Wednesday
WM Symposia 2012 Insight
The official daily newsletter of the 38th Annual Waste Management Symposium — Vol. 38, No. 1 February 26 - March 1, 2012

The US DOE and the UK NDA Sign New Statement of Intent

The US Department of Energy (DOE) and the UK Nuclear Decommissioning Authority (NDA) have renewed the Statement of Intent (SOI) between the two organizations while attending the Waste Management 2012 Symposia. The signing took place Tuesday morning, February 28.

Department of Energy Senior Advisor for Environmental Management David Huizenga (left) and Mark Lesinski, United Kingdom Executive Director, Delivery for the Nuclear Decommissioning Authority renewed the Statement of Intent in a signing ceremony at WM yesterday, expanding the scope of information sharing between the two nations.

The SOI, originally signed in March 2007, enables sharing lessons learned as well as the development and application of new technologies and approaches to improve the safety, cost effectiveness and schedule of the Office of Environmental Management (EM) Program. David Huizenga, DOE Senior Advisor for EM said: "EM highly values international cooperation and we are eager to continue working with organizations in the UK to ensure this relationship is fruitful for both sides".

To date, the SOI has resulted in information exchanges and collaborations in a number of areas such as thermal treatment technologies, plutonium management, aging facilities management, non-standard fuels disposition, glass chemistry, sodium passivation, and decontamination technologies, among others. "We are very pleased to extend the term of this Agreement and look forward to working with our colleagues in both EM and NE in the coming months," said Mark Lesinski, UK NDA Executive Director for Delivery.

This agreement renewal expands the SOI's scope of information exchange to include the Department of Energy Office of Nuclear Energy (NE), who are signatories to the agreement along with EM. "We value the experience and partnership of scientists in the UK as we exchange technical information in this important program," Peter Lyons, DOE Assistant Secretary for NE.

Lessons from Fukushima

"In science you make assumptions. At Fukushima, for example, things happened that were beyond our assumptions," said Dr. Ute Blohm-Hieber, Head of the Nuclear Energy, Transport, Decommissioning & Waste Management Unit, Directorate General for Energy of the European Commission. On Monday morning, Dr. Blohm-Hieber and representatives from Japan's METI, plus other agencies, discussed their various agencies' responses and recommendations related to the Fukushima crisis. If there was one lesson they all learned, it was that when it comes to preparing for nuclear energy incidents and accidents, you need to assume everything, even low-probability events.

Lisa Edwards, Senior Program Manager at the Electric Power Research Institute, spoke about her organization's recommendations concerning identifying mitigating approaches that dealt with the crack in the steel liners in the spent fuel pools at the site. "If you asked me on March 10th if this would have happened, I wouldn't have thought so. It has opened our eyes for the need to prepare for design-based accidents," she said. Her team has created a post-Fukushima technical evaluation which is a "living document", meant to serve as a detailed analysis of everything that happened. They plan to put all information collected into a master database that will be easily accessible to industry and use it to craft future emergency preparedness models.

Charles Miller, an NRC leader who, although retired, managed the NRC's Japan Task Force review team, stated that his findings indicated that the regulatory framework in the US "could be enhanced". Although his team recognized that NPPs in the US do not have the same seismic concerns as Fukushima, he said "we need to take [into consideration] design and beyond-design [based] accidents and have a regulatory framework that methodically determines when you need to change adequate protection…A big part of what we looked at was related to adequate protection." Among the 12 overarching recommendations included in the NRC final report was to strengthen onsite emergency procedures that "work hand-in-hand as you move from one state of an incident to another," Dr. Miller stated.

Panel Provides Insights for Fukushima cleanup

In Session 13: Fukushima Cleanup: Insight into Operations, panellists wrapped up the three-part Featured Country special with a discussion of the innovative approaches being used for cleanup at the site of the Fukushima Daiichi Nuclear Power Stations.

"If we're going to help in Japan, they need technologies that are ready to go," said James Braun, President and Chief Executive Officer for AVANTech Incorporate.

Panellists provided first-hand insight into the immediate response to Fukushima and subsequent recovery efforts, providing comparisons and application of lessons learned from other cleanup sites, including sites in the US and the UK.

Presenters covered a range of concerns being addressed in environmental remediation at the Fukushima site, including water management, containment, decommissioning and waste management. Ultimately, speakers wrapped up the series with the same message as the morning's plenary – cleanup at Fukushima is urgent and drawing on world-wide expertise.

DECOM12 Set for June in UK

Mark your calendars for June 27-28, 2012 |in Manchester, UK for DECOM12, a conference organized by the Institution of Mechanical Engineers and the Nuclear Institute, and supported by the Nuclear Industry Association and the Nuclear Decommissioning Authority.

Nuclear new-build projects and associated opportunities are rapidly evolving in the UK. "What will happen to the waste?" "What will the funded decommissioning plans look like?" These are two of the key questions about new nuclear power projects, and they lead to important challenges for the industry.

Nuclear Decommissioning 2012 (DECOM12) brings together the most comprehensive program for this sector and will be the main industry-supported event of its kind in the UK in 2012.

