Meeting Program on the AIChE web site when the program is finalized. We are also pleased to let you know that one of the Hydrogen Topical speakers will be Steven G. Chalk, Program Manager for DOE's Hydrogen, Fuel Cells & Infrastructure Technologies Program. The title of his paper, which will be presented at the Topical's Plenary Session, is "Challenges and Benefits of a Move Towards Hydrogen Fuel."

Please check the Meeting Program on the AIChE 2006 Spring Meeting web site at http://www.aiche.org/Conferences/SpringMeeting/index.aspx for more information. Once again, the AIChE will be producing an overall Spring Meeting proceedings CD-ROM. This one is expected to be a two-volume set and will include papers from all topical and non-topical sessions plus papers from the Fifth World Congress on Particle Technology. The purchase price is $90. ■

Future Meetings

Additional upcoming AIChE meetings are listed below. NED will be presenting technical sessions at both the spring and fall meetings this year, so make your plans now!

- ***2006 Annual Meeting:*** November 12 through 17, San Francisco Hilton
- ***2007 Spring National Meeting:*** Houston
- ***2007 Annual Meeting:*** November 4 through 9, 2007, Salt Lake City

More information on these and other future AIChE meetings is available on the AIChE Conferences web page at http://www.aiche.org/Conferences/.

Also, NED will be cosponsoring sessions at SERMACS, the Southeast Regional Meeting of the American Chemical Society. This is the largest ACS regional meeting and will be held in Augusta, Georgia, next fall. See http://acs-sr.home.mindspring.com/SERMACS/index2.htm. ■

Wilson Award Presentation Moving to Annual Meeting

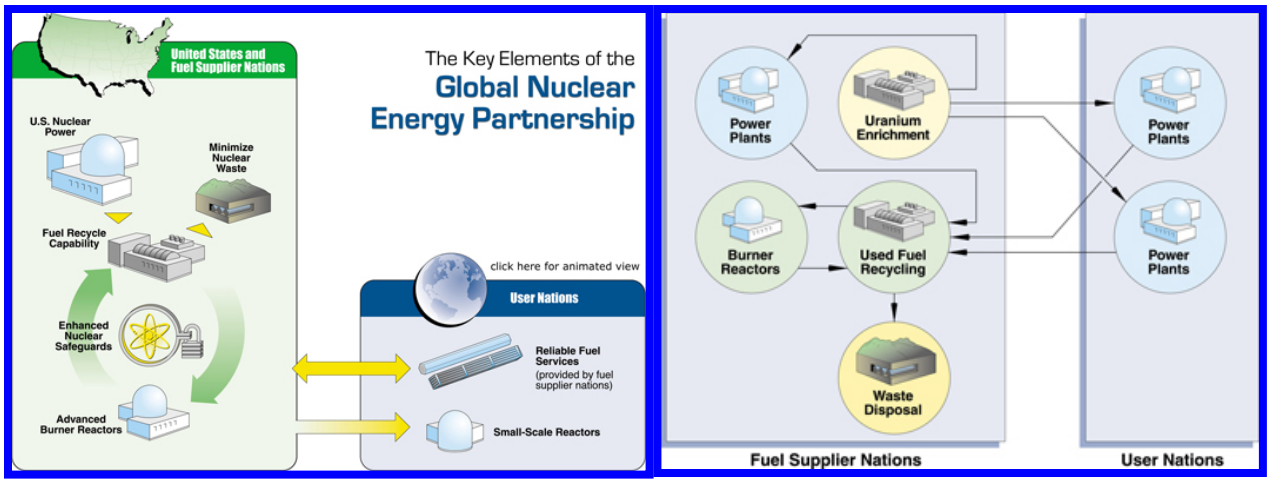
Effective this year, the NED's Robert E. Wilson Award will be presented at the Annual Meeting in November, rather than at the Spring National Meeting as in recent years. Please submit your nominations for the award to Paul d'Entremont by June 1, 2006. Nomination forms and information on this and other AIChE awards are available at http://www.aiche.org/About/Awards/index.aspx. ■

