

## Plenary Session Features World-wide Waste Management Challenges



Takao Fujie, President & CEO of the Japan Nuclear Technology Institute

The 2012 Waste Management Opening Plenary Session on Feb. 27 opened on a different note this year – one of remembrance as Takao Fujie, President and Chief Executive Officer of the Japan Nuclear Technology Institute, detailed the earthquake and tsunami that struck the Fukushima Daiichi Nuclear Power Station in March 2011.

Fujie described the damage incurred to the power stations and the recovery challenges that remain. He cited the dedication of the workforce, whose heroic efforts kept the situation from worsening. He then outlined the "Roadmap to Stabilization" with the actions being taken, including the reactor building cover, debris removal and the water shielding wall, as well as mid- and long-term plans.

"We will leverage lessons learned from Fukushima to improve safety of nuclear power facilities and regain trust," Fujie said. He gave recognition to the support being provided from the nuclear community. "I expect such cooperation will achieve decontamination of the damaged reactors," he said.

Also featured during the plenary was George E. Dials, President of B&W Conversation Services, LLC, who urged the audience, amidst a busy conference schedule, "Let's not

ignore the elephant in the room," alluding to "where are we going to put all this stuff." Dials highlighted sessions this week that will address the challenge of finding a disposal solution for the nation's hazardous waste.

David Huzienga, Department of Energy Senior Advisor for Environmental Management, spoke to a theme of partnership and collaboration, showcasing EM progress to date and the challenges that await as cleanup continues across the DOE complex. He detailed the EM program priorities and fiscal year 2013 budget as well as program goals and achievements, including improving safety and quality performance and reducing the lifecycle cost and accelerate the cleanup of the Cold War legacy.



David Huzienga, Senior Advisor for Environmental Management



Ute Blohm-Hieber, European Commision Directorite General for Energy

## Urgent Need Seen for EU Waste Management Legislation

The head of the unit for nuclear energy, transport, decommissioning and waste management in the DG ENER (Directorate General for Energy) of the European Commission (EC) says "We all have the same elephant in front of us and hopefully we can domesticate it." Ute Blohm-Hieber was Monday's luncheon keynote speaker, noting the European Union is facing the same nuclear waste disposal challenges as the other countries of the world and said the time to make decisions regarding disposal of nuclear waste is now.

The 27 members of the European Union are working on the Council Directive for Responsible and Safe Management of Spent Fuel and Radioactive Waste. She says this directive is an

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# - In Memorium



### Dade W. Moeller, Ph.D., CHP, PE 1927–2011

Acclaimed scientist, educator, and leader in the fields of radiation and environmental protection, and co-founder of the company that bears his name, Dade W. Moeller passed away peacefully at home from complications due to cancer on September 26, 2011, in New Bern, N.C. Born in 1927 in the small town of Grant, Florida, Dr. Moeller enjoyed 84 years of vitality, learning, teaching, love, and laughter.

The only person from his high school to pass the V-12 Navy exam, Dr. Moeller joined the U.S. Navy in 1944. He graduated magna cum laude from Georgia Tech in 1948 with a Bachelor of Science degree in Civil Engineering and a Master of Science in Sanitary (Environmental) Engineering. After graduating, he became a commissioned officer in the U.S. Public Health Service, with duty stations including Oak Ridge National Laboratory, Los Alamos National Laboratory, and the Headquarters offices in Washington, D.C. In 1957, under a U.S. Public Health Service sponsorship, he earned his Doctor of Philosophy degree in Nuclear Engineering from North Carolina State University. Dr. Moeller then joined the Harvard University School of Public Health, where he was a much-loved educator for 26 years.

Dr. Moeller was very active in the Health Physics Society, becoming President in 1971. He served on and chaired many committees for the U.S. Nuclear Regulatory Commission, U.S. Environmental Protection Agency, National Council of Radiological Protection and Measurements, International Commission on Radiological Protection, National Academy of Sciences, and the American Academy of Environmental Engineers. Dr. Moeller was a consultant to the World Health Organization for 15 years, and, from 1988 to 1993, he was the founding Chairman of the U.S. Nuclear Regulatory Commission's Advisory Committee on Nuclear Waste.

In 1993, after his retirement from Harvard, he co-founded the environmental consulting company proudly bearing his name, and, in 1994, established its headquarters office near the Hanford Site in Richland, Washington. Today, the company serves 156 federal, state, and commercial clients at 11 locations nationwide and employs more than 250 professionals, including more Certified Health Physicists than any other company in the United States.