Conference enquiries: Hannah Atkins, Tel: +44 (0) 207 973 1260, email: power@imeche.org

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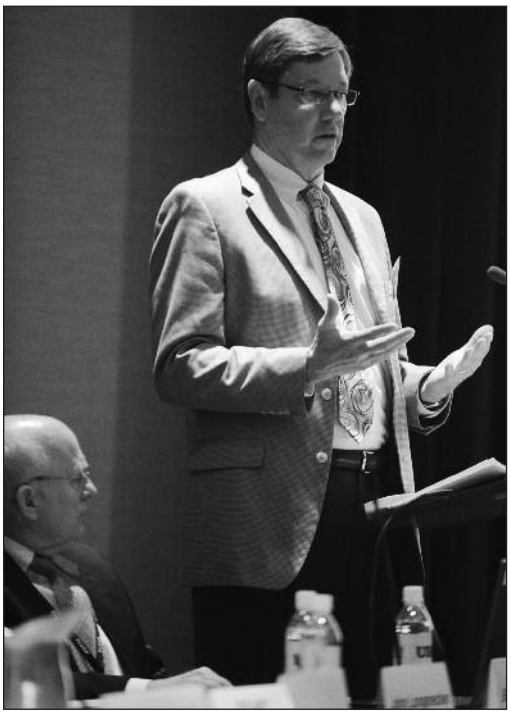
Aman Duggal, Tel: +44 (0) 207 973 1309, email: sponsorship@imeche.org

Paivi Nettamo, SRNS, (803) 292-2484, paivi.nettamo@srs.gov

DOE Contractors Discuss Safety, Productivity and Post-ARRA Progress



The American Recovery and Reinvestment Act (ARRA) made a lasting impact across the U.S. Department of Energy complex and the results were a hot topic at Session 33: Emerging Issues with US DOE Prime Contractors. Senior executives from across the country discussed issues being faced at waste and environmental cleanup projects, large and small.

Presenters showcased their progress being made in legacy waste management and cleanup as well as the challenges being faced moving forward post-ARRA. The panel included representatives from Hanford, Savannah River, East Tennessee Technology Park, Y-12, DUF6 and Portsmouth.

In addition to safety, closure and regulatory strategies, speakers shared recent lessons learned in the ramp-down and workforce restructuring many sites faced at the conclusion of the ARRA funding. Contractors will expand on lessons learned during the ARRA workshop on Thursday, March 1.

Bill Shingler (left), VP, Fluor Government Group looks on as Bob Warther (standing), VP of Environmental Management at Y-12 shares his views on the importance of carefully defining project scope. Shingler co-chaired the panel session with John Longenecker (not shown), President of Longenecker & Associates.

Don't forget to check out the WM12 blog at www.blog.wmsym.org

Panel: US Administration's Blue Ribbon Commission on America's Nuclear Future

Thursday afternoon the WM program will include presentations and discussion about the Blue Ribbon Commission on America's Nuclear Future. The BRC report was 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 strategy recommended in the report has eight key elements:

A new, consent-based approach to siting future nuclear waste management facilities.

A new organization dedicated solely to implementing the waste management program and empowered with the authority and resources to succeed.

Access to the funds nuclear utility ratepayers are providing for the purpose of nuclear waste management.

Prompt efforts to develop one or more geologic disposal facilities;

Prompt efforts to develop one or more consolidated storage facilities;

Prompt efforts to prepare for the eventual large-scale transport of spent nuclear fuel and high-level waste to consolidated storage and disposal facilities when such facilities become available.

Support for continued U.S. innovation in nuclear energy technology and for workforce development.

Active U.S. leadership in international efforts to address safety, waste management, non-proliferation, and security concerns.

Seven distinguished individuals having key roles and significant experience with the issues addressed in the report will participate. Each panelist will make a presentation about the report and its subject matter from their unique perspectives and then they will engage in what should be an active question and answer session.

The panelists include: BRC Commissioner Albert Carnesale, Chancellor Emeritus and Professor at the University of California, Los Angeles; Bob Forrest, Former mayor of Carlsbad, NM; John Parkyn, Chief Executive of Private Fuel Storage, LLC; Everett Redmond, Senior Director, Nonproliferation and Fuel Cycle Policy, Nuclear Energy Institute (NEI); William C. Ostendorff, US NRC Commissioner; Dave Martin, Cabinet Secretary, New Mexico Environmental Department and Peter B. Lyons, Assistant Secretary for Nuclear Energy, US DOE-RS#-1(USA).

The session will be Co-Chaired by Larry W. Camper, USNRC and John Longenecker, Longenecker and Associates and will take place in Room 102ABC commencing at 1:00. A networking reception will follow the workshop and provide an opportunity to mingle with the panelists and colleagues.

