Environmentally safe
Annual report validates SRS environmental programs

This month
100th SNF shipment • Academic opportunities • RADCON interns • Awards and honors
Welcome to the September 2018 edition of SRNS Today

Readers will see two themes throughout this month’s edition of SRNS Today: Safety and awards. To me, it’s no surprise. Every day I witness the excellence, attention to detail and the deliberate operations in our employees’ work.

SRNS earned another Legacy of Stars Award at the National Voluntary Protection Program Participants’ Association (VPPPA) Symposium. This is the fifth such award received by SRNS, including SRS legacy companies. Several SRNS employees were also recognized for their achievements by VPPPA at the symposium, with two winning individual achievement awards and three receiving outreach awards.

Radiological safety at SRNS is being further improved through the upgrade of dosimetry equipment, which will be implemented by January 2019. The new equipment provides simplified processes for dosimetry service employees and offers ergonomic benefits to those who wear them, as they are lighter in weight than the current dosimetry equipment.

SRNS employees were recognized by NNSA for significant achievements in support of the nation’s Stockpile Stewardship Program and also brought home several awards from the Ideas America Annual Conference.

SRNS employees’ commitment to safety and world class performance is worthy of recognition and I congratulate them on all of their achievements.

Michael Budney, DOE-Savannah River Manager, said SRNS employees should feel honored for consistently being recognized with VPP safety awards.

SRNS earns DOE Legacy of Stars safety award

SRNS earned the Legacy of Stars award at the 34th Annual National Voluntary Protection Program Participants’ Association (VPPPA) Symposium held recently in Nashville, TN.

This is the fifth such award received by SRNS, including SRS legacy companies. SRNS has been recognized as a DOE Voluntary Protection Program (VPP) each year since its SRS contract began in 2008.

The DOE VPP Legacy of Stars award distinguishes companies that have excelled in outreach and mentoring, while demonstrating sustained excellence in worker safety and health programs. The award is given to sites that have earned the VPP Star of Excellence for three consecutive years.

SRNS continues to prove competency in the five elements of the VPP: Management Leadership, Employee Involvement, Workplace Analysis, Hazard Prevention and Control, and Safety and Health Training.

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L Area celebrates 100th shipment of Foreign Research Reactor SNF

L Area recently hit a momentous milestone by receiving the 100th shipment of spent nuclear fuel (SNF) under the Foreign Research Reactor (FRR) Spent Nuclear Fuel Acceptance Program. To mark the occasion, L Area management held a celebration for employees that included words of thanks from program management followed by cake and ice cream.

“I am proud to be a part of this program,” said National Nuclear Security Administration (NNSA) FRR SNF Acceptance Program Owner Jeff Galan. “NNSA headquarters is constantly impressed by how professionally and without incident L Area accomplishes receipts. Thank you for your hard work.”

Michael Dunsmir of SRNS Nuclear Materials Programs then gave a brief history of the fuel receipt program to employees. Dunsmir explained that on July 1, 1964, the first cask of foreign SNF was received at the SRS Receiving Basin for Offsite Fuels. SRS received fuel under the Offsite Fuels policy until 1991. DOE then began a National Environmental Policy Act analysis for the next receipt policy called the FRR SNF Acceptance Program. That program started in 1996, and, since that time, SNF has been shipped to SRS from 29 countries. Shipments have been made up of 284 casks and 8,906 SNF assemblies.

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DOE Environmental Management (EM) FRR Program Owner Maxine Maxted and SRNS EM Operations Deputy Manager Janice Lawion echoed Galan’s thanks. “L Area’s dedication and support is recognized and appreciated both in NNSA and EM,” Maxted said. “You ought to be proud of yourselves for 100 shipments… now let’s go get 200,” Lawion added.
SRNS employees honored by national DOE safety program

A national DOE safety program recently recognized five SRNS employees for their exceptional performance, leadership and accomplishments related to workplace safety.

Mary Baird, Jennifer Scott, Richard Hudson, Jodie Saverance and Brandon Heath were each recognized for their achievements at the Voluntary Protection Program Participant Association (VPPPA) annual conference in Nashville, Tenn., Aug. 28-31. The VPPPA mission is to be a leader in health and safety excellence through cooperation among communities, workers, industries and governments.

