Calibration Consolidation
Streamlining laboratories saves estimated $12 million in cost avoidance

This month
Celebrating innovation • Education report card • SRNS Family Scholarships • Safety and health awards
Welcome to the May 2017 edition of SRNS Today

A great company doesn’t rest. It keeps driving forward, always focusing on the future. Savannah River Nuclear Solutions leads the way as a continually-improving, award-winning, community-changing, innovating, one-of-a-kind company.

We’re continually improving through our Focused Improvement Transformation and Best Business Model Process (BBMP) initiatives. The BBMP group recently consolidated calibration labs across the Savannah River Site, resulting in an estimated $12 million in cost avoidance.

We are award-winning. Recent honors include the National Safety Council’s Occupational Excellence award and BlueCross BlueShield’s recognition of our health and wellness programs. Our community-changing initiatives in May included participation in Celebrity Waiter night, the Site Services annual United Way Golf Tournament, the Innovative Teaching Mini Grants awards and more. Our company and employees take pride in supporting local charities and schools.

We are constantly innovating. This month, we highlight passive groundwater cleanup technologies developed at SRS and the successful results. SRNS is constantly on the leading edge of new technologies and methods, and the results continue to be effective and exciting.

SRNS makes the world safer. That’s not just a slogan, but a promise we keep every day.

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 803.952.9584 or visit our website.

www.savannahrivernuclearsolutions.com

Calibration Consolidation

Streamlining labs to save estimated $12 million in cost avoidance

The Best Business Model Process (BBMP) group at SRNS strives to determine the best value for executing the company’s business scopes of work. One of their recent efforts to streamline the calibration labs at SRNS has saved an estimated $12 million in cost avoidance.

In 2016, the BBMP group began evaluating six SRNS organizations that altogether performed approximately 18,000 calibration services annually. The effort involved a collaboration of representatives from Savannah River National Laboratory (SRNL); Environmental Stewardship, Safety and Health; National Nuclear Security Administration Operations/Programs; and Technical Services.

The major calibration labs included the Savannah River Standards Lab (SRL) in 736-A; Site Services Calibration Lab (SSCL) in 722-A and 722-1A; Savannah River Tritium Enterprise Hot Calibration Lab in 234-H; and Health Physics Instrument Calibration Lab in 735-2B.

“Our goal was to determine the best cost and service model for the calibration services and reduce redundancy and facility footprint, while maintaining program accreditation and compliance,” said Alexcia Delley, SRNS BBMP Program Manager.

The BBMP consulted with onsite and offsite subject matter experts, used results from a Site Services fiscal year (FY) 2017 study for consolidating labs and evaluated numerous alternatives to ultimately determine if they should outsource the calibrations to an offsite lab or restructure the existing labs to keep the services onsite.

As a result, the BBMP recommended that services being performed at the SRL and the SSCL should be consolidated into Building 736-A. Consolidating the calibration services will eliminate redundant services and equipment and result in approximately $562,000 in anticipated hard dollar savings over the next five years.

The initial business model called for the closure of Building 736-A which would have resulted in costs for equipment relocation and upgrades to facilities. Therefore, consolidating into Building 736-A will yield an estimated $12 million in cost avoidance that would have been required to move SRL from 736-A.

Additionally, the BBMP recommended the shutdown of Building 722-1A. Shutting down 722-1A will reduce the site footprint by approximately 6,500 square feet, eliminating future utility and facility maintenance costs. The consolidated calibration staff has been transferred to Technical Services and plans are to complete the consolidation of the equipment by the end of FY17.

PHOTOS

Above: Eric Homyer transfers a 20 gram weight to a balance at the Savannah River Standards Laboratories.
Below: Tim Hines works with a multifunction process calibrator.
SRNS recognized by National Safety Council for Occupational Excellence

SRNS was recently recognized with the presentation of the National Safety Council’s (NSC) 2017 Occupational Excellence Achievement Award for their safety performance in both Operations and Construction, for work performed during the 2016 calendar year. Receipt of this award qualifies SRNS to compete for the NSC Industry Leadership Awards, which will be presented in September.

This award recognizes companies, business units and/or corporate facilities that have reported injuries and illnesses that involved days away from work equal to or less than 50 percent of the Bureau of Labor Statistics rating for their type of industry in North America. A second requirement is that the organization cannot have an employee fatality during the calendar year in which they have been nominated for the award.

