

August 2011

SAVANNAH RIVER NUCLEAR SOLUTIONS

SRNS Today



It's TRU!

on **3**

First TRUPACT-III shipment
has arrived in New Mexico

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Time flies:
SRNS marks
third year at SRS



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SRNS offers
new wave
of help to Japan

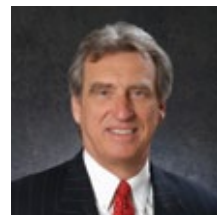


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Action! Harvard film
crew focuses on SRS

Garry Flowers

SRNS President and CEO



Welcome to the August 2011 edition of "SRNS Today."



Savannah River Nuclear Solutions, LLC, is a Fluor partnership with 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 Public Affairs 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.

For additional information about SRNS, please visit our website at savannahriversolutions.com.

This month, Savannah River Nuclear Solutions is marking its third anniversary as the management and operations contractor at the Savannah River Site. It's been a productive three years, with many great accomplishments. We're looking forward to meeting the challenges of the coming year's opportunities.

Safety is always a top priority at SRNS, and it's especially gratifying when our efforts in this arena are recognized by our industry. The National Safety Council recently presented Savannah River National Laboratory with a 2011 Industry Leader Award. We're proud of this recognition, but more proud of the safety culture which made the award possible. Please see the story on Page 5.

Safety was front and center during our first TRUPACT-III shipment to the Waste Isolation Pilot Plant, or WIPP, in New Mexico. Although we have made many shipments of transuranic (TRU) waste to WIPP for disposal, this shipment was the first to use the TRUPACT-III system. Please see the story on the next page for more on this accomplishment.

As we marked the TRU milestone here at home, SRNS was also at work internationally. In the story on Page 8, you'll learn how our Environmental Bioassay Laboratory is part of the U.S. Department of Energy's effort to assist Japan with soil and air analyses from the region near the crippled Fukushima nuclear plant.

I hope you enjoy this issue of "SRNS Today," and thank you for your continuing interest in Savannah River Nuclear Solutions.



After 10 years of working and waiting, many E Area personnel left their offices to watch the arrival of the long-awaited TRUPACT-III shipping container from Washington State, and even more employees watched a few days later as the loaded container left for the Waste Isolation Pilot Plant (WIPP) in New Mexico.

Doug Wooldridge, the Solid Waste Management transuranic (TRU) shipping coordinator who had participated in much of the logistics for the arrival and shipment of the container, said, "A lot of people worked many hours on this project. The teamwork and flexibility between the different work groups and state agencies was phenomenal."

The TRUPACT-III shipping container will be used to transport legacy TRU waste from SRS to WIPP. This Department of Transportation Type B cask allows the shipment of a single large volume container, the Standard Large Box 2 (SLB2), which is approximately 6 x 6 x 8 feet and holds a volume of 6.6 cubic meters of waste materials.

Using the TRUPACT-III shipping system will allow for the disposition of 1,700 of the 5,000 cubic meters of legacy TRU waste planned under the American Recovery and Reinvestment Act (ARRA), which would have otherwise required additional time and resources for size reduction to fit into the smaller containers suitable for TRUPACT-II. By avoiding this, SRS significantly reduced physical and radiological worker exposure to highly contaminated TRU waste materials.

This TRUPACT-III container is the first of six funded by ARRA to be used by the SRS, and it carried the first of approximately 250 planned shipments. The shipments are scheduled to occur every two weeks, and the TRUPACT-II containers will continue to be used as well. After completion of the legacy TRU waste project in Fiscal Year 2013, the fleet will be made available to other Department of Energy sites for their disposal programs.

Until then, the TRUPACT-III will be a significant addition to the legacy TRU waste program at SRS.

It's TRU!

First TRUPACT-III shipment has arrived in New Mexico



TRUPACT-III: By the Numbers

Culmination of over 10 years of effort

Product of 150 people's work

96th "contact-handled" transuranic waste shipment in Fiscal Year 2011

Over 10 hours to load one Standard Large Box 2 into one TRU PACT-III container



SRNS donates \$10,000 to Boys and Girls Clubs of Southern Carolina

SRNS in the community

College Night 2011 planned for September 8 in Augusta

College Night 2011 will be held Thursday, Sept. 8, 5-8:30 p.m., in the James Brown Arena in Augusta. The event is open to the public. Admission is free. Information booths and recruiters will represent more than 160 U.S. universities.

