

Welcome to the 2012 Waste Management Symposium

On the program this year you will find a strong series of presentations ranging from the challenges facing the Tokyo Electric Power Company's Fukushima Daichi nuclear power plants following last year's earthquake and tsunami, to the installation of the largest robotic waste retrieval device ever inserted into an active radioactive waste storage tank.



Takao Fujie is the President and CEO of the Japan Nuclear Technology Institute.

Now in its 38th year, the symposium began in Tucson with just 20 sessions and about 200 attendees. Now, those numbers have increased ten-fold with more than 100 sessions and more than 2000 attendees. The Waste Management Symposium has become the premier international conference for the management of radioactive materials and related topics.

Three featured sessions are on tap for this year's WMS, kicking off Monday with three sessions dedicated to Japan and the Fukushima incident. It starts with the first Plenary Speaker, Takao Fujie, President and Chief Executive Officer Japan Nuclear Technology Institute and continues with panel sessions and papers on the impacts on both current operations and future plans for nuclear power.

On Tuesday the US DOE featured

site is the Oak Ridge Reservation. "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. 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. 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.

Wednesday afternoon the US DOE Featured site is the Portsmouth, Ohio plant and one panel session is dedicated to different aspects of this featured site.

The first session will discuss the D&D project and include presentations on the USEC transition, workforce transition, regulatory decision making and the challenges regarding onsite disposal, baseline changes, project planning and execution and asset revitalization and recycle/reuse. The second session will focus on the DUF6 Phased Restart.

In addition to the featured sites, two special sessions are scheduled.

On Thursday Afternoon WM Symposia is pleased to include presentations and discussion about the Blue Ribbon Commission on America's Nuclear Future report

provided to Secretary of Energy Chu on January 26, 2012. At the direction of the President, the Commission was charged with reviewing policies for managing the back end of the nuclear fuel cycle and recommending a new plan for addressing this important challenge.

The US NRC will conduct a public meeting on Friday March 2 immediately following WM2012 to discuss potential changes to the agency's LLRW disposal regulations in Title 10 of the Code of Federal Regulations (CFR) Part 61.

Whether this is your first time at the symposium or whether you're a regular attendee, you will find more than enough on this year's program to keep you interested.

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Walking Tour Blends Old and New

With last year's walking tour such a success, WMS invites you to once again explore some of the diverse, historical and cultural aspects of downtown Phoenix. Starting from the Hyatt at 7:00 PM, this newly created and slightly shorter walking tour route will be led by the Downtown Phoenix Ambassadors and will last about three hours. It will visit several new points of interest, including The Westward Ho, The San Carlos Hotel, CityScape, The Downtown Phoenix ASU Campus, Civic Space Park and more, all within one square mile of the PCC.

Participants will enjoy complimentary appetizers at a few of the stops while listening to the stories of Phoenix from its time as an old west town to current day. If you go, be sure to wear comfortable shoes. There is a charge of \$15 per person for this tour.



Attention Speakers & Co-Chairs!

Make sure you are registered for the conference, and take advantage of a chance to meet your colleagues. All presenters and co-chairs are to check-in during registration to confirm attendance and receive any session update information. Each morning, a speaker and co-chair breakfast is held at 7 a.m. on the third floor of the convention center. Each session has an assigned table. This is a chance to meet others in your session and finish any session organizing. ***Please be sure to attend!***

Exhibit Hall Open Daily

There's action in the lower level of the convention center. That's where you'll find more than 200 exhibits representing the full spectrum of radioactive waste industry. The WM Exhibit and Marketplace has traditionally been a center for networking, viewing demonstrations and new products. Evening receptions are held here Sunday, Monday and Tuesday evenings. *Insight* newsletter staff will be walking the exhibit halls on the lookout for any special "Rad-Hot" deals. Look for our review right here in the *Insight*.

