MAY 2019
SAVANNAH RIVER NUCLEAR SOLUTIONS

SRISTOGAY



This month

Castor Creek cleanup ● Family Scholarships ● Ft. Gordon job shadowing ● AMP, LEAP





Stuart MacVean SRNS President and CEO

Welcome

to the May 2019 edition of

SRNS Today

Employees at Savannah River Nuclear Solutions are always looking for ways to improve our operations, our environment and the future of our company.

Our Savannah River Site Training organization recognized a need to enhance our ability to quickly train new maintenance workers while ensuring that they are qualified to perform their tasks. These employees' skills keep our operations moving smoothly and getting them ready for hands-on work is vital. Strategic efficiency improvements have resulted not only in a reduction in total training time, but also produced a \$1 million cost savings. It's a win-win for everyone.

We continue our Environmental Stewardship work with proven cleanup techniques, such as the ones being used to clean the groundwater from the decommissioned C Reactor to Castor Creek. These low-cost yet high-impact techniques help in our efforts to return SRS to its natural state.

During May, we celebrated our developing workforce and the youth who may be our workforce in the future. Our company's leadership attended the annual Leadercast event with our mid-career professionals and a management social with our early-career professionals. These two events give all the participants a chance to network, to learn about each other, and our company's goals and missions. Plus, we're happy to have presented 15 scholarships to children of our employees. We're excited to play a part in furthering their education and hope that they'll consider SRNS in their career plans.

I hope you enjoy this month's edition of SRNS Today, and as always, thank you for your interest in Savannah River Nuclear Solutions.





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 employees and other stakeholders of the company's operational- and community-related activities. If you have questions or comments, please contact us at 803.952.6131 or visit our website.

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SRNS employees Terry Killeen (left) and Jimmie Lee take baseline groundwater samples prior to the start of a cle<mark>anup project that will inject 36,000 gallons of</mark> emulsified oil mixed with water, a pH buffer, vitamin B-12 and vitamin C into the earth at a precise depth within the aquifer below.

Low cost, high impact

Cleanup method safely removes chemicals from Castor Creek

During the Cold War, chemicals like trichloroethylene (TCE) were often used to remove grease from nuclear components manufactured throughout the Department of Energy (DOE) complex. Disposal of these chemicals often resulted in groundwater contamination in areas such as the now-closed C Reactor facility at SRS.

Ninety-nine percent of the degreasing chemicals found in the groundwater were removed during an earlier cleanup action that used high-voltage electricity to heat the subsurface, vaporizing the TCE, which was then extracted. However, TCE in the groundwater from C Reactor to Castor Creek still exists in a narrow plume about one mile long.

A low-cost, low-energy cleanup method using nature's microorganisms is being implemented by SRNS to safely remove any remaining chemicals.

Terry Killeen, SRNS Environmental Engineer, explained that 36,000 gallons of vegetable oil mixed with water, a pH buffer, vitamin B-12 and vitamin C will be injected through 15 pipes driven into the earth to a precise depth within the aquifer below. The groundwater must move through this area as it slowly travels past the two lines of injection points toward the creek.

"Whenever possible, we believe it is best to harness and use nature for our environmental cleanup projects," said Killeen. "Through extensive study and testing it has been proven that a certain type of microbe, native to this area, actively eats TCE. We provide the oil and microbes, and mother nature does the rest. The oil and microbes thoroughly mix with the groundwater and coat particles of sand and clay in the subsurface. The TCE flowing through the area sticks to the oil, where both are eaten and ingested by the microbes, resulting in harmless compounds."

Killeen noted that another advantage of this type of treatment is that it involves a one-time injection of a relatively small amount of oil, which will treat a large amount of water over three to five years. Conservative estimates indicate more than one million gallons of groundwater per year will be treated. Remediating the groundwater using microbes and oil costs 30-60 percent less than many traditional types of TCE remediation at SRS.

