KEEPING THE
COMMITMENT
2012 ANNUAL REVIEW

Savannah River Remediation
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IT IS MY PLEASURE TO PROVIDE THE 2012 SAVANNAH RIVER REMEDIATION ANNUAL REVIEW ENTITLED

KEEPING THE COMMITMENT

I can say with all confidence that the state of Savannah River Remediation for 2012 has been record-setting. We have performed work safely and at a record pace. We have positioned Savannah River Site’s (SRS) liquid waste operations for a productive future through facility improvements, advancing technology and our Center of Excellence initiative, where we have become the recognized leader in radioactive waste disposition across the Department of Energy complex. We are “Keeping the Commitment.”

The centerpiece for the year was the operational closure of Tanks 18 and 19. The state of South Carolina points out that the high-level waste in Savannah River Site waste tanks represents the single largest environmental risk in the state. In operationally closing two waste tanks this year and filling them with a cement-like grout, SRR has kept its commitment to reduce the risk from the Site’s Cold War legacy waste.

To depict SRR’s record-setting year, the 2012 Annual Review provides several “Profiles in Excellence” features for your enjoyment. You will also have the opportunity for a greater understanding of our work through several interactive features, which can be found in the electronic version at www.srremediation.com/annualreview.pdf.

Experience the SRR 2012 Annual Review.

Dave Olson, SRR President and Project Manager

MISSION

To achieve tank operational closure (removal from service) through the disposition of Savannah River Site liquid waste in a safe, timely, compliant and cost-effective manner while exceeding stakeholder expectations.

SRR WILL:

Safely treat and disposition waste, and operationally close (removal from service) underground storage tanks to reduce risk and meet regulatory commitments.

Resolve the primary source of risk to public health and the environment. Continually improve efficiency to accelerate schedule and reduce cost to the taxpayers while working within budget allocations.

Enable transformation of the Site for future missions.

LIQUID WASTE OPERATIONS

- High U.S. Department of Energy priority
- Single Liquid Waste Operations contractor
- Focused on reducing the risk
- Workforce of ~ 2,000 employees
- Savannah River Remediation began work in July 2009
SAFETY EXCELLENCE

PROTECTING THE ENVIRONMENT

Savannah River Remediation (SRR) continued the Savannah River Site (SRS) tradition of posting another exemplary environmental compliance record in 2012, as liquid waste operations continued to minimize impact to the off-site public and the surrounding environment.

In 2012, SRR safely removed and mobilized approximately 8 million curies of radioactivity from waste tanks into glass.

Since becoming the SRS liquid waste contractor in July 2009, SRR has received no notices of violations from any Federal or state regulatory agency.

SAFETY AWARDS

- South Carolina Chamber of Commerce Commendation of Excellence Award
- South Carolina Department of Labor, Licensing and Regulation Certificate of Safety Achievement
- South Carolina Department of Labor, Licensing and Regulation Award for working over 1 million hours without a lost workday case
- U.S. Department of Energy Voluntary Protection Program Star of Excellence Award

SAFETY AND SECURITY BEGIN WITH ME

PROTECTING OUR WORKFORCE

- Savannah River Remediation’s (SRR) goal of “Zero Injuries, Zero Events, One Day at a Time” centered on protecting our workforce during 2012. SRR continued to perform work safely with a safety performance that exceeds the U.S. Department of Energy (DOE) Environmental Management’s safety average and well above industry standards. SRR ranked in the top tier of DOE projects complex-wide.

- In 2012, SRR’s attention turned to wellness. Employees used the URS-sponsored Slip Simulator to experience walking on slippery surfaces with a major focus on slips, trips and falls.

- To protect employees from the possibility of heart attacks and strokes, SRR partnered with University Hospital in Augusta, GA, and the hospital’s Heart Attack and Stroke Prevention Center to provide education and wellness testing aimed at heading off a heart attack or stroke.

- SRR also initiated a “Walk Away the Pounds” exercise class. The results have been so encouraging that a pilot class has now been expanded to other liquid waste facilities.
Savannah River Remediation’s (SRR) Center of Excellence continued to play a dominant role in sharing information and resources to nuclear clean up sites all over the world. The Center of Excellence has shared high-level nuclear waste policies, procedures, programs, people, equipment, technology and safety to the world’s nuclear clean up projects.