Hanford's Largest Groundwater Treatment Facility Ready to Run

Treatment of contaminated groundwater at the Hanford Site in Washington State is on target to reach an all-time high when a newly constructed treatment facility begins operations this year. Presenters will showcase progress in Hanford groundwater treatment technologies in Session 24, Sustainable Green Remediation Processes," on Feb. 27, and Session 99," Groundwater Remediation Projects "on March 1.

CH2M HILL Plateau Remediation Company is the U.S. Department of Energy's prime contractor for monitoring and remediating groundwater, the water below the surface of the earth occupying spaces in soils or geologic strata, at the Hanford Site. CH2M HILL is finishing up final construction items for the 200 West Groundwater Treatment Facility that will pump contaminated water from the ground and remove several chemical and radioactive contaminants, including the primary contaminant of concern - carbon tetrachloride.

To date, more than 5 billion gallons of groundwater have been pumped out of the ground and treated to either the drinking water standard or the stricter standard for aquatic life. CH2M HILL utilized water optimization techniques to increase treatment capacity by 300 million gallons per year without adding new facilities.

In addition, two new groundwater treatment facilities were constructed along the Columbia River and already helped CH2M HILL set a record in groundwater treatment – with more than 100 million gallons treated in a single month (equivalent to more than 150 Olympic-size swimming pools). That is more than has been treated at the Hanford Site in a month since treatment systems began operating in the 1990s.

The new 200 West Groundwater Treatment Facility is projected to treat 25 billion gallons of groundwater and remove and treat 77,000 to 110,000 pounds of carbon tetrachloride over its lifetime. It will be the largest treatment facility on the Hanford Site as well as the greenest with a process building designed to achieve Leadership in Energy and Environmental Design (LEED) certification.



An exterior view of Hanford's 200 West Groundwater Treatment Facility, the largest pump and treat system on the Hanford Site.

Improving The Future In Waste Management

It gives me great pleasure to welcome you to the 38th Annual Waste Management Conference, WM2012.

Widely regarded as the premier international conference for the management of radioactive materials and related topics, we've made it our mission to build a conference that equips you with the best practices from around the world and a return on investment that's clear and measurable. Over two thousand scientists, engineers and managers attend the conference from companies and agencies around the world.

In recognition of the growing drive towards new reactor builds and the need to demonstrate that nuclear waste management is well developed, we have adopted the theme:

Improving the Future in Waste Management

The technical program is comprehensive with over 500 papers and 105 technical sessions and panels and of course complemented by an extensive exhibition. This year's conference promises to have several exciting topics and we are especially proud to have Japan as our featured country to detail the events at Fukushima, as well as two US DOE featured sites, Portsmouth and Oak Ridge.

There will be the opportunity for networking both in the formal activities but also in the range of informal and social events organized both by the conference and participating companies.

On Thursday, March 1; WMS is proud to partner and present the topical session with the **US Administration's Blue Ribbon Commission (BRC) on America's Nuclear Future**. The BRC, which filed their charter with Congress the week before WM2010, has 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 WM2012 conference will be timely in discussing the report and these results.

On Friday March 2, The US NRC will conduct a public meeting immediately following WM2012, in Phoenix, AZ. The purpose of the meeting is to discuss potential changes to the agency's LLRW disposal regulations in Title 10 of the Code of Federal Regulations (CFR) Part 61.

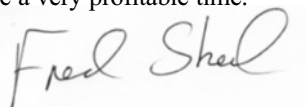
All are welcome, including generators, processors, disposal facility operators, States, LLW Compacts, advocacy groups and members of the public. Although this workshop is not part of the WM2012 Conference, it is being held the day after our conference ends at the nearby Renaissance Phoenix Downtown Hotel (Marriott) from 8:00am – 5:00pm.

The aim of the WM Board and the Program Advisory Committee is to put on a program that you find interesting, stimulating and informative. If you have ideas on how to improve the conference, please let us know.

I would like to thank the WM team for their efforts and our sponsors for their contributions that enhance what we can accomplish. Thanks also to our attendees and exhibitors who make the conference so exciting.

