

● AUGUST 2015

SAVANNAH RIVER NUCLEAR SOLUTIONS



# SRNS Today

## H Canyon at 60



### Also this month

Changing of the guard • USCA Scholars • Tritium cost savings • Education program honored







**Carol Johnson**  
SRNS President and CEO

# Welcome

to the August 2015 edition of

# SRNS Today



## Video: H Canyon

To see the H Canyon segment of our video series "Why SRS Matters," please [click here](#) or visit [www.savannahrivernuclearsolutions.com/annual/Why\\_H-AREA\\_Matters.mp4](http://www.savannahrivernuclearsolutions.com/annual/Why_H-AREA_Matters.mp4)

Success is built from positive actions. I'm pleased to say that Savannah River Nuclear Solutions and its employees have a proven record of positive impacts regionally, nationally and globally.

In August, we honored the history and the future of one of our most important SRS facilities: H Canyon. To mark its 60-year anniversary, employees, retirees and dignitaries gathered to remember the past and look forward to the future of one of our nation's essential assets. Please see Pages 10-13 for more on the event.

The pages of this edition of "SRNS Today" are filled with great examples of how SRNS makes a positive impact. Our Savannah River National Laboratory F/H Analytical Laboratories have been accredited by the International Organization for Standardization. We've completed construction of the Waste Solidification Building. We're there when area communities need assistance in case of fires or other emergencies. We're sponsoring the scientists of tomorrow with scholarships at the University of South Carolina Aiken, and we're supporting a unique training partnership with the S.C. National Guard.

SRNS continues to make a positive impact on the nation and in our region. We serve our country and help our neighbors. And we never stop striving to make the world safer.

By now, you may have heard that Fred Dohse, our Executive Vice President and Chief Operating Officer, has chosen to retire on Sept. 1. Fred has been a key executive with SRNS since 2008, when our company assumed the management and operations contract at SRS. We will miss his wisdom, his energy and his knowledge, and we wish him all happiness in his retirement. Dave Eyler will step into the EVP/COO office, bringing with him a wealth of experience. Dave's most recent position at SRS was Senior Vice President and Savannah River National Laboratory Deputy Director. We welcome Dave into his new position, and highly value his perspective in shaping the future of SRNS.

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

*Carol*



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

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# Who ya gonna call?

On Jan. 27, 2015, SRNS firefighters responded to a train derailment and hydrochloric acid spill near Allendale, S.C. as part of a mutual aid agreement.

## SRNS Fire Department helps area communities when assistance is needed

**B**ehind the scenes of the big red trucks and the flashing lights, the SRNS Fire Department is there when extra help is needed.

Since 1989, SRS has been a part of mutual aid agreements with neighboring fire departments, allowing them to share resources and manpower. Today, six mutual aid agreements are in place with Aiken County Emergency Services (EMS), the Aiken County Fire Department, Allendale and Barnwell counties in South Carolina, and Richmond and Burke counties in Georgia.

In 2008, SRNS became the management and operations contractor of SRS, and since that time, SRNS personnel have responded to 50 emergencies in the community as a result of these agreements. In August 2014, SRNS entered into a written mutual aid agreement with Aiken County EMS for the first time.

"Aiken County appreciates SRS providing emergency response assistance, when requested, alongside our EMS personnel, ensuring the most expedient service is available for all residents of our county, both inside or outside the gates of SRS," said Tommy Thompson, Aiken County Emergency Services Director.

In the past 18 months, SRNS has responded to seven medical emergencies in Aiken County. The mutual aid agreement identifies the SRNS Fire Department as responsible for providing patient care and transport resulting from calls at the Cooperative Research Center, Aiken County Technology Laboratory, the Applied Research Center and the Hydrogen Technology Research Center located on Gateway Drive.

In addition to medical emergencies, the mutual aid agreement calls for assistance from county fire departments include structure fires, wildfires and hazardous material (hazmat) spills. Most recently, SRNS personnel responded on a large scale to the Allendale train derailment and hydrochloric acid spill in January 2015.

"All of our people in the SRNS Fire Department are certified hazmat technicians. We have a lot of training and expertise that we make available to the community, so if they have an incident, then we have highly trained and capable people who are able to go and assist in the local area without having to wait for resources from farther away," said Rob Still, SRNS Fire Department Chief.

Over 40 percent of SRNS firefighters volunteer with their local fire department. SRNS firefighter and Jackson Fire Department Chief Jeremy Thorne has been volunteering at county fire departments since 1995, and his volunteer path led him to work at SRS.

"Working at SRS helps me be a better firefighter on the outside. I've learned a lot since I've come to work out here," said Thorne. "It's not just the extra training opportunities available, but I've also learned how to keep the Jackson Fire Department more organized."



SRNS will see a change in its leadership ranks on September 1. Current Executive Vice President and Chief Operating Officer Fred Dohse will retire, and Dave Eyler will assume those duties. We caught up with these leaders to get their perspectives on SRNS and their once and future roles.

# the changing of the guard

## thoughts from Fred Dohse

**Q** What were your first impressions of SRS when you arrived at the beginning of this contract?

**A** I arrived for transition on April 30, 2008. My first impression once I got on Site was: wow, it's big! Wow, looks like it's old!

I've served on old submarines, so I know that it's not really the age of the facilities, it's the passion and the professionalism of the people that makes a place successful. I did recognize that there were areas that probably needed some tender loving care in the maintenance area. (A lot of that was done during the American Recovery and Reinvestment Act, by the way.)

I recognized that we had a great workforce from the aspect of commitment: not only to SRS, but commitment to the country as well. That's a wonderful, wonderful thing.

