

Operations and Power Division

SPRING 2007



You are invited to attend...

"It's All About the People: The Future of Nuclear"

June 24-28, 2007
Boston Marriott Copley Place
Boston, MA

UWC 2007 Planning
Sunday, June 24, 2007
12:00 – 12:30 PM, Hyannis

OPD Program Committee
Sunday, June 24, 2007
12:30 – 2:30 PM, Salon B

New Construction Working Group
Sunday, June 24, 2007
2:30 – 4:00 PM, Salon B

OPD Executive Committee
Sunday, June 24, 2007
4:00 – 6:00 PM, Salon B

These meetings are open to all OPD members, and everyone is encouraged to attend.

See Our Website at ...
OPD.ANS.ORG

2007 Utility Working Conference
August 5-8, 2007
Amelia Island, FL

Winter Meeting
"Making the Renaissance Real"
November 11-15, 2007
Washington, DC

From Your Chair Harold Stiles



Dear Colleagues and Friends,

It seems to me that the talk of a nuclear renaissance is creating opportunities for a richly rewarding experience of which we all can be part!

After a long drought of near indifference, young people seem to be discovering a renewed interest in nuclear power. Apparently motivated by a genuine concern for their future and their environment, they are actively seeking creditable information about nuclear science and technology. Suddenly, what you know seems more valuable!

I recently became aware of this phenomenon when, within just a few days, I was twice the object of this youthful curiosity. As I was going about my normal routine, some obviously sharp high school students asked me, on different occasions, about nuclear careers. Although I've known these young people for many years, this struck me as odd because I didn't realize that they even knew that I worked in the nuclear industry.

These young people wanted my advice on which colleges they should attend and which courses they should study. We talked for some time about many different topics related to nuclear science and engineering. I shared my thoughts, and ... these young people were surprisingly attentive. They didn't look over their shoulders for their friends or shuffle their feet as if preparing to run away at the first pause in the conversation. Instead, their young eyes positively brightened when we touched on fusion power and space applications. I had captured their imaginations. We ended with promises from me to put them in touch with others who could get them more information.

Later, in pondering the "oddness" of these events, I realized that there had been earlier occasions to which I had (at the time) attributed nothing special. For example, other young people had recently approached me with questions about opportunities in the nuclear navy. And, within the past month, I had received an email through the ANS website (from what I took to be a young person) concerning the education and experience requirements for becoming a reactor operator. When I considered all these individual contacts together, I concluded that I was probably part of a larger trend.

From my perspective, I can't imagine a more gratifying experience than having a young person ask you to share your

life's experiences. I urge you to make yourself available to experience it.

For example, during Engineer's Week, I spoke about nuclear power to several 7th grade science classes. In a series of 50-minute presentations, I talked about nuclear reactions, fuels, radiation, reactor operations, and waste. I also had a couple of "show-and-tell" props to pass around. The things that impressed me were how much the students already knew and how receptive they were to what I had to say. They asked great questions, laughed at the right points, and lingered briefly after the bell rang. I had a wonderful time! And, you can too!

I believe that other young people like these are looking for you. They want to hear what you have to say. It's time to make yourself available to make yourself known.

Program Committee By Preston Pratt



Chair – **Tom Remick**
(thomas.remick@sce.com)

Vice Chair – **Preston Pratt** (PPPratt@pplweb.com)

In March 1776, with the scope of the colonist's resistance expanding and the Continental Congress pressing for action, General George Washington prepared his army to face Britain's General William Howe in Boston Massachusetts. Despite having a small force and significant troop turnover leading up to the encounter, Washington and his staff developed a bold plan to capture the unguarded high ground at Dorchester Heights. The whole army worked together, swiftly erecting fortifications from which to defend their position.

The hard work and plans paid off. Almost before the British were aware of Washington's activities, he and his army had created a stronghold. General Howe, fearing a repeat of the previous year's costly charge on Bunker Hill, left Boston without fighting, marking an end to British control of the city.

In many ways, the Nuclear Industry's position parallels that of Washington's, 231 years earlier. Demand for energy, concern over carbon emissions, and unstable fossil fuel prices are creating a void only Nuclear seems capable of filling. The Nuclear Regulatory Commission has issued several Early Site Permits, and expects to receive the first application for a new reactor this year. Applications for as many as 30 more reactors may follow.

While the nuclear industry seems poised to expand, the relatively small nuclear workforce is aging. This will result in large workforce turnover leading up to the largest Nuclear Industry growth in the past three decades.

Much like Washington and his staff, to meet our challenges, we will need bold plans, focused around our most important asset – people.