2012 Outlook for SRS' Accelerated Transuranic Waste Program: Safely "Fast Forward"

New initiatives, bigger shipping containers and highly trained, innovative workers combine to work towards achieving a record year

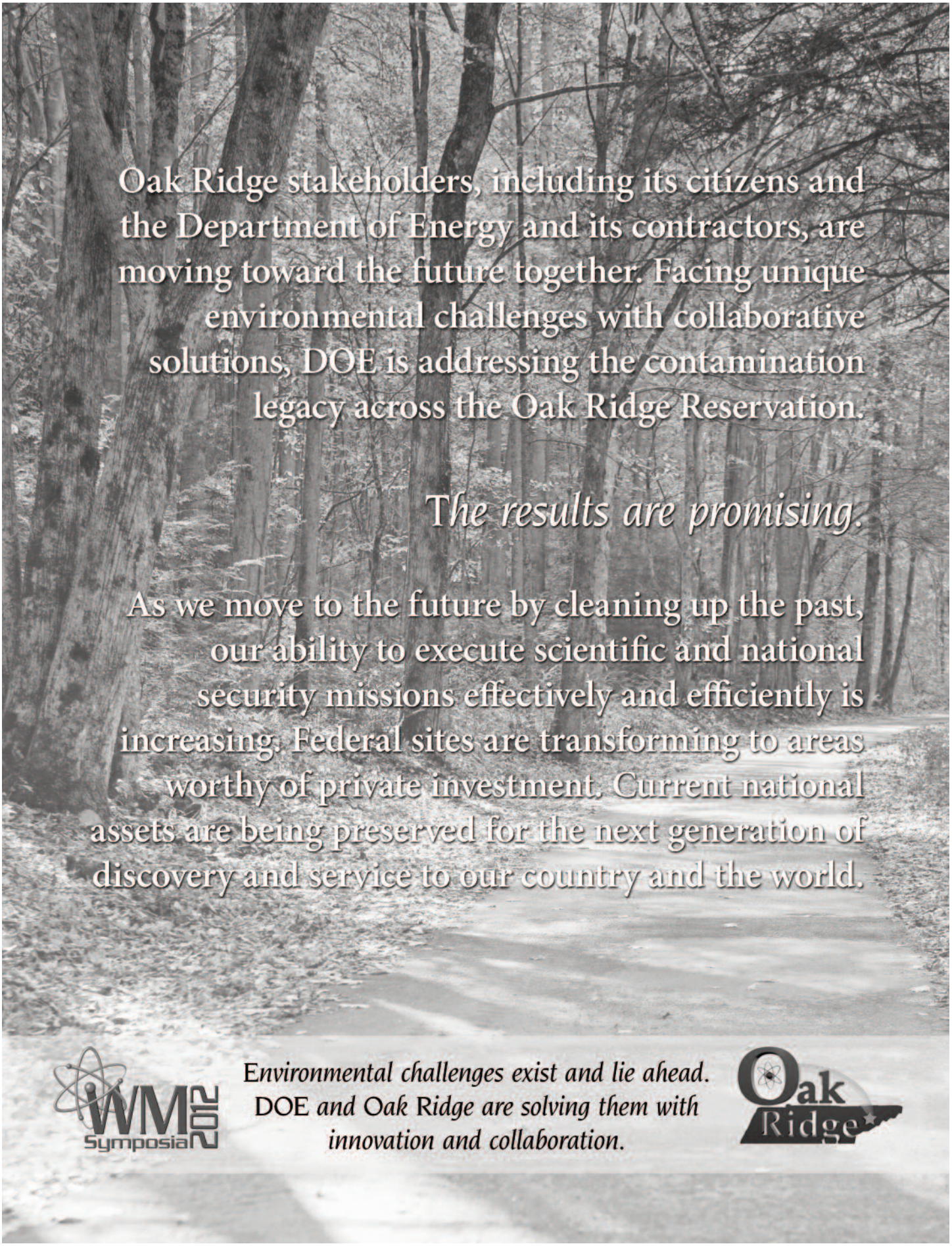
Savannah River Nuclear Solutions, LLC (SRNS) is accelerating the program at the Savannah River Site to prepare 5,000 cubic meters of transuranic waste for shipment to WIPP.

SRNS is operating four facilities to expedite the final disposition of transuranic wastes at SRS and has already achieved impressive results by either disposing of, or readying for disposal, over 50 percent of the TRU waste goal.

Success has involved several factors. First, new and larger TRUPACT-III shipping containers eliminate much of the need to manually reduce in size numerous, large pieces of transuranic (TRU) waste, saving time and minimizing employee exposure to radioactive materials. By May, six TRUPACT-III are anticipated to be available and the shipping process to WIPP will be almost continuous.

Second, the application of portable x-ray machines into the remediation process increased productivity and reduced the need for double handling of containers.

By the end of 2012, SRNS plans to have remediated, repackaged and certified for shipment all but 200 cubic meters of transuranic waste at SRS, meeting a vitally important milestone for the site's cleanup program.


Oak Ridge stakeholders, including its citizens and the Department of Energy and its contractors, are moving toward the future together. Facing unique environmental challenges with collaborative solutions, DOE is addressing the contamination legacy across the Oak Ridge Reservation.
The results are promising.
As we move to the future by cleaning up the past, our ability to execute scientific and national security missions effectively and efficiently is increasing. Federal sites are transforming to areas worthy of private investment. Current national assets are being preserved for the next generation of discovery and service to our country and the world.
WM Symposia 2012
Environmental challenges exist and lie ahead. DOE and Oak Ridge are solving them with innovation and collaboration.
Oak Ridge

Compact, Federal & Industry Leaders Provide Updates re: US Commercial LLRW Management

Texas Low-Level Radioactive Waste Disposal Compact Commission Chair Bob Wilson says that although construction has been completed at the Waste Control Specialists' (WCS) facility, a few outstanding issues need to be resolved between the Texas Commission on Environmental Quality (TCEQ) and WCS before the facility may begin to accept waste for disposal. He made his remarks during the "Hot Topics and Emerging Issues in US Commercial LLRW Management" Session on Monday. Wilson also outlined the process for setting final rates at the facility, noting that at least three separate requests for a contested case hearing on the issue have been filed to date. TCEQ is charged with establishing the maximum disposal rates that may be collected for the disposal of compact waste under Chapter 336, Subchapter N of the agency's rules.

