



Wednesday

Insight

March 7-11, 2010 The official daily newsletter of the 36th Annual Waste Management Symposium
Vol. 36, No. 3

Awards Luncheon Honors Waste Management Professionals

Sarge Ozker Award

Tom Snyder was named this year's recipient of the *Sarge Ozker Award*. Established in honor of M. Sacid (Sarge) Ozker, the award recognizes distinguished service and eminent achievement in the commercialization of nuclear power/energy with particular emphasis in the field of radioactive waste management.



Tom Snyder

Tom joined the nuclear industry as a chemical engineer with Westinghouse Electric. He has worked within the nuclear community for 32 years in areas from secondary uranium recovery and nuclear services to 233U downblending on industrial, federal and commercial nuclear project teams. He is co-author of over 40 U.S. patents.

and keep the annual conference the world's premier conference on the management and disposal of nuclear waste. Linda began participating in the symposium in the early 1980s, organized sessions on public participation training, which later led to the creation of the public participation, education and training track.

Linda was the first woman to serve on the Program Advisory Committee and has continued to help organize and chair sessions. She has also been very active as editor of the conference newsletter *Insight*. She was unable to attend Tuesday's lunch. The award was accepted on her behalf by her longtime friend, Linda Lehaman.

WMS Wendell D. Weart Lifetime Achievement Award

A name known throughout the DOE complex, **Leif Eriksson** accepted the *Wendell Weart Lifetime Achievement Award* in recognition of his long-term commitment to solving major nuclear waste challenges.



Leif Eriksson

During nearly five decades of involvement in nuclear waste management programs and projects, Leif has made substantial and enduring contributions to both national and international waste management, waste processing and nuclear waste repository programs. In the U.S. he has played key roles in the technical evaluations and licensing efforts related to the Waste Isolation Pilot Project, and the Yucca Mountain project. He has written and spoken frequently about the many technical and societal issues confronting national nuclear waste management and technical evaluations, decision making, and regulatory actions.

WM09 WMS/ANS Award Best Poster Presentation and Paper

Decision Support Tool for Prioritization of Surveillance and Maintenance Investment presented by **Leydi Velez** who is a DOE Fellow, attending Florida International University. Co author is Thomas Conley of UT-Battelle LLC at the Oak Ridge National Laboratory.



Leydi Velez

WM2009 WMS/ASME Award for Best Poster Presentation and Paper

Meteor Burst Remote Monitoring System Deployment at US DOE Hanford presented by **Andrea Hart** and co authored by **Jack Joyce**, MSE Technology Applications, Inc; Andy Ward and Chris Strickland, PNNL (USA).

WM2009 WMS/ASME Award for Best Oral Presentation and Paper

Characterization of Solids in Residual Wastes from Single Shell Tanks at the Hanford Site, Washington, USA presented by Kenneth Krupka. Co-authors **Kirk Cantrell, Todd Schaefer, Bruce Arey, William Deutsch, Michae Lindberg**, PNNL; **Steve Heald**, ANL (USA).

WMS Program Advisory Committee Award

Linda Ulland received the 2010 *WMS Program Advisory Committee Award* in recognition of her long-standing contributions to the Waste Management Symposium. The award was established by the WMS Program Advisory Committee to annually recognize an individual whose outstanding contributions have helped make



Linda Ulland

WM2009 WMS/ANS Award for Best Oral Presentation and Paper

Joseph Padlaha of the Nuclear Research Institute Rez PLC (Czech Republic) was honored for his 2009 presentation *Shipment of Spent Nuclear Fuel from the Nuclear Research Institute Rez Plc, Czech Republic to the Russian Federation for*

IMPACT SERVICES, INC.

IMPACT SERVICES, INC.

IMPACT Services, Inc., is a small business enterprise that operates radioactive waste processing facilities in Oak Ridge, Tennessee. At IMPACT, safety is our number one priority. IMPACT's record of safe, compliant, and efficient operations, in conjunction with our commitment to providing customer-oriented waste management services, sets IMPACT apart from other low-level waste processors. IMPACT provides a variety of processes geared toward the volume reduction of radioactive waste. IMPACT's low cost proprietary method for waste processing (Bulk Survey for Release) enables waste generators to reduce the volumes of their low-level radioactive wastes and dispose of low specific activity candidate materials as solid waste. IMPACT also performs a variety of decontamination activities, inspection and characterization services, thermal destruction via pyrolysis, sorting and segregation, profiling, and stabilization/solidification. Additionally, we use the patented OREX™ process on polyvinyl alcohol-based disposable garments, virtually eliminating radioactive waste disposal volume. These combination of services often result in zero disposal volume attributable to the original generator. IMPACT is licensed by the State of Tennessee and provides services to both federal and commercial clients.



FluidTech, a division of IMPACT Services, is headquartered in Las Vegas, NV. Fluid Tech provides a variety of engineered products, technologies, and services ranging from the stabilization/solidification of radioactive wastes, remediation of oil spills on both freshwater and saltwater, suppression of coal dusts, and treatment of hazardous wastes. Fluid Tech addresses environmental problems for the government and private industry through patented and innovative products and services to manage radioactive, hazardous, and industrial wastes. Fluid Tech's line of "green" certified products offers customers a more environmentally-conscious alternative to traditional waste management approaches.

GeoMelt® Technologies

GeoMelt® technologies are a collection of vitrification processes that result in the destruction of hazardous organics, immobilization of radioactive materials and heavy metals and the means to deal with difficult wastes. The GeoMelt® technologies transform hazardous chemical and radioactive wastes into an ultra-stable vitreous and crystalline material similar to volcanic obsidian that is typically 10 times stronger than concrete. Unaffected by wet/dry or freeze/thaw cycling, the final product is unsurpassed in leach resistance and it is expected to maintain its physical and chemical integrity over many tens of thousands of years. Corrosion tests have demonstrated that the GeoMelt® product is more durable than granite or marble.



IMPACT and our partner, Omega Consultants, Inc., opened the new Secure Support Facility (SSF) in 2009, and are in the RCRA "Part B" application process. Located in Oak Ridge, TN, the SSF facility features over 67,000 square feet of classified office and process space. The SSF will provide the IMPACT/Omega team with the capability to expand our services to include classified support, production, and waste operations. The SSF was designed and built as a limited area (Q) for classified material, low-level, mixed-waste (LLMW) processing and information handling.



www.impactservicesinc.com

The WM2010 Roy G Post Scholarship Winners

More than \$40,000 in cash prizes and scholarships were handed out to students at the annual WM Symposia Honors and Awards Luncheon.

Denny Carvajal, a biomedical engineer at Florida International University received a \$500 cash prize for the best student poster. His poster was chosen from a field of 60 entries.



Denny Carvajal

Eight other students received \$5,000 scholarships from the Roy G. Post Foundation.

Omar Al-Qudah is in his third year as an Environmental Science and Engineering PhD Candidate at the University of Texas El Paso. His career objective is to contribute to the understanding of the processes controlling groundwater recharge and sustainable yield of groundwater in Nye County, Nevada.



Omar Al-Qudah

Kevin Arpin is a junior seeking his B.S. in Mechanical and Nuclear Engineering from Kansas State University. He plans to pursue a PhD and career in Nuclear Physics or Engineering.



Kevin Arpin

Braden Goddard is a graduate researcher for the Nuclear Security Science and Policy Institute at Texas A & M University. He is currently pursuing his doctorate in Nuclear Engineering.



Braden Goddard

Christina Leggett is a PhD candidate in Nuclear Engineering at the University of California – Berkeley. Her research area is in separations (reprocessing) and her career objective is to combine her knowledge of separations science with radioactive waste management in an academic setting.



Christina Leggett

Jessica O'Brien is completing the final requirements for her Bachelor of Health Science (Honors) degree at the University of Ontario Institute of Technology. She is also working as an intern in emergency management and business continuity planning with Ontario Power Generation, one of the largest power generators in North America.