Approximately \$17,000 in scholarships will be offered through a drawing to those students attending the event and meeting eligibility requirements (must be high school juniors or seniors and graduate with a GPA equal to or above 2.5 on a 4.0 scale or equivalent).

College Night will include representatives from professional societies, career exploration and seminars on scholarships, financial aid, essay writing for college admissions and scholarships.

For more information, visit the College Night web site at http://www.srs.gov/general/outreach/edoutrch/coll_night.htm.

Golf tournament scores for scholarships

Eight SRNS senior staff members and managers participated in Congressman Jim Clyburn's annual Rudolph Canzater Golf Tournament in Santee, S.C. Proceeds from this tournament provide \$1.5 million in scholarship aid and college assistance to more than 1,000 students from the Clyburn Scholarship Foundation.

It may seem an unlikely pairing, but SRNS is on the same team as a former basketball star, and the goal is to improve the lives of area children.

On August 5, SRNS donated \$10,000 to The Boys and Girls Clubs of Southern Carolina, which opened its doors earlier this year to serve the needs of youth in both Allendale and Barnwell Counties.

"The Boys and Girls Clubs across America are second homes to many unheralded heroes who on a daily basis help lead our children to be productive and responsible adults," said Fred Dohse, SRNS Executive Vice President. "Many of these kids come from broken homes and live in or on the edge of poverty. They need a safe place to play and learn...and role models to pattern their lives after."

One of those role models can be found close to home. Former Harlem Globe Trotter Matthew Jackson now manages the Barnwell County Club, and has gone from winning hearts on the basketball court to teaching what is truly important in life to dozens of children. Jackson says that many famous athletes got their start as members of Boys and Girls Clubs, such as Shaquille O'Neal and Jackie Joyner-Kersey.

"It's my job now," Jackson said. "To help these kids reach their full potential, many of whom will be our future business, community and political leaders, is indescribably rewarding. I know it sounds so cliché, but this truly is my opportunity to 'give back.'"

According to Boys and Girls Clubs of Southern Carolina Executive Director Jeteseya Dennis, the monetary gift from SRNS will go towards general operating expenses. "The money our friends at SRNS have provided is not a donation, it's an investment in the lives of these precious children," said Dennis.

Both Clubs serve youth ages 6-13. The Allendale Club is located at the Allendale-Fairfax Learning Center, 172 Lee Avenue, Fairfax. The Barnwell County Club is located at the Guinyard-Butler Middle School, on Allen Street. Hours of operation for both clubs are Monday-Friday, 2:30-7 p.m.

For more than 140 years, Boys & Girls Clubs across the U.S. have helped strengthen communities by providing a safe, positive and constructive place for young people, while offering a wide variety of educational, recreational, cultural and social programs. Club employees and volunteers strive to nurture and enrich young lives by giving boys and girls opportunities for personal growth and achievement.



Photo: SRNS Executive Vice President Fred Dohse presents a check for \$10,000 to Jeteseya Dennis, Club Executive Director, Boys & Girls Clubs of Southern Carolina, while former Harlem Globe Trotter Matthew Jackson, Boys & Girls Clubs of Southern Carolina Barnwell Unit Director, performs for the children.

National Safety Council names SRNL as 2011 Industry Leader

The **National Safety Council** (NSC) announced that Savannah River National Laboratory (SRNL) has been honored with a 2011 Industry Leader Award. The award is a component of the Council's Safety Motivation and Recognition Awards Program. The award benchmarks outstanding safety achievements among member companies based on self-reported data. Earlier this year, the NSC also recognized SRNL with its Safety Leadership Award.

SRNL is one of 52 organizations honored with the 2011 Industry Leader Award, which recognizes the top five percent of NSC members that have qualified for the National Safety Council's 2011 Occupational Excellence Achievement Award. To receive the Industry Leader Award, member companies, units and facilities must have zero cases and zero fatalities during the 2010 calendar year, and demonstrate safety performance that is among the best within their North American Industry Classification code.



SRNL was one of 10 Industry Leader Award winners in the Professional, Scientific and Technical Services classification, and the only national laboratory to receive this year's award.

"The work we do is critical to the nation's energy, environment and security future," said SRNL Director Dr. Terry Michalske, "but nothing is more important than the safety and health of our employees."

Founded in 1913, and chartered by the U.S. Congress in 1953, NSC promotes safety in the workplace, in transportation, and in homes and communities. Members of NSC include 54,000 companies of all sizes from a broad spectrum of industries and facilities with eight million employees around the world.