Christine Gelles, who was recently named the Associate Deputy Secretary for Waste Management in the U.S. Department of Energy's Office of Disposal Operations, discussed the Greater-than-Class C draft environmental impact statement (EIS), which was originally released in February 2011, and announced that the department anticipates that a final EIS will be issued in late 2012 or early 2013.

Tom Magette of EnergySolutions reported that the State of Utah passed a rule requiring the Clive facility in Tooele County, Utah prepare a performance assessment before any depleted uranium may be disposed at the site, which has been completed but not yet reviewed by the state. Magette also discussed EnergySolutions' request for a variance to dispose of Class A sealed sources for a one-year period. The public comment period on this issue closes on March 13, 2012. A few days later, on March 16, 2012, the public comment period closes on R-313-25-8, Utah's proposed rule on the disposal of large quantities of blended waste.

The session concluded with a presentation by Janet Schleuter who stated that the industry has significant concerns regarding the integration of Part 20 decommissioning options, detailed guidance for non-reactor licensees, and the definition of important terms such as "significant residual radioactivity." With regard to decommissioning planning, Schleuter noted that the industry is requesting a workshop prior to the issuance of final guidance and a delay of implantation of the rule for 18 months post-issuance.

Your Brand is Your Reputation

Your "brand" is more than your company logo, said Rachael Drouhard, ImageWorks Digital Media." And if you fail to manage it, you potentially leave money (or credibility) on the table every time you meet with a business prospect, recruit new employees or interact with the public."

Drouhard was one of five panelists on a Monday afternoon panel on Communicating Waste Management Issues Using Innovative Strategies in Today's Changing Landscape. Other panelists included Todd Nelson, Bechtel National; Jana Humphreys, Vivid Learning Systems; Fred deSousa, Los Alamos National Laboratory; and John Briest, Weaver Boos Consultants.

Companies need to be clear and consistent about how they want to be viewed. That goes far beyond the logo and other printed materials. It also includes the messages you are presenting and the way you interact with your stakeholders. In short, it includes everything that makes up a personal or company reputation, which has a direct bearing on your credibility, effectiveness and success.

During the question and answer period, an audience member posed the question about whether or not current efforts to communicate with stakeholders about waste management issues are adequate, given the scant progress made with the public over the years. Panelists agreed that new approaches were needed.

"We have to do a better job of getting ahead of issues and providing stakeholders, including employees, with quick and trustworthy responses to their questions and concern," said Todd Nelson, Bechtel National. "We also need to realize that the way people choose to communicate with each other is changing and as companies, we need to adapt.

When it comes to new technologies and new social media tools, it's easy for companies to think they need to be a part of it. However, several of the panelists said that instead of rushing to adopt a new technologies or processes, look first at who you want to engage and why, then evaluate the appropriate tools to implement your strategy.

On the other hand, don't wait too long. For example, Fred deSousa, LANL, said that the lab doesn't own the name "Los Alamos National Laboratory" on Facebook; someone else does, and they have no control of what's done with it.

DOE Completes Evaluation of West Valley New York Vitrification Melter

West Valley, NY — The U.S. Department of Energy (DOE) has determined that the melter previously used at the West Valley Demonstration Project (WVDP) to vitrify liquid radioactive waste can be managed as low-level radioactive waste and may be permanently disposed at a site outside of New York.

The DOE determination was based on an evaluation, called a Waste Incidental to Reprocessing (WIR) evaluation, which demonstrated that the melter at the WVDP is not high-level waste and may be disposed of as low-level radioactive waste. DOE consulted with the Nuclear Regulatory Commission (NRC), and considered NRC comments as well as public comments before making the determination.

Florida International University's DOE Fellows (www.arc.fiu.edu/intern) attending the Waste Management 2012 Symposia had the opportunity to meet Mr. David G. Huizenga, DOE's Senior Advisor for Environmental Management after Monday's plenary session. The students had a chance to describe their DOE-EM applied research work being performed at FIU's Applied Research Center and research they have performed during summer internships at DOE sites, DOE contractors, and national laboratories.

Earth is Moving at a Major Chromium Contamination Site along Hanford River Corridor

Washington Closure Hanford manages the $2.3 billion, 10-year River Corridor Closure Project for the U.S. Department of Energy. Located on the 586-square-mile Hanford Site in southeastern Washington State, the 220-square-mile River Corridor comprises the outer edge of the Hanford Site, including major portions of the Hanford Reach National Monument along the Columbia River.

One of the challenges Washington Closure workers face are the unknown hazards that they must address at DOE's largest environmental cleanup closure project. For example, one waste site near B and C Reactors is a known chromium contamination site.