## Linda Marie Ulland

Linda Marie Ulland of Pequot Lakes, MN died Monday Dec. 26, 2011 following an extended battle with cancer. Linda was a graduate of Luther College, in Decorah, Iowa. She worked as a reporter for newspapers in Minnesota, Iowa and Nebraska before moving to San Francisco, where she worked for the California Coastal Commission. After obtaining her master's degree from San Francisco State University, she worked for Bechtel Corporation as an environmental engineer. She then moved to Albuquerque, N.M., specializing in nuclear waste issues. She returned to Minnesota and served as the regional manager for the Pollution Control Agency where she was an alternate Commissioner for the Midwest Low Level Radioactive Waste Compact Commission. She

eventually joined the University of Minnesota's College of Food, Agricultural and Natural Resource Sciences Sustainable Development Partnership. Linda was active in the American Nuclear Society and numerous local and regional organizations such as the Paul Bunyan Scenic Byway Association.

Linda Ulland received the 2010 WMS Program Advisory Committee (PAC) Award in recognition of her long-standing contributions to the Waste Management Symposia. The award was established by the WMS PAC to annually recognize an individual whose outstanding contributions have helped make and keep the annual WM conference the world's premiere conference on nuclear waste issues. Linda began participating in the symposium is the early 1980's. She organized sessions on public participation training, which later led to the creation of the public participation education and training track: currently Track 8. Linda was the first woman to serve on the PAC and continued to help organize and chair sessions. She had also been very active as editor of the conference newsletter. She attended this year's Abstract Review Meeting and the September PAC meeting before she fell too ill to continue. Linda will also be remembered for her great sense of humor, and will be sorely missed by this newsletter staff, and many conference attendees who had gotten to know her over the years.

### Jacobi Receives Hodes Award For Leadership on Low-Level Waste Disposal Issues

Lawrence R. "Rick" Jacobi has received the 2012 Richard S. Hodes, M.D. Honor Lecture Award in recognition of his extraordinary leadership and development of innovative approaches to the design, siting and operation of low-level waste disposal facilities.



Lawrence R. Jacobi receives the Richard S. Hodes Award from Jack Storton of Babcock & Wilcox

The award was established by the Southeast Compact Commission to honor the memory of Dr. Richard S. Hodes who served as chair of the commission from its inception in 1983 until his death in 2002. Jack Storton, one of two Southeast Compact Commissioners from Virginia, presented the award to Jacobi. "His achievements clearly exemplify the innovative qualities that the Hodes Award is intended to recognize. As a licensed nuclear engineer, health physicist, and attorney, he brings a unique perspective to the management of radioactive waste," Storton said.

Jacobi is the principal and a consultant with the firm Jacobi Consulting. He has volunteered his expertise to numerous organizations, including the Health Physics Society, the Texas Medical Association, the US Department of Energy, and the Texas Radiation Advisory Board.

After receiving the award Jacobi spoke to a WM panel session on emerging issues in US commercial low-level radioactive waste Monday afternoon. "The radioactive waste compact system has not worked as originally envisioned. The only new facilities to be built since NUCLEAR GRADE SERVICES

### WMG TO BUILD A NRC TYPE B SHIPPING CASK Delivery Anticipated in Time to Meet a Critical Need

### THE PROBLEM

The supply of industry available NRC Type B Shipping Casks does not meet today's present demand; and reports indicate that as our industry grows, the demand is expected to reach a level never before experienced.

### THE SOLUTION

WMG announces that it will license and build a brand new Type B Shipping Cask. With delivery anticipated for late 2013 the *WMG-150B* responds directly to a critical industry need. Anticipating the need, WMG began designing a new line of Type B Casks in early 2010. The cask will be compatible with containers like the 10-160, 8-120 and the 142. It will have a primary lid that, when removed, offers full access to its internals and equipped with a smaller secondary lid designed to accommodate processing activities; and of the greatest interest, the *WMG-150B* will offer a lead equivalency of 4.12" allowing the *WMG-150B* to meet most radiological transportation needs.

Interested? Want to know more? Follow our progress at **www.wmginc.com**.



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important step forward to ensure responsible use of nuclear energy and radioactive waste.

She notes that the planning and construction of geological disposal facilities can take more than 40 years. "Therefore, we need action now, to avoid imposing undue burden on future generations."

The EU program is a driver for legislation and a driver for action that pushes its members to develop national programs based on their individual needs, calls for periodic peer reviews of the programs and progress, and asks for complete transparency with the public. And she said the overall mandate for any and all programs is safety.

Before the EC, she worked many years as the Nuclear Safeguards Directorate, first responsible for analytical techniques and as project leader for the two on-site laboratories in Sellafield, UK and La Hague, France. Later she worked in the area of non-proliferation and specifically for the implementation of the Additional Protocol in the European Member States.

She is a physicist with a Ph.D. in theoretical nuclear physics.