S.C. Academy of Science issues 'all-SRNL' Journal

The **current issue** of the Journal of the South Carolina Academy of Science has a decidedly SRNL flavor to it. In fact, every article in this issue relates to work at SRNL and is authored or co-authored by SRNL personnel.

As the winner of the 2010 S.C. Governor's Award for Excellence in Science, SRNL's Dr. George Wicks was asked to invite papers for the annual Governor's Award special issue of the peer-reviewed journal, published in his honor. "Everyone I asked said yes, and they all delivered with outstanding publications which ranged from overviews to more detailed technical presentations, and represented many of our great core competencies on Site," Dr. Wicks said.

The collection consists of 10 papers, which represent the diversity and excellence of SRNL programs and teams, with topics ranging from nuclear waste glasses to robotics technology, from unique hydrogen storage concepts to sequestration of iodide, from catalytic carbon nanostructures to biomedical drug delivery applications, from biotechnology to water quality for reactor systems. These papers are authored and co-authored by 24 SRNL scientists and students, along with co-authors from six universities, and from the industrial sector, including Toyota and Corning.

The special issue has been published on-line and can be found at <http://scacadscience.org/index.php?nav=Journal.php>.

Honors and accolades



Dr. Lam honored by American Society of Mechanical Engineers

Dr. Poh-Sang Lam, a senior fellow engineer at SRNL, has been elected as a Fellow of the American Society of Mechanical Engineers (ASME). The grade of Fellow recognizes outstanding engineering achievement; the distinction has been granted to fewer than three percent of ASME's 111,000 members.



Dr. Poh-Sang Lam

Dr. Lam was recognized both for his achievements in research and development and for his leadership in the engineering profession. "Dr. Lam has been an important contributor to many of SRNL's important initiatives," said Dr. Natraj Iyer, SRNL Director of Materials Science & Technology, "from the days when we worked with the Savannah River Site reactors through our current work in waste management and clean energy technologies." One of his areas of expertise is fracture mechanics (the field that specializes in understanding what makes a material crack) wherein he developed fracture methodologies to ensure the structural integrity of Department of Energy (DOE) defense nuclear reactors and high-level nuclear waste tanks.

He is currently working on projects that benefit the energy sector, electronics industry, groundwater management and homeland security.

In addition, SRNL retiree Allen Smith was recognized as a Fellow.

3 YEAR

SRNS closes the past and plans for the future

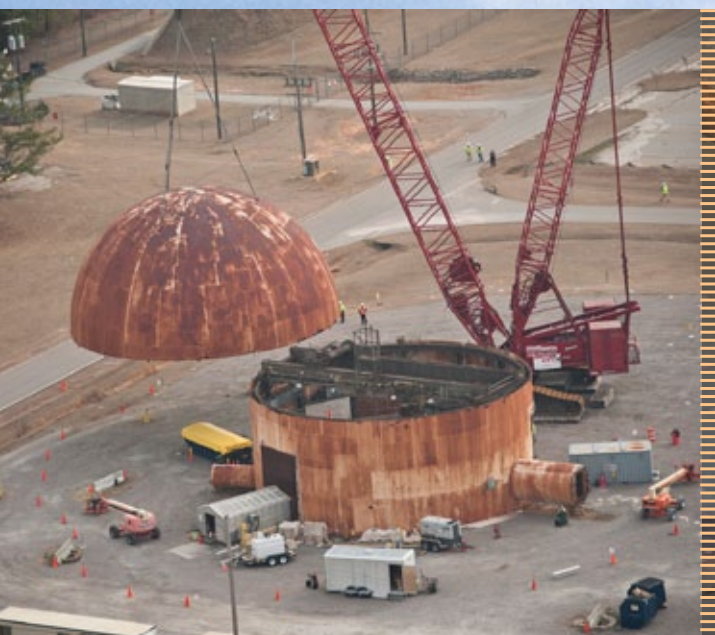
When Savannah River Nuclear Solutions became the managing and operating contractor of the Savannah River Site, its leaders were committed to supporting the Site's community, employees, environment and future. And in the past three years, SRNS has claimed success after demonstrating the strength, dedication and creativity to overcome the obstacles and rise to the challenges.

"As our fourth year begins, SRNS is ready to continue, and to further, its commitment to the future of SRS, while upholding our core values of safety, integrity, teamwork and customer satisfaction and working toward our goals," said SRNS President and Chief Executive Officer Garry Flowers.