“We are exceptionally proud of these awardees and our company for proactively seeking to learn from the best safety programs in the country,” said Barbara Guenveur, SRNS Employee Engagement Lead. “You have learned from the best to be the best.”

The VPPPA Program shares knowledge of best safety practices with others and develops new techniques to create and sustain a safer, healthier work environment. Each winner received a commemorative award and gained visibility within VPPPA publications. In addition, a letter of distinction will be sent to key individuals from the winner’s chief executive officer/plant manager and officials from the Occupational Safety & Health Administration and DOE.

“There is a long and revered history of safety excellence at SRNS dating back to the early 1950s,” said SRNS President and CEO Stuart MacVean. “To receive a prestigious award from an outstanding safety organization like VPPPA while representing a company that so strongly supports safety every day speaks volumes about the character and dedication of our five winners.”

Saverance and Heath are the two latest SRNS employees to win VPPPA Individual Achievement awards, while Baird, Scott and Hudson are the first at SRS to win a VPP Outreach Award.

“We continue to seek out new ways to strengthen and reinforce our many safety programs at SRNS. We take pride in the wide range of safety-related records achieved by our employees since SRNS became the management and operations contractor at SRS in 2008.”

Barbara Guenveur

VPPPA awards

SRNS recently completed the transfer of radiological asbestos monitoring equipment from F/H Laboratory to the Environmental Bioassay Laboratory (EBL), streamlining the lab’s analytical capabilities while protecting a one-of-a-kind capability at SRS.

The relocation of the analytical equipment from F Area to B Area marks the third technology transfer in the SRNL modification project. Asbestos analysis for radiological contamination is a critical need at SRS as modifications to aging infrastructure and ultimately, the long-term reduction of the Site’s operational footprint is completed.

“By transferring this analytical capability and merging it with ongoing analytical services performed by EBL, SRNS has retained a unique capability that is difficult to find in commercial laboratories,” said Sharon Marra, SRNL Deputy Director.

Before the transfer, the EBL was only able to perform asbestos analysis on non-radiological samples, while those samples suspected to contain radiological contamination were taken to F/H Labs.

Typically, asbestos is found in old construction materials such as roofing, ceiling tiles, gaskets, siding and insulation. Most recently, it was discovered in below-ground piping during road construction work on C Road.

“EBL was able to quickly analyze samples from piping that was uncovered during culvert work on C Road and ultimately determine the presence of asbestos. Our ability to provide this analysis on-site within a short period of time would not have been possible without this transfer,” said Marra.

Through new process, old oil drums stay out of landfill and find new usefulness

The Portable Equipment Commodity Management Center (PECMC) recently installed a drum washer and crusher, which created a new process to help SRS save money and the environment.

These drums were used to hold oil for a variety of purposes. The old system of cleaning these oil drums used a pressure washer that created 114 gallons of oily water per drum, which then had to be treated. After the used drums were cleaned out, the 35-inch tall drums were disposed of at the Three Rivers Landfill.

The new process cleans the drum in 170-degree water, which assists in removing the oil residue inside each drum. The equipment reduced the oily water waste to one gallon per drum. After the cleaning process, the drum is then crushed to a disk about three inches tall. The crushed drum is then salvaged as scrap metal.

“This process was an IDEA submitted by PECMC employee John Sloop. “The old process was time consuming, costly and created a lot of oily water waste,” said Sloop.

Full-sized oil drums destined for scrap metal salvage have replaced the 35-inch tall drums formerly sent to the Three Rivers Landfill.

SRNL continues modification process with transfer of rad asbestos monitoring equipment
Annual report states that SRS is environmentally safe

Partnering with DOE, SRNS has worked over the last decade to continually meet federal and state standards designed to protect the public, environment and site employees. The 2017 Annual Site Environmental Report (ASER) has validated the Savannah River Site’s ongoing ability to complete its missions while maintaining a record of environmental excellence.

SRNS prepares the ASER in accordance with DOE requirements. This annual report provides detailed information regarding environmental conditions at SRS for the previous calendar year and is available for use by the public and SRS regulators.