Currently, Washington Closure and subcontractors SageTech and Phoenix Enterprises N.W. have moved nearly 2.3 million tons of clean and contaminated soil, concrete debris and scrap metal from what are referred to as the C-7 waste sites.

"We expect 600,000 tons of the total material will be contaminated and have to be shipped to the Hanford Environmental Restoration Disposal Facility (ERDF). Of that, we anticipate 40,000 tons will require treatment," said Dean Strom, Field Remediation project manager for C-7.

Chromium is the major contaminant of concern at the site, the result of a spill in 1966 when C Reactor was still in operation. It was used to inhibit corrosion in reactor water.

Like other chromium-contaminated sites, Washington Closure is running into more contaminated soil than anticipated, which could account for up to an additional 200,000 tons of material to be excavated.

Excavation at C-7 is nearly complete. Removal of the contaminated material is targeted for completion in April/May 2012.

Known as "the big dig," the 100 C-7 waste site dwarfs other sites on the Washington Closure Hanford project. By the end of the project an anticipated 2.3 million tons of material will have been removed.

Going Deep: Contractors Explore Technologies and Challenges in the Vadose Zone

One of the hardest-to-reach remediation challenges will be discussed during Session 76, "Deep Vadose Zone Characterization and Remediation Technologies," on Wednesday, Feb. 29.

The vadose zone is approximately 250 to 300 feet thick. The "Deep" portion is that part of the vadose zone that is below the practical limit of surface-based remedies and ends right above the groundwater.

At the Hanford Site in Washington State, the U.S. Department of Energy and partnering agencies are managing the deep vadose zone project to bring a centralized focus and systematic approach to making decisions about how to clean up the deep vadose zone. Contractor CH2M HILL Plateau Remediation Company in conjunction with the Pacific Northwest National Laboratory is performing treatability tests to demonstrate technologies and develop a toolbox of technologies to remediate contamination in the deep vadose zone.

"We are excited about what we are seeing. This project was years in the making, and it is very satisfying to have taken this technology from theory to the field where it could contribute to one of the most significant challenges in Hanford cleanup," said Glen Chronister, CH2M HILL Deep Vadose Zone Project Manager.

The deep vadose zone is a major focus of Hanford cleanup efforts because of its proximity to the groundwater, which moves toward the Columbia River. For more information about the Hanford deep vadose zone, visit http://www.hanford.gov/page.cfm/DeepVadoseZone.

Crane Removal Contract Awarded to Accelerate Decommissioning of Two Savannah River Site Reactors

(Aiken, S.C.) – A contract to dismantle gantry cranes atop two old plutonium reactors at the Department of Energy (DOE) Savannah River Site (SRS) has been awarded by Savannah River Nuclear Solutions (SRNS), the Site management and operations contractor. The work will remove significant parts of the external super structures of the government facility's P- and R-Reactors. Combined with other decontamination and decommissioning activities, the two reactors will be eliminated as environmental concerns through the Recovery Act.

"The successful decommissioning of these reactors will represent a major achievement of the Recovery Act at SRS," said Jeffrey M. Allison, DOE Savannah River Operations Office Manager. The contract was awarded to the low bidder, Bierlein Field Services, Inc. of Midland, MI, The $2 million contract anticipates that the gantry cranes will be removed, cut into smaller sections and delivered to a landfill for permanent disposal by the end of May next year. Bierlein plans to utilize the services of Southway Crane, a small business from Columbia, S.C. and with an office in Augusta, Ga. during the dismantling process. Bierlein also intends to hire up to seven people during the two-month effort.

Roy G. Post Foundation Scholarships

These scholarships are awarded in the memory of
Dr. Roy G. Post. The Foundation is dedicated to education in the safe management of nuclear material.

Christopher Pannier,
Texas A&M University

Christopher is studying Nuclear Engineering at Texas A&M University.

Daniel Labrier,
Idaho State University

Daniel is a Doctoral Candidate at Idaho State University.

David Zwick,
Georgia Tech

David is a third year Nuclear Engineering major at Georgia Tech from Savannah, GA.

Kelly Grogan,
Clemson University

Kelly is finishing his Ph.D. in environmental health physics at Clemson.

Patricia Schuster,
University of California – Berkeley

Patricia is a first year graduate student at the University of California, Berkeley.

Phyllis Ko,
Penn State

Supported by a Nuclear Nonproliferation International Safeguards fellowship. Phyllis is studying Nuclear Forensics Applications.

Shaheen Dewji,
Georgia Tech

Shaheen Azim Dewji is a Ph.D. candidate in the Nuclear & Radiological Engineering Program at the Georgia Institute of Technology.

Lei Tu,
University of Idaho

Lei Tu is a Ph.D. candidate in the Nuclear Engineering Program at the University of Idaho.

Yusuke Tanada, ***Nagoya University***

Yusuke received B.S. degree in Physical Science and Engineering, the School of Engineering, Nagoya University.

Jonathan Spencer Barrett,
Oregon State University

Spencer earned a B.S. in Chemistry from Weber State University in Ogden, UT.

WM Symposia and James A. Glasgow Scholarship at the James E. Rogers College of Law at The University Of Arizona Law School.