"Finishing this last phase will aid in the cleanup of the C Area Ground Operable Unit, another important environmental restoration project towards returning SRS to its natural state," said Karen Adams, DOE-Savannah River Federal Project Director.

Efficiency improvement cuts training time, saves \$1 million

Strategy puts qualified maintenance workforce in the field faster



hrough strategic training efficiencies, SRNS recently graduated 68 new Maintenance, and Electrical and Instrumentation mechanics, while saving

Many of SRNS' newest employees are from the local area, and their arrival helps SRS address workforce sustainment needs created by current and expected attrition.

SRNS Site Training Department standards require scenario-based, performancebased and problem-solving training. The required training for these skill sets typically takes six months for new hires to complete to gain their initial qualifications. By doubling the size of a normal training group and implementing additional program efficiencies, graduates were able to complete the necessary training in four months.

"A two-shift training schedule was necessary because of the demand our operations facilities have for new mechanics, who are replacing retiring employees," said Robert Williamson, SRNS Maintenance Training Manager. "It takes a great deal of coordination and trainers to prepare these students to be immediately productive in the facilities," he said.

Because of the larger number of students, SRNS Site Maintenance Training personnel expedited the onboarding of the new hires and developed a compressed training schedule to allow students to complete initial qualifications early. Several courses had to be offered multiple times, including three weeks of night-shift training. Students were also provided additional classroom training and facility-specific online training to help increase their productivity when they begin work in SRS facilities. The expedited onboarding process and efficiencies resulted in a \$1 million cost savings.

Having a robust maintenance program and highly-trained mechanics helps SRS to safely complete mission essential work in the Site's nuclear operations facilities. "Maintaining safety systems assures worker and public protection and avoids costly impacts of operating equipment to failure," said Wyatt Clark, SRNS Senior Vice President, Environmental Management Operations.

As site missions continue to expand, employment opportunities for critical skills jobs—operator, radiation protection, maintenance technician and more—will continue to be in demand.

Photo: In the SRNS Machine Shop, Robert Wrightenberry measures glove port components used in various



SRSFD's new ladder truck provides increased safety benefits and cost sayings.

New ladder truck adds versatility to SRSFD capabilities

The SRS Fire Department (SRSFD) recently purchased a new 2018 Pierce 100-foot Velocity ladder truck as a part of their fleet replacement project. The ladder truck meets all applicable National Fire Protection Association codes for ladder safety and design.

The new ladder truck offers versatility in reaching both high and low spaces, supporting elevated rescue operations as well as having the capability of reaching approximately 20 feet below ground surface. This ability makes it possible to reach someone in distress using a ladder or bucket attachment in locations that may have been more challenging to access in the past.

Compared to previous models, the new truck is equipped with several features that will simplify processes and increase safety. Such features include airbags, air rod suspension, capacity to hold more equipment, and enhanced lifting capabilities, which allow the basket to hold 1.000 pounds compared to the old ladder truck that held 750 pounds.

Not only does this addition to the fleet provide on-site benefits but it can also be used to respond to emergencies in the surrounding six SRS mutual-aid communities.

"SRNS holds the safety of SRS employees and citizens in our surrounding communities as a core value," said Rick Sprague, SRNS Senior Vice President, Environmental, Safety, Health and Quality. "In the event of an emergency, the SRS fire fighters and their equipment must be ready to respond to a variety of unique facilities and environments quickly and effectively. The upgrades completed within the SRS emergency fleet give our emergency responders improved resources when seconds count."

In addition to the new ladder truck, two new fire trucks have been purchased, all SRS ambulances have been remounted and the site is scheduled to get another rescue and HAZMAT truck in the

Since arriving on site on April 1, SRS's newest ladder truck has already responded to one call for mutual aid in the local community.