The theme of the American Nuclear Society's annual meeting this year is, appropriately, "It's All About the People: The Future of Nuclear." Meeting the demands of the future will not only require innovative training and development of our current personnel, but also attracting and cultivating future talent. It, too, will require a realistic understanding of the challenges that lie ahead. This year's technical sessions deal directly with these challenges and develop the framework for how to overcome them. Highlights by day are as follows:

Monday

- Current Topics for Reactor Engineers.
- Challenges for the Next Nuclear Power Plants.
- Revitalizing the Supply Chain (General Co-Chairs' Special Session).

Tuesday

- Perspectives on Nuclear Engineering Education from Current Students and Recent Graduates.
- Creating Certainty in New Nuclear Plant Construction
- Probabilistic Safety Applications
- Generic Safety Issue 191: Update and Developments on Containment Sump Performance.
- Climate Change: What Part Does Nuclear Energy Play?
- Nuclear Power 2010 Update.

Wednesday

- Innovations for the Next Generation of Nuclear Plants.
- Environmental Aspects of New Site Selection.
- The Aging Plant/Aging-Changing Workforce.
- Updating the New Reactor Licensing Infrastructure.
- Improvements and Innovations in Spent-Fuel Storage.
- Human Factors and Considerations in New Plant Design.

In addition to the technical sessions, evening events will be held at Fenway Park and the Museum of Science. There will also be Spouse/Guest tours of Boston and of Plimoth Plantation. On Thursday, there is a technical tour of the MIT Nuclear Reactor Laboratory and Plasma Science and Fusion Center.

When we look back at the event in Boston in March 1776, Washington's success seems inevitable. During Washington's time, the outcome was questionable. Today the Future of Nuclear seems promising, with huge potential; however, lots of hard work remains. Future generations may some day look back at the events of this year's annual meeting in Boston and point to it as a pivotal moment in our history with the same sense of inevitable success. I hope you will be there June 24-28 to participate. Besides being a part of the future, you might just see some of the past.

2007 Utility Working Conference

By **Scott Soper** (shsoper@southernco.com)

The 14th annual Utility Working Conference (UWC) will be held this year from Sunday, August 5th through Wednesday, August 8th at the Amelia Island Plantation, Amelia Island, Florida. The program is currently being developed and you should be receiving the Preliminary Program in a few weeks.

The theme of this year's conference is "The Future Begins Now". The conference will focus on sustaining operational excellence with the challenges of expanding the nuclear fleet. The General Chair of the Conference will be **Jeff Gasser**, Executive Vice President and Chief Nuclear Officer of Southern Nuclear Operating Company.

The plenary session, themed "Staying Focused", to be held on Monday morning, will have a keynote address from the Honorable **Dr. Dale Klein**, Chairman of USNRC. In addition, other featured speakers include **KP Lau**, Sr. Policy Advisor of the Senate Committee on Energy and Natural Resource, **Chris Crane**, President and Chief Nuclear Officer of Exelon, and **Michael R. Kansler**, President of Entergy Nuclear Operations.

The special session, themed "Expanding the Fleet", to be held on Tuesday afternoon, will involve several panelists - **Buzz Miller**, Senior Vice President Nuclear Development of Southern Nuclear Operating Company, **H. Brew Barron**, Group Executive and Chief Nuclear Officer of Duke Energy Corporation, **J. Joseph Sheppard**, President & Chief Executive Officer STP Nuclear Operating Company, **Luis Reyes**, Executive Director for Operations, USNRC; and **Carol Berrigan**, Director of Industry Initiatives, NEI. The panel session will be moderated by Southern Nuclear Operating Company's CNO and the UWC General Chair, Jeff Gasser.

Due to the renaissance of nuclear power, this year's conference has been expanded to include a 6th session on Wednesday afternoon covering New Plant Licensing.

Break out technical sessions will be held Monday afternoon, Tuesday morning and Wednesday morning. This part of the program includes 9 tracks: Engineering (includes Equipment Reliability and Configuration Management), Operations, Work Management, Regulatory Relations, Executive, Performance Improvement, Probabilistic Risk Assessment, Quality Assurance/Oversight and Nuclear Asset Management.

The conference will begin the morning of Sunday, August 5, with a golf match for interested individuals and parties. Registration will begin Sunday afternoon and a kick off dinner will be held Sunday evening.

For additional information concerning the conference and registration, please visit www.ans.org/meetings and page down to the utility working conference or contact the Technical Program Chair, Scott Soper at 205-992-7045.

Utility Working Conference – Root Cause Training

OPD member **Bill Corcoran** will conduct a full-day Root Cause Analysis Training Workshop at Amelia Island, Florida following the Utility Working Conference. This will be the eighth root cause analysis training workshop that **Bill Corcoran** has provided for the American Nuclear Society.