SRR continues to be recognized as the leader for its creativity in developing technologies that accelerate the mission of operationally closing waste tanks and for ridding the environment of legacy nuclear waste.

Visitors from the URS Sellafield project come to SRR to learn and share information on liquid waste operations.

SRR Center of Excellence work included:

- Continued project support at the Integrated Waste Treatment Plant projects in Idaho
- Provided Documented Safety Analysis support for Sellafield and Hanford
- Provided project support at the Los Alamos National Laboratory
- Continued support for Separations Process Research Unit projects in New York
- Support contracts at Paducah, KY, and Oak Ridge, TN
- Assisted with the implementation of a Systems Engineering Process at the Sellafield project
- Provided integration support for the Sellafield project and the Salt Waste Processing Facility at SRS
- Continued interface support with the Sellafield project

Closing these tanks demonstrates to the world that we are driving safety first and making sure the environment is protected. It shows commitment from the government and regulatory agencies. The partnership that has come out of this commitment are the drivers that closed these tanks and will be there for more closures to come.

David Pethick, President
URS Global Management and Operations Services
As Savannah River Remediation (SRR) begins the second half of its six-year base contract as the Savannah River Site liquid waste contractor, the stage is set, improvements have been made, the road map is defined and production facilities are functioning at a record pace.

The mission is clear. We will reduce risk to people and the environment.

On the next several pages, SRR’s progress will be highlighted in “Profiles in Excellence” features. Enjoy!

We are at the midpoint of our contract, but know with certainty that we are here to finish the mission of reducing the risk of the liquid waste by working to operationally close waste tanks.

Dave Olson
Savannah River Remediation President and Project Manager

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**KEEPING THE COMMITMENT: MEETING FISCAL YEAR 2012 PRODUCTION GOALS**

**Defense Waste Processing Facility**
- **Goal:** Produce 275 canisters
- **Year End Total:** 275 canisters produced

**Salt Disposition Process**
- **Goal:** Process 700,000 gallons of salt solution
- **Year End Total:** 704,457 gallons processed

**Saltstone Production and Disposal Facilities**
- **Goal:** Process 1.2 million gallons of decontaminated salt solution
- **Year End Total:** 1.25 million gallons processed

**Waste Tanks Cleaned and Operationally Closed**
- **Goal:** Two waste tanks
- **Year End Total:** Two waste tanks
A road map that outlines the approval process for operationally closing future Savannah River Site (SRS) legacy waste tanks was approved during 2011.

Called the General Closure Plan (GCP) the road map defines the formal process for the U.S. Department of Energy development of closure documentation and the subsequent process of obtaining approvals from the South Carolina Department of Health and Environmental Control and U.S. Environmental Protection Agency. Without the GCP, it would have been impossible to meet the commitments of the SRS Federal Facility Agreement.

We challenged ourselves to move faster through this process and we did, while including multiple opportunities for public notice and input. We will continue that challenge in order to reduce risk to the public and environment through timely tank closure.

Catherine Templeton
Director, South Carolina Department of Health and Environmental Control
Savannah River Remediation’s (SRR) epic closure of radioactive waste Tanks 18 and 19 this summer represented the most substantial environmental risk reduction for the State of South Carolina since the first U.S. Department of Energy (DOE) legacy waste tanks, Tanks 17 and 20, were closed at the Savannah River Site in 1997.

Closure of Tanks 18 and 19 was observed on October 1, 2012, with a ceremony recognizing the accomplishment and congratulating SRR employees for a job well done.

Bulk grouting of Tanks 18 and 19 began in April and continued through August. The process involved 2,080 cement trucks pouring 3.34 million gallons of grout into the tanks. Seventy workers worked at least eight hours a day, five days a week, to safely accomplish the tank closure process.

› To view highlights of the Tanks 18 & 19 Closure Ceremony, go to www.srremediation.com/tank_closure.wmv

What you have accomplished at the Savannah River Site proved me and others right in Washington that you could close tanks in a new way to save money and protect the environment.

Lindsey Graham
United States Senator
DEALING WITH SALT WASTE IN OUR TANKS

Two key facilities – the Actinide Removal Process (ARP) and the Modular Caustic Side Solvent Extraction Unit (MCU), allow Savannah River Remediation to separate high and low-level wastes.

