

KNOXVILLE-OAK RIDGE  
SECTION, AIChE

MEETING  
HIGHLIGHTS

January Meeting:  
MOX Fuel

February 16  
Meeting: It's Just  
Candy, How  
Hard Can it Be?

March 15 Meet-  
ing: Smokey  
Mountain Air  
Quality

April 26 Meeting:  
Student Awards

INSIDE  
THIS ISSUE:

About the Speaker

Sponsor Opportunity

Future Meetings

Institute News

# AIChE - January 2005

## Knoxville, Oak Ridge Section

VOLUME 1, ISSUE 1

JANUARY 2005

### Joint January 18th Meeting – With Knoxville/Oak Ridge Section of the American Nuclear Society

Date: Tuesday, January 18, 2005  
Dinner: Mandarin House, Downtown West  
Menu: Buffet  
Cost: \$11.00

5:30 p.m.	Executive Committee meeting (all members welcome)
6:00 - 7:00 p.m.	Dinner
7:00 - 8:00 p.m.	Program

The Section will subsidize up to 15 students. For reservations, please call Linda Puckett at 574-2108 ([puckettlf@ornl.gov](mailto:puckettlf@ornl.gov)) or Betty Frazier at 974-2421 ([bfrazier@utk.edu](mailto:bfrazier@utk.edu)) by Friday, 1/14.

### This Month's Meeting Topic: MOX Fuel Program— Don Spellman, Oak Ridge National Laboratory

The Department of Energy (DOE) issued the Record of Decision (ROD) for the Storage and Disposition of Weapons-Usable Fissile Materials, including surplus plutonium, on January 14, 1997. In that ROD, the Department decided to pursue a strategy for plutonium disposition that allows for irradiating up to 50 metric tons of the surplus plutonium as mixed oxide (MOX) fuel in existing reactors. ORNL had been supporting the formulation of this program since 1994. In the early stages several options were reviewed that might be used as a disposition option. In the ROD, existing reactors (PWR or BWR) were selected along with an option to immobilize some of the plutonium in ceramic form. The program was also set up to be a bilateral arrangement with the Russian Federation to dispose of like amounts of weapons-usable plutonium.

ORNL's role over the years has been to provide technical expertise in concept evaluations, fuel development, fuel qualification, economic evaluations, design reviews, and a MOX test fuel experiment that will be the subject of this presentation.

Don Spellman joined ORNL in 1991 and has led a variety of programs since that time. Don came to ORNL from a 12-year career as a nuclear power plant consultant with Gas-Cooled Reactor Associates and Management Analysis Company and a 20-year career as a Navy Nuclear

## Speaker Information, Cont.

Submarine Officer. He joined the Plutonium Disposition Program in 1994 to lead the concept evaluation for the CANDU reactor as a disposition option. In 1997 – 1999, Don lead the ORNL support for the DOE procurement effort to contract with a U.S. consortium who would be tasked to design, construct, and operate a MOX Fuel Fabrication Facility and manage the effort with a commercial utility to modify, as necessary, reactors selected to burn the MOX fuel. This consortium, Duke, Cogema, Stone and Webster (DCS) was selected on May 19, 1999. At that point, Don then was put in charge of the management of the U.S. Domestic Reactor Disposition Program and Dr. David Moses was selected to lead the International Disposition Program.

**Your e-mail address:** To save us the cost of mailing a hard copy of the Newsletter to you, please provide us with an e-mail address. If you change e-mail addresses, let us know so you will receive future electronic copies. Contact Linda Puckett (puckettlf@ornl.gov) for more information

## SPONSORING OPPORTUNITIES

**The Knoxville Section is looking for individuals or corporate sponsors to provide student meals at Section meetings. The sponsor will be recognized at the meeting and in the Newsletter. The cost to sponsor one meeting is \$200. It's a great way to encourage students to attend the local meetings and become future members in the Institute!**

## INSTITUTE NEWS

Visit the AIChE Web site (<<http://www.aiche.org>>) to stay current, to learn about the AIChE, new programs and opportunities, and to more fully enjoy the benefits of participation in AIChE.

**2005 Spring National Meeting** - April 10-14, Hyatt Regency, Atlanta, Georgia

The Spring 2005 AIChE National Meeting will focus on workable solutions to the challenges confronting the chemical industry. Competition is fierce and resources are more finite. Safety and sustainability must support profitability. Join us in Atlanta as we explore solutions to these concerns in a new format. The 2005 Spring meeting will feature a new track structure that will reach across specialties to focus on workable solutions applicable for all industries. Take advantage of many diverse technical sessions, panel discussions, conference keynotes, short courses, and networking events designed for all chemical engineering professionals.