This scholarship is given recognition of the contributions of James Glasgow, Esq., in support of WMS, and is designed to assist a second or third-year law student who demonstrates a meaningful interest in environmental law.

John Champagne

John is a third-year law student and is interested in both administrative and environmental law.

Lauren Brooks

Lauren is a third-year law student and is interested in a career in environmental law.

Best Oral Presentations in 2011

At each conference, WMS recognizes the two best oral presentations/papers and poster/papers. Listed below are the selected winners from WM2011 Conference

WM2011 WMS/ANS Award Best Oral Presentation and Paper

ANS Award – Best Oral Presentation/Paper
"Further Development of Modified Monosodium Titanate, an Improved Sorbent for Pretreatment of High Level Nuclear Waste at the Savannah River Site"

Presented to Sharron Marra (shown) for **David Hobbs, Kathryn Taylor-Pashow**, **Fernando Fondeur**, Savannah River National Laboratory; **Samuel Fink**, Savannah River Nuclear Solutions, LLC (USA). Session 92, Abstract 11215. (Session Lead Organizer: Bernard Vigreux).

ANS Award – Best Oral Presentation/Paper
"Advanced Remedial Methods for Metals and Radionuclides in Deep Vadose Zone Environments"

Presented to **Dawn Wellman (shown), Shas Mattigod, Lirong Zhong, Ann Miracle, Fred Tilton**, Pacific Northwest National Laboratory; **Susan Hubbard, Yuxin Wu**, Lawrence Berkeley National Laboratory; Martin Foote, MSE Technology Applications, Inc. (USA). Session 84. Abstract 11026 (Session Lead Organizer: Kurt Gerdes).

Best Poster Presentations in 2011

In order to honor high quality presentations, the American Nuclear Society (ANS) and the American Society of Mechanical Engineers (ASME) presents an award for Best Poster/Papers.

The "Best Poster Awards" for 2011 are:

ANS Award – Best Poster/Paper
"Simulation of Flow and Mercury Transport in Upper East Fork Poplar Creek, Oak Ridge, TN"

Presented to **Siamak Malek-Mohammadi (shown), Georgio Tachiev, David Roelant, Reinaldo Garcia-Martinez and Amy Cook**, Florida International University (USA), Track 7 – ER

WM2011 WMS/ASME Award Best Poster Presentation
"Low Temperature SiC Synthesis Route to Immobilize Irradiated Graphite Waste"

Mehul Chavda, Michael Ojovan (shown), and Shaowei Zhang, University of Sheffield (United Kingdom), Track 3 – LLW

WMS/ASME Sarge Ozker Award

Named in honor of M. Sacid (Sarge) Ozker, and established in 1980, this award is bestowed for distinguished service and eminent achievement in the commercialization of nuclear power/energy with particular emphasis in the field of radioactive waste management. It is presented by the Nuclear Engineering Division - Radwaste Systems Operating Committee of the American Society of Mechanical Engineers (ASME).

The 2011 Sarge Ozker Award is presented to:

Mike Nolan,

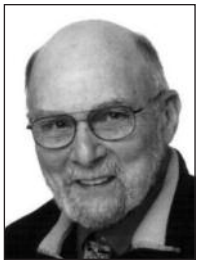
Lucas Engineering & ManagementServices

Mike Nolan is a Senior Waste Management and Transportation Consultant and Senior Health Physicist for Lucas Engineering & Management Services. He has been a radiation safety officer at a commercial LLW burial ground, responsible to assure control and accountability of special nuclear material and responsible for waste management and transportation at commercial nuclear plants, including the management, accountability, control, and transportation of spent fuel pool waste and special nuclear materials.

WMS Program Advisory Committee Award

WMS has established the WMS Program Advisory Committee (PAC) Award to annually recognize an individual who has made outstanding contributions to the WM Conference.

The 2011 WMS PAC Award is presented to:



Leon Borduin, ***Los Alamos National Laboratory, Retiree***

Leon "Lee" Borduin is a long-time member and contributor to the WM Symposium family.

WMS Wendell D. Weart Life-Time Achievement Award

The WMS Wendell D. Weart Life-Time Achievement Award recognizes the long-term commitment of the recipient to solving major nuclear waste challenges or significant nuclear waste management issues. Sandia National Laboratories has sponsored the Wendell D. Weart award.

The 2011 WMS Wendell Weart Life-Time Achievement Award is presented to:

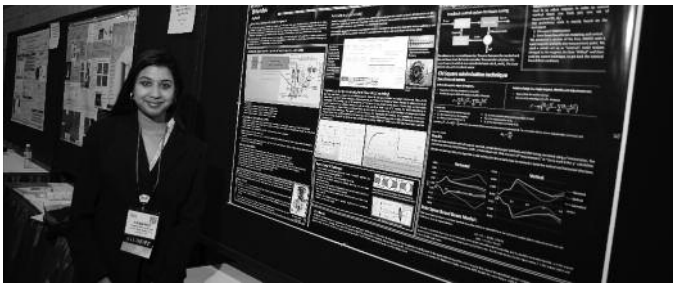
George E. Dials,
B&W Conversion Services, LLC

George E. Dials is President of B&W Conversion Services, LLC, (BWCS) and serves as Project Manager for the Depleted Uranium Hexafluoride (DUF6) Conversion Operations, the first of its kind nuclear operation in the United States. Dials directs the BWCS Lexington project office and is the day-to-day interface with the Department of Energy's (DOE) federal project director. He also directs operations at the conversion plants in Piketon, Ohio and Paducah, Kentucky.