### **Insight Newsletter**

- Editors-Linda Lehman, CH2M Hill Plateau Remediation Company Mike Berriochoa, Sounds of the Sky LLC - Contributing Editors-Maren Disney, CH2M HILL Plateau Remediation Company Jov Shoemake. CH2M HILL Plateau Remediation Company Rob Roxburgh, Washington River Protection Solutions Todd Nelson, Bechtel National Corp. Editors welcome articles or news of interest to symposia attendees Deadline 2:00 PM - Phone -- Email -509-539-5534 mberriochoa@charter.net - Layout / Graphics -**Jenny Fuciarelli** 

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1980, Clive, Utah and Andrews, Texas, were developed either outside of the compact system or in spite of the compact system," Jacobi said. "No new low-level radioactive waste disposal facilities are going to be developed in the future. We need to embrace that reality in going forward."

**Nominations for the 2013 Hodes Honor Lecture Award are now being accepted.** The deadline for submittal of nominations is June 30, 2012. Details are on the Commission website at www.secompact.org or you may contact Ted Buckner at 919/380-7780 or tedb@secompact.org.



Oak Ridge stakeholders, including its citizens and the Department of Energy and its contractors, are moving toward the future together. Facing unique environmental challenges with collaborative solutions, DOE is addressing the contamination legacy across the Oak Ridge Reservation.

# The results are promising.

As we move to the future by cleaning up the past, our ability to execute scientific and national security missions effectively and efficiently is increasing. Federal sites are transforming to areas worthy of private investment. Current national assets are being preserved for the next generation of discovery and service to our country and the world.



Environmental challenges exist and lie ahead. DOE and Oak Ridge are solving them with innovation and collaboration.



# The Oak Ridge Reservation is Today's Featured Site

Oak Ridge Day will focus on the unique challenges and creative solutions that are associated with the cleanup of the three sites that comprise the Oak Ridge Reservation. These include the Oak Ridge National Laboratory, the Y-12 National Security Complex, and the East Tennessee Technology Park (the former K-25 Gaseous Diffusion Plant). Remediation of the Oak Ridge Reservation is critical to enable the ongoing missions of the Office of Science and the National Nuclear Security Administration and to support reindustrialization and modernization of DOE's assets.

The four sessions include panel discussions and presentations that highlight some of the more innovative approaches that have been used in Oak Ridge to advance cleanup, given the challenges that our country is facing today. Also, included will be perspectives shared by our partners including the State of Tennessee, the city of Oak Ridge and the Site Specific Advisory Board, as well as representatives from the Oak Ridge business and contractor community. The discussion begins at 8:30 to highlight EM's challenges and future vision. Also to be discussed will be national security issues, world class science initiatives and the economic and environmental aspects of DOE on Tennessee and the Oak Ridge Reservation.

Part two commences at 10:15 with discussions of the Oak Ridge cleanup prioritization strategy to reduce risk while enabling the mission, reducing the mortgage on the East Tennessee Technology Park, the mercury challenge at the Y-12 National Security Complex and radiological risk reduction at ORNL.

The third session of the day begins at 1:30 with panel presentations to include the DOE OR mission and stakeholder partnership, and community perspectives.

The final session of the day kicks off at 3:15 with discussions on the changing waste management paradigms, the U-233 story, the clearing of environmental barriers to future economic growth, transforming Oak Ridge through asset revitalization, and protecting the future through long-term stewardship.

## **Collaboration Paves the Way for Success in Oak Ridge**

Oak Ridge has a long history of fulfilling critical roles in our nation's national security and scientific missions, performing every mission in the Department of Energy's (DOE) portfolio. However, at times, environmental factors impede the site's ability to modernize and conduct the agency's increasingly diverse priorities. In 2009, with the passage of the American Recovery and Reinvestment Act (ARRA), Oak Ridge had the opportunity to complete critical environmental cleanup that would assist in clearing the way for DOE's vital missions.

Determined to maximize the funding and perform numerous complex projects simultaneously, DOE's Oak Ridge Office of Environmental Management created the ARRA Steering Committee. The committee was the first DOE-led, multiple-contractor coordination and decision-making body ever assembled. The committee was comprised of members from seven contracting companies and federal officials from numerous divisions within DOE's Oak Ridge Office. The committee worked cooperatively to ensure each project was performed as effectively and safely as possible.

The collaborative arrangement encouraged streamlined communication and provided a forum to share lessons learned. Performance-related issues were discussed and immediately addressed. The unified approach created impressive results. By the end of 2011, 15 major cleanup projects were completed on schedule, while accumulating more than \$100 million in savings. These funds were then used to perform additional cleanup projects.

Through this collaboration, risks from environmental contaminants have been significantly reduced, and property is now further along in having additional areas available to the National Nuclear Security Administration and Oak Ridge National Laboratory to advance critical national missions.