Jessica O'Brien

Hayes Stripling is a M.S. candidate in Nuclear Engineering at Texas & M University. His research interests include uncertainty quantification in scientific computing.



Hayes Stripling

Thea Tadlock is a junior at Missouri S & T in Rolla, Missouri. She will graduate in May 2011 with a Bachelor of Science in Nuclear Engineering with the future goal of working in nuclear power and core designing.



Thea Tadlock

Jamie Warburton earned a B.S. degree in Nuclear Science and Engineering from MIT in 2007 and is currently a Nuclear Forensics Fellow in her third year as a Radiochemistry PhD candidate at University of Nevada Las Vegas. Her career objective is to contribute to the closing of the US nuclear fuel cycle.



Jamie Warburton

WM2011 Conference Planning

Planning for the next conference for February 27-March 3, 2011 is well underway. If you would like to participate as a presenter, or would like to volunteer with WMS, here are some milestones for your planning:

June 14, 2010 — Call for Abstracts Issued

WM2011 will solicit abstracts describing research, development and operational experience over the complete spectrum of nuclear waste activities.

Proposed topics are categorized into general tracks that are reviewed by the WMS Program Advisory

Committee Members and will be posted on www.wmsym.org and mailed in early June.

Sept. 13 & 14, 2010 — PAC Abstract Review Meeting

PAC Members gather in Phoenix to review submitted abstracts and create the preliminary program for the WM2011 Conference. Once finalized, authors are notified and draft papers are written.

November 12, 2010 — Draft Papers Due

Draft papers are submitted and reviewed in November by members of the PAC in their area of expertise. Authors are given several weeks for any requested updates or revisions and submit their final paper in January. The final program is updated and ready to be printed.

November 1, 2010 — Registration Opens

Registration for the conference is open online at www.wmsym.org in early November. Feb. 27 – March 3, 2011 WM2011 Conference

For more information on the WM2011 Conference, please visit: www.wmsym.org

PAC Volunteers

If you are interested in learning more about the Program Advisory Committee, please contact Gary Benda at gbenda@wmarizona.org for more information.

**Need last minute help
planning your travel
from Phoenix? On-site travel
help is still available from
Aquila Travel. Just talk to
Sherry in the registration
lobby. She'll be there to assist
you through Wednesday
afternoon.**

SESSION PREVIEW

Closing Session 82 - The Nuclear Renaissance!

Please do not miss on Thursday our featured *Closing Session 82 - The Nuclear Renaissance!*

This session is focused on updating the progress being made on considering applications for new nuclear power plants under 10 CFR Part 52, a rule which NRC promulgated over 20 years ago at a time when no new nuclear power plants were even being considered in the US. Little interest was shown in the specifics outside the NRC except for the forerunner organization to the NEI, the Atomic Industrial Forum. Nuclear power detractors in Congress showed almost no interest as did those institutions which had normally been against constructing and operating nuclear power plants. Now over the past four years there has been a significant resurgence in the move towards building and operating new nuclear power plants in this country and a number of commitments have either been made or are on the verge

of being made to construct new plants. This session is focused on how well the new rule is working to ensure that safe and economical new plants will be constructed to meet the nation's growing, clean electrical energy supply needs.

The panel will include: Steve Burns, General Counsel, US Nuclear Regulatory Commission. Mr. Burns was directly involved in formulating Part 52 as legal assistant to then Commissioner and later Chairman Ken Carr, who along with Chairman Lando Zech were primarily responsible for leading the development of Part 52. General Counsel Bill Parlor was also a leader in the process at that time. Steve Burns has presided over the resurgence of new plant applications using Part 52 in his role as Deputy General Counsel and now as General Counsel and will provide a unique view of just how well the new rule is working from the NRC's point of view.

Bob Evans, Vice President, Enercon Utility Services has led the preparation of a significant number of the new applications for several clients and will provide his view on how Part 52 is working from the owner/operator/ licensee's perspective.

Jim Little, Vice President, URS who is a veteran of the nuclear power industry going back to his Westinghouse days will share his vision on the prospects for new nuclear plants in the US.

Ed Helminski, well known expert in the national and international nuclear arena, will provide an overview of the prospects for new plants in the US and the acceptance of them by Americans as a part of our electricity supply future.

The panel will be co-chaired by Jim Gallagher, a pioneer in the early design and construction of pressurized water power reactors and John Bradburne who formulated the strategy at NRC which led to the promulgation of Part 52.

IFSOUP – Improving the Future by Dealing with the Past

Fueling the fleet of new reactors expected with the nuclear renaissance is a parallel renaissance in uranium production. Currently there are 436 nuclear reactors in operation world-wide with 45 new reactors under construction and 131 new reactors ordered or planned. Additionally, another 278 reactors are proposed to generate electricity. World production of uranium comes from many mines in twenty countries, yet two-thirds of the world's uranium comes from just 10 mines.

The International Forum on Sustainable Options for Uranium Production (IFSOUP) is a network for members of industry, regulatory bodies and NGOs to discuss and implement steps to achieve more sustainable uranium production practices – and thereby avoid developing new legacy sites. In keeping with the theme of WM2010 – Improving the Future by Dealing with the Past – A session of IFSOUP at WM2010 will examine how legacy sites have affected the current

economic, regulatory, and social conditions associated with primary uranium production. The session on Tuesday, March 9 will include:

- The current outlook for global uranium production
- Sustainable and socially responsible programs implemented in current uranium production
- Regulatory changes for uranium production
- Programs addressing legacy site remediation
- Barriers to sustainable uranium production

During WM2010, IFSOUP will benefit from the insights afforded by the IAEA delegation of ENVIRONET which will be presenting several ENVIRONET panels at WM2010. ENVIRONET is a network of experts, sponsored by the IAEA, that provide expertise to address the technical challenges for radiation site cleanup. The IAEA ENVIRONET lead-off session will be Monday morning, Session 04 - How Can Networks Improve the Implementation of ER Projects? (10:00 – 12:00 AM). Please check your programs for further details and listings of the IAEA and ENVIRONET special series of sessions at WM2010.



SESSION PREVIEW

ORBSP Quarterly Safety Forum, March 18, 2010 American Museum of Science and Energy

As part of an ongoing commitment to the safety of people who work on the Department of Energy's Oak Ridge Reservation sites, the Oak Ridge Business Safety Partnership (ORBSP), supported by the Energy, Technology, and Environmental Business Association (ETEBA), will hold its first quarterly safety forum of 2010, on March 18, at the American Museum of

Science and Energy in Oak Ridge. The featured speaker, nationally acclaimed safety speaker, John Drebing, is sponsored by Oak Ridge Associated Universities. Drebing presents a serious message about the importance of job safety while entertaining his audience with humor and magic. The program will emphasize the following points, identified in Drebing's book, *Mastering Safety Communication*:

- How to rekindle the vision, passion, and energy for motivating workers and others to focus on safety twenty-four hours a day
- Ways to visualize and achieve a zero-injury mindset
- How to be seen as a safety resource vs. a police officer when approaching and offering safety suggestions to others
- How to increase the number of employees who take personal responsibility for their own safe behaviors at work and home
- Tips on communicating effectively and developing the

skills and confidence that will deliver results when conveying their next safety message

- How to teach and learn the techniques to help people create a team approach to safety in which everyone watches out for each other; How to have a fun leadership meeting that celebrates your successes and creates a road map to a more productive and a safer year

As an ORBSP partner, this presentation is in support of ORAU's Voluntary Protection Program (VPP) Community Outreach Program to DOE, DOE contractors, and other local organizations to help understand and develop an interdependent safety culture throughout Oak Ridge. The forum begins with coffee, bagels and networking from 7:30 a.m. to 8:00. The program begins at 8:00 am. The forum is free and open to the public; no reservation is required.