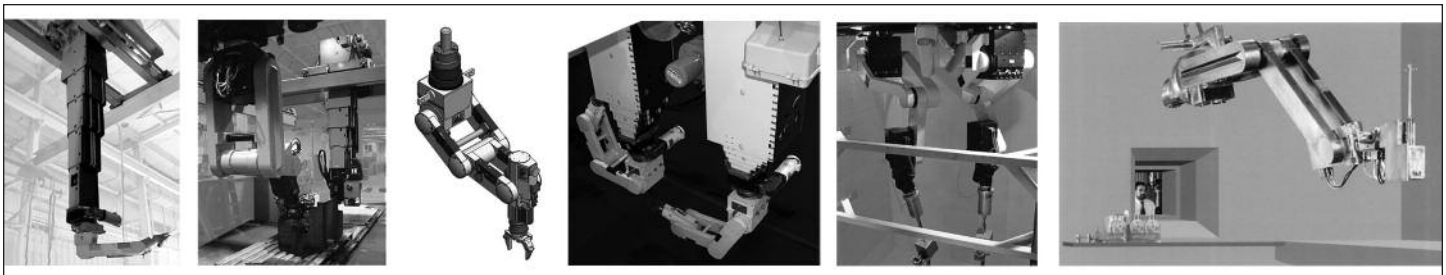
WMS Fellow Awards — for long term contributions to the WM Symposia were presented to:

- Harry Babad, Author & Consultant
- Leon "Lee" Borduin, Los Alamos National Laboratory, Retiree
- Jas Devgun, Sargent & Lundy LLC
- Leif Eriksson, Consultant
- Al Freitag, Mitsubishi Nuclear Energy Systems
- James Gallagher, Gallagher Consulting
- James Glasgow, Pillsbury Winthrop
- John Mathieson, Nuclear Decommissioning Authority
- James McCray, Professor Emeritus, University of Arizona
- Jack McElroy, McElroy Consulting
- Sue Mitchell, Consultant
- Fred Sheil, Sheil Consulting Ltd.
- Bernard Vigreux, French Nuclear Energy Society
- Linda Ulland, University of Minnesota, posthumously

Best Student Poster for WM2012:



Ms. Sampriti Bhattacharyya won for her poster — Intelligent Technologies for an Innovative Nuclear Reactor Enabling Waste Transmutation'. Sampriti goes to Ohio State University and won $500



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Getting Ready for D&D in Former Uranium-Enrichment Facilities

Fluor-B&W Portsmouth has begun removing process components from the former gaseous-diffusion facilities at the DOE Portsmouth Site in Piketon, Ohio. The activities are part of preparing for the overall decontamination and decommissioning (D&D) efforts that include the demolition and disposal of 415 facilities and the associated material inventories and process equipment; the release of 3,700 acres for reindustrialization; and the remediation of groundwater and 600,000 cubic yards of contaminated soil.

The current activities involve isolating and removing components from one of the site's three massive buildings that housed the uranium-enrichment process, known as the "cascade." Together, the three buildings represent about 100 acres under roof. The work is being done in accordance with an approved sampling and analysis plan agreed to between DOE and the Ohio Environmental Protection Agency (EPA). Fluor-B&W Portsmouth has worked with DOE and the Ohio EPA to map out an accelerated regulatory approach that will facilitate D&D and fully evaluate on-site disposal.

Much of the initial clean-up effort is focused on the cascade equipment, which is separated into individual process rooms called cells. The cells are purged and hazardous materials removed before the system is isolated. The equipment and remaining material inside the cells are then sampled. The resulting characterization data will be used to make future decisions on the project.

Once the system has been purged, evacuated, and isolated, the components ─ converters, compressors, piping, valves ─ are then removed from the system. Component removal and sampling can also be done simultaneously. Flanged openings are sealed with metal covers that are welded into place.

Several cells have already been evaluated and workers are isolating and removing parts from the first cell. In all, 200 cells will be removed from the building. Before eventually being shipped to a permanent disposal site the parts and equipment removed from the cells will undergo non-destructive analysis to ensure compliance with shipping criteria and disposal requirements.

An overhead crane lifts a large converter weighing several tons from a cell in the X-326 Process Building.

Fluor-B&W team personnel position a converter at a staging area before it is sent for analysis on site.

Countdown to startup at the Integrated Waste Treatment Unit

The countdown to facility startup has begun at the Idaho Site Integrated Waste Treatment Unit (IWTU). In November 2011, the facility successfully completed hot nitrogen testing. The test introduced nitrogen at a temperature of 600 degrees centigrade to the system to ensure that all process and support systems functioned as designed.

The exterior of the Integrated Waste Treatment Unit

The success of the test provided for full operation of the facility using a surrogate waste/feed to train IWTU operators, allowing them hands-on time with the facilitysystems and processes.

