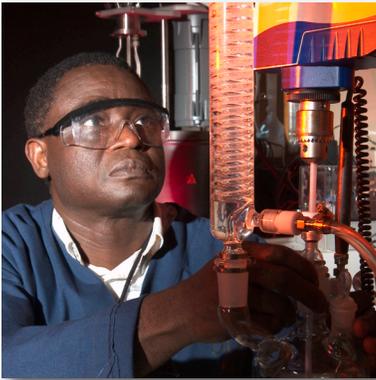


Quick Facts about the Savannah River National Laboratory



Disposition of legacy materials

FASTfacts

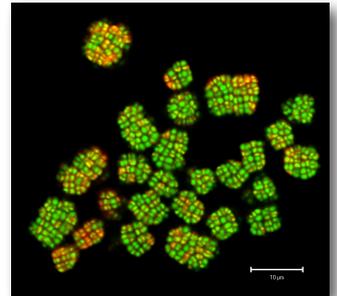
- DOE's premier applied research and development laboratory
- DOE Environmental Management's national laboratory

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 the DOE and the nation, helping customers at SRS, throughout DOE, in 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 the Savannah River Site with its mission of producing nuclear materials for the national defense.
- In 1992, the laboratory was renamed the Savannah River Technology Center to recognize its focus on applied research and development and technology deployments. The laboratory mission evolved to place greater emphasis on environmental cleanup, as well as nonproliferation technologies and tritium processing.
- In 2004, in recognition of the laboratory's service to the nation, it was designated as the country's 12th National Laboratory.
- In 2006, it was further designated as the DOE Office of Environmental Management's national laboratory, applying its unique expertise and applied technology capabilities to reduce technical uncertainties in order to assist DOE sites across the nation in meeting cleanup requirements.



Kineococcus radiotolerans, radiation-resistant bacteria studied by SRNL for its potential remediation capabilities

SRNL enables its customers to achieve success through an unwavering commitment to

- Safety – the best safety record of any DOE laboratory
- Security – stellar record of protecting the nation's interest
- Quality – integrated technology solutions that work

The laboratory serves the nation in three major areas:

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.
- Hazardous 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.

Quick Facts



Tools and techniques to support local and federal law enforcement, national defense, and homeland security



Expertise in mass spectrometry, scanning electron microscopy, and energy dispersive x-ray spectroscopy

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National and Homeland Security

- Tritium technology – Support for the nation's supply of tritium (the radioactive form of hydrogen used in national defense).
- Nuclear materials technology – Supporting 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.

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 – A 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 - Assessment and application of available renewable energy in the Southeast, such as biomass, off-shore wind and solar.

Expert staff

SRNL's staff includes total employment of over 900. The research staff of over 700 includes materials scientists, chemists, physicists, biologists, microbiologists, 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 to the lab expertise in a range of competencies:

- 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, and storage
- Hydrogen storage
- Ultra-low-level, high-sensitivity nuclear measurements

We Put Science To Work™

SRNL is managed and operated for the U.S. Department of Energy by Savannah River Nuclear Solutions, LLC