“SRS is committed to protecting our environment through continuous monitoring, surveillance and improvement of our processes,” said Angelia A. Holmes, DOE Savannah River Site, Acting Assistant Manager for Infrastructure and Environmental Stewardship. “SRS implements a sound environmental management system and stands by our environmental policy. Our ASER shows our long-standing commitment to achieve our goals and comply with all applicable laws, regulations and standards.”

Each year, SRNS collects more than 5,000 samples found both on and off site, including air, water, soil, food products, freshwater fish, seafood, wildlife and plants. Samples are collected from neighboring cities, towns and counties located in Georgia and South Carolina.

The report also summarizes SRS’s environmental data; environmental sustainability performance; compliance with applicable DOE, federal and state regulations; and remediation and surveillance monitoring programs.

SRS has monitored environmental conditions since the site was built in the early 1950s and has prepared an ASER for more than five decades.

A condensed version of the ASER, referred to as the Summary Report, is also available. The Summary Report is used to provide information to the public in support of SRS’s educational and community outreach programs. Both the ASER for 2017 and the summary are available online at: http://www.srs.gov/general/pubs/ERSum/index.html.

Interns prepare for career in radiological protection and control

The SRNS Radiation Protection and Control (RADCON) intern program is preparing students for future careers through hands-on teaching.

Steven Eaton, a recent graduate of Augusta University, has interned with SRNS’ Safety and Health Physics department for about three years, working in Instrument Calibration. “This internship has provided me with a realistic application of what I’ve learned in school,” said Eaton. “I get to do a lot of testing and perform experiments to ensure the equipment worn on site protects those wearing it, and that the radiators work properly so we can make sure we are measuring the correct amount when calibrating instruments to prevent accidents.”

Damian Bradley, another recent Augusta University graduate, has also interned with the Safety and Health Physics department for about three years, working in External Dosimetry. In this position, Bradley has been able to work with thermoluminescent dosimeter (TLD) systems, keeping track of records and algorithms to make sure they are correctly measuring the dosages that workers receive around site. “The main thing I’ve gotten out of this internship would probably be the opportunity to do real laboratory testing and use various types of equipment,” said Bradley.

With SRS currently hiring 500 employees per year, full-time positions are becoming available for interns approaching graduation.

New dosimetry equipment to improve rad safety at SRNS

SRNS is in the process of further improving radiological safety at SRS by upgrading to Landauer dosimetry equipment. Implementation of this new equipment is projected for January 2019.

Landauer optically stimulated luminescent (OSL) dosimeters offer numerous benefits in relation to cost-savings, labor and user friendliness. Panasonic thermoluminescent dosimeters (TLD) currently in use, releases the entire dose signal when read. Landauer OSL dosimeters only release a small portion of their dose signal, therefore allowing up to five intermediate reads of the dosimeter before sending it to Landauer for a final dose read.

Health Physics Services’ External Dosimetry Lead Randy Sullivan stated, “With this updated system, there is no longer a need to disassemble dosimeters and perform readings on Site. Instead, all dosimeters will be sent to the Landauer company after use for processing and returned to SRNS. In doing so, both the labor and cost involved to maintain these devices will be reduced.”

Not only do these new devices simplify processes for dosimetry service employees, but they also offer ergonomic benefits for those who are required to wear them as they are much lighter than the current TLDs in use.
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Salkehatchie Regional Campus Dean Ann C. Carmichael.

Strativia is an IT solutions provider and will be supporting SRNS through one of their major scopes, the IT Help Desk.

Supply Chain Management (SCM) Procurement worked closely with the IT Department to solve a recurring need through the Mentor-Protégé Program. The program grants non-competitive awards to small businesses at $4.0M per award for non-construction and $7M for construction. Because this was such a vital scope for SRNS, the IT Department wanted to engage a solutions provider and will be supporting SRNS through one of their major scopes, the IT Help Desk.

"This exciting partnership is another way to leverage the talents of understanding Sept. 4 at USC Aiken to establish the program. SRNL and the University of South Carolina Aiken (USCA) have agreed to create a Collegiate Affiliate Program providing opportunities for retired laboratory professionals to enhance student learning experiences.