### Tuesday is Oak Ridge Day,

focusing on the unique challenges and creative solutions that are associated with the cleanup of the three sites that comprise the Oak Ridge Reservation. Four sessions are scheduled.

Panel Session 31Oak Ridge:Vital for the Future of Our Nation8:30 AMRoom 102B

**Panel Session 32** Environmental Challenges and Solutions 10:15 AM Room 102B

**Panel Session 47** Partnering to Move Oak Ridge Forward 1:30 PM Room 102B

**Panel Session 48** Innovation to Enabling the Future 3:15 PM Room 102B.

## **Environmental Clean-up Gains Momentum in Oak Ridge**

There is a noticeable "buzz" around Oak Ridge. In the Chamber of Commerce, at the Friday morning meetings of the East Tennessee Economic Council, and in countless community meetings and receptions around town, a frequent topic of conversation has been a series of significant accomplishments in environmental clean up on the Oak Ridge Reservation. The progress is welcome news to a community that for two decades has been trying to reverse the image created by the contamination of buildings, soil and water during the Manhattan Project and the Cold War.

At stake is more than the city's environmental quality. DOE and local officials are working together on a plan that will transform hundreds of acres at the old K-25 complex into an industrial park with the resources needed to attract new companies and manufacturing plants, some potentially linked to technologies being developed at the Oak Ridge National Laboratory.

John Eschenberg, DOE's Interim Manager for the Oak Ridge Office, says "it is no exaggeration to suggest that the community's economic future depends to a large extent on how well, and how quickly, we can clean-up some of DOE's largest and most challenging environmental projects."

The renewed momentum in DOE's cleanup activities comes in the wake of changes in Washington, Nashville and Oak Ridge that have reshaped the program. In Nashville, a new governor and new commissioner of Environment and Conservation have given personal attention to Oak Ridge's EM program. In DOE headquarters, the new Assistant Secretary for Environmental Management has had an open door to local and state environmental officials, and in DOE's Oak Ridge Office, Sue Cange brings nearly two decades of experience to her new role as Interim Manager for Environmental Management. Perhaps most significant, in August, responsibility for the region's clean-up projects was transferred to UCOR, a contractor that hit the ground running and that, according to the Department of Energy, already has delivered on a number of critical milestones.

Eschenberg, who came to Oak Ridge in 2010 from Hanford, Washington, said the unusual number of changes in a short period "gave us a unique chance to hit the reset button in EM." Eschenberg says as a result, personal relationships have developed among regulators at the local, state and federal levels that, in his words, "have made an invaluable difference in establishing trust and providing focus to our EM efforts in Oak Ridge."

Eschenberg remains cautiously optimistic about the task ahead. "I believe we have turned the corner. We have completed or accelerated projects that have challenged us for years, and continue to strengthen collaboration with our contractors, citizen advisory board, and community organizations. Our goal now is to sustain our momentum and restore the environmental quality the community deserves."

Oak Ridge, this year's featured site, will discuss recent accomplishments Tuesday in room 102B. Participants will receive a more in-depth look of the site and hear how environmental cleanup is advancing other vital DOE missions.

The Oak Ridge Partnership is a proud platinum sponsor of this year's Waste Management Symposium. The partnership is a collaborative effort among Oak Ridge's stakeholders to advance economic development and DOE's future missions.

# Oak Ridge Organization Makes Safety a Community Partnership Affair

On February 1, the Oak Ridge Business Safety Partnership (ORBSP) held its first safety forum of 2012. The session, which focused on Y-12's Voluntary Protection Program (VPP) effort, attracted almost 200 people from Department of Energy (DOE), National Nuclear Security Agency (NNSA), labor unions, prime contractors, and subcontractors. The participants represented every major site, contractor and federal agency associated with DOE's work in Oak Ridge.

The ORBSP, which dates back to 2004, is a collection of government agencies, contracting companies and labor unions that raise safety awareness in East Tennessee to achieve accident free workplaces. The organization helps companies understand DOE and NNSA's demanding safety culture and shares lessons about relevant safety topics such as electrical safety, vehicle transportation, hoisting and rigging, and concerns with counterfeit parts. The forum meets quarterly, but once a year, the organization features a national speaker through the contributions of one of its major partners, Oak Ridge Associated Universities. Past forums have attracted speakers from commercial companies such as DuPont and Alcoa Aluminum.

With this year's theme, Above and Beyond: Creating a Sense of Urgency, the ORBSP is sponsoring two training sessions to the community, and it will host the first Safety Fest in September. The partnership is a community initiative with numerous community impacts and benefits. The free and open forums raise awareness on key issues and reinforce a strong safety culture that allows employees to return home to their families safely.