SRNS has received this award for occupational excellence for nine consecutive years, dating back to 2008. “Savannah River Nuclear Solutions annually receives a number of prestigious safety awards which collectively validate the effectiveness of our safety program,” said Dan McKeel, SRNS Senior Vice President, Environmental Stewardship, Safety and Health. “These awards, especially this award from the National Safety Council, provides insight on the value we as a company, place on the health and well-being of our family of employees. It’s an honor to yet again receive the Safety Council’s Occupational Excellence Achievement Award.”

For more than 100 years, the NSC has been a leader in workplace safety, and according to the NSC, employers who show they care about the safety of their employees see improved morale, increased productivity, lower costs and, most importantly, fewer injuries.

BlueCross BlueShield presents health, wellness award to SRNS

BlueCross BlueShield (BCBS) of South Carolina recently presented the “Blue Shoe” award for the Midlands region to SRNS. This award recognizes companies, business units and/or corporate facilities that have reported injuries and illnesses that involved days away from work equal to or less than 50 percent of the Bureau of Labor Statistics rating for their type of industry in North America. A second requirement is that the organization cannot have an employee fatality during the calendar year in which they have been nominated for the award.

SRNS received the award for their health incentive program and corporate responsibility in all aspects of employees’ health, morale, increased productivity, lower costs and, most importantly, fewer injuries.

SRNS Health and Wellness also collaborates with the Employee Assistance Program to host lunch and learns about various topics such as suicide prevention. Recipient companies must also demonstrate excellence in the five tenets of the VPPPA program: Workplace Analysis, Hazard Prevention and Control, Safety and Health Training, Management Leadership and Employee Involvement.
Annual live burn training for SRS emergency responders is a multi-faceted exercise involving a simulated fire within a mock radiological facility. Four days of drills recently allowed 227 employees to train together from multiple SRNS organizations including the SRS Fire Department, Radiological Protection, Emergency Management and Facility Operations personnel. The live burn was held at the Columbia County (Ga.) Fire Rescue Training Facility, which allows fire departments to fully exercise their abilities to properly respond to a fire in a variety of settings.

“What makes this event so valuable is the specialized, true-to-life experience SRNS employees take part in,” said Kevin Whitt, SRNS Site Training Manager. “We want to ensure that all participants fully understand their roles and become familiar with the surveying and decontamination process. In turn, firefighters must find and rescue a life-sized training manikin, and then carry the victim from the smoke-filled structure to the waiting ambulance, while other members of the team extinguish the flames.”

The most critical step for our firefighters is being aware of their surroundings during high intensity training,” said Travis Young, SRS Fire Department Training Captain. “Several of our buildings at SRS require the use of extinguishing agents other than water. Knowing which agent to use at that moment is critical. Upon arrival at the fire, we have to work quickly and closely with the Incident Commander to develop a plan of attack to take control of the scene.”

An Incident Commander is responsible for directing all SRNS support personnel to remove underground contamination. This annual training allows Radiological Protection Department personnel to receive hands-on training on how to remove a firefighter from their gear in a safe manner. In turn, firefighters become familiar with the surveying and decontamination process.

The knowledge and experience gained through the drill is invaluable to ensure the safety of SRS emergency response personnel in the event of a fire involving radiological materials.

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### Passive environmental cleanup technology pays off

Recently, SRNS has studied several highly productive technologies to develop and pioneer new methods to clean up soil and groundwater at SRS, many of which cost-effectively rely on the forces of nature.

“Years ago, one of our first groundwater cleanup approaches was to strongly attack the potentially hazardous chemicals under SRS using high-power machinery and pumps that required large amounts of electrical and frequent maintenance.” said Mike Griffith, SRNS Project Manager, Area Completion Projects. “We’d pump up huge volumes of contaminated groundwater and treat it to remove solvents, similar to the chemicals used at clothing cleaners.”

According to Griffith, though using active cleanup technology such as “pump and treat” still remains a viable option in relatively small areas at SRS, a movement towards long-term, passive treatments is quickly proving to be the primary objective.

“Using low-power, low-maintenance methods have also proven to be a consistently viable cleanup option at SRS. It’s a matter of using the right tool for the right job. We want to be efficient and cost conscious while ensuring we have the full support of our environmental regulators as well,” said Griffith.

