

● JANUARY 2015

SAVANNAH RIVER NUCLEAR SOLUTIONS

SRNS Today



Lauding Looney

Savannah River National Laboratory honors
Dr. Brian Looney with Orth Lifetime Award



Also this month

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Carol Johnson
SRNS President and CEO

Welcome

to the January 2015 edition of

SRNS Today



Video: Safety at SRS

To see a video about the safety program at SRS, please [click here](#) or visit www.savannahrivernuclearsolutions.com/annual/Journey-To-Safety-Empowerment.mp4

Welcome to 2015!
January is all about seeing familiar routines with a fresh perspective.

I'm pleased to start our first SRNS Today of 2015 with some great news. Savannah River Nuclear Solutions has earned yet another Voluntary Protection Plan (VPP) certification from the Department of Energy. Being awarded VPP certification confirms that our safety programs are effective and dynamic, growing and being enhanced as our missions and business evolve. However, all of us at SRNS know that to keep this prestigious designation, we can't become complacent. We must constantly renew our safety attitudes, for ourselves and for our coworkers. As our safety slogan says: Safety and security begin with me!

In the Savannah River Site's K Area, this fresh perspective on safety led to the creation of a device that protects our workers and makes operations more efficient. Our K Area workers routinely move 400-pound shipping drums of nuclear material onto metal pallets. Anyone who has ever moved furniture can relate to how cumbersome these containers must be. SRNS Construction employees answered this challenge with a new tool that vastly improved this process. For more details, please see the story on the next page.

Young people often offer the best fresh perspectives. This month, the Future Cities competition offered area middle school students the chance to envision new ways of feeding the multitudes of people who will live in concentrated urban areas in the future. Their ideas today may become the standard of operation in years to come, and SRNS is proud to help provide a way to grow their interest in the sciences. The story is on Page 7.

I hope you enjoy this edition of "SRNS Today." As always, thank you for your interest in Savannah River Nuclear Solutions.

Carol



Savannah River Nuclear Solutions, LLC, is a Fluor-led company whose members are Fluor Federal Services, Newport News Nuclear and Honeywell. Since August 2008, SRNS has been the management and operating contractor for the Savannah River Site, a Department of Energy-owned site near Aiken, South Carolina, including the Savannah River National Laboratory. The SRNS corporate and community offices are located in the renovated 1912 "Old Post Office" building in Aiken, S.C. The primary initiatives of SRNS are national security, clean energy and environmental stewardship. SRNS Today is published monthly by SRNS Corporate Communications to inform our stakeholders of the company's operational and community-related activities. If you have questions or comments, please contact us at 803.952.9584 or visit our website.

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Continuous improvement in K Area

Innovative drum lifter protects employees, increases efficiency in handling nuclear material containers

Upholding a long tradition of finding new and more efficient ways to work, K Area employees at the Savannah River Site, working with the Construction and Engineering departments, created a new piece of equipment that reduces the exposure potential and manpower needed to move drums of nuclear materials.

"SRS fosters a willingness to continually improve processes and procedures," said Patrick McGuire, DOE Assistant Manager for Nuclear Material Stabilization Project. "K Area routinely requires moving 9975 shipping packages (drums) from the ground onto metal pallets for storing and transporting. The challenges associated with moving drums that weigh 400 pounds each caused facility management to look for a different option."

In the past, drum carts were used to position a drum on the edge of a pallet, and then the drum was manually slid into place. In order to reduce manpower and safety issues involved with manually positioning these drums, K Area management requested the construction department to design and fabricate a drum lifting attachment. Used in conjunction with an existing hydraulic lifting frame, the attachment would raise the drum approximately four to five inches and set the drum on a partitioned metal pallet, minimizing employee interaction and reducing exposure. The device also could not damage or otherwise compromise the shipping package/drum.

"Our construction personnel took our requirements and designed and fabricated an innovative lifting device that met all our needs," said Janice Lawson, SRNS K Area Facility Manager. "Demonstrations have shown that the drum lifting attachment will allow the placement of drums on pallets safely and efficiently with minimal effort required by the employee performing the operation."

During the fabrication process, engineering oversight was involved to ensure that the lifting attachment met all technical and safety requirements.



"Demonstrations have shown that the drum lifting attachment will allow the placement of drums on pallets safely and efficiently with minimal effort required by the employee performing the operation."

Janice Lawson

Lauding Looney

Savannah River National Laboratory honors Dr. Brian Looney with Orth Lifetime Award

When it comes to identifying innovative technologies for difficult environmental challenges, Dr. Brian Looney is your man.