Message from the Chair

Bond Calloway

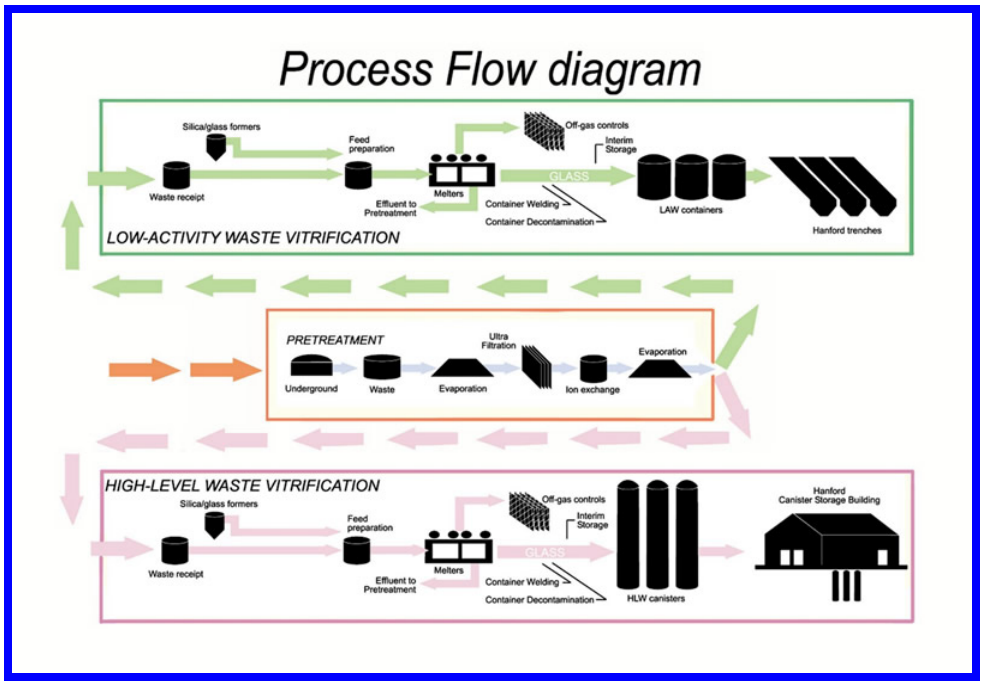
Wow! NED is on the move! These few short words express what has happen to NED over the last several years. I am proud to report that we will be hosting three meetings for our membership this year (AIChE Spring and Fall meetings, and SERMACS - see articles on pages 2 and 3). President Bush's energy initiatives have allowed the NED to expand the division's role in supporting the nation's energy-related research. The NED hydrogen program started by Charles Forsberg has grown from one session at the Spring conference back in 2002 to two annual meetings that were held last year. Way to go Charles! The NED has been requested to take the lead on hydrogen research programming by the AIChE Research and New Technology Committee. The NED will continue to focus programming efforts on the President's Hydrogen and Energy Initiatives. NED Vice Chairman - Energy Programs, Max Gorensek, will lead our hydrogen and energy programming efforts.

Recently, President Bush announced his Advanced Nuclear Fuel Cycle Initiative and Global Nuclear Energy Partnership (GNEP, http://www.gnep.energy.gov/). The AFCI 2007 budget request is over $240 million and will advance the state of the art in nuclear fuel reprocessing. The NED expects to see a large increase in AFCI R&D for the 2006/2007 time period and has focused efforts toward programming in this area for the upcoming year. NED Vice Chairman-Advanced Fuel Cycle Stuart Arm will lead our efforts in this nationally and internationally significant program.



Hanford's vitrification plant (Waste Treatment Plant) could cost more than $10 billion before it's ready to begin treating radioactive waste in the spring of 2017, according to a new report released by the DOE (http://www.hanfordnews.com/news/2006/story/7429569p-7340510c.html). The new estimate puts the cost at almost $8.8 billion. But it does not include an undetermined fee for Bechtel or an allowance for uncertainties in the project that likely would be the responsibility of the Department of Energy. Bechtel estimated those risks at nearly $1.8 billion, which would bring the cost without the contractor fee to $10.5 billion. Other factors driving the cost increase include solving science problems for the first-of-a-kind plant, increased costs for labor and materials, design changes that have required more construction material, and more contingency money. Currently, the DOE is sponsoring several

project and R&D review groups to determine the best way forward. NED leadership continues to monitor these developments.