We are a non-profit organization with the aim of promoting education and opportunity and your participation helps us to further these objectives.

I hope you have a very profitable time.



Fred Sheil
Chairman - WM Symposia
Sheil Consulting, Ltd, United Kingdom



Fred Sheil
Chairman,
WM Symposia

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Meeting Notice for PA and RA Community of Practice

William Levitan, DOE EM Office of Site Restoration, is hosting a Risk Assessment (RA) Community of Practice (COP) get together on Monday February 27th in Room 101 C of the Phoenix Convention Center at the 2012 Waste Management Symposia. The purpose of the meeting is to discuss the expansion of the former Performance Assessment COP to include other risk assessors to provide lessons learned and share practices across the country.

Mr. Levitan has stated that because of common issues facing both the risk assessment community and PA practitioners, this COP will discuss technical issues associated with conducting long-term risk assessments for all cleanup activities, particularly at DOE sites. The Waste Management Symposia is an opportune time to kick-off the expanded COP as it will be attended by a large number of individuals who are engaged in performance assessment or risk assessment activities. The Conference setting allows the COP to reach out to the broader scientific and regulatory community to share ideas and discuss common issues.

Please join us and meet your old friends and some new ones. Water and sodas will be provided by the Waste Management Symposia.

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Keynote Speakers to Share National and Global Insights

Student Opportunities at Waste Management

Monday is a day that will highlight students, and opportunities for them to network and meet other Waste Management professionals.

This year, there are more students from more places than ever before—including students from outside the U.S.

A special networking session for students and young professionals will begin just after the International Welcome Reception Monday evening. Student posters will be featured from 1:30-5 p.m. on Monday.



David G. Huizenga
U.S. Department of Energy

David G. Huizenga

The Department of Energy's Acting Assistant Secretary for the Office of Environmental Management will share his insights and expectations for the future of his organization's activities when he kicks off the opening session of the 2012 Waste Management Symposium Monday, February 27.

David G. Huizenga was appointed to the post by President Obama in July 2011. A nationally and internationally recognized expert in nonproliferation and nuclear waste management issues, Mr. Huizenga has over 25 years of leadership, management, and technical experience in a wide variety of programs across the Department of Energy.

He began his career researching and solving some of the Environmental Management program's greatest challenges as a Pacific Northwest National Laboratory research engineer at the Hanford site in 1985. In that capacity, Mr. Huizenga worked on long-term solutions to aging single-shell tanks that were leaking radioactive waste in the soil and other activities to protect the Columbia River and developed computer-modeling tools to evaluate the long-term performance of low-level radioactive waste forms.

He has a Bachelor of Science in Chemistry and a Masters in Chemical Engineering from Montana State University. He has received Meritorious Presidential Rank Awards in 2000 and 2008 and the Secretary of Energy Gold Award in 1998. Mr. Huizenga lives in Arlington, Virginia with his wife and two children.

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) will tell the 2012 Waste Management Symposium that the Council Directive for Responsible and Safe Management of Spent Fuel and Radioactive Waste in the European Union is an important step forward to ensure responsible use of nuclear energy and radioactive waste.

Mrs. Ute Blohm-Hieber will be Monday's keynote luncheon speaker. Her unit deals with the societal aspects of the entire nuclear fuel cycle. "Why do we need EU legislation? In fact, all states are producing radioactive waste from different applications but there are few disposal facilities in operation for low and intermediate radioactive waste only," she says.

Mrs. Blohm-Hieber 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."

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.



Mrs. Ute Blohm-Hieber

Fukushima Recovery

Significant progress has been made, but large challenges remain

The March 11, 2011, earthquake and tsunami in Japan led to a series of events at the Fukushima Daiichi nuclear power station in which several units and their adjacent spent fuel pools have experienced beyond-design-basis accidents and are now in high-risk, uncharacterized configurations.