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**CH2M HILL** provides innovative clean up and closure solutions for the most contaminated sites in the U.S. DOE nuclear weapons complex and in UK Nuclear Decommissioning sites, while successfully and safely delivering projects ahead of schedule and under budget. In addition, we ensure the decommissioning, waste management, waste fuel strategies, and support service operations at civilian nuclear research sites in the United Kingdom and the United States result in reduced costs and improved schedule performance, quality, and safety standards.

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### Panel Explores Waste Management Issues for Uranium Recovery

With renewed interest in uranium exploration and development across North America, the environmental impacts of radioactive waste from the recovery operations are garnering further public interest. On Wednesday, February 29, the Session 67 Panel will discuss the management of radioactive waste resulting from uranium recovery operations, the ongoing management of Title I and Title II sites and implications for evaluating alternatives to satisfy the National Environmental Policy Act (NEPA). Distinguished and diverse panelists include Mr. Bill Von Till, Chief of the Uranium Recovery Licensing Branch at the U.S. Nuclear Regulatory Commission; Mr. John Cash, Vice President of Regulatory Affairs, Exploration and Geology for Ur-Energy Inc.; Ms. Jennifer Opila, Unit Leader, Radioactive Materials Unit, State of Colorado; Mr. Mark Pelizza, Senior Vice President of Health, Safety & Environmental Affairs at Uranium Resources, Inc.; Ms. Suzanne Bohan, NEPA Program Director, Region 8, at the U.S. Environmental Protection Agency; and Mr. Tony Thompson of Thompson and Pugsley, PLLC.

The session will be Co-Chaired by Larry W. Camper, USNRC and Rod Grebb, Black Range Minerals. The panel discussion commences at 8:30 am in Room 104AB.

## **Corps of Engineers Schedules Industry Day**

The U.S. Army Corps of Engineers (USACE) will hold an industry day on Wednesday, February 29 in Room 102A from 1:30 – 3:15 PM to discuss the next contracting opportunity for the Shallow Land Disposal Area (SLDA) FUSRAP project in Armstrong County, PA. The USACE intends to provide an overview of the project and to facilitate open discussions with interested vendors attending the presentation. Information gathered will assist USACE in finalizing its Acquisition Strategy, Statement of Work and Evaluation Factors. Interested parties may contact Tyrone Palaganas, Contracting Officer at 716-597-9617 or Kevin Logan, Project Manager at 412-715-2255 anytime during the conference to further discuss this project.

### POSTER SESSIONS

In order to honor high quality presentations at WM2012, the American Nuclear Society (ANS) presents an award for the Best Poster/Paper and the American Society of Mechanical Engineers (ASME) provides an award for the runner–up. Poster sessions are scheduled each morning and afternoon.

## Women of Waste Management Reception

Women delegates and anyone interested in opportunities for women in our industry are invited to attend the Women of Waste Management Networking Reception Tuesday evening from 6:00 PM – 7:30 PM in the Hyatt Regency AB Ballroom. The theme of the reception this year is Megatrends Matter...Their Effects from Women's Perspectives."

Megatrends are the great forces in social development that will very likely impact the future in the next 10-15 years. Many companies and organizations use megatrends in their strategic work in corporate strategy, market innovation, business development, product development and human resources. Key to us is the global move to an era where gender roles are less rigid, as evidenced by more women moving into increasingly responsible corporate roles.

The Fluor-sponsored reception will include a 45-minute panel discussion followed by a moderated Q & A period, with about 30 minutes set aside for networking. Four women executives in various areas of the nuclear industry comprise the panel:

Ms. Ute Blohm-Hieber, IAEA, European Commission Directorate General for Energy

Ms. Irena Mele, IAEA, Dept. of Nuclear Energy, Waste Technology Section

Sue Cange, Acting Manager for Environmental Management Department of Energy – Oak Ridge Office

Margaret Foster, Marshallton Laboratories.

Refreshments will be offered throughout the event, with informal seating to encourage interaction.

This is the third year that Fluor has sponsored this special function. In lieu of small mementos, Fluor will make a \$25 donation to the Susan G. Komen Foundation on behalf of each person attending the session.

So, join Vice-Mayor of Phoenix Michael Johnson in attending the event, hear the perspectives of our four guest panelists, and help make a difference in fighting breast cancer.



## WMS Provides Big Opportunities for Students

For many year the Waste Management Symposium as supported and promoted students and young engineers through a variety of means. The Roy G. Post Foundation has awarded scholarships to graduate and undergraduate students which are presented at Tuesday's annual awards luncheon. These scholarships are funded by a variety of means including direct donations, a fundraising golf tournament and support from Waste Management Symposia (WMS). Currently these scholarships are for \$5000 and \$2500 for graduate and undergraduate winners respectively.