**Q** What is your proudest accomplishment during your career here or elsewhere?

**A** While I was a squadron commander, I had between eight and 12 commanding officers that reported to me. Two of those commanding officers became four-star admirals and two became three-star admirals. I also had two Stockdale leadership award winners in my squadron. It's a very prestigious leadership award, and for two consecutive years, a commanding officer in my squadron won that award. I'm very, very proud of that – developing leaders to achieve the highest potential that their God-given skills allows them to be.

**Q** What would you like your SRS legacy to be?

**A** I would like for my legacy to SRS to be that we are viewed as the center of nonproliferation activity for the U.S. Not to trivialize the very important tritium mission because the (nuclear) stockpile would not be viable without the product that the tritium facilities produce. But as I look to the future, my thought is that nonproliferation activities are vitally important and much of that activity has to happen at SRS. We can store the materials safely, and on top of that, we can also disposition them into safe forms that are no longer proliferation risks. Hence, we truly do make the world safer for our kids and grandkids.



*"I'd like to thank the workforce for their continued commitment to making SRS and our nation strong."*

**Fred Dohse**

*Executive Vice President  
and Chief Operating Officer  
(outgoing)*



**Q** What advice would you give Dave Eyler as he assumes the role of COO for SRNS?

**A** I don't think Dave needs any advice from me, because Dave is an excellent, excellent leader and a very knowledgeable, technically savvy person. So it would almost be embarrassing for me to try to give him advice. The one thing I'd like to see him continue and advance is the operator training program. Procedural compliance is important and necessary, but it is not by itself sufficient to achieve excellence in operations. I would encourage Dave to continue to move us forward in training in Conduct of Operations excellence and I have total confidence that he will.

**Q** What are you most looking forward to in retirement?

**A** I spent so much time away from my family during my Navy career, and had some very demanding jobs on shore duty that required long work hours and frequent commitments on the weekends. So, I want to spend time with my family. I look forward to that very much. My wife Deidre is my best friend. We've been married 43 years. I look forward to a lot of travel and fun things with Dede, and time to go to ballgames with my grandchildren. That really is my number one priority. On a selfish side, I do like to fish and hunt and play golf, and I plan to take care of those activities as well.

**Q** Is there anything else you'd like to add?

**A** I'd like to thank the workforce for their continued commitment to making SRS and our nation strong. And that, if I can ever help them, or do anything for them in the future, I certainly will.



*"I've been really happy working with the people here, because they're dedicated, knowledgeable and enthusiastic."*

**Dave Eyler**

*Executive Vice President  
and Chief Operating Officer  
(incoming)*



## thoughts from Dave Eyler

**Q** What do you think is the biggest challenge for SRNS and SRS over the next three years?

**A** I think our biggest challenge for the company and the Site is dealing with the knowledge transfer that's necessary for future work. We're going to be working on some new missions or missions that people have never done or haven't done for a long time.

Also, a lot of our facilities are getting in the 60-year-plus age range. It's going to be an increasing challenge to sustain the equipment, the systems and the buildings. A lot of these facilities were built in the 1950s through the 1970s and look it, but our newer workforce looks for a different environment.

With the infrastructure we have, attracting new, highly capable and talented people can be a challenge.

**Q** What was the most surprising thing you found when you first came to the Site?

**A** The biggest surprise was the complexity of the Site in terms of how many different activities we have, the number of organizations present on the Site that are active and just the diversity in terms of background expertise and experience of the workforce.

I was pleasantly surprised at how many different Site activities were really interesting, exciting and challenging.

**Q** What will you miss the most about Fred when he's no longer here at SRS?

**A** I think Fred's staying locally so I hope to see him off and on. As far as working with Fred, you know, Fred and I go back many years. We first met in the early '80s and we were both in the Navy. We're good friends and we enjoy working with each other.

I'll miss his certain style of directness that always challenges you with "why are we doing this?" Or "why don't we do that?"

He's just very direct and I like that. You know what he's thinking or where he stands and I'll miss that.

I'll miss those conversations with him.

**Q** What advice would you give to someone who's considering a career at SRS?

**A** I would give the same advice to anybody considering a career choice.

One: What sort of work will you be doing or could you do? Two: What sort of people are you going to work with? Three: Is the work you're going to be doing worthwhile?

When you think about this Site, I think the work here is very worthwhile. It's very important. It's of lasting value. People care about what happens here.

Probably the most important thing is the type of people you work with. I've been really happy working with the people here, because they're dedicated, knowledgeable and enthusiastic.

And they all want to do a good job. It's hard to find a large organization where generally you can say that.

**Q** What is your vision for the future of the missions at SRS?

**A** My crystal ball – limited as it is – indicates to me that there's going to be basically the same mission set. My vision is it's going to be very nuclear-centric. That's not going to change.

But how we do it and what we're doing could change significantly over time because of our ability to innovate and our ability to think of ways to better serve the nation in those areas.





SRTE employees perform preventive maintenance. A Continuous Improvement project resulted in revised schedules for PM activities, saving over 4,000 manhours per year in SRTE maintenance mechanics' field time.

## Continuous Improvement SRTE alignment of PM schedules yields big savings

A Continuous Improvement project to review preventive maintenance (PM) activities in the Savannah River Tritium Enterprise (SRTE) is producing over \$606K in savings by revising PM schedules to better align with actual requirements and needs.

So far this fiscal year, SRTE has completed 26 Continuous Improvement projects that have already resulted in \$4.6 million in validated savings, far surpassing the total savings from any previous year. SRTE includes all of the people, facilities and activities at SRS involved in work with tritium, the radioactive form of hydrogen that is a necessary component in the nation's nuclear defense.