That’s why the 31-year veteran scientist with the Savannah River National Laboratory (SRNL) is the 2014 recipient of the Donald A. Orth Lifetime Award of Merit.

The Orth Award is the highest distinction at SRNL to recognize technical excellence and leadership. The annual award is presented to an individual whose character, technical performance and leadership best exemplify the character and contributions of Dr. Donald A. Orth, an SRNL researcher who retired in 1992 after a 41-year career.

Looney, a senior advisory engineer, is widely lauded in the federal arena by DOE, the Department of Defense and the Environmental Protection Agency for his expertise in environmental cleanup. He coordinates innovative environmental characterization and clean-up methods at SRS and is a technical resource supporting the DOE Environmental Management Program.

Looney is quick to share the praise. “No one at SRNL does anything on their own,” he said. “I was given the award because I was mentored by people who were here when I started and supported by people who came to the lab after me.”

Looney’s work emphasizes working with nature—incorporating natural processes into cleanup technologies—to maximize effectiveness and minimize energy use and waste generation.

During his tenure at SRNL, he developed and deployed numerous environmental characterization, remediation and monitoring technologies. He has advanced a conceptual framework that defines environmental target zones based on their chemical and physical characteristics and how the conditions change in space and time. The resulting environmental “ovals” concept has been used nationwide to evaluate and match technologies to difficult environmental challenges.

He is known in his field for the massive 1,500-page, two-volume book, “Vadose Zone: Science and Technology Solutions, edited by Looney and Ronald W. Falta in 2000. (The vadose zone is the region of aeration in the earth above the water table.) The book has been recognized by U.S. Secretary of Energy Dr. Ernest Moniz as the leading research on vadose zone remediation from SRNL.

Looney has received two R&D 100 Awards given by R&D Magazine to honor innovative technologies. He holds 11 patents related to environmental remediation and characterization and is an adjunct professor in the Environmental Engineering Science Department at Clemson University.



“I could have become an environmental activist or maybe an engineer or scientist who develops solutions. What I decided was really to follow the idea of developing solutions or becoming a scientist. And that’s what I’ve pursued ever since.”
Dr. Brian Looney

Winners named in SRNL science, engineering awards

In addition to presenting the Orth Award, SRNL honored 13 scientists and engineers for contributions to their fields and exceptional achievement in science and engineering in 2014. SRNS Executive Vice President and SRNL Director Dr. Terry Michalske presented the awards for work supporting disciplines ranging from atmospheric technology to clean energy.

Early Career Exceptional Achievement Awards

Michael Martinez-Rodriguez, Marissa Reigel, Joseph Teprovich, Christopher Verst and Brian Viner

Exceptional Scientific and Engineering Achievement Awards

Heather Brant, Dennis Fish, Tim Jannik, Paul Korinko, Christopher Martino, John Mickalonis, Margaret Millings and David Tamburello

InfoPods: Students, public learn of SRS missions



Janet Griffin and Kristin Huber of SRNS register an attendee at the SRS Information Pods, held on the Summerville campus of GRU.

Missions at SRS topped the agenda at the fourth SRS Information Pods, held Jan. 28 at Georgia Regents University (GRU). A partnership of SRS, GRU and Augusta Technical College, the event marked the first time that the Information Pods were held on a college campus. ■ “If you like science and knowledge, then there’s no better place to be on a Wednesday night in Augusta,” said Josh Dillard. “As a student of nuclear science at GRU, it was really awesome to hear about professionals doing this type of work locally. It’s one thing to learn about a process in a classroom. It’s quite another to learn how it works in a workplace environment.” ■ The evening began with a poster session featuring the nuclear science programs at both schools, as well as the SRS Community Reuse Organization, SRNS Workforce Services, Savannah River Ecology Lab and SRS safety culture. Afterward, SRS representatives conducted presentations on the Savannah River National Laboratory, environmental monitoring and restoration, nuclear materials management and waste management. ■ “Having the venue at GRU allowed us to focus on students who have an interest in nuclear industry careers. We had close to 100 students attend tonight,” said Teresa Haas, Director of SRNS Community and Government Relations.



Nuclear degree programs at center of SRNS, Aiken Tech agreement

Aiken Technical College (ATC) and SRNS signed a formal Memorandum of Understanding Jan. 27, supporting degree programs that prepare ATC students for potential jobs in the nuclear industry.