As these more aggressive cleanup projects mature and the bulk of contaminants are removed, it becomes more efficient to transition to passive, low-energy, low-carbon emission technologies such as solar powered MicrBlowers™.

Each MicrBlower™ system requires only between 20 and 40 watts of power, which can be easily produced by a small, solar-powered panel. The pumps used are only four inches in height and three inches in diameter. “The longevity of these mechanisms has been impressive. We’ve seen an average of 15,000 to 20,000 hours between pump failures,” said SRNS scientist Branden Kramer. “We spread the pumps out to provide simple, low-cost soil vapor extraction. During a 10 month test, a single MicrBlower™ removed 23.4 pounds of volatile organic compounds from chemically contaminated groundwater beneath SRS.”

Many of these technologies were developed in conjunction with SRNL, working closely with the S.C. Department of Health and Environmental Control and the Environmental Protection Agency.

Kramer acknowledged that even the microblowers in time will be replaced by an even simpler process, known as a Baroball™. Baroballs™ rely on changes in atmospheric barometric pressure to force underground, chemical-laden vapors up and out of the earth through plastic pipes. A ping pong-sized ball sits within a housing unit on top of the venting pipe, preventing air and rain water from entering the pipe when it is not exhausting chemical gases.

Kramer explained that another passive form of technology used across the site to remove underground contamination includes using a common household product, vegetable oil. The oil is injected into the ground to promote the growth of naturally occurring bacteria. The bacteria aggressively consumes the oil and in doing so also consumes some forms of underground chemical contamination, such as solvents, accelerating cleanup time, and saving millions of dollars.

Harnessing nature also lends a hand with the use of 60 acres of trees at SRS that serve as a living, passive remediation system, all part of an innovative process to remove low-level radiactive contamination from groundwater located near the center of the site.

In essence, it’s man working with nature and using thousands of years of scientific research and chemical solutions to safely absorb the radiactively tainted water,” said Kramer. Since tritium has a half-life of 12.3 years, after a little more than 12 years, half of the nuclear activity is gone from the trees.

“Using passive cleanup processes reminds me of that old saying, ‘work smarter, not harder,’” said Kramer. “The only difference being, we work harder at working smarter and have millions in cost avoidance over the years to verify it.”
SRNS receives top marks for 2017 outreach programs

With the close of the 2016/2017 school year, SRNS can look back and know nearly 30,000 students and educators have been positively impacted as a result of 14 comprehensive education outreach programs and events they have provided throughout the region.

Since SRNS became the management and operating contractor in 2008 at SRS, more than 200,000 students and teachers throughout the eight counties near SRS have benefited from their dedicated efforts to help local students and assist area educators.

“Without a doubt, SRNS deserves an A+ for the quality of their education outreach programs,” said Dr. Sean Alford, Superintendent, Aiken County Public Schools. “It has been rewarding working closely with their employees and the SRNS Education Outreach Program staff.”

Overall, the primary goal of SRNS education outreach programs is to stress the importance of science, technology, engineering and math (STEM). These STEM-intensive initiatives include the Traveling Science Demonstration Program, Science & Technology Enrichment Program, Innovative Teaching Mini Grants, Introduce a Girl to Engineering and STEM Demonstration Program, Science & Technology Enrichment Program, Innovative Teaching Mini Grants, Introduce a Girl to Engineering and Mathematics and Technology Programs. These STEM-intensive initiatives include the Traveling Science Demonstration Program, Science & Technology Enrichment Program, Innovative Teaching Mini Grants, Introduce a Girl to Engineering and Mathematics and Technology Programs.

SRNS presents $50,000 to area educators during annual Innovative Teaching Mini Grants reception

SRNS recently donated $50,000 to honor 118 teachers from the greater Aiken-Augusta area at the annual “SRNS Innovative Teaching Mini Grants” reception held in Aiken, S.C. Since 2009, SRNS has donated over $550,000 to enhance local education through this program.

“The ingenuity, passion and dedication we see expressed within so many of these impressive grant proposals is inspiring,” said Stuart MacVean, SRNS President & CEO. “We’re investing in the goals of these teachers to raise the bar and take education for area students to the next level, and at the same time, interest students in careers at SRS.”