About ETEBA:

The Energy, Technology & Environmental Business Association (ETEBA) is a 501(c)(6) national non-profit trade association representing a diverse group of businesses that provide environmental, energy, engineering and other technical services to federal agencies and commercial clients. ETEBA has chapters in Tennessee and New Mexico and an office in Washington, DC.

Insight Newsletter

— *Editors*—

Linda Ulland,

University of Minnesota,
Regional Sustainable Development Partnerships

Linda Lehman,

CH2M Hill Plateau Remediation Company

— *Contributing Editors*—

Mike Berriochoa, WRPS

Lynette Bennett, CH2M Hill PRC

Maren Disney, CH2M Hill PRC

Todd Nelson, Washington Closure Hanford

— *Layout / Graphics* —

Pam Bradford

pambradford03@yao.com

Editors welcome articles or news
of interest to symposia attendees.

— *Email* —

llehman@wmarizona.org

— *Phone* —

612-978-9725

Disposition of High Activity Mixed Waste-Problematic or No Problem?

Is the characterization, treatment and disposal of high activity (some WIPP wanna be) waste well in hand now or are there other issues to resolve? When NTS disposal ends this year will another cell be available? With Hanford closed to out of state waste for years now, will WCS offer another option? Can the treatment vendors handle your HWNs. Stop by Session 56 Wednesday 10:15AM Room 105AB and bring your problem waste.

A reminder to all Waste Management 2010 guests and attendees. The Phoenix Convention Center is a public facility so you should take care to watch your belongings while in the building. A coat check desk is available to you on the lower level through Wednesday afternoon where you can check your bags as well as your coats.

SESSION REVIEWS

Emerging Issues Facing DOE Site Contractors

Maintaining an experienced and motivated workforce on Department of Energy (DOE) site cleanup projects through the life of the projects is emerging as a top issue to contractors across the DOE complex. That was the message from contractor managers who met Tuesday morning to discuss emerging issues facing them.

Most DOE sites are cleaning up and closing down and a lot of experienced workers won't want to wait for the end of a project before moving on. The problem is compounded by the large numbers of new employees that have come on board with money from the American Reinvestment and Recover Act (ARRA).

"We depend on the experienced workers to help train and mentor the new people so we need to make sure we have a staffing plan that identifies new jobs for our people when current cleanup projects end. Otherwise we will lose them early and finding qualified replacements to complete the projects could be difficult," said Jeff Mousseau, President and General Manager, Bechtel BWXT Idaho.

Coincident with the need to keep good people is the recognition that a large number of workers in the DOE complex are or soon will be eligible for retirement. This means more younger workers must be brought into the system. Those being hired with ARRA money are being trained to take jobs lasting only one or two years represent a significant investment, one that no site wants to lose.

"We've developed new training programs to bring these new workers up to speed and are assigning them to teams of experienced workers who can serve as their mentors. But if something isn't done about the funding we will lose a lot of good people," said John Lehew, President of CH2M HILL Plateau Remediation Company.

While most DOE sites are cleaning up and closing down at a rapid pace, the legacy of plutonium production will keep portions of the Hanford Site in Washington State active for another 40 or more years. Washington River Protection Solutions (WRPS) is charged with reducing the risk of 53 million gallons of highly radioactive and chemical waste and safely managing the waste until it is prepared for disposal in the nearby Waste Treatment Plant which is now under construction.



Scott Sax, Project Operations Manager for Washington River Protection Solutions on the Hanford Site in Washington State discussed emerging issues facing DOE contractors.

"Our employment challenge is the workforce of the future as we transition to an operations company and begin hot operations of the WTP," said Scott Sax, WRPS Project Operations Manager. WRPS is currently focusing its energies on cleaning old leak-prone single-shell tanks and moving waste to newer and safer double-shell tanks. But soon the needed skill mix will change. "Our biggest need will be for qualified and experienced start-up engineers who know their way around big plants," Sax said.

Other issues facing DOE contractors engaged in site cleanup include the economic impact on communities near the site as projects are concluded and funding declines. "Site reuse is an important issue to our community," said LATA/Parallax Project Manager Bill Franz. LATA/Parallax is closing down the Portsmouth facility. "Portsmouth will always be a nuclear facility but our community is eager to see the future since the local unemployment rate is at 16 percent," Franz said.

Other emerging issues discussed by the panel included regulatory alignment and agreement on what is meant by closure so everyone agrees on the end state. And every panel member agreed to completing the work safely is always the highest priority.

Challenges of Putting ARRA Funds to Work

The past year of implementing ARRA funding has not been without its challenges and that was the focus for the "US Progress, Challenges and Future of American Recovery and Reinvestment Act (ARRA) D&D Projects" panel on Tuesday morning. Speakers outline challenges being experienced across the DOE complex as ARRA dollars are being put to work:

- Recruiting, training and maintaining a skilled workforce
- Planning the work
- Installing the necessary infrastructure
- Preparing buildings for D&D

- Increasing disposal efforts
- Integrating co-located missions and activities
- Integrating base and ARRA funding
- Understanding requirements for implementing funds
- Reporting and tracking the funding and progress

Reinhard Kneer, Paducah, and Ken Schneider, Oak Ridge National Laboratory, discussed the successes, challenges and lessons learned from their projects. Kneer described the challenges of implementing ARRA funding at a shared site such as Paducah, which is home to three contractors and other private

companies. Similarly, Schneider explained how at the Oak Ridge site, the project has been challenged with conducting cleanup amidst several research facilities. William Shingler, Burns and Roe Enterprises, Inc., spoke about ARRA funding implementation from the subcontractor perspective, outlining ARRA procurement and contract challenges.

From understanding the ARRA requirements to actually implementing contracts and doing the work, ARRA funding has challenged projects to transform their work and their workforce – and it is a challenge the projects have been willing to accept.

SESSION REVIEWS

International Youth Nuclear Congress

“The Nuclear Renaissance is here,” said Leonel Lagos. That and the fact that a high percentage of the U.S. Department of Energy and contractor labor force is nearing retirement, makes the industry ripe for young professionals, he said.

Lagos runs the DOE Fellow program at Florida International University and was one of the co-chairs for the Tuesday morning panel discussion on *International Youth Nuclear Congress/Young Professionals*. The panel provided a forum for young people to hear about training, development and networking opportunities for young professionals in the nuclear industry.

Corbyn Parr, president of the Young Generation Network (YGN) in the United Kingdom, said that nuclear was off the agenda only five years ago, but “it’s very much on the agenda today.” She talked about the generational gap created in the nuclear industry and the opportunities created by renewed focus on nuclear as an energy source, as well as cleanup activity at Sellafield and other places.

The YGN also hosts tours. Parr is in the beginning stages of planning a trip to cleanup sites in the United States in 2011. This will be the first trip for the group to the United States since they have fewer contacts here.

The YGN is part of the UK’s Nuclear Institute. It has experienced swift growth

in the last few years and is now up to 1,200 members. They provide a platform for education and training, professional development and networking, as well as national and international exchange. But their primary focus is on the next generation.

In addition to Parr and the Young Generation Network, Braden Goddard of Texas A&M, talked about the World Nuclear University – Summer Institute in Oxford, England. WNU hosts young professionals working in the nuclear industry for an intensive six-week summer program. The purpose is to foster communications and build leadership skills that young professionals can take back to their organizations throughout the world.

They are given problems to solve, take tours of nuclear facilities and hear from senior professionals in the field, such as Hans Blix, former head of the International Atomic Energy Agency. At a per person cost of US \$16,000 the program, requires corporate support.

Also part of the panel was Rosa Ramirez, who went through the DOE Fellow program at Florida International University and now works for DOE Office of Environmental Management. She said it’s important to young professionals to find a mentor.