Dr. Vahid Majidi, SRNS Executive Vice President and SRNL Director, and USCA Chancellor Dr. Sandra J. Jordan signed a memorandum of understanding Sept. 4 at USC Aiken to establish the program. The USCA/SRNL Collegiate Affiliate Program provides two ways for retired SRNL professionals to collaborate with USC Aiken faculty, staff, students and community. The Faculty Affiliate option allows qualified lab retirees to teach college-level courses or laboratories.

"Our aim is to align our Mentor-Protégé Program as a strategic solution for our Site needs. We carefully select capable suppliers with sound business practices, provide them mentorship where needed and grow them into great suppliers," said Johnson.

"The Mentor-Protégé Program is a win-win for the Site,” said Alex Ayegam, Manager of SRNS Small Business Programs and Supplier Partnering. "It aids in the efficient execution of Site missions through a streamlined procurement process. It allows small businesses the opportunity to become great through the technical oversight of some of the best professionals in the complex. Site missions gain the benefit of the nimble and innovative solutions of small business, the economy grows through the economic impact of Site dollars and SRNS gains efficiencies through developing a supplier who is able to engage across the complex.”

SRNS Small Business Programs recently introduced a new small business into the pipeline.

DOE has approved Strativia LLC to provide Information Technology (IT) services to SRNS as a Protégé under the Mentor-Protégé Program, a DOE initiative designed to encourage and assist small businesses in an effort to enhance their capabilities to perform subcontracts throughout the DOE Complex. Strativia is an IT solutions provider and will be supporting SRNS through one of their major scopes, the IT Help Desk.

The University Affiliate option provides a range of opportunities for retirees to mentor young scientists, act as career counsellors to science majors, connect students with internships, provide guest lectures in classes, assist with Ruth Patrick Science Education Center programs, and more.

"We have a long history of collaborating with USC Aiken to strengthened the science and technology education at the university and expand the opportunities for students who may find future employment at our lab,” Majidi said. "We have a number of lab alumni whose expertise can be a valuable resource for the university, and we look forward to seeing this turn into an opportunity that strengthens STEM education at USC Aiken."

"This exciting partnership is another way to leverage the talents and knowledge of SRNL employees to augment and complement our work at USC Aiken,” Jordan said. "The program will bring retired SRNL scientists and engineers to our campus to enrich the educational opportunities of students."

The USCA/SRNL Collegiate Affiliate Program is being started with a $100,000 grant from SRNS. The funding will be used to renovate space in USC Aiken’s Gregg-Graniteville Library to serve as participant office space; to establish a training workshop; to help provide salaries for Faculty Affiliate participants teaching courses; and management and marketing support for the program.

SRNS loans engineering exec to USC Salkehatchie

SRNS is working to increase cooperative programs with the University of South Carolina (USC) Salkehatchie by loaning an SRNS employee to teach an introductory engineering course on campus.

Salkehatchie’s Industrial Process Engineering program encourages students to consider engineering as a major while remaining in the SRS region to attend college, live and work.

Eric Johnson, SRNS Department Manager of Fire Protection Engineering Support, is currently teaching Introduction to Engineering twice a week at USC Salkehatchie. “I am excited about this opportunity and look forward to seeing the students grow this semester,” said Johnson.

The Loaned Executive assignment is consistent with DOE’s policy to be a constructive partner within the region, while also aligning with DOE’s intent to contribute to the maintenance and enhancement of community, regulatory and stakeholder relationships; engage regional stakeholders in issues and concerns of mutual interest; and recognize that going back to the community is a worthwhile business practice.

"We deeply appreciate the support and partnership with SRS as we strive to meet the needs of the communities we serve,” said USC Salkehatchie Regional Campus Dean Ann C. Carmichael.

SRNS President and CEO Stuart MacVean stated, “SRNS is proud to partner with USCS and contribute to the education of future engineers. We want to give back to the communities where our employees live," immediately identified the Mentor-Protégé Program as a solution to their complex supply chain problem.