Fishing event at SRS honors wounded warriors, mobility impaired

DOE and U.S. Forest Service personnel from SRS, working with the National Wild Turkey Federation (NWTF), recently held the fifth annual Ultimate Fishing Challenge at SRS to honor our nation's wounded warriors and mobility-impaired residents from throughout the region.

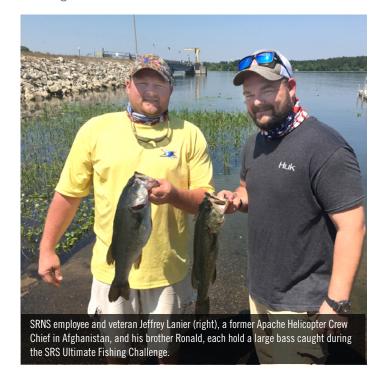
"We have a wide variety of natural resources at SRS that we can share from time to time with members of those groups who have risked their lives for us, such as our military veterans and first responders." said Tony Towns, DOE Natural Resources Program Manager. "Along with our annual Wounded Warrior Deer Hunt and SRS Ultimate Turkey Hunt, this fishing event is one more way we can express our appreciation for their service to our country."

Recently, dozens of military veterans wounded in combat and U.S. citizens with serious mobility issues enjoyed hours of fishing on a lake at SRS, appreciating the near-wilderness conditions.

Army veteran Jeffrey Lanier, a former Apache Helicopter Crew Chief in Afghanistan and current SRNS employee, said, "This is a once-in-alifetime experience that makes you not want to fish anywhere else. I really appreciate this opportunity."

The catch-and-release fishing contest was held May 18 and ended with a cookout and awards ceremony for the two largest fish caught, as well as the single largest fish presented at the weigh-in. The record for a single fish caught since the inception of this event is 10.4 pounds.

The participants are chosen through a lottery system administered by NWTF personnel at their office located in Edgefield, S.C. More than 80 applications were received for this year's competition, with 25 being selected.



6 | SRNS TODAY | MAY 2019 MAY 2019

Ft. Gordon soldiers begin 90-day SRNS job shadowing program

Soldiers from Ft. Gordon recently began their job shadowing program at SRS within the SRNS Health and Safety division. This program provides career advancement opportunities for veterans, military families and transitioning service members.

Each soldier reports to the site from 7 a.m. to noon during their 90-day shadowing experience, which will provide rotation opportunities to work with safety engineers and industrial hygienists (IH). The 13-week program begins with an orientation followed by four job shadowing assignments in Site Maintenance, F Area, Project Management and Construction Services and Subcontracts. The first wave of job shadowing participants are scheduled to complete the program on July 18.

Not only will the program provide career-building experiences, but participants will also receive one-on-one resume writing and interview prep skill courses to prepare for future job opportunities.



SRNS Senior Industrial Hygienist Chris Wells instructs Chris Frazier of the SRS Ft. Gordon Job Shadowing Program on the use of a volatile organic compound meter to monitor the air in a building that is undergoing a roof replacement.

"Seeing what the Safety and IH professionals do at the Site has been a very eye-opening experience," said participating soldier Chris Frazier. "Everyone has been very welcoming and helpful. I am looking forward to gaining experience and seeing all the opportunities this field has to offer."

The job shadowing program is part of a larger initiative to increase veteran employment at SRNS.





SRNS provides local teachers with \$600,000 over past 10 years

ver the last decade, SRNS has donated \$600,000 to enhance local education through the annual SRNS Innovative Teaching Mini Grants program.

More than 100 educators from the greater Aiken-Augusta area recently gathered to be honored and receive grants ranging from \$500 to \$1,000.

"We realize funding issues often limit the goals and plans our local educators have for their students," said Francine Burroughs, SRNS Manager, Talent Acquisition and Development. "We want to reward their impressive dedication and extreme desire to academically grow their students. This is where our Mini Grants program can often help."

The program recognizes and supports projects that enhance elementary and middle school science, mathematics and technology programs.