Students and Young Members Committee

Sophie Gutner, Chair (sophie.gutner@dom.com)

OPD is a strong supporter of student activities. In addition, to establishing an annual budget with \$10K to support student participation in national conferences and \$4K for the ANS general scholarship fund, OPD funds three divisional scholarships, co-sponsors UWC Interns, and this year put a student on the slate of candidates for membership on the Executive Committee. Expanding the roles of students and young members was identified as a priority in the strategic plan.

In recognition of his leadership to the ROD as Chair in 1970, the OPD Scholarship for 2007 was awarded in honor of **Dr. J. Lawrence "Larry" Meem, Jr.** who passed on May 8, 2006 at the age of 90. Dr. Meem was a professor of nuclear engineering at the University of Virginia and retired in 1981.

OPD extends congratulations to **Alan Thomas Cebula** of Kansas State University (recipient of the "Angelo F. Bisesti Memorial Scholarship"), **Terrance R. McGuire** of the University of Cincinnati (recipient of the "Robert G. Lacy Memorial Scholarship"), and **Tuan Luong Hoang** of Texas A&M University (recipient of the "Dr. J. Lawrence 'Larry' Meem, Jr. Memorial Scholarship").

In a collaborative effort with Local Sections and universities, OPD sponsors UWC Interns to expose students to the process for organizing national meetings. Following a successful pilot in 2006, the UWC Internship program was opened up to students, in general, and two excellent students were selected for 2007. **James Henkel** from the University of Tennessee was co-sponsored by the Oak Ridge/Knoxville Local Section, and **William Buchanan** from North Carolina State University was co-sponsored by the Eastern Carolina Local Section. **Ted Quinn** has agreed to mentor James in the preparation of the NRC's special track for new plant licensing. **George Attarian** will mentor William in the organization of the Engineering Track. Please be sure to congratulate both of these young leaders when you see them at UWC 2007.

Distance Participation Committee

Bob Penn, Chair (bob.penn@areva.com)

We are beginning to make significant progress with expanding distance participation. This was identified as a priority in the strategic plan. The initial effort includes three elements. We began by identifying the existing opportunities for distance participation, and there are a surprisingly large number of them. Then we asked members who are interested in participating in OPD activities without the need for travel to national meetings to contact us, and we already have a list of several members. A partial list of opportunities for distance participation has been posted on the OPD website with contact information for interested members.

Member participation by teleconference in the Executive Committee meeting at the national Winter Meeting in Albuquerque, NM was essential to OPD being able to conduct necessary business. ANS has conducted an electronic paper review for some years, but this year distance participation allowed **Cindy Connelly** to make noteworthy contributions to the success of the paper review for the Boston meeting. **Marty McCormick** is using distance participation to help organize a technical session in the Operations Track at the 2007 Utility Working Conference.

We are exploring the creation of new ways for distance participation, such as web-based conferencing and making presentations available on the website.

Webpage Committee

Veronica Klein, Chair (nuclearsaurus@aol.com)

Have you visited the revamped webpage? There's something there for everyone. Information on the new webpage is organized by OPD committees. First-time visitors should be able to get a quick understanding of the purpose and current Division activities. More seasoned committee members should find many links to helpful references and resources. With just a few clicks, the curious can access historical information and gain an interesting perspective on the Division. Updating the OPD website to support Division governance and knowledge exchange was a priority in the strategic plan. A maintenance schedule has been established to ensure that the information remains current.

Honors and Awards Committee

Greg Gibson, Chair (gtgibson@stpegs.com)

On Monday, June 25th, during the 2007 ANS National Meeting in Boston, OPD will bestow its highest honor, the Walter H. Zinn award, to **Leonard Koch**. The Walter H. Zinn Award, named for the Society's first President, was established in 1976 to recognize a selected individual for notable and sustained contribution to the nuclear power industry. Mr. Koch was selected for this award in recognition of his contributions as the Experimental Breeder Reactor II Project Manager under the leadership of Dr. Zinn, then

laboratory director. EBR-II, a pool-type sodium fast reactor, was unique and influenced the designs of PFR in the United Kingdom, Phenix and SuperPhenix in France, and BN-600 in Russia. The double-tube steam generators, another unique design of the EBR-II, were in service continuously for over 30 years without a single tube leak. Mr. Koch went on to become the Vice President of Illinois Power Company with responsibility for the operation of the Clinton Power Station. Please plan to join us in recognizing this deserving member of our industry.