Also, students are invited to participate in a best poster competition with a first place prize of \$500. The winner is selected by attendees as well as a panel of judges. All students that enter this contest have their travel expenses reimbursed and are encouraged to interact with attendees and the judges during the poster session.

Two panel sessions in the conference are specifically directed towards student and young engineer's issues. One of the panels deals with world-wide activities of Young Generation Nuclear (YGN) which focuses on interactions promoting the future of various nuclear programs. The other student-related panel deals with issues between the needs and wants of young engineers and the companies that employ them. Outlines of special development programs are presented by personnel from the Department of Energy (DOE), Nuclear Regulatory Commission (NRC) and from a

### **Networking Dinner at New Location**

Don't miss the networking reception and dinner at the Rawhide Western Town and Steakhouse Wednesday evening. It's a time to meet in a casual outdoor setting under the stars.

This authentic frontier town is celebrating 39 years of entertainment. It's Arizona's largest western-themed attraction. You can browse the specialty shops with everything from authentic western wear to Native America art to handmade jewelry to cowboy toys.

The menu includes tasty appetizers, mesquite-broiled steaks, chicken an salmon, plus desserts. Busses depart from the Monroe Street Exit at the Hyatt Regency Phoenix at 6:00 PM and return to the hotel beginning at 8:30. Light jackets and comfortable footwear are recommended. variety of educational institutions. Panels have included young engineers who outline how WMS programs have affected their careers and how the current generation of engineers has different wants and needs in the workplace.

The conference also has a special afterhours session set aside as an opportunity for attendees to network with the students and young engineers that attend the conference. In addition, the students are encouraged to assist in all the different sessions and to provide support for the co-chairs. By doing this, the students are able to interact directly in sessions that are of a professional interest to them and make important professional networking contacts.

One of the main goals of WMS is to help promote students and young engineers in their educational and professional growth; since they are the future of our industry. This is done with the activities of the Roy G. Post Foundation in partnership with WMS and well as the special student and young engineer sessions and activities at the Conference.





**Our Goal...** Advise, Deliver, Assure **Your Gain...** Reduce Risk, Spend Wisely, Finish Faster

## **Eastern Technologies Inc., Announces the Generation 2 OREX Processor**

Eastern Technologies Inc., the developers of OREX® Protective Clothing, have announced they have finalized modifications on the Generation 2 OREX Processor, which features state-of-the-art OREX dissolution technology. Since OREX protective clothing is made from polyvinyl alcohol (PVA) and is100% organic, during processing it is converted to a liquid biodegradable organic solution, and subsequently filtered to remove radioactive contaminants. The new largecapacity processor is environmentally friendly as it uses 90% less water than was previously required, and is experiencing unparalleled waste volume reduction factors of up to 10,000:1.

In 2010, a small scale Generation 2 OREX Processor was installed at Wolsung Nuclear Power Plant in South Korea where it was successfully used to process used OREX during a refueling shutdown period. South Korea recently acknowledged the superior technology and innovation of the smaller scale Generation 2 OREX Processor by awarding it a "Top 10" technology award. In 2010 and 2011, ETI began engineering a larger capacity Generation 2 Processor that has been modified to satisfy the specific requirements of nuclear power plants in several foreign countries.

For over 10 years ETI has been developing and manufacturing disposable protective clothing, contamination control products

and the associated processing technology. Since then, the Company has begun to changing the paradigm in the nuclear industry by offering a proven solution that offers unequalled protection, worker comfort and logistics improvements, while being gentler on the environment. Today more than 2,000,000 sets of OREX protective clothing are used in U.S. nuclear power plants each year—and in the past 10 years, the majority of U.S. commercial nuclear power plants have switched over to OREX instead of traditional cloth garments.

Currently, ETI operates two processors that operate 24 hours per day, each day at its main facility in Alabama.



Generation 2 OREX Processor

# Thin-film Evaporator to Provide Portable Option for At-Tank Volume Reduction of Waste



A full-scale thin-film evaporator system is being developed as a portable option for at-tank volume reduction of Hanford tank waste.

Engineers at Hanford tank farms have developed a full-scale thin-film evaporator system as a portable option for at-tank volume reduction of tank waste. Simulant testing of the evaporator was conducted in 2011 which demonstrated scaleup and provided excellent technical operating data.