More than 200 grant proposals were submitted by teachers from schools in Aiken, Barnwell, Richmond and Columbia counties. Educators from all CSRA elementary and middle schools (public and private) are eligible to apply for Mini Grants in the amount of $500, $750 or $1,000. The program recognizes and supports projects that enhance elementary and middle school science, mathematics and technology programs.

“The grants are so very encouraging. This is amazing,” said Kimberly Ray, Special Education Teacher, Meriwether Middle School, North Augusta, S.C. “To have community support from companies like SRNS means so much to me and my students who depend heavily on manipulatives, hands-on objects to help them convert a concept into a real world experience. I’m extremely grateful to SRNS.”

This competitive program provides grants to CSRA public and private elementary and middle school teachers for innovative ideas. During this past school year, grants for more than 140 teachers totaling $50,000, were awarded. To date, more than $550,000 has been contributed to support educators throughout the region. At the collegiate level, SRNS has taken steps to strengthen ties with many colleges and universities in South Carolina and Georgia by providing scholarships, funds for critical STEM-related equipment and mentoring opportunities.

To better reach adults of all ages living near SRS, Memoranda of Understandings have been signed with local technical colleges. Each documents the partnership between these colleges, DOE and SRNS, while providing for the creation of advisory boards to oversee curriculum and course management related to SRNS work scope.

“Partnering with the Department of Energy and so many inspiring academic leaders, teachers and school officials continues to be a rewarding experience,” said SRNS President and CEO, Stuart MacVean. “We are pleased to invest in the future of the communities surrounding SRS. I hope that many of those students are now working to engage and assist with, in time, join the SRNS family.”

SRNS Leaders Emerging Among Professionals (LEAP) teamed up with Textron during the annual Ronald McDonald House Plane Pull at the Augusta Regional Airport on May 20. Pictured above are LEAP team members Liz Juarez, Rayne Cartwright and Hope Hartman. The joint LEAP-Textron team used all their muscle power to tug a Boeing 737 for 32 feet in 8.1 seconds. All proceeds from the Plane Pull fundraising event will benefit Ronald McDonald House Charities of Augusta, which provides a “home away from home” for over three families for the families of children who are seeking medical treatment in the region. LEAP is a paid beginning-midcareer program members are full-time employees at SRNS and have earned at least an associate's degree within the past seven years. In addition to providing networking and professional development opportunities, LEAP organizes community outreach events for its members through organizations such as the Greater Aiken Food Bank, Aiken County Animal Shelter and Special Olympics.
SRNS’ contributions will help fund the cost of occupational, speech, and physical and mental health therapy, three meals a day, and bus transportation for Aiken County children. “This program rewards graduating high school students on the basis of general academic accomplishments achieved and long-term dedication displayed by each of these students is extraordinary,” said Stuart MacVean, SRNS President and CEO. “And, as if that wasn’t enough, the list of volunteers who worked hard to make this event possible.”

Children’s Place, which allows them to further their mission of ‘High Risk to High Hope’ for the lives of Aiken County kids. I appreciate all the employees, volunteers who took time out of their Friday to support this event,” added Heath. The golf tournament fundraiser is part of the SRNS Employee United Way campaign, which achieved over $240,000 over the past 14 years. “This is only possible through the support of our generous sponsors and our dedicated players and volunteers who took time out of their Friday to support this event,” added Heath. The golf tournament fundraiser is part of the SRNS Employee United Way campaign, which achieved over $240,000 over the past 14 years. “This is only possible through the support of our generous sponsors and our dedicated players and volunteers who took time out of their Friday to support this event,” added Heath.

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SRNS Sites Services (SS) can claim another successful year for their 14th annual United Way (UW) Golf Tournament, which achieved over $30,000 for local United Way agencies. This year’s tournament, held on May 12 at Woodside Plantation in Aiken, S.C., featured 116 players on 29 teams from SRNS, Savannah River Remediation LLC, Department of Energy-Savannah River and Centerra Group, LLC, as well as local businesses from across the area.

“We’re so thankful for the employees at Savannah River Nuclear Solutions,” said Sharron Rodgers, UW of Aiken County President. “All of our partner agencies deeply appreciate your support, and the energy from all of the tournament participants and volunteers is what ‘Living United’ is all about. Everyone deserves an opportunity for a good quality of life, and for so many years, this golf tournament has helped us make that a reality.”

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