The high-level portion goes to the Defense Waste Processing Facility. However, the low-level portion of the salt waste is sent to the Saltstone Facilities.

For FY12, the ARP/MCU processed 704,457 gallons of salt waste. The target number was 700,000 gallons.

› For a closer look at our tanks, go to www.srrmediation.com/srr-presentation/

The ARP and MCU facilities have surpassed expected operational results by processing at a rate of over eight gallons per minute, operating greater than 10 times more efficiently and for a longer period than expected.

Cliff Winkler
Savannah River Remediation
Chief Engineer
Reducing the risk of high-level waste was performed at record levels in 2012 at the Defense Waste Processing Facility (DWPF), the Savannah River Site (SRS) facility that glassifies radioactive waste from the massive underground waste tanks.

The facility reached its FY12 goal of filling 275 canisters with a mixture of molten glass and waste. For the first time since the facility became operational in 1996, more than 300 canisters were produced during a 12-month period that ended in June 2012. The 12-month record is 338 canisters.

The U.S. Department of Energy (DOE) gave Savannah River Remediation the go ahead to develop an alternative to storing glassified waste filled canisters at the Savannah River Site (SRS). The new facility, called Canister Interim Storage (CIS), will be as safe as the two current Glass Waste Storage Buildings, but the difference is its price tag.

The estimated up-front cost to construct a building similar to the existing ones is between $100 million to $140 million. The CIS is expected to reduce initial costs by at least $50 million.
A nine-month, $8 million improvement outage at the Savannah River Site (SRS) Saltstone Facilities has resulted in record-setting performances.

Following restart of operations in September, Saltstone processed 1.1 million gallons of decontaminated salt solution for a two-month production record. This performance was helped by a new monthly production record in October, when 664,129 gallons of salt solution was processed.

Since beginning operations that turns the salt waste into non-hazardous cement for on-site disposal, Saltstone has disposed of over 12 million gallons of solidified waste.

We expected a new and more reliable system to process larger amounts of decontaminated salt solution following the improvement outage and we got it.

Stuart MacVean
SRR Operations and Deputy Project Manager
The next generation low-level waste disposal units at the Savannah River Site (SRS) have the potential to save $250 million over the life of liquid waste disposition, and Savannah River Remediation (SRR) has the go-ahead to make it happen.

Called the large Saltstone Disposal Unit (SDU), the unit will be similar to the smaller Saltstone Disposal Units, but will be much bigger, holding approximately 30 million gallons of nonhazardous waste compared to the current units that held approximately 3 million gallons.

Besides saving millions, SRR will need only seven MSDUs instead of the planned 58 smaller versions, thus saving on land development.

For a video on the Saltstone Disposal Unit, go to www.sremediation.com/srr-presentation/sdu.php

The cost to construct the large SDUs will save 25% of the cost to construct more of our existing size units. I congratulate SRR for bringing this new innovation to SRS and committing to its development.

Dr. David Moody
Manager,
U.S. Department of Energy
Savannah River Operations
Management of liquid waste operations at the Savannah River Site (SRS) involved more than operationally closing radioactive waste tanks in 2012. Receiving waste from other SRS contractors and managing space inside the Site’s underground storage tanks helped to keep SRS functioning.

During 2012, 859 waste transfers, totalling nearly 19 million gallons of waste, were performed between the Site’s two tank farms.

SRR accepts waste from H Canyon operations and the Site’s laboratories, including the Savannah River National Laboratory, and from normal waste processing and disposition activities. There are 305 transfer lines, comprising approximately 21 miles, which are available for waste transfers.

If waste receipts from SRS operations and the management of space inside the Site’s underground storage tanks were not done properly, all Site operations would be in jeopardy. SRR liquid waste operations keep everything working.

Neil Davis
Tank Farms and Effluent Treatment Project Director
NEW TECHNOLOGY
REDUCING RADIATION EXPOSURE

Protecting employees, the public and environment from exposure to radioactive waste was demonstrated in 2012 by Savannah River Remediation (SRR) in two major new technology areas.

SRR’s robot arsenal was increased by two with the deployment of PackBot and Brokk 400 at the Defense Waste Processing Facility (DWPF). PackBot navigates the narrow passages and steep grades inside the DWPF performing remote clean up activities. The Brokk 400, a golf cart-sized remote controlled robot, reduces waste volume by its scissor-like jaws to cut up used piping and equipment inside the DWPF. Both are used in radioactive areas instead of employees, thus keeping humans safe from radioactivity.