SRTE conducts preventive maintenance on thousands of systems and components, with individual PM frequencies varying from weekly to multi-year. These frequencies were established when each system or piece of equipment was first installed in the plant. "Our operating experience told us that a lot of these schedules could be reduced and still ensure safe, efficient operations," said Kirsten Aylward, SRNS SRTE Maintenance Manager. "So we took a closer look to figure out how often each of these PMs really needed to be performed."

The team analyzed the regulatory and safety requirements, actual performance, risk and other factors before recommending new PM frequencies. The new schedules will save over 4,000 manhours per year in SRTE maintenance mechanics' field time.

Putting these new schedules in place required a large number of revisions to the two computer program databases that document and maintain the regularly scheduled work activities – nearly 1,600 record updates in all. Normally, inputting that many changes would have been a lengthy and time-consuming process, but SRTE developed an automated program tool that saved at least 80 hours of employee input time.

"SRNS employees use Continuous Improvement projects to change the way things are done. The result is money saved, improved processes, enhanced safety or all three," said Pat Rapp, SRTE Quality, Continuous Improvement and Business Excellence Manager.



Signing the University Scholars Program agreement were (from left) SRNS President and CEO Carol Johnson; USCA Chancellor Dr. Sandra Jordan; SRNS Executive Vice President and SRNL Director Dr. Terry Michaske; and SRNS Board of Directors Chairman Bruce Stanski.

## SRNL, USC Aiken sign University Scholars agreement to help students prepare for lab careers in STEM

SRNL and the University of South Carolina Aiken are partnering in a new program to help students prepare for laboratory careers in science, technology, engineering and math.

The agreement, signed August 11, establishes and funds an SRNL University Scholars Program that provides USCA students with both financial aid and greater exposure to the research staff at SRNL.

The objective of the SRNL University Scholars Program is to promote the education and development of the next generation of researchers through financial assistance and opportunities to engage in real-world research and development.

The initial funding for USCA will support up to 10 scholarships at \$4,000 per student per school year. USCA expects to name the first five University Scholars in the upcoming 2015-16 academic year; recipients must be at least a junior to be eligible.

A workshop is expected to be held in September to identify research collaboration opportunities between the university and SRNL for the coming year.

The funding is being provided corporately by the SRNS Board of Directors. The board has authorized \$400,000 in funding; after the USCA launch, plans are to extend this program to Clemson University, the University of South Carolina, Georgia Regents University and Georgia Tech.

"Investment by the SRNS board is making a significant difference in the success and future of the laboratory," said SRNS Executive Vice President and SRNL Director Dr. Terry Michalske. "It's critical that we continue to develop a pipeline of talent for the future; this kind of program exposes the next generation to our best scientists, and shows our best and brightest in the region that they can create a challenging career for themselves at SRNL."

"This is an exciting collaboration between the Savannah River National Laboratory and the University of South Carolina Aiken," stated USCA Chancellor Dr. Sandra Jordan. "This program is an endorsement of the future—the bright future of the national lab, supported by a pipeline of new talent as students have an opportunity to engage in cutting-edge scholarship with SRNL's world-class researchers. To be the first university in South Carolina and Georgia to launch this University Scholars Program with SRNL and promote STEM leaders is truly a proud moment for our students, faculty and campus at large."

"The three member companies that make up SRNS—Fluor, Huntington Ingalls Industries and Honeywell—are committed to invest in the development and future success of the Savannah River National Laboratory," said Bruce Stanski, Chairman of the Board of SRNS. "This program is an endorsement of all the progress the lab has made, and a step towards making SRNL an even greater scientific, technical and economic asset to the region."





# A win-win for all

## SRNS, SC National Guard team up for mutual benefit

The South Carolina National Guard (SCNG) 124th and 125th Engineer Companies and 122nd Engineer Battalion used SRS to conduct an annual training exercise, July 11-24.

This exercise produced labor benefits for SRS, as well as a training opportunity for the SCNG soldiers who completed three projects that included earthmoving, brush clearing and erosion control.

SCNG removed a failing dam at New Fire Pond, a former farm pond that was in place prior to the creation of the Site. The dam was in need of upgrades and is not part of Site mission needs. The soldiers also improved a water runoff outfall by contouring a sediment pond and clearing debris caused by the 2014 ice storm.

“These project sites were not funded or on a critical needs list; however, they would have eventually needed to be performed,” said David Bender, Director, DOE Infrastructure and Area Completion Division. “SCNG coordinated with various Site organizations to plan the training, and worked closely with SRNS Site Services and Environmental Compliance. They helped SRS by safely completing these projects for just the cost of the materials used.”

For the past few years, the U.S. military has been conducting specialized training at SRS under a Joint Standard Operating Procedure developed after an environmental assessment determined that the use of limited areas of the Site would not cause harm to the environment. All military training is planned in advance, involving a series of coordination meetings prior to a training event. Additionally, military members must comply with the Site safety

culture and coordinate all vehicles, aircraft and equipment used. There is no military live fire training at SRS.

*“Because of the quality of their leadership, the exemplary skill of these soldiers, and their incredible inventory of earth-moving equipment, SCNG has exceeded our expectations.”*

**Skip Brown**

Military training at SRS was originally coordinated with Ft. Gordon's training command. As SCNG began using SRS for military training more frequently, they agreed to provide a full-time liaison for the National Guard and other military units that desired to use some of the unique training opportunities at SRS.

SRNS Site Services employees Robert “Skip” Brown and Joe Ormand worked with Office of Infrastructure Services Division of DOE's Assistant Manager for Infrastructure and Environmental Services to select the project sites. Brown and Ormand also worked with DOE and SCNG to coordinate training.