Hanford's Waste Vitrification Plant

Savannah River Site and Idaho cleanup projects are also encountering some delays due to technical and regulatory issues. Additionally, the government is sponsoring important new research that will convert the nation's excess plutonium into an immobilized waste form. The plant, if built, will be located at the Savannah River Site. We continue to see a large turnout of research directed toward the environmental aspects of nuclear waste management. NED will partner with AIChE's Environmental Division to host several environmental sessions next fall in San Francisco. NED Vice Chairman-Environmental Programs, Dan Lambert, will lead this effort as well as lead our efforts at programming for the SERMACS conference in Augusta, Georgia.

I would like to thank all the volunteers in our organization for making NED what it is today. Through the effective leadership of Bill Rhodes, our past chairman, this division has continued to serve its members well and has grown through his strong and enthusiastic leadership. Finally, if you cannot go to a conference, our webmaster Gene Daniel has posted the 2005 Annual conference papers on our web site, http://www.aiche-ned.org/. We will continue this practice and we would like to thank Gene for all his hard work.

The BEST is YET to Come!

Bond

Contributions to Newsletter Welcome from All NED Members

NED welcomes contributions from all members for future editions of this newsletter. Potential topics include the following:

- Profiles of outstanding members
- Industry news
- News from your company
- Local section news
- DOE site news
- Relevant political or regulatory developments
- Engineers' Week activities
- Any other topics of potential interest to your fellow members

Please send your ideas or contributions to newsletter editor Keith Hampton via e-mail at bryan_k_keith_hampton@rl.gov. ■

Three New Vice Chairs for NED

The NED will have three Vice Chairs this year. Max Gorensek, Vice Chair for Energy Programs, will focus his efforts on energy-related topics and the hydrogen economy. Dan Lambert, Vice Chair for Environmental Programs, will focus his efforts on the environmental aspects of the nuclear energy and waste management industry. Stuart Arm, Vice Chair for Advanced Fuel Cycle, will focus his efforts on the President's Advanced Fuel Cycle Initiative. We now have three Vice Chairs primarily due to the growth in our division's programming efforts for 2005 and 2006. We will be hosting technical sessions at three meetings this year (AIChE Spring and Annual Meetings and SERMACS; see article on page 3). The role of Vice Chair allows us to recognize the significant accomplishments of the volunteers associated with these conferences. Additionally, the role of Vice Chair allows our division to tap other financial resources which will allow more of our members to attend AIChE conferences. ■

NED Contacts

Executive Committee

- CHAIR: Bond Calloway, Savannah River National Laboratory, (803) 819-8412
- VICE CHAIR, ADVANCED FUEL CYCLE: Stuart Arm, Pacific Northwest National Laboratory, (509) 376-5040
- VICE CHAIR, ENERGY PROGRAMS: Max Gorensek, Savannah River National Laboratory, (803) 725-1314
- VICE CHAIR, ENVIRONMENTAL PROGRAMS: Dan Lambert, Savannah River National Laboratory, (803) 725-5276
- SECRETARY-TREASURER: Ronald Denney, Bechtel BWXT Idaho, (208) 526-3102
- PAST CHAIR: William Rhodes, Savannah River National Laboratory, (803) 208-3001
- CTOC LIAISON: Jack Watson (retired)

Nominating Committee

- CHAIR: Paul d'Entremont, Westinghouse Savannah River Company, (803) 208-8727
- R. E. WILSON AWARD: Paul d'Entremont, WSRC, (803) 208-8727

Programming Committee

- CHAIR: Ronald Denney, Bechtel BWXT Idaho, (208) 526-3102
- NUCLEAR HYDROGEN GENERATION AND APPLICATIONS: Charles Forsberg, Oak Ridge National Laboratory, (865) 574-6783

Newsletter

- EDITOR: Keith Hampton, Fluor Hanford, (509) 373-1239

Web Links

- NED: http://www.aiche-ned.org/
  - Webmaster: Gene Daniel
- AIChE: http://www.aiche.org/