In response to Ramirez’s comment, an

audience member asked the panel what makes a good mentor:

- Find one who is willing to spend some time with you, to get to know you, understand what it is you’re interested in.
- Find one you’re not afraid to speak to, someone who’s been where you are.
- If one isn’t working out, find another. It has to work for both of you. A good one will realize they can learn as much from you as you can from them.
- Realize that you may change mentors depending on where you’re located and what stage you’re in with career and life.
- Don’t expect your mentor to do all the work. You have to show some initiative.
- They can’t read your mind, so talk with them and be open about your goals, your plans, and your thoughts.

To learn more, visit:

- World Nuclear University: www.world-nuclear-university.org
- International Youth Nuclear Congress: www.iync.org
- Young Generation Network: www.ygn.nuclearinst.com
- YGN e-mail: ygnchair@nuclearinst.com

Credibility in Cleanup Linked to Open, Honest Communication

Making cleanup data and information accessible to a wide range of stakeholders emerged as a key element in engaging the public in cleanup decisions and nuclear operations during Monday’s session, “US DOE Site Specific and Citizen Advisory Boards (CABs) – Public Involvement Makes a Difference.”

Engaging young people, whether it be in cleanup decisions or in nuclear advocacy, was a theme also echoed by presenters. And with the “greening” of nuclear energy, some groups are even beginning collaborations with traditional opponents as they work toward understanding.

But the key to credibility is “facts linked back to a strongly, technically based source,” said Dr. Susan Wood with the Citizens for Nuclear Technology Awareness. “Whether it be education or advocacy, we must always go back to

facts,” she said.

Laurence Pernot, who has communications responsibility for Areva North America, added that when it comes to nuclear power, we must make the debate more rational than it was in the past. “There must be no taboo questions about nuclear energy or nuclear waste. Concerns must be taken seriously and answered honestly,” she said.

JD Campbell, Chairman of the Northern New Mexico Citizens Advisory Board, said they are working toward allowing stakeholders to access information and data from their unique cultural perspectives. “Native Americans have a strong link with thousands of years of history,” he said. The lens they view through is one of geography, encompassing four mountain peaks that are sacred in their culture. Hispanics have a strong agrarian tie to the land that dates

back more than 400 years.

He said the two groups come at the question from a very different cultural context than the physicist who’s interested in the specific placement of groundwater wells. “They have to be able to access data from their cultural perspective if they are to provide transparent oversight of multiple projects,” he said.

The Savannah River Site Citizen Advisory Board took a different approach according to Chairman Manuel Bettencourt. He said it took them a year to put together an input/output analysis graphic to illustrate the cleanup process. When site managers make presentations regarding work underway, they must describe the work in terms of the input/output graphic so that how cleanup is accomplished is visually and consistently placed in context for the board and its stakeholders.

SITE NEWS

Do Work Safely Course Welcomes New Workers to Hanford Safety Culture

When it was clear that Recovery Act funding was going to bring hundreds of new employees to the CH2M HILL Plateau Remediation Company (CH2M HILL) workforce, the question wasn't about what to do with the workers but rather how to get them trained so that work could begin safely as soon as possible.

To meet the challenge of training such a large number of new employees, CH2M HILL teamed with other contractors and the HAMMER training facility staff to develop a course that draws on lessons learned and existing workers' experiences.

"Their training needed to prepare workers in realistic conditions to work safely and be successful when they go into the field," said Red McKennon, Training Director. "The workers' backgrounds and experience range from beginner to those with broad field experience, but it's important that all of them understand our safety culture. The hazards and conditions on the Hanford Site are different than anything they've encountered."

During the course, called Do Work Safely, workers learned about conduct of operations, human performance improvements and safety principles that are relative to not only their scope

of work but also the entire CH2M HILL project. Workers complete the five-week training course that is designed to help them work safely and be successful when they are at a job site.

"The thoroughness of the training was impressive," said Scott Napier, a new decommissioning and demolition worker. "We're learning to be prepared for all potential hazards. The most important lesson is to follow the principles and if something doesn't feel safe, don't do it."



New hires to the CH2M HILL Plateau Remediation Company complete Do Work Safely training to prepare for decommissioning and demolition work on the Hanford Site.

Cell 5 Liner Nears Completion

You wouldn't normally consider a "blackout" a cause for celebration, but workers at DOE's Environmental Management Waste Management Facility (EMWMF) Cell 5 construction site were celebrating just such an event recently, according to Bechtel Jacobs Co. (BJC) Project Manager Joe Williams.

A "blackout" in this context refers to the installation of a high-density polyethylene geomembrane (black in color) that completely encapsulates the cell's low-permeability clay liner, making it water tight and protecting it from the weather.

The clay liner and the "blackout" geomembrane are two elements of a multilayer, multicomponent liner system to prevent waste from leaching into groundwater beneath the cell.

Williams noted that since Cell 5 construction started in June, workers have endured extremely wet weather, with rainfall amounts more than 50% above average. Before blackout, every rain or snow event required extensive storm water management to drain the cell in order to dry out the saturated clay surface so work could resume.

"These folks did a terrific job in completing this work safely and on schedule," Williams said. "Frequent rain events required make-up days to be worked many Saturdays and Sundays. Through all of that, the project has worked over 60,000 hours with only one first aid case – a spider bite."

The 14-person crew from ESI installed the liner system. BJC and Avisco, the subcontractor responsible for excavation, then began placement of drainage rock and protective soil layers inside the cell. The overall project will then transition to the



ESI workers weld the final seam in the EMWMF Cell 5 secondary geomembrane. The membrane to the right is the run-out of the Cell 4 geomembrane that was installed in 2004. The membrane to the left is the new secondary geomembrane for Cell 5. The wedge welder heats both sheets of membrane to 500 degrees Fahrenheit, then fuses them together in two parallel strips.

installation of piping, instrumentation, and electrical installations outside the cell.

EMWMF expansion is being funded by \$26M from the American Recovery and Reinvestment Act and will be finished in May 2010, with regulatory approval expected in August 2010.

SITE NEWS

A Recipe for Protecting the Columbia River

Coyote Willow and molasses are just two ingredients for a contaminated groundwater solution.

The best recipe for protecting the Columbia River from contamination might just be a mixture of strategies. Researchers at Pacific Northwest National Laboratory, along with collaborators at CH2M HILL Plateau Remediation Company, tested several methods that will “lock up” or remove groundwater contaminants making their way to the Columbia.

As a legacy of contamination from nuclear reactors at the Hanford Site, three plumes consisting of strontium 90, uranium, and hexavalent chromium are of major concern. With just over \$7 million in U.S. Department of Energy (DOE) funds, researchers completed multiple studies which provide advanced solutions for remediation. Three of the nine studies are highlighted here.

Using a technology called phytoextraction, scientists planted Coyote willow in the riparian zone along the Columbia. A native plant in Southeastern Washington, the Coyote willow produces enough biomass to effectively “suck up” strontium 90 from the soil and act as a filter for groundwater along the river. The shrubs’ ability to remove strontium-90 exceeded initial expectations during the three-year test.

In the Hanford 300 area, a groundwater plume of uranium contamination remains 40 years after fuel rod manufacturing ceased. To keep that plume from reaching the Columbia, PNNL researchers are injecting a soluble form of polyphosphate into the sediment layer (vadose zone) above the groundwater to “lock up” the uranium. This immobilization occurs in the formation of autunite, which has very low solubility properties.

A physical barrier called an in-situ redox manipulation (ISRM) was installed in the 100-D area of the Hanford site to reduce chromium. When portions of the barrier began to leak, due to high concentrations of oxygen and nitrogen in the groundwater, scientists looked for ways to mitigate this process. Biostimulation—activating existing soil bacteria to treat contaminants—was tested to reduce the activity of oxygen and nitrogen breaking down the ISRM barrier, which allowed chromium to reach the river. Molasses proved to be a cost-effective biostimulant. Low concentrations of oxygen, nitrogen,



PNNL scientists install a contaminant barrier along the Columbia River shoreline on the Hanford site.

and chromium were maintained during the 2-year study. The effectiveness of the treatment will persist for some time due to the organic material left behind from the action of the molasses.