An accident of this magnitude had never happened before—six reactors, all in the same location, were damaged by the tsunami. Three of these reactors (Units 1-3) were operating at full power when the disaster struck. The four reactors (Units 1-4) that received the brunt of the damage also have integral spent fuel pools containing significant amounts of highly radioactive spent fuel, which were also damaged by the disaster and the subsequent explosions.

While Japan possesses world-class engineering and scientific capabilities, these reactor emergencies represent a first-of-a-kind event for the Japanese government and the nuclear industry in general, and were realized amid a plethora of other earthquake- and tsunami-related emergency conditions. The Japanese, supported by various international teams, have been undertaking a systematic effort to recover from the damage at the site and to begin the restoration of the surrounding areas.

Considerable progress has been made in stabilizing the situation and beginning the long road to recovery. In December 2012, nine months after the earthquake, the Japanese completed the initial steps on their roadmap toward restoration. Units 1-3 are now in cold shutdown condition, with stable circulating cooling systems in operation. The spent fuel pools have stable cooling systems installed as well. Construction of extensive storage and treatment systems for accumulated water has been accomplished and work is under way for enhancing these systems and developing acceptable approaches for the storage and management of the secondary wastes.

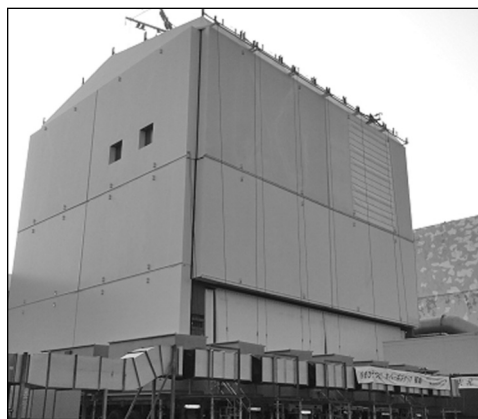
Extensive efforts have been undertaken to mitigate further releases of contamination beyond the station, including removal and management of

large amounts of debris, extensive use of fixatives on site, and the completion in October of the new reactor building cover for Unit 1. Site preparation and construction of the reactor building covers for Units 3 and 4 are under way. Remediation efforts have also been undertaken to test the effectiveness and efficiency of various decontamination technologies at 11 remediation demonstration cities, towns, and villages throughout Fukushima prefecture. The results of these demonstration projects will guide the large-scale decontamination efforts to follow, with the objective of returning residents to their homes in most areas within three years.

While much has been accomplished, many challenges remain. To address these challenges, a detailed mid- and long-term roadmap toward decommissioning the site was developed and issued in late December. The specific plans outlined in the roadmap cover the following five topical areas:

- maintaining the plant in an ongoing stable state
- reducing radioactive dosage and mitigating seawater contamination
- fuel removal from the spent fuel pools
- fuel debris removal
- disassembly of reactor facilities and the processing and disposal of radioactive waste.

It has been estimated that the completion of decommissioning will take at least 30 years.



Reactor building cover completed for Unit 1 on October 28, 2011

Japan is WM Featured Country

Beginning Monday morning and concluding that afternoon, WMS will include three sessions dedicated to Japan and the Fukushima incident.

It will start with our first Plenary Speaker, **Takao Fujie**, President and Chief Executive Officer, Japan Nuclear Technology Institute (JANTI) and continue with the first of three panel sessions Monday morning beginning at 10:00 AM. This panel will focus on the policy and program implications around the world from the Fukushima event. The session will address impacts on both current operations and future plans for nuclear power. After a short opening presentation, a facilitator will lead a highly interactive discussion among panel members.

The panel consists of high-level individuals from Japan, Europe and the United States.

An oral session begins right after lunch at 1:30 with four papers being presented covering various aspects of Fukushima. Details of each paper are found in the Technical Session listing.