Testing of a next generation solvent to be used in the Modular Caustic Side Solvent Extraction Unit (MCU) has shown significant processing improvements that will reduce the number of curies—a measure of radioactivity—in the low-level waste, which is kept on site. The solvent, called MAXCalix, will be introduced in the MCU next year. It replaces an earlier version, BoBCalix.

› To view a video go to www.youtube.com/watch?v=nrj0zxOpnOw

SRR continually seeks to implement practices that will protect employees and using robots and new technology is the right thing to do.

Patricia Allen
Savannah River Remediation
Environmental, Safety, Health QA and CA Director
COMMUNITY GIVING

COMMITTED EMPLOYEES FIND CREATIVE WAYS TO GIVE

Savannah River Remediation (SRR) and its employees continued giving back and supporting communities where they live with several new and creative functions in 2012.

A first-ever employee bowling tournament raised $2,515 for four area United Way agencies, while the first “SRR’s Got Talent” collected 158 toys for the Salvation Army and Marine Toys for Tots campaign and $1,057 for the purchase of additional toys.

Another first featured SRR’s summer interns, who learned the value of community outreach with a United Way Project VISION day. The interns donated a free day from work to use their hands, hearts and minds to help those who needed assistance. The interns’ day followed the United Way Project VISION, CARE and SERVE days, which are supported each year by SRR employees, who also give of their time, talents and resources.

SRR employees Virginia Nettles and Dave Smith were recognized in 2012 for their commitment to helping others. Virginia was honored by the United Way of Barnwell County for her support, which included serving on its Board of Directors.

Dave was honored by showing that one person can single-handedly save hundreds of lives. He was recognized by the Shepeard Community Blood Center for donating 18 gallons or 144 pints of blood since 1961. Since one pint of blood saves about three lives, Dave has saved roughly 432 lives.

SRR Community Outreach also included:

- Employees pledged and contributed a total of $349,376 to the 2012 SRR United Way Campaign.
- SRR contributed $25,000 to the United Way of Aiken County.
- Employees continued supporting the American Heart Association Heart Walk by walking and collecting over $26,000.
- Employees collected over 400 canned good items and donated $4,545 to the 2012 Golden Harvest Food Drive.
- SRR contributed $4,000 to help fund seasonal flu shots for low income and elderly residents of Allendale and Barnwell counties.
  - SRR participated as the sole sponsor of the 8th Annual City of Aiken Earth Day celebration.
  - SRR Public Affairs personnel participated in a new Allendale County School District summer school initiative that helped prepare children for school this fall and develop a better understanding of life skills.
COMMITTED TO SUPPORTING EDUCATION

✔ Presented $3,000 each to 10 high school graduates of employees in the Savannah River Remediation (SRR) Family Scholarship program.

✔ Welcomed 34 summer college interns working in a variety of disciplines, including Computer Science, Design Authority, Engineering, Finance, Health Protection, Public Affairs, Human Resources, Legal and Project Controls.

✔ Continued its School-to-Work program by hiring three radiological technology summer interns from Aiken Technical College.

✔ Awarded nearly $15,000 in grants to eight area elementary schools as part of SRR’s “Students, Teachers Achieving Results” grant program.

✔ Signed a Memorandum of Understanding with Allen University to help students prepare for careers, particularly in science, technology, engineering and math.

✔ Provided $5,000 to Augusta State University to assist the university’s Center for Undergraduate Research and Scholarship program.

✔ Provided $5,000 to Augusta Technical College Foundation to help fund the college’s Adult Literacy program.

✔ Received a Presidential Citation from Claflin University for its partnership efforts to provide Claflin students with opportunities in research, internships and jobs.

✔ Awarded scholarships to two high school seniors as part of the National Society of Black Engineers scholarship program.

✔ Donated $5,000 to Paine College to help fund the college’s annual scholarship fund.

✔ Provided $10,000 to South Carolina State University’s Nuclear Engineering program for scholarships.

✔ Awarded a $5,000 check to Matthew Correnti as the winner of the 2012 Robert Maher Memorial Scholarship award.
The Savannah River Site (SRS) is owned by the U.S. Department of Energy. Savannah River Remediation LLC manages and operates the liquid waste mission at SRS.