DOE’s investments in these and other projects for cleaning up nuclear waste along the Columbia River have led to many new achievements in contaminant remediation. A number of these technologies have successfully been transitioned to the site contractors for additional pilot-scale evaluation and have broader applicability to other contaminated sites.

Fundraising Raffle for Roy G. Post Foundation

Be sure to purchase your raffle tickets for the Roy G. Post Foundation’s Fundraising Raffle. The list of donated items includes Lunch for Four at the World Famous Arizona Biltmore Resort’s Wright’s restaurant; Dinner for Two at the Hyatt Regency Phoenix’s Compass Room; a Golf Bag donated by Tetra Tech; a deluxe Gift Basket including a Two Night Stay at the Springhill Suites Phoenix; a black leather computer case donated by Longenecker & Associates; two golf outing goodie bags donated by Reef Industries and much more.



Raffle Tickets are just \$10 each or five for \$40 and are available at the Registration Desk.

Radwaste Solutions Discusses Radioactive Waste Issues

Radwaste Solutions, a publication of the American Nuclear Society, is a bimonthly specialty magazine containing articles that discuss practical approaches and solutions to everyday problems and issues in all fields of radioactive waste management and environmental restoration. Included is coverage of the generation, handling, removal, treatment, cleanup, and disposal of radioactive (including mixed) waste. Articles are contributed by people working with utilities and those involved in U.S. Department of Energy site work; in the medical, legal, university, consulting, and commercial areas; as well as from all levels of government. Also included are articles on radwaste management programs and practices outside the United States, as well as perspective pieces by industry experts, letters to the editor, and articles on recent academic/technical advances, detailing their immediate or planned practical applications.

With the Yucca Mountain waste repository now most likely history, and the Blue Ribbon Commission ready to begin work to look for a new future for the country’s high-level waste and spent nuclear fuel, *Radwaste Solutions* will become an even more important volume in your professional library.

Be sure to read the complimentary issue on Groundwater Contamination, included in your registration packet. Articles in this issue look at the work being done to monitor and mitigate groundwater contamination, both at commercial nuclear power plant sites and at former weapons sites.



SITE NEWS

Local Landfill Haul a Big Step in Central Campus Cleanup

In a move that symbolizes a clearing of the way for the re-use of ORNL's central campus, a container of cleanup waste from the Building 3026 demolition project was trucked to an Oak Ridge Reservation landfill on October 20.

The intermodal container was filled with building material from the demolition preparation activities under way at the dilapidated facility in ORNL's central campus. The material included asbestos and a small amount of low-level radioactive contamination.

The old radioisotope laboratory, out of use for more than a decade, contains hot cells and other support system equipment left over from its former mission. The initial stages of the American Recovery and Reinvestment Act-supported demolition are removing the asbestos and other problematic materials before the wooden structure is demolished.

The waste from 3026 made up the first shipment to the Environmental Management Waste Management Facility near Y-12. Another Recovery Act-funded project, currently in the procurement phase, will remove the hot cells after the wooden structure is demolished.

"We've been working for over a year in getting all the approvals and characterization information to be able to start shipping the waste, and this was our first load," says Dirk Van Hoesen, who is leading the ORNL cleanup projects being carried out by UT-Battelle.

"This effort will culminate in the cleanup of the central campus, starting with Building 3026," he says. Once the actual

teardown of the old facility begins, the EMWMF will receive up to 15 truckloads of material a day."

Opening the EMWMF to material from all over the ORR is an important step in the Integrated Facilities Disposition Project, which is the official moniker of ORNL's effort to clear away old, outdated facilities in the central campus to make way for potential new development.

The EMWMF, operated by the Oak Ridge environmental management contractor, Bechtel Jacobs Corporation, already receives a steady stream of truckloads from demolition activities at the East Tennessee Technology Park, the old K-25 Site.

Transferring waste around the highly regulated environment of the ORR requires a fairly sophisticated system. A "haul road" was specially constructed to receive shipments from ETTP, complete with bridges over public highways, and technology is speeding the process.

One obvious time-saver is a scale set up near the substation at Reeves Road across Bethel Valley Road from the Fifth Street entrance to the Lab. The truck mounts the platform and a digital readout instantly displays its weight.

Less conspicuous is the trucks' RFID (radio frequency identification) system, manifested by a small box on the trucks' front fender.

"It's a passive RFID system that we instituted at Bechtel Jacobs and have since



On a foggy October morning a bin of waste was hoisted onto a truck bound for the EMWMF.

transitioned to ORNL and Y-12 that allows us to track trucks on the road for security purposes, as well as electronic shipping information," says Dean Newton of SCI, an EM subcontractor.

"Our main focus is to turn trucks in and out of the EMWMF as fast as possible," Dean says. "And that's critical when you're talking about 210 to 240 trucks a day."

Dean says the system is saving 25 minutes per trip for each truck in cycle time. Aside from the obvious boost in efficiency, the avoidance of chokepoints and bottlenecks made possible by the electronic system benefits the environment because trucks aren't sitting still and idling nearly as often.

"It's been a huge time saver as well as saving impact on the environment," Dean says.

The EMWMF landfill opened in May 2002 to accept low-level radiological and low-level mixed waste. The landfill has four waste cells, with another under construction.

Another demolition project that stands to benefit from the waste hauling arrangement with BJC is the demolition of the Quonset huts at the top of Third Street. The fabled "Winter Palace"—Buildings 2000 and 2001—will undergo a similar ritual of being gutted and readied for razing this year.

The ability to send the waste to a nearby, on-site landfill will pay dividends down the road in brown fields available for new uses and missions. Knowing that some of the trucks entering the EMWMF are from ORNL's IFDP is a major step for the ORNL decontamination and demolition projects.

"This has been big day for the central campus cleanup," Dirk says.



MHF SERVICES
Where Complex Challenges
Meet Smart Solutions

RECAPITALIZED • REORGANIZED • READY TO SERVE

Visit us at Booth #900
and enter our drawing for a Nike® Golf Bag and
a Kindle™ Wireless Reading Device

mhfservices.com p 724.772.9800 tf 877.452.9300

SITE NEWS

Waste Ready to Go, Hanford Landfill Ready to

Serve A seven-million dollar joint effort is ensuring that more waste can be transported and disposed of on the Hanford Site. In late spring, management teams knew existing resources would be insufficient for the waste volumes expected to result from activities funded by the Recovery Act. Hanford Site contractors CH2M HILL Plateau Remediation Company (CH2M HILL) and Washington Closure Hanford teamed up to increase disposal resources and enable the Environmental Restoration Disposal Facility (ERDF) to receive significantly greater amounts of waste.

“Our organizations made a joint effort and share a joint success,” said Ty Blackford, Vice President of CH2M HILL’s Waste and Fuels Management Project. “Our collaboration accelerated the disposal facility self-perform capability by two-and-a-half years.”

“Our goal is to be able to transport and dispose of six times as much waste at the disposal facility in fiscal year 2010 as we did in fiscal year 2009,” said Waste and Fuels Project manager Kalli Shupe.

Self-perform describes CH2M HILL’s capability to deliver waste to the facility and directly dump waste using super dump trucks. Washington Closure Hanford built two new ramps for CH2M HILL waste

streams at the disposal facility, which is an engineered landfill designed to receive low-level waste. Both ramps support the disposal of roll-on/roll-off containers and one supports direct disposal from super dump trucks.

With the landfill ready to serve, CHPRC ramped up its resources and staffing, which included awarding \$7.3 million to Cavanagh Services Group, Inc., a certified small disadvantaged and woman-owned business based in Utah, to provide waste containers as well as packaging, shipping and technical expertise. Cavanagh Services Group ensured a flood of 400 orange roll-on/roll-off containers – which are a staple on the Hanford Site – were procured, inspected and delivered to CH2M HILL projects weeks ahead of schedule.