Since the beginning, working with the community has been a top priority for SRNS and its employees. SRNS has worked with organizations including United Way, Golden Harvest, Habitat for Humanity, Red Cross and local schools and colleges. "Our employees have shown a real strength of character through giving and raising donations and volunteering their time and effort. I had the privilege of working with some of them in the recent Project Care event for United Way, and seeing their earnest concern for the community," said SRNS Chief Operating Officer and Executive Vice President Fred Dohse.

SRNS also continued communication campaigns to unite employees and promote teamwork across the Site. "We want employees to be kept informed about the issues that affect them and to know that they are a central part of our work here. As the base of all operations on Site, they are our biggest asset," said SRNS Public Affairs Vice President Clif Webb.

In the past year, however, SRNS had to work through the serious, but necessary, challenge of decreasing its work force. Flowers said,



Site ARRA workers removed the 75-foot-tall, 174,000-pound dome of the Heavy Water Components Test Reactor.



SRNL took part in a media demonstration given during Wildfire Media Day in March at the Insurance Institute for Business and Home Safety to illustrate that embers, rather than direct flame contact, cause many buildings to burn during wildfires.

"While this was a difficult time for the Site, we remained dedicated to our employees. We opened two voluntary separation opportunities for employees who were ready to leave, and we created a Workforce Transition Center to help displaced workers handle the change and find new employment."

When SRNS came to the Site and inherited the environmental cleanup of an era's-worth of cold-war facilities, it rose to the challenge and made significant progress towards making the unused areas at SRS clean for future use or nature's repossession. With an additional \$1.4 billion in funding received through the American Recovery and Reinvestment Act (ARRA), and some of the nearly 3,600 employed with it, SRNS was able to accomplish many of the demolition, remediation and area closure projects ahead of schedule. The past year's accomplishments include celebrating the closure of the M Area Operable Unit, achieving mechanical completion at the Small Arms Training Facility, continuing transuranic waste shipments to the Waste Isolation Pilot Plant in New Mexico and working toward the closure of P and R Reactors, which will be celebrated in late September.

Site ARRA workers achieved the significant milestone of decommissioning the Heavy Water Components Test Reactor, affectionately known as "Hector," safely removing its rust-orange, 75-foot-tall, 174,000-pound dome with a 660-ton crane and lifting lugs, after more than 16 months of preparations.

As the cleanup mission at the Site was ending, however, SRNS leaders began to look to the future and ask the big questions on everyone's minds. "What will the fate of SRS be when the missions driving the Site for the past 20 years are finished?" With the arrival of the new DOE SR Manager Dr. Dave Moody and his unwavering confidence in SRS, came support for SRNS' answer to that question – that SRS would not be a closure site.

Dr. Terry Michalske also brought a fresh view of the future of SRS when he took over as the new SRNL director in September 2010. While some

areas on Site are completing their work scope, SRNL is constantly expanding its collection of knowledge, abilities and potential. With a thriving Work for Others program, SRNL steadily draws funding from a variety of sources, not only serving DOE, but also the Department of Justice, the Federal Bureau of Investigation, other laboratories, businesses, colleges and more. One of its many accomplishments during SRNS' third year, SRNL led the Wildfire Ignition Resistant Home Design program for the U.S. Department of Homeland Security.

"Terry Michalske is an outstanding leader with extensive experience and a strong commitment to growing our laboratory mission. When looking to the Site's future, I need creative minds to find new solutions for transitioning SRS to the future – and I know that he and the rest of my executive team are more than capable," said Flowers.

At the beginning of 2011, Michalske led a team of technical and programmatic experts from DOE and SRNS to put the ideas and goals for the Site's future into a cohesive framework. Moody was a regular participant and strong advocate of the group, showing DOE's shared goal of making a robust, prosperous future for the Site. Set to be released in the fall of 2011, the plan that resulted, known as Enterprise SRS, will refocus Site efforts on developing future missions by broadening its impact in environmental stewardship, clean energy and national security mission areas.

The Enterprise SRS core team worked closely with a broader set of DOE and SRNS leadership to determine specific objectives to achieve their goals, and to commit to running SRS like a business – pro-active in seeking new mission opportunities. Flowers said, "Dave Moody's cooperation and support were instrumental in making Enterprise SRS happen. We said in the plan, 'Work scope growth doesn't come through dramatic step change. It must be steady in nature. And it must begin now.' He and I believe that, and so does the rest of the SRNS leadership team."