"It feels really good to be able to work on a project that you see transformed from paper to actual hardware," said Washington River Protection Solutions Project Manager Rick Tedeschi. "This is a result of a lot of team effort in design, pilot-scale testing by our partner firm Columbia Energy and Environmental Services, and offsite subcontractor manufacturing to develop a full-scale unit for actual application in the tank farms." *A discussion of this unique technology will be held during Session 054: Storage and Retrieval of HLW: Equipment and Instrumentation beginning Tuesday at 1:30 PM.* 

As part of the tank farm mission, crews at Hanford are working to empty older, leak-prone single shell tanks and transfer the waste into newer, safer double-shell tanks for storage. Because the single-shell tanks outnumber the number of double-shell tanks by 5 to 1, storage space is limited and precious. The thin-film evaporator is expected to help relieve tank congestion by providing a mobile, tankside system to reduce the volume of waste by removing excess water from the waste.

The thin-film evaporator technology is expected to supplement the Hanford 35-year-old 242-A Evaporator by consolidating supernate at-tank. Its development is crucial in order to mitigate the risk of a 242-A Evaporator failure and reduce logistics challenges and costs associated with waste transfers.

## International Framework for Nuclear Energy Co-operation (IFNEC)

Question: What does Microsoft's Bill Gates know and think about IFNEC? To find out come to Room 105AB beginning at 1:30 PM on Tuesday afternoon! Unfortunately Bill has prior commitments so he won't be

there, but he did address the Ministerial level meeting in Warsaw last September and we will be reporting on his discussion of the importance of innovative energy technologies, including nuclear, in addressing world poverty.

So how would a country go about securing a nuclear reactor for electricity supply? A good starting point is to join with other countries, both small and large, which already have a nuclear program, or are thinking about doing so.

Take Ghana for example: it relies heavily on hydro electricity generated by the largest man-made lake in the world – Lake Volta. If the lake's water level falls too low, there is a shortfall of capacity, industry suffers and so does the economy. The potential solution is to consider nuclear power, including the use of small modular reactors (SMRs). To assist countries like Ghana develop safe, reliable nuclear power in a proliferation-free way, a network of governments formed the Global Nuclear Energy Partnership (GNEP) in 2007, which in 2010 became the

International Framework for Nuclear Energy Cooperation (IFNEC). It now has 31 participant and 30 observer countries represented.

Ed McGinnis, the IFNEC Steering Group Chair with DOE-NE, will lead a panel discussion on IFNEC activities. There will be introductory presentations from Ed and the co

chairs of IFNEC's two working groups, John Mathieson, NDA (UK), Infrastructure Development, and Kazuhiro Suzuki, METI (Japan), Reliable Nuclear Fuel Supply. Irena Mele of the IAEA will talk about their co-operation with IFNEC and Hans Codée, COVRA (Netherlands) will discuss shared disposal facilities.

Many issues face the new countries wanting nuclear and two of the biggest are the financing of the build and what to do with the waste. One of IFNEC's latest initiatives is to encourage the World Bank to lead a study on the financing of nuclear and related issues.

John Mathieson and Paul Dickman, ANL (US) will Co-chair the session.

#### A Force in Innovation

In 1961, PaR Systems began supplying remote manipulators to government research facilities. While some of those early manipulators are still 'working', PaR strives to develop new technology to better serve their clients. Over 50 years later, PaR is a world leader in designing and manufacturing highly engineered equipment and systems for critical applications to many diverse industries, including nuclear, aerospace, defense, life science, and general industrial.

Please join us for a reception during the 2012 Waste Management Symposium.

This year's reception will be held on Tuesday, February 28, 2012 from 6:00–9:00 pm in the Cassidy Room on the 2<sup>nd</sup> floor of the Hyatt Regency Phoenix.

We look forward to seeing you there!



### Speaking to Future Generations

Waste Management Symposium attendees are invited to be part of future international history by participating in Session 64B: "Speaking to the Future: What would you say to the next 1000 generations?"

This session is a highly interactive brainstorming exercise in the Records, Knowledge and Memory (RK&M) International Workshop in Session 64B Wednesday morning from 8:30 AM to 12:00 PM in the Hyatt-Curtis AB rooms.

This session is dedicated to gathering ideas and views on the permanent marker system for geologic repositories of nuclear waste and will focus on identifying the "message" to be sent to future generations for thousands of years and methodologies for sending these messages. Past generations warned of disturbing the tombs in the Egyptian pyramids. Those warnings spurred grave robbing. Past generations warned of building in lower elevations of Japan, yet those warnings were not always heeded and the consequences were sometimes devastating. This generation's challenge is to inform/warn near and far future generations of the dangerous materials buried in the earth beneath their feet in an enduring and convincing way.

Be a part of this exciting and challenging process. The results of this workshop will be shared with OECD-NEA International RK&M project that will be developing International recommendations for Passive Institutional Controls programs and permanent markers systems. Your words and ideas may become a part of history.