CH2M HILL also procured 10 super dump trucks as a tool to increase both efficiency and worker safety. The trucks’ direct-dumping capability reduces handling by as much as one-fourth and the volume of a super dump container is greater than that of a roll-on/roll-off container.

Overall, from the waste sites to the landfill, CH2M HILL is keeping its waste on the move as cleanup and demolition continue to accelerate across the Central Plateau.



A roll-on/roll-off waste container being loaded onto a truck.



A super dump truck receives soil from a Hanford waste site.



A super dump truck unloads soil at the Environmental Restoration Disposal Facility.

Guest Program Tours

Wednesday, March 10, 2010

Arizona Mills Outlet 9:30 AM – 3:30 PM \$20.00/pp

Take advantage of this wonderful opportunity to tackle the famous Arizona Mills Outlet Shopping Center. For a complete list of available stores, visit the mall’s website at www.arizonamills.com.

Shuttle van takes you door-to-door leaving from the Hyatt Regency Phoenix. Shuttle departures are scheduled 9:30 am, 10:30 am, 11:30 am and departures from the Outlet at 1:30 pm, 2:30 pm and the final return at 3:30 pm.

Thursday, March 11, 2010

Sedona & Native American Ruins 7:00 AM – 5:30 PM \$95.00/pp

You’ll first have the chance to explore the ancient Sinaguan Indian ruins of the Montezuma Castle, that existed along a busy trade route over 1,000 years ago. Our tour will spend approximately 3.5 hours in Sedona, where you can explore on foot, visit galleries and shops, or get a psychic reading.

Tour includes lunch, national monument entry fees and bottled water.

Wednesday Exhibit Hall Lunch Coupon Added for WM2010!

For 2010, WMS has added a lunch for Wednesday in the Exhibit Hall and Marketplace from 11:30 AM – 1:30 PM so you have just a little more time to visit our great exhibitors and network. During that period, we will also announce the winners of the Exhibitors’ giveaways and booth drawings.

Attendees with Full Technical Registration or the Wednesday One or Two Day Registration will receive coupons valid for lunch at one of the concession stands inside the Exhibit Hall. You’ll have your choice of a salad, sandwich or bratwurst with all the fixin’s.

If your registration category does not include lunches, you will also be able to purchase what you’d like at the concession stands.

Either way, you’ll want to make sure you stay to hear if you’ve won any of the great prizes our exhibitors will be giving away at their booths.

Thank you to **The Shaw Group** for sponsoring the Wednesday Exhibit Hall Lunch!

SITE NEWS

EPA Region X Perspective on Hanford

Hanford: few names evoke so many images. To some, Hanford is seen as one of the most contaminated areas in the western hemisphere, plagued with problems and a seemingly endless cleanup mission. Others see Hanford as a national asset, a powerful economic engine that drives a thriving local economy, as well as a leader in innovative thinking, home to the Hanford Reach National Monument, the LIGO Facility and the Pacific Northwest National Lab. Hanford, one could argue, is all of that and more.

A cleanup as large and complex as Hanford needs visible goals to measure progress. Changes to the Tri-Party Agreement have recently been negotiated that will provide for cleanup of the majority of the river corridor waste sites and groundwater by 2015. This tangible goal will be to complete the work started in the mid-1990s which focused on cleanup progress along the Columbia River.

When the river corridor work is finished, the active cleanup area of Hanford will be reduced to 75 square miles, a fraction of the original 580-square-mile footprint. Of course, the cleanup of those 75 square miles located in the Central Plateau presents enormous challenges and gives rise to the spectrum of views on Hanford. Currently, there are some 53 million gallons of liquid waste in aging underground tanks, well past their design life, waiting for the Waste Treatment Plant to come on-line in a little over a decade. In other places, large quantities of waste released to the soil pose challenges we are yet to solve, even with today's best technology.

As we look forward to meeting these challenges, I believe it's useful to reflect on the history of the Manhattan Project. It is hard to imagine that it took only 15 months to take the B Reactor from "concept" to "technological wonder" and to ponder the creation of

all the other facilities that supported the Hanford weapons mission. Since the 1940s, both the times and our mission have changed, but I firmly believe we will need the same level of drive, ingenuity, and collective commitment of resources as our predecessors to solve the challenges we face on the Central Plateau.

Thanks to the work of organizations like the B Reactor Museum Association, 2008 will be remembered as the year B Reactor was officially recognized as a National Historic Landmark. This is truly a crowning achievement for a facility and workforce that played a key role in ending World War II. The B Reactor Museum will serve as both a fitting tribute to the ingenuity and accomplishments of the past, while also reminding us of the cleanup legacy that remains. The B Reactor holds the promise of becoming a major attraction for the region and could have a significant role in telling the story of the Hanford lands, from their rich tribal history through the completion of cleanup.

We sometimes forget just how much the construction of Hanford not only changed the area's landscape, but helped shape the intellectual and culturally diverse personality of the Tri-Cities. Without the Hanford Project, the diverse and nearly pristine shrub-steppe ecosystem we now enjoy and value may have been seen as incompatible with other uses and been lost forever. Similarly, thanks to the Hanford Project we now treasure the beauty of the Hanford Reach,

In the final analysis, however you view Hanford, it has unquestionably shaped our community and region. As the cleanup moves ahead, we need to summon the same vision, courage and commitment that created this place to achieve the cleanup mission that will honor its past.

PARSONS

Proud Sponsors of WM Symposia 2010



Please visit us at booth # 501
www.parsons.com

SITE NEWS

ARRA-funded Accelerated Retrieval Project III completed at the DOE Idaho Site

Workers at the Idaho Cleanup Project (ICP) accomplished another major environmental cleanup deliverable as they safely retrieved and packaged 539 cubic meters of targeted waste to complete the Accelerated Retrieval Project (ARP) III, over a year ahead of schedule.

Located at the Radioactive Waste Management Complex (RWMC), ARP III retrieval was partially funded through the American Recovery and Reinvestment Act (ARRA). Of the 539 cubic meters of targeted waste retrieved and packaged, 389 cubic meters were retrieved and packaged using ARRA funding. The overall buried waste retrieval effort involves multiple phases, one of which is ARP III. Once the waste is retrieved, it is identified, repackaged, and shipped off-site for disposal.

ARP III exhumed some of the highest densities of radioactively-contaminated waste and solidified solvents from the Radioactive Waste Management Complex's Subsurface Disposal Area (SDA) – the area where waste from the



Cleanup Project workers prepare the inside of the exhumation facility.



Workers prepare the steel structure of the ARP IV facility before the fabric skin is installed.

Rocky Flats Plant was disposed.

“We are extremely proud to have completed this work safely and ahead of schedule. The credit goes to the many individuals who were dedicated to completing the work,” said Hoss Brown, Buried Waste Senior Project Director for the Idaho Cleanup Project contractor, CH2M-WG, Idaho.

With the completion of ARP III, ICP

workers are already on to the next phase of the buried waste retrieval project – preparing ARP IV for targeted waste exhumation. ARP IV, a specialized exhumation facility designed to withstand sunlight, snow, wind and operate under negative pressure contain airborne contaminants– has been constructed over Pit 5 of the SDA. Waste exhumations are scheduled to commence in January 2010.



Know the market.

At URS, we are at the forefront of managing critical, high-hazard projects. We are a market leader, bringing global expertise in operations, decommissioning and environmental restoration.

URS

URSCORP.COM



The UK National Nuclear Laboratory's core business is to provide the experts and technologies to ensure the UK nuclear industry operates safely and cost-effectively today and for the future.

Technology resides at the backbone of our business and is closely aligned with commercial acumen to add value for customers and provide a good return on investment.

Our unique combination of highly skilled technical people and access to world-class facilities makes us ideally placed to provide customers with all-round technical capability and flexibility.