“Because of the quality of their leadership, the exemplary skill of these soldiers, and their incredible inventory of earth-moving equipment, SCNG has exceeded our expectations by completing this project ahead of schedule, while meeting the high standard we set for work performed on this Site,” said Brown.

## SRNL's F/H Analytical Laboratories achieve ISO accreditation

SRNL's F/H Analytical Laboratories recently achieved ISO/IEC 17025 accreditation, which represents an independent validation of two analytical methods against a set of world-class specifications.

The F/H Analytical Laboratories have supported SRS operations for more than 60 years, providing high quality analytical, radiometric and environmental monitoring data to a range of customers. The two analytical methods both relate to mass spectrometry analysis; mass spectrometry is an analytical chemistry technique that helps to determine the amount and type of a chemical present in a sample.

*“Becoming ISO/IEC 17025 accredited is not only a benefit to our customers on Site, but it will also put SRNL in a better position to attract external business.”*

**Curt Gardner**

The accreditation was formally awarded by the American Association for Laboratory Accreditation, a non-profit, non-governmental body that provides world-class accreditation services for testing and calibration laboratories.

“Becoming ISO/IEC 17025 accredited is not only a benefit to our customers on Site, but it will also put SRNL in a better position to attract external business,” said Curt Gardner, Director of Analytical Laboratories for SRNL. “It demonstrates F/H laboratories commitment to quality, and positions the laboratory as a provider of analytical services capable of meeting stringent international standards.”

The labs' quality, administrative and technical operations were evaluated against the ISO/IEC 17025 general requirements for the competence of testing and calibration laboratories international standard. The two methods included the inductively coupled plasma mass spectrometer (ICP-MS), which is used to detect metals and several non-metal impurities at concentrations as low as one part per trillion. The other method employs a thermal ionization mass spectrometer (TIMS), which is a magnetic sensor mass spectrometer that is capable of making very precise measurements of isotope ratios of elements that can be thermally ionized, including isotopes of uranium and plutonium.

The F/H labs perform a wide range of analyses on both radiological and non-radiological samples (soil, water, gases, foodstuffs, waste, decommissioning debris, process control samples and others) for process control, product quality, nuclear material accountability, and nuclear criticality safety. The laboratories maintain certifications and qualifications through a variety of governing bodies. More than 50,000 determinations are processed yearly. The F/H labs are part of the Science and Technology Directorate within SRNL. In addition to SRS customers, the F/H Lab performs work for a variety of other sites within the DOE complex.

## Bellamy honored for career in nuclear materials packaging technology

SRNL's Steve Bellamy has been given the Edway R. Johnson Meritorious Service Award by the Institute of Nuclear Materials Management (INMM).



Steve Bellamy

Bellamy is the Manager of Packaging Technology and Pressurized Systems and was recognized for a career dedicated to new technologies and designs in nuclear materials packaging and performance.

The award is granted based on long-term outstanding contribution to the INMM as well as the individual's noteworthy accomplishments in the profession.

The nomination recognized Bellamy's leadership, initiative, and hard work in the successful validation of DOE's plutonium package certificates in multiple countries, and was important in a number of nonproliferation initiatives. It also noted that Bellamy has a unique blend of technical expertise and leadership that has earned him respect from the international packaging technologies community. He not only has excelled in his own contributions, but also has helped elevate the performance of those around him.

Bellamy said it's an honor to be recognized by the INMM, particularly for this award.

“Ed Johnson was a dear friend. Receiving an INMM award named for him sets a high standard. I hope to have the impact on others that Ed demonstrated through his example to me.”

Bellamy has worked at the Savannah River Site for 27 years, with the last 15 at SRNL. He is considered to be a national leader for his technical knowledge of nuclear materials management. Bellamy has helped in the design and fabrication of various packages that are the international standard for transportation of associated radioactive and nuclear materials.



# H Canyon at 60

Employees, retirees  
and VIPs gather  
to remember the past  
and look to the future  
of this national asset

**T**hey gathered on a steamy August day – employees, retirees and dignitaries. They stood in the shadow of a facility that is the only one of its kind in the nation. And they remembered its past, celebrated its present and looked toward to its future.

This year, the H Canyon Facility at SRS is celebrating 60 years of service to the United States. It first produced nuclear materials in support of the nation's defense weapons programs and later, after the Cold War, helped to disposition and stabilize nuclear materials and spent nuclear fuel from legacy cleanup, and from foreign and domestic research reactors.

U.S. Congressman Joe Wilson, U.S. Department of Energy Deputy Assistant Secretary for Tank Waste and Nuclear Materials Management Ken Picha, SRNS President and CEO Carol Johnson, and SRS Manager Jack Craig all spoke at the luncheon celebration on Aug. 12 for H Canyon employees and supporters. The speakers conveyed their gratitude to H Canyon employees for the Canyon's long history of contributing to the national defense by supplying products for the nation's needs, and urged for excellence in future operations.