Typically, the grants are used to purchase materials and handson kits such as: Making a Splash in Learning with Underwater Robotics; FUNdamental Fractions; Limitless Learning in 3-D; Raising Awareness of Our Environment; and Creating "Tasty Treats" with Math and Science.

"It's very nice what SRNS does for us," said Jannie Dee Johnson, a fourth-grade teacher at Greendale Elementary, New Ellenton, S.C. "Not many people understand how much of our own money we spend on supplies and materials for our students. It's a great feeling that a company would spend that much to support local teachers. It shows just how much they value education."

Educators from all Central Savannah River Area elementary and middle schools (public and private) are eligible to apply for the \$50,000 in Mini Grants offered each year. This year, more than 200 grant proposals were submitted, with 80 being selected.



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Jannie Dee Johnson



"The grant for our project involves several grades of students working with area colleges and civil engineers to design and build a model of a pedestrian bridge to be constructed over a very busy highway next to our school," said Denise Newman, STEM Coordinator for Jackson Middle School, Jackson, S.C. "Hopefully, by the end, we'll have a nice presentation for the County Board of Supervisors to review and consider."

Funding for the grants is provided through the parent companies of SRNS (Fluor, Newport News Nuclear and Honeywell).

"Rewarding these teachers who work so hard for our children is important," said Gladys Moore, SRNS Education Outreach. "Their enthusiasm and heartfelt expressions of appreciation make this event special for us as well."

The primary goal of the extensive SRNS education outreach program is to enhance interest in science, mathematics, engineering and technology while supporting improvements in education by using the unique resources available at SRS. The SRNS management team believes business, industry, government and the academic community should work together as partners to improve educational opportunities for all students in our region.

Photo: SRNS President and Chief Executive Officer Stuart MacVean gives an introduction at this year's Leadercast event.

8 | SRNS TODAY | MAY 2019 | MAY 2019



SRNS employee Taylor Rice assists Harper (left) and Landen Still to created a geodome out of gumdrops and toothpicks.

Diggin' Science: Williston kids turn out for STEM event

This year's DIG (Dreams, Imagination & Gift) STEM Festival in Williston, S.C., recently saw more than 50 exhibitors working together to provide a day of fascinating hands-on learning involving a myriad of topics for over 4,000 visitors.

The event was created to showcase a multitude of local exhibitors who provide engaging activities, live performances, interactive demonstrations and family-oriented STEM (science, technology, engineering and math) entertainment featuring drone simulators, robotics, virtual reality and 3-D printing.

Aisles and exhibits were filled with area children, teens and their families as they browsed through high-tech machines and other intriguing devices found at exhibits in this science wonderland.

One clever demonstration featured musical bananas that acted as a simple keyboard. When touched, each played a specific note of music. The day also featured STEM-based competitions, inflatable play equipment, games and live music.

Steven Brown, DIG president and founder, sees the success of a STEM festival in a rural area like Barnwell County as the proof that his original vision is viable. He described DIG as a tax exempt, non-

profit organization whose goal is to motivate, mentor, encourage and enable rural children and youth to excel and make their dreams and imaginations a reality.

"DIG aims to establish a sense of community pride and ownership by providing an organization that gives residents an opportunity to play a major role in developing their own youth. Statistics show that when a community is involved by volunteering, residents feel secure, personally invested and tend to do more for the well-being of the community," Brown said. "I am a firm believer that we are witnessing a cultural shift in our communities that will help ensure a better future for our residents and youth."

"As a part of that cultural shift, we realize something big is happening in the rural communities we serve and SRNS is at the center of it," added Brown. "SRNS has been supporting our programs and festival for four years, and we are positive that the success we've had over those years would not be possible without them. All things engineering-related and industry-related stems from SRNS first, and we are glad that they are partners of our STEM outreach initiatives."



All in the (SRNS) Family

SRNS presents 15 scholarships to children of company employees

Since 2009, nearly \$500,000 in college scholarships has been presented to area students as part of the SRNS Family Scholarship program.