The closure of P (above) and R Reactors was accelerated thanks to ARRA funding.



SRNS President and CEO Garry Flowers speaks to the Enterprise SRS team, led by SRNL Director Terry Michalske. To be released in the fall of 2011, Enterprise SRS will refocus Site efforts on developing future missions in environmental stewardship, clean energy and national security mission areas.

SRNS Environmental Bioassay Lab offers Japan a new wave of help

On March 11, 2011, an earthquake and a tsunami wave triggered a string of disasters in Japan that created an outpouring of relief efforts to assist the Japanese people.

The SRNS Environmental Bioassay Laboratory (EBL), which is operated by SRNS, was one U.S. asset that played a key role in the Department of Energy (DOE) Consequence Management Home Team's (CMHT) response to assist the government of Japan, by analyzing soil and air filter samples for radiological contaminants related to the Fukushima Daiichi reactor incident. The EBL is one of the first SRS capabilities to play a specific role in the Japan effort.

The staff at the EBL is trained to perform this kind of emergency work smoothly and rapidly, and they've demonstrated that we have an asset that can provide high quality analytical work when it's needed.

David Moody

Manager
DOE-Savannah River

"The staff at the EBL is trained to perform this kind of emergency work smoothly and rapidly, and they've demonstrated that we have an asset that can provide high quality analytical work when it's needed," said David Moody, Manager, DOE-Savannah River. "Their service helped both the United States and Japanese governments have quick access to important radiological data."

"We have a number of other people – particularly some of the scientists at the Savannah River National Laboratory – whose professional expertise has helped to define how the U.S. may be able to assist," Moody added. "Going forward, I expect that SRS has specific skills, like our understanding of the technology associated with long-term cleanup, remediation and monitoring in a nuclear environment, that will be very pertinent to the recovery effort that's ahead."

The primary objectives of the CMHT's sample collection, sample analysis and data assessment teams were to evaluate personnel exposure hazards, identify the nuclear power plant radiological source term and plume deposition, and assist the government of Japan in assessing any environmental and agricultural impacts associated with the nuclear event.

The EBL analyzed approximately 250 samples and reported approximately 500 analytical method determinations. Samples sent to the EBL were primarily soil samples from farmland surrounding the Fukushima reactors or air monitoring samples of national interest, including those collected at the U.S. Embassy and American military bases. Since the soil samples were from Japan and might contain foreign microbes, they had to be processed, treated and analyzed under a special permit from the U.S. Department of Agriculture. The rapid reporting of high quality analytical data was critical to allow the government of Japan and CMHT to evaluate radiological impacts from the nuclear reactor incident to both personnel and the environment.

The EBL was selected as one of four laboratories nationally to perform these sample analyses due to its expertise in rapid analytical methods for radiological contaminants in environmental samples. The Lab was contacted via Lawrence Livermore National Lab, because of its membership in the National Analytical Management Program, a DOE-sponsored organization that coordinates analytical services and capabilities within the DOE complex and within other federal agencies.



Staci Britt performs sampling in the Environmental Bioassay Laboratory at SRNS.

Harvard University film crew focuses on SRS as part of DOE documentary

A four-person film crew led by two Harvard professors visited SRS in August to digitally capture several major Site missions as part of a documentary on the DOE complex.

"Most people don't understand the complexities of what is being accomplished around the DOE complex," said Peter Galison, Professor, Harvard University. "We're trying to give a balanced perspective so our audience can make their own decisions as to the value of the various DOE missions and any potential threats posed by these sites all over the country."

The two Harvard professors, who are also the producers and directors, are focusing on work being performed at several SRS areas and processes, such as H Canyon, the Savannah River Ecology Laboratory, H Tank Farm, the Salt Waste Processing Facility and TRU waste processing.

SRNS Public Affairs Specialist DT Townsend noted that the crew took an interest in the Site's impressive records and awards regarding safety and the efficiency of our operations. "They also seemed to be overwhelmed with the incredible variety of missions at SRS and its sheer size. To them, SRS is a microcosm, a perfect example of the complexity of the DOE complex as a whole," said Townsend. "One of the producers commented that the operations conducted by SRNS and the other contractors merited a documentary in and of itself."

Photo: The Harvard University crew is shown here filming a TRUPACT-II shipment leaving SRS from E Area.



Allendale benefits from SRS excess firetrucks

The recent purchase of new fire engines at SRS has resulted in the donation of an excess fire truck to the Allendale County Fire Department through the SRS Community Reuse Organization's (SRSCRO) Asset Transition Program.