"H Canyon has served our nation well for 60 years and today it remains the only operating production-scale shielded chemical separations facility in the country," said Energy Secretary Ernest Moniz. "Thanks to the hard work, creativity and dedication of the men and women operating at H Canyon, the facility has stood the test of time as a national asset for large scale nuclear materials processing. It is a global asset for nuclear nonproliferation cooperation. The Department commends the H Canyon

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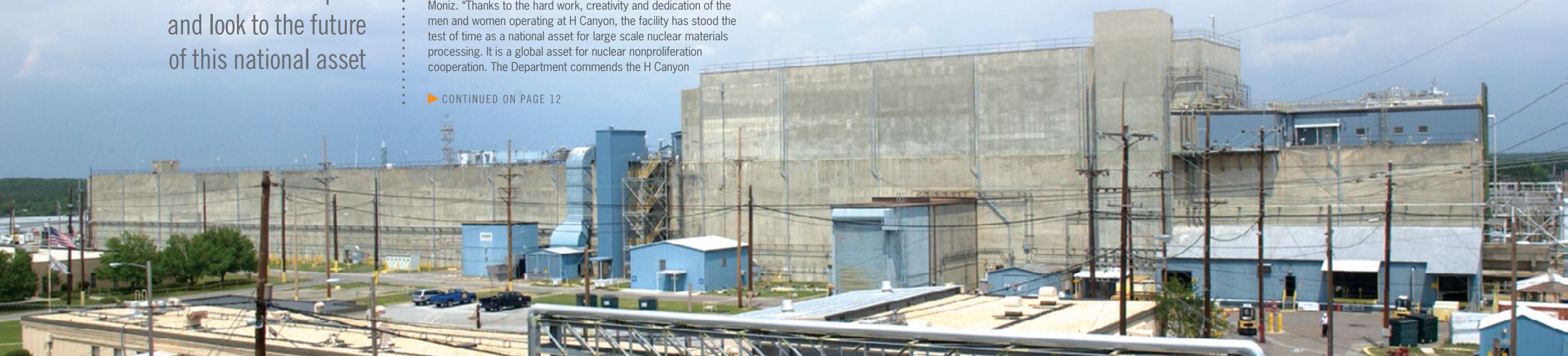
Former H Canyon employee Bill Whitlock talks with SRNS President and CEO Carol Johnson at the celebration.



Wyatt Clark (center), SRNS Senior Vice President for Environmental Management Operations, meets former H Canyon employees Bob Hamvey (left) and George Blackburn.



U.S. Congressman Joe Wilson addresses employees at the H Canyon 60th year celebration, while (from left) SRS Manager Jack Craig, SRNS President and CEO Carol Johnson, and U.S. Department of Energy Deputy Assistant Secretary Ken Picha look on.





# H Canyon at 60

Continued from Page 10

community for the essential work they are doing to strengthen our national security, nonproliferation efforts and the safe disposition of nuclear material.”

“For 60 years, the Canyon has supported this country’s nuclear material needs,” said Congressman Wilson. “There is no other place in the United States that has served our nation in this way. During the Cold War, it was involved with nuclear material production, significantly contributing to a victory for democracy. Today, H Canyon proves that it is a great asset to our nation by helping to keep nuclear materials in a safe and secure location, and I am grateful for their dedicated, capable employees.”

Two recent key milestones were also celebrated resumption of the HB Line mission to prepare surplus plutonium for disposition and readiness to begin the Second Uranium Cycle to start processing spent nuclear fuel.

H Canyon was originally constructed in the 1950s and began operations in 1955. For nearly 40 years, the facility separated and recovered plutonium, as well as uranium-235 and neptunium-237, from irradiated, aluminum-clad, enriched-uranium fuel assemblies from site weapons production reactors. The end of the Cold War in 1991 led to a significant change in the role of H Canyon, as this facility, once used to produce weapons-grade nuclear materials, was no longer needed for that purpose.

In April 1992, DOE issued a decision to stop operations at nuclear weapon production sites, including H Canyon and HB Line (located on top of the Canyon), as the future of the facilities was evaluated. However, in May 1994, the Defense Nuclear Facility Safety Board issued a recommendation to DOE, urging for a capability to stabilize legacy Cold War materials, spent fuel and neptunium throughout the DOE weapons complex, including SRS.

Several possibilities for stabilizing the legacy Cold War material were evaluated, but in 1997 DOE issued the Phased Canyon Strategy that allowed H Canyon to begin stabilizing materials. Immediately upon issuance of the decision, H Canyon began dissolving Mk 16/22 spent nuclear fuel from SRS weapons production reactors. In the

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U.S. Congressman Joe Wilson

ensuing years since the 1997 restart, H Canyon and HB Line have completed stabilization of various other nuclear materials.

In 2001, an Interagency Agreement was signed between DOE and the Tennessee Valley Authority (TVA). Under the agreement, DOE was to provide low enriched uranium (LEU) to TVA for use to generate power. In 2003, H Canyon began blending DOE-owned highly enriched uranium (HEU) with natural uranium to form a LEU solution suitable for conversion to fuel. This fuel could then be used in commercial power reactors operated by TVA. Initial shipments began to TVA’s vendors starting in July 2003, and culminated in their generation of electricity from SRS uranium starting in April 2005. To date, 335 trailers of LEU have been shipped to TVA. That amount of LEU is enough to provide power for all the homes in South Carolina for 8.5 years or every home in the U.S. for 47 days. The amount of HEU blended down to date is equivalent to nearly 600 nuclear weapons. The disposition of LEU helps meet environmental cleanup and nuclear nonproliferation goals.

H Canyon is also being used as a test bed for new technologies in the spent nuclear material field. Initially started for safeguards and nonproliferation purposes, the purpose of the test bed has been expanded to include special nuclear material accountability, environmental monitoring and compliance, and improved process control.



Tina Westall, an SRNS HB Line employee, proudly shows off her commemorative AFS-2 coffee mug.



H Canyon retiree Don Johnson joined his daughter Caroline Johnson, a current H Canyon employee, at the event.

