

# The Savannah River Site is making our world safer

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Criticism is sometimes pointed at SRS, saying nuclear material comes in and never leaves. The reality is quite different. Those who work at the site, those companies with contracts at the site and the federal/state management which directs the site, together have made great progress. Nuclear materials are processed, cold war facilities are cleaned up, and our national security is maintained. The site is safer, our region is safer and the world is safer.

Speaking of safety, the site's employees take great pride in being safe. Each year SRS is rated 10 times better than U.S. industries and is usually the safest DOE plant in our country.

SRS does much more than "clean up", it is also an ongoing active production enterprise. For example,

- The tritium group ensures the strength of our national strategic deterrent and the viability of ultra-sensitive nuclear detectors,
- The nuclear materials group prevents radioactive material from proliferating to "bad guys" around the world and in the process helps TVA reactors produce electrical power,
- Our National Laboratory puts science to work with important discoveries in chemical separations, atmospheric modeling, bio-remediation, medical isotope delivery, energy efficiency, and much more.

All that notwithstanding, the rest of this article focuses on SRS "clean-up" successes.

Tanks .. Winning the cold war and ensuring our strategic security today left nearly 50 underground tanks containing highly-radioactive and hazardous-chemical-laced liquid waste. The Savannah River Remediation team and predecessors have emptied 7 of those tanks and turned the radioactive waste into nearly 4,000 stainless steel glass-filled canisters. These canisters total more than 15 million pounds. They are strong and durable and completely immobilize the waste nuclides. They will eventually go to a national repository, like Yucca Mountain, but in the meantime they are safe, secure and stable right where they are, and will remain so for many hundreds of years. Our region is safer.

Solid Waste.. The Cold War also left us more than 5,000 cubic meters of TRU waste (solid waste containing longer lived, man-

made radioactive nuclides). The Savannah River Nuclear Solutions (SRNS) team and predecessors have dug up these barrels, separated the components, packaged and shipped the waste to New Mexico. The entire amount of this waste is packaged, and they have completed 1,609 shipments to date out of our state. Only a few shipping containers remain, and they will leave when the Waste Isolation Pilot Plant (WIPP) reopens. SC is much safer today than a decade ago.

Pu and U/Np down blend ... The Department of Energy and SRNS have also collected more troublesome nuclides of plutonium, uranium and neptunium and rendered them unusable as weapons material. They converted them into a safe and manageable form in the H canyon complex, the nation's only large-scale nuclear chemical separation facility. 409 containers have been shipped out of state and 261 are ready to go when WIPP reopens. It makes our world a safer place.

Spent Nuclear Fuel from research reactors ... Our SRS team works as full partners on our nation's national security and non-proliferation activities. They have sought out, collected, safely stored and processed spent nuclear fuel from domestic and international research reactors. Over the past five years, about 450 assemblies have been received and safely stored at the SRS for processing, half of these from 6 foreign countries keeping the material out of unintended hands. In the same period, nearly 900 assemblies have been processed through H canyon. This includes fuel that had been stored in L Basin. No one else in the world is doing this type of work, and this activity has made the world significantly safer.

Site Restoration ... Lastly DOE and the SRS team have remediated buildings, facilities, old reactors, and land to regain 85% of the site, cleaned to Industrial Standards.

Nuclear materials arrive at SRS, they are processed, transformed for further use or disposal. Cold war facilities are being cleaned up. Materials are rendered stable, safe and secure. Much has been sent out of state to final repositories. DOE, state regulators, U.S. Contractors, and some very smart employees, our neighbors, have made our region and the world a safer place, and they continue to do this. I for one, sleep better at night, and give them a great big thank you.



Two Glass Waste Storage Buildings at SRS will safely hold the stainless steel canisters of vitrified radioactive waste pending decisions on a permanent disposition location.



P Reactor has been permanently and safely entombed. The white concrete panels visible at the right and at various points on the building are caps covering fully grouted basins and process areas.



Spent (used) fuel from research reactors around the US and the world is safely stored for processing.



Entire areas of SRS have been closed and could be made available for future industrial uses. T Area was one of the early locations for testing various site processes and equipment, from the Defense Waste Processing Facility and high-level waste tank closure.