Key Services include:

- Waste and Residue Management
- Environmental Management
- Homeland Security and Non-Proliferation
- Plant Process Support
- Materials, Corrosion and Nuclear Chemistry
- Nuclear Reactor and Fuel Cycle Technology
- Specialist Analytical Services



Contact Details

Roger G Anderson
Business Development Director

T: +44 (0)19467 79004
M: +44 (0)7858 939710

E: roger.g.anderson@nnl.co.uk

Winners of the Roy G. Post Foundation Golf Tournament

Thanks to our tournament hosts Teledyne Brown Engineering, Inc., and Tetra tech.

Thanks to our sponsors: Bartlett, American Nuclear Society, Cabrera Services, CDM, EnergySolutions, Terranear PMC, Waste Control Specialists, LLC.
The Post Foundation thanks Anne Hosford for her hard work in organizing this year's tournament.



1st Place:
Joe Angyus, Mike Defatta,
Scott Hall, Mark Gradkowski



2nd Place:
Cavanaugh Mims, John Albers,
Tim Crowley, Charlie Cheatham (not pictured)



3rd Place:
Brett Campbell, Hank Chafin,
Rob Marshall, Tom Brouns



Longest Drive, Ladies:
Pam Sprouse



Longest Drive, Mens:
Tim Crowley



Closest to the Pin, Ladies:
Craig Williamson
(because no woman reached the green)



Closest to the Pin, Mens:
Dan Antle



Delivering proven performance

- Site Management and Operations
- Site Closure and D&D
- Strategic Nuclear Materials Management
- Radiological and Industrial Safety
- Safeguards & Security

B&W

the babcock & wilcox company
a McDermott company

www.babcock.com

100th Recovery Act TRU Shipment Leaves SRS for Permanent Disposition

Recovery Act Accelerates TRU Shipment as Part of Site Clean-Up Plan

Aiken, S.C. – Transuranic (TRU) waste leaving the Department of Energy's (DOE) Savannah River Site (SRS) by truck in November for the Waste Isolation Pilot Plant (WIPP), near Carlsbad, N.M., marked the 100th shipment for the Recovery Act Project and the 128th shipment for the 2009 calendar year. The milestone brings the Site one shipment closer to final disposition of its inventory of legacy TRU waste.

"This will be the last shipment until early 2010, while WIPP closes to perform yearly preventative maintenance on its equipment. WIPP also limits its transport by truck around holidays, when travel-related traffic is increased," said Doug Wooldridge, the Savannah River Nuclear Solutions (SRNS) TRU waste shipping coordinator. The U.S. Department of Energy (DOE) ships TRU waste to WIPP from all over its complex.

About 30 SRNS employees, many of whom were hired to work on the Recovery Act Project, and inspectors from the South Carolina Department of Health and Environmental Control (SCDHEC) and the South Carolina Transport Police gathered at the Big Top, the giant opened-ended shelter that serves as an inspection site in SRS' E Area, as the truck left on its 100th Recovery Act and farewell 2009 voyage. The trucks used in the shipments carry three massive transuranic waste transportation containers, known as TRUPACT IIs, approximately 8 feet in

diameter and 10 feet high and certified by the U.S. Nuclear Regulatory Commission. Two of the TRUPACT containers in this shipment housed four 55-gallon drums of waste; the third container held 14 55-gallon waste-filled drums.

TRU waste at SRS typically comprises clothing, tools, rags, debris and other items used during the production of nuclear materials and contaminated with radioactive elements, primarily plutonium.

The Site has made more than 1,000 of these shipments since the SRS program, Ship-to-WIPP, started in 2001. In the last eight years, the Site has safely shipped 28,760 drum offsite.

The work is part of the Recovery Act Project's footprint reduction plan that calls for the acceleration of Site clean-up projects to free more than 50 percent of the Site's land for future reuse. Additionally, SRS plans to ship the waste offsite for disposal or have the waste ready for shipment to WIPP by September 2012 – a full six years earlier than planned.

In preparation for the shipment, Savannah River Nuclear Solutions LLC (SRNS), the management and operations contractor at SRS, inspects old TRU waste



The 100th Recovery Act TRU waste shipment prepares to leave SRS.

containers for items WIPP prohibits from disposal, including liquids and aerosol cans, then repackages and characterizes the waste for final disposal.

"This last shipment for 2009 safely closes our Ship-to-WIPP program for the year," said Garry Flowers, SRNS president and CEO. "This important clean-up work would not be performed in this accelerated timeframe without Recovery Act funding. It illustrates the DOE commitment to clean up legacy waste sites through safe, permanent disposal."

Wooldridge is planning for TRU shipping to resume during the first week of January.

For additional information on the Department of Energy's Office of Environmental Management and the Savannah River Site, can be found at <http://www.em.doe.gov> or <http://www.srs.gov>. For more information about the SRS Recovery Act Project, please visit www.srs.gov/recovery.

Washington State Department of Ecology Views on

The Washington State Department of Ecology's Nuclear Waste Program regulates cleanup at the Department of Energy's Hanford Site. There is widespread groundwater contamination under the site, which produced plutonium for WWII and through the Cold War. During the 60 years of production, 440 billion gallons of waste water were discharged directly to the soil through injection wells, French drains, ponds and cribs. As a result, about 80 square miles of groundwater exceed safe drinking water standards for one or more chemical or radiological elements. Radionuclides include uranium, plutonium, strontium-90, iodine-129, cesium and others. Chemical contaminants run the gamut from nitrate to carbon tetrachloride, chloroform, and trichloroethylene, and hexavalent chromium.

Our main focus is to protect the Columbia River from contamination coming from the Hanford Site. Our goal is

stop chromium from entering the Columbia River by 2012, and strontium-90 by 2016. The river corridor will be cleaned up by 2024 if all goes as planned. We are using both conventional and innovative groundwater treatment technologies.

Groundwater cleanup methods in use today are pump and treat, in-situ redox barriers, biological stimulation, and permeable reactive barriers are being used in cleanup. In addition, we are experimenting with phytoremediation.

One of the most promising innovative technologies now in use is an apatite barrier to prevent dangerous strontium-90 in groundwater from reaching the Columbia River. Strontium-90 is attracted to bones and causes cancer. The strontium-90 is successfully binding in the apatite barrier, which was created by forcing a fish bone slurry under pressure into the soil.

Ecology continues to work with

USDOE and its contractors to find solutions to the groundwater problems at Hanford. We not only want to contain the plumes from further spreading, we hope to remediate the groundwater for maximum beneficial use.

To follow these plumes and ensure cleanup efforts are working, water quality monitoring is extensive. About 2,300 wells are in use, with about 1,000 wells sampled annually. More than 200 aquifer tubes in the Columbia River are sampled annually, about 350 are installed. Water is sampled for radionuclides and organic and inorganic contaminants. In addition, we expect about 500 new wells to be installed by 2015, and for wells no longer in use to be properly abandoned.

For more information about the Washington State Department of Ecology's Nuclear Waste Program, please visit us on the Web, at www.ecy.wa.gov/programs/nwp.

Insight Newsletter

— Editors—

Linda Ulland,
University of Minnesota,
Regional Sustainable Development
Partnerships

Linda Lehman,
CH2M Hill Plateau Remediation
Company

— Contributing Editors—

Mike Berriochoa, WRPS
Lynette Bennett, CH2M Hill PRC
Maren Disney, CH2M Hill PRC
Todd Nelson, Washington Closure
Hanford

— Layout / Graphics —

Pam Bradford
pambradford03@yaoo.com

Editors welcome articles or news
of interest to symposia attendees.

— Email —
llehman@wmarizona.org

— Phone —
612-978-9725



Guest Program attendees greet familiar faces and make new acquaintances during the daily breakfast.