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SRNS licenses TCAP technology to Greenway Energy

SRNS has licensed its hydrogen isotope separation technology to Greenway Energy, LLC, a hydrogen technologies company. The license is for a system known as Thermal Cycling Absorption Process (TCAP), which is used to separate hydrogen isotopes — protium, deuterium and tritium — using a continuous method based on palladium gas chromatography.

The TCAP system was invented in 1980 by SRNL to support its national security mission. Since its introduction, the TCAP system has been refined to feature a significantly smaller size, consume less energy and improve environmental safety. "TCAP is an excellent example of the type of practical, applied research that SRNL conducts on behalf of the nation,” said Dr. Vahid Majidi, SRNS Executive Vice President and Director.

"The transfer of this technology opens up the possibility of additional commercial applications and improved availability to our customers," said Scott Greenway, president of Greenway Energy. "We are working with clients and industry to develop solutions around this technology. Greenway Energy seeks SRNL as a partner for further technology development that will drive innovation in this area."

Through the license agreement, Greenway will be able to economically manufacture a TCAP system for use by a commercial laboratory in a nucleotide radiography system. This type of radiography is a proven technique for the nondestructive testing of manufactured components in the aerospace, energy and defense sectors.

“Licensing TCAP technologies opens a variety of unique solutions for imaging as well as purification of hydrogen isotopes used in commercial processes,” said Scott Greenway, president of Greenway Energy. "We are working with clients and industry to develop solutions around this technology. Greenway Energy seeks SRNL as a partner for further technology development that will drive innovation in this area."
SRNS employees honored for national security support

Five teams of SRNS personnel were recognized by the National Nuclear Security Administration (NNNS) for significant achievements in support of the nation’s Stockpile Stewardship Program and other important national security objectives. Scott Handy, NNNS’s Assistant Deputy Administrator for Stockpile Management, presented the five teams Defense Programs (DP) Awards of Excellence in recognition of their achievements.

The five honored teams comprised of about 60 employees, with some of those being members of more than one team. In addition, two SRNS employees are part of a team with personnel from other NNNS sites and labs that will receive DP Awards at Sandia National Laboratories’ ceremony later this year.

“Those awards are particularly meaningful because they represent the excellent work our folks perform in support of the nuclear deterrent that keeps our nation safe,” said Walks Spangler, SRNS Sr. Vice President, NNNS Operations and Programs. “Our teams are part of the Savannah River Tritium Enterprise (SRT), which provides the radioactive isotope of hydrogen used in the nuclear deterrent, or the Savannah River National Laboratory, which performs research and development in support of NNNS and other programs.

One of the teams was honored for rolling out a system in SRTE, called the Tiered Operating Performance System, which provides a structure for daily engagement by all employees. This system, which is now being expanded to other areas of SRNS, has produced an increase in personnel engagement and empowerment, enhancement of daily discipline, improvements in product quality, and increased focus on continuous improvement.

Brigmon continues contribution to S.C. Academy of Science

When he served as a judge for the 91st annual meeting of the South Carolina Academy of Science (SCAS) this summer, SRNS Senior Fellow Engineer Robin Brigmon continued more than a decade of serving South Carolina’s scientific community. As a volunteer and leader with SCAS, he has dedicated countless hours encouraging the scientific knowledge of students and faculty, while strengthening STEM education in the state.

The SCAS meeting this summer brought more than 500 students together for demonstrations and presentations. As a judge, Brigmon followed the same criteria that are used for peer reviewed journals.

"Every year the quality of papers improves," said Brigmon. "I am very pleased to see the progress these students make year after year." Brigmon served as SCAS president in 2012 and his responsibilities included overseeing budgets, collaborating with university and industrial partners and assisting committees. He was also instrumental in bringing the SCAS Annual Meeting to the University of South Carolina Aiken in 2012 and linking it with SRNS.

"I continue supporting SCAS because it is a rewarding way to help South Carolina college, high school and middle school students in STEM education," Brigmon said. "When you see the excitement of the students as they give their presentations and explain their results, it is clear they are learning." Brigmon’s time and effort has not gone unnoticed. "Robin has been instrumental in connecting SRNL with SCAS," said John Kaup, Executive Director, S.C. Junior Academy of Science. "Even after his presidential succession ended he continued to be a part of the academies, giving support and mentoring."