Part three will focus on the complex technical challenges associated with the Fukushima cleanup. The panel will discuss the innovative approaches being used for cleanup in a very difficult radiologically-contaminated environment. This panel will cover decontamination methods that reflect the many technical unknowns and uncertainties associated with the current site conditions.

PNNL Support to Japan's Response and Recovery from Fukushima

Two weeks after the massive earthquake and tsunami that hit Fukushima, Japan, the Japanese government was making real-time decisions in a race to stabilize the situation.

In the midst of overwhelming destruction and the urgency to prevent further damage, Pacific Northwest National Laboratory was tapped to provide technical assistance to Japan. Working 18- to 20-hour days alongside Japanese counterparts, PNNL scientists and engineers drew on PNNL's 40-plus years of experience at the Hanford site in eastern Washington, at Chernobyl, and with other nuclear and environmental recovery efforts, to provide direct support to the Japanese government.

As the crisis unfolded, PNNL staff members were dispatched to Washington, D.C., as part of a multi-laboratory, multi-agency team to provide technical support to DOE's Nuclear Energy Response Team (NERT). Concurrently, and at Japan's request, NERT authorized PNNL to send staff members to Tokyo, where they helped assess technical options, technologies, and processes. PNNL was also the first organization to detect released radionuclides beyond Japan's borders and in the United States.

Prior to the disaster, Japan was the third largest producer of nuclear power in the world, getting 30 percent of its electric energy needs from nuclear. PNNL's work with Japan is contributing to Japan's efforts to

achieve a safe and stable resolution to the crisis in terms of energy production and managing radioactive contamination in Fukushima prefecture so that Japan can continue to meet its energy needs and Japanese citizens can return to their homes. In a larger context, nuclear energy is an important source of carbon-free, base-load energy in a world where both energy needs and carbon emissions are rising. As they support the Japanese, PNNL scientists will use what they learn to help make nuclear power plants safer in the U.S. and abroad.

Initially, PNNL staff focused on the immediate activities needed to stabilize the situation: assisting with technical plans for cooling the damaged reactors and spent fuel pools; assisting in efforts to stabilize radioactive contamination and prevent further releases; and providing technical options for securely storing and treating the rapidly accumulating volume of contaminated cooling water. PNNL staff members were also asked to consider the likely condition of the spent fuel contained in the pools and the impact that the accident, along with the degraded water chemistry, might have on the fuel. Drawing on their experience with Hanford's K Basin and work accomplished internationally, PNNL staff were able to assist the Japanese in assessing possible conditions within the spent fuel pools.

One immediate concern was the transport of contaminants to the food chain. Issues such as erosion,



Remediation demonstration project at Kawamata Town.

sedimentation, bioaccumulation, and potential uptake into food crops like rice and lettuce on land, and seaweed and shellfish within the ocean, made PNNL's environmental and coastal science expertise an important resource. As time passed, remediation, waste management, and long-term monitoring became additional concerns. Echoing PNNL's Hanford experience, these areas also relate to fate and transport, remediation technologies and desired land use. Working with various Japanese government officials and scientific teams, PNNL staff members have been able to provide valuable input into recovery plans.

At the onset of work in Japan, PNNL was part of DOE's NERT. This has transitioned into a new phase of work for PNNL which is funded directly by the Japanese government. PNNL, along with national laboratory partners and core government clients (including DOE offices of Nuclear Energy and Environmental Management, and the National Nuclear Security Administration), is committed to aiding the Government of Japan in achieving final safe and stable end state conditions at Fukushima Daiichi and in the surrounding region.



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Learn More about Hanford Cleanup

The complexities and importance of the cleanup of the USDOE's Hanford Site will take center stage during two consecutive half-sessions on Hanford Cleanup – Sessions 20 & 21 on Monday afternoon at WM2012.

Hanford is, by all accounts, one of the most challenging and complex cleanup projects in the United States, if not the world. Sixty years of defense nuclear production played a huge role in keeping America dominant, but that did not come without sacrifice. The legacy is millions of gallons of radioactive and chemical tank waste, billions of gallons of contaminated groundwater, millions of tons of contaminated soil, and hundreds of contaminated facilities.