## H Canyon: Remarkable Milestones

### 1950s

- H Canyon construction period
- Start up of plutonium-239 production with natural uranium targets
- Conversion to highly enriched uranium fuel processing

### 1960s

- Recovery of neptunium from high activity waste stream by ion exchange
- Began neptunium-237 oxide production
- Startup of Frames processing of plutonium-238 from neptunium targets
- First high plutonium isotope (plutonium-241) campaign through Frames
- Frames process recovers plutonium-242 for curium-244 and americium-243 production
- First plutonium-242 oxide campaign
- First uranium-233 oxide campaign

### 1970s

- 99 percent plutonium oxide campaign
- Processing of domestic and foreign research reactor fuel
- 6.3 electrolytic dissolver operation

### 1980s

- Startup of scrap recovery/plutonium oxide line to produce plutonium-238 oxide in support of NASA
- First computerized process control system operational
- New remotely operated hot and warm cranes become operational

### 1990s

- Produced plutonium-238 oxide for the Cassini space mission to Saturn
- President Bush declares Cold War over
- Plutonium-242 campaign using Frame Waste Recovery process
- Resumption of spent fuel dissolving

### 2000s

- Plutonium-239 disposition campaign
- Blending down of highly enriched uranium to low enriched uranium for Tennessee Valley Authority
- Neptunium disposition campaign
- Resumption of spent nuclear reactor fuel processing
- Initiated Alternate Feedstock-2 plutonium dissolutions for oxide production







SRNS Senior Vice President of NNSA Operations and Programs Wallis Spangler addresses employees gathered to mark the completion of WSB construction.

## SRNS completes construction of Waste Solidification Building

SRNS has completed construction on the massive Waste Solidification Building (WSB) project, and the National Nuclear Security Administration has formally accepted the project's completion.

According to Perry Stanley, SRNS Project Manager for WSB, "The positive working relationship with the local NNSA office was instrumental to the success of the project. This healthy relationship allowed the project to move forward to completion."

The WSB is a key part of the current NNSA nuclear nonproliferation strategy for the secure disposition of excess plutonium, and is intended to handle waste from operations at the Mixed Oxide Fuel Fabrication Facility, which is now under construction. The WSB provides the capability for converting liquid waste into a cement

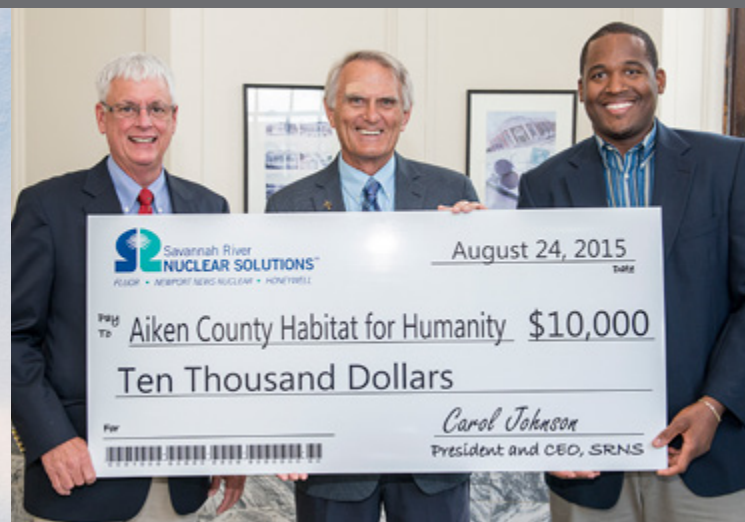
form for disposal. In addition to an analytical laboratory and control room, the facility includes tanks, evaporators and other solidification equipment for the cementation process.

In the final months of the project, SRNS implemented a "War Room" concept to help focus the team on key issues and assist communications, allocate resources and resolve emergent issues.

One of the project's key accomplishments, according to Perry, was the successful completion of the Readiness Assessment, which demonstrated that agreed-upon systems are able to be operated, including having a trained staff. Since the facility will not operate until needed, no "hot" radioactive testing was performed, to keep from introducing radioactive materials into the facility until closer to a startup date.

## ● \$10,000 for 100th Habitat House

SRNS Senior Vice President and Chief Financial Officer Jim Barry (left) recently presented Richard Church (center), Executive Director, Aiken County Habitat for Humanity, and Aaron Washington, Board President, Aiken County Habitat for Humanity, with a check for \$10,000 to support the building of the 100th Habitat house in Aiken County. This will be the third house co-sponsored by SRNS, having provided financial support for houses built in 2010 and 2011 as well. Jennifer Pixley and her children Arthur, Josiah, Adriyanna and Aliza will help build the house of their dreams and are expected to move in during December, receiving a very special Christmas present.



## Technology Association names SRNS as finalist in STEM education awards

The Technology Association of Georgia (TAG) and the TAG Education Collaborative (TAG-Ed) recently announced that SRNS is a finalist in the "Corporate Outreach" category, a part of the 2015 Georgia STEM Education Awards.

The Georgia STEM Education Awards recognizes schools, programs and companies for outstanding efforts and achievements in supporting and promoting STEM (science, technology, engineering and math) education in Georgia.

"The nine major educational outreach programs we manage and help sponsor each year validate the level of importance we place on supporting all levels of education throughout the CSRA," said Carol Johnson, SRNS President and CEO. "As a finalist in the TAG Corporate Outreach category, this achievement provides the confirmation we seek to ensure our company is doing our part to meet the academic needs of area teachers and students."

Nominees competed in eight categories during the statewide event. "It was truly a challenge to choose from among the many applicants from around Georgia for these finalists," said Tino Mantella, TAG President and CEO. "We applaud all of our applicants for their excellent work in STEM."

Winners will be announced during a special awards gala on Aug. 28 in Atlanta.

According to Michael Robertson, Executive Director of TAG-Ed, the programs selected as finalists are leading the way and sharing best practices that will prepare students for future academic challenges.

