

We put science to work.™

SRNL is a DOE National Laboratory  
operated by Savannah River Nuclear Solutions.

# Facts

## about Savannah River National Laboratory

U.S. DEPARTMENT OF ENERGY • SAVANNAH RIVER SITE • AIKEN • SC

[srnl.doe.gov](http://srnl.doe.gov)

### SRNL Fast Facts

- > Located at the U.S. Department of Energy's Savannah River Site near Aiken, South Carolina
- > Operated by Savannah River Nuclear Solutions
- > National Laboratory for DOE Office of Environmental Management
- > Applied research, development and deployment of practical, high-value and cost effective technology solutions in the areas of national security, clean energy and environmental stewardship
- > Supporting customers at SRS, DOE and other federal agencies nationally and internationally

### Contact Information

SRNL Office of Communications  
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## An Overview of the Savannah River National Laboratory

### Introduction and History

Savannah River National Laboratory (SRNL) puts science to work to create and deploy practical, high-value, cost-effective technology solutions.

As the applied research and development laboratory at the U.S. Department of Energy's (DOE) Savannah River Site (SRS), SRNL serves DOE and the nation by providing innovative solutions for DOE and other federal agencies across the country and around the world.

- The laboratory was established in 1951 to provide research and development support for the startup and operation of SRS with its mission of producing nuclear materials for national defense.
- In 2006, the DOE Office of Environmental Management assumed stewardship responsibilities for SRNL. As the Environmental Management national laboratory, SRNL has prime responsibility for ensuring DOE's commitment to provide the scientific and technical rigor and innovation needed to mitigate the environmental risk associated with legacy nuclear waste with reduced cost and shortened cleanup schedules.



SRNL provides an unwavering commitment to the nation's security and prosperity.

### Safety

Best safety record of any DOE laboratory

### Security

Demonstrated record of protecting the nation's interests

### Quality

Field-proven innovations



# Facts

## about Savannah River National Laboratory

SRNL serves the nation in three major areas:



### National Security

- **Tritium science technology:** Support for the nation's supply of tritium (the radioactive form of hydrogen used in national defense)
- **Nuclear materials processing:** Support for the safe handling and disposition of plutonium and spent nuclear fuel to advance the nation's nuclear nonproliferation goals
- **Homeland security:** Technologies, training and consultation for a variety of national, regional and local homeland security and law enforcement needs
- **Nuclear forensics**
- **Monitoring and detection** capabilities for nuclear nonproliferation
- **Biological and chemical collection technologies** for signature analyses and nonproliferation



### Environmental Stewardship

- **Cleanup technology:** Technologies for cleaning chemical and radiological contaminants from the soil and water, including techniques that harness and measure nature's own decontamination abilities
- **Nuclear materials disposition:** Technologies to safely stabilize, immobilize, store, transport and permanently dispose of all types of waste and legacy materials, including low- and high-level radioactive waste, and plutonium, uranium and other actinide materials. This includes technologies to immobilize waste in a safe, stable glass form, suitable for long-term disposition



### Clean Energy

- **Hydrogen technology:** Technologies needed to make the wide-spread use of hydrogen practical for powering America's future, including hydrogen storage, hydrogen production, and other fields related to the use of hydrogen
- **Fusion energy:** Partner laboratory for the U.S. ITER project, part of an international project to demonstrate the scientific and technological feasibility of a full-scale fusion power reactor
- **Nuclear energy:** Research on options to enable the safe, secure, economical and sustainable expansion of nuclear energy while reducing proliferation risks
- **Renewable Energy:** Renewable energy assessment and application in the Southeast, such as off-shore wind and solar
- **Material, chemical processing and control system support** for national initiatives in wind, solar and smart grid technologies

### Expert staff

SRNL's staff includes total employment of approximately 800 people. The research staff of over 700 includes materials scientists, chemists, physicists, biologists, mechanical engineers, chemical engineers, nuclear engineers and a variety of other scientists, engineers and technicians. Approximately one quarter of the research staff hold PhDs. These personnel bring expertise in a range of competencies, including:

- Radioactive chemical processing
- Glass waste forms and vitrification process development
- Application of environmental remediation technologies
- Development and qualification of nuclear material packaging
- Nuclear fuel storage and handling
- Tritium production, purification, storage and surveillance
- Hydrogen fuel cells and storage systems
- Ultra-low-level, high-sensitivity nuclear measurements



**Savannah River National Laboratory**<sup>™</sup>  
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