Excellent progress is being made. The landscape at the Hanford Site is changing – daily. Old structures are being torn down, waste and debris are being consolidated or shipped off-site, plutonium and spent nuclear fuel are safely repackaged, waste sites are cleaned, liquid tank waste is being pumped out of aging tanks, and land is being officially transitioned for long-term surveillance and maintenance.

In parallel, new facilities are going up as construction of new groundwater treatment plants is nearly complete and the Waste Treatment Plant continues to rise against the backdrop of Rattlesnake Mountain. Meanwhile planning and preparations are under way to ensure the reliable and continuous delivery of tank waste to the WTP once it is operational, and to provide for the needed infrastructure to operate that complex facility and others.

Come join us Monday at 1:30pm for Sessions 20 and 21 and hear the details of this enormous, complex and highly important cleanup effort.

Student Poster Competition

Be sure to visit the Student Posters session on Monday, February 27th in the Exhibit Hall and vote for your selection for Best Student Poster. The winning student will be presented with \$500 cash at the Tuesday Honors & Awards Luncheon.

Stephen Wood, Florida International University/Applied Research Center (USA) won the WM2011 Student Poster Competition with his poster titled *“Unplugging of High Level Waste Transfer Pipelines: Method of Characteristics”*.

New This Year

Be sure to check your email each day! WMS will be sending you an electronic copy of the *Insight* Newsletter.

Also, attendees will have the convenience of charging their Smartphones, iPads and laptops at the WMS Charging Stations throughout the conference. Each station will include a security attendant, allowing attendees to leave their devices to charge and return at a later time.



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MARS Operations

For the first time in history a large robotic arm is being used to remove waste from a radioactive waste storage tank on the U.S. Department of Energy's Hanford Site in Washington State. Operators brought the Mobile Arm Retrieval System (MARS) to life inside one of Hanford's 149 single-shell tanks on September 29, 2011 following two years of planning, testing, operator training and rehearsals.

"It's been an extraordinary 2 year journey getting MARS designed, built, installed and tested. We are excited to have put MARS into operation and were able to realize its capabilities as our latest waste retrieval tool," said Single-Shell Tank Retrieval and Closure Manager Kent Smith. *A discussion of this unique technology will be held during Session 035: Storage and Retrieval of HLW: Retrieval and Cleaning beginning Tuesday at 8:30 AM.*

MARS uses high pressure liquids to mobilize the solids so they can be pumped. Meanwhile, a vacuum version of MARS is being tested for



deployment in Hanford's tanks that are known to have leaked. It uses an educator system requiring a minimum amount of liquid to mobilize the waste and removes the liquid almost as fast as it is introduced. Because of its hydraulic arm MARS is capable of a wide range of telescoping motion to reach all parts of a tank. The operating head has multiple low and high-

pressure spray nozzles that hydraulically "rake" waste to a central pump. The head is also articulated, allowing it to reach around obstructions encountered in the tank.

Because of the size of the arm a 55-inch diameter hole was cut in the top of C-107 in December 2010...the largest hole ever cut in an active radioactive waste storage tank.

Warnings to Future Generations to be Discussed Tuesday

Warning future generations of geologic waste disposal sites will be the topic of Session 34:

"Communicating Across the Millennia." The panel session is scheduled for Tuesday morning from 8:30 AM to 12:00 PM in room 104 AB. It will focus on the design and content of warning messages to the future that are being designed by various geologic repository programs throughout the world.

We all know how to characterize a geologic repository site, we all know how to prepare the safety case for a site, and we all know how to do the engineering to build a geologic repository; but we all do not know how to communicate to generations thousands of years in the future that a repository is

located beneath their feet and what the dangers associated with that may be.