Crews also successfully completed connecting the waste line from the Idaho Nuclear Technology and Engineering Center Tank Farm to the IWTU in January.

The IWTU team will conclude the operational testing phase of the project with the System Performance test using radioactive feed which is required to show compliance to state permit limits. Upon demonstration of compliance, the facility will complete the processing of 900,000 gallons of sodium-bearing waste to meet the Idaho Settlement Agreement milestone of December 31, 2012.

Award-winning Technologies Delivering Sustainable Remediation at Hanford

At the Hanford Site in southeast Washington State, CH2M HILL Plateau Remediation Company is delivering award-winning safe and sustainable remediation techniques that are increasing safety and efficiency while reducing costs and schedule. Poster Session 91, "Non-Paper Poster Session for Emerging Issues," on Feb. 29 will feature CH2M HILL's remediation technologies as well as other posters highlighting lessons learned from emerging issues in waste management and environmental remediation.

For example, the use of "super dump" truck was recognized by the U.S. Department of Energy (DOE) Environmental Management (EM) Environmental Sustainability (E-Star) Awards program in 2011 and the Eastern Washington Chapter of the Academy of Certified Hazardous Materials Management for the Excellence in Hazardous Materials Management award in 2010. The trucks haul more material than the traditional containers used at Hanford and allow for direct-dumping into Hanford's onsite engineered landfill.

CH2M HILL used aerial survey technology to characterize a 13-square-mile waste site, reducing environmental impacts and accelerating schedule by eliminating the need to have crews walk the area with instrumentation. The technology was recognized for the "Manager's Award for Exemplary Service" from the DOE Office of River Protection.

Left – aerial survey technology reduced environmental impacts and saved costs and schedule for characterizing a 13-square-mile waste site.

Right – A super dump truck is loaded with soil for disposal. The trucks provided increased capacity with reduced worker handling.

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Future Generations Be Warned: Dangerous Material Below

Warning future generations of the dangers of buried radioactive waste is an area ripe for international collaboration, said Abe Van Luik, U.S. Department of Energy. Van Luik was part of a panel on "Geologic Repository Warning Messages to the Future – Ensuring Continuity of Memory and Messages to Future Generations" on Tuesday morning.

The panel focused on passive intrusion controls being developed by various repository programs around the world to alert current and future generations. The effort began during the early design of the Waste Isolation Pilot Plant in New Mexico.

Panel members agreed that the current generation has an ethical obligation to warn future generations. What happens after that is subject to debate. The warnings have to inform inadvertent and advertent intruders – those who stumble upon sites and those who purposely breach them knowing the dangers. Interestingly, the recent tsunami in Japan provided a good example of the latter.

Past generations erected stone monuments warning of the tsunami dangers. Understanding the message and the danger, the current generation built sea walls they thought would protect them. Yet, 18,000 people lost their lives in the disaster, in spite of the fact that they were warned of the danger by a past generation.

"We believe the best course is to tell the whole story and let future generations judge for themselves, said Van Luik. The international collaboration is critical in determining the right amount of information to dissuade intruders, he said.

Ultimately, the controls and the information presented have to be distilled into messages that future generations will receive and believe. What those messages should be is the subject of Wednesday workshop, "Records, Knowledge and Memory," at 8:30 a.m. at the Hyatt.

Options for SNF/UNF in Light of US and International Decisions

Experts in the science, engineering, and economics of WM discussed the urgent need to find and solidify storage solutions for SNF/UNF at a panel held on Monday afternoon. There is precious little time because, as Mary Peterson of PNNL stated, inventories continue to build, and "with the demise of Yucca Mountain, the US joins the ranks of countries with no long term storage solution." Her main message was that the US needs to develop a national energy roadmap with an integrated waste management strategy for nuclear energy.

The panelists agreed that continued R&D is needed to determine the best processes for dealing with UNF/SNF, but several options were given that are supported by advanced research. Chris Phillips of EnergySolutions, LLC, said that consolidated UNF storage is a sensible interim solution but is not a permanent one. He suggested that Modified Open Cycle was "worthy of further R&D", and that "full UNF recycling should be an attractive option but has been unjustly demonized in the US."

Terry Todd of Idaho National Laboratory presented a case for using pyrochemical/electrochemical processes for converting UNF/SNF. As the director of Full Cycle R&D at INL, he has examined different dry methods and argued that the advantages of using pyro/electrochemical processes are many. They include that they are highly resistant to radiation effects, can process short term fuels, have a compact footprint, and produce only small levels of LLW. Perhaps most importantly, "it lasts forever," he said. But there are disadvantages, he noted, including that they produce two HLW streams of moderate volume, you can't recycle product in layers without additional processing, and safeguard methodologies are not fully developed.

Dorothy Davidson of AREVA Federal Services, LLC, analyzed the problem from a different angle – she focuses her research on the economics of interim storage and recycling. In the US, "I don't think any state wants to become a de facto dump [for UNF/SNF]," she noted, where waste is brought into a state with no plan for what will happen to it. But she argued that "centralized interim storage can be a first step in developing a comprehensive plan," and reignited the idea that a new entity needs to be created that is devoted to used fuel management and given specific authority to "handle all options".