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## **Risk Reduction Discussed in Sunday Training Workshop**

Risk Reduction in Nuclear Remediation and Waste Management was the subject of the WM2012 training workshop held on Sunday. This half-day workshop provided a condensed but intense training in this subject area. Topics covered included risk assessment, risk reduction methodologies, risk vs. cost, best management practices in this regard, and practical lessons from various projects. The primary instructor for the workshop was Dr. Jas Devgun. He was assisted by the guest lecturer Stuart Walker of EPA. Attendees from several organizations had active participation in the discussions. Participants received a certificate of training completion and a complete set of workshop notes.



## **DOE EM Focuses On Reorganzaton**

The DOE has reorganized to create a more efficient, cost-conscious and safety oriented organization. In order to stretch the flat 2013 budget, projected at 630 million dollars, Mission Units have been formed to identify and advance strategies for cleanup and to optimize linkages between field offices and Headquarters. One strategy will be to push decision-making to the lowest management level possible and increase partnering with contractor organizations.

DOE has been studying the lessons learned from the 6 billion dollar ARRA work in order to build on its successes in the future. They want to know:

- What could have been done differently
- Where are the opportunities to improve, and
- How to work more closely with Stakeholders

Main goals include: reducing cost and risk while accelerating cleanup; continue to reduce the foot print by 90%; and improve the national program planning for D&D soil and groundwater remediation. The panelists recognized the need to maintain transparency and are willing to learn from the experiences of other programs and other countries.

Panelists were: Mark Gilbertson, DAS for Site Restoration; Frank Marcinowski, DAS for Waste Management; Ken Picha, DAS for Tank Waste and Nuclear Materials; John Surash, DAS for Acquisition and Contract Management, Matthew Moury, DAS for Safety and Security Programs and Desi Crouther, Director, Office of Human Capital.

## **Bartlett Services Enters into Exclusive Distribution Agreement for Warren Environmental Epoxy Coatings**

Bartlett Services, Inc. (BSI) has entered into an exclusive agreement with Warren Environmental, Inc. for the distribution and sales of its epoxy systems. These solvent-free, ultra high-build, 100% solids epoxy coatings are fast curing and applied in a single coat by spraying, hand troweling or rolling on horizontal, vertical or overhead surfaces, providing an impermeable protective liner. Designed to protect or restore a variety of infrastructures, the coating can be applied to steel, metal, fiberglass, masonry or concrete surfaces with likely exposure to corrosive and erosive environments. Advantages of the epoxies include zero VOC application for confined space safety, while delivering superior adhesion, flame resistance, corrosion resistance and structural strength.

This agreement furthers BSI's growth in specialty technology markets by expanding and strengthening its line of products that have applications within the Department of Energy and commercial nuclear power markets. BSI's commitment to our decontamination product line includes offering a broad product selection, competitive pricing, timely delivery and technical support.

Warren Environmental is an ISO 9001-certified company which designs, manufactures and develops high performance epoxy coatings and grout products. An established leader within the industrial coatings market, Warren Environmental has experience protecting and rehabilitating deteriorating infrastructure throughout the United States and Europe. **www.warrenenviro.com** 

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## **Special Workshops Featured at WMS**

A series of special workshops is slated for WMS on a wide range of topics. On Wednesday, a session on Records, Knowledge and Memory (RKM) will run from 8:30 AM - 12:00 PM in the Curtis AB Room at the Hyatt Regency. The workshop is to gather ideas and views on the permanent marker system for geologic repositories of nuclear waste and focus on identifying a uniform message that should be told to future generations.

On Thursday the Department of Energy will hold an ARRA Lessons Learned Workshop in Room 105AB from 8:30 AM - 5:00 PM. This EFCOG session is designed to identify and build upon the American Recovery and Reinvestment Act lessons learned and best practices to help streamline and improve the efficiency of all EM work scope.

On Thursday afternoon the U.S. Administration's Blue Ribbon Commission on America's Nuclear Future will discuss its recently issued report. The Commission conducted a comprehensive review of policies for managing the back end of the nuclear fuel cycle, including all alternatives for the storage, processing, and disposal of civilian and defense used nuclear fuel and nuclear waste. The workshop will be followed by a networking reception in the Level One Foyer.

A workshop will be held on Radioactive Materials and Waste Packaging Transportation and Disposal. It will run from 9:00 AM - 5:00 PM Thursday in the Remington Room at the Hyatt Regency. This training workshop covers radioactive material shipments, including typical decommissioning mixed waste. It is designed to provide students with an understanding of 49 CFR and EPA regulations relating to radioactive and typical decommissioning mixed waste.

On Friday the Nuclear Regulatory Commission will hold a public meeting on potential changes to Commercial LLW Regulation 10 CFR Part 61. It will be held from 8:00 AM - 5:00 PM in the Renaissance Phoenix Downtown Hotel formerly the Wyndham.



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## **WM2012 Welcome Reception**



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