International subject matter experts from both industry and regulatory entities will be speaking on their perspectives of the "message" that should be conveyed to future generations and methodologies proposed to send this message. This panel will describe and debate differences and similarities of the various international programs being contemplated and the audience will be asked to participate.

Let your voice and ideas be heard on this far reaching, challenging and sometimes controversial subject. Please join us for this panel session on Tuesday morning.



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- 70% of our contracts in our community

CH2M HILL is proud of the role we play in cleaning up the Hanford Site for future generations. Visit ***www.plateauremediation.hanford.gov*** for more information about our mission at Hanford.



Waste Management Symposium: A Convergence of Interests

When Jim Voss attended the first Waste Management Symposium, then held in Tucson, 38 years ago he had no idea where it would lead. He was a student at the University of Arizona and the symposium lit a fire in him that still burns brightly today. He now owns a group of companies in the nuclear and renewable energy industry, has been a speaker and presenter at the symposium and for the past ten years has served as the symposium's Managing Director. Needless to say, he's seen a lot of changes in the Symposium.

"The most significant change in the symposium has been the relevance of the conference and the topics we focus on. Waste management was once the stepchild of the nuclear industry dominated by process technologies. Now it is one of the most important issues facing the growth of the nuclear industry and our program offerings reflect that," he said.

Another vital topic for the symposium is environmental remediation, something that didn't become a national imperative until the 1980s. "The symposium plays a significant part in advancing progress in all areas of waste management and site remediation," he said.

Two of the most important focuses of the symposium, Voss believes, are the technology exchanges and lessons learned exchanges. "We've gotten past the 'not invented here' syndrome that plagued our industry. We still have some distance to go but the symposium continues to focus on it as we bring lessons from one site to another and from one country to another," Voss said.

Over the years there has also been

the initiative by the symposium board to increase student participation. "The symposium has attempted to create a home for people engaged in the waste management and disposal fields so students feel that they have an understanding of the industry and can see where they fit in and where to take their careers," Voss said.

Another who was there for the first symposium was Jack McElroy, then a research scientist at Pacific Northwest National Laboratory in Richland, Washington. He has since retired from PNNL but remains active with the symposium. For him a significant element of the symposium is student involvement. "Students involvement is one of our main drivers. We put a lot of money into student support, including scholarships, travel and lodging assistance and poster sessions. The students are our future and it's imperative that we support them," McElroy said. The Roy Post foundation, with symposium support, has been able to give at least 50 scholarships to deserving students.

Waste Management Symposium President and past Chairman Jim Gallagher wasn't around for the first symposium. He became active in the organization in later years in his role as an executive with Westinghouse, then a leader in the nuclear power industry. He believes the symposium works because of the convergence of good technical papers, good policy discussions and good commercial opportunities and dialogues that take place.

"The Department of Energy supports the conference tremendously because they view our technical and non-profit

status as a forum for discussion without conflicts of interest. We continue to focus the symposium on the exchange of information, safe management of nuclear materials, and to provide opportunities for growth of organizations as well as individuals in the field," Gallagher said.

Gallagher's takes pride in the growth and improvement he has seen. "I am ecstatic with where the symposium is right now. The quality of the conference is at an all-time high according to the feedback we receive and the financial health of the conference is the best it's ever been."

At the end of the symposium when presenters have put away their PowerPoint graphs and charts, exhibitors have packed away their displays and handouts, and students have returned to the classroom, they have all been part of a very special convergence that makes Voss, McElroy, and Gallagher excited about the future of the symposium as well as the future of the industry it supports.

But there is another aspect of the symposium that Voss says can't be overlooked. "The symposium is seen by those who attend it as a cost effective way for major groups to meet separately from the symposium offerings. Last year the Russians brought 30 people and held a lot of side meetings involving our participants. This year we have scheduled EFCOG side meetings and DOE side meetings, and the NRC is holding a public meeting on Friday to take advantage of the vast number of people who are here. They all see value in being here and providing value is our primary objective," Voss said.



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