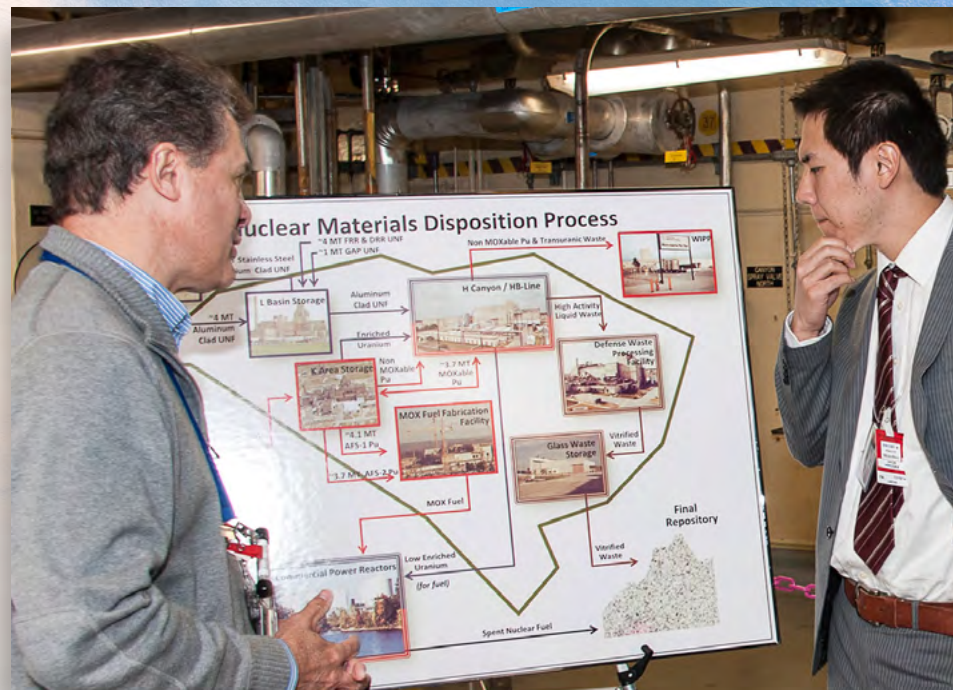
“This partnership creates unique opportunities for our graduates and provides a highly skilled workforce for the nuclear industry,” said ATC President Dr. Susan Winsor.

Last year, 52 ATC students graduated with associate of applied science degrees in electrical engineering technology, industrial maintenance technology, nuclear quality systems, radiation protection technology and welding. In 2014, SRNS hired 40 ATC graduates.

“We are proud to be a part of this mutually beneficial agreement,” said Carol Johnson, SRNS President and CEO. “It will help us to further develop our workforce while ensuring the transfer of highly valued process knowledge between experienced and new employees.”

The agreement calls for SRNS to collaborate on developing curriculum, support outreach efforts to students, participate on an advisory board, and provide loaned laboratory equipment as well as subject matter experts and guest speakers. As feasible, SRNS will provide internship opportunities that allow students to apply skills taught in the classroom to on-the-job experiences.

Japan Atomic Energy Agency Visitors



The Japan Atomic Energy Agency visited SRS on Dec. 19. Hosted by SRNL, the Japanese visitors received an overview of SRS and SRNL, and toured H Canyon, the Mixed Oxide Facility and the Defense Waste Processing Facility. At left, SRNS Environmental Management Staff Technical Advisor Jimmy Winkler describes to a JAEA member the nuclear materials disposition process and the unique capabilities of H Canyon.

One bright idea equals thousands in savings

Traditionally, a light bulb represents a great idea. Sometimes, however, the light bulb IS the great idea.

The gloveboxes in the Savannah River Tritium Enterprise's H Area Old Manufacturing Facility are lit with light fixtures that use an old type of tube that is no longer produced. An SRNS Continuous Improvement team of Jim Bullock, Danny Guerrieri and Chuck Bell identified a solution using an inexpensive, commercially-available fixture that will result in validated savings of over a quarter of a million dollars.

The options that had been considered included modifying the existing light fixtures (an expensive proposition, especially for fixtures that were contaminated from service inside gloveboxes) and fabricating custom fixtures (which would cost over \$1,000 each).

The commercially-available fixture uses a common bulb and provides light that is as good as, if not better than, the original fixture and costs less than \$100 each.

When all 246 fixtures are replaced over a 12-month period, the total savings will reach \$294,434.

Another advantage: Unlike the old bulbs, the new ones contain no mercury, simplifying disposal.