Guest program attendees Linda Eriksson, Pamela Dials and Sally Voss share tips before heading out for a day in the Valley of the Sun.



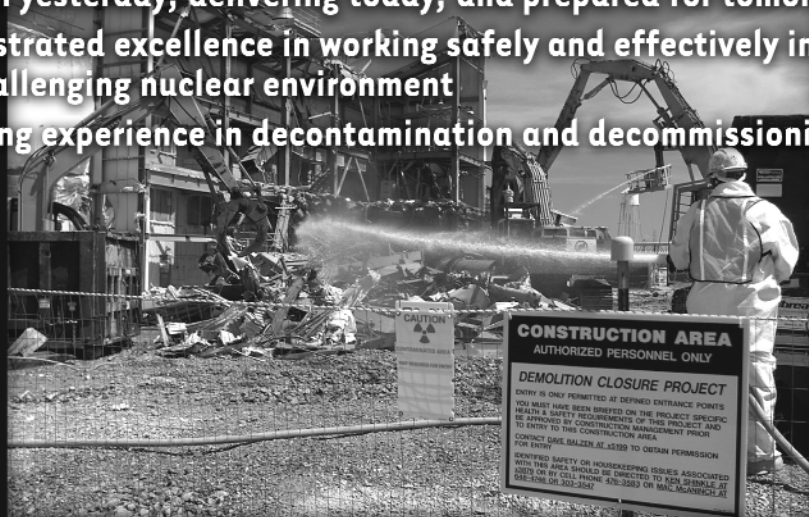
Guest Breakfast Daily Drawing Jewelry Winners are Pam Harmon, guest of Larry Harmon, and Gwen Bibler, guest of Dr. Ned Bibler of Nuclear Solutions.

We're ready for the next challenge!

Building on yesterday, delivering today, and prepared for tomorrow.

Demonstrated excellence in working safely and effectively in a complex and challenging nuclear environment

Providing experience in decontamination and decommissioning



FLUOR®

Fluor Government Group
Environmental & Nuclear
www.fluor.com/government

©2010 Fluor Corporation. All rights Reserved.



a world of **Solutions**™

Building Excellence—Through People and Performance

At Shaw, we are committed to providing innovative and cost-effective solutions for our DOE customers.

- Engineering, design, and construction
- Environmental remediation
- Decontamination and decommissioning
- Facility maintenance and operations
- Waste management and compliance
- Technology
- Best practices in commercial nuclear
- Supporting the DOE since the Manhattan Project
- Demonstrated safety performance and certified ISMS
- Proven project management processes, tools, and systems

For proven, safe, and cost-effective solutions, choose excellence. Choose Shaw.

www.shawgrp.com

06M0120100

PACTEC

*A Manufacturer of Soft Sided Containers
for the Radioactive Waste Industries*

COME SEE US AT BOOTH 720!

www.pactecinc.com · 800-272-2832

1000th Employee Hired under the Recovery Act to Accelerate Cleanup at Savannah River Site

The Department of Energy's Savannah River Site (SRS) announced today it has hired 1000 new employees under the American Recovery and Reinvestment Act. Frankie Hutto, a lifetime resident of Williston, South Carolina with 25 years of experience driving trucks and operating heavy equipment, was the 1000th new employee hired to help accelerate the cleanup work at SRS.

Hutto was already excited about his first day on the job at SRS, but it was made even sweeter when he met with site personnel to receive his security badge on Tuesday, August 18th and found out he was the 1000th new employee.

"I had been out of work for two months, and at age 53, I was worried about not being offered a job at the site," said Hutto. "But it worked out great, and I'm pleased to be here."

"Frankie has spent the last 13 years driving gasoline tankers," said Donnie Abbott, Hutto's supervisor. "He's qualified and licensed to drive any

truck we've got out here and he has a good head on his shoulders. Like many of new Recovery Act workers, Frankie will be a big help in speeding up the cleanup at Savannah River Site."

Under the Recovery Act, Savannah River Nuclear Solutions has been able to help many local residents get back to work. The \$1.6 billion economic stimulus package at SRS is expected to accelerate the environmental cleanup activities at SRS, saving or creating up to 3,000 jobs and reducing the site's operational footprint by about 40 percent.

SRS cleanup efforts currently include work on 17 projects across the 310 square mile Department of Energy site. Most of this work is related to the safe and permanent closure or demolition of over 100 buildings and structures and the cleanup of over 50 contaminated areas.



Frankie Hutto, the 1000th employee hired since the recent receipt of \$1.6B in Recovery Act money at SRS, receives his site security badge.

Additional information on the Department of Energy's Office of Environmental Management and the Savannah River Site, can be found at <http://www.em.doe.gov> or <http://www.srs.gov>. Follow SRS news on twitter also: www.twitter.com/SRSNews.

For more information about the SRS Recovery Act Project, please visit www.srs.gov/recovery.

WM2010 Box Luncheon Invitation to discuss the ICEM'10 & ICEM'11 Conferences

Date: Wednesday, March 10, 2010
Location: PCC, 1st Floor, Room 105
Time: 12 noon - 1:30 pm

The ASME-ICEM organizing committee is pleased to cordially invite all interested parties (authors to organizers) in the discussion of both International Conferences on Environmental Remediation and Radioactive Waste Management (ICEM). During lunch, we will discuss both programs and the related events for ICEM'10, October 3-7 in Tsukuba, Japan and ICEM'11 scheduled for the fall of 2011 in France.

If you would like to have a free box lunch, please RSVP to: cisscorp@gmail.com or call 520-571-6047 by 5:00 pm on - Tuesday, March 09, 2010, the day before the lunch meeting.

The ICEM conferences are sponsored by the American Society of Mechanical Engineers' (ASME) Nuclear Engineering and Environmental Engineering Divisions, and also organized in cooperation with the USDOE, NRC, EPA and the IAEA. Additional details on these venues, tours and programs are available at www.ICEMConf.com or by contacting **Gary Benda**, ICEM'11 Conference Manager at: GBenda_use@hotmail.com or **Shari Brabham**, US Program Coordinator at: cisscorp@gmail.com

We look forward to seeing you there!



Jas Devgun Elected by PAC as P2 Committee Representative

At Saturday's PAC Meeting, the new P2 Committee Representative was announced.

The new representative is not new to the WMS, as Dr. Jas Devgun has been actively involved with the symposia for over 25 years including a variety of roles on the PAC.

The P2 (Program and Performance) Committee is one of the WMS Board of Directors operating committees that is comprised of Board Members and a PAC-selected representative. The objective is to further ensure that the annual WM Symposia is in step with nuclear material and management developments in the world. Another goal is that each annual conference addresses current issues and provides the best possible value for attendees and exhibitors. Its recommendations are submitted to the Board for evaluation and authorization of proposed improvements and actions.

As he begins his two-year term as the P2 representative, Jas stated that the heart of the conference is its technical program and the PAC input to the Board is crucial to its continuing success. But Jas sees this as a collective responsibility of each member of the PAC. As a liaison to the Board, he solicits your inputs and ideas, and assures us that he will be your representative. So talk to him, call him or email: Jas.s.devgun@sargentlundy.com

Westinghouse AP1000

On schedule for 2013

*Placement of the containment vessel
bottom head at Sanmen, Unit 1.*



WESTINGHOUSE ELECTRIC COMPANY LLC

The Westinghouse AP1000™ nuclear power plant is the technology of choice for active and emerging new plant markets across the globe.

In China, four new AP1000s™ are currently under construction and they are being built in an on-time and on-budget manner, with the first scheduled to come online as planned in 2013.

In the United States, the AP1000™ has been selected as the technology of choice for more than half of the new plants announced, including the only six for which engineering, procurement and construction contracts have been signed.

Westinghouse nuclear technology will help provide future generations with safe, clean and reliable electricity.

Check us out at www.westinghousenuclear.com



A Toshiba Group Company

**You can be sure...
if it's Westinghouse**