Dr. David Moody, DOE Manager for the Savannah River Operations Office, said. "We are extremely pleased to provide this equipment, through the Asset Transition Program, to benefit the taxpayers who provided the funds to purchase the truck years ago. It will assist the Allendale County Fire & Rescue to meet the needs of its citizens."

"The requested fire truck will provide a new service to serve multiple substations being established in the outer limits of the county," stated Allendale County Fire Chief Rodney Stanley. "This equipment will provide assistance in areas that are not currently within a five mile radius of an existing station."



Photo: SRNS President & CEO Garry Flowers (left) greets Allendale County Fire Chief Rodney Stanley.

Visitors of Note



Mayor of Augusta tours Savannah River Site

Deke Copenhaver, Mayor of Augusta, (at right in photo) and Karyn Nixon, executive assistant, recently visited SRS and toured H Area.

Chuck Goergen, SRNS Deputy Manager for Nuclear Materials Operations (at left), and Steve Howell, SRNS Director, Nuclear Materials Disposition (center), led them on a tour of H Canyon and explained the canyon's capabilities. The group also received an explanation of the Defense Waste Processing Facility, H Tank Farm, Salt Waste Processing Facility (currently under construction), Saltstone Disposal Facility, and the Effluent Treatment Project and how each facility is designed to interact and function together.

The tour concluded in B Area where the guests met with SRNS President and CEO Garry Flowers, SRNS Executive Vice President Fred Dohse and SRNL Director Dr. Terry Michalske.

Michalske discussed with the Mayor the research opportunities SRNL has developed for the Canyon. He also discussed potential research and business opportunities and how these would benefit the Central Savannah River Area, including the Georgia communities.

Environmental students get first-hand look at technology in action

Over the last few years, SRNL personnel have interacted with the students and professors participating in South Carolina State University's Field Station summer program. While we present information in the classroom, we also take the students to the field where they can see, and when possible, participate in applied research activities. I believe this program provides a valuable opportunity for both the students and our researchers to learn from each other.

Karen Vangelas

Savannah River National Laboratory



Students participating in the Savannah River Environmental Sciences Field Station (SRESFS) recently got a first-hand look at technologies for cleaning up the environment, along with some of the Savannah River Site's most innovative cleanup projects.

The SRESFS is managed by South Carolina State University, with funding from DOE, the USDA Forest Service - Savannah River and Natural Resources Conservation Service, and the Walmart State Giving Program. The program offers undergraduate and graduate students from 29 SRESFS member institutions unique internship opportunities that integrate environmental science course instruction with exposure to DOE/SRNL field work, laboratories and applied research projects.

A group of professionals from the SRNL Center for Sustainable Groundwater and Soil Solutions introduced the students to several SRNL-developed technologies that exemplify the concept of sustainable cleanup: BaroBall™, MicroBlower™ and MicroCED. All three technologies use natural forces, like barometric pressure or naturally occurring microorganisms, and work without requiring day-to-day hands-on involvement.

After discussion with the researchers, the students took a field tour of the P Area remediation site, where they could see for themselves how these technologies are being implemented in a complementary manner to clean up a chlorinated solvent source and plume at SRS.

In addition, the participants toured D Area to observe two ongoing Early Actions funded by ARRA: the D Area Coal Pile Runoff Basin/D-006 Outfall/Waste Oil Facility consolidation and vegetative soil cover and the Thermal Detritiation at the Moderator Processing Facility Subunit. ARRA funding accelerated the D Area remediation by six years.

The SRESFS seeks to increase the recruitment and retention of underrepresented students and women in science, engineering, natural resources management and environmental career professions, many of whom are students at Historically Black Colleges and Universities.





Scenes of SRNS

*A white-hot sun silhouettes a volunteer installing trusses on the newest SRNS-sponsored Habitat for Humanity house, located in Warrenton, S.C. The house is slated for completion before Thanksgiving.
(Photograph by Steve Ashe)*

Savannah River Nuclear Solutions



national security • clean energy • environmental stewardship

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Our commitment is to create innovative, effective solutions for our country's most pressing initiatives.

Savannah River Nuclear Solutions offers in-depth nuclear knowledge for the nation and works to make the future of our country secure, energy independent and environmentally responsible.

For more information on Savannah River Nuclear Solutions, please visit our website: savannahrivernuclearsolutions.com.