Hensel named ASME Fellow

Stephen Hensel was recently named an ASME Fellow. Founded in 1880 as the American Society of Mechanical Engineers, ASME is a not-for-profit professional organization that enables engineering collaboration, knowledge sharing and skill development.

Hensel, an SRNS Senior Fellow Engineer, received a BS in nuclear engineering and a PhD in mechanical engineering at Texas A&M University.

Hensel's technical contributions include thermal analysis of radioactive materials packaging, design authority engineering for nuclear processing facilities and managing analytical groups at SRNL. His work on nuclear materials packaging and storage safety has been important to the management of these materials at DOE facilities.

Hensel has eight journal and 37 conference publications. He has been active in the committee of the Pressure Vessel and Piping Division for over 17 years, serving as a Technical Program Representative and Technical Committee Chair.

ASME has grown to include more than 130,000 members in 158 countries. Fellows are nominated by their peers and selected by a committee within the organization; the distinction of Fellow is based on outstanding engineering achievements.



Stephen Hensel



The third-place W.A. Perry Middle School (Columbia) team is congratulated by SRNS judges (from left) Senior Vice President for EM Operations Wyatt Clark; Senior Vice President for Technical Services Rick Sprague; and Chief Engineer and Nuclear Safety Officer J.C. Wallace.

North Augusta team wins Future City event

Thirty-six teams of middle school students brought their visions of the future to this year's Regional Future City competition. The event was held Jan. 24.

The teams included students from across South Carolina and the Aiken-Augusta area who built models to represent innovative cities of the future.

The winning team was from Paul Knox Middle School in North Augusta, S.C.

SRNS Education Outreach personnel have managed the local Future City Regional competition for 12 years, in partnership with the Ruth Patrick Science Education Center at USC Aiken.

"This year's theme encouraged students to explore today's urban agriculture, from aeroponic systems for roof top farms to recycled gray water to the sustainability-driven farm-to-table movement, and develop a futuristic solution to growing crops within the confines of their city," said Future City regional coordinator and SRNS employee Kim Mitchell.

First-place winners from each regional competition receive a trip to the Future City Competition National Finals in Washington, D.C., Feb. 15-18.

2015 Heart Walk campaign steps up

SRNS employees will once again step forward to participate in the annual Heart Walk, to be held Saturday, March 7, at the North Augusta Greenway to benefit the American Heart Association.

This year's SRNS campaign began with a January kickoff meeting, where the SRNS Heart Walk committee honored survivors and local CSRA Heart Walk representatives, and campaign chair Michael Cordaro announced this year's goal of \$60,000.

In 2014, SRNS employees raised \$76,462 for the American Heart Association, exceeding their goal by more than \$25,000. SRNS gave an additional philanthropic donation of \$10,000.

Mini grant deadline is March 6

For the fifth consecutive year, SRNS is offering \$75,000 in mini grants to more than 100 Central Savannah River Area (CSRA) educators as part of the SRNS "Innovative Teaching Mini Grants Program."

Educators from CSRA elementary and middle schools may apply by March 6 for a mini grant in one of three categories: \$500, \$750 or \$1,000. An independent selection committee will select the winning projects.

The SRNS Mini Grants program supports innovative teaching methods by funding projects that enhance elementary and middle school science, mathematics and technology programs.

The grants are provided through corporate funding from SRNS parent companies: Fluor, Newport News Nuclear and Honeywell.

Elementary and middle school educators in Aiken, Allendale, Bamberg, Barnwell and Edgefield counties in South Carolina, and Columbia and Richmond counties in Georgia may submit applications.

Applications for the 2015 Mini Grant Program have been mailed to schools principals and are also available on the SRS website at http://www.srs.gov/general/outreach/edoutrch/mini_grant.htm

For additional information, contact Gladys Moore, (803) 952-9450 or via email, gladys.moore@srs.gov.

'Zero Heroes' cheer up kids

The SRNS "Zero Heroes" Local Safety Improvement Team (LSIT) annual Christmas Fund Challenge provided computer tablets and toys to children at the Joseph M. Still Burn Center in Augusta, Ga.



The safety challenge is designed to encourage participation in the SRNS Site Services division Behavior Based Safety program. The LSIT collected over \$1,100 through the campaign, which helped purchase nine tablets and other toys.

"This initiative is one of the most rewarding and memorable elements of the work we do to keep safety in the forefront for SRNS' Site Services employees. We found a creative way to link safety to a fundraising plan, which has allowed us to make the holidays a little brighter for children in unfortunate circumstances," said Richard Hudson, "Zero Heroes" LSIT Chair.

We make the world **safer.**

SRNS



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