DOE-Savannah River and SRNS support the following annual education outreach programs at SRS:

CSRA College Night; DOE Savannah River Regional Science Bowl; Innovative Teaching Mini-Grants program; "Future City" competition; Savannah River Regional Science & Engineering Fair; Science & Technology Enrichment Program; Traveling Science Demonstration Program; Engineering Teach-Ins; and Introduce a Girl to Engineering.

"The University of South Carolina Aiken, Savannah River Ecology Laboratory, Natural Resources Management and Research Institute each offer major contributions in support of several SRNS education outreach programs," said Candice Dermody, SRNS Manager, Education Outreach and Talent Management. "Their generosity and shared vision have made these programs the success they are today."

**Photo:** SRNS engineer Annamarie MacMurray provided guidance to dozens of students about robotics during this year's "Introduce a Girl to Engineering" program at USCA's Ruth Patrick Science Center.





## ● SRNL Student Poster Symposium

Akela Scott (left) and Taurean Houston (center), both seniors at South Carolina State University (SCSU), explain their findings on SRS species richness to Dr. Trina Halfhide, an instructor in environmental sciences from the University of the West Indies, St. Augustine, Trinidad and Tobago campus. Scott and Houston were two of 26 students and interns enrolled in SCSU or other Historically Black College or Universities, who spent this summer at SRNL in a program that starts with coursework training for undergraduate students and ends with a research emphasis for interns who have returned from previous years to work at SRNL. The program's highlight is a student/intern poster symposium held at the Lab with SRNL scientists and researchers in attendance.



## SRNS hosts United Way Agency Day at SRS

United Way agencies from the Central Savannah River Area (CSRA) recently showcased their work for United Way Agency Day at SRS. This event gave SRNS employees an opportunity to learn about how the annual SRNS employee United Way campaign impacts local nonprofit organizations.

"We appreciate the opportunity to meet employees and talk with them one-on-one about how our 35 member agencies support disaster relief, health and wellness, education, and financial stability for people of all ages and abilities," said Sharon Rodgers, President, United Way of Aiken County. "Volunteering is such a big part of what we do – it's how we keep costs low, so we can help people in Aiken County who need it desperately. United Way of Aiken County would not be here without Savannah River Site employees. We couldn't operate without your generous contributions and the hours you give volunteering at our member agencies."

According to Rina Powell, Senior Director of Resource Development, United Way of the CSRA, a group of volunteers on the Citizens Review Panel determines which charities receive funding. Every year, SRS employees volunteer to serve on this panel.

"During the United Way campaign, we ask SRS employees to contribute, so it's our responsibility to make sure the agencies spend their money wisely," said Powell. "United Way staff members do not make the decisions about funding; however, volunteers from our Citizens Review Panel make the funding recommendations after visiting the member agencies, examining their budgets, assessing the outcomes and monitoring how the money is spent." Overall, each



Alpha Dunbar from the Aiken Center for Alcohol and Other Drug Services shows a "Tar Jar" to SRNS employee Trina Minnis-Carter during United Way Agency Day. Dunbar uses this visual aid for prevention programs at area schools, and the jar represents the amount of tar in tobacco smoke that an average 20-a-day smoker inhales every year.

exhibit at the agency fair represented how United Way strives to help individuals with the building blocks of life, which include a strong foundation in education, access to healthcare and financial stability.

Last year, SRNS employees raised over \$1 million to support the United Way. In addition, \$200,000 was provided by the SRNS parent companies through corporate giving.

## Melton honored for support of Defense Threat Reduction Agency annual force-on-force exercise

Matt Melton, security specialist with Savannah River Tritium Enterprise, spent a grueling 23 days in a remote area of Wyoming in May and June. He came out of it with an award from the Defense Threat Reduction Agency (DTRA) for his excellent support of their annual force-on-force exercise, along with the knowledge that he had helped assure the U.S. military's ability to keep our citizens safe.

Melton served as Senior Adversary Controller for the exercise, dubbed Sentinel Warrior. Joint force-on-force exercises are conducted to evaluate the adequacy of Department of Defense (DoD) security policies, manning, training, tactics and equipment. These exercises involve collaboration among the DoD, Nuclear Regulatory Commission, DOE and NNSA, partnering to align security practices.

This year's exercise was held at Camp Guernsey, Wy. The exercise consisted of 23 consecutive days running 21 full scale force-on-force exercises involving 250 personnel from 12 different military installations and four NNSA sites.

As the Senior Adversary Controller, Melton was responsible for the control of all Adversary Force controller personnel, meaning he provided supervision and guidance to 18 controllers from NNSA and the Army, Navy and Marine Corps, ensuring they were trained and equipped to perform their duties for each exercise.

For his outstanding performance in this year's event, Melton was one of only two NNSA controllers awarded the Sentinel Warrior Coin of Excellence by the Exercise Director. This was the second time that Melton had participated in DTRA's joint exercises. "The experience I gained was relevant to my position at SRS and also gave me an even greater appreciation for the sacrifices our military personnel make each and every day to ensure our nation's security," Melton said.



## Employees 'raise the steaks' to raise some funds for United Way

SRNS raised more than \$3,000 for United Way of Aiken County at "Raising the Steaks" on Aug. 14. The event, catered by Outback, was held at Aiken Electric Cooperative, and more than 200 meals were served to SRS employees and special guests from the community. "This event brings the whole site together, and we are extremely grateful for your support. Raising the Steaks is not only a fundraiser for the United Way of Aiken County, but it's also an opportunity for old friends to catch up," said Sharon Rodgers, President, United Way of Aiken County. "Raising the Steaks" is a fundraiser of the SRNS Employee United Way Campaign, which benefits nine United Way agencies in South Carolina and Georgia.







