

SRS Facts

SAVANNAH RIVER SITE • AIKEN • SC

Savannah River National Laboratory

SRNL's tradition of putting science to work in service to the nation spans more than 60 years. The laboratory was established in 1951 to provide technology research and development support for the Atomic Energy Commission.

Today, SRNL is an internationally recognized laboratory for nuclear research with expertise in hydrogen technology, materials science, environmental research, robotics engineering, analytical chemistry, hazardous material stabilization and technologies for nonproliferation and national security. SRNL was the safest laboratory in the U.S. Department of Energy (DOE) complex in 2014.

SRNL puts science to work to create innovative solutions to some of the nation's most challenging problems. As an applied research laboratory for DOE, SRNL's impact spans the nation and the globe. SRNL is designated as the only national laboratory for the DOE's Office of Environmental Management and is the nation's only complete nuclear material management facility. SRNL provides the science and technology necessary for innovative solutions in a changing world.

Environmental Stewardship Our nation is engaged in a technically challenging and environmentally important activity: reducing the risk of Cold War legacy nuclear waste. Technologies for cleaning chemical and radiological contaminants from the soil and groundwater are being developed, as well as technologies to safely stabilize, immobilize, store and dispose of legacy materials. SRNL discoveries and developments have contributed to a cleaner environment and accelerated cleanup in a cost effective and safe manner. Overall, the investment in new, innovative cleanup technologies at SRNL in just the past five years has saved an estimated \$2 billion in cost, yielding a nearly 20-to-one return on investment.



Environmental Stewardship

- Nuclear Waste Treatment
- Materials Stabilization and Disposition
- Remediation and Cleanup
- Assessments and Verification



U.S. DEPARTMENT OF
ENERGY



Savannah River National Laboratory *(continued)*

National Security Our nation is faced with the challenge of maintaining a safe and reliable nuclear deterrent while also reducing the risk of nuclear proliferation around the globe. An assured tritium supply is critical to our nation's nuclear stockpile and SRNL is the premier center for research, development and surveillance in the use of tritium for our nuclear weapons systems. SRNL supports a wide range of defense, intelligence, national security and law enforcement needs by applying our unique knowledge and capabilities in nuclear materials processing, storage, packaging, disposition, and environmental fate and transport. SRNL research impacts our nation's ability to secure proliferant materials across the globe, protect our nation's borders, and assess potential threats. SRNL works with the FBI to maintain and operate the world's only criminal forensic laboratory capable of handling and examining radiological or contaminated evidence.

Clean Energy More than ever, our nation is focused on the demands of developing clean energy alternatives. SRNL maintains active applied research and development programs, constantly working toward one of the grandest challenges—finding viable options for future commercial fuel needs. SRNL's expertise in fuel cycle management, nuclear fuel reprocessing and high level waste disposal provides a solid foundation for this pioneering effort. With the Center for Hydrogen Research as its cornerstone, SRNL is applying its unique capability for gas processing, storage and transfer toward the advancement of cutting edge energy solutions such as natural gas to fuel vehicles, hydrogen and natural gas storage, solar energy technology and the international ITER project, a full-scale fusion power reactor.

SRNL's Four Distinguishing Competencies

- **Environmental Remediation and Risk Reduction**
Apply science and technology to reduce the risk associated with radiological contamination at sites in the U.S. and abroad
- **Nuclear Materials Processing and Disposition**
Advance the state of the art of radiological materials handling and chemical engineering processes to support our nation's nuclear materials management needs
- **Nuclear Detection, Characterization and Assessments**
Develop and field integrated capabilities to systematically observe, assess and analyze nuclear materials, operations and events
- **Gas Processing, Storage and Transfer Systems**
Develop technologies to store, transport and use small molecules for national security and clean energy applications



National Security

Tritium Science
Plutonium Technology
Nonproliferation
Nuclear Forensics



Clean Energy

Nuclear Energy Programs
Renewable Energy Research
Alternative Fuels