This year, 15 children of SRNS employees were each awarded a \$3,000 scholarship, received at a special ceremony recently held in Aiken, S.C.

The scholarships are awarded to graduating high school students based on general ability, leadership and scholastic achievement.

"Every year, I'm continually impressed by the long list of achievements obtained and awards received by each of our winning students," said Stuart MacVean, SRNS President and CEO. "Their morals, values and desire to assist those in need are equally amazing. If these young people are representative of our future leaders, we are in good hands."

MacVean also expressed his hope that one day many of the students, like their parents, will consider joining the SRNS family.

"I want to eventually become a certified registered nurse anesthetist, so I'm thankful for their support to help me reach this goal," said William Biebesheimer, North Augusta High School. "It's a privilege to be here."

"To receive this honor means a lot to me," said Beth Verdery, Strom Thurmond High School. "I need to live up to it and be responsible in what I do to better myself by obtaining the education I need." Verdery's plans are to attend Clemson University and obtain a degree in Bioengineering.

And the recipients are...

Alexander Bates, son of Bill Bates, SRNL (Nuclear Materials Management Programs)

William Biebesheimer, son of Richard Biebesheimer, NNSA (Nuclear Material Disposition Project)

Walker Burt, son of William Burt, Technical Services (Site Services)

Zachary Franklin, son of Tracey Franklin, NNSA (Tritium Operations, Training, Procedures)

Aiyana Holland, daughter of Sharon Adams, Environment, Safety, Heath & Quality (Operational Excellence)

Jahleel Johnson, son of Seneca Johnson, Technical Services (Site Services)

Brian Marra, son of Sharon Marra, SRNL

Anna McCabe, daughter of Daniel McCabe, SRNL (Environmental Stewardship)

Harrison Miller, son of Nathaniel Miller, SRNL (Science and Technology)

Tyler Newton, son of Lori Newton, Business Services (IT)

Thomas Osborne, son of Michael Osborne, NNSA (F Area Operations)

Erica Pareizs, daughter of John Pareizs, SRNL (Environmental Stewardship)

Donovan Price, son of Donald Price, NNSA (Tritium Operations, Training, Procedures)

Samuel Sessions, son of Kevin Sessions, NNSA (Tritium Operations, Training, Procedures)

Elizabeth Verdery, daughter of John Verdery, Technical Services (Site Services)

10 | SRNS TODAY | MAY 2019 | MAY 2019

LEAP Management Social cultivates a culture of relationships, development

SRNS Leaders Emerging Among Professionals (LEAP) members recently met at the Aiken Center for the Arts for the annual 2019 LEAP Management Social.

The social is considered one of LEAP's capstone events. During the event, members are encouraged to network directly with experienced managers from across the Site. In a professional yet relaxed atmosphere, members can build personal and lasting relationships with upper management and other LEAP members.

LEAP Networking Sub-Committee Co-Chair Peter Gula finds the social a one-of-a-kind, unique professional development event. "With a company the size of SRNS, it is tempting for young professionals to feel like a small cog in a large machine," said Gula. "This event cuts directly through this challenge. The Management Social is an event intentionally designed to cultivate a culture of personal relationships and talent development."

SRNS Senior Vice President Business Services Norm Powell believes it is important to offer events that foster relationships and mentorship opportunities to the future workforce across the site.

"The younger workforce joining SRNS come to us with new technical skills and a differing perspective on how our work can be performed. This allows us to adopt new ideas and approaches to more efficiently perform our vital scope of work," said Powell.

"These young professionals are the future leaders of SRS and need



LEAP members talk with SRNS President and CEO Stuart MacVean at the recent LEAP Management Social.



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This event cuts directly through this challenge.

The Management Social is an event intentionally designed to cultivate a culture of personal relationships and talent development."