In sincere appreciation for his focus on improving the effectiveness and efficiency in NRC processes, OPD was privileged to nominate NRC Commissioner **Edward McGaffigan** for the ANS Distinguished Public Service Award. Having been first appointed in 1996, Commission McGaffigan, with over 30 years of Federal service, is the longest serving commissioner in NRC history. During that time Commissioner McGaffigan has distinguished himself with his common sense approach to promoting nuclear safety in regulations. The award will be presented in May by past ANS President, **Jim Reinsch**, in Washington.

Also to be recognized in Boston are the following individuals who are responsible for the Best Papers and Best Sessions at the national meetings in 2006:

Annual Meeting in Reno, NV:

"Considerations of Electronic Circuit Board Aging," by: G. William Hannaman, C. Dan Wilkinson (SAIC), Joseph Naser (EPRI). Presented in a Session on: "Addressing Aging and Obsolescence Issues with Printed Circuit Boards," organized by Joe Naser.

Session: "The Licensing Process and Status of Small Power Reactors," organized by Christopher Lapp (Lapp Consulting Services).

Winter Meeting in Albuquerque, NM:

"EPR: An Evolutionary Step to the United States Nuclear Fleet" by Stephen Mazurkiewicz, Calvin Ritchey, Kevin Baucom, and Eric Williams (AREVA, NP). Presented in a Session on: "Advanced Nuclear Energy Systems, Including Nuclear Power 2010: Research and Development", organized by Buzz Savage.

Session: "Combined Operating License Application Status in the United States - Panel", organized by Ted Quinn (consultant) and Kyle Turner (McCallum-Turner).

As nominated by the Organization of Test, Research, and Training Reactors, the Nuclear Engineering Teaching Laboratory (NETL) at the University of Texas at Austin was selected as the recipient of OPD's 2007 Meritorious Performance in Operations Award. In particular, NETL is recognized "for demonstrating good operational planning for, and implementation of, the replacement of the graphite reflector for the TRIGA Research Reactor, which included the repair of an undrained reactor tank and the identification of improvements in the manufacturing quality check procedures to avoid future weld failures". The Award will be presented during the 2007 Annual Meeting in Boston at the OPD Awards luncheon.

Committee on New Construction

Ted Quinn, Co-Chair (tedquinn@att.net)

Kyle Turner, Co-Chair (kyleturner@att.net)

The OPD Committee on New Construction (CNC) established a new award in 2007 called the "Nuclear Builder Award". The award recognizes individuals who have provided major contributions to the advancement of nuclear technology that will be used for the building of new nuclear plants in the United States and around the world. This award is expected to be presented annually as part of the OPD Annual Meetings. For 2007, the first two award winners are:

Mr. John Taylor, EPRI (retired), has provided a lifetime of leadership in Westinghouse and EPRI. He is a primary author of the EPRI/NEI program that addressed the 14 building blocks for building new nuclear plants in the U.S.

Mr. Tom Miller, DOE, has been the longstanding DOE program director of the NP2010 program that is bringing forward the public/private partnership to provides the necessary infrastructure for deploying new nuclear plants in the U.S. These initiatives include Early Site Permitting, the Combined Operating License, and the associated financial incentives in the Energy Policy Act of 2005.

Our congratulations from the OPD CNC to these individuals!

WANTED: OPD Members for National Committees

Several national committees are currently looking for willing volunteers. A complete listing of the committees, with descriptions and requirements, is available on the ANS website:

<http://www.ans.org/about/committees/>

Interested OPD members may volunteer directly through the website, or may contact the OPD Chair for a recommendation from the Division. If you can help, please let us know.

OPD Officers

Harold Stiles, Chairman
Harold.Stiles@pgnmail.com

Greg Gibson, Vice Chair
gtgibson@STPEGS.com

Tom Snow, 2nd Vice Chair
Tom.Snow@dom.com

D. Sean O'Kelly, Secretary
sokelly@mail.utexas.edu

Don Eggett, Treasurer
dreggett@aesengineering.com

Mark Reinhart, Past Chair
F.Reinhart@iaea.org

OPD Executive Committee

Jeffrey A. Benjamin, jeffrey.benjamin@exeloncorp.com

William E. Burchill, Burchill@tamu.edu

Bill Corcoran, firebird.one@alum.mit.edu

Brian Katz, Brian.Katz@songs.sce.com

Robert F. Penn, Jr., Robert.Penn@areva.com

Preston P. Pratt, III, PPPratt@pplweb.com

Rodney Krich, rod.krich@constellation.com

Andrew Klein, kleina@enr.orst.edu

Sandra Sloan, Sandra.Sloan@areva.com

Ernest J. Harkness, ejharkness@comcast.com

Brian P. Reilly, breilly@bechtel.com

John Stanford, jack.stanford@att.net