## ● First SRS Sports Challenge

SRNS employees Jonathan Barth (left), Allan Hickman, Matthew Brantley, Brittany Hodge, Tara Smith and Senior Vice President of NNSA Operations and Programs Wallis Spangler competed in the tug-of war competition at the inaugural SRS Sports Challenge at Riverview Park in North Augusta, S.C. More than 225 Savannah River Site employees competed in the competitive event, which raised \$4,000 for Aiken-Augusta area United Way agencies. An SRNS team, the “PMCS (Project Management and Construction Services) Kobras” placed third in the friendly competition, which included events such as a boardwalk, pickleball, basketball free-throw relay, soccer relay, chipping golf balls, a one-mile power walk relay, disc golf, horseshoes and corn hole.

## SRNS, Aiken Tech team up to fill projected inspectors positions

SRNS will have a projected need of more than 162 Radiological Control Inspectors (RCIs) by 2016 and a projected 192 Inspectors by 2017.

These RCI needs are often filled through Aiken Technical College’s (ATC) Radiation Protection Technology program. This program will be called upon for future hires as well, said Alice Doswell, SRNS Senior Vice President for Environmental Stewardship, Safety and Health.

“The Radiation Protection Technology program at Aiken Technical College provides a qualified local workforce to fill essential jobs at SRS,” Doswell said. “The nuclear industry is changing and anticipating a significant number of new hires as well as retirements in the coming years, which means this program will provide an excellent feeder system to replace these critical workers.”

Since 2010, SRS has hired more than 40 ATC graduates into RCI positions, a number of them kickstarting their careers at SRS during their last semester of the program by fulfilling a final internship requirement, an experience that gives the students a “real-world” opportunity to apply the theories learned in the classroom.

The two-year, 70-credit hour program leads to an Associate’s degree program in applied science. Students become certified RCIs after completing 180 application hours through on-site internships.

Aiken Tech has a high placement rate: During the 2012-13 school year, the latest year data is available, nearly 97 percent of graduates found employment in their field of study or chose to continue their education, said Nikasha Dicks, ATC’s Marketing and Public Relations Manager.

## SRNS intern focuses on water monitoring at SRS

When it comes to his internship at SRNS, Clemson University student Garrett Hall has combined his love for the outdoors and his interests in math and engineering.

For the past two summer sessions, Hall has interned in the SRNS Sample Data Management Group at SRS. This group collects and analyzes all environmental monitoring data for the site, which spans 310 square miles.

This summer, Hall has focused on the surface water monitoring program, which monitors the primary streams at SRS.

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*“My internship has not been sitting in an office crunching numbers. It has been an amazing opportunity to get out of the office to observe the sample collection process and how the flow equations I have helped develop are being implemented by the flow meters stationed in the field.”*

**Garrett Hall**

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“My favorite part of this internship is seeing how the sample data process comes full circle – starting in the office writing equations to calculate stream flow, then going out into the field to observe how technicians collect the data, and finally analyzing the data collected from the equipment. My internship has not been sitting in an office crunching numbers. It has been an amazing opportunity to get out of the office to observe the sample collection process and how the flow equations I have helped develop are being implemented by the flow meters stationed in the field,” said Hall.

In addition, Hall is part of a 50-year tradition by working on the annual SRS Environmental Report for 2014. SRS has published an environmental report every year since the early 1960s.

“Our group monitors the flow rates of all the primary streams on site, and we take samples to determine levels of contamination that could be in the water. Garrett has specifically helped us update all of our flow information, and his important work is being released to the public. At SRNS, we are stewards of our environment, and the annual environmental report provides proof to the public that we work in an environmentally safe manner,” said Mike Griffith, Manager, SRNS Sample Data Management.

In July, Hall gave a demonstration on various ways to determine flow including the use of a weir with an ultrasonic flowmeter and using area velocity measurements at a TREAT (Teaching Radiation Energy and Technology) workshop held at the University of South Carolina Aiken.

Hall graduated from Clemson University with a bachelor’s degree in bioengineering. He will return to Clemson University in the fall, where he will pursue a master’s degree in mechanical engineering.



## ● SRNS thanks 2015 interns

ISRNS interns recently attended a special event held in Aiken where company officials answered questions, provided advice and thanked the interns for their contributions to SRS. SRNS President and CEO Carol Johnson (above, right) discussed potential career opportunities with interns and Aiken County residents Rebecca Jarrell, a senior at Clemson University, and DeJean Dunbar, a junior at Charleston Southern University.

## ● College Night is Sept. 10

High school students will have an opportunity to meet recruiters from more than 140 colleges and universities and win scholarships totaling approximately \$12,000 at CSRA College Night.

The popular annual event, sponsored by DOE-Savannah River, is set for Thursday, Sept. 10, 5-8:30 p.m., at the James Brown Arena, Augusta, Ga. Admission is free and open to the public. DOE-Savannah River is a major sponsor of this event. SRNS manages and coordinates the event.

College Night provides a way for CSRA students and parents to obtain information on educational opportunities, admission requirements and tuition; attend financial aid seminars; visit a career exploration area and a counseling center; and speak with members of professional societies.

To qualify for a College Night scholarship, students must be high school juniors or seniors and graduate with a GPA equal or above 2.5 on a 4.0 scale (or equivalent). Students must attend and register in person at CSRA College Night to be eligible.

For more information, visit the SRS web site at <http://www.srs.gov>, click on Outreach, then Education Outreach Programs, then CSRA College Night.



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