Peter Gula



every opportunity to quickly grow and develop into the management team of tomorrow," Powell continued.

With a focus of business awareness specific to SRNS, LEAP provides early-career professionals with networking, professional development and community outreach events, as well as increased visibility with management.

LEAP climbs to new heights in networking, development events

LEAP recently offered a professional development presentation from the Chief Nuclear Officer of Fluor, Dave Olson, who is also leading the proposed pit production project at SRS.

Olson's interactive presentation kept LEAP members engaged by providing a scenario and allowing them to work together in teams to discuss the best approach to handling difficult situations.

Throughout the presentation, Olson introduced a multitude of scenarios, ranging from conflicts within a work group to sexual harassment issues. One key piece of advice he gave was to make use of company resources rather than trying to navigate workplace challenges alone.

Thirty-eight years in the nuclear cleanup business—with the last 15 years in executive positions—have provided Olson with a unique perspective on how to navigate complex challenges that he shared with LEAP members.

Not only are LEAP members climbing to new heights professionally, but also on the rock-climbing wall.

Recently, members from a variety of disciplines across the site were able to build relationships with peers that they would normally

not have an opportunity to interact with as they took the leap onto the rock-climbing wall at Active Climbing, a rock climbing and ninja training center located in Grovetown, Ga., that offers activities for people of all ages.

LEAP members learned how to properly and safely climb, jump and secure climbers using a belayed rope while encouraging team-building at the event.

Aside from climbing, the facility offered activities such as bouldering, a warped wall, salmon ladder, climbing peg boards and areas for games such as foosball and foursquare.



Dave Olson explains how to handle a difficult situation during his presentation on overcoming workplace challenges.



Research and Development Engineer Allen Quackenbush (right) explains the additive manufacturing process to USC visitors in SRNL's Plastic Additive Manufacturing Lab.

Faculty from USC Aiken, Salkehatchie tour SRS facilities

SRS recently hosted faculty members from the Universities of South Carolina Aiken (USCA) and Salkehatchie to tour facilities around the Site and evaluate opportunities for future partnerships.

During the driving portion of the tour, visitors were able to view M Area clean-up and closure; F Canyon and F Tank Farm; Low-level Waste Disposal Facilities; the Salt Waste Processing Facility and the Saltstone Facility.

The tour also featured stops in the Savannah River National Laboratory to observe virtual reality equipment, robotics and additive manufacturing; an overview of physical protection systems engineering; and the Tritium Extraction Facility.

99

partnership."

Chad Leverette

"There are so many great

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"We are so thankful for the opportunity to have such an in-depth tour of SRS. With our colleagues from USC Salkehatchie, the USC Aiken faculty hoped to learn more about the operations and needs of SRNS, SRNL and SRR," said USCA Interim Dean of the College of Science and Engineering Chad Leverette. "There are so many great opportunities for us and our students to partner with SRS going forward. With the new perspective provided by the tour, we have already had follow up conversations with SRS staff on growing our partnership."



Auctioneer Dennis Cheeks and Anne Claire Jordan encourage the crowd at Celebrity Waiter Night to bid on the "Party in a Pail" package.

Celebrity Waiter event serves up \$50,000 for Children's Place

SRNS "celebrities" served over 150 employees and guests at the annual Celebrity Waiter Night on May 9. The event raised \$50,000 for Children's Place, Inc., a United Way of Aiken County agency that provides therapeutic intervention, bus transportation and daycare for local children as well as support groups and parenting classes to caregivers.

All proceeds raised from the brunch, dinner, silent auction, live auction and "tips" for the celebrity waiters will go towards the needs of the non-profit organization.

"SRNS has always been proud to support United Way of Aiken County partner agencies," said Elizabeth Harm, SRNL Protocol Officer and Celebrity Waiter Co-Chair, along with Yolanda Pelzer. "I am so excited that this year we will be donating \$50,000 to Children's Place, increasing last year's donation by \$20,000."

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